INDUSTRIAL AVE,
TE 3
AHWAH NJ 07430

ONE: 201.684.0055
X: 201.684.0066

Transcend Wireless

April 18, 2022

Members of the Siting Council
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: Notice of Exempt Modification
118 Wintechog Hill Road, North Stonington, CT 06359
Latitude: 41.4598438800
Longitude: -71.927335000
T-Mobile Site#: CT11266A - Anchor

Dear Ms. Bachman:

T-Mobile currently maintains nine (9) antennas at the 225-foot level of the existing 251-foot self support tower at 118 Wintechog Hill Road, North Stonington, CT. The 251-foot self support tower and property are owned and operated by American Tower Corporation. T-Mobile now intends to remove and replace (6) antennas at the 225-foot level of the tower. These antennas will support 5G services.

Planned Modifications:
Tower:
Install New:
(3) Ericsson AIR 6419 B41 Antennas
(3) Commscope VV-65A-R1 Antennas
(3) Radio 4460 B25 B66
(3) 6x24 Hybrid Cables

To Be Removed:
(6) AIR21 Antennas
(1) 9x18 HCS Cable

To Remain:
(3) RFS APXVAARR24 Antennas
(3) Radio 4449 B12 B71
(3) 6x12 HCS Cables

Ground:
Install (1) 6160 Power Enclosure
Install (1) B160 Battery Cabinet
(1) Concrete Pad
(2) RP 6651, (1) PSU4813

This facility was approved by the Siting Council in Docket No. 91A on April 30, 1990. The proposed modification complies with the original approval.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies§ 16- SOj-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.SA. § 16-SOj-73, a copy of this letter is being sent to First Selectman Bob Carlson, Elected Official, and Nathan Reichert, Zoning Official, as well as the tower and property owner.

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,

Eric Breun
Transcend Wireless
Cell: 201-658-7728
Email: ebreun@transcendwireless.com

Attachments
cc: Bob Carlson - First Selectman of North Stonington
Nathan Reichert - Zoning Official
American Tower - Property Owner

ERIC BREUN
2016587728
1 INTERNATIONAL BLVD.
MAHWAH NJ 07495

1 LBS

1 OF 1

SHIP TO:
NATHAN REICHERT
40 MAIN STREET
NORTH STONINGTON CT 06359

CT 063 0-02

UPS GROUND
TRACKING #: 1Z V25 742 03 9921 8038

BILLING: P/P

Reference #1: CT11266A

XOL 22.04.15 NV45 16.0A 04/2022*

ERIC BREUN
2016587728
1 INTERNATIONAL BLVD.
MAHWAH NJ 07495

1 LBS

1 OF 1

SHIP TO:
FIRST SELECTMAN
BOB CARLSON
40 MAIN STREET
NORTH STONINGTON CT 06359

CT 063 0-02

UPS GROUND
TRACKING #: 1Z V25 742 03 9479 4684

BILLING: P/P

Reference #1: CT11266A

XOL 22.04.15 NV45 16.0A 04/2022*

Hello, your package has been delivered.

Delivery Date: Wednesday, 04/13/2022

Delivery Time: 11:03 AM

Left At: FRONT DESK

Signed by: LONG

TRANSCEND WIRELESS

Tracking Number:	1ZV257420395308046
Ship To:	AMERICAN TOWER CORPORATION 10 PRESIDENTIAL WAY WOBURN, MA 01801 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	CT11266A

Hello, your package has been delivered.

Delivery Date: Wednesday, 04/13/2022

Delivery Time: 12:58 PM

Signed by: PANCARO

TRANSCEND WIRELESS

Tracking Number:	1ZV257420399218038
Ship To:	NATHAN REICHERT 40 MAIN STREET NORTH STONINGTON, CT 06359 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	CT11266A

Hello, your package has been delivered.

Delivery Date: Wednesday, 04/13/2022

Delivery Time: 12:58 PM

Signed by: PANCARO

TRANSCEND WIRELESS

Tracking Number:	1ZV257420394794684
Ship To:	BOB CARLSON 40 MAIN STREET NORTH STONINGTON, CT 06359 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	CT11266A

DOCKET NO. 91A - SNET Cellular, Inc., Amended Certificate of Environmental Compatibility and Public Need for cellular telephone antennas and associated equipment in the Town of North Stonington, Connecticut.

Connecticut

Siting

Council

April 30, 1990

DECISION AND ORDER

Pursuant to the foregoing Findings of Fact, Opinion, and record in Docket No. 91, the Connecticut Siting Council hereby directs that an amended Certificate of Environmental Compatibility and Public Need as provided by Section 16-501 of the General Statutes of Connecticut (CGS) be issued to SNET Cellular, Inc., for the construction, operation, and maintenance of a cellular telephone facility and associated equipment off of Wintechog Hill Road in the Town of North Stonington, Connecticut.

The facility shall be constructed, operated, and maintained substantially as specified in the Council's record in Docket No. 91, with changes as specified in this amendment.

The Certificate Holder shall abide by all of the conditions issued by the Council in its Decision and Order for Docket No. 91, dated March 22, 1988.

Pursuant to CGS Section 16-50p, we hereby direct that a copy of this Decision and Order be served on each person listed below, and that a notice of issuance shall be published in the New London Day.

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

The Parties to this proceeding are:

SNET Cellular, Inc. (Applicant)
555 Long Wharf Drive
New Haven, CT 06511

Peter J. Tyrrell (Its Attorney)
Senior Attorney
227 Church Street
New Haven, CT 06510

RKE/bd

4339E

CERTIFICATION

The undersigned members of the Connecticut Siting Council hereby certify that they have heard this case in Docket No. 91A - SNET Cellular, Inc., Amended Certificate for Environmental Compatibility and Public Need for cellular telephone antennas and associated equipment in the Town of North Stonington, Connecticut or read the record thereof, and that we voted as follows:

Dated at New Britain, Connecticut the 30th day of April, 1990.

Council Members	Vote Cast
Gloria Dibble Pond Chairperson	Yes
Commissioner Peter Boucher Designee: Robert A. Pulito	Yes
Commissioner Leslie Carothers Designee: Brian Emerick	Yes
Harry E. Covey	Abstain
Mortimer A. Gelston	Yes
Daniel P. Lynch, Jr.	Yes
Paulann H. Sheets	Yes
William H. Smith	Yes
Colin C. Tait	Yes

4328E-2

Town of North Stonington, CT

Property Listing Report | Map Block Lot **93 4392** | Building # | Unique Identifier **G6195000**

Property Information

Property Location	118C WINTECHOG HL
Mailing Address	P O BOX 723597 ATLANTA GA 31139
Land Use	Cell Tower
Zoning Code	R80
Neighborhood	C120

Owner	AMERICAN TOWER
Co-Owner	PROPERTY TAX DEPT
Book / Page	0112/0098
Land Class	Vacant Land
Census Tract	7071
Acreage	0.98

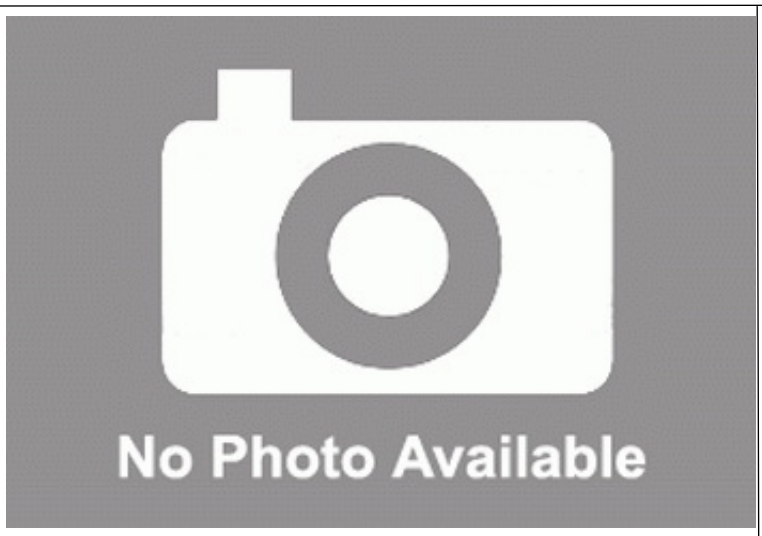
Valuation Summary

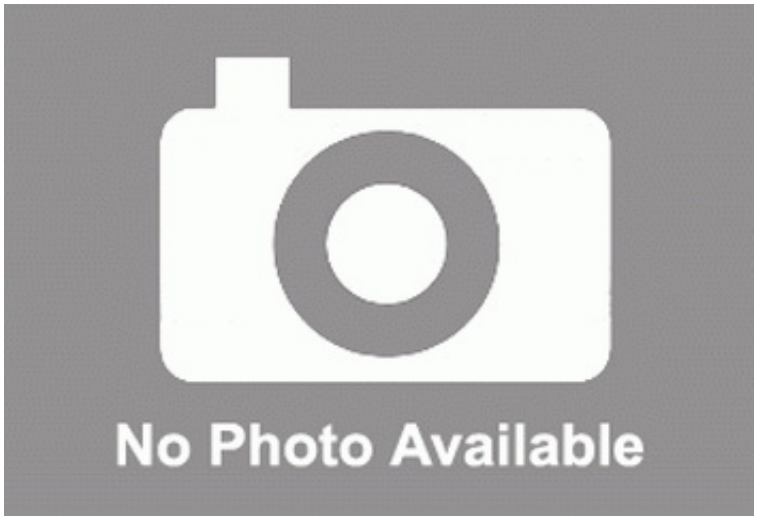
(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	0	0
Outbuildings	133600	93520
Land	444000	310800
Total	577600	404320

Utility Information

Electric	No
Gas	No
Sewer	No
Public Water	No
Well	No





Primary Construction Details

Year Built		Heating Fuel		Building Use	
Building Desc.		Heating Type		Building Condition	
Building Style		AC Type		Frame Type	
Stories		Bedrooms		Fireplaces	
Exterior Walls		Full Bathrooms		Bsmt Gar	
Exterior Walls 2		Half Bathrooms		Fin Bsmt Area	
Interior Walls		Extra Fixtures		Fin Bsmt Quality	
Interior Walls 2		Total Rooms		Building Grade	
Interior Floors 1		Bath Style		Roof Style	
Interior Floors 2		Kitchen Style		Roof Cover	
		Occupancy			

Report Created On **4/12/2022**

Town of North Stonington, CT

Property Listing Report | Map Block Lot **93 4392** | Building # | Unique Identifier **G6195000**

Detached Outbuildings

Type	Description	Area (sq ft)	Condition	Year Built
Utility	Building	308	Average	2000
Fence	6 Ft Chain	370	Average	2000
Utility	Building	308	Average	2000
Utility	Building	575	Average	2000
Utility	Building	575	Average	2000
Other	Generator	1	Excellent	2013

Attached Extra Features

Type	Description	Area (sq ft)	Condition	Year Built

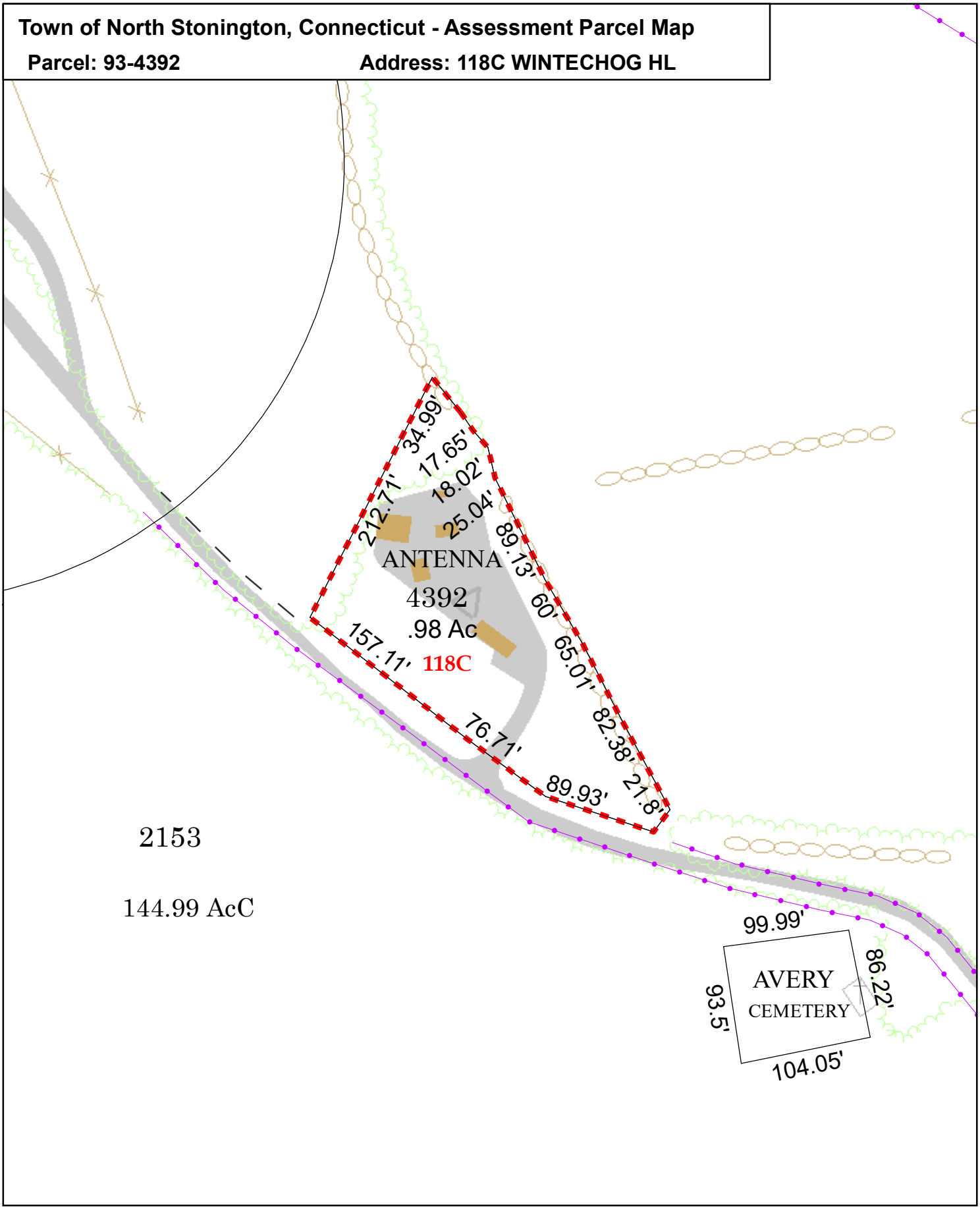
Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
AMERICAN TOWER	0112_0098	11/1/1996	1000000
GOGUEN GERALD A	0069_0531	2/6/1987	27500

Report Created On **4/12/2022**

Town of North Stonington, Connecticut - Assessment Parcel Map

Parcel: 93-4392 **Address: 118C WINTECHOG HL**



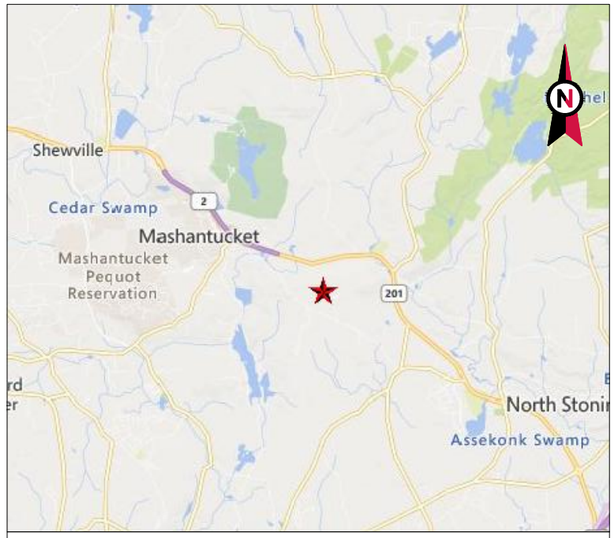
N

Approximate Scale: 1:1,200

0 20 40 80 120 160 Feet

Map Produced June 2020

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



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: NORTH STONINGTON CT
ATC SITE NUMBER: 6260
T-MOBILE SITE NAME: NORTH STONINGTON-3_1
T-MOBILE SITE NUMBER: CT11266A
SITE ADDRESS: 118C WINTECHOG HILL RD.,
OFF OF RT. 2
NORTH STONINGTON,CT 06359

T-MOBILE ANCHOR AMENDMENT PLAN
67D5D998E OUTDOOR CONFIGURATION

LOCATION MAP

BIRD WATCH SITE:
PLEASE CONTACT BIRD.WATCH@AMERICANTOWER.COM OR AMERICAN TOWER NOC AT 877-518-6937 FOR ASSISTANCE

COMPLIANCE CODE

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.

1. INTERNATIONAL BUILDING CODE (IBC)
2. NATIONAL ELECTRIC CODE (NEC)
3. LOCAL BUILDING CODE
4. CITY/COUNTY ORDINANCES

UTILITY COMPANIES

POWER COMPANY: NORTHEAST UTILITIES
PHONE: (800) 286-2000

TELEPHONE COMPANY: AT&T
PHONE: (800) 288-2020

811
Know what's below.
Call before you dig.

PROJECT SUMMARY

SITE ADDRESS:

118C WINTECHOG HILL RD., OFF OF RT. 2
NORTH STONINGTON,CT 06359
COUNTY: NEW LONDON

GEOGRAPHIC COORDINATES:

LATITUDE: 41.45985788
LONGITUDE: -71.9273517
GROUND ELEVATION: 448' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

APPLICANT:

T-MOBILE

ENGINEER:

ATC TOWER SERVICES, LLC
3500 REGENCY PKWY STE 100
CARY, NC 27518

PROPERTY OWNER:

ATC
118C WINTECHOG HILL RD.,
OFF OF RT. 2
NORTH STONINGTON,CT 06359

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW:

TOWER WORK:

REMOVE (6) ANTENNA(s) AND (1) HYBRID CABLE

INSTALL (6) ANTENNA(s), (3) RRH(s), AND (3) HCS 2.0 TRUNK CABLE(s)

EXISTING (3) ANTENNA(s), (3) RRH(s), AND (3) HYBRID CABLE(s) TO REMAIN

GROUND WORK:

INSTALL (1) CONCRETE PAD, (1) ENCLOSURE 6160 W/ (1) iXRe ROUTER, (2) RP 6651, AND (1) PSU4813 VOLTAGE BOOSTER, AND (1) B160 BATTERY CABINET

PROJECT NOTES

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.
6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).

PROJECT LOCATION DIRECTIONS

TAKE I-395 TO EXIT 85 TO RTE 164 SOUTH; RIGHT ON RT 2 EAST. THEN RIGHT ON WINTECHOG HILL RD. LEFT AT THE BUSINESS ENTRANCE OF GREENHOUSE. & FOLLOW THE DIRT RD TO THE TOWER

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	0	03/30/22	JP
G-002	GENERAL NOTES	0	03/30/22	JP
C-101	DETAILED SITE PLAN	0	03/30/22	JP
C-102	DETAILED GROUND PLAN	0	03/30/22	JP
C-201	TOWER ELEVATION	0	03/30/22	JP
C-401	ANTENNA INFORMATION & SCHEDULE	0	03/30/22	JP
C-501	CONSTRUCTION DETAILS	0	03/30/22	JP
C-502	CONSTRUCTION DETAILS	0	03/30/22	JP
E-501	GROUNDING DETAILS	0	03/30/22	JP
R-601	SUPPLEMENTAL			
R-602	SUPPLEMENTAL			
R-603	SUPPLEMENTAL			
R-604	SUPPLEMENTAL			
R-605	SUPPLEMENTAL			
R-606	SUPPLEMENTAL			
R-607	SUPPLEMENTAL			
R-608	SUPPLEMENTAL			
R-609	SUPPLEMENTAL			

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

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JP	03/30/22

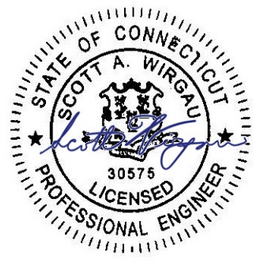
ATC SITE NUMBER:
6260

ATC SITE NAME:
NORTH STONINGTON CT

T-MOBILE SITE NAME:
NORTH STONINGTON-3_1

SITE ADDRESS:
118C WINTECHOG HILL RD., OFF OF RT. 2
NORTH STONINGTON,CT 06359

SEAL:



Authorized by "EOR"
30 Mar 2022 01:06:08

T-Mobile

DATE DRAWN:	03/30/22
ATC JOB NO:	13934708_G3
CUSTOMER ID:	NORTH STONINGTON-3_1
CUSTOMER #:	CT11266A

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	0

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, T-MOBILE "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
   - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
   - B. AC/TELCO INTERFACE BOX (PPC)
   - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
   - D. TOWERS, MONOPOLES
   - E. TOWER LIGHTING
   - F. GENERATORS & LIQUID PROPANE TANK
   - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
   - H. ANTENNAS (INSTALLED BY OTHERS)
   - I. TRANSMISSION LINE
   - J. TRANSMISSION LINE JUMPERS
   - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
   - L. TRANSMISSION LINE GROUND KITS
   - M. HANGERS
   - N. HOISTING GRIPS
   - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF T-MOBILE TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. 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.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE T-MOBILE REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE T-MOBILE REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE T-MOBILE REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE T-MOBILE CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE T-MOBILE REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH T-MOBILE AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE 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.
22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY T-MOBILE MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH T-MOBILE SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO T-MOBILE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO T-MOBILE SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. 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.
27. CONTRACTOR SHALL NOTIFY T-MOBILE 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.
28. 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.
29. 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 NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT 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.
30. 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 REP. ANY WORK FOUND BY THE T-MOBILE REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
31. 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.
32. T-MOBILE FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE T-MOBILE WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
33. T-MOBILE OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO T-MOBILE OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
   - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY T-MOBILE UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL.
   - B. INSTALL ANTENNAS AS INDICATED ON DRAWINGS AND T-MOBILE SPECIFICATIONS.
   - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.
   - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE.
   - E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.
   - F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
   - G. ANTENNA AND COAXIAL CABLE GROUNDING:
2. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.
3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

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

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JP	03/30/22

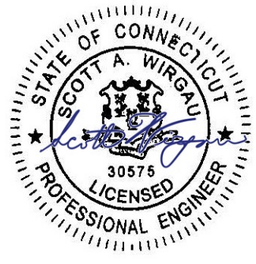
ATC SITE NUMBER:
6260

ATC SITE NAME:
NORTH STONINGTON CT

T-MOBILE SITE NAME:
NORTH STONINGTON-3_1

SITE ADDRESS:
118C WINTECHOG HILL RD., OFF OF RT. 2
NORTH STONINGTON,CT 06359

SEAL:



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30 Mar 2022 01:06:08

T-Mobile cosign

DATE DRAWN:	03/30/22
ATC JOB NO:	13934708_G3
CUSTOMER ID:	NORTH STONINGTON-3_1
CUSTOMER #:	CT11266A

GENERAL NOTES

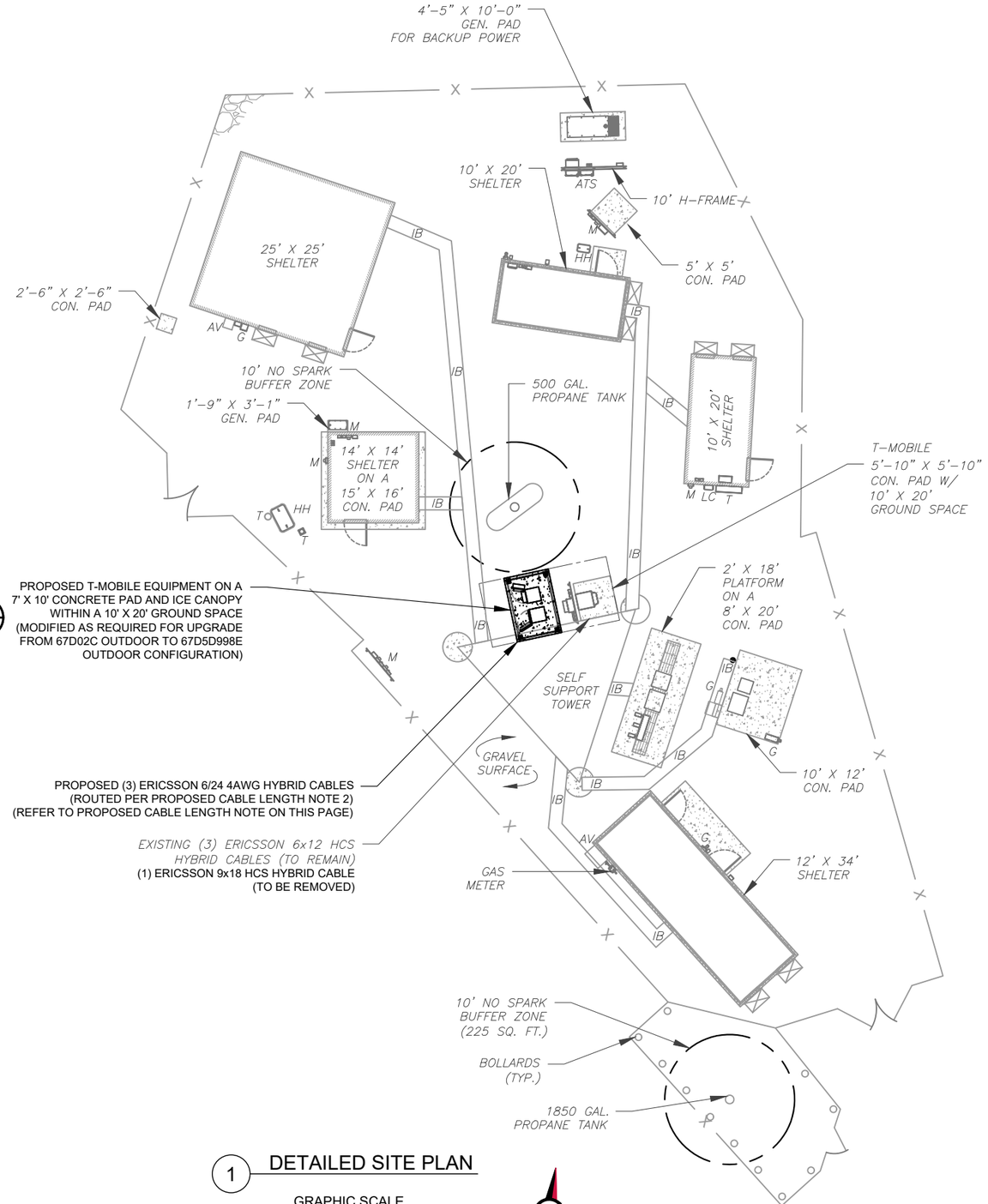
SHEET NUMBER:	REVISION:
G-002	0

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. NO ELECTRICAL SCOPE IS INCLUDED IN THIS PROJECT.

LEGEND

⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACAL
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
———	CHAINLINK FENCE



1 DETAILED SITE PLAN

GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 UNIT = 20 FEET

PROPOSED CABLE LENGTH:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **300'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR 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), CDS DEFER TO GREATEST CABLE LENGTH.
2. 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).

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0	FOR CONSTRUCTION	JP	03/30/22

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ATC SITE NAME:
NORTH STONINGTON CT

T-MOBILE SITE NAME:
NORTH STONINGTON-3_1

SITE ADDRESS:
118C WINTECHOG HILL RD., OFF OF RT. 2
NORTH STONINGTON,CT 06359

SEAL:

STATE OF CONNECTICUT · SCOTT A. WIRGAU · 30575 · LICENSED PROFESSIONAL ENGINEER

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T-Mobile cosign

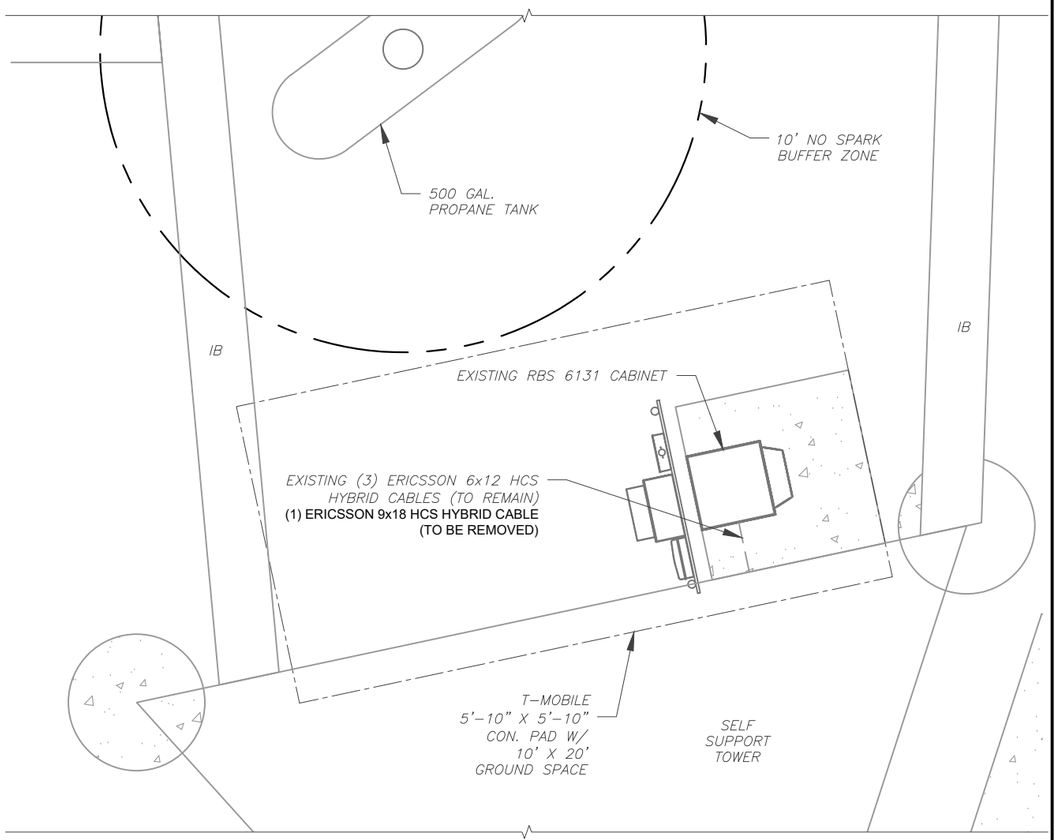
DATE DRAWN:	03/30/22
ATC JOB NO:	13934708_G3
CUSTOMER ID:	NORTH STONINGTON-3_1
CUSTOMER #:	CT11266A

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	0

SITE PLAN NOTES:

1. CONTRACTOR TO VERIFY THERE IS NO LIVE AAV FIBER RUNNING THROUGH EXISTING DEAD EQUIPMENT. IF SO, THIS WILL NEED TO BE RERUN THROUGH CONDUIT PRIOR TO REMOVING DEAD 2G (6201 CABS) EQUIPMENT.
2. ALL OPEN PORTS NEED TO BE SEALED / WEATHERPROOFED PROPERLY
3. ALL UNNEEDED / EXCESS EQUIPMENT AND GARBAGE TO BE REMOVED FROM EQUIPMENT AREA. DISPOSE OF MATERIALS PROPERLY OFF SITE.



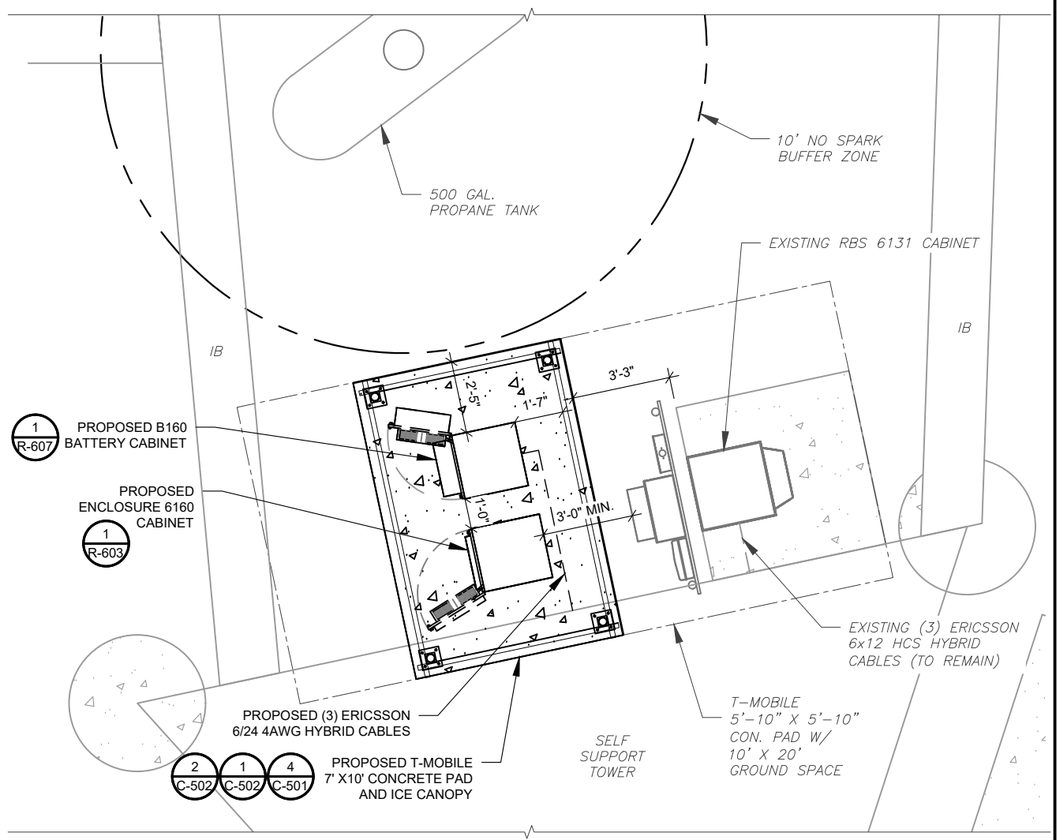
1 EXISTING GROUND EQUIPMENT LAYOUT

GRAPHIC SCALE

5 0 2.5 5

(IN FEET)
1 UNIT = 5 FEET

T-MOBILE CM APPROVAL REQUIRED BEFORE INSTALLING CABINETS.



2 PROPOSED GROUND EQUIPMENT LAYOUT

GRAPHIC SCALE

5 0 2.5 5

(IN FEET)
1 UNIT = 5 FEET

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JP	03/30/22

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ATC SITE NAME:
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T-MOBILE SITE NAME:
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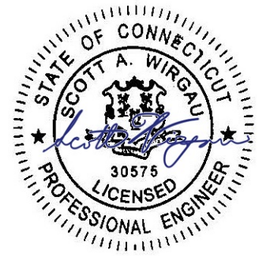
NORTH STONINGTON,CT 06359

SEAL:



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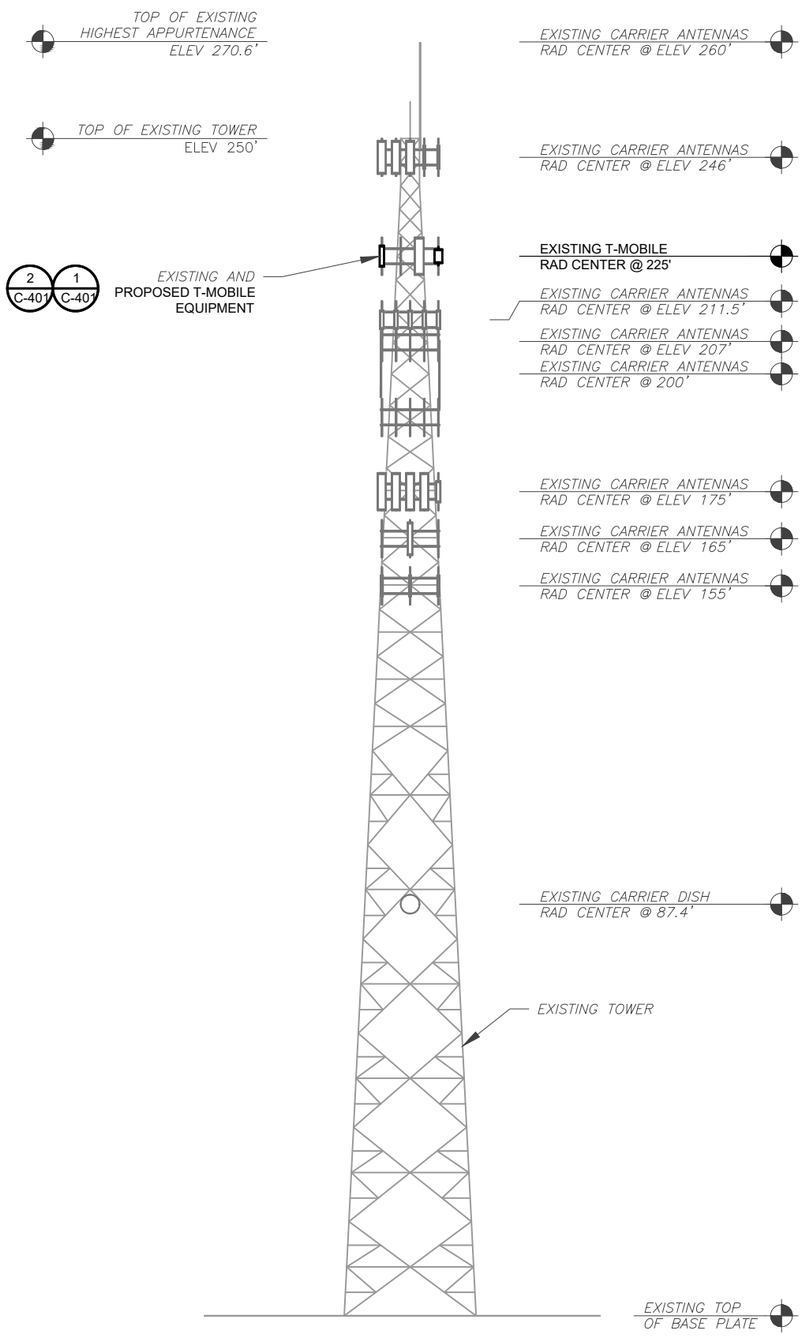
30 Mar 2022 01:06:09

DATE DRAWN:	03/30/22
ATC JOB NO:	13934708_G3
CUSTOMER ID:	NORTH STONINGTON-3_1
CUSTOMER #:	CT11266A

DETAILED GROUND PLAN

SHEET NUMBER:	REVISION:
C-102	0

PER MOUNT ANALYSIS COMPLETED BY ATC, DATED 03/14/22, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.



1 TOWER ELEVATION
SCALE: N.T.S.

TOWER NOTE:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT 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.
2. WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
3. 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).
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.)
5. TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.

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NORTH STONINGTON,CT 06359

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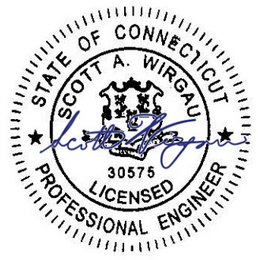

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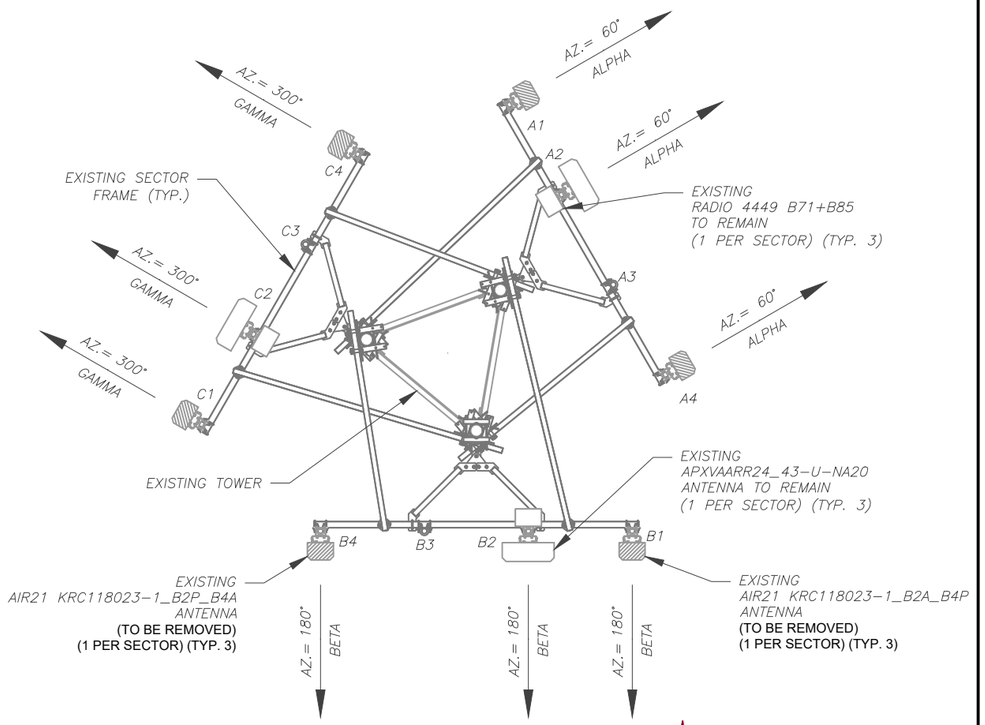
T-Mobile

DATE DRAWN:	03/30/22
ATC JOB NO:	13934708_G3
CUSTOMER ID:	NORTH STONINGTON-3_1
CUSTOMER #:	CT11266A

TOWER ELEVATION

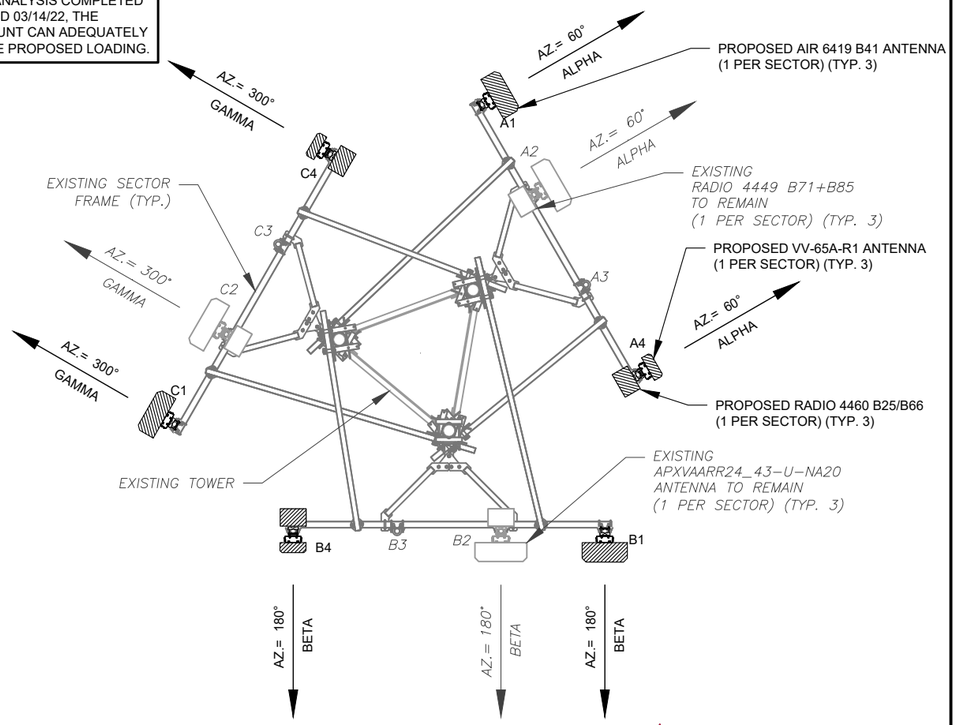
SHEET NUMBER:	REVISION:
C-201	0



1 EXISTING ANTENNA PLAN

SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY ATC, DATED 03/14/22, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.



2 FINAL ANTENNA PLAN

SCALE: N.T.S.

EXISTING ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY					NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	225'	60°	A1	AIR21 KRC118023-1_B2A_B4P	U1900, G1900	0°	RMV	-	-
			A2	APXVAARR24_43-U-NA20	L700, L600, N600	0°	RMN	RADIO 4449 B71+B85	RMN
			A3	-	-	-	-	-	-
			A4	AIR21 KRC118023-1_B2P_B4A	L2100	0°	RMV	-	-
BETA	225'	180°	B1	AIR21 KRC118023-1_B2A_B4P	U1900, G1900	0°	RMV	-	-
			B2	APXVAARR24_43-U-NA20	L700, L600, N600	0°	RMN	RADIO 4449 B71+B85	RMN
			B3	-	-	-	-	-	-
			B4	AIR21 KRC118023-1_B2P_B4A	L2100	0°	RMV	-	-
GAMMA	225'	300°	C1	AIR21 KRC118023-1_B2A_B4P	U1900, G1900	0°	RMV	-	-
			C2	APXVAARR24_43-U-NA20	L700, L600, N600	0°	RMN	RADIO 4449 B71+B85	RMN
			C3	-	-	-	-	-	-
			C4	AIR21 KRC118023-1_B2P_B4A	L2100	0°	RMV	-	-

NOTES

1. CONFIRM WITH T-MOBILE REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
2. CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.

STATUS ABBREVIATIONS

RMV: TO BE REMOVED
RMN: TO REMAIN
REL: TO BE RELOCATED
ADD: TO BE ADDED

CABLE LENGTHS FOR JUMPERS

JUNCTION BOX TO RRU: 15'
RRU TO ANTENNA: 10'

FINAL ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY					NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	225'	60°	A1	AIR 6419 B41	L2500, N2500	0°/2°	ADD	-	-
			A2	APXVAARR24_43-U-NA20	L700, L600, N600	0°/2°	RMN	RADIO 4449 B71+B85	RMN
			A3	-	-	-	-	-	-
			A4	VV-65A-R1	L2100, L1900, G1900, U1900	0°/2°	ADD	RADIO 4460 B25/B66	ADD
BETA	225'	180°	B1	AIR 6419 B41	L2500, N2500	0°/2°	ADD	-	-
			B2	APXVAARR24_43-U-NA20	L700, L600, N600	0°/2°	RMN	RADIO 4449 B71+B85	RMN
			B3	-	-	-	-	-	-
			B4	VV-65A-R1	L2100, L1900, G1900, U1900	0°/2°	ADD	RADIO 4460 B25/B66	ADD
GAMMA	225'	300°	C1	AIR 6419 B41	L2500, N2500	0°/2°	ADD	-	-
			C2	APXVAARR24_43-U-NA20	L700, L600, N600	0°/2°	RMN	RADIO 4449 B71+B85	RMN
			C3	-	-	-	-	-	-
			C4	VV-65A-R1	L2100, L1900, G1900, U1900	0°/2°	ADD	RADIO 4460 B25/B66	ADD

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
-	-	-	(3) 6X12 HCS	RMN
-	-	-	(1) 9X18 HCS	RMV

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
-	-	-	(3) 6X12 HCS	RMN
-	-	-	(3) 6/24 4AWG	ADD

3 EQUIPMENT SCHEDULES

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ATC SITE NUMBER:
6260

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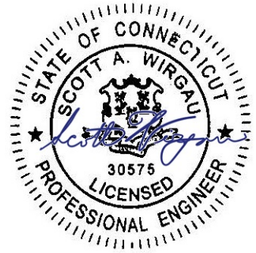
NORTH STONINGTON CT

T-MOBILE SITE NAME:
NORTH STONINGTON-3_1

SITE ADDRESS:
118C WINTECHOG HILL RD., OFF OF RT. 2
NORTH STONINGTON,CT 06359

SEAL:



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30 Mar 2022 01:06:09

DATE DRAWN:	03/30/22
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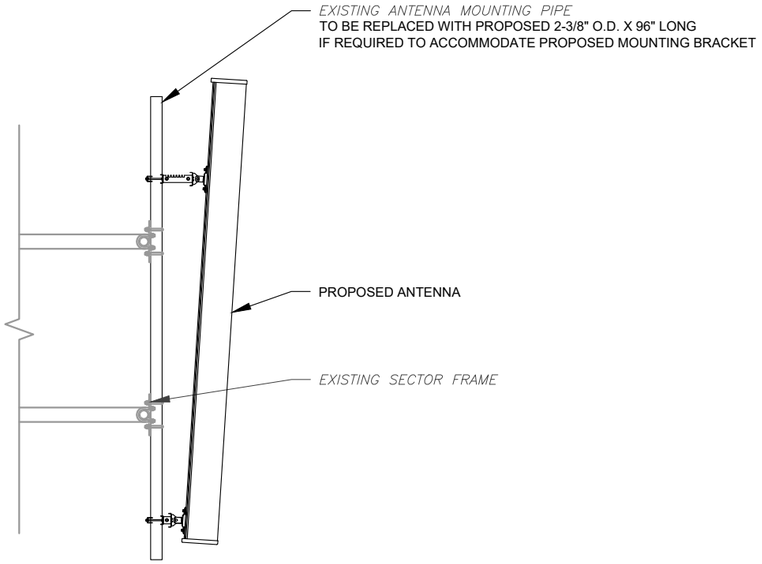
CUSTOMER ID:	NORTH STONINGTON-3_1
CUSTOMER #:	CT11266A

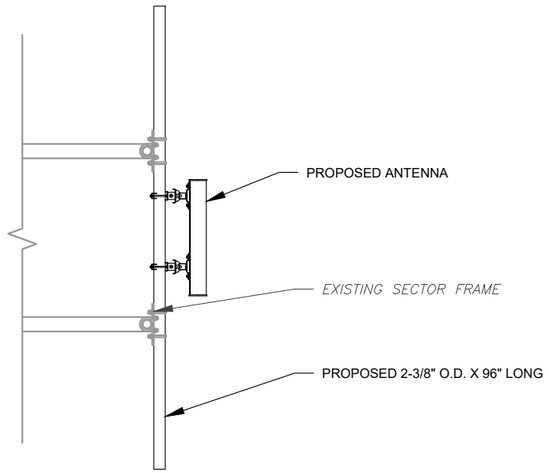
ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	0



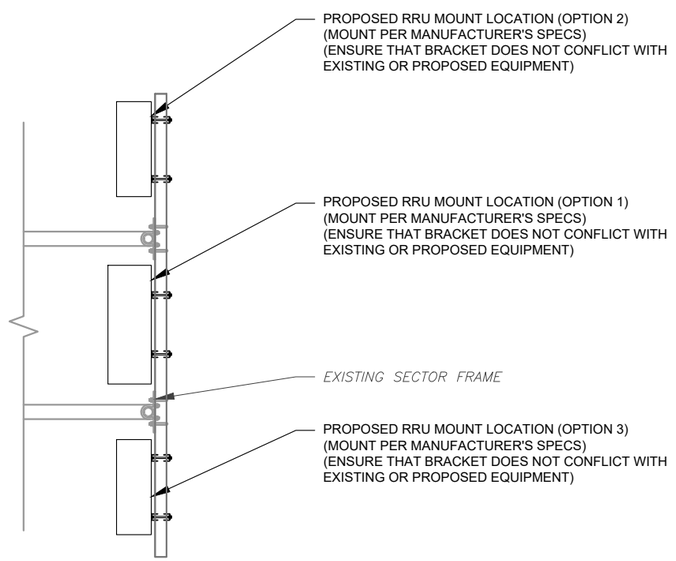
1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: NOT TO SCALE



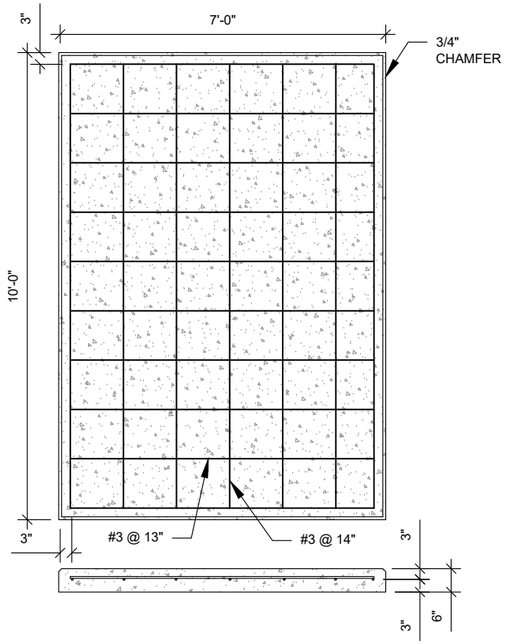
2 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



3 PROPOSED RRU MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.

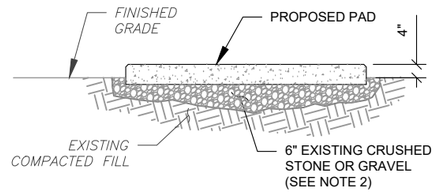


PAD NOTES:

1. PADS SHALL BE PRE-CAST MATCHING THIS DESIGN WHERE ALLOWED BY LOCAL JURISDICTION.
2. REFER TO CONCRETE & REINFORCED STEEL NOTES ON SHEET G-002 & ATC SPEC 033000 FOR CAST-IN-PLACE PADS.

4 REINFORCED PAD LAYOUT

SCALE: N.T.S.



PAD NOTES:

1. SUBGRADE AND FILL SHALL CONSIST OF CLEAN SOIL. DELETRIOUS MATERIAL AND ORGANICS SHALL BE REMOVED.
2. MECHANICALLY COMPACT FOOTPRINT OF PAD PLUS 2' PERIMETER.
3. USE GALVANIZED HILTI EXPANSION ANCHORS OR, APPROVED EQUAL, FOR EQUIPMENT ANCHORAGE.
4. FOR SIZE AND LOCATION OF ANCHORS AND OTHER REQUIREMENT, SEE EQUIPMENT VENDOR DRAWINGS.

5 GRAVEL PREPARATION

SCALE: N.T.S.

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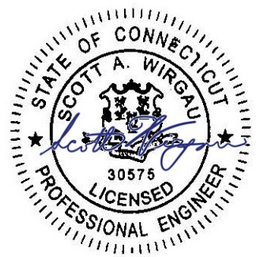
NORTH STONINGTON,CT 06359

SEAL:



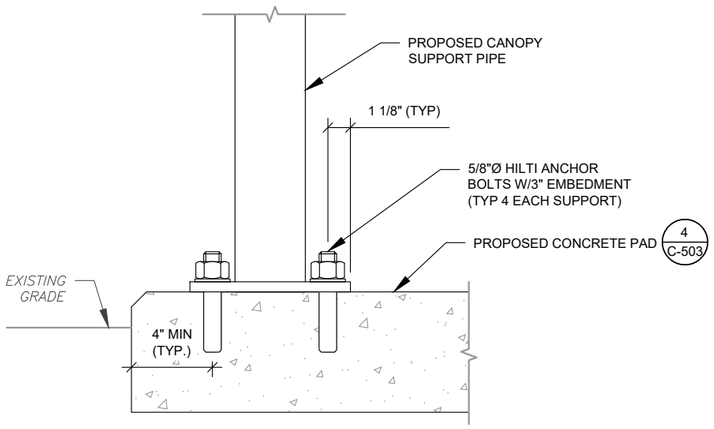
Authorized by "EOR"
30 Mar 2022 01:06:10

T-Mobile eosign

DATE DRAWN:	03/30/22
ATC JOB NO:	13934708_G3
CUSTOMER ID:	NORTH STONINGTON-3_1
CUSTOMER #:	CT11266A

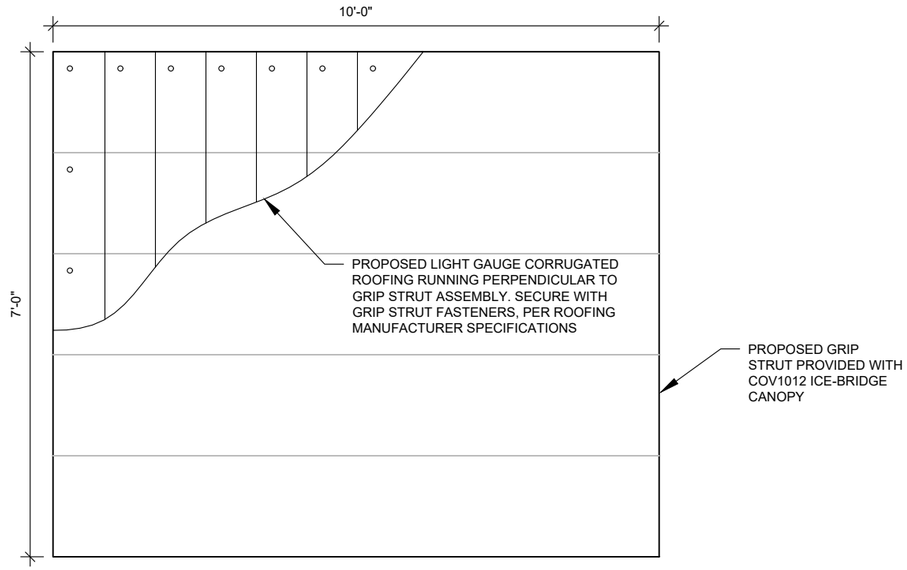
CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	0



1 CANOPY SUPPORT/ANCHOR DETAIL

SCALE: N.T.S.



2 ROOF DETAIL

SCALE: N.T.S.

AMERICAN TOWER®

A.T. ENGINEERING SERVICE, PLLC

3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: P-1177

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JP	03/30/22

ATC SITE NUMBER:
6260

ATC SITE NAME:
NORTH STONINGTON CT

T-MOBILE SITE NAME:
NORTH STONINGTON-3_1

SITE ADDRESS:
118C WINTECHOG HILL RD., OFF OF RT. 2
NORTH STONINGTON,CT 06359

SEAL:

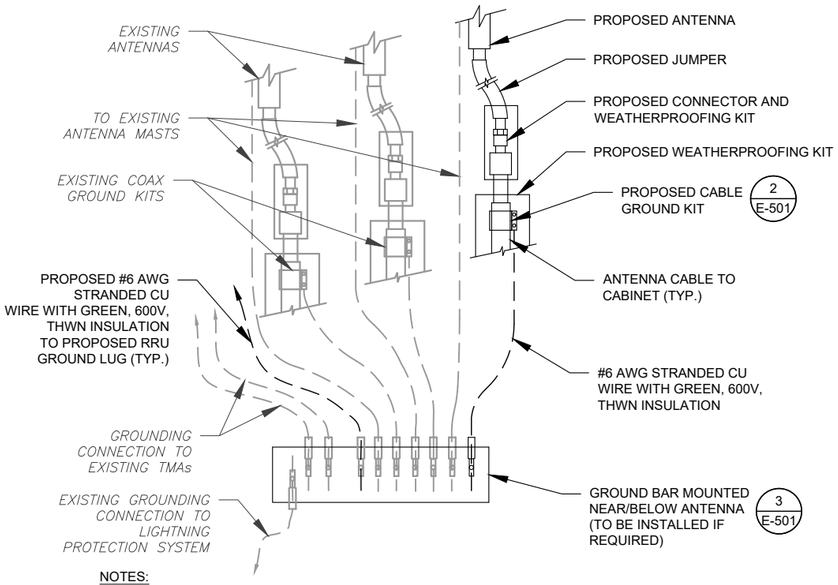
Authorized by "EOR"
30 Mar 2022 01:06:10

T-Mobile cosign

DATE DRAWN:	03/30/22
ATC JOB NO:	13934708_G3
CUSTOMER ID:	NORTH STONINGTON-3_1
CUSTOMER #:	CT11266A

CONSTRUCTION
DETAILS

SHEET NUMBER:	REVISION:
C-502	0

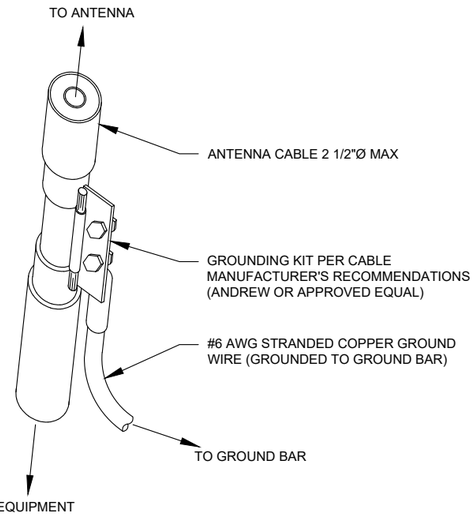


NOTES:

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: N.T.S.

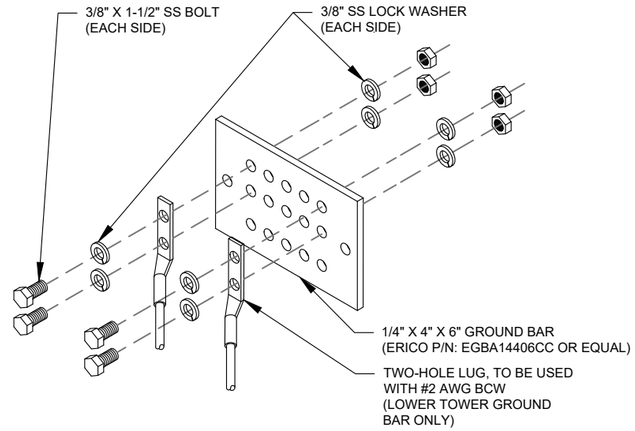


GROUND KIT NOTES:

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: N.T.S.



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

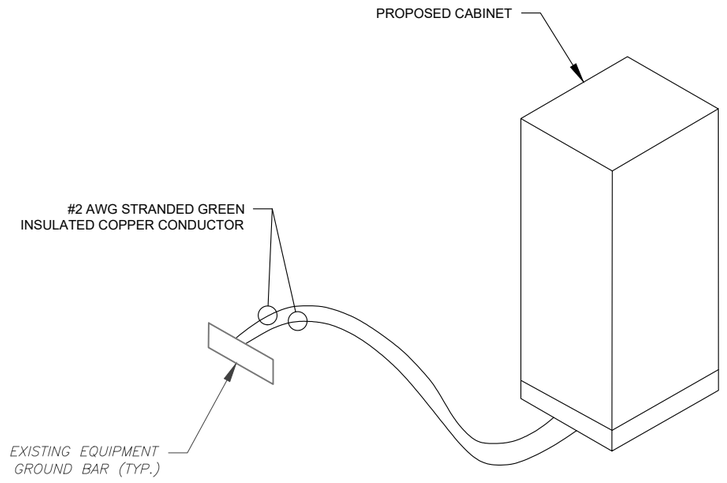
SCALE: N.T.S.

ELECTRICAL NOTES:

1. 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.
2. ATC HAS NOT 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. PROPOSED CABLE AND CONDUIT SHALL BE MINIMUM SIZE PER BELOW IN CHART.
3. FOR SPECIFIC CABINET / ANCILLARY EQUIPMENT WIRING REQUIREMENTS, THE T-MOBILE CONTRACTOR SHOULD REFERENCE DESIGN DOCUMENTS PROVIDED BY T-MOBILE FOR THIS CURRENT PROJECT CONFIGURATION, IN ACCORDANCE WITH LOCAL JURISDICTION REQUIREMENTS & NEC STANDARDS & PRACTICES.

OCPD SIZE	WIRE SIZE	GROUND SIZE	CONDUIT SIZE
80A/2P	2#3 AWG	#8 AWG	1-1/4"
100/2P	2#2 AWG	#8 AWG	1-1/4"
125A/2P	2#1 AWG	#8 AWG	1-1/2"
150A/2P	2#1/0 AWG	#8 AWG	1-1/2"

4 ELECTRICAL NOTES



5 CABINET GROUNDING DETAIL

SCALE: N.T.S.

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

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JP	03/30/22

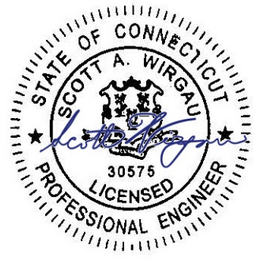
ATC SITE NUMBER:
6260

ATC SITE NAME:
NORTH STONINGTON CT

T-MOBILE SITE NAME:
NORTH STONINGTON-3_1

SITE ADDRESS:
118C WINTECHOG HILL RD., OFF OF RT. 2
NORTH STONINGTON,CT 06359

SEAL:



Authorized by "EOR"
30 Mar 2022 01:06:10

T-Mobile

DATE DRAWN:	03/30/22
ATC JOB NO:	13934708_G3
CUSTOMER ID:	NORTH STONINGTON-3_1
CUSTOMER #:	CT11266A

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	0

Existing RAN Equipment	
Template: 67D02C Outdoor	
Enclosure	1
Enclosure Type	RBS 6131
Baseband	DUW30 DUW30 U1900 DUG20 G1900 BB 6630 L2100 BB 6630 L700 L600 N600
Hybrid Cable System	Ericsson 9x18 HCS *Select Length* Ericsson 6x12 HCS *Select Length & AWG* **(x 3)**
Radio	RUS01 B4 **(x 6)**

Proposed RAN Equipment				
Template: 67D5D998E Outdoor				
Enclosure	1	2	3	4
Enclosure Type	RBS 6131	Ancillary Equipment (Ericsson)	Enclosure 6160 AC V1	B160
Baseband	DUW30 U1900 DUG20 G1900 BB 6630 L700 L600 N600 BB 6630 L2100 L1900		RP 6651 L2500 RP 6651 N2500	
Hybrid Cable System	Ericsson 6x12 HCS *Select Length & AWG* **(x 3)**		PSU 4813 vR4A (Kit) Ericsson Hybrid Trunk 6/24 4AWG 100m **(x 3)**	
Transport System			CSR IXRe V2 (Gen2)	

RAN Scope of Work:

Remove and return all cabinet radios from existing base station cabinet.

Add (1) Enclosure 6160.

Add (1) iXRe Router to new Enclosure 6160.

Add (1) RP 6651 for L2500 to new Enclosure 6160.

Add (1) RP 6651 for N2500 to new Enclosure 6160.

Add (1) PSU4813 Voltage Booster to new Enclosure 6160.

Add (1) Battery Cabinet B160.

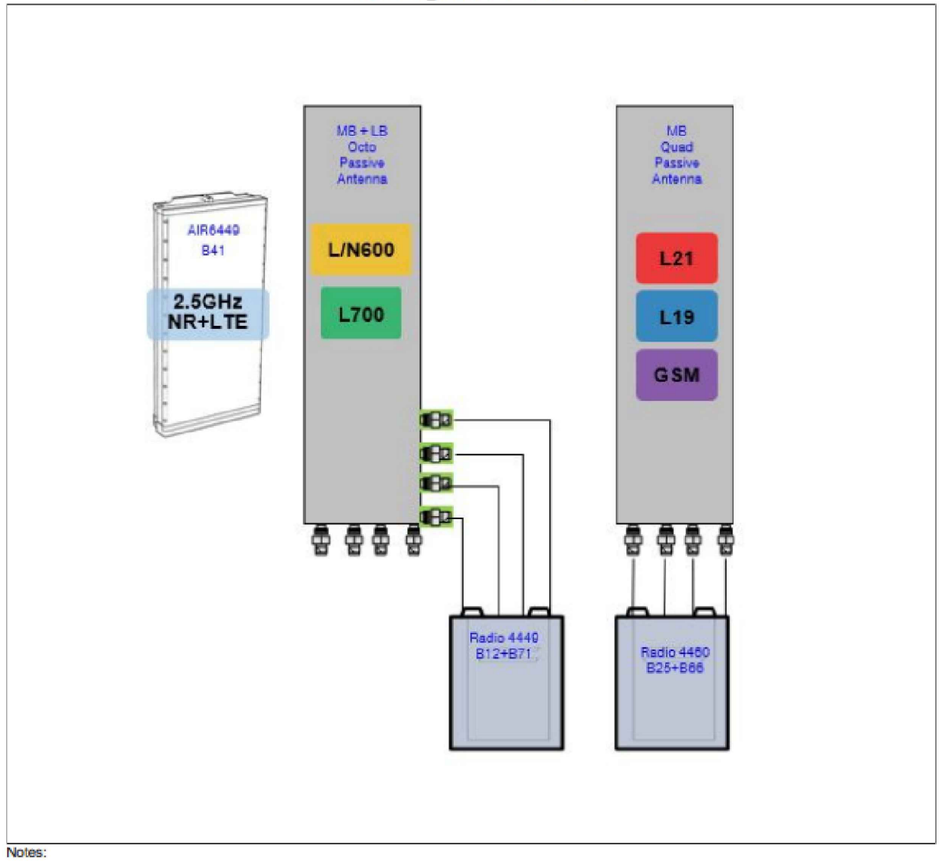
Existing : (3) 6x12, (1) 9x18

Remove all Coax. and (1) 9x18

Add (3) 6X24 HCS terminating at the Enclosure 6160 and Connect DC for the AIR6449 B41 to the PSU4813 Voltage Booster.

1 CABINET CONFIGURATION

67D5998E_1xAIR+1OP+1QP.JPG



Notes:

2 ANTENNA CONFIGURATION

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

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-601	0

STANDARD CONDUIT USE TABLE

CONDUIT TYPE	USE CASE	LOCATION	USE CASE EXAMPLE
RMC (METALLIC)	AC, DC COMM	ABOVE GROUND	ABOVE GROUND PPC TO SSC
PVC	AC POWER	UNDERGROUND	UNDERGROUND PPC TO SSC OR BACKHAUL TRANSPORT HUB TO SSC
LFMC	AC, DC, COMM	MAX 6' PER CONDUIT RUN, ABOVE GROUND ONLY	TIGHT LOCATIONS BETWEEN HUB AND CONDUIT BUT NOT TO BE USED WHERE IT CAN BE STEPPED ON
EMT	INDOOR AC, DC COMM	INDOOR NOT EXPOSED TO THE OUTDOOR ENVIRONMENT (MUST BE DRY)	CIRCUIT PANEL TO JUNCTION BOX
LFNC	GROUND WIRE	CONCEALING AND PROTECTING BTCW RISERS ONLY	GROUND RING TO MGB OR SSC

EXCEPTION CONDUIT USE TABLE

CONDUIT TYPE	USE CASE	LOCATION	USE CASE EXAMPLE
EMT (NOT PREFERRED)	OUTDOOR DC, COMM	OUTDOOR WHEN USED WITH WATERTIGHT HUBS ONLY	BETWEEN EQUIPMENT AND BATTERY CABINET OR EQUIPMENT TO EQUIPMENT CABINETS FOR INTER CABINET CONNECTION
RMC NONMETALLIC (ALUMINUM)	OUTDOOR/INDOOR PER NEC GUIDLINES	ABOVE GROUND	MAT BE USED AS A LOWER COST ALTERNATIVE TO METALLIC RMC, MUST MEET OR EXCEED FEDERAL SPEC: WW-C-540C, UL-6A, ANSI C80.5, NEC 344.10 (A) ALLOWS THE USE OF EITHER ALUMINUM OR GALVANIZED FITTINGS

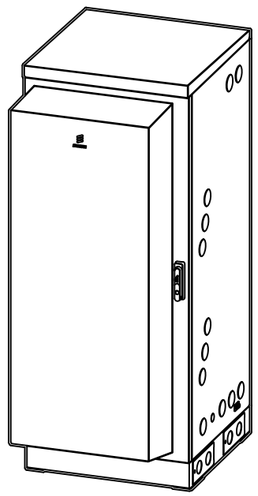
NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

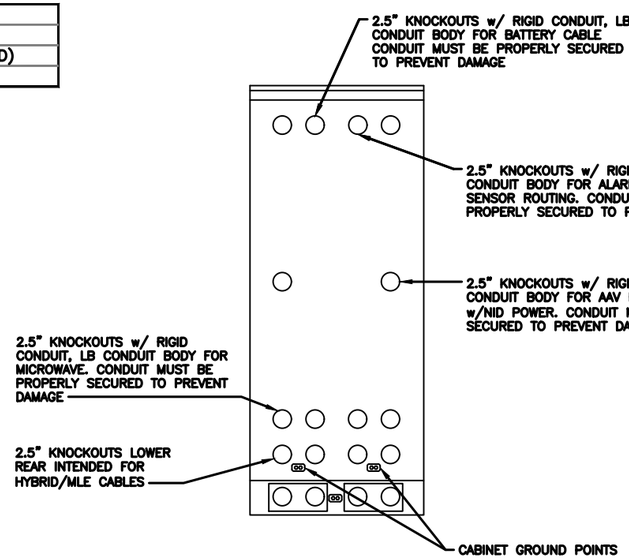
SUPPLEMENTAL

SHEET NUMBER: R-602

REVISION: 0

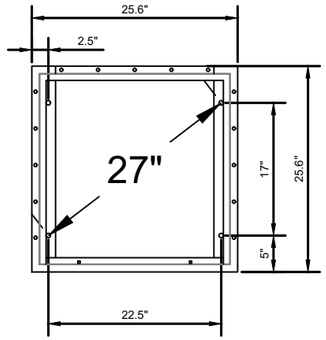
MANUFACTURER:	ERICSSON
MODEL:	6160 SITE SUPPORT CABINET
DIMENSIONS:	63" x 25.6" x 33.6" (H x W x D)
WEIGHT:	373 LBS





REAR VIEW

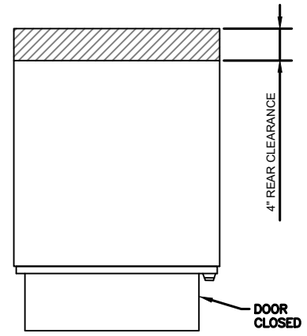
NOTE:
- CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS. DO NOT DRILL THROUGH KNOCKOUTS
- CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND OR CABLING

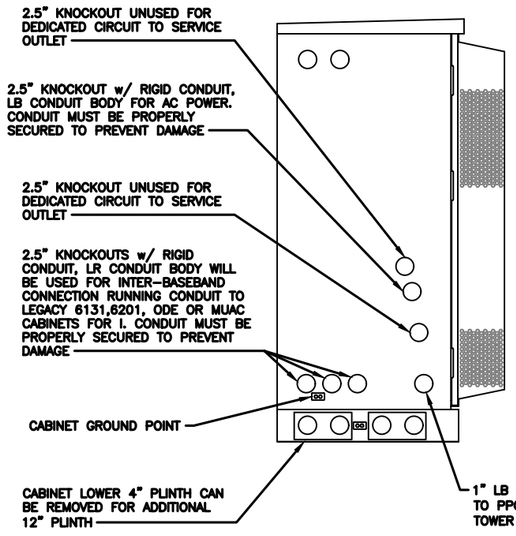


BOLT DOWN PATTERN

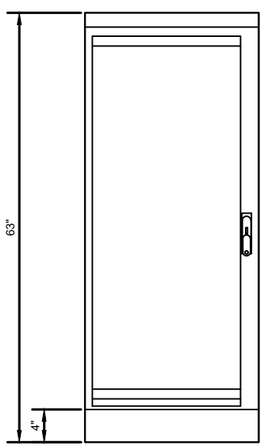
GROUNDING NOTE:

"CABINET GROUNDING TO USE A SINGLE, #2 BTCW CONDUCTOR, W/ 2-HOLE, 1" C-C, LONG BARREL, WINDOW LUG, IN 3/4" LFNC TO GROUND RING. PLINTH GROUNDING IS NOT REQUIRED."

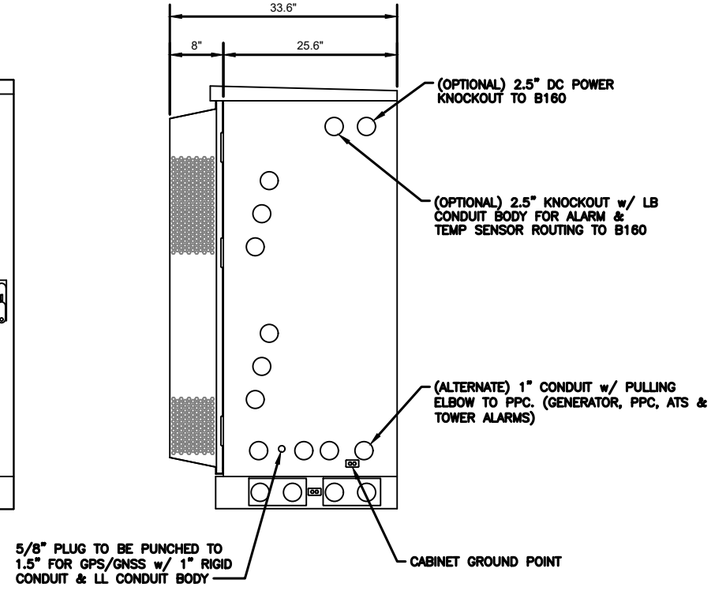




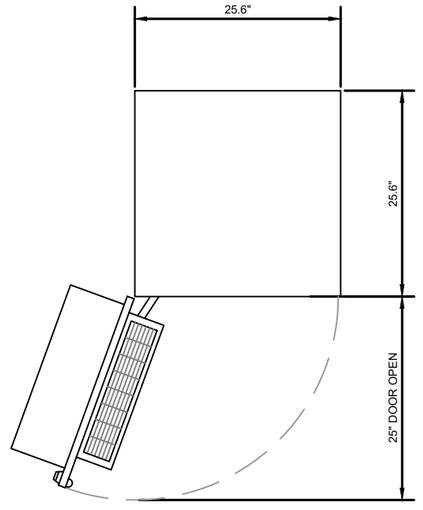
LEFT VIEW



FRONT VIEW



RIGHT VIEW



PLAN VIEW

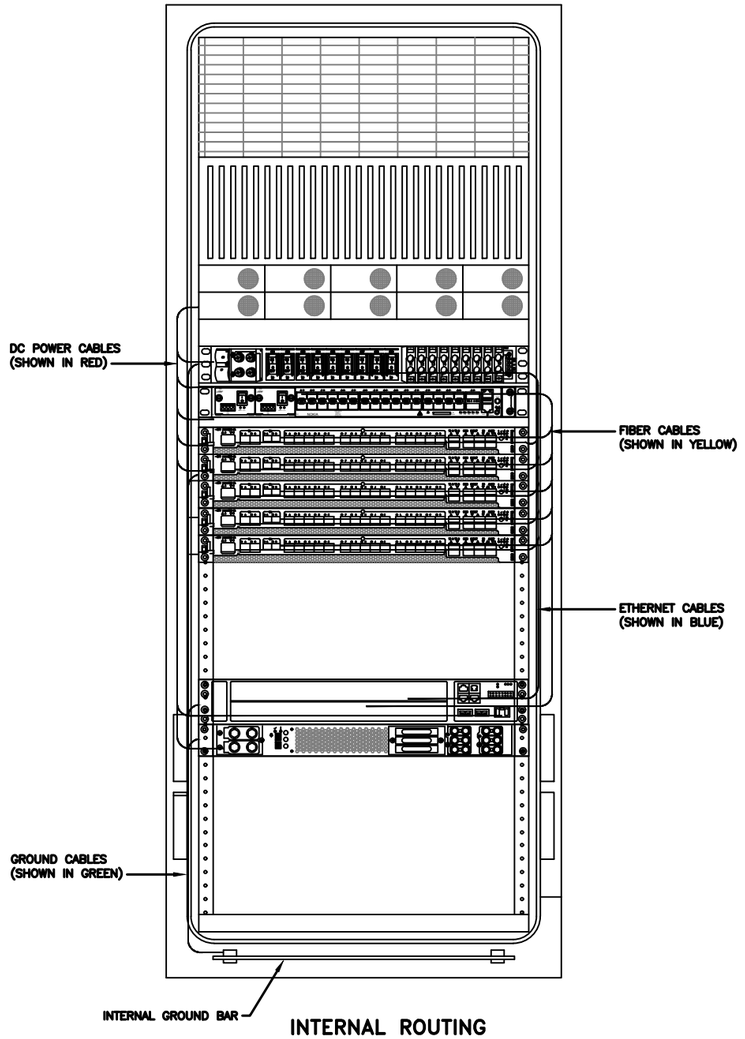
1 ERICSSON 6160 SITE SUPPORT CABINET SPECIFICATIONS

SCALE: N.T.S.

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

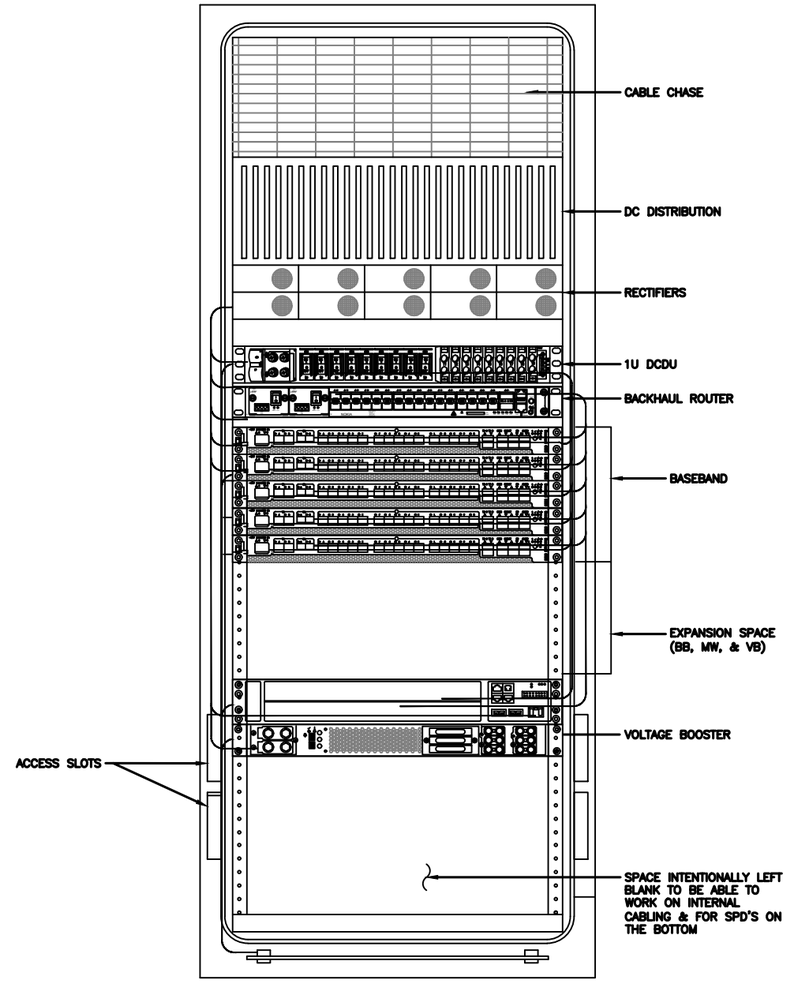
SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-603	0



INTERNAL ROUTING
(DOOR OPEN)

RACK ASSIGNMENTS	
RU SLOTS	DESCRIPTION
1	DC DISTRIBUTION
2	
3	
4	
5	RECTIFIER SHELF
6	
7	FIBER BOX
8	DCDU
9	BACKHAUL ROUTER
10	
11	1ST BASEBAND
12	2ND BASEBAND
13	3RD BASEBAND
14	4TH BASEBAND
15	5TH BASEBAND
16	EXPANSION
17	
18	
19	
20	EXPANSION / LEGACY BASEBAND / VOLTAGE BOOSTER
21	
22	VOLTAGE BOOSTER
23	OPEN SPACE FOR SPD ACCESS
24	
25	



FRONT VIEW
(DOOR OPEN)

1 ERICSSON 6160 CABINET DETAILS

SCALE: N.T.S.

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

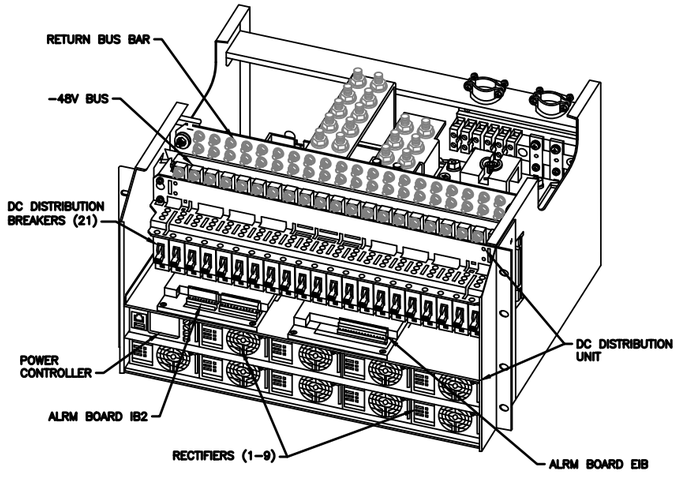
SUPPLEMENTAL

SHEET NUMBER: R-604

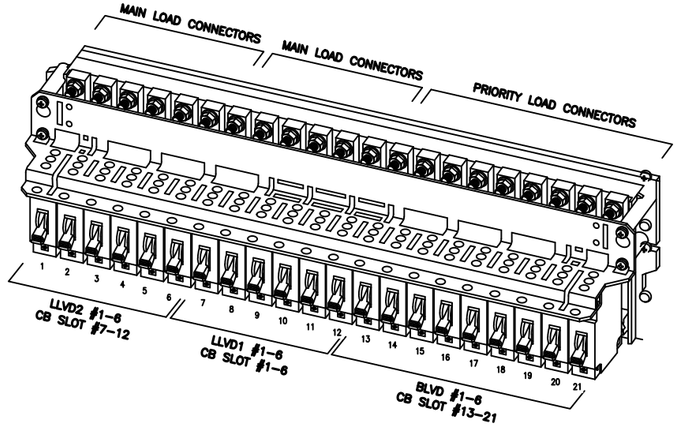
REVISION: 0

NOTE:
THIS IS FOR REFERENCE ONLY, CHECK FOR SPECIFIC DETAIL IN T–MOBILE CABINET SPECIFIC INSTALLATION GUIDES

Breaker Allocation for E6160					
CB SLOT	Ckt #		w/ DCDU Prior to availability of the 4460 and 4480	w/ DCDU Later Design Post-4460 and Post-4480	w/ DCDU 4 and 6 Sector designs
1	LVD1 47.0V	1	Router PS-2*/Future		Radio 4460 B25/66 ζ-1
2		2	Future		Radio 4460 B25/66 ζ-2
3		3	PSU 4813 feeding B25/66 α, β and γ (AIR 1641s)		PSU 4813 feeding B41-δ & B71/12-δ (Air 6449s and Radio 4480s)
4		4			
5		5	PSU 4813 feeding B41 α, β and γ (Air 6449s)		
6		6			
7	LVD2 45.1V	1	PSU 4813 feeding B71/12 α, β and γ (Radio 4449s)	PSU 4813 feeding B71/12 α, β and γ (Radio 4480s)	
8		2			
9		3	Future		Radio 4460 B25/66 δ-1
10		4	Future		Radio 4460 B25/66 δ-2
11		5	Future		Radio 4460 B25/66 ε-1
12		6	Future		Radio 4460 B25/66 ε-2
13	BLVD 43.2V	1	Router PS-1		
14		2	Radio 4415 B25/66 α	Radio 4460 B25/66 α-1	
15		3	Radio 4415 B25/66 β	Radio 4460 B25/66 α-2	
16		4	Radio 4415 B25/66 γ	Radio 4460 B25/66 β-1	
17		5	PSU 4813 feeding B2/25 α, β and γ (Radio 4424s)	Radio 4460 B25/66 β-2	
18		6		Radio 4460 B25/66 γ-1	
19		7	Future	Radio 4460 B25/66 γ-2	
20		8	DCDU		
21		9	AAV		
Sector Identification α = Alpha, β = Beta, γ = Gamma, δ = Delta, ε = Epsilon, ζ = Zeta					



POWER SUBRACK



DC DISTRIBUTION

1 ERICSSON 6160 ELECTRICAL DETAILS

SCALE: N.T.S.

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

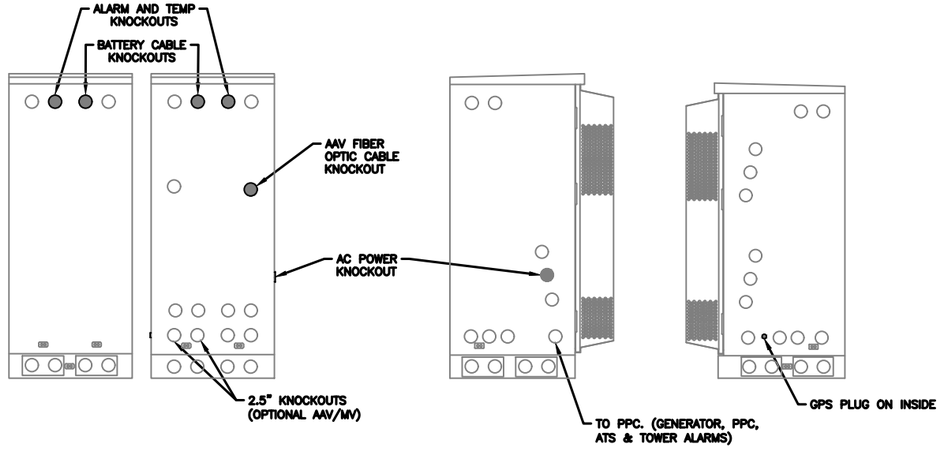
SUPPLEMENTAL

SHEET NUMBER: R-605

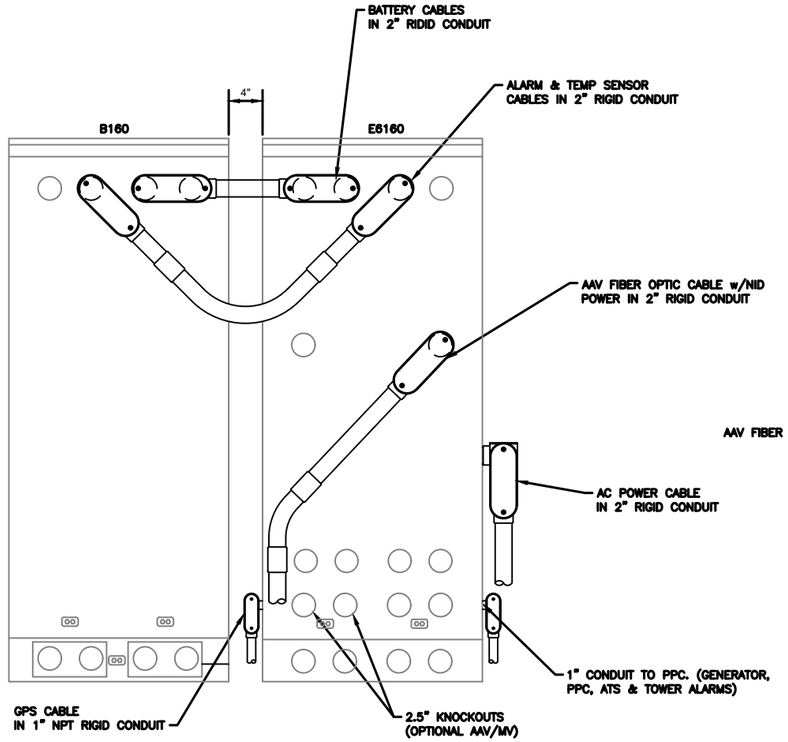
REVISION: 0

NOTE:

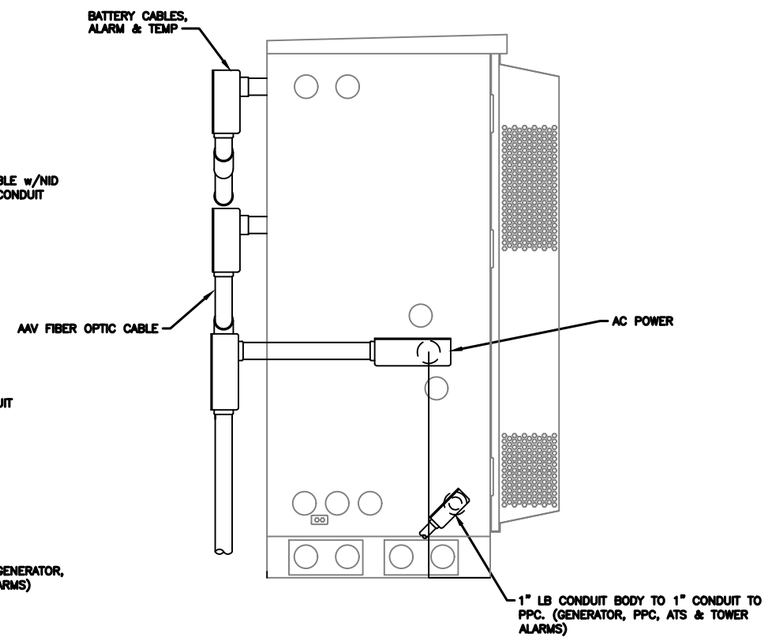
1. ALL CONDUIT AND FITTING ENTRANCES INTO CABINETS AND ENCLOSURES MUST UTILIZE MYERS OR EQUIVALENT HUBS OR SEALING WASHERS TO PREVENT WATER ENTRY/SEEPAGE INTO CABINETS AND ENCLOSURES.
2. (LIQUIDFLEX) FLEXIBLE METALLIC CONDUIT (LFMC) & ASSOCIATED FITTINGS CAN BE USED AS NEEDED BUT ONLY FOR TIGHT CONDUIT BENDS AND RUNS SUBJECT TO UL AND NEC LIMITATIONS. 6' MAX PER CONDUIT RUN.
3. POWER CONDUIT BODY ATTACHED WITH SHORT NIPPLE AND SEALING WASHER INSIDE & OUT. (FOR DOOR HOOD CLEARANCE)
4. PULLING ELBOWS MAY BE USED IN LIEU OF A CONDUIT BODIES WHEN CLEARANCE IS LIMITED.
5. ALL EXTERNAL ALARM CONDUITS ARE TOO TERMINATE AT THE PPC WITH A SINGLE 1" ALARM CONDUIT TO THE 6160.
6. (DO NOT USE CHASE NIPPLES) CONDUIT SHOULD HAVE SEALING WASHERS INSIDE AND OUT w/ LOCK NUT AND CAP.



CONDUIT LOCATIONS



REAR VIEW



SIDE VIEW

1 ERICSSON 6160/B160 CONDUIT ROUTING DETAILS

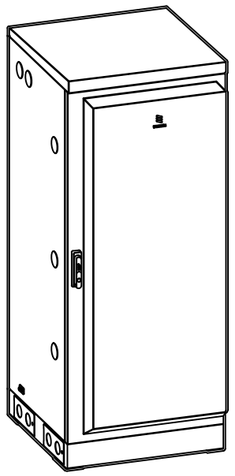
SCALE: N.T.S.

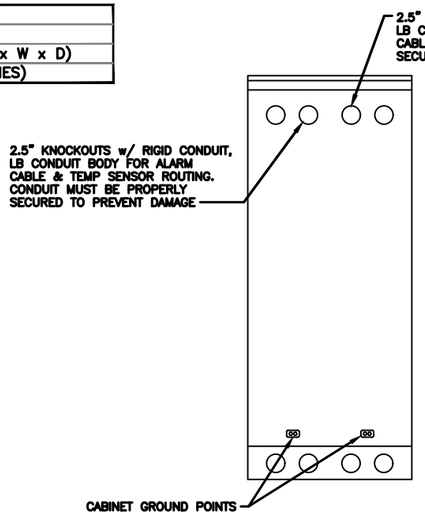
NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

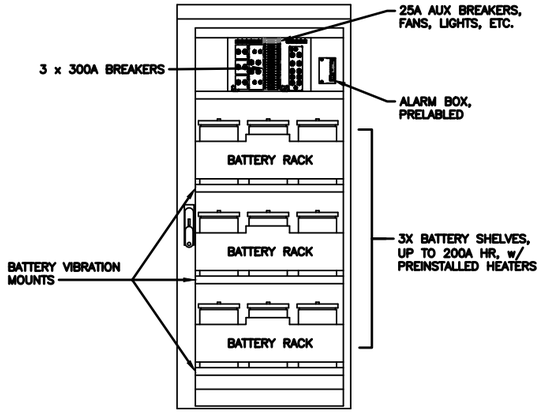
SHEET NUMBER:	REVISION:
R-606	0

MANUFACTURER:	ERICSSON
MODEL:	B160 BATTERY CABINET
DIMENSIONS:	63" x 25.6" x 29.5" (H x W x D)
WEIGHT:	295 LBS (WITHOUT BATTERIES)



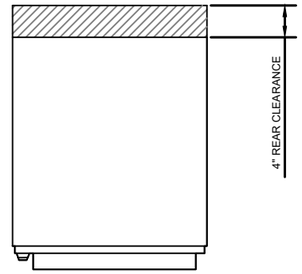


REAR VIEW



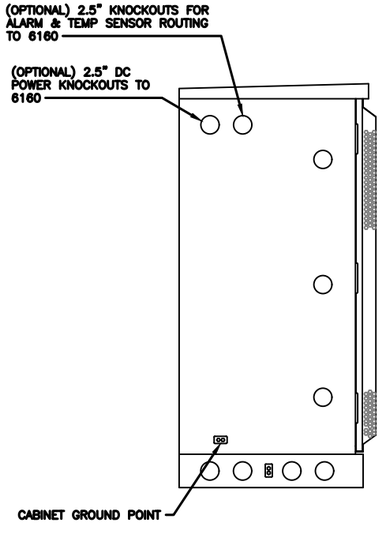
FRONT VIEW
(DOOR OPEN)

NOTE:
- CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS. DO NOT DRILL THROUGH KNOCKOUTS
- CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND OR CABLING

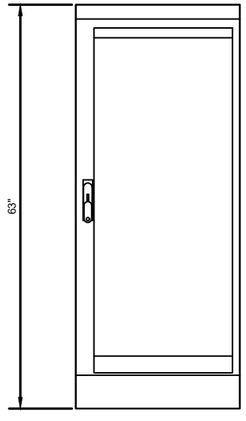


GROUNDING NOTE:

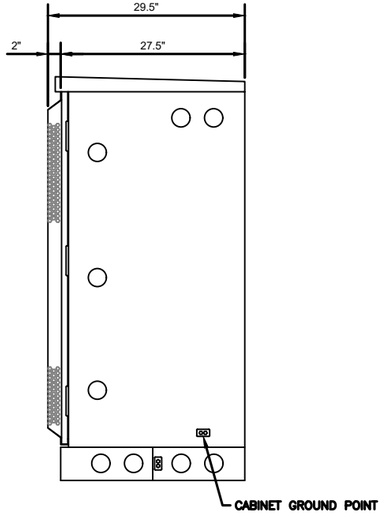
"CABINET GROUNDING TO USE A SINGLE, #2 BTCW CONDUCTOR, W/ 2-HOLE, 1" C-C, LONG BARREL, WINDOW LUG, IN 3/4" LFNC TO GROUND RING. PLINTH GROUNDING IS NOT REQUIRED."



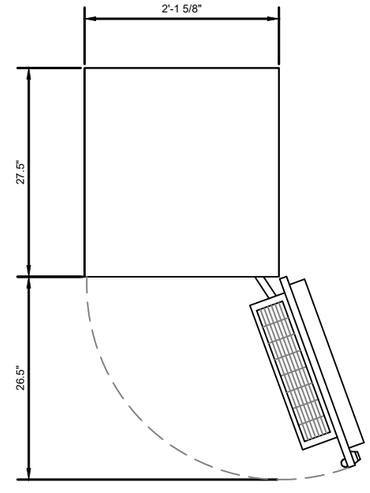
LEFT VIEW



FRONT VIEW



RIGHT VIEW



PLAN VIEW

B160 ERICSSON SITE SUPPORT BATTERY CABINET

1 ERICSSON B160 BATTERY CABINET SPECIFICATIONS

SCALE: N.T.S.

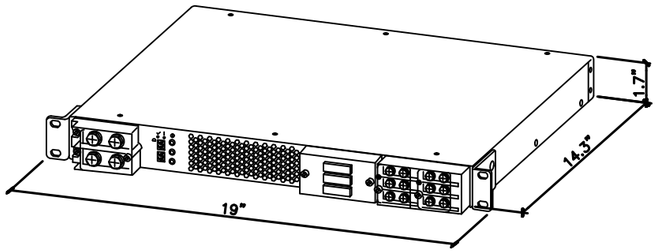
NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

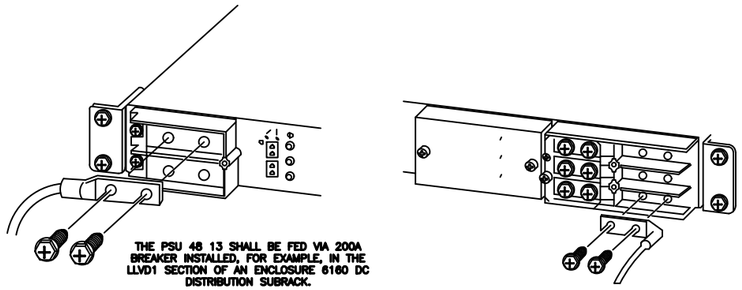
SUPPLEMENTAL

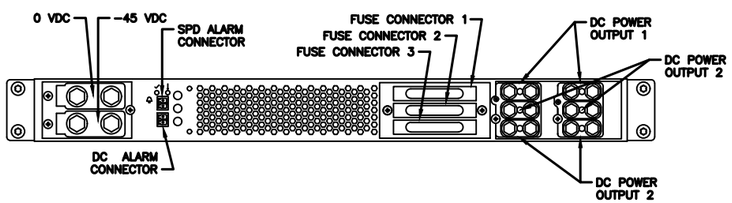
SHEET NUMBER:	REVISION:
R-607	0

MANUFACTURER:	ERICSSON
MODEL:	PSU 48 13
WEIGHT:	17.1 LBS
DIMENSIONS:	19"x 1.7"x 14.3"

NEEDED INSTALL KIT (PICK 1)	
34133	PSU4813 INSTALL KIT FOR RBS61XX
34134	PSU4813 INSTALL KIT FOR PBC6200
34135	PSU4813 INSTALL KIT FOR 6X60/RBS6230



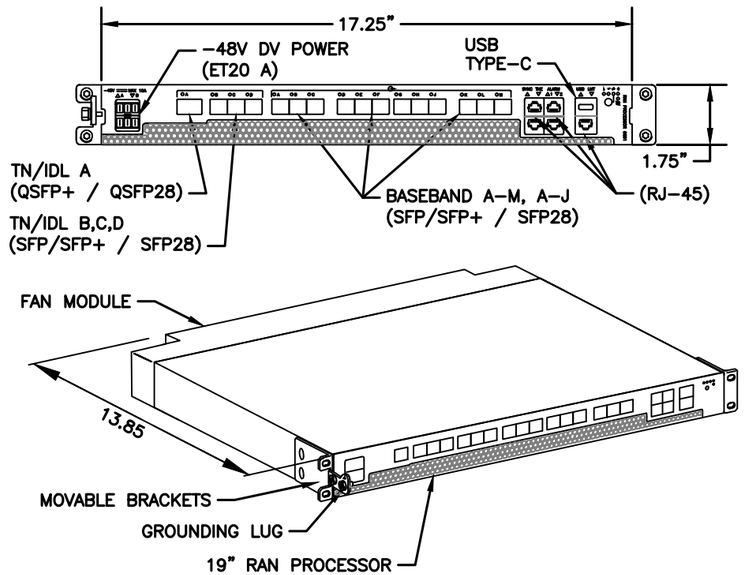




1 SKU# 34132 - PSU 48 13

SCALE: N.T.S.

MANUFACTURER:	ERICSSON
MODEL:	6651 RAN PROCESSOR (KDU1370093/11)
DIMENSIONS:	1.75" x 17.25" x 13.85" (H" x W" x D")
WEIGHT:	16.53 LBS



2 34553 - ERICSSON 6651 RAN PROCESSOR

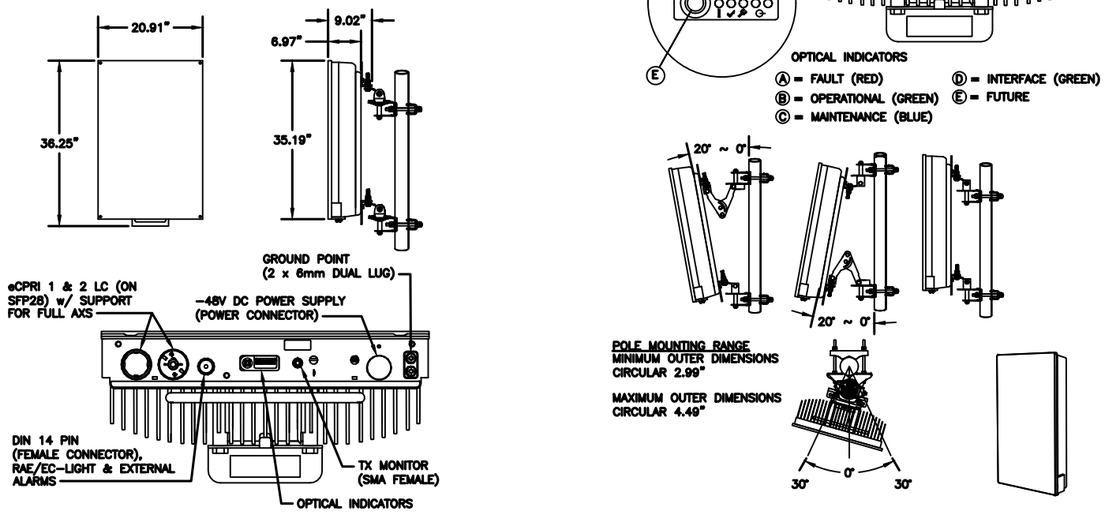
SCALE: N.T.S.

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

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-608	0

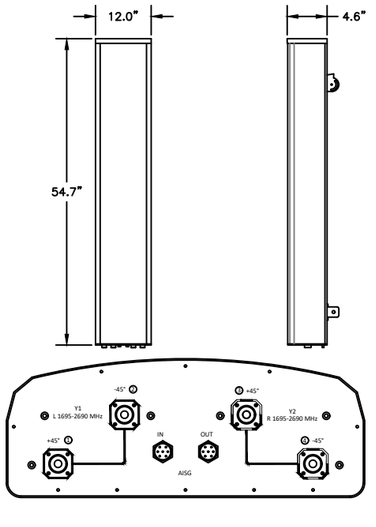
MANUFACTURER:	ERICSSON
MODEL:	AIR 6419 B41 (2.5GHz M-MIMO)
DIMENSIONS:	36.25" x 20.91" x 9.02" NOT TO EXCEED (H x W x D)
WEIGHT:	83 LBS (EXCLUDING MOUNTING KIT)
MOUNT WEIGHT:	13.5 LBS (SXK109 2016/1)



1 34552 - ERICSSON AIR 6419 BAND 41

SCALE: N.T.S.

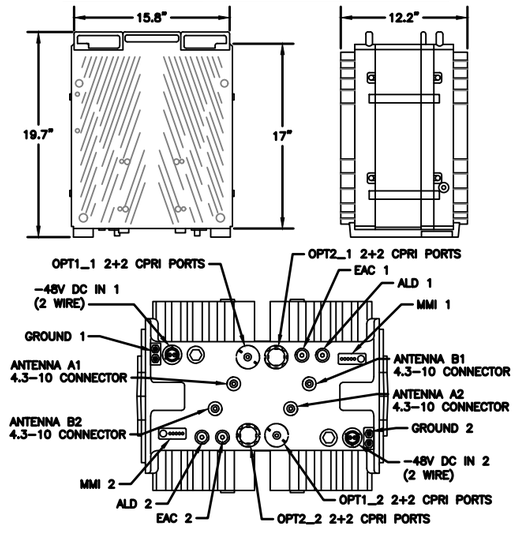
MANUFACTURER:	COMMSCOPE
MODEL:	VV-65A-R1
DIMENSIONS:	54.7" x 12.1" x 4.6" (H x W x D)
WEIGHT:	24.7 LB
INTERFACE:	4-PORT 4.3-10 FEMALE
MOUNTING KIT:	600899A-2 (INCLUDED) WEIGHT: 8.6 LB



2 34401 - COMMSCOPE VV-65A-R1

SCALE: N.T.S.

MANUFACTURER:	ERICSSON
MODEL:	4460 RADIO B2/25 B66 (KRC 161 912/3)
DIMENSIONS:	19.7" x 15.8" x 12.2" (H" x W" x D")
WEIGHT:	109 LBS
BRACKET WEIGHT:	4.8 LBS (ERS HEAVY #SXK1255993/1)



3 34373 - ERICSSON 4460 RADIO B2/25 B66

SCALE: N.T.S.

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

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-609	0

AMERICAN TOWER®
CORPORATION

This report was prepared for American Tower Corporation by

DELTA OAKS
GROUP

Structural Analysis Report

Structure	:	**250 ft Self Support Tower**
ATC Site Name	:	**NORTH STONINGTON CT,CT**
ATC Site Number	:	**6260**
Engineering Number	:	**13934708_C3_03**
Proposed Carrier	:	**T-MOBILE**
Carrier Site Name	:	**North Stonington-3_1**
Carrier Site Number	:	**CT11266A**
Site Location	:	**118C Wintechog Hill Rd., off of Rt. 2** **North Stonington, CT 06359-1228** **41.4599, -71.9274**
County	:	**New London**
Date	:	**March 11, 2022**
Max Usage	:	**65%**
Result	:	**Pass**

Prepared By:

Yamini Rajakumar
Delta Oaks Group

Yamini Rajakumar

Reviewed By:

Michael L Lassiter
2022.03.11
09:54:47 -05'00'

STATE OF CONNECTICUT
MICHAEL L. LASSITER
No. 25064
LICENSED
PROFESSIONAL ENGINEER

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 250 ft Self Support tower to reflect the change in loading by T-MOBILE.

Supporting Documents

Tower Drawings	FWT Job #19240001, dated September 13, 1999
Foundation Drawing	FWT Job #19240001, dated September 13, 1999
Geotechnical Report	Clarence Welti Associates, dated August 31, 1999
Modifications	CLS Engineering PLLC Project #41124-12927122-01-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:	127 mph (3-second gust)
Basic Wind Speed w/ Ice:	50 mph (3-second gust) w/ 1.00" radial ice concurrent
Code:	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Spectral Response:	Ss = 0.19, S_1 = 0.05
Site Class:	D - Stiff Soil - Default

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	Equipment	Mount Type	Lines	Carrier
260.0	1	Decibel DB809DK-XT	Leg	(2) 1 5/8" Coax	STATE OF CT
250.0	1	Box Enclosures BEN-92P	Sector Frame	(4) 0.21" (5.3mm) Cat 5e (4) 1 1/4" Hybriflex Cable (1) 1" conduit	SPRINT NEXTEL
246.0	3	Alcatel-Lucent TD-RRH8x20-25			
	3	Alcatel-Lucent 1900 MHz 4X45 RRH			
	6	Alcatel-Lucent RRH2x50-08			
	3	RFS APXVSPP18-C-A20			
	3	KMW ETCR-654L12H6			
236.0	1	Generic Low Noise Amplifier	Leg	(1) 1/2" Coax	SIGFOX S.A.
	1	Generic 5" x 3" x 2" Cavity Filter			
	1	Procom CXL 900-3LW			
225.0	3	RFS APXVAARR24_43-U-NA20	Sector Frame	(3) 1 5/8" Hybriflex	T-MOBILE
211.5	12	Generic 48" x 10" Panel	Sector Frame	(12) 1 5/8" Coax	SPRINT NEXTEL
207.0	1	Sinclair SC479-HF1LDF(E5765)	Leg	(1) 1 5/8" Coax	STATE OF CT
200.0	1	Bird 432E-83I-01-T	Side Arm	(1) 0.51" (13mm) Cable	
192.0	2	Sinclair SC479-HF1LDF(E5765)	Side Arm	(2) 1 5/8" Coax	
175.0	3	CCI OPA65R-BU8D	Sector Frame	(1) 0.39" (10mm) Fiber Trunk (1) 0.39" (9.8mm) Cable (4) 0.78" (19.7mm) 8 AWG 6 (6) 1 5/8" Coax (3) 3" conduit	AT&T MOBILITY
	3	CCI DMP65R-BU8D			
	3	Allgon 7770.00			
	3	Ericsson RRUS 4449 B5, B12			
	3	Ericsson RRUS 4478 B14			
	6	Powerwave Allgon LGP17201			
	3	Ericsson RRUS 8843 B2, B66A			
	1	Raycap DC6-48-60-18-8F (23.5" Height)			
	3	Powerwave Allgon 7020			
	6	Powerwave Allgon LGP21901			
	1	Raycap DC6-48-60-18-8F ("Squid")			
174.3	2	CCI OPA65R-KE6D			
165.0	3	Fujitsu TA08025-B604	Sector Frame	(1) 1.60" (40.6mm) Hybrid	DISH WIRELESS L.L.C.
	3	Fujitsu TA08025-B605			
	3	JMA Wireless MX08FRO665-21			
	1	Commscope RDIDC-9181-PF-48			
155.0	6	Kathrein Scala 860 10025	Sector Frame	(12) 1 5/8" Coax (6) 3/8" Coax	METRO PCS INC
	6	Kathrein Scala 800 10504			
95.3	1	Generic 24" x 24" Ice Shield	Leg	(1) WE65	STATE OF CT
87.4	1	RFS PA6-65AC w/ Radome	Leg		

Equipment to be Removed

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
225.0	3	Ericsson Radio 4449 B12,B71	-	(6) 1 5/8" Coax (1) 1 5/8" Hybriflex	T-MOBILE
	3	Ericsson AIR 21, 1.3M, B4A B2P (90.4 lbs)			
	3	Ericsson AIR 21, 1.3M, B2A B4P (91.5 lbs)			

Proposed Equipment

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
225.0	3	Ericsson Radio 4449 B71 B85A	Sector Frame	(3) 1.99" (50.7mm) Hybrid	T-MOBILE
	3	Ericsson 4460 BAND 2/25			
	3	Commscope VV-65A-R1B			
	3	Ericsson AIR 6419 B41			

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

Install proposed lines alongside existing T-MOBILE lines.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	49%	Pass
Diagonals	65%	Pass
Horizontals	3%	Pass
Anchor Bolts	53%	Pass
Leg Bolts	43%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Uplift (Kips)	556.7	751.5	442.2	59%
Download (kips)	673.9	909.8	530.8	58%
Moment (Kips-Ft)	15040.5	20304.7	11955.4	59%
Shear (Kips)	63.2	85.3	54.2	64%
* The design reactions are factored by 1.35 per ANSI/TIA-222-H, Sec. 15.6.2				

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, 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) (°)
225.0	Commscope VV-65A-R1B	T-MOBILE	0.275	0.006	0.135
	Ericsson 4460 BAND 2/25				
	Ericsson AIR 6419 B41				
	Ericsson Radio 4449 B71 B85A				
165.0	Commscope RDIDC-9181-PF-48	DISH WIRELESS L.L.C.	0.143	0.007	0.099
	Fujitsu TA08025-B604				
	Fujitsu TA08025-B605				
	JMA Wireless MX08FRO665-21				
	Commscope RDIDC-9181-PF-48		0.160	0.007	0.104
	Fujitsu TA08025-B604				
	Fujitsu TA08025-B605				
	JMA Wireless MX08FRO665-21				
87.4	RFS PA6-65AC w/ Radome	STATE OF CT	0.038	0.004	0.052

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

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.

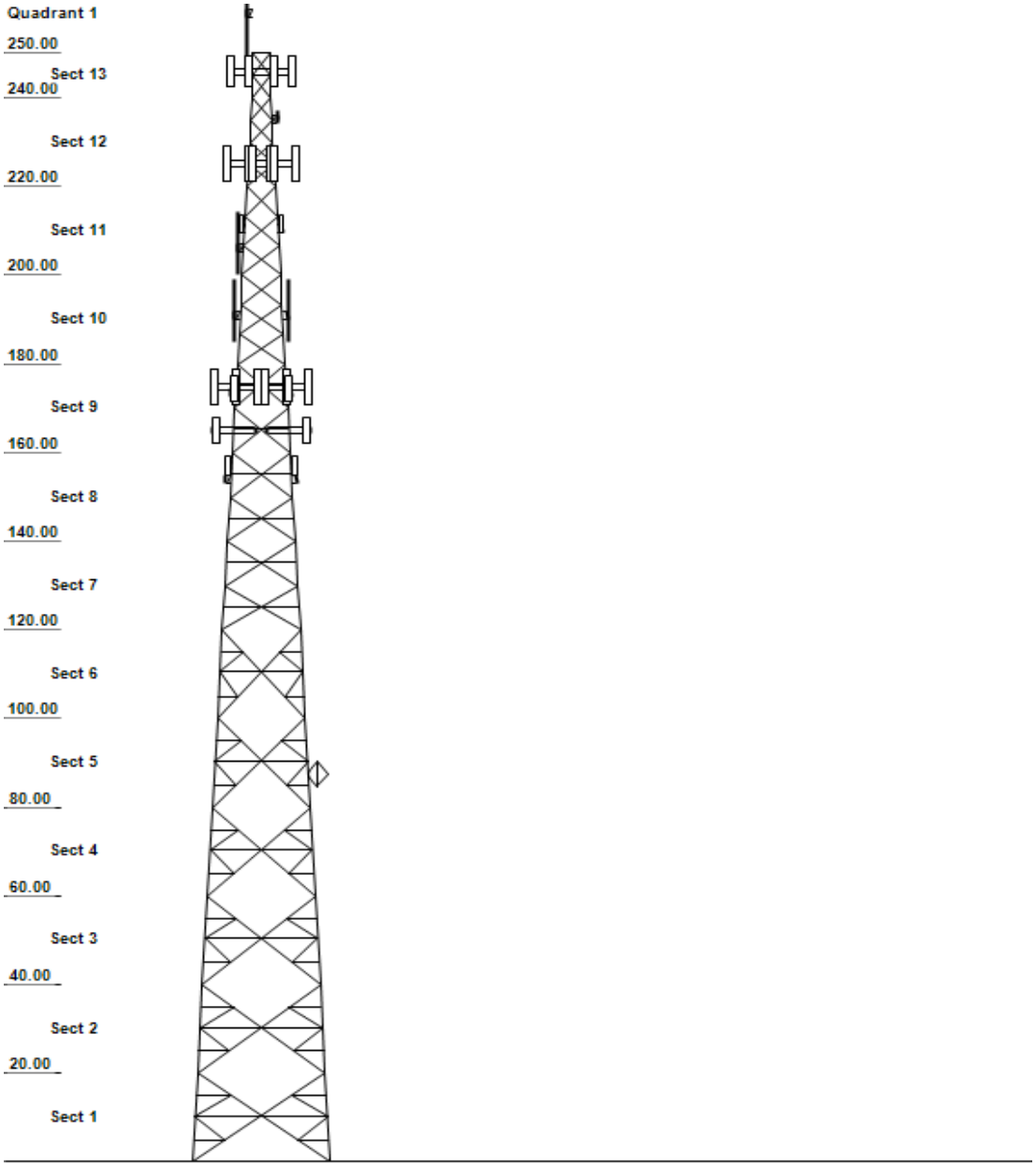
All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with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

JOB INFORMATION

Asset:	6260, NORTH STONINGTON CT	Height :	250 ft
Client	T-MOBILE	Base Width :	28 ft
Code:	ANSI/TIA-222-H	Shape :	Triangle



SITE PARAMETERS

Nominal Wind : 127 mph wind with no ice — Exposure : B — Site Class : D

Ice Wind: 50 mph wind with 1" radial — Topo Method: Method 1 — Risk Cat : II

Service Wind : 60 mph Serviceability — Topo Feature : — S_s : 0.188 — S_1 : 0.053

SECTION PROPERTIES

Section	Leg Members	Diagonal Members	Horizontal Members
1	SOL 50 ksi 5 3/4" SOL	DAE 36 ksi 3X3X0.25	
2	SOL 50 ksi 5 1/2" SOL	DAE 36 ksi 3X3X0.25	
3	SOL 50 ksi 5 1/4" SOL	DAE 36 ksi 3X3X0.25	
4	SOL 50 ksi 5" SOLID	DAE 36 ksi 3X3X0.1875	
5	SOL 50 ksi 4 3/4" SOL	DAE 36 ksi 3X3X0.1875	
6	SOL 50 ksi 4 1/2" SOL	DAE 36 ksi 3X3X0.1875	
7	SOL 50 ksi 4 1/4" SOL	DAE 36 ksi 2.5X2.5X0.1875	
8	SOL 50 ksi 4" SOLID	DAE 36 ksi 2.5X2.5X0.1875	
9	SOL 50 ksi 3 3/4" SOL	SAE 36 ksi 3.5x3.5x0.25	
10	SOL 50 ksi 3 3/4" SOL	SAE 36 ksi 3X3X0.1875	
11	SOL 50 ksi 3 1/4" SOL	SAE 36 ksi 2.5X2.5X0.1875	
12	SOL 50 ksi 2 1/4" SOL	SAE 36 ksi 1.75X1.75X0.1875	
13	SOL 50 ksi 2" SOLID	SAE 36 ksi 1.75X1.75X0.1875	SAE 36 ksi 2X2X0.1875

REDUNDANT SECONDARY BRACING

Section	Sub Diag 1	Sub Horiz 1	Sub Diag 2	Sub Horiz 2	Sub Diag 3	Sub Horiz 3
2	D2X2X0.1875	D2X2X0.1875	D2X2X0.1875	D3X3X0.1875	-	D2X2X0.1875
3	D2X2X0.1875	D2X2X0.1875	D2X2X0.1875	D2.5X2.5X0.187	-	D2X2X0.1875
4	S3X3X0.1875	S2.5X2.5X0.187	S3X3X0.1875	S3.5x3.5x0.25	-	S2.5X2.5X0.18
5	S3X3X0.1875	S2.5X2.5X0.187	S3X3X0.1875	S3X3X0.25	-	S2.5X2.5X0.18
6	S2.5X2.5X0.1875	S2X2X0.1875	S2.5X2.5X0.1875	S3X3X0.1875	-	S2X2X0.1875
7	-	S3X3X0.1875	-	-	-	-
8	-	S2.5X2.5X0.187	-	-	-	-
9	-	S2X2X0.1875	-	-	-	-
10 - 13	-	-	-	-	-	-
1	D2.5X2.5X0.1875	D2.5X2.5X0.187	D2.5X2.5X0.1875	D3X3X0.1875	-	D2.5X2.5X0.18

DISCRETE APPURTENANCE

Elev (ft)	Type	Qty	Description
260.00	OMNI	1	Decibel DB809DK-XT
250.00	BOB/SSB	1	Box Enclosures BEN-92P
246.00	PANEL	3	KMW ETCR-654L12H6
246.00	PANEL	3	RFS APXVSPP18-C-A20
246.00	RRU/RRH	3	Alcatel-Lucent TD-RRH8x20-25
246.00	RRU/RRH	3	Alcatel-Lucent 1900 MHz 4X45 R
246.00	RRU/RRH	6	Alcatel-Lucent RRH2x50-08
246.00	Sector Frame	3	Round Sector Frames
236.00	DIPLEXER/DUAL COUPLER	1	Generic Low Noise Amplifier
236.00	Filter	1	Generic 5" x 3" x 2" Cavity Fi
236.00	OMNI	1	Procom CXL 900-3LW
225.00	PANEL	3	Ericsson AIR 6419 B41
225.00	PANEL	3	RFS APXVAARR24_43-U-NA20
225.00	PANEL	3	Commscope VV-65A-R1B
225.00	RRU/RRH	3	Ericsson Radio 4449 B71 B85A
225.00	Radio/ODU	3	Ericsson 4460 BAND 2/25
225.00	Sector Frame	3	Round Sector Frames

JOB INFORMATION

Asset:	6260, NORTH STONINGTON CT	Height :	250 ft
Client	T-MOBILE	Base Width :	28 ft
Code:	ANSI/TIA-222-H	Shape :	Triangle

DISCRETE APPURTENANCE

Elev (ft)	Type	Qty	Description
211.50	PANEL	12	Generic 48" x 10" Panel
207.00	OMNI	1	Sinclair SC479-HF1LDF(E5765)
200.00	T-Arm	3	Flat Side Arm
200.00	TTA	1	Bird 432E-83I-01-T
192.00	OMNI	2	Sinclair SC479-HF1LDF(E5765)
175.00	BOB/SSB	1	Raycap DC6-48-60-18-8F ("Squid
175.00	BOB/SSB	1	Raycap DC6-48-60-18-8F (23.5"
175.00	BTS	3	Powerwave Allgon 7020
175.00	DIPLEXER/DUAL COUPLER	6	Powerwave Allgon LGP21901
175.00	PANEL	3	Allgon 7770.00
175.00	PANEL	3	CCI DMP65R-BU8D
175.00	PANEL	3	CCI OPA65R-BU8D
175.00	RRU/RRH	3	Ericsson RRUS 8843 B2, B66A
175.00	RRU/RRH	3	Ericsson RRUS 4478 B14
175.00	RRU/RRH	3	Ericsson RRUS 4449 B5, B12
175.00	Sector Frame	3	Generic Heavy Sector Frame
175.00	TTA	6	Powerwave Allgon LGP17201
174.30	PANEL	2	CCI OPA65R-KE6D
165.00	BOB/SSB	1	Commscope RDIDC-9181-PF-48
165.00	PANEL	3	JMA Wireless MX08FRO665-21
165.00	RRU/RRH	3	Fujitsu TA08025-B604
165.00	RRU/RRH	3	Fujitsu TA08025-B605
165.00	Sector Frame	3	Generic Flat Light Sector Fram
155.00	PANEL	6	Kathrein Scala 800 10504
155.00	RET/RCU	6	Kathrein Scala 860 10025
95.30	ICE SHIELD	1	Generic 24" x 24" Ice Shield
87.40	DISH-RADOME	1	RFS PA6-65AC w/ Radome

LINEAR APPURTENANCE

Elev (ft) From	To	Qty	Description
0.00	260.00	2	1 5/8" Coax
0.00	250.00	1	Waveguide
0.00	250.00	1	Climbing Ladder
0.00	246.00	1	Waveguide
0.00	246.00	1	1" conduit
0.00	246.00	4	1 1/4" Hybriflex Cable
0.00	246.00	4	0.21" (5.3mm) Cat 5e
0.00	236.00	1	1/2" Coax
0.00	225.00	1	Waveguide
0.00	225.00	3	1.99" (50.7mm) Hybrid
0.00	225.00	3	1 5/8" Hybriflex
0.00	211.00	12	1 5/8" Coax
0.00	210.00	1	Waveguide
0.00	207.00	1	1 5/8" Coax
10.00	200.00	1	0.51" (13mm) Cable
0.00	192.00	2	1 5/8" Coax
0.00	175.00	1	Waveguide
10.00	175.00	2	3" conduit
0.00	175.00	6	1 5/8" Coax
10.00	175.00	4	0.78" (19.7mm) 8 AWG 6
0.00	175.00	1	0.39" (9.8mm) Cable
10.00	175.00	1	0.39" (10mm) Fiber Trunk

JOB INFORMATION

Asset:	6260, NORTH STONINGTON CT	Height :	250 ft
Client	T-MOBILE	Base Width :	28 ft
Code:	ANSI/TIA-222-H	Shape :	Triangle

LINEAR APPURTENANCE

Elev (ft) From	To	Qty	Description
10.00	173.00	1	3" conduit
0.00	165.00	1	1.60" (40.6mm) Hybrid
0.00	158.00	1	Waveguide
0.00	155.00	6	3/8" Coax
0.00	155.00	12	1 5/8" Coax
0.00	83.00	1	WE65

GLOBAL BASE FOUNDATION DESIGN LOADS

Load Case	Moment (k-ft)	Vertical (kip)	Horizontal (kip)
DL+WL	11955.45	113.37	90.71
DL+WL+IL	3825.63	212.71	29.76

INDIVIDUAL BASE FOUNDATION DESIGN LOADS

Vertical (kip)	Uplift (kip)	Horizontal (kip)
530.82	442.25	54.23

ANALYSIS PARAMETERS

Location:	New London County, CT	**Height:**	250 ft
Type and Shape:	Self Support, Triangle	**Base Elevation:**	0.00 ft
Manufacturer:	FWT	**Bottom Face Width:**	28.00 ft
Kd	0.85	**Top Face Width:**	4.00 ft
Ke:	0.98	**Anchor Bolt Detail Type:**	d

ICE & WIND PARAMETERS

Exposure Category:	B	**Design Wind Speed Without Ice:**	127 mph
Risk Category:	II	**Design Wind Speed with Ice:**	50 mph
Topographic Factor Procedure:	Method 1	**Operational Windspeed:**	60 mph
Topographic Category:	Flat	**Design Ice Thickness:**	1.00 in
Crest Height:	0 ft	**HMSL:**	448 ft

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	D - Stiff Soil			**Period Based on Rayleigh Method (sec):**	0.89
T_L (sec):	6	**P:**	1.3	**$C_{s:}$**	0.032
$S_{s:}$	0.188	**$S_{1:}$**	0.053	**$C_{s,}$ Max:**	0.032
$F_{a:}$	1.600	**$F_{v:}$**	2.400	**$C_{s,}$ Min:**	0.030
$S_{ds:}$	0.201	**S_{d1}:**	0.085		

LOAD CASES

1.2D + 1.0W Normal	127 mph wind with no ice
1.2D + 1.0W 60°	127 mph wind with no ice
1.2D + 1.0W 90°	127 mph wind with no ice
1.2D + 1.0W 120°	127 mph wind with no ice
1.2D + 1.0W 180°	127 mph wind with no ice
1.2D + 1.0W 210°	127 mph wind with no ice
1.2D + 1.0W 240°	127 mph wind with no ice
1.2D + 1.0W 300°	127 mph wind with no ice
1.2D + 1.0W 330°	127 mph wind with no ice
0.9D + 1.0W Normal	127 mph wind with no ice
0.9D + 1.0W 60°	127 mph wind with no ice
0.9D + 1.0W 90°	127 mph wind with no ice
0.9D + 1.0W 120°	127 mph wind with no ice
0.9D + 1.0W 180°	127 mph wind with no ice
0.9D + 1.0W 210°	127 mph wind with no ice
0.9D + 1.0W 240°	127 mph wind with no ice
0.9D + 1.0W 300°	127 mph wind with no ice
0.9D + 1.0W 330°	127 mph wind with no ice
1.2D + 1.0Di + 1.0Wi Normal	50 mph wind with 1" radial ice
1.2D + 1.0Di + 1.0Wi 60°	50 mph wind with 1" radial ice
1.2D + 1.0Di + 1.0Wi 90°	50 mph wind with 1" radial ice
1.2D + 1.0Di + 1.0Wi 120°	50 mph wind with 1" radial ice
1.2D + 1.0Di + 1.0Wi 180°	50 mph wind with 1" radial ice
1.2D + 1.0Di + 1.0Wi 210°	50 mph wind with 1" radial ice
1.2D + 1.0Di + 1.0Wi 240°	50 mph wind with 1" radial ice
1.2D + 1.0Di + 1.0Wi 300°	50 mph wind with 1" radial ice
1.2D + 1.0Di + 1.0Wi 330°	50 mph wind with 1" radial ice
1.2D + 1.0Ev + 1.0Eh Normal	Seismic
1.2D + 1.0Ev + 1.0Eh 60°	Seismic
1.2D + 1.0Ev + 1.0Eh 90°	Seismic
1.2D + 1.0Ev + 1.0Eh 120°	Seismic
1.2D + 1.0Ev + 1.0Eh 180°	Seismic
1.2D + 1.0Ev + 1.0Eh 210°	Seismic
1.2D + 1.0Ev + 1.0Eh 240°	Seismic

LOAD CASES

1.2D + 1.0Ev + 1.0Eh 300°	Seismic
1.2D + 1.0Ev + 1.0Eh 330°	Seismic
0.9D - 1.0Ev + 1.0Eh Normal	Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 60°	Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 90°	Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 120°	Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 180°	Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 210°	Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 240°	Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 300°	Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 330°	Seismic (Reduced DL)
1.0D + 1.0W Service Normal	60 mph Wind with No Ice
1.0D + 1.0W Service 60°	60 mph Wind with No Ice
1.0D + 1.0W Service 90°	60 mph Wind with No Ice
1.0D + 1.0W Service 120°	60 mph Wind with No Ice
1.0D + 1.0W Service 180°	60 mph Wind with No Ice
1.0D + 1.0W Service 210°	60 mph Wind with No Ice
1.0D + 1.0W Service 240°	60 mph Wind with No Ice
1.0D + 1.0W Service 300°	60 mph Wind with No Ice
1.0D + 1.0W Service 330°	60 mph Wind with No Ice

TOWER LOADING

Discrete Appurtenance Properties 1.2D + 1.0W

Elev (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)
260.0	Decibel DB809DK-XT	1	64	6.4	21.2	3.0	3.0	1.00	1.00	0.0	0.00	44.84	242	77
250.0	Box Enclosures BEN-92P	1	2	0.7	0.8	8.0	5.1	0.80	1.00	0.0	0.00	44.34	20	3
246.0	Alcatel-Lucent RRH2x50-08	6	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.00	44.13	153	381
246.0	Alcatel-Lucent 1900 MHz 4X45 R	3	60	2.3	2.1	11.1	10.7	0.80	0.50	0.0	0.00	44.13	105	216
246.0	Alcatel-Lucent TD-RRH8x20-25	3	66	3.7	2.1	17.5	5.7	0.80	0.50	0.0	0.00	44.13	167	238
246.0	RFS APXVSPP18-C-A20	3	57	8.0	6.0	11.8	7.0	0.80	0.69	0.0	0.00	44.13	498	205
246.0	Round Sector Frames	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	44.13	814	1080
246.0	KMW ETCR-654L12H6	3	85	15.7	7.1	21.0	6.3	0.80	0.61	0.0	0.00	44.13	863	306
236.0	Procom CXL 900-3LW	1	2	0.1	2.3	0.6	0.6	1.00	1.00	0.0	0.00	43.61	5	2
236.0	Generic 5" x 3" x 2" Cavity Fi	1	2	0.1	0.4	3.2	1.9	1.00	0.50	0.0	0.00	43.61	3	2
236.0	Generic Low Noise Amplifier	1	2	0.2	0.4	4.0	2.0	1.00	0.50	0.0	0.00	43.61	3	2
225.0	Ericsson Radio 4449 B71 B85A	3	75	1.6	1.3	13.2	10.5	0.80	0.50	0.0	0.00	43.02	72	270
225.0	Ericsson 4460 BAND 2/25	3	109	2.6	1.6	15.7	12.1	0.80	0.67	0.0	0.00	43.02	151	392
225.0	Commscope VV-65A-R1B	3	25	5.9	4.6	12.0	4.6	0.80	0.63	0.0	0.00	43.02	326	89
225.0	Ericsson AIR 6419 B41	3	83	6.3	3.0	20.9	9.0	0.80	0.63	0.0	0.00	43.02	350	300
225.0	Round Sector Frames	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	43.02	794	1080
225.0	RFS APXVAARR24_43-U-NA20	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.00	43.02	1119	460
211.5	Generic 48" x 10" Panel	12	20	4.3	4.0	10.0	5.0	0.80	0.66	0.0	0.00	42.27	988	288
207.0	Sinclair SC479-HF1LDF(E5765)	1	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.00	42.01	180	41
200.0	Bird 432E-83I-01-T	1	25	1.2	1.0	12.0	7.5	0.80	0.67	0.0	0.00	41.60	23	30
200.0	Flat Side Arm	3	150	6.3	0.0	0.0	0.0	0.75	0.67	0.0	0.00	41.60	336	540
192.0	Sinclair SC479-HF1LDF(E5765)	2	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.00	41.12	352	82
175.0	Powerwave Allgon LGP21901	6	6	0.2	0.3	6.0	3.0	0.80	0.50	0.0	0.00	40.04	16	40
175.0	Powerwave Allgon 7020	3	2	0.3	0.4	8.3	2.4	0.80	0.50	0.0	0.00	40.04	14	8
175.0	Raycap DC6-48-60-18-8F (23.5"	1	20	1.3	2.0	9.7	9.7	0.80	0.67	0.0	0.00	40.04	23	24
175.0	Raycap DC6-48-60-18-8F ("Squid	1	32	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.00	40.04	40	38
175.0	Ericsson RRUS 8843 B2, B66A	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.00	40.04	67	259
175.0	Powerwave Allgon LGP17201	6	31	1.7	1.2	14.4	3.7	0.80	0.50	0.0	0.00	40.04	136	223
175.0	Ericsson RRUS 4478 B14	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.00	40.04	75	216
175.0	Ericsson RRUS 4449 B5, B12	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.00	40.04	80	256
175.0	Allgon 7770.00	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.00	40.04	292	126
175.0	CCI DMP65R-BU8D	3	96	17.9	8.0	20.7	7.7	0.80	0.63	0.0	0.00	40.04	920	345
175.0	CCI OPA65R-BU8D	3	77	18.1	8.0	21.0	7.8	0.80	0.63	0.0	0.00	40.04	931	275
175.0	Generic Heavy Sector Frame	3	500	29.3	0.0	0.0	0.0	0.75	0.75	0.0	0.00	40.04	1683	1800
174.3	CCI OPA65R-KE6D	2	67	12.9	5.9	21.0	7.8	0.80	0.72	0.0	0.00	40.00	504	161
165.0	Commscope RDIDC-9181-PF-48	1	22	1.9	1.3	14.0	8.0	0.80	1.00	0.0	0.00	39.38	50	26
165.0	Fujitsu TA08025-B604	3	64	2.0	1.3	15.0	7.9	0.80	0.50	0.0	0.00	39.38	79	230
165.0	Fujitsu TA08025-B605	3	75	2.0	1.3	15.0	9.1	0.80	0.50	0.0	0.00	39.38	79	270
165.0	JMA Wireless MX08FRO665-21	3	65	12.5	6.0	20.0	8.0	0.80	0.64	0.0	0.00	39.38	642	232
165.0	Generic Flat Light Sector Fram	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.00	39.38	1011	1440
155.0	Kathrein Scala 860 10025	6	1	0.2	0.6	2.4	2.0	0.80	0.50	-1.0	12.29	38.61	12	9
155.0	Kathrein Scala 800 10504	6	18	3.3	4.5	6.1	2.7	0.80	0.66	1.2	418.86	38.76	349	127
95.3	Generic 24" x 24" Ice Shield	1	50	0.8	0.3	24.0	24.0	1.00	1.00	0.0	0.00	33.66	23	60
87.4	RFS PA6-65AC w/ Radome	1	308	24.4	6.0	72.0	0.0	1.00	1.00	0.0	0.00	32.84	681	370
	Totals	130	10,514	811.0									15,270	12,616

TOWER LOADING

Discrete Appurtenance Properties 0.9D + 1.0W

Elev (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)
260.0	Decibel DB809DK-XT	1	64	6.4	21.2	3.0	3.0	1.00	1.00	0.0	0.00	44.84	242	58
250.0	Box Enclosures BEN-92P	1	2	0.7	0.8	8.0	5.1	0.80	1.00	0.0	0.00	44.34	20	2
246.0	Alcatel-Lucent RRH2x50-08	6	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.00	44.13	153	286
246.0	Alcatel-Lucent 1900 MHz 4X45 R	3	60	2.3	2.1	11.1	10.7	0.80	0.50	0.0	0.00	44.13	105	162
246.0	Alcatel-Lucent TD-RRH8x20-25	3	66	3.7	2.1	17.5	5.7	0.80	0.50	0.0	0.00	44.13	167	178
246.0	RFS APXVSPP18-C-A20	3	57	8.0	6.0	11.8	7.0	0.80	0.69	0.0	0.00	44.13	498	154
246.0	Round Sector Frames	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	44.13	814	810
246.0	KMW ETCR-654L12H6	3	85	15.7	7.1	21.0	6.3	0.80	0.61	0.0	0.00	44.13	863	229
236.0	Procom CXL 900-3LW	1	2	0.1	2.3	0.6	0.6	1.00	1.00	0.0	0.00	43.61	5	1
236.0	Generic 5" x 3" x 2" Cavity Fi	1	2	0.1	0.4	3.2	1.9	1.00	0.50	0.0	0.00	43.61	3	1
236.0	Generic Low Noise Amplifier	1	2	0.2	0.4	4.0	2.0	1.00	0.50	0.0	0.00	43.61	3	2
225.0	Ericsson Radio 4449 B71 B85A	3	75	1.6	1.3	13.2	10.5	0.80	0.50	0.0	0.00	43.02	72	202

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient Factor	Vert E_{cc} (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
225.0	Ericsson 4460 BAND 2/25	3	109	2.6	1.6	15.7	12.1	0.80	0.67	0.0	0.00	43.02	151	294
225.0	Commscope VV-65A-R1B	3	25	5.9	4.6	12.0	4.6	0.80	0.63	0.0	0.00	43.02	326	67
225.0	Ericsson AIR 6419 B41	3	83	6.3	3.0	20.9	9.0	0.80	0.63	0.0	0.00	43.02	350	225
225.0	Round Sector Frames	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	43.02	794	810
225.0	RFS APXVAARR24_43-U-NA20	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.00	43.02	1119	345
211.5	Generic 48" x 10" Panel	12	20	4.3	4.0	10.0	5.0	0.80	0.66	0.0	0.00	42.27	988	216
207.0	Sinclair SC479-HF1LDF(E5765)	1	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.00	42.01	180	31
200.0	Bird 432E-83I-01-T	1	25	1.2	1.0	12.0	7.5	0.80	0.67	0.0	0.00	41.60	23	22
200.0	Flat Side Arm	3	150	6.3	0.0	0.0	0.0	0.75	0.67	0.0	0.00	41.60	336	405
192.0	Sinclair SC479-HF1LDF(E5765)	2	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.00	41.12	352	61
175.0	Powerwave Allgon LGP21901	6	6	0.2	0.3	6.0	3.0	0.80	0.50	0.0	0.00	40.04	16	30
175.0	Powerwave Allgon 7020	3	2	0.3	0.4	8.3	2.4	0.80	0.50	0.0	0.00	40.04	14	6
175.0	Raycap DC6-48-60-18-8F (23.5"	1	20	1.3	2.0	9.7	9.7	0.80	0.67	0.0	0.00	40.04	23	18
175.0	Raycap DC6-48-60-18-8F ("Squid	1	32	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.00	40.04	40	29
175.0	Ericsson RRUS 8843 B2, B66A	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.00	40.04	67	194
175.0	Powerwave Allgon LGP17201	6	31	1.7	1.2	14.4	3.7	0.80	0.50	0.0	0.00	40.04	136	167
175.0	Ericsson RRUS 4478 B14	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.00	40.04	75	162
175.0	Ericsson RRUS 4449 B5, B12	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.00	40.04	80	192
175.0	Allgon 7770.00	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.00	40.04	292	94
175.0	CCI DMP65R-BU8D	3	96	17.9	8.0	20.7	7.7	0.80	0.63	0.0	0.00	40.04	920	258
175.0	CCI OPA65R-BU8D	3	77	18.1	8.0	21.0	7.8	0.80	0.63	0.0	0.00	40.04	931	207
175.0	Generic Heavy Sector Frame	3	500	29.3	0.0	0.0	0.0	0.75	0.75	0.0	0.00	40.04	1683	1350
174.3	CCI OPA65R-KE6D	2	67	12.9	5.9	21.0	7.8	0.80	0.72	0.0	0.00	40.00	504	121
165.0	Commscope RDIDC-9181-PF-48	1	22	1.9	1.3	14.0	8.0	0.80	1.00	0.0	0.00	39.38	50	20
165.0	Fujitsu TA08025-B604	3	64	2.0	1.3	15.0	7.9	0.80	0.50	0.0	0.00	39.38	79	173
165.0	Fujitsu TA08025-B605	3	75	2.0	1.3	15.0	9.1	0.80	0.50	0.0	0.00	39.38	79	202
165.0	JMA Wireless MX08FRO665-21	3	65	12.5	6.0	20.0	8.0	0.80	0.64	0.0	0.00	39.38	642	174
165.0	Generic Flat Light Sector Fram	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.00	39.38	1011	1080
155.0	Kathrein Scala 860 10025	6	1	0.2	0.6	2.4	2.0	0.80	0.50	-1.0	12.29	38.61	12	6
155.0	Kathrein Scala 800 10504	6	18	3.3	4.5	6.1	2.7	0.80	0.66	1.2	418.86	38.76	349	95
95.3	Generic 24" x 24" Ice Shield	1	50	0.8	0.3	24.0	24.0	1.00	1.00	0.0	0.00	33.66	23	45
87.4	RFS PA6-65AC w/ Radome	1	308	24.4	6.0	72.0	0.0	1.00	1.00	0.0	0.00	32.84	681	277
	Totals	130	10,514	811.0									15,270	9,462

TOWER LOADING

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elev (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient Factor	Vert E_{cc} (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
260.0	Decibel DB809DK-XT	1	176	11.6	21.2	3.0	3.0	1.00	1.00	0.0	0.00	6.95	69	188
250.0	Box Enclosures BEN-92P	1	18	1.1	0.8	8.0	5.1	0.80	1.00	0.0	0.00	6.87	5	18
246.0	Alcatel-Lucent RRH2x50-08	6	94	2.3	1.3	13.0	9.8	0.80	0.50	0.0	0.00	6.84	32	630
246.0	Alcatel-Lucent 1900 MHz 4X45 R	3	117	3.1	2.1	11.1	10.7	0.80	0.50	0.0	0.00	6.84	21	386
246.0	Alcatel-Lucent TD-RRH8x20-25	3	124	4.6	2.1	17.5	5.7	0.80	0.50	0.0	0.00	6.84	32	413
246.0	RFS APXVSPP18-C-A20	3	178	10.0	6.0	11.8	7.0	0.80	0.69	0.0	0.00	6.84	96	568
246.0	Round Sector Frames	3	558	26.0	0.0	0.0	0.0	0.75	0.67	0.0	0.00	6.84	228	1854
246.0	KMW ETCR-654L12H6	3	288	18.0	7.1	21.0	6.3	0.80	0.61	0.0	0.00	6.84	153	915
236.0	Procom CXL 900-3LW	1	5	0.6	2.3	0.6	0.6	1.00	1.00	0.0	0.00	6.76	4	6
236.0	Generic 5" x 3" x 2" Cavity Fi	1	5	0.3	0.4	3.2	1.9	1.00	0.50	0.0	0.00	6.76	1	5
236.0	Generic Low Noise Amplifier	1	6	0.4	0.4	4.0	2.0	1.00	0.50	0.0	0.00	6.76	1	6
225.0	Ericsson Radio 4449 B71 B85A	3	117	2.2	1.3	13.2	10.5	0.80	0.50	0.0	0.00	6.67	15	396
225.0	Ericsson 4460 BAND 2/25	3	171	3.3	1.6	15.7	12.1	0.80	0.67	0.0	0.00	6.67	30	577
225.0	Commscope VV-65A-R1B	3	106	7.4	4.6	12.0	4.6	0.80	0.63	0.0	0.00	6.67	63	333
225.0	Ericsson AIR 6419 B41	3	189	7.5	3.0	20.9	9.0	0.80	0.63	0.0	0.00	6.67	64	616
225.0	Round Sector Frames	3	556	25.9	0.0	0.0	0.0	0.75	0.67	0.0	0.00	6.67	222	1849
225.0	RFS APXVAARR24_43-U-NA20	3	402	22.8	8.0	24.0	8.7	0.80	0.63	0.0	0.00	6.67	196	1282
211.5	Generic 48" x 10" Panel	12	85	5.6	4.0	10.0	5.0	0.80	0.66	0.0	0.00	6.55	199	1069
207.0	Sinclair SC479-HF1LDF(E5765)	1	120	8.6	14.4	3.5	3.5	1.00	1.00	0.0	0.00	6.51	47	127
200.0	Bird 432E-83I-01-T	1	53	1.7	1.0	12.0	7.5	0.80	0.67	0.0	0.00	6.45	5	58
200.0	Flat Side Arm	3	200	8.0	0.0	0.0	0.0	0.75	0.67	0.0	0.00	6.45	66	690
192.0	Sinclair SC479-HF1LDF(E5765)	2	119	8.5	14.4	3.5	3.5	1.00	1.00	0.0	0.00	6.37	93	251
175.0	Powerwave Allgon LGP21901	6	11	0.4	0.3	6.0	3.0	0.80	0.50	0.0	0.00	6.21	5	71
175.0	Powerwave Allgon 7020	3	9	0.6	0.4	8.3	2.4	0.80	0.50	0.0	0.00	6.21	4	29
175.0	Raycap DC6-48-60-18-8F (23.5"	1	56	1.7	2.0	9.7	9.7	0.80	0.67	0.0	0.00	6.21	5	60
175.0	Raycap DC6-48-60-18-8F ("Squid	1	74	1.9	2.0	11.0	11.0	0.80	1.00	0.0	0.00	6.21	8	80
175.0	Ericsson RRUS 8843 B2, B66A	3	113	2.2	1.2	13.2	10.9	0.80	0.50	0.0	0.00	6.21	14	384
175.0	Powerwave Allgon LGP17201	6	57	2.2	1.2	14.4	3.7	0.80	0.50	0.0	0.00	6.21	28	378

Elev (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)
175.0	Ericsson RRUS 4478 B14	3	97	2.4	1.4	13.4	7.7	0.80	0.50	0.0	0.00	6.21	16	328
175.0	Ericsson RRUS 4449 B5, B12	3	115	2.6	1.5	13.2	9.4	0.80	0.50	0.0	0.00	6.21	16	386
175.0	Allgon 7770.00	3	120	6.2	4.6	11.0	5.0	0.80	0.65	0.0	0.00	6.21	51	380
175.0	CCI DMP65R-BU8D	3	326	20.4	8.0	20.7	7.7	0.80	0.63	0.0	0.00	6.21	162	1034
175.0	CCI OPA65R-BU8D	3	310	20.6	8.0	21.0	7.8	0.80	0.63	0.0	0.00	6.21	164	975
175.0	Generic Heavy Sector Frame	3	872	41.0	0.0	0.0	0.0	0.75	0.75	0.0	0.00	6.21	365	2917
174.3	CCI OPA65R-KE6D	2	244	14.8	5.9	21.0	7.8	0.80	0.72	0.0	0.00	6.20	90	514
165.0	Commscope RDIDC-9181-PF-48	1	60	2.5	1.3	14.0	8.0	0.80	1.00	0.0	0.00	6.10	10	64
165.0	Fujitsu TA08025-B604	3	103	2.6	1.3	15.0	7.9	0.80	0.50	0.0	0.00	6.10	16	347
165.0	Fujitsu TA08025-B605	3	117	2.6	1.3	15.0	9.1	0.80	0.50	0.0	0.00	6.10	16	396
165.0	JMA Wireless MX08FRO665-21	3	236	14.4	6.0	20.0	8.0	0.80	0.64	0.0	0.00	6.10	114	747
165.0	Generic Flat Light Sector Fram	3	601	28.0	0.0	0.0	0.0	0.75	0.75	0.0	0.00	6.10	245	2043
155.0	Kathrein Scala 860 10025	6	5	0.4	0.6	2.4	2.0	0.80	0.50	-1.0	4.58	5.98	5	33
155.0	Kathrein Scala 800 10504	6	60	4.6	4.5	6.1	2.7	0.80	0.66	1.2	88.43	6.01	74	378
95.3	Generic 24" x 24" Ice Shield	1	109	1.3	0.3	24.0	24.0	1.00	1.00	0.0	0.00	5.22	6	119
87.4	RFS PA6-65AC w/ Radome	1	747	25.9	6.0	72.0	0.0	1.00	1.00	0.0	0.00	5.09	112	808
	Totals	130	22,606	1078.3									3169	24,709

TOWER LOADING

Discrete Appurtenance Properties 1.0D + 1.0W Service

Elev (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)
260.0	Decibel DB809DK-XT	1	64	6.4	21.2	3.0	3.0	1.00	1.00	0.0	0.00	10.01	54	64
250.0	Box Enclosures BEN-92P	1	2	0.7	0.8	8.0	5.1	0.80	1.00	0.0	0.00	9.90	4	2
246.0	Alcatel-Lucent RRH2x50-08	6	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.00	9.85	34	317
246.0	Alcatel-Lucent 1900 MHz 4X45 R	3	60	2.3	2.1	11.1	10.7	0.80	0.50	0.0	0.00	9.85	23	180
246.0	Alcatel-Lucent TD-RRH8x20-25	3	66	3.7	2.1	17.5	5.7	0.80	0.50	0.0	0.00	9.85	37	198
246.0	RFS APXVSPP18-C-A20	3	57	8.0	6.0	11.8	7.0	0.80	0.69	0.0	0.00	9.85	111	171
246.0	Round Sector Frames	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	9.85	182	900
246.0	KMW ETCR-654L12H6	3	85	15.7	7.1	21.0	6.3	0.80	0.61	0.0	0.00	9.85	193	255
236.0	Procom CXL 900-3LW	1	2	0.1	2.3	0.6	0.6	1.00	1.00	0.0	0.00	9.73	1	2
236.0	Generic 5" x 3" x 2" Cavity Fi	1	2	0.1	0.4	3.2	1.9	1.00	0.50	0.0	0.00	9.73	1	2
236.0	Generic Low Noise Amplifier	1	2	0.2	0.4	4.0	2.0	1.00	0.50	0.0	0.00	9.73	1	2
225.0	Ericsson Radio 4449 B71 B85A	3	75	1.6	1.3	13.2	10.5	0.80	0.50	0.0	0.00	9.60	16	225
225.0	Ericsson 4460 BAND 2/25	3	109	2.6	1.6	15.7	12.1	0.80	0.67	0.0	0.00	9.60	34	327
225.0	Commscope VV-65A-R1B	3	25	5.9	4.6	12.0	4.6	0.80	0.63	0.0	0.00	9.60	73	74
225.0	Ericsson AIR 6419 B41	3	83	6.3	3.0	20.9	9.0	0.80	0.63	0.0	0.00	9.60	78	250
225.0	Round Sector Frames	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.00	9.60	177	900
225.0	RFS APXVAARR24_43-U-NA20	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.00	9.60	250	384
211.5	Generic 48" x 10" Panel	12	20	4.3	4.0	10.0	5.0	0.80	0.66	0.0	0.00	9.43	221	240
207.0	Sinclair SC479-HF1LDF(E5765)	1	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.00	9.38	40	34
200.0	Bird 432E-83I-01-T	1	25	1.2	1.0	12.0	7.5	0.80	0.67	0.0	0.00	9.29	5	25
200.0	Flat Side Arm	3	150	6.3	0.0	0.0	0.0	0.75	0.67	0.0	0.00	9.29	75	450
192.0	Sinclair SC479-HF1LDF(E5765)	2	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.00	9.18	78	68
175.0	Powerwave Allgon LGP21901	6	6	0.2	0.3	6.0	3.0	0.80	0.50	0.0	0.00	8.94	4	33
175.0	Powerwave Allgon 7020	3	2	0.3	0.4	8.3	2.4	0.80	0.50	0.0	0.00	8.94	3	7
175.0	Raycap DC6-48-60-18-8F (23.5"	1	20	1.3	2.0	9.7	9.7	0.80	0.67	0.0	0.00	8.94	5	20
175.0	Raycap DC6-48-60-18-8F ("Squid	1	32	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.00	8.94	9	32
175.0	Ericsson RRUS 8843 B2, B66A	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.00	8.94	15	216
175.0	Powerwave Allgon LGP17201	6	31	1.7	1.2	14.4	3.7	0.80	0.50	0.0	0.00	8.94	30	186
175.0	Ericsson RRUS 4478 B14	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.00	8.94	17	180
175.0	Ericsson RRUS 4449 B5, B12	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.00	8.94	18	213
175.0	Allgon 7770.00	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.00	8.94	65	105
175.0	CCI DMP65R-BU8D	3	96	17.9	8.0	20.7	7.7	0.80	0.63	0.0	0.00	8.94	205	287
175.0	CCI OPA65R-BU8D	3	77	18.1	8.0	21.0	7.8	0.80	0.63	0.0	0.00	8.94	208	230
175.0	Generic Heavy Sector Frame	3	500	29.3	0.0	0.0	0.0	0.75	0.75	0.0	0.00	8.94	376	1500
174.3	CCI OPA65R-KE6D	2	67	12.9	5.9	21.0	7.8	0.80	0.72	0.0	0.00	8.93	113	134
165.0	Commscope RDIDC-9181-PF-48	1	22	1.9	1.3	14.0	8.0	0.80	1.00	0.0	0.00	8.79	11	22
165.0	Fujitsu TA08025-B604	3	64	2.0	1.3	15.0	7.9	0.80	0.50	0.0	0.00	8.79	18	192
165.0	Fujitsu TA08025-B605	3	75	2.0	1.3	15.0	9.1	0.80	0.50	0.0	0.00	8.79	18	225
165.0	JMA Wireless MX08FRO665-21	3	65	12.5	6.0	20.0	8.0	0.80	0.64	0.0	0.00	8.79	143	194
165.0	Generic Flat Light Sector Fram	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.00	8.79	226	1200
155.0	Kathrein Scala 860 10025	6	1	0.2	0.6	2.4	2.0	0.80	0.50	-1.0	2.74	8.62	3	7
155.0	Kathrein Scala 800 10504	6	18	3.3	4.5	6.1	2.7	0.80	0.66	1.2	93.49	8.65	78	106
95.3	Generic 24" x 24" Ice Shield	1	50	0.8	0.3	24.0	24.0	1.00	1.00	0.0	0.00	7.51	5	50

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient Factor	Vert E_{cc} (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
87.4	RFS PA6-65AC w/ Radome	1	308	24.4	6.0	72.0	0.0	1.00	1.00	0.0	0.00	7.33	152	308
	Totals	130	10,514	811.0									3,408	10,514

TOWER LOADING

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	% In Wind	Spread On Faces	Bundling	Cluster Dia (in)	Out of Zone	Spacing (in)	Orient Factor	K_a Override
10.0	200.0	0.51" (13mm) Cable	1	0.51	0.14	100	1	Individual	0.00	N	1.00	1.00	0.00
10.0	175.0	0.39" (10mm) Fiber Trunk	1	0.39	0.06	100	2	Individual	0.00	N	1.00	1.00	0.00
10.0	175.0	3" conduit	2	3.50	7.58	100	2	Individual	0.00	N	1.00	1.00	0.00
10.0	175.0	0.78" (19.7mm) 8 AWG 6	4	0.78	0.59	100	2	Individual	0.00	N	1.00	1.00	0.00
10.0	173.0	3" conduit	1	3.50	7.58	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	260.0	1 5/8" Coax	2	1.98	0.82	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	250.0	Waveguide	1	1.50	6.00	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	250.0	Climbing Ladder	1	1.50	6.90	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	246.0	1 1/4" Hybriflex Cable	4	1.54	1.00	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	246.0	0.21" (5.3mm) Cat 5e	4	0.21	0.02	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	246.0	Waveguide	1	2.00	6.00	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	246.0	1" conduit	1	1.32	1.68	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	236.0	1/2" Coax	1	0.63	0.15	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	225.0	Waveguide	1	2.00	6.00	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	225.0	1.99" (50.7mm) Hybrid	3	1.99	1.90	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	225.0	1 5/8" Hybriflex	3	1.98	1.30	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	211.0	1 5/8" Coax	12	1.98	0.82	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	210.0	Waveguide	1	2.00	6.00	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	207.0	1 5/8" Coax	1	1.98	0.82	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	192.0	1 5/8" Coax	2	1.98	0.82	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	175.0	1 5/8" Coax	6	1.98	0.82	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	175.0	0.39" (9.8mm) Cable	1	0.39	0.07	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	175.0	Waveguide	1	1.50	6.00	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	165.0	1.60" (40.6mm) Hybrid	1	1.60	2.34	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	158.0	Waveguide	1	1.50	6.00	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	155.0	3/8" Coax	6	0.44	0.08	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	155.0	1 5/8" Coax	12	1.98	0.82	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	83.0	WE65	1	2.03	0.53	100	1	Individual	0.00	N	1.00	1.00	0.00

SECTION FORCES

1.2D + 1.0W Normal — Gust Response Factor (Gh): 0.85
127 mph wind with no ice — Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	44.08	4.274	3.333	0.00	0.183	2.66	1.00	1.00	0.0	6.18	16.41	0.00	875	0	615	359	973
12	230	43.29	8.033	7.512	0.00	0.150	2.77	1.00	1.00	0.0	12.30	34.09	0.00	2136	0	1254	1101	2355
11	210	42.18	11.748	10.851	0.00	0.155	2.75	1.00	1.00	0.0	17.91	49.29	0.00	3896	0	1767	2234	4001
10	190	40.99	16.341	12.521	0.00	0.155	2.75	1.00	1.00	0.0	23.29	64.11	0.00	5044	0	2234	2862	5096
9	170	39.71	20.640	12.521	0.00	0.147	2.78	1.00	1.00	0.0	27.61	76.86	0.00	6244	0	2594	3916	6511
8	150	38.32	18.799	13.356	0.00	0.121	2.88	1.00	1.00	0.0	26.09	75.21	0.00	7512	0	2449	5060	7509
7	130	36.78	22.219	14.190	0.00	0.119	2.89	1.00	1.00	0.0	29.87	86.33	0.00	8243	0	2699	5114	7813
6	110	35.07	25.214	15.025	0.00	0.116	2.90	1.00	1.00	0.0	33.22	96.39	0.00	8725	0	2873	4876	7749
5	90	33.11	28.916	15.860	0.00	0.115	2.90	1.00	1.00	0.0	37.31	108.31	0.00	9490	0	3049	4614	7663
4	70	30.82	31.741	16.694	0.00	0.113	2.91	1.00	1.00	0.0	40.56	118.12	0.00	10189	0	3094	4349	7443
3	50	27.99	33.032	17.529	0.00	0.108	2.93	1.00	1.00	0.0	42.37	124.25	0.00	12582	0	2957	3750	6707
2	30	24.19	31.525	18.364	0.00	0.098	2.97	1.00	1.00	0.0	41.11	122.19	0.00	12539	0	2513	3241	5754
1	10	24.17	35.935	19.199	0.00	0.100	2.96	1.00	1.00	0.0	44.28	131.18	0.00	13280	0	2695	3132	5827
														100,754	0			75,402

1.2D + 1.0W 60° — Gust Response Factor (Gh): 0.85
127 mph wind with no ice — Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	44.08	4.274	3.333	0.00	0.183	2.66	0.80	1.00	0.0	5.32	14.14	0.00	875	0	530	359	888
12	230	43.29	8.033	7.512	0.00	0.150	2.77	0.80	1.00	0.0	10.69	29.63	0.00	2136	0	1091	1101	2191
11	210	42.18	11.748	10.851	0.00	0.155	2.75	0.80	1.00	0.0	15.56	42.82	0.00	3896	0	1536	2234	3769
10	190	40.99	16.341	12.521	0.00	0.155	2.75	0.80	1.00	0.0	20.02	55.12	0.00	5044	0	1921	2862	4783
9	170	39.71	20.640	12.521	0.00	0.147	2.78	0.80	1.00	0.0	23.48	65.37	0.00	6244	0	2207	3916	6123
8	150	38.32	18.799	13.356	0.00	0.121	2.88	0.80	1.00	0.0	22.33	64.37	0.00	7512	0	2096	5060	7156
7	130	36.78	22.219	14.190	0.00	0.119	2.89	0.80	1.00	0.0	25.42	73.48	0.00	8243	0	2297	5114	7411
6	110	35.07	25.214	15.025	0.00	0.116	2.90	0.80	1.00	0.0	28.18	81.76	0.00	8725	0	2437	4876	7313
5	90	33.11	28.916	15.860	0.00	0.115	2.90	0.80	1.00	0.0	31.53	91.52	0.00	9490	0	2576	4614	7190
4	70	30.82	31.741	16.694	0.00	0.113	2.91	0.80	1.00	0.0	34.22	99.64	0.00	10189	0	2610	4349	6959
3	50	27.99	33.032	17.529	0.00	0.108	2.93	0.80	1.00	0.0	35.76	104.88	0.00	12582	0	2496	3750	6246
2	30	24.19	31.525	18.364	0.00	0.098	2.97	0.80	1.00	0.0	34.81	103.45	0.00	12539	0	2127	3241	5368
1	10	24.17	35.935	19.199	0.00	0.100	2.96	0.80	1.00	0.0	37.89	112.26	0.00	13280	0	2306	3146	5452
														100,754	0			70,851

1.2D + 1.0W 90° — Gust Response Factor (Gh): 0.85
127 mph wind with no ice — Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	44.08	4.274	3.333	0.00	0.183	2.66	0.85	1.00	0.0	5.54	14.71	0.00	875	0	551	359	910
12	230	43.29	8.033	7.512	0.00	0.150	2.77	0.85	1.00	0.0	11.09	30.75	0.00	2136	0	1132	1101	2232
11	210	42.18	11.748	10.851	0.00	0.155	2.75	0.85	1.00	0.0	16.15	44.44	0.00	3896	0	1593	2234	3827
10	190	40.99	16.341	12.521	0.00	0.155	2.75	0.85	1.00	0.0	20.83	57.36	0.00	5044	0	1999	2862	4861
9	170	39.71	20.640	12.521	0.00	0.147	2.78	0.85	1.00	0.0	24.51	68.24	0.00	6244	0	2304	3916	6220
8	150	38.32	18.799	13.356	0.00	0.121	2.88	0.85	1.00	0.0	23.27	67.08	0.00	7512	0	2185	5060	7244
7	130	36.78	22.219	14.190	0.00	0.119	2.89	0.85	1.00	0.0	26.53	76.69	0.00	8243	0	2398	5114	7512
6	110	35.07	25.214	15.025	0.00	0.116	2.90	0.85	1.00	0.0	29.44	85.42	0.00	8725	0	2546	4876	7422
5	90	33.11	28.916	15.860	0.00	0.115	2.90	0.85	1.00	0.0	32.98	95.72	0.00	9490	0	2694	4614	7309
4	70	30.82	31.741	16.694	0.00	0.113	2.91	0.85	1.00	0.0	35.80	104.26	0.00	10189	0	2731	4349	7080
3	50	27.99	33.032	17.529	0.00	0.108	2.93	0.85	1.00	0.0	37.41	109.72	0.00	12582	0	2611	3750	6361
2	30	24.19	31.525	18.364	0.00	0.098	2.97	0.85	1.00	0.0	36.38	108.13	0.00	12539	0	2224	3241	5465

SECTION FORCES

Sect #	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)
1	10	24.17	35.935	19.199	0.00	0.100	2.96	0.85	1.00	0.0	39.69	117.58	0.00	13280	0	2416	3146	5561
														100,754	0			72,004

1.2D + 1.0W 120° Gust Response Factor (Gh): 0.85
127 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	44.08	4.274	3.333	0.00	0.183	2.66	1.00	1.00	0.0	6.18	16.41	0.00	875	0	615	359	973
12	230	43.29	8.033	7.512	0.00	0.150	2.77	1.00	1.00	0.0	12.30	34.09	0.00	2136	0	1254	1101	2355
11	210	42.18	11.748	10.851	0.00	0.155	2.75	1.00	1.00	0.0	17.91	49.29	0.00	3896	0	1767	2234	4001
10	190	40.99	16.341	12.521	0.00	0.155	2.75	1.00	1.00	0.0	23.29	64.11	0.00	5044	0	2234	2862	5096
9	170	39.71	20.640	12.521	0.00	0.147	2.78	1.00	1.00	0.0	27.61	76.86	0.00	6244	0	2594	3916	6511
8	150	38.32	18.799	13.356	0.00	0.121	2.88	1.00	1.00	0.0	26.09	75.21	0.00	7512	0	2449	5060	7509
7	130	36.78	22.219	14.190	0.00	0.119	2.89	1.00	1.00	0.0	29.87	86.33	0.00	8243	0	2699	5114	7813
6	110	35.07	25.214	15.025	0.00	0.116	2.90	1.00	1.00	0.0	33.22	96.39	0.00	8725	0	2873	4876	7749
5	90	33.11	28.916	15.860	0.00	0.115	2.90	1.00	1.00	0.0	37.31	108.31	0.00	9490	0	3049	4614	7663
4	70	30.82	31.741	16.694	0.00	0.113	2.91	1.00	1.00	0.0	40.56	118.12	0.00	10189	0	3094	4349	7443
3	50	27.99	33.032	17.529	0.00	0.108	2.93	1.00	1.00	0.0	42.37	124.25	0.00	12582	0	2957	3750	6707
2	30	24.19	31.525	18.364	0.00	0.098	2.97	1.00	1.00	0.0	41.11	122.19	0.00	12539	0	2513	3241	5754
1	10	24.17	35.935	19.199	0.00	0.100	2.96	1.00	1.00	0.0	45.08	133.55	0.00	13280	0	2744	3146	5890
														100,754	0			75,464

1.2D + 1.0W 180° Gust Response Factor (Gh): 0.85
127 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	44.08	4.274	3.333	0.00	0.183	2.66	0.80	1.00	0.0	5.32	14.14	0.00	875	0	530	359	888
12	230	43.29	8.033	7.512	0.00	0.150	2.77	0.80	1.00	0.0	10.69	29.63	0.00	2136	0	1091	1101	2191
11	210	42.18	11.748	10.851	0.00	0.155	2.75	0.80	1.00	0.0	15.56	42.82	0.00	3896	0	1536	2234	3769
10	190	40.99	16.341	12.521	0.00	0.155	2.75	0.80	1.00	0.0	20.02	55.12	0.00	5044	0	1921	2862	4783
9	170	39.71	20.640	12.521	0.00	0.147	2.78	0.80	1.00	0.0	23.48	65.37	0.00	6244	0	2207	3916	6123
8	150	38.32	18.799	13.356	0.00	0.121	2.88	0.80	1.00	0.0	22.33	64.37	0.00	7512	0	2096	5060	7156
7	130	36.78	22.219	14.190	0.00	0.119	2.89	0.80	1.00	0.0	25.42	73.48	0.00	8243	0	2297	5114	7411
6	110	35.07	25.214	15.025	0.00	0.116	2.90	0.80	1.00	0.0	28.18	81.76	0.00	8725	0	2437	4876	7313
5	90	33.11	28.916	15.860	0.00	0.115	2.90	0.80	1.00	0.0	31.53	91.52	0.00	9490	0	2576	4614	7190
4	70	30.82	31.741	16.694	0.00	0.113	2.91	0.80	1.00	0.0	34.22	99.64	0.00	10189	0	2610	4349	6959
3	50	27.99	33.032	17.529	0.00	0.108	2.93	0.80	1.00	0.0	35.76	104.88	0.00	12582	0	2496	3750	6246
2	30	24.19	31.525	18.364	0.00	0.098	2.97	0.80	1.00	0.0	34.81	103.45	0.00	12539	0	2127	3241	5368
1	10	24.17	35.935	19.199	0.00	0.100	2.96	0.80	1.00	0.0	37.89	112.26	0.00	13280	0	2306	3146	5452
														100,754	0			70,851

1.2D + 1.0W 210° Gust Response Factor (Gh): 0.85
127 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	44.08	4.274	3.333	0.00	0.183	2.66	0.85	1.00	0.0	5.54	14.71	0.00	875	0	551	359	910
12	230	43.29	8.033	7.512	0.00	0.150	2.77	0.85	1.00	0.0	11.09	30.75	0.00	2136	0	1132	1101	2232
11	210	42.18	11.748	10.851	0.00	0.155	2.75	0.85	1.00	0.0	16.15	44.44	0.00	3896	0	1593	2234	3827
10	190	40.99	16.341	12.521	0.00	0.155	2.75	0.85	1.00	0.0	20.83	57.36	0.00	5044	0	1999	2862	4861
9	170	39.71	20.640	12.521	0.00	0.147	2.78	0.85	1.00	0.0	24.51	68.24	0.00	6244	0	2304	3916	6220
8	150	38.32	18.799	13.356	0.00	0.121	2.88	0.85	1.00	0.0	23.27	67.08	0.00	7512	0	2185	5060	7244
7	130	36.78	22.219	14.190	0.00	0.119	2.89	0.85	1.00	0.0	26.53	76.69	0.00	8243	0	2398	5114	7512
6	110	35.07	25.214	15.025	0.00	0.116	2.90	0.85	1.00	0.0	29.44	85.42	0.00	8725	0	2546	4876	7422
5	90	33.11	28.916	15.860	0.00	0.115	2.90	0.85	1.00	0.0	32.98	95.72	0.00	9490	0	2694	4614	7309
4	70	30.82	31.741	16.694	0.00	0.113	2.91	0.85	1.00	0.0	35.80	104.26	0.00	10189	0	2731	4349	7080
3	50	27.99	33.032	17.529	0.00	0.108	2.93	0.85	1.00	0.0	37.41	109.72	0.00	12582	0	2611	3750	6361

SECTION FORCES

Sect #	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)
2	30	24.19	31.525	18.364	0.00	0.098	2.97	0.85	1.00	0.0	36.38	108.13	0.00	12539	0	2224	3241	5465
1	10	24.17	35.935	19.199	0.00	0.100	2.96	0.85	1.00	0.0	39.69	117.58	0.00	13280	0	2416	3146	5561
														100,754	0			72,004

1.2D + 1.0W 240° Gust Response Factor (Gh): 0.85
127 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	44.08	4.274	3.333	0.00	0.183	2.66	1.00	1.00	0.0	6.18	16.41	0.00	875	0	615	359	973
12	230	43.29	8.033	7.512	0.00	0.150	2.77	1.00	1.00	0.0	12.30	34.09	0.00	2136	0	1254	1101	2355
11	210	42.18	11.748	10.851	0.00	0.155	2.75	1.00	1.00	0.0	17.91	49.29	0.00	3896	0	1767	2234	4001
10	190	40.99	16.341	12.521	0.00	0.155	2.75	1.00	1.00	0.0	23.29	64.11	0.00	5044	0	2234	2862	5096
9	170	39.71	20.640	12.521	0.00	0.147	2.78	1.00	1.00	0.0	27.61	76.86	0.00	6244	0	2594	3916	6511
8	150	38.32	18.799	13.356	0.00	0.121	2.88	1.00	1.00	0.0	26.09	75.21	0.00	7512	0	2449	5060	7509
7	130	36.78	22.219	14.190	0.00	0.119	2.89	1.00	1.00	0.0	29.87	86.33	0.00	8243	0	2699	5114	7813
6	110	35.07	25.214	15.025	0.00	0.116	2.90	1.00	1.00	0.0	33.22	96.39	0.00	8725	0	2873	4876	7749
5	90	33.11	28.916	15.860	0.00	0.115	2.90	1.00	1.00	0.0	37.31	108.31	0.00	9490	0	3049	4614	7663
4	70	30.82	31.741	16.694	0.00	0.113	2.91	1.00	1.00	0.0	40.56	118.12	0.00	10189	0	3094	4349	7443
3	50	27.99	33.032	17.529	0.00	0.108	2.93	1.00	1.00	0.0	42.37	124.25	0.00	12582	0	2957	3750	6707
2	30	24.19	31.525	18.364	0.00	0.098	2.97	1.00	1.00	0.0	41.11	122.19	0.00	12539	0	2513	3241	5754
1	10	24.17	35.935	19.199	0.00	0.100	2.96	1.00	1.00	0.0	45.08	133.55	0.00	13280	0	2744	3146	5890
														100,754	0			75,464

1.2D + 1.0W 300° Gust Response Factor (Gh): 0.85
127 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	44.08	4.274	3.333	0.00	0.183	2.66	0.80	1.00	0.0	5.32	14.14	0.00	875	0	530	359	888
12	230	43.29	8.033	7.512	0.00	0.150	2.77	0.80	1.00	0.0	10.69	29.63	0.00	2136	0	1091	1101	2191
11	210	42.18	11.748	10.851	0.00	0.155	2.75	0.80	1.00	0.0	15.56	42.82	0.00	3896	0	1536	2234	3769
10	190	40.99	16.341	12.521	0.00	0.155	2.75	0.80	1.00	0.0	20.02	55.12	0.00	5044	0	1921	2862	4783
9	170	39.71	20.640	12.521	0.00	0.147	2.78	0.80	1.00	0.0	23.48	65.37	0.00	6244	0	2207	3916	6123
8	150	38.32	18.799	13.356	0.00	0.121	2.88	0.80	1.00	0.0	22.33	64.37	0.00	7512	0	2096	5060	7156
7	130	36.78	22.219	14.190	0.00	0.119	2.89	0.80	1.00	0.0	25.42	73.48	0.00	8243	0	2297	5114	7411
6	110	35.07	25.214	15.025	0.00	0.116	2.90	0.80	1.00	0.0	28.18	81.76	0.00	8725	0	2437	4876	7313
5	90	33.11	28.916	15.860	0.00	0.115	2.90	0.80	1.00	0.0	31.53	91.52	0.00	9490	0	2576	4614	7190
4	70	30.82	31.741	16.694	0.00	0.113	2.91	0.80	1.00	0.0	34.22	99.64	0.00	10189	0	2610	4349	6959
3	50	27.99	33.032	17.529	0.00	0.108	2.93	0.80	1.00	0.0	35.76	104.88	0.00	12582	0	2496	3750	6246
2	30	24.19	31.525	18.364	0.00	0.098	2.97	0.80	1.00	0.0	34.81	103.45	0.00	12539	0	2127	3241	5368
1	10	24.17	35.935	19.199	0.00	0.100	2.96	0.80	1.00	0.0	37.89	112.26	0.00	13280	0	2306	3146	5452
														100,754	0			70,851

1.2D + 1.0W 330° Gust Response Factor (Gh): 0.85
127 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	44.08	4.274	3.333	0.00	0.183	2.66	0.85	1.00	0.0	5.54	14.71	0.00	875	0	551	359	910
12	230	43.29	8.033	7.512	0.00	0.150	2.77	0.85	1.00	0.0	11.09	30.75	0.00	2136	0	1132	1101	2232
11	210	42.18	11.748	10.851	0.00	0.155	2.75	0.85	1.00	0.0	16.15	44.44	0.00	3896	0	1593	2234	3827
10	190	40.99	16.341	12.521	0.00	0.155	2.75	0.85	1.00	0.0	20.83	57.36	0.00	5044	0	1999	2862	4861
9	170	39.71	20.640	12.521	0.00	0.147	2.78	0.85	1.00	0.0	24.51	68.24	0.00	6244	0	2304	3916	6220
8	150	38.32	18.799	13.356	0.00	0.121	2.88	0.85	1.00	0.0	23.27	67.08	0.00	7512	0	2185	5060	7244
7	130	36.78	22.219	14.190	0.00	0.119	2.89	0.85	1.00	0.0	26.53	76.69	0.00	8243	0	2398	5114	7512
6	110	35.07	25.214	15.025	0.00	0.116	2.90	0.85	1.00	0.0	29.44	85.42	0.00	8725	0	2546	4876	7422
5	90	33.11	28.916	15.860	0.00	0.115	2.90	0.85	1.00	0.0	32.98	95.72	0.00	9490	0	2694	4614	7309
4	70	30.82	31.741	16.694	0.00	0.113	2.91	0.85	1.00	0.0	35.80	104.26	0.00	10189	0	2731	4349	7080

SECTION FORCES

Sect #	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)
3	50	27.99	33.032	17.529	0.00	0.108	2.93	0.85	1.00	0.0	37.41	109.72	0.00	12582	0	2611	3750	6361
2	30	24.19	31.525	18.364	0.00	0.098	2.97	0.85	1.00	0.0	36.38	108.13	0.00	12539	0	2224	3241	5465
1	10	24.17	35.935	19.199	0.00	0.100	2.96	0.85	1.00	0.0	39.69	117.58	0.00	13280	0	2416	3146	5561
														100,754	0			72,004

0.9D + 1.0W Normal — Gust Response Factor (Gh): 0.85
127 mph wind with no ice — Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	44.08	4.274	3.333	0.00	0.183	2.66	1.00	1.00	0.0	6.18	16.41	0.00	656	0	615	359	973
12	230	43.29	8.033	7.512	0.00	0.150	2.77	1.00	1.00	0.0	12.30	34.09	0.00	1602	0	1254	1101	2355
11	210	42.18	11.748	10.851	0.00	0.155	2.75	1.00	1.00	0.0	17.91	49.29	0.00	2922	0	1767	2234	4001
10	190	40.99	16.341	12.521	0.00	0.155	2.75	1.00	1.00	0.0	23.29	64.11	0.00	3783	0	2234	2862	5096
9	170	39.71	20.640	12.521	0.00	0.147	2.78	1.00	1.00	0.0	27.61	76.86	0.00	4683	0	2594	3916	6511
8	150	38.32	18.799	13.356	0.00	0.121	2.88	1.00	1.00	0.0	26.09	75.21	0.00	5634	0	2449	5060	7509
7	130	36.78	22.219	14.190	0.00	0.119	2.89	1.00	1.00	0.0	29.87	86.33	0.00	6182	0	2699	5114	7813
6	110	35.07	25.214	15.025	0.00	0.116	2.90	1.00	1.00	0.0	33.22	96.39	0.00	6543	0	2873	4876	7749
5	90	33.11	28.916	15.860	0.00	0.115	2.90	1.00	1.00	0.0	37.31	108.31	0.00	7117	0	3049	4614	7663
4	70	30.82	31.741	16.694	0.00	0.113	2.91	1.00	1.00	0.0	40.56	118.12	0.00	7642	0	3094	4349	7443
3	50	27.99	33.032	17.529	0.00	0.108	2.93	1.00	1.00	0.0	42.37	124.25	0.00	9437	0	2957	3750	6707
2	30	24.19	31.525	18.364	0.00	0.098	2.97	1.00	1.00	0.0	41.11	122.19	0.00	9404	0	2513	3241	5754
1	10	24.17	35.935	19.199	0.00	0.100	2.96	1.00	1.00	0.0	45.08	133.55	0.00	9960	0	2744	3146	5890
														75,566	0			75,464

0.9D + 1.0W 60° — Gust Response Factor (Gh): 0.85
127 mph wind with no ice — Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	44.08	4.274	3.333	0.00	0.183	2.66	0.80	1.00	0.0	5.32	14.14	0.00	656	0	530	359	888
12	230	43.29	8.033	7.512	0.00	0.150	2.77	0.80	1.00	0.0	10.69	29.63	0.00	1602	0	1091	1101	2191
11	210	42.18	11.748	10.851	0.00	0.155	2.75	0.80	1.00	0.0	15.56	42.82	0.00	2922	0	1536	2234	3769
10	190	40.99	16.341	12.521	0.00	0.155	2.75	0.80	1.00	0.0	20.02	55.12	0.00	3783	0	1921	2862	4783
9	170	39.71	20.640	12.521	0.00	0.147	2.78	0.80	1.00	0.0	23.48	65.37	0.00	4683	0	2207	3916	6123
8	150	38.32	18.799	13.356	0.00	0.121	2.88	0.80	1.00	0.0	22.33	64.37	0.00	5634	0	2096	5060	7156
7	130	36.78	22.219	14.190	0.00	0.119	2.89	0.80	1.00	0.0	25.42	73.48	0.00	6182	0	2297	5114	7411
6	110	35.07	25.214	15.025	0.00	0.116	2.90	0.80	1.00	0.0	28.18	81.76	0.00	6543	0	2437	4876	7313
5	90	33.11	28.916	15.860	0.00	0.115	2.90	0.80	1.00	0.0	31.53	91.52	0.00	7117	0	2576	4614	7190
4	70	30.82	31.741	16.694	0.00	0.113	2.91	0.80	1.00	0.0	34.22	99.64	0.00	7642	0	2610	4349	6959
3	50	27.99	33.032	17.529	0.00	0.108	2.93	0.80	1.00	0.0	35.76	104.88	0.00	9437	0	2496	3750	6246
2	30	24.19	31.525	18.364	0.00	0.098	2.97	0.80	1.00	0.0	34.81	103.45	0.00	9404	0	2127	3241	5368
1	10	24.17	35.935	19.199	0.00	0.100	2.96	0.80	1.00	0.0	37.89	112.26	0.00	9960	0	2306	3146	5452
														75,566	0			70,851

0.9D + 1.0W 90° — Gust Response Factor (Gh): 0.85
127 mph wind with no ice — Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	44.08	4.274	3.333	0.00	0.183	2.66	0.85	1.00	0.0	5.54	14.71	0.00	656	0	551	359	910
12	230	43.29	8.033	7.512	0.00	0.150	2.77	0.85	1.00	0.0	11.09	30.75	0.00	1602	0	1132	1101	2232
11	210	42.18	11.748	10.851	0.00	0.155	2.75	0.85	1.00	0.0	16.15	44.44	0.00	2922	0	1593	2234	3827
10	190	40.99	16.341	12.521	0.00	0.155	2.75	0.85	1.00	0.0	20.83	57.36	0.00	3783	0	1999	2862	4861
9	170	39.71	20.640	12.521	0.00	0.147	2.78	0.85	1.00	0.0	24.51	68.24	0.00	4683	0	2304	3916	6220
8	150	38.32	18.799	13.356	0.00	0.121	2.88	0.85	1.00	0.0	23.27	67.08	0.00	5634	0	2185	5060	7244
7	130	36.78	22.219	14.190	0.00	0.119	2.89	0.85	1.00	0.0	26.53	76.69	0.00	6182	0	2398	5114	7512
6	110	35.07	25.214	15.025	0.00	0.116	2.90	0.85	1.00	0.0	29.44	85.42	0.00	6543	0	2546	4876	7422
5	90	33.11	28.916	15.860	0.00	0.115	2.90	0.85	1.00	0.0	32.98	95.72	0.00	7117	0	2694	4614	7309

SECTION FORCES

Sect #	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)
4	70	30.82	31.741	16.694	0.00	0.113	2.91	0.85	1.00	0.0	35.80	104.26	0.00	7642	0	2731	4349	7080
3	50	27.99	33.032	17.529	0.00	0.108	2.93	0.85	1.00	0.0	37.41	109.72	0.00	9437	0	2611	3750	6361
2	30	24.19	31.525	18.364	0.00	0.098	2.97	0.85	1.00	0.0	36.38	108.13	0.00	9404	0	2224	3241	5465
1	10	24.17	35.935	19.199	0.00	0.100	2.96	0.85	1.00	0.0	39.69	117.58	0.00	9960	0	2416	3146	5561
														75,566	0			72,004

0.9D + 1.0W 120° Gust Response Factor (Gh): 0.85
127 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	44.08	4.274	3.333	0.00	0.183	2.66	1.00	1.00	0.0	6.18	16.41	0.00	656	0	615	359	973
12	230	43.29	8.033	7.512	0.00	0.150	2.77	1.00	1.00	0.0	12.30	34.09	0.00	1602	0	1254	1101	2355
11	210	42.18	11.748	10.851	0.00	0.155	2.75	1.00	1.00	0.0	17.91	49.29	0.00	2922	0	1767	2234	4001
10	190	40.99	16.341	12.521	0.00	0.155	2.75	1.00	1.00	0.0	23.29	64.11	0.00	3783	0	2234	2862	5096
9	170	39.71	20.640	12.521	0.00	0.147	2.78	1.00	1.00	0.0	27.61	76.86	0.00	4683	0	2594	3916	6511
8	150	38.32	18.799	13.356	0.00	0.121	2.88	1.00	1.00	0.0	26.09	75.21	0.00	5634	0	2449	5060	7509
7	130	36.78	22.219	14.190	0.00	0.119	2.89	1.00	1.00	0.0	29.87	86.33	0.00	6182	0	2699	5114	7813
6	110	35.07	25.214	15.025	0.00	0.116	2.90	1.00	1.00	0.0	33.22	96.39	0.00	6543	0	2873	4876	7749
5	90	33.11	28.916	15.860	0.00	0.115	2.90	1.00	1.00	0.0	37.31	108.31	0.00	7117	0	3049	4614	7663
4	70	30.82	31.741	16.694	0.00	0.113	2.91	1.00	1.00	0.0	40.56	118.12	0.00	7642	0	3094	4349	7443
3	50	27.99	33.032	17.529	0.00	0.108	2.93	1.00	1.00	0.0	42.37	124.25	0.00	9437	0	2957	3750	6707
2	30	24.19	31.525	18.364	0.00	0.098	2.97	1.00	1.00	0.0	41.11	122.19	0.00	9404	0	2513	3241	5754
1	10	24.17	35.935	19.199	0.00	0.100	2.96	1.00	1.00	0.0	45.08	133.55	0.00	9960	0	2744	3146	5890
														75,566	0			75,464

0.9D + 1.0W 180° Gust Response Factor (Gh): 0.85
127 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	44.08	4.274	3.333	0.00	0.183	2.66	0.80	1.00	0.0	5.32	14.14	0.00	656	0	530	359	888
12	230	43.29	8.033	7.512	0.00	0.150	2.77	0.80	1.00	0.0	10.69	29.63	0.00	1602	0	1091	1101	2191
11	210	42.18	11.748	10.851	0.00	0.155	2.75	0.80	1.00	0.0	15.56	42.82	0.00	2922	0	1536	2234	3769
10	190	40.99	16.341	12.521	0.00	0.155	2.75	0.80	1.00	0.0	20.02	55.12	0.00	3783	0	1921	2862	4783
9	170	39.71	20.640	12.521	0.00	0.147	2.78	0.80	1.00	0.0	23.48	65.37	0.00	4683	0	2207	3916	6123
8	150	38.32	18.799	13.356	0.00	0.121	2.88	0.80	1.00	0.0	22.33	64.37	0.00	5634	0	2096	5060	7156
7	130	36.78	22.219	14.190	0.00	0.119	2.89	0.80	1.00	0.0	25.42	73.48	0.00	6182	0	2297	5114	7411
6	110	35.07	25.214	15.025	0.00	0.116	2.90	0.80	1.00	0.0	28.18	81.76	0.00	6543	0	2437	4876	7313
5	90	33.11	28.916	15.860	0.00	0.115	2.90	0.80	1.00	0.0	31.53	91.52	0.00	7117	0	2576	4614	7190
4	70	30.82	31.741	16.694	0.00	0.113	2.91	0.80	1.00	0.0	34.22	99.64	0.00	7642	0	2610	4349	6959
3	50	27.99	33.032	17.529	0.00	0.108	2.93	0.80	1.00	0.0	35.76	104.88	0.00	9437	0	2496	3750	6246
2	30	24.19	31.525	18.364	0.00	0.098	2.97	0.80	1.00	0.0	34.81	103.45	0.00	9404	0	2127	3241	5368
1	10	24.17	35.935	19.199	0.00	0.100	2.96	0.80	1.00	0.0	37.89	112.26	0.00	9960	0	2306	3146	5452
														75,566	0			70,851

0.9D + 1.0W 210° Gust Response Factor (Gh): 0.85
127 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	44.08	4.274	3.333	0.00	0.183	2.66	0.85	1.00	0.0	5.54	14.71	0.00	656	0	551	359	910
12	230	43.29	8.033	7.512	0.00	0.150	2.77	0.85	1.00	0.0	11.09	30.75	0.00	1602	0	1132	1101	2232
11	210	42.18	11.748	10.851	0.00	0.155	2.75	0.85	1.00	0.0	16.15	44.44	0.00	2922	0	1593	2234	3827
10	190	40.99	16.341	12.521	0.00	0.155	2.75	0.85	1.00	0.0	20.83	57.36	0.00	3783	0	1999	2862	4861
9	170	39.71	20.640	12.521	0.00	0.147	2.78	0.85	1.00	0.0	24.51	68.24	0.00	4683	0	2304	3916	6220
8	150	38.32	18.799	13.356	0.00	0.121	2.88	0.85	1.00	0.0	23.27	67.08	0.00	5634	0	2185	5060	7244
7	130	36.78	22.219	14.190	0.00	0.119	2.89	0.85	1.00	0.0	26.53	76.69	0.00	6182	0	2398	5114	7512
6	110	35.07	25.214	15.025	0.00	0.116	2.90	0.85	1.00	0.0	29.44	85.42	0.00	6543	0	2546	4876	7422

SECTION FORCES

Sect #	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)
5	90	33.11	28.916	15.860	0.00	0.115	2.90	0.85	1.00	0.0	32.98	95.72	0.00	7117	0	2694	4614	7309
4	70	30.82	31.741	16.694	0.00	0.113	2.91	0.85	1.00	0.0	35.80	104.26	0.00	7642	0	2731	4349	7080
3	50	27.99	33.032	17.529	0.00	0.108	2.93	0.85	1.00	0.0	37.41	109.72	0.00	9437	0	2611	3750	6361
2	30	24.19	31.525	18.364	0.00	0.098	2.97	0.85	1.00	0.0	36.38	108.13	0.00	9404	0	2224	3241	5465
1	10	24.17	35.935	19.199	0.00	0.100	2.96	0.85	1.00	0.0	39.69	117.58	0.00	9960	0	2416	3146	5561
														75,566	0			72,004

0.9D + 1.0W 240° Gust Response Factor (Gh): 0.85
127 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	44.08	4.274	3.333	0.00	0.183	2.66	1.00	1.00	0.0	6.18	16.41	0.00	656	0	615	359	973
12	230	43.29	8.033	7.512	0.00	0.150	2.77	1.00	1.00	0.0	12.30	34.09	0.00	1602	0	1254	1101	2355
11	210	42.18	11.748	10.851	0.00	0.155	2.75	1.00	1.00	0.0	17.91	49.29	0.00	2922	0	1767	2234	4001
10	190	40.99	16.341	12.521	0.00	0.155	2.75	1.00	1.00	0.0	23.29	64.11	0.00	3783	0	2234	2862	5096
9	170	39.71	20.640	12.521	0.00	0.147	2.78	1.00	1.00	0.0	27.61	76.86	0.00	4683	0	2594	3916	6511
8	150	38.32	18.799	13.356	0.00	0.121	2.88	1.00	1.00	0.0	26.09	75.21	0.00	5634	0	2449	5060	7509
7	130	36.78	22.219	14.190	0.00	0.119	2.89	1.00	1.00	0.0	29.87	86.33	0.00	6182	0	2699	5114	7813
6	110	35.07	25.214	15.025	0.00	0.116	2.90	1.00	1.00	0.0	33.22	96.39	0.00	6543	0	2873	4876	7749
5	90	33.11	28.916	15.860	0.00	0.115	2.90	1.00	1.00	0.0	37.31	108.31	0.00	7117	0	3049	4614	7663
4	70	30.82	31.741	16.694	0.00	0.113	2.91	1.00	1.00	0.0	40.56	118.12	0.00	7642	0	3094	4349	7443
3	50	27.99	33.032	17.529	0.00	0.108	2.93	1.00	1.00	0.0	42.37	124.25	0.00	9437	0	2957	3750	6707
2	30	24.19	31.525	18.364	0.00	0.098	2.97	1.00	1.00	0.0	41.11	122.19	0.00	9404	0	2513	3241	5754
1	10	24.17	35.935	19.199	0.00	0.100	2.96	1.00	1.00	0.0	45.08	133.55	0.00	9960	0	2744	3146	5890
														75,566	0			75,464

0.9D + 1.0W 300° Gust Response Factor (Gh): 0.85
127 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	44.08	4.274	3.333	0.00	0.183	2.66	0.80	1.00	0.0	5.32	14.14	0.00	656	0	530	359	888
12	230	43.29	8.033	7.512	0.00	0.150	2.77	0.80	1.00	0.0	10.69	29.63	0.00	1602	0	1091	1101	2191
11	210	42.18	11.748	10.851	0.00	0.155	2.75	0.80	1.00	0.0	15.56	42.82	0.00	2922	0	1536	2234	3769
10	190	40.99	16.341	12.521	0.00	0.155	2.75	0.80	1.00	0.0	20.02	55.12	0.00	3783	0	1921	2862	4783
9	170	39.71	20.640	12.521	0.00	0.147	2.78	0.80	1.00	0.0	23.48	65.37	0.00	4683	0	2207	3916	6123
8	150	38.32	18.799	13.356	0.00	0.121	2.88	0.80	1.00	0.0	22.33	64.37	0.00	5634	0	2096	5060	7156
7	130	36.78	22.219	14.190	0.00	0.119	2.89	0.80	1.00	0.0	25.42	73.48	0.00	6182	0	2297	5114	7411
6	110	35.07	25.214	15.025	0.00	0.116	2.90	0.80	1.00	0.0	28.18	81.76	0.00	6543	0	2437	4876	7313
5	90	33.11	28.916	15.860	0.00	0.115	2.90	0.80	1.00	0.0	31.53	91.52	0.00	7117	0	2576	4614	7190
4	70	30.82	31.741	16.694	0.00	0.113	2.91	0.80	1.00	0.0	34.22	99.64	0.00	7642	0	2610	4349	6959
3	50	27.99	33.032	17.529	0.00	0.108	2.93	0.80	1.00	0.0	35.76	104.88	0.00	9437	0	2496	3750	6246
2	30	24.19	31.525	18.364	0.00	0.098	2.97	0.80	1.00	0.0	34.81	103.45	0.00	9404	0	2127	3241	5368
1	10	24.17	35.935	19.199	0.00	0.100	2.96	0.80	1.00	0.0	37.89	112.26	0.00	9960	0	2306	3146	5452
														75,566	0			70,851

0.9D + 1.0W 330° Gust Response Factor (Gh): 0.85
127 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	44.08	4.274	3.333	0.00	0.183	2.66	0.85	1.00	0.0	5.54	14.71	0.00	656	0	551	359	910
12	230	43.29	8.033	7.512	0.00	0.150	2.77	0.85	1.00	0.0	11.09	30.75	0.00	1602	0	1132	1101	2232
11	210	42.18	11.748	10.851	0.00	0.155	2.75	0.85	1.00	0.0	16.15	44.44	0.00	2922	0	1593	2234	3827
10	190	40.99	16.341	12.521	0.00	0.155	2.75	0.85	1.00	0.0	20.83	57.36	0.00	3783	0	1999	2862	4861
9	170	39.71	20.640	12.521	0.00	0.147	2.78	0.85	1.00	0.0	24.51	68.24	0.00	4683	0	2304	3916	6220
8	150	38.32	18.799	13.356	0.00	0.121	2.88	0.85	1.00	0.0	23.27	67.08	0.00	5634	0	2185	5060	7244
7	130	36.78	22.219	14.190	0.00	0.119	2.89	0.85	1.00	0.0	26.53	76.69	0.00	6182	0	2398	5114	7512

SECTION FORCES

Sect #	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)
6	110	35.07	25.214	15.025	0.00	0.116	2.90	0.85	1.00	0.0	29.44	85.42	0.00	6543	0	2546	4876	7422
5	90	33.11	28.916	15.860	0.00	0.115	2.90	0.85	1.00	0.0	32.98	95.72	0.00	7117	0	2694	4614	7309
4	70	30.82	31.741	16.694	0.00	0.113	2.91	0.85	1.00	0.0	35.80	104.26	0.00	7642	0	2731	4349	7080
3	50	27.99	33.032	17.529	0.00	0.108	2.93	0.85	1.00	0.0	37.41	109.72	0.00	9437	0	2611	3750	6361
2	30	24.19	31.525	18.364	0.00	0.098	2.97	0.85	1.00	0.0	36.38	108.13	0.00	9404	0	2224	3241	5465
1	10	24.17	35.935	19.199	0.00	0.100	2.96	0.85	1.00	0.0	39.69	117.58	0.00	9960	0	2416	3146	5561
														75,566	0			72,004

1.2D + 1.0Di + 1.0Wi Normal — Gust Response Factor (Gh): 0.85 — Ice Importance Factor: 1.00
50 mph wind with 1" radial ice — Wind Importance Factor (Iw): 1.00 — Ice Dead Load Factor: 1.00

Sect #	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)
13	245	6.83	4.274	13.438	10.10	0.405	2.05	1.00	1.00	1.2	12.85	26.40	10.10	1802	927	153	154	307
12	230	6.71	8.033	27.090	19.58	0.326	2.23	1.00	1.00	1.2	24.49	54.60	19.58	4429	2293	311	522	834
11	210	6.54	11.748	30.530	19.68	0.283	2.34	1.00	1.00	1.2	29.88	69.98	19.68	7712	3816	389	995	1384
10	190	6.35	16.341	33.827	21.31	0.264	2.40	1.00	1.00	1.2	36.25	86.88	21.31	9963	4919	469	1280	1749
9	170	6.16	20.640	32.069	19.55	0.229	2.50	1.00	1.00	1.2	39.25	98.19	19.55	12499	6255	514	1714	2228
8	150	5.94	18.799	33.851	20.50	0.195	2.61	1.00	1.00	1.2	38.21	99.90	20.50	15724	8212	504	2319	2823
7	130	5.70	22.219	35.637	21.45	0.186	2.64	1.00	1.00	1.1	42.61	112.62	21.45	16972	8729	546	2365	2910
6	110	5.44	25.214	32.429	17.40	0.164	2.72	1.00	1.00	1.1	43.67	118.80	17.40	17376	8651	549	2286	2835
5	90	5.13	28.916	33.410	17.55	0.159	2.74	1.00	1.00	1.1	47.91	131.19	17.55	18226	8737	572	2150	2722
4	70	4.78	31.741	34.317	17.62	0.153	2.76	1.00	1.00	1.1	51.23	141.43	17.62	18952	8763	574	2009	2584
3	50	4.34	33.032	35.083	17.55	0.144	2.79	1.00	1.00	1.0	52.92	147.80	17.55	22343	9760	545	1807	2352
2	30	3.75	31.525	35.551	17.19	0.131	2.84	1.00	1.00	1.0	51.64	146.82	17.19	21129	8590	468	1539	2007
1	10	3.75	35.935	35.066	15.87	0.128	2.85	1.00	1.00	0.9	55.77	159.07	15.87	20872	7591	507	1369	1875
														187,998	87,244			26,611

1.2D + 1.0Di + 1.0Wi 60° — Gust Response Factor (Gh): 0.85 — Ice Importance Factor: 1.00
50 mph wind with 1" radial ice — Wind Importance Factor (Iw): 1.00 — Ice Dead Load Factor: 1.00

Sect #	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)
13	245	6.83	4.274	13.438	10.10	0.405	2.05	0.80	1.00	1.2	12.00	24.64	10.10	1802	927	143	154	297
12	230	6.71	8.033	27.090	19.58	0.326	2.23	0.80	1.00	1.2	22.88	51.01	19.58	4429	2293	291	522	813
11	210	6.54	11.748	30.530	19.68	0.283	2.34	0.80	1.00	1.2	27.53	64.48	19.68	7712	3816	358	995	1354
10	190	6.35	16.341	33.827	21.31	0.264	2.40	0.80	1.00	1.2	32.98	79.05	21.31	9963	4919	427	1280	1707
9	170	6.16	20.640	32.069	19.55	0.229	2.50	0.80	1.00	1.2	35.12	87.86	19.55	12499	6255	460	1714	2174
8	150	5.94	18.799	33.851	20.50	0.195	2.61	0.80	1.00	1.2	34.45	90.07	20.50	15724	8212	455	2319	2773
7	130	5.70	22.219	35.637	21.45	0.186	2.64	0.80	1.00	1.1	38.17	100.88	21.45	16972	8729	489	2365	2854
6	110	5.44	25.214	32.429	17.40	0.164	2.72	0.80	1.00	1.1	38.63	105.08	17.40	17376	8651	485	2286	2771
5	90	5.13	28.916	33.410	17.55	0.159	2.74	0.80	1.00	1.1	42.13	115.35	17.55	18226	8737	503	2150	2653
4	70	4.78	31.741	34.317	17.62	0.153	2.76	0.80	1.00	1.1	44.88	123.90	17.62	18952	8763	503	2009	2512
3	50	4.34	33.032	35.083	17.55	0.144	2.79	0.80	1.00	1.0	46.32	129.35	17.55	22343	9760	477	1807	2284
2	30	3.75	31.525	35.551	17.19	0.131	2.84	0.80	1.00	1.0	45.34	128.90	17.19	21129	8590	411	1539	1950
1	10	3.75	35.935	35.066	15.87	0.128	2.85	0.80	1.00	0.9	48.59	138.57	15.87	20872	7591	441	1369	1810
														187,998	87,244			25,953

1.2D + 1.0Di + 1.0Wi 90° — Gust Response Factor (Gh): 0.85 — Ice Importance Factor: 1.00
50 mph wind with 1" radial ice — Wind Importance Factor (Iw): 1.00 — Ice Dead Load Factor: 1.00

Sect #	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)
13	245	6.83	4.274	13.438	10.10	0.405	2.05	0.85	1.00	1.2	12.21	25.08	10.10	1802	927	146	154	300
12	230	6.71	8.033	27.090	19.58	0.326	2.23	0.85	1.00	1.2	23.28	51.91	19.58	4429	2293	296	522	819
11	210	6.54	11.748	30.530	19.68	0.283	2.34	0.85	1.00	1.2	28.11	65.85	19.68	7712	3816	366	995	1361
10	190	6.35	16.341	33.827	21.31	0.264	2.40	0.85	1.00	1.2	33.80	81.01	21.31	9963	4919	438	1280	1718
9	170	6.16	20.640	32.069	19.55	0.229	2.50	0.85	1.00	1.2	36.15	90.45	19.55	12499	6255	473	1714	2187
8	150	5.94	18.799	33.851	20.50	0.195	2.61	0.85	1.00	1.2	35.39	92.52	20.50	15724	8212	467	2319	2786

SECTION FORCES

Sect #	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)
7	130	5.70	22.219	35.637	21.45	0.186	2.64	0.85	1.00	1.1	39.28	103.81	21.45	16972	8729	503	2365	2868
6	110	5.44	25.214	32.429	17.40	0.164	2.72	0.85	1.00	1.1	39.89	108.51	17.40	17376	8651	501	2286	2787
5	90	5.13	28.916	33.410	17.55	0.159	2.74	0.85	1.00	1.1	43.57	119.31	17.55	18226	8737	521	2150	2670
4	70	4.78	31.741	34.317	17.62	0.153	2.76	0.85	1.00	1.1	46.47	128.28	17.62	18952	8763	521	2009	2530
3	50	4.34	33.032	35.083	17.55	0.144	2.79	0.85	1.00	1.0	47.97	133.97	17.55	22343	9760	494	1807	2301
2	30	3.75	31.525	35.551	17.19	0.131	2.84	0.85	1.00	1.0	46.91	133.38	17.19	21129	8590	425	1539	1964
1	10	3.75	35.935	35.066	15.87	0.128	2.85	0.85	1.00	0.9	50.38	143.70	15.87	20872	7591	458	1369	1826
														187,998	87,244			26,118

1.2D + 1.0Di + 1.0Wi 120° Gust Response Factor (Gh): 0.85 Ice Importance Factor: 1.00
50 mph wind with 1" radial ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Sect #	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)
13	245	6.83	4.274	13.438	10.10	0.405	2.05	1.00	1.00	1.2	12.85	26.40	10.10	1802	927	153	154	307
12	230	6.71	8.033	27.090	19.58	0.326	2.23	1.00	1.00	1.2	24.49	54.60	19.58	4429	2293	311	522	834
11	210	6.54	11.748	30.530	19.68	0.283	2.34	1.00	1.00	1.2	29.88	69.98	19.68	7712	3816	389	995	1384
10	190	6.35	16.341	33.827	21.31	0.264	2.40	1.00	1.00	1.2	36.25	86.88	21.31	9963	4919	469	1280	1749
9	170	6.16	20.640	32.069	19.55	0.229	2.50	1.00	1.00	1.2	39.25	98.19	19.55	12499	6255	514	1714	2228
8	150	5.94	18.799	33.851	20.50	0.195	2.61	1.00	1.00	1.2	38.21	99.90	20.50	15724	8212	504	2319	2823
7	130	5.70	22.219	35.637	21.45	0.186	2.64	1.00	1.00	1.1	42.61	112.62	21.45	16972	8729	546	2365	2910
6	110	5.44	25.214	32.429	17.40	0.164	2.72	1.00	1.00	1.1	43.67	118.80	17.40	17376	8651	549	2286	2835
5	90	5.13	28.916	33.410	17.55	0.159	2.74	1.00	1.00	1.1	47.91	131.19	17.55	18226	8737	572	2150	2722
4	70	4.78	31.741	34.317	17.62	0.153	2.76	1.00	1.00	1.1	51.23	141.43	17.62	18952	8763	574	2009	2584
3	50	4.34	33.032	35.083	17.55	0.144	2.79	1.00	1.00	1.0	52.92	147.80	17.55	22343	9760	545	1807	2352
2	30	3.75	31.525	35.551	17.19	0.131	2.84	1.00	1.00	1.0	51.64	146.82	17.19	21129	8590	468	1539	2007
1	10	3.75	35.935	35.066	15.87	0.128	2.85	1.00	1.00	0.9	55.77	159.07	15.87	20872	7591	507	1369	1875
														187,998	87,244			26,611

1.2D + 1.0Di + 1.0Wi 180° Gust Response Factor (Gh): 0.85 Ice Importance Factor: 1.00
50 mph wind with 1" radial ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Sect #	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)
13	245	6.83	4.274	13.438	10.10	0.405	2.05	0.80	1.00	1.2	12.00	24.64	10.10	1802	927	143	154	297
12	230	6.71	8.033	27.090	19.58	0.326	2.23	0.80	1.00	1.2	22.88	51.01	19.58	4429	2293	291	522	813
11	210	6.54	11.748	30.530	19.68	0.283	2.34	0.80	1.00	1.2	27.53	64.48	19.68	7712	3816	358	995	1354
10	190	6.35	16.341	33.827	21.31	0.264	2.40	0.80	1.00	1.2	32.98	79.05	21.31	9963	4919	427	1280	1707
9	170	6.16	20.640	32.069	19.55	0.229	2.50	0.80	1.00	1.2	35.12	87.86	19.55	12499	6255	460	1714	2174
8	150	5.94	18.799	33.851	20.50	0.195	2.61	0.80	1.00	1.2	34.45	90.07	20.50	15724	8212	455	2319	2773
7	130	5.70	22.219	35.637	21.45	0.186	2.64	0.80	1.00	1.1	38.17	100.88	21.45	16972	8729	489	2365	2854
6	110	5.44	25.214	32.429	17.40	0.164	2.72	0.80	1.00	1.1	38.63	105.08	17.40	17376	8651	485	2286	2771
5	90	5.13	28.916	33.410	17.55	0.159	2.74	0.80	1.00	1.1	42.13	115.35	17.55	18226	8737	503	2150	2653
4	70	4.78	31.741	34.317	17.62	0.153	2.76	0.80	1.00	1.1	44.88	123.90	17.62	18952	8763	503	2009	2512
3	50	4.34	33.032	35.083	17.55	0.144	2.79	0.80	1.00	1.0	46.32	129.35	17.55	22343	9760	477	1807	2284
2	30	3.75	31.525	35.551	17.19	0.131	2.84	0.80	1.00	1.0	45.34	128.90	17.19	21129	8590	411	1539	1950
1	10	3.75	35.935	35.066	15.87	0.128	2.85	0.80	1.00	0.9	48.59	138.57	15.87	20872	7591	441	1369	1810
														187,998	87,244			25,953

1.2D + 1.0Di + 1.0Wi 210° Gust Response Factor (Gh): 0.85 Ice Importance Factor: 1.00
50 mph wind with 1" radial ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Sect #	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)
13	245	6.83	4.274	13.438	10.10	0.405	2.05	0.85	1.00	1.2	12.21	25.08	10.10	1802	927	146	154	300
12	230	6.71	8.033	27.090	19.58	0.326	2.23	0.85	1.00	1.2	23.28	51.91	19.58	4429	2293	296	522	819
11	210	6.54	11.748	30.530	19.68	0.283	2.34	0.85	1.00	1.2	28.11	65.85	19.68	7712	3816	366	995	1361
10	190	6.35	16.341	33.827	21.31	0.264	2.40	0.85	1.00	1.2	33.80	81.01	21.31	9963	4919	438	1280	1718
9	170	6.16	20.640	32.069	19.55	0.229	2.50	0.85	1.00	1.2	36.15	90.45	19.55	12499	6255	473	1714	2187

SECTION FORCES

Sect #	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)
8	150	5.94	18.799	33.851	20.50	0.195	2.61	0.85	1.00	1.2	35.39	92.52	20.50	15724	8212	467	2319	2786
7	130	5.70	22.219	35.637	21.45	0.186	2.64	0.85	1.00	1.1	39.28	103.81	21.45	16972	8729	503	2365	2868
6	110	5.44	25.214	32.429	17.40	0.164	2.72	0.85	1.00	1.1	39.89	108.51	17.40	17376	8651	501	2286	2787
5	90	5.13	28.916	33.410	17.55	0.159	2.74	0.85	1.00	1.1	43.57	119.31	17.55	18226	8737	521	2150	2670
4	70	4.78	31.741	34.317	17.62	0.153	2.76	0.85	1.00	1.1	46.47	128.28	17.62	18952	8763	521	2009	2530
3	50	4.34	33.032	35.083	17.55	0.144	2.79	0.85	1.00	1.0	47.97	133.97	17.55	22343	9760	494	1807	2301
2	30	3.75	31.525	35.551	17.19	0.131	2.84	0.85	1.00	1.0	46.91	133.38	17.19	21129	8590	425	1539	1964
1	10	3.75	35.935	35.066	15.87	0.128	2.85	0.85	1.00	0.9	50.38	143.70	15.87	20872	7591	458	1369	1826
														187,998	87,244			26,118

1.2D + 1.0Di + 1.0Wi 240° — Gust Response Factor (Gh): 0.85 — Ice Importance Factor: 1.00
50 mph wind with 1" radial ice — Wind Importance Factor (Iw): 1.00 — Ice Dead Load Factor: 1.00

Sect #	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)
13	245	6.83	4.274	13.438	10.10	0.405	2.05	1.00	1.00	1.2	12.85	26.40	10.10	1802	927	153	154	307
12	230	6.71	8.033	27.090	19.58	0.326	2.23	1.00	1.00	1.2	24.49	54.60	19.58	4429	2293	311	522	834
11	210	6.54	11.748	30.530	19.68	0.283	2.34	1.00	1.00	1.2	29.88	69.98	19.68	7712	3816	389	995	1384
10	190	6.35	16.341	33.827	21.31	0.264	2.40	1.00	1.00	1.2	36.25	86.88	21.31	9963	4919	469	1280	1749
9	170	6.16	20.640	32.069	19.55	0.229	2.50	1.00	1.00	1.2	39.25	98.19	19.55	12499	6255	514	1714	2228
8	150	5.94	18.799	33.851	20.50	0.195	2.61	1.00	1.00	1.2	38.21	99.90	20.50	15724	8212	504	2319	2823
7	130	5.70	22.219	35.637	21.45	0.186	2.64	1.00	1.00	1.1	42.61	112.62	21.45	16972	8729	546	2365	2910
6	110	5.44	25.214	32.429	17.40	0.164	2.72	1.00	1.00	1.1	43.67	118.80	17.40	17376	8651	549	2286	2835
5	90	5.13	28.916	33.410	17.55	0.159	2.74	1.00	1.00	1.1	47.91	131.19	17.55	18226	8737	572	2150	2722
4	70	4.78	31.741	34.317	17.62	0.153	2.76	1.00	1.00	1.1	51.23	141.43	17.62	18952	8763	574	2009	2584
3	50	4.34	33.032	35.083	17.55	0.144	2.79	1.00	1.00	1.0	52.92	147.80	17.55	22343	9760	545	1807	2352
2	30	3.75	31.525	35.551	17.19	0.131	2.84	1.00	1.00	1.0	51.64	146.82	17.19	21129	8590	468	1539	2007
1	10	3.75	35.935	35.066	15.87	0.128	2.85	1.00	1.00	0.9	55.77	159.07	15.87	20872	7591	507	1369	1875
														187,998	87,244			26,611

1.2D + 1.0Di + 1.0Wi 300° — Gust Response Factor (Gh): 0.85 — Ice Importance Factor: 1.00
50 mph wind with 1" radial ice — Wind Importance Factor (Iw): 1.00 — Ice Dead Load Factor: 1.00

Sect #	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)
13	245	6.83	4.274	13.438	10.10	0.405	2.05	0.80	1.00	1.2	12.00	24.64	10.10	1802	927	143	154	297
12	230	6.71	8.033	27.090	19.58	0.326	2.23	0.80	1.00	1.2	22.88	51.01	19.58	4429	2293	291	522	813
11	210	6.54	11.748	30.530	19.68	0.283	2.34	0.80	1.00	1.2	27.53	64.48	19.68	7712	3816	358	995	1354
10	190	6.35	16.341	33.827	21.31	0.264	2.40	0.80	1.00	1.2	32.98	79.05	21.31	9963	4919	427	1280	1707
9	170	6.16	20.640	32.069	19.55	0.229	2.50	0.80	1.00	1.2	35.12	87.86	19.55	12499	6255	460	1714	2174
8	150	5.94	18.799	33.851	20.50	0.195	2.61	0.80	1.00	1.2	34.45	90.07	20.50	15724	8212	455	2319	2773
7	130	5.70	22.219	35.637	21.45	0.186	2.64	0.80	1.00	1.1	38.17	100.88	21.45	16972	8729	489	2365	2854
6	110	5.44	25.214	32.429	17.40	0.164	2.72	0.80	1.00	1.1	38.63	105.08	17.40	17376	8651	485	2286	2771
5	90	5.13	28.916	33.410	17.55	0.159	2.74	0.80	1.00	1.1	42.13	115.35	17.55	18226	8737	503	2150	2653
4	70	4.78	31.741	34.317	17.62	0.153	2.76	0.80	1.00	1.1	44.88	123.90	17.62	18952	8763	503	2009	2512
3	50	4.34	33.032	35.083	17.55	0.144	2.79	0.80	1.00	1.0	46.32	129.35	17.55	22343	9760	477	1807	2284
2	30	3.75	31.525	35.551	17.19	0.131	2.84	0.80	1.00	1.0	45.34	128.90	17.19	21129	8590	411	1539	1950
1	10	3.75	35.935	35.066	15.87	0.128	2.85	0.80	1.00	0.9	48.59	138.57	15.87	20872	7591	441	1369	1810
														187,998	87,244			25,953

1.2D + 1.0Di + 1.0Wi 330° — Gust Response Factor (Gh): 0.85 — Ice Importance Factor: 1.00
50 mph wind with 1" radial ice — Wind Importance Factor (Iw): 1.00 — Ice Dead Load Factor: 1.00

Sect #	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)
13	245	6.83	4.274	13.438	10.10	0.405	2.05	0.85	1.00	1.2	12.21	25.08	10.10	1802	927	146	154	300
12	230	6.71	8.033	27.090	19.58	0.326	2.23	0.85	1.00	1.2	23.28	51.91	19.58	4429	2293	296	522	819
11	210	6.54	11.748	30.530	19.68	0.283	2.34	0.85	1.00	1.2	28.11	65.85	19.68	7712	3816	366	995	1361
10	190	6.35	16.341	33.827	21.31	0.264	2.40	0.85	1.00	1.2	33.80	81.01	21.31	9963	4919	438	1280	1718

SECTION FORCES

Sect #	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	6.16	20.640	32.069	19.55	0.229	2.50	0.85	1.00	1.2	36.15	90.45	19.55	12499	6255	473	1714	2187
8	150	5.94	18.799	33.851	20.50	0.195	2.61	0.85	1.00	1.2	35.39	92.52	20.50	15724	8212	467	2319	2786
7	130	5.70	22.219	35.637	21.45	0.186	2.64	0.85	1.00	1.1	39.28	103.81	21.45	16972	8729	503	2365	2868
6	110	5.44	25.214	32.429	17.40	0.164	2.72	0.85	1.00	1.1	39.89	108.51	17.40	17376	8651	501	2286	2787
5	90	5.13	28.916	33.410	17.55	0.159	2.74	0.85	1.00	1.1	43.57	119.31	17.55	18226	8737	521	2150	2670
4	70	4.78	31.741	34.317	17.62	0.153	2.76	0.85	1.00	1.1	46.47	128.28	17.62	18952	8763	521	2009	2530
3	50	4.34	33.032	35.083	17.55	0.144	2.79	0.85	1.00	1.0	47.97	133.97	17.55	22343	9760	494	1807	2301
2	30	3.75	31.525	35.551	17.19	0.131	2.84	0.85	1.00	1.0	46.91	133.38	17.19	21129	8590	425	1539	1964
1	10	3.75	35.935	35.066	15.87	0.128	2.85	0.85	1.00	0.9	50.38	143.70	15.87	20872	7591	458	1369	1826
														187,998	87,244			26,118

1.0D + 1.0W Service Normal — Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	9.84	4.274	3.333	0.00	0.183	2.66	1.00	1.00	0.0	6.18	16.41	0.00	729	0	137	80	217
12	230	9.66	8.033	7.512	0.00	0.150	2.77	1.00	1.00	0.0	12.30	34.09	0.00	1780	0	280	246	526
11	210	9.42	11.748	10.851	0.00	0.155	2.75	1.00	1.00	0.0	17.91	49.29	0.00	3246	0	394	499	893
10	190	9.15	16.341	12.521	0.00	0.155	2.75	1.00	1.00	0.0	23.45	64.58	0.00	4204	0	502	639	1141
9	170	8.86	20.640	12.521	0.00	0.147	2.78	1.00	1.00	0.0	27.74	77.24	0.00	5203	0	582	829	1411
8	150	8.55	18.799	13.356	0.00	0.121	2.88	1.00	1.00	0.0	26.35	75.95	0.00	6260	0	552	1068	1620
7	130	8.21	22.219	14.190	0.00	0.119	2.89	1.00	1.00	0.0	30.24	87.40	0.00	6869	0	610	1083	1693
6	110	7.83	25.214	15.025	0.00	0.116	2.90	1.00	1.00	0.0	33.70	97.78	0.00	7271	0	651	1032	1683
5	90	7.39	28.916	15.860	0.00	0.115	2.90	1.00	1.00	0.0	37.88	109.95	0.00	7908	0	691	977	1668
4	70	6.88	31.741	16.694	0.00	0.113	2.91	1.00	1.00	0.0	41.17	119.89	0.00	8491	0	701	922	1623
3	50	6.25	33.032	17.529	0.00	0.108	2.93	1.00	1.00	0.0	42.93	125.89	0.00	10485	0	669	837	1506
2	30	5.40	31.525	18.364	0.00	0.098	2.97	1.00	1.00	0.0	41.89	124.50	0.00	10449	0	571	723	1295
1	10	5.40	35.935	19.199	0.00	0.100	2.96	1.00	1.00	0.0	46.77	138.57	0.00	11067	0	635	683	1318
														83,962	0			16,593

1.0D + 1.0W Service 60° — Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	9.84	4.274	3.333	0.00	0.183	2.66	0.80	1.00	0.0	5.32	14.14	0.00	729	0	118	80	198
12	230	9.66	8.033	7.512	0.00	0.150	2.77	0.80	1.00	0.0	10.69	29.63	0.00	1780	0	243	246	489
11	210	9.42	11.748	10.851	0.00	0.155	2.75	0.80	1.00	0.0	15.56	42.82	0.00	3246	0	343	499	841
10	190	9.15	16.341	12.521	0.00	0.155	2.75	0.80	1.00	0.0	20.19	55.58	0.00	4204	0	432	639	1071
9	170	8.86	20.640	12.521	0.00	0.147	2.78	0.80	1.00	0.0	23.61	65.74	0.00	5203	0	495	829	1324
8	150	8.55	18.799	13.356	0.00	0.121	2.88	0.80	1.00	0.0	22.59	65.11	0.00	6260	0	473	1068	1542
7	130	8.21	22.219	14.190	0.00	0.119	2.89	0.80	1.00	0.0	25.79	74.56	0.00	6869	0	520	1083	1603
6	110	7.83	25.214	15.025	0.00	0.116	2.90	0.80	1.00	0.0	28.66	83.15	0.00	7271	0	553	1032	1586
5	90	7.39	28.916	15.860	0.00	0.115	2.90	0.80	1.00	0.0	32.09	93.16	0.00	7908	0	585	977	1562
4	70	6.88	31.741	16.694	0.00	0.113	2.91	0.80	1.00	0.0	34.82	101.40	0.00	8491	0	593	922	1514
3	50	6.25	33.032	17.529	0.00	0.108	2.93	0.80	1.00	0.0	36.32	106.52	0.00	10485	0	566	837	1403
2	30	5.40	31.525	18.364	0.00	0.098	2.97	0.80	1.00	0.0	35.58	105.76	0.00	10449	0	485	723	1209
1	10	5.40	35.935	19.199	0.00	0.100	2.96	0.80	1.00	0.0	39.58	117.27	0.00	11067	0	538	683	1221
														83,962	0			15,563

1.0D + 1.0W Service 90° — Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	9.84	4.274	3.333	0.00	0.183	2.66	0.85	1.00	0.0	5.54	14.71	0.00	729	0	123	80	203
12	230	9.66	8.033	7.512	0.00	0.150	2.77	0.85	1.00	0.0	11.09	30.75	0.00	1780	0	253	246	498
11	210	9.42	11.748	10.851	0.00	0.155	2.75	0.85	1.00	0.0	16.15	44.44	0.00	3246	0	356	499	854

SECTION FORCES

Sect #	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)
10	190	9.15	16.341	12.521	0.00	0.155	2.75	0.85	1.00	0.0	21.00	57.83	0.00	4204	0	450	639	1089
9	170	8.86	20.640	12.521	0.00	0.147	2.78	0.85	1.00	0.0	24.65	68.62	0.00	5203	0	517	829	1346
8	150	8.55	18.799	13.356	0.00	0.121	2.88	0.85	1.00	0.0	23.53	67.82	0.00	6260	0	493	1068	1561
7	130	8.21	22.219	14.190	0.00	0.119	2.89	0.85	1.00	0.0	26.90	77.77	0.00	6869	0	543	1083	1626
6	110	7.83	25.214	15.025	0.00	0.116	2.90	0.85	1.00	0.0	29.92	86.81	0.00	7271	0	578	1032	1610
5	90	7.39	28.916	15.860	0.00	0.115	2.90	0.85	1.00	0.0	33.54	97.36	0.00	7908	0	612	977	1589
4	70	6.88	31.741	16.694	0.00	0.113	2.91	0.85	1.00	0.0	36.41	106.02	0.00	8491	0	620	922	1541
3	50	6.25	33.032	17.529	0.00	0.108	2.93	0.85	1.00	0.0	37.97	111.36	0.00	10485	0	591	837	1429
2	30	5.40	31.525	18.364	0.00	0.098	2.97	0.85	1.00	0.0	37.16	110.44	0.00	10449	0	507	723	1230
1	10	5.40	35.935	19.199	0.00	0.100	2.96	0.85	1.00	0.0	41.38	122.60	0.00	11067	0	562	683	1245
														83,962	0			15,821

1.0D + 1.0W Service 120° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	9.84	4.274	3.333	0.00	0.183	2.66	1.00	1.00	0.0	6.18	16.41	0.00	729	0	137	80	217
12	230	9.66	8.033	7.512	0.00	0.150	2.77	1.00	1.00	0.0	12.30	34.09	0.00	1780	0	280	246	526
11	210	9.42	11.748	10.851	0.00	0.155	2.75	1.00	1.00	0.0	17.91	49.29	0.00	3246	0	394	499	893
10	190	9.15	16.341	12.521	0.00	0.155	2.75	1.00	1.00	0.0	23.45	64.58	0.00	4204	0	502	639	1141
9	170	8.86	20.640	12.521	0.00	0.147	2.78	1.00	1.00	0.0	27.74	77.24	0.00	5203	0	582	829	1411
8	150	8.55	18.799	13.356	0.00	0.121	2.88	1.00	1.00	0.0	26.35	75.95	0.00	6260	0	552	1068	1620
7	130	8.21	22.219	14.190	0.00	0.119	2.89	1.00	1.00	0.0	30.24	87.40	0.00	6869	0	610	1083	1693
6	110	7.83	25.214	15.025	0.00	0.116	2.90	1.00	1.00	0.0	33.70	97.78	0.00	7271	0	651	1032	1683
5	90	7.39	28.916	15.860	0.00	0.115	2.90	1.00	1.00	0.0	37.88	109.95	0.00	7908	0	691	977	1668
4	70	6.88	31.741	16.694	0.00	0.113	2.91	1.00	1.00	0.0	41.17	119.89	0.00	8491	0	701	922	1623
3	50	6.25	33.032	17.529	0.00	0.108	2.93	1.00	1.00	0.0	42.93	125.89	0.00	10485	0	669	837	1506
2	30	5.40	31.525	18.364	0.00	0.098	2.97	1.00	1.00	0.0	41.89	124.50	0.00	10449	0	571	723	1295
1	10	5.40	35.935	19.199	0.00	0.100	2.96	1.00	1.00	0.0	46.77	138.57	0.00	11067	0	635	683	1318
														83,962	0			16,593

1.0D + 1.0W Service 180° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	9.84	4.274	3.333	0.00	0.183	2.66	0.80	1.00	0.0	5.32	14.14	0.00	729	0	118	80	198
12	230	9.66	8.033	7.512	0.00	0.150	2.77	0.80	1.00	0.0	10.69	29.63	0.00	1780	0	243	246	489
11	210	9.42	11.748	10.851	0.00	0.155	2.75	0.80	1.00	0.0	15.56	42.82	0.00	3246	0	343	499	841
10	190	9.15	16.341	12.521	0.00	0.155	2.75	0.80	1.00	0.0	20.19	55.58	0.00	4204	0	432	639	1071
9	170	8.86	20.640	12.521	0.00	0.147	2.78	0.80	1.00	0.0	23.61	65.74	0.00	5203	0	495	829	1324
8	150	8.55	18.799	13.356	0.00	0.121	2.88	0.80	1.00	0.0	22.59	65.11	0.00	6260	0	473	1068	1542
7	130	8.21	22.219	14.190	0.00	0.119	2.89	0.80	1.00	0.0	25.79	74.56	0.00	6869	0	520	1083	1603
6	110	7.83	25.214	15.025	0.00	0.116	2.90	0.80	1.00	0.0	28.66	83.15	0.00	7271	0	553	1032	1586
5	90	7.39	28.916	15.860	0.00	0.115	2.90	0.80	1.00	0.0	32.09	93.16	0.00	7908	0	585	977	1562
4	70	6.88	31.741	16.694	0.00	0.113	2.91	0.80	1.00	0.0	34.82	101.40	0.00	8491	0	593	922	1514
3	50	6.25	33.032	17.529	0.00	0.108	2.93	0.80	1.00	0.0	36.32	106.52	0.00	10485	0	566	837	1403
2	30	5.40	31.525	18.364	0.00	0.098	2.97	0.80	1.00	0.0	35.58	105.76	0.00	10449	0	485	723	1209
1	10	5.40	35.935	19.199	0.00	0.100	2.96	0.80	1.00	0.0	39.58	117.27	0.00	11067	0	538	683	1221
														83,962	0			15,563

1.0D + 1.0W Service 210° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	9.84	4.274	3.333	0.00	0.183	2.66	0.85	1.00	0.0	5.54	14.71	0.00	729	0	123	80	203
12	230	9.66	8.033	7.512	0.00	0.150	2.77	0.85	1.00	0.0	11.09	30.75	0.00	1780	0	253	246	498

SECTION FORCES

Sect #	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)
11	210	9.42	11.748	10.851	0.00	0.155	2.75	0.85	1.00	0.0	16.15	44.44	0.00	3246	0	356	499	854
10	190	9.15	16.341	12.521	0.00	0.155	2.75	0.85	1.00	0.0	21.00	57.83	0.00	4204	0	450	639	1089
9	170	8.86	20.640	12.521	0.00	0.147	2.78	0.85	1.00	0.0	24.65	68.62	0.00	5203	0	517	829	1346
8	150	8.55	18.799	13.356	0.00	0.121	2.88	0.85	1.00	0.0	23.53	67.82	0.00	6260	0	493	1068	1561
7	130	8.21	22.219	14.190	0.00	0.119	2.89	0.85	1.00	0.0	26.90	77.77	0.00	6869	0	543	1083	1626
6	110	7.83	25.214	15.025	0.00	0.116	2.90	0.85	1.00	0.0	29.92	86.81	0.00	7271	0	578	1032	1610
5	90	7.39	28.916	15.860	0.00	0.115	2.90	0.85	1.00	0.0	33.54	97.36	0.00	7908	0	612	977	1589
4	70	6.88	31.741	16.694	0.00	0.113	2.91	0.85	1.00	0.0	36.41	106.02	0.00	8491	0	620	922	1541
3	50	6.25	33.032	17.529	0.00	0.108	2.93	0.85	1.00	0.0	37.97	111.36	0.00	10485	0	591	837	1429
2	30	5.40	31.525	18.364	0.00	0.098	2.97	0.85	1.00	0.0	37.16	110.44	0.00	10449	0	507	723	1230
1	10	5.40	35.935	19.199	0.00	0.100	2.96	0.85	1.00	0.0	41.38	122.60	0.00	11067	0	562	683	1245
														83,962	0			15,821

1.0D + 1.0W Service 240° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	9.84	4.274	3.333	0.00	0.183	2.66	1.00	1.00	0.0	6.18	16.41	0.00	729	0	137	80	217
12	230	9.66	8.033	7.512	0.00	0.150	2.77	1.00	1.00	0.0	12.30	34.09	0.00	1780	0	280	246	526
11	210	9.42	11.748	10.851	0.00	0.155	2.75	1.00	1.00	0.0	17.91	49.29	0.00	3246	0	394	499	893
10	190	9.15	16.341	12.521	0.00	0.155	2.75	1.00	1.00	0.0	23.45	64.58	0.00	4204	0	502	639	1141
9	170	8.86	20.640	12.521	0.00	0.147	2.78	1.00	1.00	0.0	27.74	77.24	0.00	5203	0	582	829	1411
8	150	8.55	18.799	13.356	0.00	0.121	2.88	1.00	1.00	0.0	26.35	75.95	0.00	6260	0	552	1068	1620
7	130	8.21	22.219	14.190	0.00	0.119	2.89	1.00	1.00	0.0	30.24	87.40	0.00	6869	0	610	1083	1693
6	110	7.83	25.214	15.025	0.00	0.116	2.90	1.00	1.00	0.0	33.70	97.78	0.00	7271	0	651	1032	1683
5	90	7.39	28.916	15.860	0.00	0.115	2.90	1.00	1.00	0.0	37.88	109.95	0.00	7908	0	691	977	1668
4	70	6.88	31.741	16.694	0.00	0.113	2.91	1.00	1.00	0.0	41.17	119.89	0.00	8491	0	701	922	1623
3	50	6.25	33.032	17.529	0.00	0.108	2.93	1.00	1.00	0.0	42.93	125.89	0.00	10485	0	669	837	1506
2	30	5.40	31.525	18.364	0.00	0.098	2.97	1.00	1.00	0.0	41.89	124.50	0.00	10449	0	571	723	1295
1	10	5.40	35.935	19.199	0.00	0.100	2.96	1.00	1.00	0.0	46.77	138.57	0.00	11067	0	635	683	1318
														83,962	0			16,593

1.0D + 1.0W Service 300° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	9.84	4.274	3.333	0.00	0.183	2.66	0.80	1.00	0.0	5.32	14.14	0.00	729	0	118	80	198
12	230	9.66	8.033	7.512	0.00	0.150	2.77	0.80	1.00	0.0	10.69	29.63	0.00	1780	0	243	246	489
11	210	9.42	11.748	10.851	0.00	0.155	2.75	0.80	1.00	0.0	15.56	42.82	0.00	3246	0	343	499	841
10	190	9.15	16.341	12.521	0.00	0.155	2.75	0.80	1.00	0.0	20.19	55.58	0.00	4204	0	432	639	1071
9	170	8.86	20.640	12.521	0.00	0.147	2.78	0.80	1.00	0.0	23.61	65.74	0.00	5203	0	495	829	1324
8	150	8.55	18.799	13.356	0.00	0.121	2.88	0.80	1.00	0.0	22.59	65.11	0.00	6260	0	473	1068	1542
7	130	8.21	22.219	14.190	0.00	0.119	2.89	0.80	1.00	0.0	25.79	74.56	0.00	6869	0	520	1083	1603
6	110	7.83	25.214	15.025	0.00	0.116	2.90	0.80	1.00	0.0	28.66	83.15	0.00	7271	0	553	1032	1586
5	90	7.39	28.916	15.860	0.00	0.115	2.90	0.80	1.00	0.0	32.09	93.16	0.00	7908	0	585	977	1562
4	70	6.88	31.741	16.694	0.00	0.113	2.91	0.80	1.00	0.0	34.82	101.40	0.00	8491	0	593	922	1514
3	50	6.25	33.032	17.529	0.00	0.108	2.93	0.80	1.00	0.0	36.32	106.52	0.00	10485	0	566	837	1403
2	30	5.40	31.525	18.364	0.00	0.098	2.97	0.80	1.00	0.0	35.58	105.76	0.00	10449	0	485	723	1209
1	10	5.40	35.935	19.199	0.00	0.100	2.96	0.80	1.00	0.0	39.58	117.27	0.00	11067	0	538	683	1221
														83,962	0			15,563

1.0D + 1.0W Service 330° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Sect #	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)
13	245	9.84	4.274	3.333	0.00	0.183	2.66	0.85	1.00	0.0	5.54	14.71	0.00	729	0	123	80	203

SECTION FORCES

Sect #	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)
12	230	9.66	8.033	7.512	0.00	0.150	2.77	0.85	1.00	0.0	11.09	30.75	0.00	1780	0	253	246	498
11	210	9.42	11.748	10.851	0.00	0.155	2.75	0.85	1.00	0.0	16.15	44.44	0.00	3246	0	356	499	854
10	190	9.15	16.341	12.521	0.00	0.155	2.75	0.85	1.00	0.0	21.00	57.83	0.00	4204	0	450	639	1089
9	170	8.86	20.640	12.521	0.00	0.147	2.78	0.85	1.00	0.0	24.65	68.62	0.00	5203	0	517	829	1346
8	150	8.55	18.799	13.356	0.00	0.121	2.88	0.85	1.00	0.0	23.53	67.82	0.00	6260	0	493	1068	1561
7	130	8.21	22.219	14.190	0.00	0.119	2.89	0.85	1.00	0.0	26.90	77.77	0.00	6869	0	543	1083	1626
6	110	7.83	25.214	15.025	0.00	0.116	2.90	0.85	1.00	0.0	29.92	86.81	0.00	7271	0	578	1032	1610
5	90	7.39	28.916	15.860	0.00	0.115	2.90	0.85	1.00	0.0	33.54	97.36	0.00	7908	0	612	977	1589
4	70	6.88	31.741	16.694	0.00	0.113	2.91	0.85	1.00	0.0	36.41	106.02	0.00	8491	0	620	922	1541
3	50	6.25	33.032	17.529	0.00	0.108	2.93	0.85	1.00	0.0	37.97	111.36	0.00	10485	0	591	837	1429
2	30	5.40	31.525	18.364	0.00	0.098	2.97	0.85	1.00	0.0	37.16	110.44	0.00	10449	0	507	723	1230
1	10	5.40	35.935	19.199	0.00	0.100	2.96	0.85	1.00	0.0	41.38	122.60	0.00	11067	0	562	683	1245
														83,962	0			15,821

EQUIVALENT LATERAL FORCE METHOD

Spectral Response Acceleration for Short Period (S_S):	0.19
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.05
Long-Period Transition Period (T_L – Seconds):	6
Importance Factor (I_e):	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}):	0.20
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.08
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_S:	0.03
Lower Limit C_S:	0.03
Period based on Rayleigh Method (sec):	0.89
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.20
Total Unfactored Dead Load:	94.48 k
Seismic Base Shear (E):	3.90 k

SEISMIC

Load Case: 0.9D - 1.0Ev + 1.0Eh Seismic

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	Cvx	Horizontal Force (lb)	Vertical Force (lb)
13	245.00	729	522,963	0.020	79	627
12	230.00	1,780	1,184,284	0.046	178	1,531
11	210.00	3,246	1,937,339	0.075	291	2,791
10	190.00	4,204	2,225,792	0.086	335	3,615
9	170.00	5,203	2,411,989	0.093	363	4,474
8	150.00	6,260	2,498,828	0.096	376	5,383
7	130.00	6,869	2,310,806	0.089	348	5,907
6	110.00	7,271	2,003,105	0.077	301	6,252
5	90.00	7,908	1,714,118	0.066	258	6,800
4	70.00	8,491	1,362,859	0.053	205	7,301
3	50.00	10,485	1,125,664	0.043	169	9,016
2	30.00	10,449	609,136	0.024	92	8,985
1	10.00	11,067	173,525	0.007	26	9,516
Decibel DB809DK-XT	250.00	64	47,045	0.002	7	55
Box Enclosures BEN-92P	250.00	2	1,617	0.000	0	2
Alcatel-Lucent RRH2x50-08	246.00	317	228,856	0.009	34	273
Alcatel-Lucent 1900 MHz 4X45 RRH	246.00	180	129,786	0.005	20	155
Alcatel-Lucent TD-RRH8x20-25	246.00	198	142,765	0.006	21	170
RFS APXVSPP18-C-A20	246.00	171	123,297	0.005	19	147
Round Sector Frames	246.00	900	648,931	0.025	98	774
KMW ETCR-654L12H6	246.00	255	183,648	0.007	28	219
Procom CXL 900-3LW	236.00	2	1,029	0.000	0	1
Generic 5" x 3" x 2" Cavity Filter	236.00	2	1,029	0.000	0	1
Generic Low Noise Amplifier	236.00	2	1,372	0.000	0	2
Ericsson Radio 4449 B71 B85A	225.00	225	145,820	0.006	22	193
Ericsson 4460 BAND 2/25	225.00	327	211,925	0.008	32	281
Commscope VV-65A-R1B	225.00	74	48,023	0.002	7	64
Ericsson AIR 6419 B41	225.00	250	161,957	0.006	24	215
Round Sector Frames	225.00	900	583,279	0.022	88	774
RFS APXVAARR24_43-U-NA20	225.00	384	248,671	0.010	37	330
Generic 48" x 10" Panel	211.50	240	144,452	0.006	22	206

Sinclair SC479-HF1LDF(E5765)	207.00	34	19,945	0.001	3	29
Bird 432E-83I-01-T	200.00	25	14,074	0.000	2	21
Flat Side Arm	200.00	450	253,339	0.010	38	387
Sinclair SC479-HF1LDF(E5765)	192.00	68	36,459	0.001	5	58
Powerwave Allgon LGP21901	175.00	33	15,837	0.001	2	28
Powerwave Allgon 7020	175.00	7	3,167	0.000	0	6
Raycap DC6-48-60-18-8F (23.5" Height)	175.00	20	9,598	0.000	1	17
Raycap DC6-48-60-18-8F ("Squid")	175.00	32	15,262	0.001	2	27
Ericsson RRUS 8843 B2, B66A	175.00	216	103,663	0.004	16	186
Powerwave Allgon LGP17201	175.00	186	89,265	0.003	13	160
Ericsson RRUS 4478 B14	175.00	180	86,242	0.003	13	155
Ericsson RRUS 4449 B5, B12	175.00	213	102,223	0.004	15	183
Allgon 7770.00	175.00	105	50,392	0.002	8	90
CCI DMP65R-BU8D	175.00	287	137,786	0.005	21	247
CCI OPA65R-BU8D	175.00	230	110,142	0.004	17	197
Generic Heavy Sector Frame	175.00	1,500	719,883	0.028	108	1,290
CCI OPA65R-KE6D	174.30	134	64,002	0.002	10	115
Commscope RDIDC-9181-PF-48	165.00	22	9,796	0.000	1	19
Fujitsu TA08025-B604	165.00	192	85,753	0.003	13	165
Fujitsu TA08025-B605	165.00	225	100,649	0.004	15	193
JMA Wireless MX08FRO665-21	165.00	194	86,558	0.003	13	166
Generic Flat Light Sector Frame	165.00	1,200	536,792	0.021	81	1,032
Kathrein Scala 860 10025	155.00	7	2,989	0.000	0	6
Kathrein Scala 800 10504	155.00	106	43,836	0.002	7	91
Generic 24" x 24" Ice Shield	95.30	50	11,605	0.000	2	43
RFS PA6-65AC w/ Radome	87.40	308	64,461	0.002	10	265
Totals		94,475	25,907,629	1.000	3,898	81,239

SEISMIC

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

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	Cvx	Horizontal Force (lb)	Vertical Force (lb)
13	245.00	729	522,963	0.020	79	904
12	230.00	1,780	1,184,284	0.046	178	2,207
11	210.00	3,246	1,937,339	0.075	291	4,026
10	190.00	4,204	2,225,792	0.086	335	5,213
9	170.00	5,203	2,411,989	0.093	363	6,452
8	150.00	6,260	2,498,828	0.096	376	7,763
7	130.00	6,869	2,310,806	0.089	348	8,518
6	110.00	7,271	2,003,105	0.077	301	9,016
5	90.00	7,908	1,714,118	0.066	258	9,807
4	70.00	8,491	1,362,859	0.053	205	10,530
3	50.00	10,485	1,125,664	0.043	169	13,003
2	30.00	10,449	609,136	0.024	92	12,958
1	10.00	11,067	173,525	0.007	26	13,724
Decibel DB809DK-XT	250.00	64	47,045	0.002	7	79
Box Enclosures BEN-92P	250.00	2	1,617	0.000	0	3
Alcatel-Lucent RRH2x50-08	246.00	317	228,856	0.009	34	394
Alcatel-Lucent 1900 MHz 4X45 RRH	246.00	180	129,786	0.005	20	223
Alcatel-Lucent TD-RRH8x20-25	246.00	198	142,765	0.006	21	246
RFS APXVSPP18-C-A20	246.00	171	123,297	0.005	19	212
Round Sector Frames	246.00	900	648,931	0.025	98	1,116
KMW ETCR-654L12H6	246.00	255	183,648	0.007	28	316
Procom CXL 900-3LW	236.00	2	1,029	0.000	0	2
Generic 5" x 3" x 2" Cavity Filter	236.00	2	1,029	0.000	0	2
Generic Low Noise Amplifier	236.00	2	1,372	0.000	0	2
Ericsson Radio 4449 B71 B85A	225.00	225	145,820	0.006	22	279
Ericsson 4460 BAND 2/25	225.00	327	211,925	0.008	32	406
Commscope VV-65A-R1B	225.00	74	48,023	0.002	7	92
Ericsson AIR 6419 B41	225.00	250	161,957	0.006	24	310
Round Sector Frames	225.00	900	583,279	0.022	88	1,116
RFS APXVAARR24_43-U-NA20	225.00	384	248,671	0.010	37	476
Generic 48" x 10" Panel	211.50	240	144,452	0.006	22	298
Sinclair SC479-HF1LDF(E5765)	207.00	34	19,945	0.001	3	42
Bird 432E-83I-01-T	200.00	25	14,074	0.000	2	31
Flat Side Arm	200.00	450	253,339	0.010	38	558
Sinclair SC479-HF1LDF(E5765)	192.00	68	36,459	0.001	5	84
Powerwave Allgon LGP21901	175.00	33	15,837	0.001	2	41

Powerwave Allgon 7020		175.00	7	3,167	0.000	0	8
Raycap DC6-48-60-18-8F (23.5" Height)		175.00	20	9,598	0.000	1	25
Raycap DC6-48-60-18-8F ("Squid")		175.00	32	15,262	0.001	2	39
Ericsson RRUS 8843 B2, B66A		175.00	216	103,663	0.004	16	268
Powerwave Allgon LGP17201		175.00	186	89,265	0.003	13	231
Ericsson RRUS 4478 B14		175.00	180	86,242	0.003	13	223
Ericsson RRUS 4449 B5, B12		175.00	213	102,223	0.004	15	264
Allgon 7770.00		175.00	105	50,392	0.002	8	130
CCI DMP65R-BU8D		175.00	287	137,786	0.005	21	356
CCI OPA65R-BU8D		175.00	230	110,142	0.004	17	285
Generic Heavy Sector Frame		175.00	1,500	719,883	0.028	108	1,860
CCI OPA65R-KE6D		174.30	134	64,002	0.002	10	166
Commscope RDIDC-9181-PF-48		165.00	22	9,796	0.000	1	27
Fujitsu TA08025-B604		165.00	192	85,753	0.003	13	238
Fujitsu TA08025-B605		165.00	225	100,649	0.004	15	279
JMA Wireless MX08FRO665-21		165.00	194	86,558	0.003	13	240
Generic Flat Light Sector Frame		165.00	1,200	536,792	0.021	81	1,488
Kathrein Scala 860 10025		155.00	7	2,989	0.000	0	9
Kathrein Scala 800 10504		155.00	106	43,836	0.002	7	131
Generic 24" x 24" Ice Shield		95.30	50	11,605	0.000	2	62
RFS PA6-65AC w/ Radome		87.40	308	64,461	0.002	10	382
	Totals		94,475	25,907,629	1.000	3,898	117,159

FORCE/STRESS SUMMARY

Section 1 – Base 0.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 5 3/4" SOLID	-508.88	1.2D + 1.0W N	20.033	25	25	25	41.81	50.0	1028.32	0.00	0.00	0	0	49	Member X
D DAE - 3X3X0.25	-19.11	1.2D + 1.0W 90°	33.606	25	49	13	167.48	36.0	29.39	55.22	69.60	4	2	65	Member Y

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 5 3/4" SOLID	425.89	0.9D + 1.0W 60°	50.0	65	1168.52	0.00	0.00		0	0	36	Member
D DAE - 3X3X0.25	18.14	1.2D + 1.0W 90°	36.0	58	82.75	55.22	55.68	41.05	4	2	44	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	405.67	0.9D + 1.0W 180°	0.00	0	0	
Bot Tension	445.90	0.9D + 1.0W 180°	1287.77	12	6	2.75" A36
Bot Compression	530.79	1.2D + 1.0W 120°	1065.74	53	6	2.75" A36

Section 2 – Base 20.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 5 1/2" SOLID	-464.47	1.2D + 1.0W N	20.033	25	25	25	43.71	50.0	929.73	0.00	0.00	0	0	49	Member X
D DAE - 3X3X0.25	-19.57	1.2D + 1.0W 90°	32.021	25	50	13	161.94	36.0	31.43	55.22	69.60	4	2	62	Member Y

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 5 1/2" SOLID	387.41	0.9D + 1.0W 60°	50.0	65	1069.11	0.00	0.00		0	0	36	Member
D DAE - 3X3X0.25	19.46	1.2D + 1.0W 90°	36.0	58	82.75	55.22	55.68	41.05	4	2	47	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	365.56	0.9D + 1.0W 180°	0.00	0	0	
Bot Tension	405.67	0.9D + 1.0W 180°	1349.04	30	6	2" A325

Section 3 – Base 40.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 5 1/4" SOLID	-414.88	1.2D + 1.0W N	20.033	25	25	25	45.79	50.0	835.70	0.00	0.00	0	0	49	Member X
D DAE - 3X3X0.25	-19.90	1.2D + 1.0W 90°	30.485	25	50	13	154.17	36.0	34.68	55.22	69.60	4	2	57	Member Y

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 5 1/4" SOLID	341.20	1.2D + 1.0W 60°	50.0	65	974.16	0.00	0.00		0	0	35	Member
D DAE - 3X3X0.25	19.06	1.2D + 1.0W 90°	36.0	58	82.75	55.22	55.68	41.05	4	2	46	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	325.11	0.9D + 1.0W 180°	0.00	0	0	
Bot Tension	365.56	0.9D + 1.0W 180°	1349.04	27	6	2" A325

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Section 4 – Base 60.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 5" SOLID	-363.44	1.2D + 1.0W N	20.033	25	25	25	48.08	50.0	746.17	0.00	0.00	0	0	48	Member X
D DAE - 3X3X0.1875	-19.40	1.2D + 1.0W 90°	29.006	25	49	13	145.05	36.0	29.66	55.22	52.20	4	2	65	Member Y

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 5" SOLID	300.46	1.2D + 1.0W 60°	50.0	65	883.58	0.00	0.00		0	0	34	Member
D DAE - 3X3X0.1875	18.92	1.2D + 1.0W 90°	36.0	58	62.71	55.22	41.76	30.79	4	2	61	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	283.08	0.9D + 1.0W 180°	0.00	0	0	
Bot Tension	325.11	0.9D + 1.0W 180°	758.83	43	6	1 1/2 A325

Section 5 – Base 80.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 4 3/4" SOLID	-312.53	1.2D + 1.0W N	20.033	25	25	25	50.61	50.0	661.25	0.00	0.00	0	0	47	Member X
D DAE - 3X3X0.1875	-18.52	1.2D + 1.0W 90°	27.592	25	50	13	140.03	36.0	31.82	55.22	52.20	4	2	58	Member Y

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 4 3/4" SOLID	263.65	0.9D + 1.0W 60°	50.0	65	797.44	0.00	0.00		0	0	33	Member
D DAE - 3X3X0.1875	18.16	1.2D + 1.0W 90°	36.0	58	62.71	55.22	41.76	30.79	4	2	58	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	240.37	0.9D + 1.0W 180°	0.00	0	0	
Bot Tension	283.08	0.9D + 1.0W 180°	758.83	37	6	1 1/2 A325

Section 6 – Base 100.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 4 1/2" SOLID	-260.35	1.2D + 1.0W N	20.033	25	25	25	53.42	50.0	580.89	0.00	0.00	0	0	44	Member X
D DAE - 3X3X0.1875	-18.16	1.2D + 1.0W 90°	26.255	25	50	13	133.24	36.0	35.15	55.22	52.20	4	2	51	Member Y

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 4 1/2" SOLID	215.55	1.2D + 1.0W 60°	50.0	65	715.68	0.00	0.00		0	0	30	Member
D DAE - 3X3X0.1875	17.43	1.2D + 1.0W 90°	36.0	58	62.71	55.22	41.76	30.79	4	2	56	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	196.35	0.9D + 1.0W 180°	0.00	0	0	
Bot Tension	240.37	0.9D + 1.0W 180°	758.83	32	6	1 1/2 A325

Section 7 – Base 120.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 4 1/4" SOLID	-222.85	1.2D + 1.0W N	10.017	50	50	50	56.56	50.0	505.21	0.00	0.00	0	0	44	Member X

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D DAE - 2.5X2.5X0.1875	-11.93	1.2D + 1.0W 90°	18.448	50	50	25	145.94	36.0	24.19	55.22	52.20	4	2	49 Member Y

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 4 1/4" SOLID	187.96	0.9D + 1.0W 60°	50.0	65	638.37	0.00	0.00		0	0	29	Member
D DAE - 2.5X2.5X0.1875	12.00	1.2D + 1.0W 90°	36.0	58	50.31	55.22	41.76	28.75	4	2	41	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	155.06	0.9D + 1.0W 180°	0.00	0	0	
Bot Tension	196.35	0.9D + 1.0W 180°	623.64	31	6	1.375" A325

Section 8 – Base 140.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 4" SOLID	-173.41	1.2D + 1.0W N	10.017	50	50	50	60.10	50.0	434.22	0.00	0.00	0	0	39	Member X
D DAE - 2.5X2.5X0.1875	-11.00	1.2D + 1.0W 90°	16.803	50	50	25	132.93	36.0	29.16	55.22	52.20	4	2	37	Member Y

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 4" SOLID	142.39	1.2D + 1.0W 60°	50.0	65	565.47	0.00	0.00		0	0	25	Member
D DAE - 2.5X2.5X0.1875	10.99	1.2D + 1.0W 90°	36.0	58	50.31	55.22	41.76	28.75	4	2	38	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	112.20	0.9D + 1.0W 180°	0.00	0	0	
Bot Tension	155.06	0.9D + 1.0W 180°	523.32	30	6	1.25" A325

Section 9 – Base 160.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3 3/4" SOLID	-123.84	1.2D + 1.0W N	10.017	50	50	50	64.11	50.0	368.02	0.00	0.00	0	0	33	Member X
D SAE - 3.5x3.5x0.25	-9.26	1.2D + 1.0W 90°	15.243	50	50	50	132.93	36.0	27.37	27.61	34.80	2	1	33	Member Z

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3 3/4" SOLID	101.22	1.2D + 1.0W 60°	50.0	65	497.02	0.00	0.00		0	0	20	Member
D SAE - 3.5x3.5x0.25	9.17	1.2D + 1.0W 90°	36.0	58	49.53	27.61	27.84	23.25	2	1	39	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	79.07	0.9D + 1.0W 180°	0.00	0	0	
Bot Tension	112.20	0.9D + 1.0W 180°	412.17	27	6	1 1/8 A325

Section 10 – Base 180.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3 3/4" SOLID	-88.71	1.2D + 1.0W N	6.678	100	100	100	85.48	50.0	291.32	0.00	0.00	0	0	30	Member X
D SAE - 3X3X0.1875	-5.06	1.2D + 1.0W 90°	11.744	50	50	50	118.67	36.0	21.86	27.61	26.10	2	1	23	Member Z

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3 3/4" SOLID	75.32	0.9D + 1.0W 60°	50.0	65	497.02	0.00	0.00		0	0	15	Member

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D SAE - 3X3X0.1875	5.05	1.2D + 1.0W 90°	36.0	58	31.36	27.61	20.88	15.39	2	1	32	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	51.19	0.9D + 1.0W 180°	0.00	0	0	
Bot Tension	79.07	0.9D + 1.0W 180°	412.17	19	6	1 1/8 A325

Section 11 – Base 200.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3 1/4" SOLID	-56.06	1.2D + 1.0W N	6.678	100	100	100	98.63	50.0	183.32	0.00	0.00	0	0	30	Member X
D SAE - 2.5X2.5X0.1875	-4.25	1.2D + 1.0W 90°	10.162	50	50	50	123.17	36.0	16.98	27.61	26.10	2	1	25	Member Z

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3 1/4" SOLID	46.32	1.2D + 1.0W 60°	50.0	65	373.32	0.00	0.00		0	0	12	Member
D SAE - 2.5X2.5X0.1875	4.20	1.2D + 1.0W 90°	36.0	58	25.22	27.61	20.88	14.38	2	1	29	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	24.37	0.9D + 1.0W 180°	0.00	0	0	
Bot Tension	51.19	0.9D + 1.0W 180°	327.10	16	6	1 A325

Section 12 – Base 220.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-26.65	1.2D + 1.0W N	5.008	100	100	100	106.84	50.0	77.66	0.00	0.00	0	0	34	Member X
D SAE - 1.75X1.75X0.1875	-3.02	1.2D + 1.0W 90°	7.621	50	50	50	133.32	36.0	10.00	17.67	20.88	2	1	30	Member Z

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	20.60	1.2D + 1.0W 60°	50.0	65	178.92	0.00	0.00		0	0	11	Member
D SAE - 1.75X1.75X0.1875	2.97	1.2D + 1.0W 90°	36.0	58	16.82	17.67	16.64	9.99	2	1	29	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	5.40	0.9D + 1.0W 180°	0.00	0	0	
Bot Tension	24.37	0.9D + 1.0W 180°	122.04	20	6	5/8 A325

Section 13 – Base 240.0 (ft) and Height 10.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	-4.71	1.2D + 1.0W N	5	100	100	100	120.00	50.0	49.29	0.00	0.00	0	0	9	Member X
H SAE - 2X2X0.1875	-0.26	1.2D + 1.0W N	4	100	100	100	121.83	36.0	13.73	13.81	13.05	1	1	2	Bolt Bear
D SAE - 1.75X1.75X0.1875	-2.06	1.2D + 1.0W 90°	6.403	50	50	50	114.01	36.0	13.22	17.67	20.88	2	1	15	Member Z

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	2.49	1.2D + 1.0W 60°	50.0	65	141.37	0.00	0.00		0	0	1	Member
H SAE - 2X2X0.1875	0.23	1.2D + 1.0W 60°	36.0	58	19.12	13.81	7.83	6.83	1	1	3	Blk Shear
D SAE - 1.75X1.75X0.1875	1.97	1.2D + 1.0W 90°	36.0	58	16.82	17.67	16.64	9.99	2	1	19	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

FORCE/STRESS SUMMARY

Bot Tension	5.40	0.9D + 1.0W 180°	81.36	7	4	5/8 A325	

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*(-) Uplift and (+) Down *F_X (kip)	*F_Y (kip)	*F_Z (kip)
1.2D + 1.0W Normal	16.17	0.00	0	1	0.00	530.82	-54.21
	16.17	0.00	120	1a	17.55	-208.73	-18.22
	16.17	0.00	240	1b	-17.55	-208.73	-18.22
1.2D + 1.0W 60°	16.17	0.00	0	1	-6.92	273.32	-26.55
	16.17	0.00	120	1a	-26.45	273.30	7.28
	16.17	0.00	240	1b	-41.19	-433.25	-23.78
1.2D + 1.0W 90°	16.17	0.00	0	1	-7.94	37.79	-1.68
	16.17	0.00	120	1a	-41.42	450.48	19.15
	16.17	0.00	240	1b	-37.89	-374.90	-17.47
1.2D + 1.0W 120°	16.17	0.00	0	1	-7.02	-208.74	24.33
	16.17	0.00	120	1a	-46.97	530.82	27.11
	16.17	0.00	240	1b	-24.57	-208.71	-6.08
1.2D + 1.0W 180°	16.17	0.00	0	1	0.00	-433.28	47.57
	16.17	0.00	120	1a	-19.53	273.32	19.27
	16.17	0.00	240	1b	19.53	273.32	19.27
1.2D + 1.0W 210°	16.17	0.00	0	1	3.82	-374.93	41.56
	16.17	0.00	120	1a	2.51	37.81	7.71
	16.17	0.00	240	1b	37.30	450.49	26.29
1.2D + 1.0W 240°	16.17	0.00	0	1	7.02	-208.74	24.33
	16.17	0.00	120	1a	24.57	-208.71	-6.08
	16.17	0.00	240	1b	46.97	530.82	27.11
1.2D + 1.0W 300°	16.17	0.00	0	1	6.92	273.32	-26.55
	16.17	0.00	120	1a	41.19	-433.25	-23.78
	16.17	0.00	240	1b	26.45	273.30	7.28
1.2D + 1.0W 330°	16.17	0.00	0	1	4.12	450.50	-45.45
	16.17	0.00	120	1a	34.08	-374.91	-24.08
	16.17	0.00	240	1b	5.42	37.78	-6.03
0.9D + 1.0W Normal	16.17	0.00	0	1	0.00	520.91	-53.72
	16.17	0.00	120	1a	18.01	-217.94	-18.50
	16.17	0.00	240	1b	-18.01	-217.94	-18.50
0.9D + 1.0W 60°	16.17	0.00	0	1	-6.91	263.64	-26.04
	16.17	0.00	120	1a	-26.00	263.62	7.03
	16.17	0.00	240	1b	-41.65	-442.23	-24.05
0.9D + 1.0W 90°	16.17	0.00	0	1	-7.93	28.35	-1.16
	16.17	0.00	120	1a	-40.97	440.61	18.90
	16.17	0.00	240	1b	-38.35	-383.93	-17.74
0.9D + 1.0W 120°	16.17	0.00	0	1	-7.02	-217.94	24.85
	16.17	0.00	120	1a	-46.52	520.89	26.85
	16.17	0.00	240	1b	-25.02	-217.92	-6.35
0.9D + 1.0W 180°	16.17	0.00	0	1	0.00	-442.25	48.10
	16.17	0.00	120	1a	-19.10	263.64	19.00
	16.17	0.00	240	1b	19.10	263.64	19.00
0.9D + 1.0W 210°	16.17	0.00	0	1	3.81	-383.96	42.09
	16.17	0.00	120	1a	2.95	28.36	7.45
	16.17	0.00	240	1b	36.86	440.63	26.03
0.9D + 1.0W 240°	16.17	0.00	0	1	7.02	-217.94	24.85
	16.17	0.00	120	1a	25.02	-217.92	-6.35
	16.17	0.00	240	1b	46.52	520.89	26.85
0.9D + 1.0W 300°	16.17	0.00	0	1	6.91	263.64	-26.04
	16.17	0.00	120	1a	41.65	-442.23	-24.05
	16.17	0.00	240	1b	26.00	263.62	7.03
0.9D + 1.0W 330°	16.17	0.00	0	1	4.11	440.64	-44.94
	16.17	0.00	120	1a	34.54	-383.95	-24.34
	16.17	0.00	240	1b	4.97	28.33	-6.28
1.2D + 1.0Di + 1.0Wi Normal	16.17	0.00	0	1	0.00	228.67	-20.53
	16.17	0.00	120	1a	3.28	-7.98	-4.61
	16.17	0.00	240	1b	-3.28	-7.98	-4.61
1.2D + 1.0Di + 1.0Wi 60°	16.17	0.00	0	1	-2.33	148.25	-11.77
	16.17	0.00	120	1a	-11.36	148.24	3.87
	16.17	0.00	240	1b	-11.52	-83.79	-6.65
1.2D + 1.0Di + 1.0Wi 90°	16.17	0.00	0	1	-2.69	70.90	-3.39
	16.17	0.00	120	1a	-16.26	205.53	7.82
	16.17	0.00	240	1b	-10.32	-63.73	-4.42
1.2D + 1.0Di + 1.0Wi 120°	16.17	0.00	0	1	-2.36	-7.98	5.15
	16.17	0.00	120	1a	-17.78	228.66	10.27
	16.17	0.00	240	1b	-5.64	-7.98	-0.53
1.2D + 1.0Di + 1.0Wi 180°	16.17	0.00	0	1	0.00	-83.79	13.31
	16.17	0.00	120	1a	-9.03	148.25	7.90

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*(-) Uplift and (+) Down *F_X (kip)	*F_Y (kip)	*F_Z (kip)
	16.17	0.00	240	1b	9.03	148.25	7.90
1.2D + 1.0Di + 1.0Wi 210°	16.17	0.00	0	1	1.33	-63.73	11.15
	16.17	0.00	120	1a	-1.60	70.91	4.02
	16.17	0.00	240	1b	14.90	205.53	10.17
1.2D + 1.0Di + 1.0Wi 240°	16.17	0.00	0	1	2.36	-7.98	5.15
	16.17	0.00	120	1a	5.64	-7.98	-0.53
	16.17	0.00	240	1b	17.78	228.66	10.27
1.2D + 1.0Di + 1.0Wi 300°	16.17	0.00	0	1	2.33	148.25	-11.77
	16.17	0.00	120	1a	11.52	-83.79	-6.65
	16.17	0.00	240	1b	11.36	148.24	3.87
1.2D + 1.0Di + 1.0Wi 330°	16.17	0.00	0	1	1.36	205.54	-17.99
	16.17	0.00	120	1a	8.99	-63.73	-6.72
	16.17	0.00	240	1b	4.28	70.90	-0.63
1.2D + 1.0Ev + 1.0Eh Normal	16.17	0.00	0	1	0.00	62.76	-4.49
	16.17	0.00	120	1a	-0.99	23.77	0.31
	16.17	0.00	240	1b	0.99	23.77	0.31
1.2D + 1.0Ev + 1.0Eh 60°	16.17	0.00	0	1	-0.22	49.76	-3.33
	16.17	0.00	120	1a	-3.00	49.76	1.47
	16.17	0.00	240	1b	-0.13	10.77	-0.07
1.2D + 1.0Ev + 1.0Eh 90°	16.17	0.00	0	1	-0.26	36.77	-2.17
	16.17	0.00	120	1a	-3.68	59.28	1.98
	16.17	0.00	240	1b	0.08	14.25	0.19
1.2D + 1.0Ev + 1.0Eh 120°	16.17	0.00	0	1	-0.22	23.77	-1.01
	16.17	0.00	120	1a	-3.89	62.76	2.24
	16.17	0.00	240	1b	0.77	23.77	0.70
1.2D + 1.0Ev + 1.0Eh 180°	16.17	0.00	0	1	0.00	10.77	0.15
	16.17	0.00	120	1a	-2.77	49.76	1.86
	16.17	0.00	240	1b	2.77	49.76	1.86
1.2D + 1.0Ev + 1.0Eh 210°	16.17	0.00	0	1	0.13	14.25	-0.16
	16.17	0.00	120	1a	-1.75	36.77	1.31
	16.17	0.00	240	1b	3.55	59.28	2.20
1.2D + 1.0Ev + 1.0Eh 240°	16.17	0.00	0	1	0.22	23.77	-1.01
	16.17	0.00	120	1a	-0.77	23.77	0.70
	16.17	0.00	240	1b	3.89	62.76	2.24
1.2D + 1.0Ev + 1.0Eh 300°	16.17	0.00	0	1	0.22	49.76	-3.33
	16.17	0.00	120	1a	0.13	10.77	-0.07
	16.17	0.00	240	1b	3.00	49.76	1.47
1.2D + 1.0Ev + 1.0Eh 330°	16.17	0.00	0	1	0.13	59.28	-4.18
	16.17	0.00	120	1a	-0.21	14.25	-0.03
	16.17	0.00	240	1b	2.01	36.77	0.86
0.9D - 1.0Ev + 1.0Eh Normal	16.17	0.00	0	1	0.00	51.46	-3.83
	16.17	0.00	120	1a	-0.41	12.51	-0.02
	16.17	0.00	240	1b	0.41	12.51	-0.02
0.9D - 1.0Ev + 1.0Eh 60°	16.17	0.00	0	1	-0.22	38.47	-2.67
	16.17	0.00	120	1a	-2.42	38.47	1.14
	16.17	0.00	240	1b	-0.70	-0.47	-0.41
0.9D - 1.0Ev + 1.0Eh 90°	16.17	0.00	0	1	-0.26	25.49	-1.51
	16.17	0.00	120	1a	-3.11	47.98	1.65
	16.17	0.00	240	1b	-0.50	3.01	-0.14
0.9D - 1.0Ev + 1.0Eh 120°	16.17	0.00	0	1	-0.22	12.51	-0.35
	16.17	0.00	120	1a	-3.31	51.46	1.91
	16.17	0.00	240	1b	0.19	12.51	0.37
0.9D - 1.0Ev + 1.0Eh 180°	16.17	0.00	0	1	0.00	-0.47	0.81
	16.17	0.00	120	1a	-2.20	38.47	1.53
	16.17	0.00	240	1b	2.20	38.47	1.53
0.9D - 1.0Ev + 1.0Eh 210°	16.17	0.00	0	1	0.13	3.01	0.50
	16.17	0.00	120	1a	-1.18	25.49	0.98
	16.17	0.00	240	1b	2.98	47.98	1.87
0.9D - 1.0Ev + 1.0Eh 240°	16.17	0.00	0	1	0.22	12.51	-0.35
	16.17	0.00	120	1a	-0.19	12.51	0.37
	16.17	0.00	240	1b	3.31	51.46	1.91
0.9D - 1.0Ev + 1.0Eh 300°	16.17	0.00	0	1	0.22	38.47	-2.67
	16.17	0.00	120	1a	0.70	-0.47	-0.41
	16.17	0.00	240	1b	2.42	38.47	1.14
0.9D - 1.0Ev + 1.0Eh 330°	16.17	0.00	0	1	0.13	47.98	-3.52
	16.17	0.00	120	1a	0.37	3.01	-0.36
	16.17	0.00	240	1b	1.43	25.49	0.53
1.0D + 1.0W Service Normal	16.17	0.00	0	1	0.00	139.83	-13.24

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*(-) Uplift and (+) Down *F_X (kip)	*F_Y (kip)	*F_Z (kip)
	16.17	0.00	120	1a	2.69	-22.68	-3.36
	16.17	0.00	240	1b	-2.69	-22.68	-3.36
1.0D + 1.0W Service 60°	16.17	0.00	0	1	-1.49	83.21	-7.19
	16.17	0.00	120	1a	-6.97	83.20	2.30
	16.17	0.00	240	1b	-7.94	-71.94	-4.58
1.0D + 1.0W Service 90°	16.17	0.00	0	1	-1.74	31.49	-1.73
	16.17	0.00	120	1a	-10.24	122.12	4.90
	16.17	0.00	240	1b	-7.22	-59.14	-3.17
1.0D + 1.0W Service 120°	16.17	0.00	0	1	-1.57	-22.68	4.02
	16.17	0.00	120	1a	-11.47	139.82	6.62
	16.17	0.00	240	1b	-4.26	-22.67	-0.65
1.0D + 1.0W Service 180°	16.17	0.00	0	1	0.00	-71.94	9.17
	16.17	0.00	120	1a	-5.48	83.21	4.89
	16.17	0.00	240	1b	5.48	83.21	4.89
1.0D + 1.0W Service 210°	16.17	0.00	0	1	0.86	-59.15	7.84
	16.17	0.00	120	1a	-0.63	31.49	2.37
	16.17	0.00	240	1b	9.37	122.13	6.42
1.0D + 1.0W Service 240°	16.17	0.00	0	1	1.57	-22.68	4.02
	16.17	0.00	120	1a	4.26	-22.67	-0.65
	16.17	0.00	240	1b	11.47	139.82	6.62
1.0D + 1.0W Service 300°	16.17	0.00	0	1	1.49	83.21	-7.19
	16.17	0.00	120	1a	7.94	-71.94	-4.58
	16.17	0.00	240	1b	6.97	83.20	2.30
1.0D + 1.0W Service 330°	16.17	0.00	0	1	0.88	122.13	-11.32
	16.17	0.00	120	1a	6.36	-59.14	-4.67
	16.17	0.00	240	1b	2.37	31.49	-0.64

Max Uplift:	442.25 (kip)	Moment Ice:	3825.63 (kip-ft)	Moment:	11955.45 (kip-ft)
Max Down:	530.82 (kip)	Total Down Ice:	212.71 (kip)	Total Down:	113.37 (kip)
Max Shear:	54.23 (kip)	Total Shear Ice:	29.76 (kip)	Total Shear:	90.71(kip)

1.2D + 1.0W 240°

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W Normal 127 mph wind with no ice	80.00	0.1729	0.0062	0.2334	0.2334
1.2D + 1.0W Normal 127 mph wind with no ice	100.00	0.2652	0.0060	0.2852	0.2852
1.2D + 1.0W Normal 127 mph wind with no ice	150.00	0.5714	0.0051	0.4289	0.4289
1.2D + 1.0W Normal 127 mph wind with no ice	160.00	0.6478	0.0058	0.4491	0.4491
1.2D + 1.0W Normal 127 mph wind with no ice	170.00	0.7286	0.0066	0.4742	0.4742
1.2D + 1.0W Normal 127 mph wind with no ice	193.33	0.9342	0.0084	0.5325	0.5325
1.2D + 1.0W Normal 127 mph wind with no ice	200.00	0.9969	0.0087	0.5463	0.5464
1.2D + 1.0W Normal 127 mph wind with no ice	206.67	1.0619	0.0091	0.5661	0.5661
1.2D + 1.0W Normal 127 mph wind with no ice	213.33	1.1285	0.0088	0.5777	0.5778
1.2D + 1.0W Normal 127 mph wind with no ice	225.00	1.249	0.0068	0.6090	0.609
1.2D + 1.0W Normal 127 mph wind with no ice	235.00	1.3561	0.0016	0.6313	0.6313
1.2D + 1.0W Normal 127 mph wind with no ice	245.00	1.4671	0.0013	0.6432	0.6432
1.2D + 1.0W Normal 127 mph wind with no ice	250.00	1.5217	0.0011	0.6330	0.633
1.2D + 1.0W 60° 127 mph wind with no ice	80.00	0.165	-0.0135	0.2243	0.2245
1.2D + 1.0W 60° 127 mph wind with no ice	100.00	0.2527	-0.0161	0.2724	0.2725
1.2D + 1.0W 60° 127 mph wind with no ice	150.00	0.5482	-0.0265	0.4047	0.4049
1.2D + 1.0W 60° 127 mph wind with no ice	160.00	0.6217	-0.0272	0.4342	0.4346
1.2D + 1.0W 60° 127 mph wind with no ice	170.00	0.6994	-0.0270	0.4559	0.4561
1.2D + 1.0W 60° 127 mph wind with no ice	193.33	0.8973	-0.0272	0.5124	0.5126
1.2D + 1.0W 60° 127 mph wind with no ice	200.00	0.9575	-0.0271	0.5252	0.5255
1.2D + 1.0W 60° 127 mph wind with no ice	206.67	1.0201	-0.0267	0.5447	0.545
1.2D + 1.0W 60° 127 mph wind with no ice	213.33	1.0839	-0.0259	0.5561	0.5562
1.2D + 1.0W 60° 127 mph wind with no ice	225.00	1.2001	-0.0215	0.5859	0.5861
1.2D + 1.0W 60° 127 mph wind with no ice	235.00	1.3032	-0.0135	0.6081	0.6082
1.2D + 1.0W 60° 127 mph wind with no ice	245.00	1.4103	-0.0087	0.6207	0.6207
1.2D + 1.0W 60° 127 mph wind with no ice	250.00	1.463	-0.0088	0.6118	0.6118
1.2D + 1.0W 90° 127 mph wind with no ice	80.00	0.1669	-0.0163	0.2282	0.2288
1.2D + 1.0W 90° 127 mph wind with no ice	100.00	0.2538	-0.0197	0.2732	0.2734
1.2D + 1.0W 90° 127 mph wind with no ice	150.00	0.5535	-0.0326	0.4064	0.4068
1.2D + 1.0W 90° 127 mph wind with no ice	160.00	0.6275	-0.0334	0.4383	0.4396
1.2D + 1.0W 90° 127 mph wind with no ice	170.00	0.7062	-0.0331	0.4596	0.4599
1.2D + 1.0W 90° 127 mph wind with no ice	193.33	0.906	-0.0333	0.5168	0.517
1.2D + 1.0W 90° 127 mph wind with no ice	200.00	0.967	-0.0332	0.5299	0.5308
1.2D + 1.0W 90° 127 mph wind with no ice	206.67	1.0298	-0.0328	0.5496	0.5506
1.2D + 1.0W 90° 127 mph wind with no ice	213.33	1.0948	-0.0318	0.5610	0.5612
1.2D + 1.0W 90° 127 mph wind with no ice	225.00	1.2121	-0.0268	0.5922	0.5928
1.2D + 1.0W 90° 127 mph wind with no ice	235.00	1.3161	-0.0176	0.6153	0.6155
1.2D + 1.0W 90° 127 mph wind with no ice	245.00	1.4242	-0.0121	0.6296	0.6298
1.2D + 1.0W 90° 127 mph wind with no ice	250.00	1.4772	-0.0120	0.6115	0.6116
1.2D + 1.0W 120° 127 mph wind with no ice	80.00	0.1729	-0.0150	0.2332	0.2334
1.2D + 1.0W 120° 127 mph wind with no ice	100.00	0.2652	-0.0183	0.2851	0.2852
1.2D + 1.0W 120° 127 mph wind with no ice	150.00	0.5713	-0.0304	0.4216	0.4219
1.2D + 1.0W 120° 127 mph wind with no ice	160.00	0.6478	-0.0311	0.4505	0.4509
1.2D + 1.0W 120° 127 mph wind with no ice	170.00	0.7285	-0.0309	0.4736	0.4737
1.2D + 1.0W 120° 127 mph wind with no ice	193.33	0.9341	-0.0310	0.5324	0.5325
1.2D + 1.0W 120° 127 mph wind with no ice	200.00	0.9968	-0.0309	0.5458	0.5461
1.2D + 1.0W 120° 127 mph wind with no ice	206.67	1.0617	-0.0305	0.5655	0.5658
1.2D + 1.0W 120° 127 mph wind with no ice	213.33	1.1283	-0.0297	0.5772	0.5775
1.2D + 1.0W 120° 127 mph wind with no ice	225.00	1.2489	-0.0254	0.6085	0.6087
1.2D + 1.0W 120° 127 mph wind with no ice	235.00	1.3559	-0.0175	0.6309	0.631
1.2D + 1.0W 120° 127 mph wind with no ice	245.00	1.467	-0.0128	0.6433	0.6434
1.2D + 1.0W 120° 127 mph wind with no ice	250.00	1.5216	-0.0125	0.6329	0.633
1.2D + 1.0W 180° 127 mph wind with no ice	80.00	0.165	0.0057	0.2245	0.2246
1.2D + 1.0W 180° 127 mph wind with no ice	100.00	0.2527	0.0052	0.2724	0.2724
1.2D + 1.0W 180° 127 mph wind with no ice	150.00	0.5482	0.0040	0.4114	0.4114
1.2D + 1.0W 180° 127 mph wind with no ice	160.00	0.6217	0.0048	0.4329	0.4329
1.2D + 1.0W 180° 127 mph wind with no ice	170.00	0.6995	0.0054	0.4565	0.4565
1.2D + 1.0W 180° 127 mph wind with no ice	193.33	0.8974	0.0071	0.5125	0.5125
1.2D + 1.0W 180° 127 mph wind with no ice	200.00	0.9576	0.0074	0.5258	0.5258
1.2D + 1.0W 180° 127 mph wind with no ice	206.67	1.0202	0.0076	0.5453	0.5454
1.2D + 1.0W 180° 127 mph wind with no ice	213.33	1.084	0.0073	0.5562	0.5563
1.2D + 1.0W 180° 127 mph wind with no ice	225.00	1.2002	0.0049	0.5864	0.5865
1.2D + 1.0W 180° 127 mph wind with no ice	235.00	1.3034	0.0007	0.6086	0.6086
1.2D + 1.0W 180° 127 mph wind with no ice	245.00	1.4104	0.0039	0.6206	0.6206

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W 180° 127 mph wind with no ice	250.00	1.4632	0.0034	0.6118	0.6118
1.2D + 1.0W 210° 127 mph wind with no ice	80.00	0.1669	-0.0087	0.2286	0.2288
1.2D + 1.0W 210° 127 mph wind with no ice	100.00	0.2538	0.0106	0.2735	0.2735
1.2D + 1.0W 210° 127 mph wind with no ice	150.00	0.5536	0.0178	0.4137	0.4138
1.2D + 1.0W 210° 127 mph wind with no ice	160.00	0.6276	0.0182	0.4376	0.4377
1.2D + 1.0W 210° 127 mph wind with no ice	170.00	0.7063	0.0181	0.4601	0.4605
1.2D + 1.0W 210° 127 mph wind with no ice	193.33	0.9061	0.0180	0.5173	0.5173
1.2D + 1.0W 210° 127 mph wind with no ice	200.00	0.9671	0.0180	0.5309	0.5311
1.2D + 1.0W 210° 127 mph wind with no ice	206.67	1.03	0.0178	0.5507	0.5509
1.2D + 1.0W 210° 127 mph wind with no ice	213.33	1.0949	0.0172	0.5613	0.5615
1.2D + 1.0W 210° 127 mph wind with no ice	225.00	1.2122	0.0148	0.5931	0.5932
1.2D + 1.0W 210° 127 mph wind with no ice	235.00	1.3162	0.0103	0.6162	0.6162
1.2D + 1.0W 210° 127 mph wind with no ice	245.00	1.4243	0.0075	0.6295	0.6295
1.2D + 1.0W 210° 127 mph wind with no ice	250.00	1.4773	0.0073	0.6116	0.6116
1.2D + 1.0W 240° 127 mph wind with no ice	80.00	0.1729	0.0150	0.2332	0.2334
1.2D + 1.0W 240° 127 mph wind with no ice	100.00	0.2652	0.0183	0.2851	0.2852
1.2D + 1.0W 240° 127 mph wind with no ice	150.00	0.5713	0.0304	0.4216	0.4219
1.2D + 1.0W 240° 127 mph wind with no ice	160.00	0.6478	0.0311	0.4505	0.4509
1.2D + 1.0W 240° 127 mph wind with no ice	170.00	0.7285	0.0309	0.4736	0.4737
1.2D + 1.0W 240° 127 mph wind with no ice	193.33	0.9341	0.0310	0.5324	0.5325
1.2D + 1.0W 240° 127 mph wind with no ice	200.00	0.9968	0.0309	0.5458	0.5461
1.2D + 1.0W 240° 127 mph wind with no ice	206.67	1.0617	0.0305	0.5655	0.5658
1.2D + 1.0W 240° 127 mph wind with no ice	213.33	1.1283	0.0297	0.5772	0.5775
1.2D + 1.0W 240° 127 mph wind with no ice	225.00	1.2489	0.0254	0.6085	0.6087
1.2D + 1.0W 240° 127 mph wind with no ice	235.00	1.3559	0.0175	0.6309	0.631
1.2D + 1.0W 240° 127 mph wind with no ice	245.00	1.467	0.0128	0.6433	0.6434
1.2D + 1.0W 240° 127 mph wind with no ice	250.00	1.5216	0.0125	0.6329	0.633
1.2D + 1.0W 300° 127 mph wind with no ice	80.00	0.165	0.0135	0.2243	0.2245
1.2D + 1.0W 300° 127 mph wind with no ice	100.00	0.2527	0.0161	0.2724	0.2725
1.2D + 1.0W 300° 127 mph wind with no ice	150.00	0.5482	0.0265	0.4047	0.4049
1.2D + 1.0W 300° 127 mph wind with no ice	160.00	0.6217	0.0272	0.4342	0.4346
1.2D + 1.0W 300° 127 mph wind with no ice	170.00	0.6994	0.0270	0.4559	0.4561
1.2D + 1.0W 300° 127 mph wind with no ice	193.33	0.8973	0.0272	0.5124	0.5126
1.2D + 1.0W 300° 127 mph wind with no ice	200.00	0.9575	0.0271	0.5252	0.5255
1.2D + 1.0W 300° 127 mph wind with no ice	206.67	1.0201	0.0267	0.5447	0.545
1.2D + 1.0W 300° 127 mph wind with no ice	213.33	1.0839	0.0259	0.5561	0.5562
1.2D + 1.0W 300° 127 mph wind with no ice	225.00	1.2001	0.0215	0.5859	0.5861
1.2D + 1.0W 300° 127 mph wind with no ice	235.00	1.3032	0.0135	0.6081	0.6082
1.2D + 1.0W 300° 127 mph wind with no ice	245.00	1.4103	0.0087	0.6207	0.6207
1.2D + 1.0W 300° 127 mph wind with no ice	250.00	1.463	0.0088	0.6118	0.6118
1.2D + 1.0W 330° 127 mph wind with no ice	80.00	0.1669	-0.0096	0.2286	0.2288
1.2D + 1.0W 330° 127 mph wind with no ice	100.00	0.2538	-0.0103	0.2733	0.2734
1.2D + 1.0W 330° 127 mph wind with no ice	150.00	0.5535	0.0147	0.4139	0.414
1.2D + 1.0W 330° 127 mph wind with no ice	160.00	0.6276	0.0152	0.4374	0.4377
1.2D + 1.0W 330° 127 mph wind with no ice	170.00	0.7063	0.0151	0.4608	0.4608
1.2D + 1.0W 330° 127 mph wind with no ice	193.33	0.9061	-0.0161	0.5173	0.5173
1.2D + 1.0W 330° 127 mph wind with no ice	200.00	0.9671	-0.0163	0.5307	0.531
1.2D + 1.0W 330° 127 mph wind with no ice	206.67	1.03	-0.0164	0.5506	0.5508
1.2D + 1.0W 330° 127 mph wind with no ice	213.33	1.0949	-0.0158	0.5616	0.5616
1.2D + 1.0W 330° 127 mph wind with no ice	225.00	1.2122	-0.0125	0.5930	0.5932
1.2D + 1.0W 330° 127 mph wind with no ice	235.00	1.3162	0.0073	0.6161	0.6161
1.2D + 1.0W 330° 127 mph wind with no ice	245.00	1.4243	-0.0054	0.6296	0.6296
1.2D + 1.0W 330° 127 mph wind with no ice	250.00	1.4773	-0.0052	0.6116	0.6116
0.9D + 1.0W Normal 127 mph wind with no ice	80.00	0.1727	0.0062	0.2329	0.233
0.9D + 1.0W Normal 127 mph wind with no ice	100.00	0.2647	0.0060	0.2846	0.2846
0.9D + 1.0W Normal 127 mph wind with no ice	150.00	0.5706	0.0051	0.4282	0.4282
0.9D + 1.0W Normal 127 mph wind with no ice	160.00	0.647	0.0058	0.4484	0.4484
0.9D + 1.0W Normal 127 mph wind with no ice	170.00	0.7276	0.0066	0.4734	0.4734
0.9D + 1.0W Normal 127 mph wind with no ice	193.33	0.9329	0.0084	0.5316	0.5316
0.9D + 1.0W Normal 127 mph wind with no ice	200.00	0.9955	0.0087	0.5454	0.5454
0.9D + 1.0W Normal 127 mph wind with no ice	206.67	1.0603	0.0090	0.5651	0.5652
0.9D + 1.0W Normal 127 mph wind with no ice	213.33	1.1268	0.0088	0.5767	0.5767
0.9D + 1.0W Normal 127 mph wind with no ice	225.00	1.2472	0.0068	0.6078	0.6078
0.9D + 1.0W Normal 127 mph wind with no ice	235.00	1.354	0.0017	0.6301	0.6301
0.9D + 1.0W Normal 127 mph wind with no ice	245.00	1.4649	0.0013	0.6420	0.642
0.9D + 1.0W Normal 127 mph wind with no ice	250.00	1.5194	0.0011	0.6321	0.6321
0.9D + 1.0W 60° 127 mph wind with no ice	80.00	0.1648	-0.0135	0.2240	0.2243
0.9D + 1.0W 60° 127 mph wind with no ice	100.00	0.2526	-0.0161	0.2722	0.2723

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
0.9D + 1.0W 60° 127 mph wind with no ice	150.00	0.5475	-0.0264	0.4040	0.4042
0.9D + 1.0W 60° 127 mph wind with no ice	160.00	0.6209	-0.0272	0.4334	0.4339
0.9D + 1.0W 60° 127 mph wind with no ice	170.00	0.6985	-0.0270	0.4551	0.4553
0.9D + 1.0W 60° 127 mph wind with no ice	193.33	0.896	-0.0272	0.5116	0.5117
0.9D + 1.0W 60° 127 mph wind with no ice	200.00	0.9561	-0.0271	0.5243	0.5247
0.9D + 1.0W 60° 127 mph wind with no ice	206.67	1.0186	-0.0267	0.5438	0.5441
0.9D + 1.0W 60° 127 mph wind with no ice	213.33	1.0823	-0.0259	0.5550	0.5552
0.9D + 1.0W 60° 127 mph wind with no ice	225.00	1.1983	-0.0215	0.5850	0.5851
0.9D + 1.0W 60° 127 mph wind with no ice	235.00	1.3013	-0.0136	0.6071	0.6071
0.9D + 1.0W 60° 127 mph wind with no ice	245.00	1.4081	-0.0087	0.6195	0.6196
0.9D + 1.0W 60° 127 mph wind with no ice	250.00	1.4608	-0.0089	0.6105	0.6105
0.9D + 1.0W 90° 127 mph wind with no ice	80.00	0.1667	-0.0163	0.2278	0.2284
0.9D + 1.0W 90° 127 mph wind with no ice	100.00	0.2534	-0.0197	0.2726	0.2728
0.9D + 1.0W 90° 127 mph wind with no ice	150.00	0.5528	-0.0326	0.4057	0.4062
0.9D + 1.0W 90° 127 mph wind with no ice	160.00	0.6268	-0.0334	0.4376	0.4388
0.9D + 1.0W 90° 127 mph wind with no ice	170.00	0.7053	-0.0331	0.4588	0.4591
0.9D + 1.0W 90° 127 mph wind with no ice	193.33	0.9047	-0.0333	0.5159	0.5162
0.9D + 1.0W 90° 127 mph wind with no ice	200.00	0.9656	-0.0332	0.5290	0.5299
0.9D + 1.0W 90° 127 mph wind with no ice	206.67	1.0284	-0.0327	0.5486	0.5496
0.9D + 1.0W 90° 127 mph wind with no ice	213.33	1.0932	-0.0317	0.5600	0.5602
0.9D + 1.0W 90° 127 mph wind with no ice	225.00	1.2103	-0.0268	0.5911	0.5917
0.9D + 1.0W 90° 127 mph wind with no ice	235.00	1.3141	-0.0177	0.6142	0.6144
0.9D + 1.0W 90° 127 mph wind with no ice	245.00	1.422	-0.0121	0.6285	0.6286
0.9D + 1.0W 90° 127 mph wind with no ice	250.00	1.4749	-0.0120	0.6102	0.6103
0.9D + 1.0W 120° 127 mph wind with no ice	80.00	0.1727	-0.0150	0.2328	0.233
0.9D + 1.0W 120° 127 mph wind with no ice	100.00	0.2647	-0.0183	0.2845	0.2846
0.9D + 1.0W 120° 127 mph wind with no ice	150.00	0.5706	-0.0304	0.4209	0.4212
0.9D + 1.0W 120° 127 mph wind with no ice	160.00	0.6469	-0.0311	0.4498	0.4501
0.9D + 1.0W 120° 127 mph wind with no ice	170.00	0.7275	-0.0309	0.4728	0.4729
0.9D + 1.0W 120° 127 mph wind with no ice	193.33	0.9328	-0.0310	0.5315	0.5316
0.9D + 1.0W 120° 127 mph wind with no ice	200.00	0.9954	-0.0309	0.5449	0.5452
0.9D + 1.0W 120° 127 mph wind with no ice	206.67	1.0602	-0.0305	0.5646	0.5649
0.9D + 1.0W 120° 127 mph wind with no ice	213.33	1.1267	-0.0296	0.5762	0.5765
0.9D + 1.0W 120° 127 mph wind with no ice	225.00	1.247	-0.0254	0.6073	0.6075
0.9D + 1.0W 120° 127 mph wind with no ice	235.00	1.3539	-0.0176	0.6297	0.6298
0.9D + 1.0W 120° 127 mph wind with no ice	245.00	1.4647	-0.0128	0.6421	0.6422
0.9D + 1.0W 120° 127 mph wind with no ice	250.00	1.5192	-0.0125	0.6320	0.632
0.9D + 1.0W 180° 127 mph wind with no ice	80.00	0.1649	0.0057	0.2242	0.2243
0.9D + 1.0W 180° 127 mph wind with no ice	100.00	0.2526	0.0052	0.2723	0.2723
0.9D + 1.0W 180° 127 mph wind with no ice	150.00	0.5476	0.0040	0.4108	0.4109
0.9D + 1.0W 180° 127 mph wind with no ice	160.00	0.621	0.0048	0.4322	0.4322
0.9D + 1.0W 180° 127 mph wind with no ice	170.00	0.6986	0.0054	0.4557	0.4557
0.9D + 1.0W 180° 127 mph wind with no ice	193.33	0.8961	0.0071	0.5116	0.5116
0.9D + 1.0W 180° 127 mph wind with no ice	200.00	0.9562	0.0074	0.5249	0.525
0.9D + 1.0W 180° 127 mph wind with no ice	206.67	1.0187	0.0076	0.5444	0.5444
0.9D + 1.0W 180° 127 mph wind with no ice	213.33	1.0824	0.0073	0.5553	0.5553
0.9D + 1.0W 180° 127 mph wind with no ice	225.00	1.1984	0.0049	0.5855	0.5855
0.9D + 1.0W 180° 127 mph wind with no ice	235.00	1.3014	0.0007	0.6076	0.6076
0.9D + 1.0W 180° 127 mph wind with no ice	245.00	1.4082	0.0039	0.6195	0.6195
0.9D + 1.0W 180° 127 mph wind with no ice	250.00	1.4609	0.0033	0.6105	0.6105
0.9D + 1.0W 210° 127 mph wind with no ice	80.00	0.1667	0.0086	0.2283	0.2284
0.9D + 1.0W 210° 127 mph wind with no ice	100.00	0.2534	0.0106	0.2730	0.273
0.9D + 1.0W 210° 127 mph wind with no ice	150.00	0.5529	0.0178	0.4131	0.4132
0.9D + 1.0W 210° 127 mph wind with no ice	160.00	0.6268	0.0182	0.4369	0.437
0.9D + 1.0W 210° 127 mph wind with no ice	170.00	0.7054	0.0180	0.4594	0.4597
0.9D + 1.0W 210° 127 mph wind with no ice	193.33	0.9048	0.0180	0.5165	0.5165
0.9D + 1.0W 210° 127 mph wind with no ice	200.00	0.9657	0.0180	0.5300	0.5301
0.9D + 1.0W 210° 127 mph wind with no ice	206.67	1.0285	0.0178	0.5498	0.55
0.9D + 1.0W 210° 127 mph wind with no ice	213.33	1.0933	0.0172	0.5604	0.5605
0.9D + 1.0W 210° 127 mph wind with no ice	225.00	1.2104	0.0148	0.5921	0.5922
0.9D + 1.0W 210° 127 mph wind with no ice	235.00	1.3142	0.0103	0.6151	0.6151
0.9D + 1.0W 210° 127 mph wind with no ice	245.00	1.4222	0.0076	0.6284	0.6284
0.9D + 1.0W 210° 127 mph wind with no ice	250.00	1.475	0.0073	0.6103	0.6103
0.9D + 1.0W 240° 127 mph wind with no ice	80.00	0.1727	0.0150	0.2328	0.233
0.9D + 1.0W 240° 127 mph wind with no ice	100.00	0.2647	0.0183	0.2845	0.2846
0.9D + 1.0W 240° 127 mph wind with no ice	150.00	0.5706	0.0304	0.4209	0.4212
0.9D + 1.0W 240° 127 mph wind with no ice	160.00	0.6469	0.0311	0.4498	0.4501
0.9D + 1.0W 240° 127 mph wind with no ice	170.00	0.7275	0.0309	0.4728	0.4729

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
0.9D + 1.0W 240° 127 mph wind with no ice	193.33	0.9328	0.0310	0.5315	0.5316
0.9D + 1.0W 240° 127 mph wind with no ice	200.00	0.9954	0.0309	0.5449	0.5452
0.9D + 1.0W 240° 127 mph wind with no ice	206.67	1.0602	0.0305	0.5646	0.5649
0.9D + 1.0W 240° 127 mph wind with no ice	213.33	1.1267	0.0296	0.5762	0.5765
0.9D + 1.0W 240° 127 mph wind with no ice	225.00	1.247	0.0254	0.6073	0.6075
0.9D + 1.0W 240° 127 mph wind with no ice	235.00	1.3539	0.0176	0.6297	0.6298
0.9D + 1.0W 240° 127 mph wind with no ice	245.00	1.4647	0.0128	0.6421	0.6422
0.9D + 1.0W 240° 127 mph wind with no ice	250.00	1.5192	0.0125	0.6320	0.632
0.9D + 1.0W 300° 127 mph wind with no ice	80.00	0.1648	0.0135	0.2240	0.2243
0.9D + 1.0W 300° 127 mph wind with no ice	100.00	0.2526	0.0161	0.2722	0.2723
0.9D + 1.0W 300° 127 mph wind with no ice	150.00	0.5475	0.0264	0.4040	0.4042
0.9D + 1.0W 300° 127 mph wind with no ice	160.00	0.6209	0.0272	0.4334	0.4339
0.9D + 1.0W 300° 127 mph wind with no ice	170.00	0.6985	0.0270	0.4551	0.4553
0.9D + 1.0W 300° 127 mph wind with no ice	193.33	0.896	0.0272	0.5116	0.5117
0.9D + 1.0W 300° 127 mph wind with no ice	200.00	0.9561	0.0271	0.5243	0.5247
0.9D + 1.0W 300° 127 mph wind with no ice	206.67	1.0186	0.0267	0.5438	0.5441
0.9D + 1.0W 300° 127 mph wind with no ice	213.33	1.0823	0.0259	0.5550	0.5552
0.9D + 1.0W 300° 127 mph wind with no ice	225.00	1.1983	0.0215	0.5850	0.5851
0.9D + 1.0W 300° 127 mph wind with no ice	235.00	1.3013	0.0136	0.6071	0.6071
0.9D + 1.0W 300° 127 mph wind with no ice	245.00	1.4081	0.0087	0.6195	0.6196
0.9D + 1.0W 300° 127 mph wind with no ice	250.00	1.4608	0.0089	0.6105	0.6105
0.9D + 1.0W 330° 127 mph wind with no ice	80.00	0.1667	-0.0096	0.2282	0.2284
0.9D + 1.0W 330° 127 mph wind with no ice	100.00	0.2534	-0.0103	0.2730	0.273
0.9D + 1.0W 330° 127 mph wind with no ice	150.00	0.5529	0.0147	0.4132	0.4132
0.9D + 1.0W 330° 127 mph wind with no ice	160.00	0.6268	0.0152	0.4367	0.4369
0.9D + 1.0W 330° 127 mph wind with no ice	170.00	0.7054	0.0151	0.4600	0.46
0.9D + 1.0W 330° 127 mph wind with no ice	193.33	0.9048	-0.0160	0.5165	0.5165
0.9D + 1.0W 330° 127 mph wind with no ice	200.00	0.9657	-0.0163	0.5298	0.5301
0.9D + 1.0W 330° 127 mph wind with no ice	206.67	1.0285	-0.0163	0.5497	0.5499
0.9D + 1.0W 330° 127 mph wind with no ice	213.33	1.0933	-0.0158	0.5605	0.5605
0.9D + 1.0W 330° 127 mph wind with no ice	225.00	1.2104	-0.0125	0.5920	0.5921
0.9D + 1.0W 330° 127 mph wind with no ice	235.00	1.3143	0.0073	0.6150	0.615
0.9D + 1.0W 330° 127 mph wind with no ice	245.00	1.4222	-0.0054	0.6284	0.6284
0.9D + 1.0W 330° 127 mph wind with no ice	250.00	1.475	-0.0052	0.6103	0.6103
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	80.00	0.0553	0.0026	0.0759	0.0759
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	100.00	0.0831	0.0028	0.0884	0.0884
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	150.00	0.1806	0.0032	0.1324	0.1325
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	160.00	0.2034	0.0035	0.1393	0.1393
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	170.00	0.2284	0.0037	0.1451	0.1451
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	193.33	0.2907	0.0043	0.1617	0.1617
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	200.00	0.3098	0.0044	0.1653	0.1653
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	206.67	0.329	0.0045	0.1702	0.1702
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	213.33	0.3492	0.0045	0.1734	0.1735
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	225.00	0.3851	0.0041	0.1818	0.1819
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	235.00	0.4169	0.0030	0.1873	0.1873
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	245.00	0.4497	0.0023	0.1897	0.1897
1.2D + 1.0Di + 1.0Wi Normal 50 mph wind with 1" radial ice	250.00	0.466	0.0023	0.1860	0.186
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	80.00	0.0548	-0.0042	0.0749	0.075
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	100.00	0.0845	-0.0050	0.0895	0.0895
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	150.00	0.1784	-0.0078	0.1297	0.1298
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	160.00	0.2004	-0.0080	0.1364	0.1365
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	170.00	0.2252	-0.0080	0.1433	0.1433
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	193.33	0.286	-0.0083	0.1585	0.1586
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	200.00	0.3048	-0.0082	0.1635	0.1635
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	206.67	0.3237	-0.0082	0.1672	0.1674
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	213.33	0.3434	-0.0081	0.1710	0.171
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	225.00	0.3785	-0.0071	0.1791	0.1791
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	235.00	0.4098	-0.0054	0.1835	0.1835
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	245.00	0.4419	-0.0043	0.1866	0.1866
1.2D + 1.0Di + 1.0Wi 60° 50 mph wind with 1" radial ice	250.00	0.4581	-0.0043	0.1860	0.186
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	80.00	0.0548	-0.0049	0.0751	0.0752
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	100.00	0.0839	-0.0058	0.0890	0.0891
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	150.00	0.1789	-0.0091	0.1295	0.1296
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	160.00	0.2011	-0.0094	0.1378	0.1379
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	170.00	0.226	-0.0094	0.1436	0.1436
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	193.33	0.2871	-0.0097	0.1595	0.1596
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	200.00	0.306	-0.0097	0.1638	0.1639
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	206.67	0.3249	-0.0096	0.1680	0.168

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	213.33	0.3448	-0.0094	0.1715	0.1716
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	225.00	0.3801	-0.0084	0.1797	0.1798
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	235.00	0.4115	-0.0064	0.1847	0.1848
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	245.00	0.4438	-0.0051	0.1881	0.1882
1.2D + 1.0Di + 1.0Wi 90° 50 mph wind with 1" radial ice	250.00	0.46	-0.0051	0.1854	0.1854
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	80.00	0.0553	-0.0043	0.0759	0.0759
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	100.00	0.0831	-0.0051	0.0883	0.0884
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	150.00	0.1805	-0.0081	0.1309	0.1311
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	160.00	0.2034	-0.0083	0.1397	0.1397
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	170.00	0.2284	-0.0083	0.1448	0.145
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	193.33	0.2907	-0.0085	0.1617	0.1617
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	200.00	0.3098	-0.0085	0.1652	0.1653
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	206.67	0.329	-0.0085	0.1701	0.1702
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	213.33	0.3492	-0.0083	0.1733	0.1734
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	225.00	0.3851	-0.0074	0.1817	0.1818
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	235.00	0.4169	-0.0057	0.1872	0.1873
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	245.00	0.4497	-0.0046	0.1897	0.1898
1.2D + 1.0Di + 1.0Wi 120° 50 mph wind with 1" radial ice	250.00	0.4659	-0.0045	0.1860	0.186
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	80.00	0.0548	0.0026	0.0749	0.075
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	100.00	0.0845	0.0027	0.0895	0.0895
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	150.00	0.1784	0.0031	0.1311	0.1311
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	160.00	0.2004	0.0034	0.1361	0.1361
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	170.00	0.2252	0.0036	0.1434	0.1434
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	193.33	0.286	0.0042	0.1586	0.1586
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	200.00	0.3049	0.0043	0.1635	0.1635
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	206.67	0.3237	0.0044	0.1673	0.1674
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	213.33	0.3434	0.0044	0.1710	0.171
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	225.00	0.3786	0.0040	0.1791	0.1791
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	235.00	0.4098	0.0028	0.1835	0.1835
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	245.00	0.442	0.0021	0.1866	0.1866
1.2D + 1.0Di + 1.0Wi 180° 50 mph wind with 1" radial ice	250.00	0.4581	0.0022	0.1860	0.186
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	80.00	0.0548	-0.0034	0.0752	0.0752
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	100.00	0.0839	-0.0038	0.0890	0.0891
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	150.00	0.1789	-0.0049	0.1309	0.131
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	160.00	0.2011	-0.0052	0.1375	0.1375
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	170.00	0.226	-0.0055	0.1437	0.1438
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	193.33	0.2871	-0.0060	0.1596	0.1596
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	200.00	0.3061	-0.0061	0.1638	0.1639
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	206.67	0.3249	-0.0062	0.1681	0.1681
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	213.33	0.3448	-0.0061	0.1715	0.1716
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	225.00	0.3801	-0.0055	0.1797	0.1798
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	235.00	0.4115	-0.0040	0.1848	0.1848
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	245.00	0.4438	-0.0031	0.1881	0.1881
1.2D + 1.0Di + 1.0Wi 210° 50 mph wind with 1" radial ice	250.00	0.46	-0.0032	0.1854	0.1854
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	80.00	0.0553	0.0043	0.0759	0.0759
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	100.00	0.0831	0.0051	0.0883	0.0884
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	150.00	0.1805	0.0081	0.1309	0.1311
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	160.00	0.2034	0.0083	0.1397	0.1397
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	170.00	0.2284	0.0083	0.1448	0.145
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	193.33	0.2907	0.0085	0.1617	0.1617
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	200.00	0.3098	0.0085	0.1652	0.1653
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	206.67	0.329	0.0085	0.1701	0.1702
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	213.33	0.3492	0.0083	0.1733	0.1734
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	225.00	0.3851	0.0074	0.1817	0.1818
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	235.00	0.4169	0.0057	0.1872	0.1873
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	245.00	0.4497	0.0046	0.1897	0.1898
1.2D + 1.0Di + 1.0Wi 240° 50 mph wind with 1" radial ice	250.00	0.4659	0.0045	0.1860	0.186
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	80.00	0.0548	0.0042	0.0749	0.075
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	100.00	0.0845	0.0050	0.0895	0.0895
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	150.00	0.1784	0.0078	0.1297	0.1298
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	160.00	0.2004	0.0080	0.1364	0.1365
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	170.00	0.2252	0.0080	0.1433	0.1433
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	193.33	0.286	0.0083	0.1585	0.1586
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	200.00	0.3048	0.0082	0.1635	0.1635
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	206.67	0.3237	0.0082	0.1672	0.1674
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	213.33	0.3434	0.0081	0.1710	0.171
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	225.00	0.3785	0.0071	0.1791	0.1791
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	235.00	0.4098	0.0054	0.1835	0.1835

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	245.00	0.4419	0.0043	0.1866	0.1866
1.2D + 1.0Di + 1.0Wi 300° 50 mph wind with 1" radial ice	250.00	0.4581	0.0043	0.1860	0.186
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	80.00	0.0548	-0.0035	0.0751	0.0752
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	100.00	0.0839	-0.0038	0.0891	0.0891
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	150.00	0.1789	-0.0051	0.1310	0.131
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	160.00	0.2011	-0.0054	0.1374	0.1375
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	170.00	0.226	-0.0056	0.1438	0.1438
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	193.33	0.2871	-0.0061	0.1595	0.1596
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	200.00	0.3061	-0.0062	0.1639	0.1639
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	206.67	0.325	-0.0063	0.1680	0.168
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	213.33	0.3448	-0.0062	0.1716	0.1716
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	225.00	0.3801	-0.0056	0.1798	0.1798
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	235.00	0.4115	-0.0041	0.1848	0.1849
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	245.00	0.4438	-0.0032	0.1881	0.1881
1.2D + 1.0Di + 1.0Wi 330° 50 mph wind with 1" radial ice	250.00	0.46	-0.0032	0.1854	0.1854
1.2D + 1.0Ev + 1.0Eh Normal Seismic	80.00	0.0092	0.0006	0.0132	0.0132
1.2D + 1.0Ev + 1.0Eh Normal Seismic	100.00	0.015	0.0007	0.0171	0.0171
1.2D + 1.0Ev + 1.0Eh Normal Seismic	150.00	0.0325	0.0012	0.0262	0.0262
1.2D + 1.0Ev + 1.0Eh Normal Seismic	160.00	0.0372	0.0013	0.0282	0.0282
1.2D + 1.0Ev + 1.0Eh Normal Seismic	170.00	0.0423	0.0014	0.0303	0.0303
1.2D + 1.0Ev + 1.0Eh Normal Seismic	193.33	0.0553	0.0015	0.0342	0.0342
1.2D + 1.0Ev + 1.0Eh Normal Seismic	200.00	0.0593	0.0016	0.0353	0.0353
1.2D + 1.0Ev + 1.0Eh Normal Seismic	206.67	0.0636	0.0016	0.0369	0.0369
1.2D + 1.0Ev + 1.0Eh Normal Seismic	213.33	0.0679	0.0016	0.0382	0.0382
1.2D + 1.0Ev + 1.0Eh Normal Seismic	225.00	0.0759	0.0017	0.0412	0.0413
1.2D + 1.0Ev + 1.0Eh Normal Seismic	235.00	0.0833	0.0016	0.0433	0.0433
1.2D + 1.0Ev + 1.0Eh Normal Seismic	245.00	0.091	0.0015	0.0449	0.0449
1.2D + 1.0Ev + 1.0Eh Normal Seismic	250.00	0.0947	0.0014	0.0447	0.0448
1.2D + 1.0Ev + 1.0Eh 60° Seismic	80.00	0.009	0.0006	0.0133	0.0133
1.2D + 1.0Ev + 1.0Eh 60° Seismic	100.00	0.0141	0.0007	0.0162	0.0163
1.2D + 1.0Ev + 1.0Eh 60° Seismic	150.00	0.0324	0.0012	0.0262	0.0262
1.2D + 1.0Ev + 1.0Eh 60° Seismic	160.00	0.0371	0.0013	0.0278	0.0279
1.2D + 1.0Ev + 1.0Eh 60° Seismic	170.00	0.0421	0.0014	0.0302	0.0302
1.2D + 1.0Ev + 1.0Eh 60° Seismic	193.33	0.0552	0.0015	0.0342	0.0343
1.2D + 1.0Ev + 1.0Eh 60° Seismic	200.00	0.0593	0.0016	0.0355	0.0355
1.2D + 1.0Ev + 1.0Eh 60° Seismic	206.67	0.0635	0.0016	0.0368	0.0369
1.2D + 1.0Ev + 1.0Eh 60° Seismic	213.33	0.0679	0.0016	0.0383	0.0383
1.2D + 1.0Ev + 1.0Eh 60° Seismic	225.00	0.0759	0.0017	0.0413	0.0413
1.2D + 1.0Ev + 1.0Eh 60° Seismic	235.00	0.0833	0.0016	0.0434	0.0434
1.2D + 1.0Ev + 1.0Eh 60° Seismic	245.00	0.0909	0.0015	0.0446	0.0446
1.2D + 1.0Ev + 1.0Eh 60° Seismic	250.00	0.0947	0.0014	0.0457	0.0457
1.2D + 1.0Ev + 1.0Eh 90° Seismic	80.00	0.0091	-0.0007	0.0133	0.0133
1.2D + 1.0Ev + 1.0Eh 90° Seismic	100.00	0.0147	-0.0008	0.0169	0.0169
1.2D + 1.0Ev + 1.0Eh 90° Seismic	150.00	0.0324	-0.0014	0.0262	0.0262
1.2D + 1.0Ev + 1.0Eh 90° Seismic	160.00	0.0372	-0.0015	0.0281	0.0281
1.2D + 1.0Ev + 1.0Eh 90° Seismic	170.00	0.0423	-0.0016	0.0302	0.0303
1.2D + 1.0Ev + 1.0Eh 90° Seismic	193.33	0.0553	-0.0018	0.0342	0.0343
1.2D + 1.0Ev + 1.0Eh 90° Seismic	200.00	0.0593	-0.0018	0.0354	0.0354
1.2D + 1.0Ev + 1.0Eh 90° Seismic	206.67	0.0636	-0.0019	0.0369	0.0369
1.2D + 1.0Ev + 1.0Eh 90° Seismic	213.33	0.0679	-0.0019	0.0383	0.0383
1.2D + 1.0Ev + 1.0Eh 90° Seismic	225.00	0.0759	-0.0019	0.0413	0.0413
1.2D + 1.0Ev + 1.0Eh 90° Seismic	235.00	0.0833	-0.0018	0.0434	0.0434
1.2D + 1.0Ev + 1.0Eh 90° Seismic	245.00	0.0909	-0.0017	0.0448	0.0448
1.2D + 1.0Ev + 1.0Eh 90° Seismic	250.00	0.0947	-0.0017	0.0454	0.0454
1.2D + 1.0Ev + 1.0Eh 120° Seismic	80.00	0.0092	0.0006	0.0132	0.0132
1.2D + 1.0Ev + 1.0Eh 120° Seismic	100.00	0.015	0.0007	0.0171	0.0171
1.2D + 1.0Ev + 1.0Eh 120° Seismic	150.00	0.0325	0.0012	0.0262	0.0262
1.2D + 1.0Ev + 1.0Eh 120° Seismic	160.00	0.0372	0.0013	0.0282	0.0282
1.2D + 1.0Ev + 1.0Eh 120° Seismic	170.00	0.0423	0.0014	0.0303	0.0303
1.2D + 1.0Ev + 1.0Eh 120° Seismic	193.33	0.0553	0.0015	0.0342	0.0342
1.2D + 1.0Ev + 1.0Eh 120° Seismic	200.00	0.0593	0.0016	0.0353	0.0353
1.2D + 1.0Ev + 1.0Eh 120° Seismic	206.67	0.0636	0.0016	0.0369	0.0369
1.2D + 1.0Ev + 1.0Eh 120° Seismic	213.33	0.0679	0.0016	0.0382	0.0382
1.2D + 1.0Ev + 1.0Eh 120° Seismic	225.00	0.0759	0.0017	0.0412	0.0413
1.2D + 1.0Ev + 1.0Eh 120° Seismic	235.00	0.0833	0.0016	0.0433	0.0433
1.2D + 1.0Ev + 1.0Eh 120° Seismic	245.00	0.091	0.0015	0.0449	0.0449
1.2D + 1.0Ev + 1.0Eh 120° Seismic	250.00	0.0947	0.0014	0.0447	0.0448
1.2D + 1.0Ev + 1.0Eh 180° Seismic	80.00	0.009	0.0006	0.0133	0.0133

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh 180° Seismic	100.00	0.0141	0.0007	0.0162	0.0163
1.2D + 1.0Ev + 1.0Eh 180° Seismic	150.00	0.0324	0.0012	0.0262	0.0262
1.2D + 1.0Ev + 1.0Eh 180° Seismic	160.00	0.0371	0.0013	0.0278	0.0279
1.2D + 1.0Ev + 1.0Eh 180° Seismic	170.00	0.0421	0.0014	0.0302	0.0302
1.2D + 1.0Ev + 1.0Eh 180° Seismic	193.33	0.0552	0.0015	0.0342	0.0343
1.2D + 1.0Ev + 1.0Eh 180° Seismic	200.00	0.0593	0.0016	0.0355	0.0355
1.2D + 1.0Ev + 1.0Eh 180° Seismic	206.67	0.0635	0.0016	0.0368	0.0369
1.2D + 1.0Ev + 1.0Eh 180° Seismic	213.33	0.0679	0.0016	0.0383	0.0383
1.2D + 1.0Ev + 1.0Eh 180° Seismic	225.00	0.0759	0.0017	0.0414	0.0414
1.2D + 1.0Ev + 1.0Eh 180° Seismic	235.00	0.0833	0.0016	0.0434	0.0434
1.2D + 1.0Ev + 1.0Eh 180° Seismic	245.00	0.0909	0.0015	0.0446	0.0446
1.2D + 1.0Ev + 1.0Eh 180° Seismic	250.00	0.0947	0.0014	0.0457	0.0457
1.2D + 1.0Ev + 1.0Eh 210° Seismic	80.00	0.0091	-0.0007	0.0133	0.0133
1.2D + 1.0Ev + 1.0Eh 210° Seismic	100.00	0.0147	-0.0009	0.0169	0.0169
1.2D + 1.0Ev + 1.0Eh 210° Seismic	150.00	0.0324	-0.0014	0.0262	0.0262
1.2D + 1.0Ev + 1.0Eh 210° Seismic	160.00	0.0372	-0.0015	0.0281	0.0281
1.2D + 1.0Ev + 1.0Eh 210° Seismic	170.00	0.0423	-0.0016	0.0302	0.0303
1.2D + 1.0Ev + 1.0Eh 210° Seismic	193.33	0.0553	-0.0018	0.0342	0.0343
1.2D + 1.0Ev + 1.0Eh 210° Seismic	200.00	0.0593	-0.0018	0.0354	0.0354
1.2D + 1.0Ev + 1.0Eh 210° Seismic	206.67	0.0636	-0.0019	0.0369	0.0369
1.2D + 1.0Ev + 1.0Eh 210° Seismic	213.33	0.0679	-0.0019	0.0383	0.0383
1.2D + 1.0Ev + 1.0Eh 210° Seismic	225.00	0.0759	-0.0019	0.0413	0.0413
1.2D + 1.0Ev + 1.0Eh 210° Seismic	235.00	0.0833	-0.0018	0.0434	0.0434
1.2D + 1.0Ev + 1.0Eh 210° Seismic	245.00	0.0909	-0.0017	0.0448	0.0448
1.2D + 1.0Ev + 1.0Eh 210° Seismic	250.00	0.0947	-0.0017	0.0454	0.0454
1.2D + 1.0Ev + 1.0Eh 240° Seismic	80.00	0.0092	0.0006	0.0132	0.0132
1.2D + 1.0Ev + 1.0Eh 240° Seismic	100.00	0.015	0.0007	0.0171	0.0171
1.2D + 1.0Ev + 1.0Eh 240° Seismic	150.00	0.0325	0.0012	0.0262	0.0262
1.2D + 1.0Ev + 1.0Eh 240° Seismic	160.00	0.0372	0.0013	0.0282	0.0282
1.2D + 1.0Ev + 1.0Eh 240° Seismic	170.00	0.0423	0.0014	0.0303	0.0303
1.2D + 1.0Ev + 1.0Eh 240° Seismic	193.33	0.0553	0.0015	0.0342	0.0342
1.2D + 1.0Ev + 1.0Eh 240° Seismic	200.00	0.0593	0.0016	0.0353	0.0353
1.2D + 1.0Ev + 1.0Eh 240° Seismic	206.67	0.0636	0.0016	0.0369	0.0369
1.2D + 1.0Ev + 1.0Eh 240° Seismic	213.33	0.0679	0.0016	0.0382	0.0382
1.2D + 1.0Ev + 1.0Eh 240° Seismic	225.00	0.0759	0.0017	0.0412	0.0413
1.2D + 1.0Ev + 1.0Eh 240° Seismic	235.00	0.0833	0.0016	0.0433	0.0433
1.2D + 1.0Ev + 1.0Eh 240° Seismic	245.00	0.091	0.0015	0.0449	0.0449
1.2D + 1.0Ev + 1.0Eh 240° Seismic	250.00	0.0947	0.0014	0.0447	0.0448
1.2D + 1.0Ev + 1.0Eh 300° Seismic	80.00	0.009	0.0006	0.0133	0.0133
1.2D + 1.0Ev + 1.0Eh 300° Seismic	100.00	0.0141	0.0007	0.0162	0.0163
1.2D + 1.0Ev + 1.0Eh 300° Seismic	150.00	0.0324	0.0012	0.0262	0.0262
1.2D + 1.0Ev + 1.0Eh 300° Seismic	160.00	0.0371	0.0013	0.0278	0.0279
1.2D + 1.0Ev + 1.0Eh 300° Seismic	170.00	0.0421	0.0014	0.0302	0.0302
1.2D + 1.0Ev + 1.0Eh 300° Seismic	193.33	0.0552	0.0015	0.0342	0.0343
1.2D + 1.0Ev + 1.0Eh 300° Seismic	200.00	0.0593	0.0016	0.0355	0.0355
1.2D + 1.0Ev + 1.0Eh 300° Seismic	206.67	0.0635	0.0016	0.0368	0.0369
1.2D + 1.0Ev + 1.0Eh 300° Seismic	213.33	0.0679	0.0016	0.0383	0.0383
1.2D + 1.0Ev + 1.0Eh 300° Seismic	225.00	0.0759	0.0017	0.0413	0.0413
1.2D + 1.0Ev + 1.0Eh 300° Seismic	235.00	0.0833	0.0016	0.0434	0.0434
1.2D + 1.0Ev + 1.0Eh 300° Seismic	245.00	0.0909	0.0015	0.0446	0.0446
1.2D + 1.0Ev + 1.0Eh 300° Seismic	250.00	0.0947	0.0014	0.0457	0.0457
1.2D + 1.0Ev + 1.0Eh 330° Seismic	80.00	0.0091	-0.0007	0.0133	0.0133
1.2D + 1.0Ev + 1.0Eh 330° Seismic	100.00	0.0147	-0.0008	0.0169	0.0169
1.2D + 1.0Ev + 1.0Eh 330° Seismic	150.00	0.0324	-0.0014	0.0262	0.0262
1.2D + 1.0Ev + 1.0Eh 330° Seismic	160.00	0.0372	-0.0015	0.0281	0.0281
1.2D + 1.0Ev + 1.0Eh 330° Seismic	170.00	0.0423	-0.0016	0.0302	0.0303
1.2D + 1.0Ev + 1.0Eh 330° Seismic	193.33	0.0553	-0.0018	0.0342	0.0343
1.2D + 1.0Ev + 1.0Eh 330° Seismic	200.00	0.0593	-0.0018	0.0354	0.0354
1.2D + 1.0Ev + 1.0Eh 330° Seismic	206.67	0.0636	-0.0019	0.0369	0.0369
1.2D + 1.0Ev + 1.0Eh 330° Seismic	213.33	0.0679	-0.0019	0.0383	0.0383
1.2D + 1.0Ev + 1.0Eh 330° Seismic	225.00	0.0759	-0.0019	0.0413	0.0413
1.2D + 1.0Ev + 1.0Eh 330° Seismic	235.00	0.0833	-0.0018	0.0434	0.0434
1.2D + 1.0Ev + 1.0Eh 330° Seismic	245.00	0.0909	-0.0017	0.0448	0.0448
1.2D + 1.0Ev + 1.0Eh 330° Seismic	250.00	0.0947	-0.0017	0.0454	0.0454
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	80.00	0.0091	0.0006	0.0131	0.0131
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	100.00	0.0147	0.0007	0.0168	0.0168
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	150.00	0.0324	0.0012	0.0261	0.0261
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	160.00	0.0371	0.0013	0.0280	0.028

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	170.00	0.0422	0.0014	0.0302	0.0302
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	193.33	0.0552	0.0015	0.0342	0.0342
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	200.00	0.0592	0.0016	0.0352	0.0352
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	206.67	0.0634	0.0016	0.0368	0.0368
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	213.33	0.0678	0.0016	0.0381	0.0381
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	225.00	0.0758	0.0017	0.0411	0.0411
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	235.00	0.0831	0.0016	0.0431	0.0432
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	245.00	0.0908	0.0015	0.0446	0.0446
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	250.00	0.0945	0.0014	0.0444	0.0444
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	80.00	0.0089	0.0006	0.0130	0.013
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	100.00	0.014	0.0007	0.0161	0.0161
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	150.00	0.0323	0.0012	0.0260	0.026
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	160.00	0.037	0.0013	0.0277	0.0278
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	170.00	0.042	0.0014	0.0300	0.03
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	193.33	0.0551	0.0015	0.0342	0.0342
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	200.00	0.0592	0.0016	0.0353	0.0353
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	206.67	0.0634	0.0016	0.0367	0.0368
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	213.33	0.0677	0.0016	0.0381	0.0381
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	225.00	0.0757	0.0017	0.0411	0.0411
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	235.00	0.0831	0.0016	0.0432	0.0432
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	245.00	0.0907	0.0015	0.0444	0.0444
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	250.00	0.0945	0.0014	0.0450	0.045
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	80.00	0.0091	-0.0007	0.0131	0.0131
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	100.00	0.0145	-0.0008	0.0166	0.0166
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	150.00	0.0324	-0.0014	0.0260	0.0261
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	160.00	0.0371	-0.0015	0.0280	0.028
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	170.00	0.0421	-0.0016	0.0301	0.0301
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	193.33	0.0552	-0.0018	0.0342	0.0342
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	200.00	0.0592	-0.0018	0.0353	0.0353
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	206.67	0.0634	-0.0019	0.0368	0.0368
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	213.33	0.0678	-0.0019	0.0381	0.0381
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	225.00	0.0758	-0.0019	0.0411	0.0411
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	235.00	0.0831	-0.0018	0.0432	0.0432
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	245.00	0.0908	-0.0017	0.0445	0.0445
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	250.00	0.0945	-0.0016	0.0449	0.0449
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	80.00	0.0091	0.0006	0.0131	0.0131
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	100.00	0.0147	0.0007	0.0168	0.0168
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	150.00	0.0324	0.0012	0.0261	0.0261
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	160.00	0.0371	0.0013	0.0281	0.0281
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	170.00	0.0422	0.0014	0.0302	0.0302
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	193.33	0.0552	0.0015	0.0342	0.0342
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	200.00	0.0592	0.0016	0.0352	0.0353
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	206.67	0.0634	0.0016	0.0368	0.0368
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	213.33	0.0678	0.0016	0.0381	0.0381
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	225.00	0.0758	0.0017	0.0411	0.0411
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	235.00	0.0831	0.0016	0.0431	0.0432
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	245.00	0.0908	0.0015	0.0446	0.0446
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	250.00	0.0945	0.0014	0.0444	0.0444
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	80.00	0.0089	0.0006	0.0130	0.013
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	100.00	0.014	0.0007	0.0161	0.0161
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	150.00	0.0323	0.0012	0.0260	0.026
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	160.00	0.037	0.0013	0.0277	0.0278
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	170.00	0.042	0.0014	0.0300	0.03
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	193.33	0.0551	0.0015	0.0342	0.0342
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	200.00	0.0592	0.0016	0.0353	0.0353
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	206.67	0.0634	0.0016	0.0367	0.0368
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	213.33	0.0677	0.0016	0.0381	0.0381
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	225.00	0.0757	0.0017	0.0411	0.0411
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	235.00	0.0831	0.0016	0.0432	0.0432
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	245.00	0.0907	0.0015	0.0444	0.0444
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	250.00	0.0945	0.0014	0.0450	0.045
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	80.00	0.0091	-0.0007	0.0131	0.0131
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	100.00	0.0145	-0.0008	0.0166	0.0166
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	150.00	0.0324	-0.0014	0.0260	0.0261
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	160.00	0.0371	-0.0015	0.0280	0.028
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	170.00	0.0421	-0.0016	0.0301	0.0301
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	193.33	0.0552	-0.0018	0.0342	0.0342
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	200.00	0.0592	-0.0018	0.0353	0.0353

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	206.67	0.0634	-0.0019	0.0368	0.0368
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	213.33	0.0678	-0.0019	0.0381	0.0381
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	225.00	0.0758	-0.0019	0.0411	0.0411
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	235.00	0.0831	-0.0018	0.0432	0.0432
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	245.00	0.0908	-0.0017	0.0445	0.0445
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	250.00	0.0945	-0.0017	0.0449	0.0449
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	80.00	0.0091	0.0006	0.0131	0.0131
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	100.00	0.0147	0.0007	0.0168	0.0168
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	150.00	0.0324	0.0012	0.0261	0.0261
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	160.00	0.0371	0.0013	0.0281	0.0281
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	170.00	0.0422	0.0014	0.0302	0.0302
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	193.33	0.0552	0.0015	0.0342	0.0342
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	200.00	0.0592	0.0016	0.0352	0.0353
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	206.67	0.0634	0.0016	0.0368	0.0368
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	213.33	0.0678	0.0016	0.0381	0.0381
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	225.00	0.0758	0.0017	0.0411	0.0411
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	235.00	0.0831	0.0016	0.0431	0.0432
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	245.00	0.0908	0.0015	0.0446	0.0446
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	250.00	0.0945	0.0014	0.0444	0.0444
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	80.00	0.0089	0.0006	0.0130	0.013
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	100.00	0.014	0.0007	0.0161	0.0161
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	150.00	0.0323	0.0012	0.0260	0.026
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	160.00	0.037	0.0013	0.0277	0.0278
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	170.00	0.042	0.0014	0.0300	0.03
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	193.33	0.0551	0.0015	0.0342	0.0342
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	200.00	0.0592	0.0016	0.0353	0.0353
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	206.67	0.0634	0.0016	0.0367	0.0368
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	213.33	0.0677	0.0016	0.0381	0.0381
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	225.00	0.0757	0.0017	0.0411	0.0411
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	235.00	0.0831	0.0016	0.0432	0.0432
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	245.00	0.0907	0.0015	0.0444	0.0444
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	250.00	0.0945	0.0014	0.0450	0.045
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	80.00	0.0091	-0.0007	0.0131	0.0131
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	100.00	0.0145	-0.0008	0.0166	0.0166
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	150.00	0.0324	-0.0014	0.0260	0.0261
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	160.00	0.0371	-0.0015	0.0280	0.028
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	170.00	0.0421	-0.0016	0.0301	0.0301
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	193.33	0.0552	-0.0018	0.0342	0.0342
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	200.00	0.0592	-0.0018	0.0353	0.0353
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	206.67	0.0634	-0.0019	0.0368	0.0368
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	213.33	0.0678	-0.0019	0.0381	0.0381
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	225.00	0.0758	-0.0019	0.0411	0.0411
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	235.00	0.0831	-0.0018	0.0432	0.0432
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	245.00	0.0908	-0.0017	0.0445	0.0445
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	250.00	0.0945	-0.0016	0.0449	0.0449
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	80.00	0.0381	0.0015	0.0516	0.0516
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	100.00	0.0588	0.0015	0.0633	0.0633
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	150.00	0.1257	0.0015	0.0945	0.0945
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	160.00	0.1426	0.0017	0.0990	0.099
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	170.00	0.1604	0.0019	0.1045	0.1045
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	193.33	0.2057	0.0024	0.1175	0.1175
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	200.00	0.2195	0.0025	0.1207	0.1207
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	206.67	0.2339	0.0026	0.1249	0.1249
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	213.33	0.2485	0.0026	0.1276	0.1276
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	225.00	0.2751	0.0022	0.1346	0.1346
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	235.00	0.2987	0.0010	0.1395	0.1395
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	245.00	0.3232	0.0004	0.1420	0.142
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	250.00	0.3353	0.0004	0.1392	0.1392
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	80.00	0.0361	-0.0031	0.0488	0.0488
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	100.00	0.0549	-0.0037	0.0592	0.0592
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	150.00	0.1202	-0.0061	0.0892	0.0892
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	160.00	0.1364	-0.0063	0.0954	0.0955
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	170.00	0.1535	-0.0062	0.1004	0.1005
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	193.33	0.1971	-0.0063	0.1129	0.1129
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	200.00	0.2104	-0.0062	0.1159	0.1159
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	206.67	0.2242	-0.0061	0.1201	0.1201
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	213.33	0.2383	-0.0060	0.1228	0.1228
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	225.00	0.264	-0.0050	0.1290	0.129

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	235.00	0.2867	-0.0032	0.1339	0.1339
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	245.00	0.3103	-0.0020	0.1368	0.1369
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	250.00	0.3219	-0.0020	0.1354	0.1354
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	80.00	0.0367	-0.0036	0.0500	0.0501
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	100.00	0.0562	-0.0043	0.0606	0.0606
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	150.00	0.1216	-0.0072	0.0895	0.0896
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	160.00	0.138	-0.0074	0.0965	0.0967
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	170.00	0.1553	-0.0073	0.1013	0.1014
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	193.33	0.1993	-0.0073	0.1140	0.114
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	200.00	0.2127	-0.0073	0.1170	0.1171
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	206.67	0.2266	-0.0072	0.1212	0.1214
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	213.33	0.2409	-0.0070	0.1239	0.1239
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	225.00	0.2668	-0.0059	0.1306	0.1308
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	235.00	0.2897	-0.0038	0.1357	0.1358
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	245.00	0.3135	-0.0025	0.1389	0.1389
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	250.00	0.3252	-0.0024	0.1353	0.1353
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	80.00	0.0381	-0.0032	0.0515	0.0516
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	100.00	0.0588	-0.0039	0.0632	0.0633
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	150.00	0.1257	-0.0064	0.0929	0.093
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	160.00	0.1426	-0.0066	0.0993	0.0994
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	170.00	0.1604	-0.0066	0.1043	0.1044
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	193.33	0.2057	-0.0066	0.1175	0.1175
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	200.00	0.2194	-0.0066	0.1205	0.1206
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	206.67	0.2339	-0.0065	0.1248	0.1248
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	213.33	0.2485	-0.0063	0.1275	0.1275
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	225.00	0.2751	-0.0053	0.1345	0.1346
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	235.00	0.2987	-0.0035	0.1394	0.1394
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	245.00	0.3232	-0.0023	0.1420	0.142
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	250.00	0.3353	-0.0023	0.1392	0.1392
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	80.00	0.0361	0.0014	0.0488	0.0488
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	100.00	0.0549	0.0013	0.0592	0.0592
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	150.00	0.1202	0.0013	0.0907	0.0907
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	160.00	0.1364	0.0015	0.0951	0.0951
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	170.00	0.1535	0.0017	0.1006	0.1006
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	193.33	0.1971	0.0022	0.1129	0.1129
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	200.00	0.2105	0.0023	0.1159	0.1159
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	206.67	0.2242	0.0024	0.1202	0.1202
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	213.33	0.2384	0.0023	0.1228	0.1228
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	225.00	0.264	0.0019	0.1290	0.129
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	235.00	0.2867	0.0008	0.1340	0.134
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	245.00	0.3103	0.0001	0.1368	0.1368
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	250.00	0.3219	0.0002	0.1354	0.1354
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	80.00	0.0367	-0.0021	0.0501	0.0501
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	100.00	0.0562	0.0022	0.0606	0.0606
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	150.00	0.1216	0.0037	0.0911	0.0911
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	160.00	0.138	0.0038	0.0963	0.0963
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	170.00	0.1553	0.0037	0.1014	0.1015
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	193.33	0.1993	0.0037	0.1141	0.1141
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	200.00	0.2127	-0.0038	0.1171	0.1171
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	206.67	0.2266	-0.0039	0.1214	0.1215
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	213.33	0.2409	-0.0038	0.1239	0.124
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	225.00	0.2668	-0.0032	0.1308	0.1308
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	235.00	0.2897	0.0019	0.1359	0.1359
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	245.00	0.3136	0.0013	0.1389	0.1389
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	250.00	0.3252	0.0013	0.1353	0.1353
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	80.00	0.0381	0.0032	0.0515	0.0516
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	100.00	0.0588	0.0039	0.0632	0.0633
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	150.00	0.1257	0.0064	0.0929	0.093
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	160.00	0.1426	0.0066	0.0993	0.0994
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	170.00	0.1604	0.0066	0.1043	0.1044
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	193.33	0.2057	0.0066	0.1175	0.1175
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	200.00	0.2194	0.0066	0.1205	0.1206
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	206.67	0.2339	0.0065	0.1248	0.1248
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	213.33	0.2485	0.0063	0.1275	0.1275
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	225.00	0.2751	0.0053	0.1345	0.1346
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	235.00	0.2987	0.0035	0.1394	0.1394
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	245.00	0.3232	0.0023	0.1420	0.142
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	250.00	0.3353	0.0023	0.1392	0.1392

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	80.00	0.0361	0.0031	0.0488	0.0488
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	100.00	0.0549	0.0037	0.0592	0.0592
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	150.00	0.1202	0.0061	0.0892	0.0892
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	160.00	0.1364	0.0063	0.0954	0.0955
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	170.00	0.1535	0.0062	0.1004	0.1005
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	193.33	0.1971	0.0063	0.1129	0.1129
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	200.00	0.2104	0.0062	0.1159	0.1159
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	206.67	0.2242	0.0061	0.1201	0.1201
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	213.33	0.2383	0.0060	0.1228	0.1228
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	225.00	0.264	0.0050	0.1290	0.129
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	235.00	0.2867	0.0032	0.1339	0.1339
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	245.00	0.3103	0.0020	0.1368	0.1369
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	250.00	0.3219	0.0020	0.1354	0.1354
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	80.00	0.0367	-0.0021	0.0501	0.0501
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	100.00	0.0562	-0.0023	0.0606	0.0606
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	150.00	0.1216	0.0035	0.0912	0.0912
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	160.00	0.138	0.0036	0.0962	0.0963
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	170.00	0.1553	0.0036	0.1015	0.1015
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	193.33	0.1993	-0.0038	0.1140	0.114
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	200.00	0.2127	-0.0039	0.1171	0.1171
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	206.67	0.2266	-0.0040	0.1214	0.1215
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	213.33	0.2409	-0.0039	0.1240	0.124
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	225.00	0.2668	-0.0032	0.1308	0.1308
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	235.00	0.2897	0.0018	0.1359	0.1359
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	245.00	0.3136	0.0012	0.1389	0.1389
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	250.00	0.3252	0.0012	0.1353	0.1353

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Mount Analysis Report

ATC Site Name	:	**NORTH STONINGTON CT, CT**
ATC Site Number	:	**6260**
Engineering Number	:	**13934708_C8_01**
Mount Elevation	:	**224 ft**
Carrier	:	**T-Mobile**
Carrier Site Name	:	**North Stonington-3_1**
Carrier Site Number	:	**CT11266A**
Site Location	:	**118C Wintechog Hill Rd., off of Rt. 2** **North Stonington, CT 06359-1228** **41.45985788 , -71.9273517**
County	:	**New London**
Date	:	**March 14, 2022**
Max Usage	:	**52%**
Result	:	**Pass**

Prepared By:
Garrett Williams
Structural Engineer I

Garrett Williams

Reviewed By:

Authorized by "EOR"
14 Mar 2022 05:29:50 cosign

COA: PEC.0001553

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Table of Contents

Introduction

The purpose of this report is to summarize results of the mount analysis performed for T-Mobile at 224 ft.

Supporting Documents

Specifications Sheet	Perfect Vision SFA12-B, dated September 21, 2017
Radio Frequency Data Sheet	RFDS ID #CT11266A, dated January 18, 2022
Reference Photos	Site photos from 2021

Analysis

This mount was analyzed using American Tower Corporation's Mount Analysis Program and RISA-3D

Basic Wind Speed:	127 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1.00'' radial ice concurrent
Codes:	ANSI/TIA-222-H
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 2
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	Ss = 0.188, S1 = 0.053
Site Class:	D - Stiff Soil
Live Loads:	Lm = 500 lbs, Lv = 250 lbs

Conclusion

Based on the analysis results, the antenna mount meets the requirements per the applicable codes listed above. The mount 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.

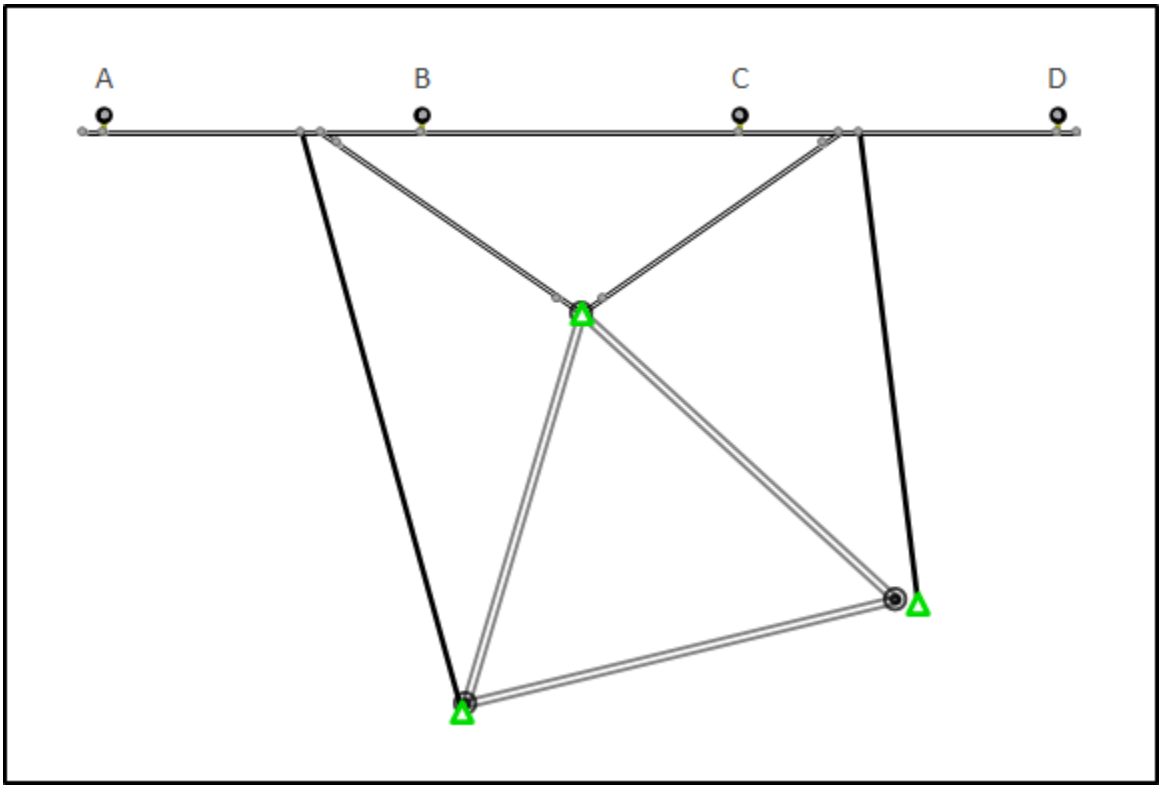
Application Loading

Mount Centerline (ft)	Equipment Centerline (ft)	Qty	Equipment Manufacturer & Model
224.0	225.0	3	Ericsson AIR 6419 B41
		3	RFS APXVAARR24_43-U-NA20
		3	Commscope VV-65A-R1B
		3	Ericsson Radio 4449 B71 B85A
		3	Ericsson 4460 BAND 2/25

Structure Usages

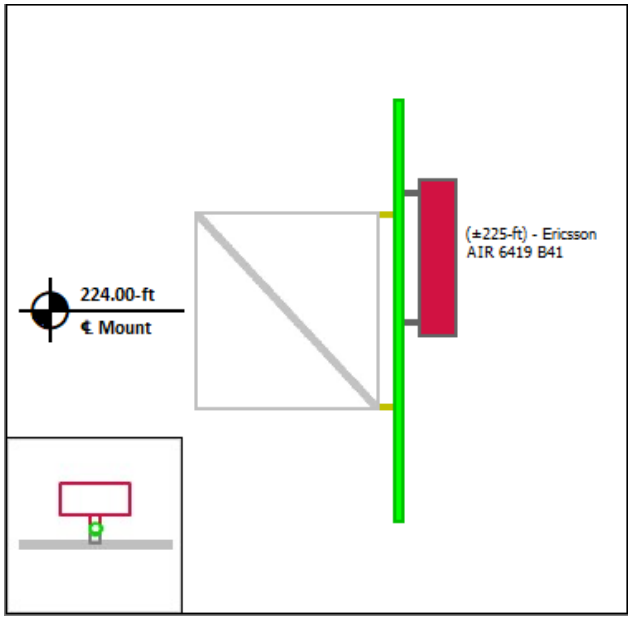
Structural Component	Controlling Usage	Pass/Fail
Horizontals	52%	Pass
Verticals	35%	Pass
Diagonals	18%	Pass
Mount Pipes	51%	Pass

Mount Layout

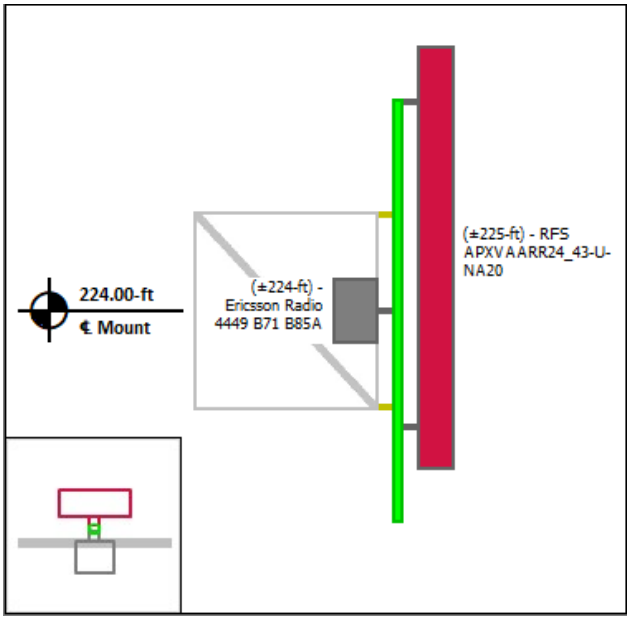


Equipment Layout

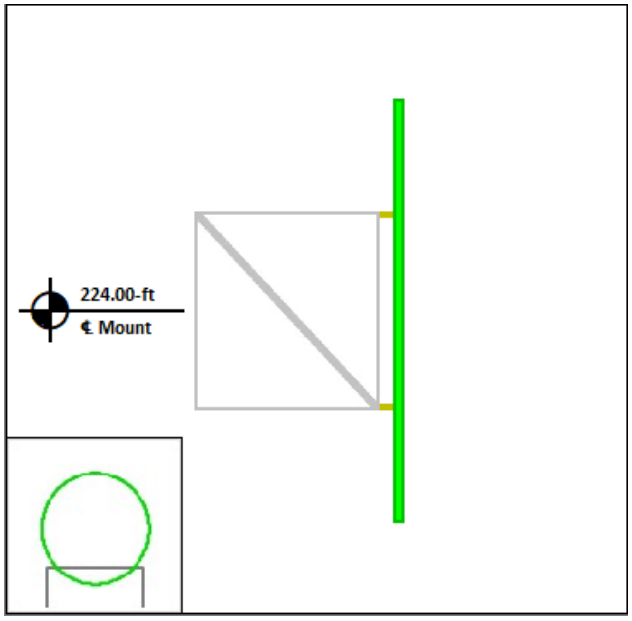
Mount Pipe A



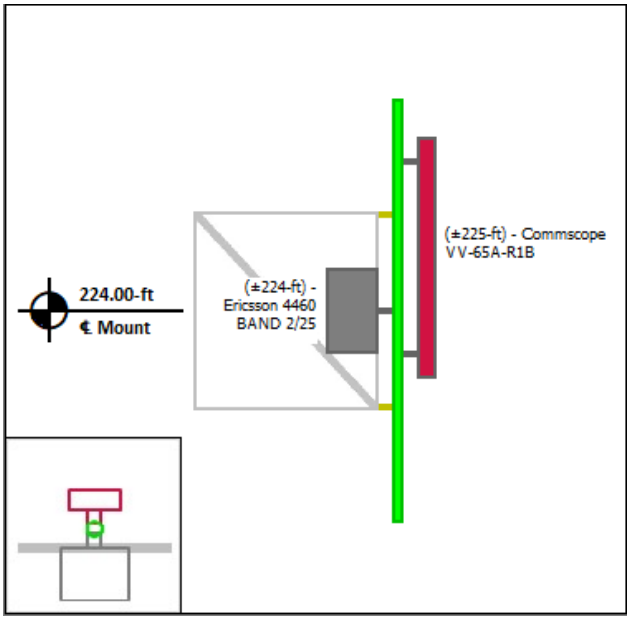
Mount Pipe B



Mount Pipe C



Mount Pipe D



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 equipment, 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.

American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

All connections are to be verified for condition and tightness by the installation contractor preceding any changes to the appurtenance mounting system and/or equipment attached to it.

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.

Installation of all equipment and steel should be confirmed not to cause tower conflicts nor impede the tower climbing pegs.

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.

AMERICAN TOWER®
CORPORATION

Site Number:	*6260*
Project Number:	*13934708_C8_01*
Carrier:	*T-Mobile*
Mount Elevation:	*224 ft*
Date:	3/14/2022

Mount Analysis Force Calculations

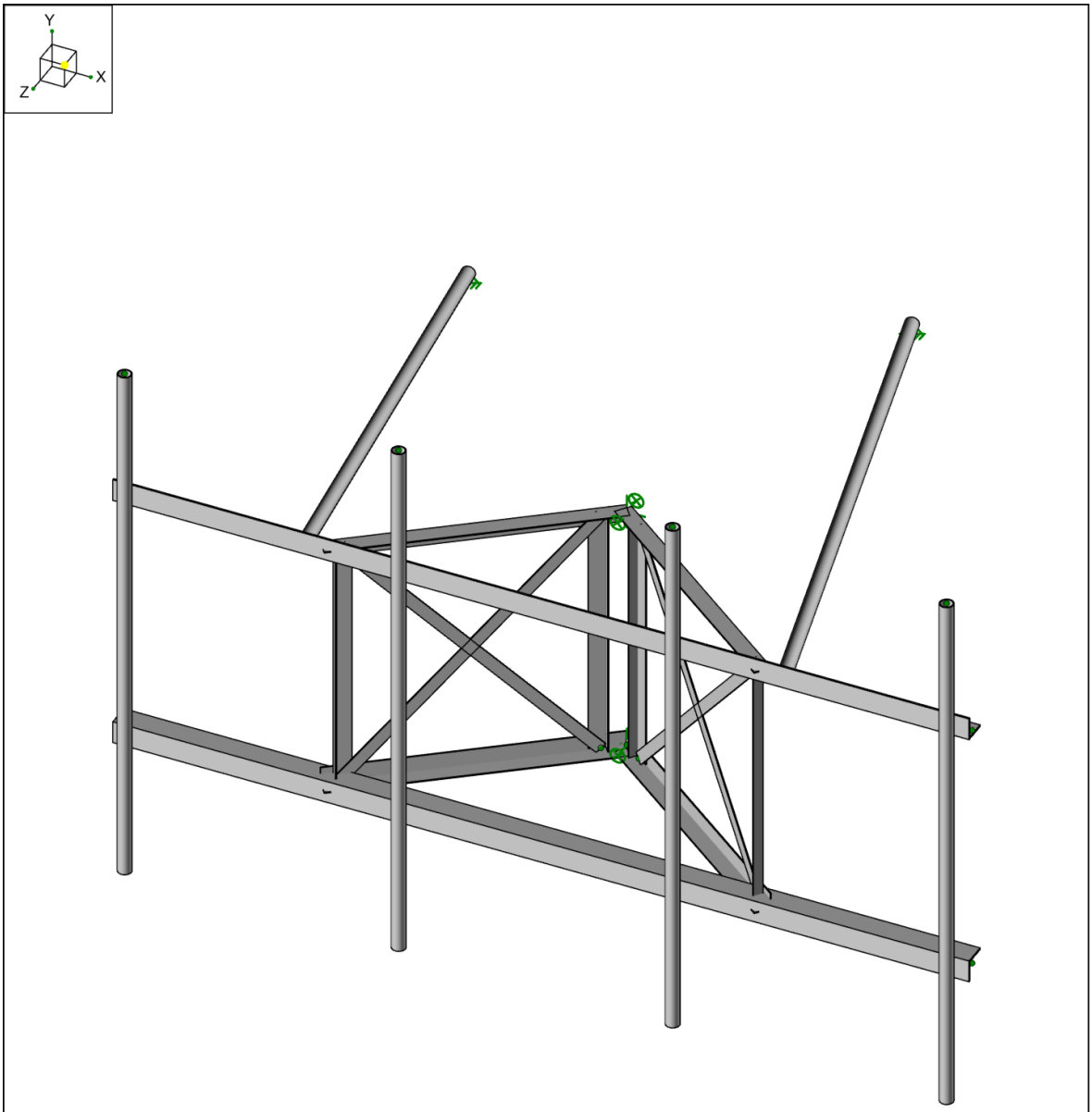
Wind & Ice Load Calculations			
Velocity Pressure Coefficient	K_z	1.24	
Topographic Factor	K_{zt}	1.00	
Rooftop Wind Speed-up Factor	K_s	1.00	
Shielding Factor	K_a	0.90	
Ground Elevation Factor	K_e	0.98	
Wind Direction Probability Factor	K_d	0.95	
Basic Wind Speed	V	127	mph
Velocity Pressure	q_z	48.0	psf
Height Escalation Factor	K_{iz}	1.21	
Thickness of Radial Glaze Ice	T_{iz}	1.21	in

Seismic Load Calculations			
Short Period DSRAP	S_{DS}	0.201	
1 Second DSRAP	S_{D1}	0.085	
Importance Factor	I	1.0	
Response Modification Coefficient	R	2.0	
Seismic Response Coefficient	C_S	0.100	
Amplification Factor	A	1.0	
Total Weight	W	1041.1	lbs
Total Shear Force	V_S	104.4	lbs
Horizontal Seismic Load	Eh	104.4	lbs
Vertical Seismic Load	Ev	41.8	lbs

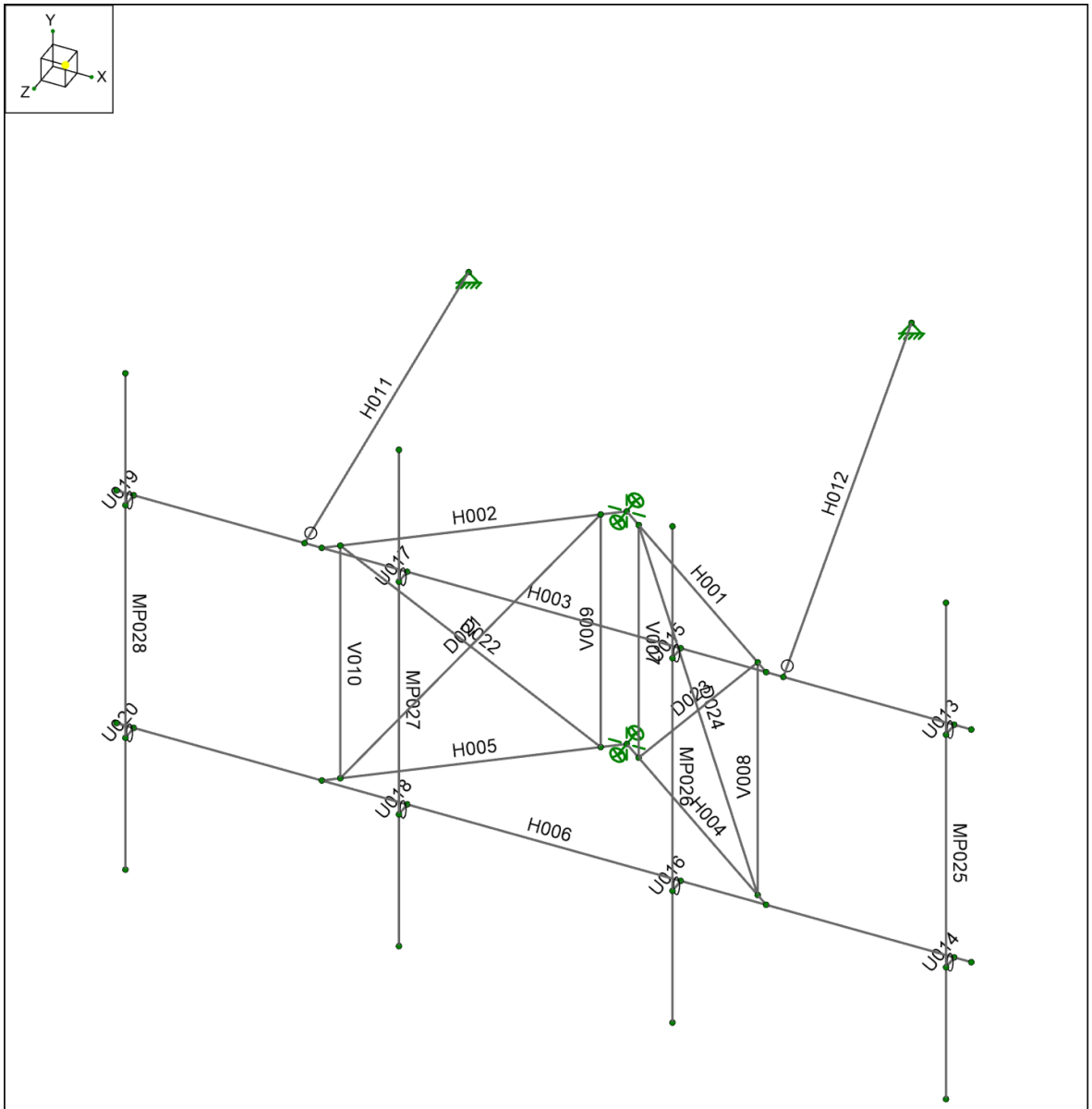
Antenna Calculations (Elevations per Application/RFDS)*

Equipment	Height	Width	Depth	Weight	EPA_N	EPA_T	EPA_{Ni}	EPA_{Ti}
Model #	in	in	in	lbs	sqft	sqft	sqft	sqft
Ericsson AIR 6419 B41	36.3	20.9	9.0	83.3	6.32	1.82	7.53	2.46
RFS APXVAARR24_43-U-NA20	95.9	24.0	8.7	127.9	20.24	3.48	22.85	4.56
Commscope VV-65A-R1B	54.7	12.0	4.6	24.7	5.89	1.30	7.39	2.08
Ericsson Radio 4449 B71 B85A	15.0	13.2	10.5	75.0	1.65	1.31	2.27	1.88
Ericsson 4460 BAND 2/25	19.6	15.7	12.1	109.0	2.56	1.98	3.33	2.67

**** Equipment with EPA values N/A were not considered in the mount analysis***



American Tower Corp.	6260, NORTH STONINGTON CT	SK-1
Garrett.Williams		Mar 14, 2022
13934708_C8_01		R3D. T-MOBILE @ 6260, NORT…



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Garrett.Williams		Mar 14, 2022
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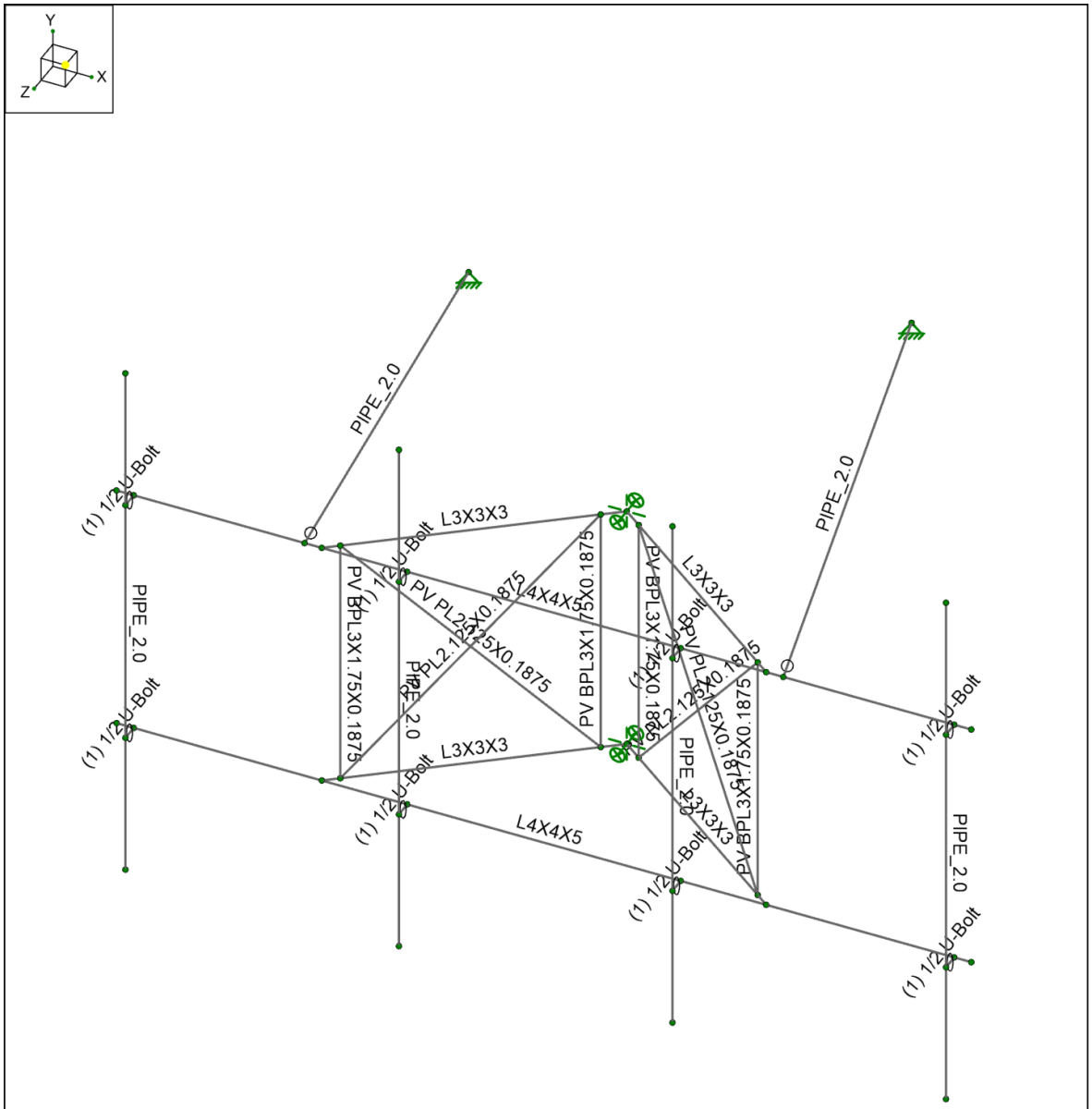
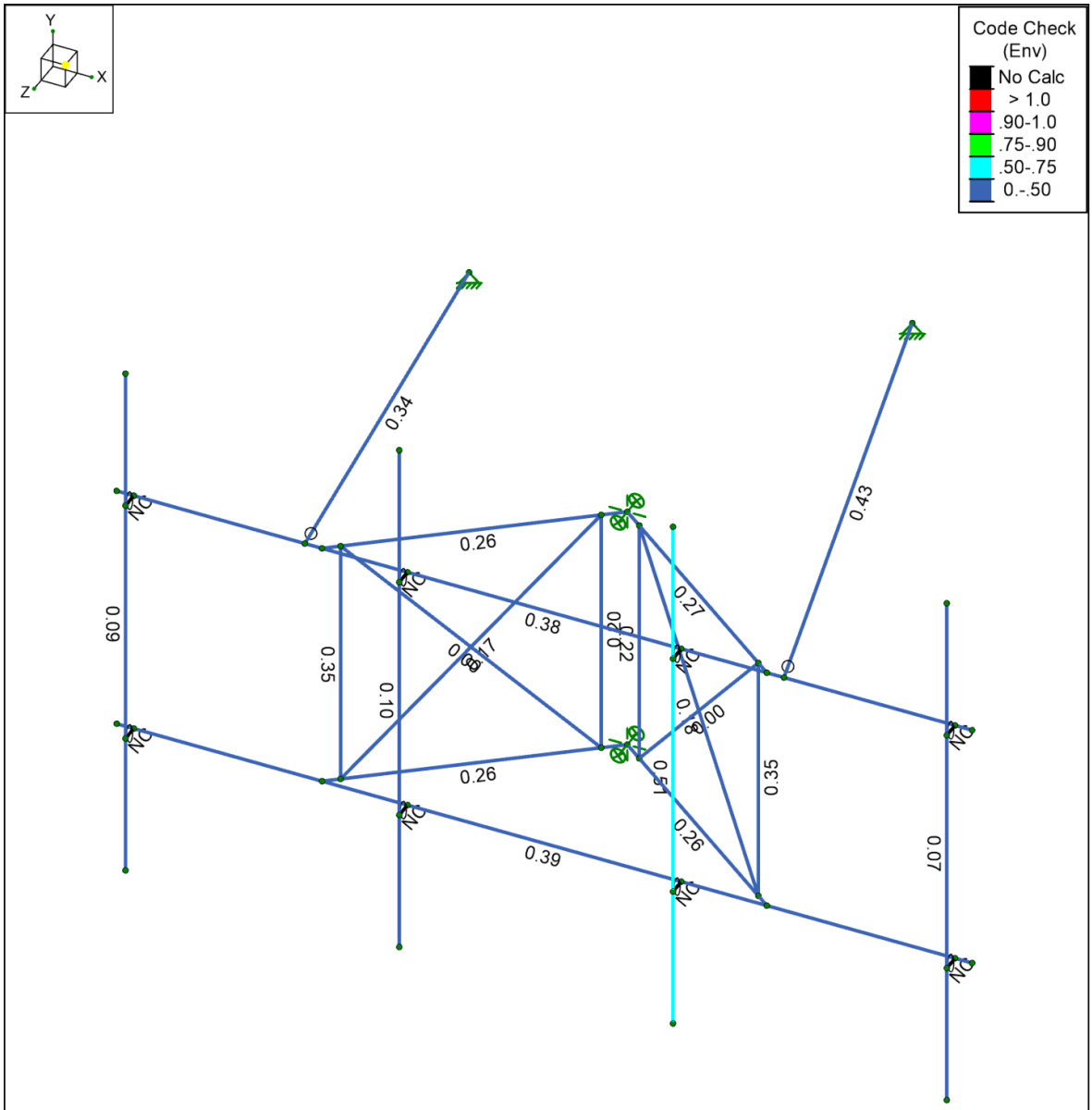
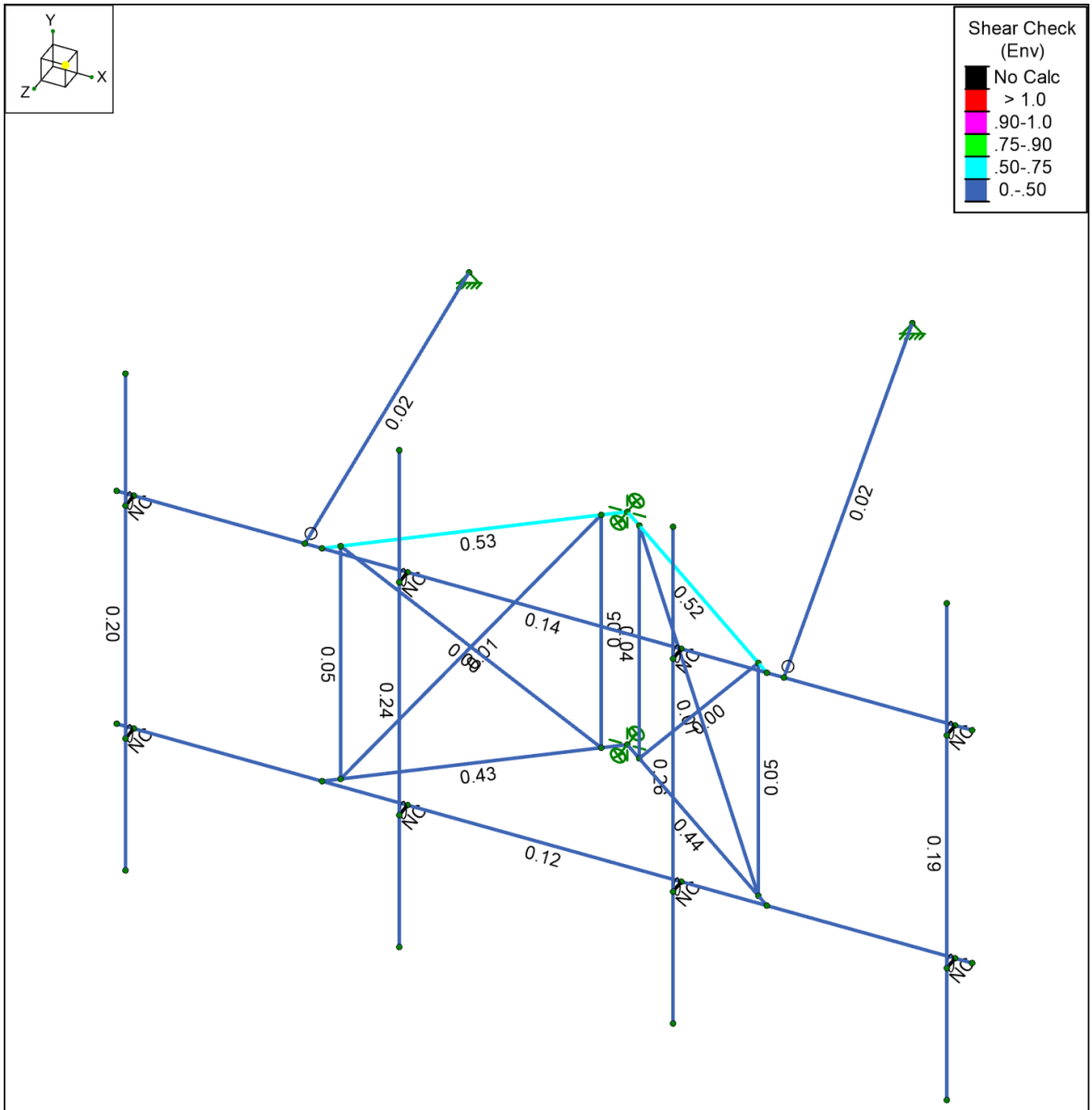


American Tower Corp.	6260, NORTH STONINGTON CT	SK-3
Garrett.Williams		Mar 14, 2022
13934708_C8_01		R3D. T-MOBILE @ 6260, NORT…



Member Code Checks Displayed (Enveloped)

American Tower Corp.	6260, NORTH STONINGTON CT	SK-4
Garrett.Williams		Mar 14, 2022
13934708_C8_01		R3D. T-MOBILE @ 6260, NORT…



Member Shear Checks Displayed (Enveloped)

American Tower Corp.	6260, NORTH STONINGTON CT	SK-5
Garrett.Williams		Mar 14, 2022
13934708_C8_01		R3D. T-MOBILE @ 6260, NORT…

Basic Load Cases

	BLC Description	Category	Y Gravity	Nodal	Point	Distributed
1	D	DL	-1		8	
2	Di	IL			8	20
3	W 0	WL			8	30
4	W 30	WL			16	58
5	W 60	WL			16	58
6	W 90	WL			8	29
7	W 120	WL			16	58
8	W 150	WL			16	58
9	W 180	WL			8	30
10	W 210	WL			16	58
11	W 240	WL			16	58
12	W 270	WL			8	29
13	W 300	WL			16	58
14	W 330	WL			16	58
15	Wi 0	WL			8	30
16	Wi 30	WL			16	58
17	Wi 60	WL			16	58
18	Wi 90	WL			8	29
19	Wi 120	WL			16	58
20	Wi 150	WL			16	58
21	Wi 180	WL			8	30
22	Wi 210	WL			16	58
23	Wi 240	WL			16	58
24	Wi 270	WL			8	29
25	Wi 300	WL			16	58
26	Wi 330	WL			16	58
27	Ws 0	WL			8	30
28	Ws 30	WL			16	58
29	Ws 60	WL			16	58
30	Ws 90	WL			8	29
31	Ws 120	WL			16	58
32	Ws 150	WL			16	58
33	Ws 180	WL			8	30
34	Ws 210	WL			16	58
35	Ws 240	WL			16	58
36	Ws 270	WL			8	29
37	Ws 300	WL			16	58
38	Ws 330	WL			16	58
39	Ev -Y	ELY				20
40	Eh -Z	ELZ				20
41	Eh -X	ELX				20
42	Lv (1)	LL			1	
43	Lv (2)	LL			1	
44	Lv (3)	LL			1	
45	Lv (4)	LL			1	
46	Lv (5)	LL			1	
47	Lv (6)	LL			1	
48	Lv (7)	LL			1	
49	Lv (8)	LL			1	
50	Lv (9)	LL		1		
51	Lv (10)	LL		1		
52	Lv (11)	LL		1		
53	Lv (12)	LL		1		
54	Lm (1)	LL		1		
55	Lm (2)	LL		1		

Basic Load Cases (Continued)

	BLC Description	Category	Y Gravity	Nodal	Point	Distributed
56	Lm (3)	LL		1		
57	Lm (4)	LL		1		

Node Boundary Conditions

	Node Label	X [lb/in]	Y [lb/in]	Z [lb/in]	Z Rot [k-in/rad]
1	N001	Reaction	Reaction	Reaction	Reaction
2	N006	Reaction	Reaction	Reaction	Reaction
3	N019	Reaction	Reaction	Reaction	
4	N022	Reaction	Reaction	Reaction	

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	H001	N002	N001	180	L3X3X3	Beam	None	A36	Typical
2	H002	N003	N001	90	L3X3X3	Beam	None	A36	Typical
3	H003	N004	N005		L4X4X5	Beam	None	A36	Typical
4	H004	N007	N006	270	L3X3X3	Beam	None	A36	Typical
5	H005	N008	N006		L3X3X3	Beam	None	A36	Typical
6	H006	N009	N010	90	L4X4X5	Beam	None	A36	Typical
7	V007	N014	N013	218	PV BPL3X1.75X0.1875	Column	None	A36	Typical
8	V008	N012	N011	322	PV BPL3X1.75X0.1875	Column	None	A36	Typical
9	V009	N018	N017	38	PV BPL3X1.75X0.1875	Column	None	A36	Typical
10	V010	N015	N016	142	PV BPL3X1.75X0.1875	Column	None	A36	Typical
11	H011	N020	N019		PIPE_2.0	Beam	None	A53 Gr. B	Typical
12	H012	N021	N022		PIPE_2.0	Beam	None	A53 Gr. B	Typical
13	U013	N023	N027		(1) 1/2 U-Bolt	Beam	None	A36	Typical
14	U014	N028	N029		(1) 1/2 U-Bolt	Beam	None	A36	Typical
15	U015	N024	N030		(1) 1/2 U-Bolt	Beam	None	A36	Typical
16	U016	N031	N032		(1) 1/2 U-Bolt	Beam	None	A36	Typical
17	U017	N025	N033		(1) 1/2 U-Bolt	Beam	None	A36	Typical
18	U018	N034	N035		(1) 1/2 U-Bolt	Beam	None	A36	Typical
19	U019	N026	N036		(1) 1/2 U-Bolt	Beam	None	A36	Typical
20	U020	N037	N038		(1) 1/2 U-Bolt	Beam	None	A36	Typical
21	D021	N017	N016		PV PL2.125X0.1875	Column	None	A36	Typical
22	D022	N018	N015		PV PL2.125X0.1875	Column	None	A36	Typical
23	D023	N011	N013		PV PL2.125X0.1875	Column	None	A36	Typical
24	D024	N012	N014		PV PL2.125X0.1875	Column	None	A36	Typical
25	MP025	N039	N040		PIPE_2.0	Column	None	A53 Gr. B	Typical
26	MP026	N041	N042		PIPE_2.0	Column	None	A53 Gr. B	Typical
27	MP027	N043	N044		PIPE_2.0	Column	None	A53 Gr. B	Typical
28	MP028	N045	N046		PIPE_2.0	Column	None	A53 Gr. B	Typical

Member Advanced Data

	Label	I Release	T/C Only	Physical	Deflection Ratio Options	Activation	Seismic DR
1	H001			Yes	N/A		None
2	H002			Yes	N/A		None
3	H003			Yes	N/A		None
4	H004			Yes	N/A		None
5	H005			Yes	N/A		None
6	H006			Yes	N/A		None
7	V007			Yes	** NA **		None
8	V008			Yes	** NA **		None
9	V009			Yes	** NA **		None

Member Advanced Data (Continued)

	Label	I Release	T/C Only	Physical	Deflection Ratio Options	Activation	Seismic DR
10	V010			Yes	** NA **		None
11	H011	BenPIN		Yes	N/A		None
12	H012	BenPIN		Yes	N/A		None
13	U013	OOOXOO		Yes	Default	Exclude	None
14	U014	OOOXOO		Yes	Default	Exclude	None
15	U015	OOOXOO		Yes	Default	Exclude	None
16	U016	OOOXOO		Yes	Default	Exclude	None
17	U017	OOOXOO		Yes	Default	Exclude	None
18	U018	OOOXOO		Yes	Default	Exclude	None
19	U019	OOOXOO		Yes	Default	Exclude	None
20	U020	OOOXOO		Yes	Default	Exclude	None
21	D021		Tension Only	Yes	** NA **		None
22	D022		Tension Only	Yes	** NA **		None
23	D023		Tension Only	Yes	** NA **		None
24	D024		Tension Only	Yes	** NA **		None
25	MP025			Yes	** NA **		None
26	MP026			Yes	** NA **		None
27	MP027			Yes	** NA **		None
28	MP028			Yes	** NA **		None

Hot Rolled Steel Design Parameters

	Label	Shape	Length [in]	Lb y-y [in]	Lb z-z [in]	Lcomp top [in]	L-Torque [in]	K y-y	K z-z	Function
1	H001	L3X3X3	49.204			Lbyy		1	1	Lateral
2	H002	L3X3X3	49.204			Lbyy		1	1	Lateral
3	H003	L4X4X5	150			Lbyy		1	1	Lateral
4	H004	L3X3X3	49.204			Lbyy		1	1	Lateral
5	H005	L3X3X3	49.204			Lbyy		1	1	Lateral
6	H006	L4X4X5	150			Lbyy		1	1	Lateral
7	V007	PV BPL3X1.75X0.1875	45			Lbyy		0.65	0.65	Lateral
8	V008	PV BPL3X1.75X0.1875	45			Lbyy		0.65	0.65	Lateral
9	V009	PV BPL3X1.75X0.1875	45			Lbyy		0.65	0.65	Lateral
10	V010	PV BPL3X1.75X0.1875	45			Lbyy		0.65	0.65	Lateral
11	H011	PIPE_2.0	78.518			Lbyy		1	1	Lateral
12	H012	PIPE_2.0	98.955			Lbyy		1	1	Lateral
13	U013	(1) 1/2 U-Bolt	3			Lbyy		0.5	0.5	Lateral
14	U014	(1) 1/2 U-Bolt	3			Lbyy		0.5	0.5	Lateral
15	U015	(1) 1/2 U-Bolt	3			Lbyy		0.5	0.5	Lateral
16	U016	(1) 1/2 U-Bolt	3			Lbyy		0.5	0.5	Lateral
17	U017	(1) 1/2 U-Bolt	3			Lbyy		0.5	0.5	Lateral
18	U018	(1) 1/2 U-Bolt	3			Lbyy		0.5	0.5	Lateral
19	U019	(1) 1/2 U-Bolt	3			Lbyy		0.5	0.5	Lateral
20	U020	(1) 1/2 U-Bolt	3			Lbyy		0.5	0.5	Lateral
21	D021	PV PL2.125X0.1875	61.555			Lbyy		0.65	0.65	Lateral
22	D022	PV PL2.125X0.1875	61.555			Lbyy		0.65	0.65	Lateral
23	D023	PV PL2.125X0.1875	61.555			Lbyy		0.65	0.65	Lateral
24	D024	PV PL2.125X0.1875	61.555			Lbyy		0.65	0.65	Lateral
25	MP025	PIPE_2.0	96	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
26	MP026	PIPE_2.0	96	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
27	MP027	PIPE_2.0	96	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral
28	MP028	PIPE_2.0	96	Segment	Segment	Lbyy	Segment	2.1	2.1	Lateral

Hot Rolled Steel Properties

	Label	E [psi]	G [psi]	Nu	Therm. Coeff. [1e⁵°F⁻¹]	Density [lb/ft³]	Yield [psi]	Ry	Fu [psi]	Rt
1	A36	2.9e+07	1.115e+07	0.3	0.65	490	36000	1.5	58000	1.2
2	A53 Gr. B	2.9e+07	1.115e+07	0.3	0.65	490	35000	1.6	60000	1.2

Envelope Node Reactions

	Node Label		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N001	max	1643.4	6	1434.465	32	408.65	14	0	121	0	121	206.613	78
2		min	-1622.856	24	277.057	14	-1244.703	8	0	1	0	1	-189.698	120
3	N006	max	1202.789	78	1105.728	26	2028.555	2	0	121	0	121	106.261	65
4		min	-1136.927	120	167.701	20	-791.214	20	0	1	0	1	-96.817	66
5	N019	max	132.328	16	201.156	68	959.222	16	0	121	0	121	0	121
6		min	-152.118	10	10.062	15	-1130.262	10	0	1	0	1	0	1
7	N022	max	311.078	25	204.705	69	1328.195	25	0	121	0	121	0	121
8		min	-366.352	7	12.672	25	-1550.179	7	0	1	0	1	0	1
9	Totals:	max	2319.236	18	2550.02	34	3413.309	14						
10		min	-2319.236	24	829.285	15	-3413.309	8						

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

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
1	H001	L3X3X3	0.273	2.563	85	0.524	2.563	y	12	23632.878	35316	1320.097	2664.955	1.5	H2-1
2	H002	L3X3X3	0.263	2.563	112	0.525	2.563	z	4	23632.878	35316	1320.097	2664.955	1.5	H2-1
3	H003	L4X4X5	0.384	114.062	121	0.145	115.625	z	4	14698.419	77760	3776.855	6630.98	1.474	H2-1
4	H004	L3X3X3	0.259	2.563	82	0.437	2.563	z	10	23632.878	35316	1320.097	2664.955	1.5	H2-1
5	H005	L3X3X3	0.26	2.563	112	0.432	2.563	y	6	23632.878	35316	1320.097	2664.955	1.5	H2-1
6	H006	L4X4X5	0.394	114.062	117	0.119	114.062	z	6	14698.419	77760	3776.855	6667.424	1.5	H2-1
7	V007	PV BPL3X1.75X0.1875	0.216	0	32	0.045	45	y	4	19894.332	27717.188	493.139	1478.77	1.5	H2-1
8	V008	PV BPL3X1.75X0.1875	0.349	0	84	0.045	45	z	12	19894.332	27717.188	493.139	1478.77	1.5	H2-1
9	V009	PV BPL3X1.75X0.1875	0.203	45	34	0.045	0	y	12	19894.332	27717.188	493.139	1478.77	1.5	H2-1
10	V010	PV BPL3X1.75X0.1875	0.351	45	112	0.045	0	z	4	19894.332	27717.188	493.139	1478.77	1.5	H2-1
11	H011	PIPE_2.0	0.341	39.259	68	0.021	78.518		68	19230.075	32130	1871.625	1871.625	1.309	H1-1b
12	H012	PIPE_2.0	0.434	49.477	69	0.021	98.955		69	14217.613	32130	1871.625	1871.625	1.307	H1-1b
13	D021	PV PL2.125X0.1875	0.171	0	117	0.014	0	y	4	164.729	12909.375	50.427	370.13	2.362	H1-1b*
14	D022	PV PL2.125X0.1875	0	61.555	121	0	61.555	y	121	164.729	12909.375	50.427	156.734	1	H1-1a
15	D023	PV PL2.125X0.1875	0	61.555	121	0	61.555	y	121	164.729	12909.375	50.427	156.734	1	H1-1a
16	D024	PV PL2.125X0.1875	0.176	61.555	79	0.013	61.555	y	12	164.729	12909.375	50.427	370.384	2.363	H1-1b*
17	MP025	PIPE_2.0	0.073	50	8	0.19	70		10	15275.24	32130	1871.625	1871.625	1.543	H1-1b
18	MP026	PIPE_2.0	0.511	25	8	0.26	26		12	25305.601	32130	1871.625	1871.625	1.264	H1-1b
19	MP027	PIPE_2.0	0.102	70	12	0.244	26		4	15275.24	32130	1871.625	1871.625	1.405	H3-6
20	MP028	PIPE_2.0	0.092	57	9	0.199	70		6	15275.24	32130	1871.625	1871.625	1.489	H1-1b

RAN Template:	A&L Template:
67D5D998E Outdoor	67D5998E_1xAIR+1OP+1QP

CT11266A_Anchor_3

Print Name: Preliminary (RFDS_For_Scoping)
PORs: Anchor_Phase 3

Section 1 - Site Information

Site ID: CT11266A
Status: Final
Version: 3
Project Type: Anchor
Approved: 1/18/2022 2:54:13 PM
Approved By: Pratik.Patil30@T-Mobile.com
Last Modified: 1/18/2022 2:54:13 PM
Last Modified By: Pratik.Patil30@T-Mobile.com

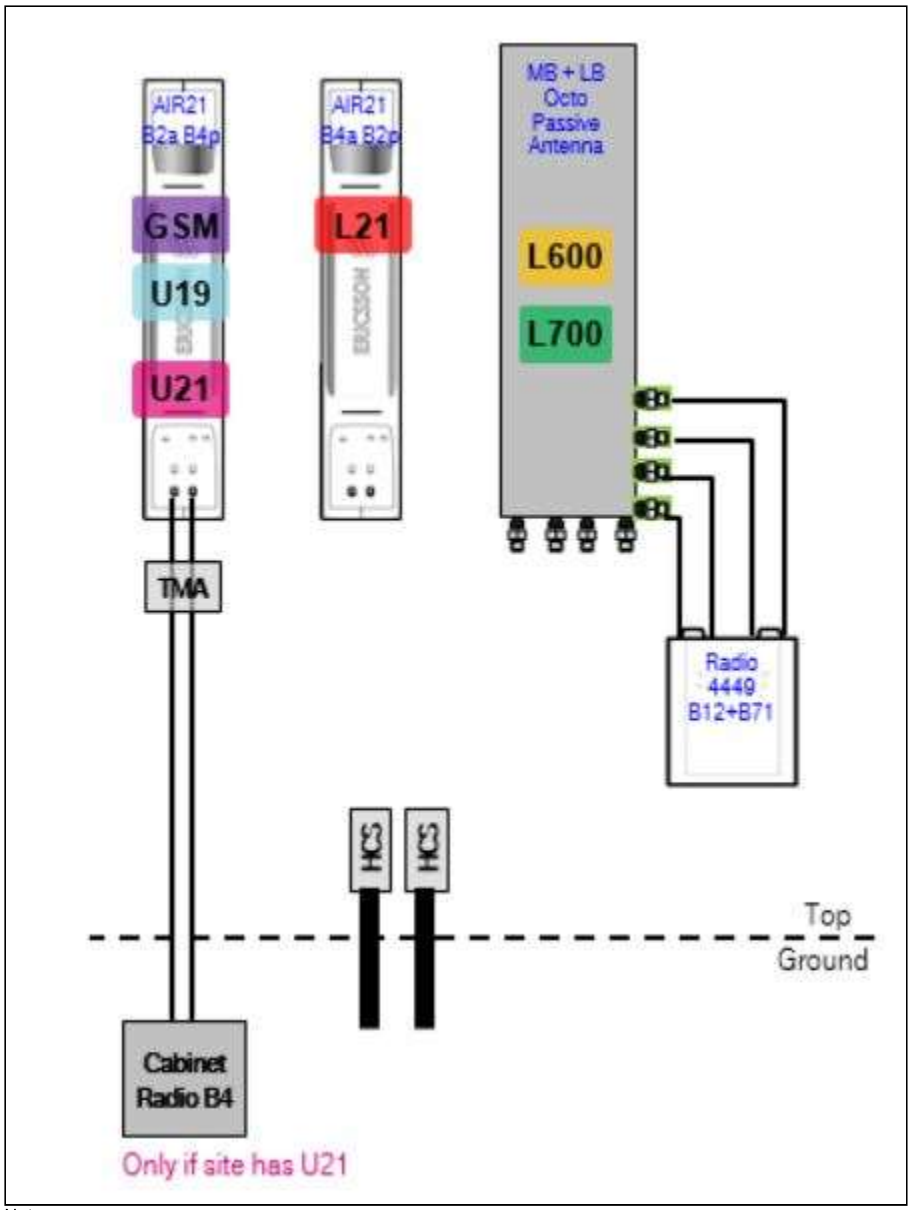
Site Name: North Stonington-3_1
Site Class: Self Support Tower
Site Type: Structure Non Building
Plan Year: 2022
Market: CONNECTICUT CT
Vendor: Ericsson
Landlord: <undefined>

Latitude: 41.45984388
Longitude: -71.92733500
Address: 118 Wintechog Hill Road
City, State: North Stonington, CT
Region: NORTHEAST

RAN Template: 67D5D998E Outdoor		AL Template: 67D5998E_1xAIR+1OP+1QP		
Sector Count: 3	**Antenna Count:** 9	**Coax Line Count:** 0	**TMA Count:** 0	**RRU Count:** 6

Section 2 - Existing Template Images

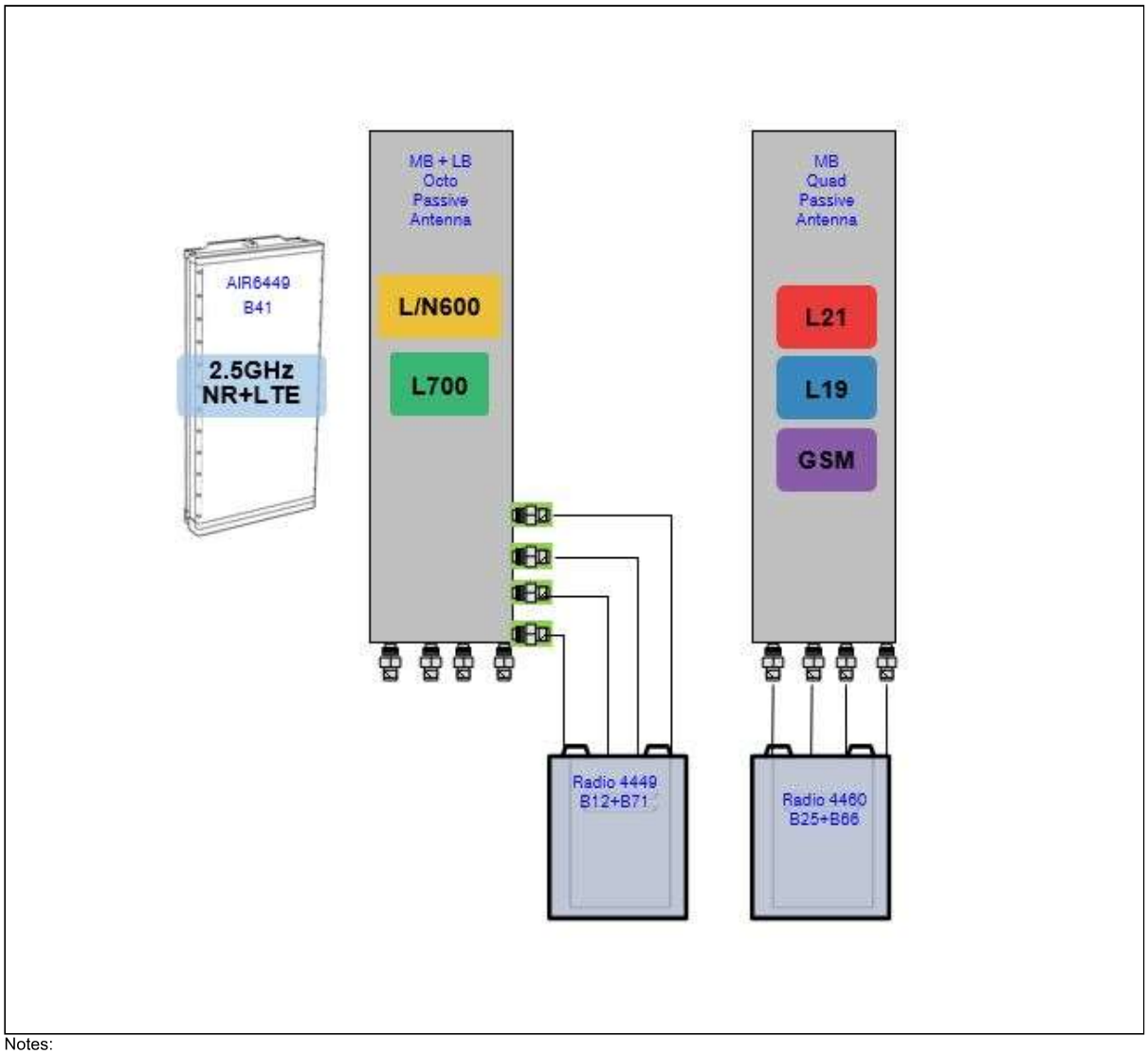
67D02C.JPG



Notes:

Section 3 - Proposed Template Images

67D5998E_1xAIR+1OP+1QP.JPG



Notes:

Section 4 - Siteplan Images

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RAN Template:	A&L Template:
67D5D998E Outdoor	67D5998E_1xAIR+1OP+1QP

CT11266A_Anchor_3

Print Name: Preliminary (RFDS_For_Scoping)
PORs: Anchor_Phase 3

Section 5 - RAN Equipment

Existing RAN Equipment

Template: 67D02C Outdoor

Enclosure	**1**
Enclosure Type	RBS 6131
Baseband	DUW30; DUW30 U1900; DUG20 G1900; BB 6630 L2100; BB 6630 L700 L600 N600
Hybrid Cable System	Ericsson 9x18 HCS *Select Length*; Ericsson 6x12 HCS *Select Length & AWG* **(x 3)**
Radio	RUS01 B4 **(x 6)**

Proposed RAN Equipment

Template: 67D5D998E Outdoor

Enclosure	1	2	3	4
Enclosure Type	RBS 6131	Ancillary Equipment (Ericsson)	Enclosure 6160 AC V1	B160
Baseband	DUW30 U1900; DUG20 G1900; BB 6630 L700 L600 N600; BB 6630 L2100 L1900		RP 6651 L2500; RP 6651 N2500	
Hybrid Cable System	Ericsson 6x12 HCS *Select Length & AWG* **(x 3)**		PSU 4813 vR4A (Kit); Ericsson Hybrid Trunk 6/24 4AWG 100m **(x 3)**	
Transport System			CSR IXRe V2 (Gen2)	

RAN Scope of Work:

Remove and return all cabinet radios from existing base station cabinet.

Add (1) Enclosure 6160.

Add (1) iXRe Router to new Enclosure 6160.

Add (1) RP 6651 for L2500 to new Enclosure 6160.

Add (1) RP 6651 for N2500 to new Enclosure 6160.

Add (1) PSU4813 Voltage Booster to new Enclosure 6160.

Add (1) Battery Cabinet B160.

Existing : (3) 6x12, (1) 9x18

Remove all Coax. and (1) 9x18

Add (3) 6X24 HCS terminating at the Enclosure 6160 and Connect DC for the AIR6449 B41 to the PSU4813 Voltage Booster.

RAN Template:	A&L Template:
67D5D998E Outdoor	67D5998E_1xAIR+1OP+1QP

CT11266A_Anchor_3

Print Name: Preliminary (RFDS_For_Scoping)
PORs: Anchor_Phase 3

Section 6 - A&L Equipment

Existing Template: 67D02C_2xAIR+1OP
Proposed Template: 67D5998E_1xAIR+1OP+1QP

Sector 1 (Existing) view from behind

Coverage Type	A - Outdoor Macro								
Antenna	1		2				3	4	
Antenna Model	Ericsson - AIR21 KRC118023-1_B2A_B4P (Quad)		RFS - APXVAARR24_43-U-NA20 (Octo)				Empty Antenna Mount (Empty mount)	Ericsson - AIR21 KRC118023-1_B2P_B4A (Quad)	
Azimuth	60		60				60	60	
M. Tilt	0		0					0	
Height	225		225					225	
Ports	P1	P2	P3	P4	P5	P6		P7	P8
Active Tech.	U1900 G1900		L700 L600 N600	L700 L600 N600					L2100
Dark Tech.									
Restricted Tech.									
Decomm. Tech.									
E. Tilt	2		2						2
Cables	Fiber Jumper **(x2)**		Coax Jumper **(x2)** Fiber Jumper **(x2)**	Coax Jumper **(x2)**					Fiber Jumper **(x2)**
TMAs									
Diplexers / Combiners									
Radio			Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)					
Sector Equipment									

Unconnected Equipment:

Scope of Work:

Replace LB Dual in Position 2 with (1) LB/MB Octo.
Replace RRUS11 B12 in Position 2 with (1) Radio 4449 B71+B12 for L600 and L700.
Coaxial lines and AWS TMA (all unused) can be removed.

*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.

RAN Template:	A&L Template:
67D5D998E Outdoor	67D5998E_1xAIR+1OP+1QP

CT11266A_Anchor_3

Print Name: Preliminary (RFDS_For_Scoping)
PORs: Anchor_Phase 3

Sector 1 (Proposed) view from behind

Coverage Type	A - Outdoor Macro								
Antenna	1		2				3	4	
Antenna Model	AIR 6419 B41 (Active Antenna - Massive MIMO)		RFS - APXVAARR24_43-U-NA20 (Octo)				Empty Antenna Mount (Empty mount)	Commscope_VV-65A-R1 (Quad)	
Azimuth	60		60					60	
M. Tilt	0		0					0	
Height	225		225					225	
Ports	P1	P2	P3	P4	P5	P6		P7	P8
Active Tech.	L2500 N2500	L2500 N2500	L700 L600 N600	L700 L600 N600				L2100 L1900 G1900 U1900	L2100 L1900 G1900 U1900
Dark Tech.									
Restricted Tech.									
Decomm. Tech.									
E. Tilt	2	2	2	2				2	2
Cables	Fiber Jumper **(x2)**	Fiber Jumper **(x2)**	Coax Jumper **(x2)** Fiber Jumper	Coax Jumper **(x2)** Fiber Jumper				Coax Jumper **(x2)** Fiber Jumper	Coax Jumper **(x2)** Fiber Jumper
TMAs									
Diplexers / Combiners									
Radio			Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)				Radio 4460 B25+B66 (At Antenna)	SHARED Radio 4460 B25+B66 (At Antenna)
Sector Equipment									

Unconnected Equipment:

Scope of Work:

There will be Three antennae per sector.

Remove all TMAs.

Remove all Coaxial Lines.

Replace AIR21 B2A/B4P from Position 1 with (1) AIR 6419 for L2500 and N2500.

Replace AIR21 B2P/B4A from position 4 with (1) mid-band Quad VV-65A-R1.

Add (1) Radio 4460 B25+B66 for L2100, L1900 (Both carriers), GSM and U1900 to Position 4 at antenna.

Ensure RET control is enabled for all technology layers according to the Design Documents

*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.

RAN Template:	A&L Template:
67D5D998E Outdoor	67D5998E_1xAIR+1OP+1QP

CT11266A_Anchor_3

Print Name: Preliminary (RFDS_For_Scoping)
PORs: Anchor_Phase 3

Sector 2 (Existing) view from behind

Coverage Type	A - Outdoor Macro								
Antenna	1		2				3	4	
Antenna Model	Ericsson - AIR21 KRC118023-1_B2A_B4P (Quad)		RFS - APXVAARR24_43-U-NA20 (Octo)				Empty Antenna Mount (Empty mount)	Ericsson - AIR21 KRC118023-1_B2P_B4A (Quad)	
Azimuth	180		180				180	180	
M. Tilt	0		0					0	
Height	225		225					225	
Ports	P1	P2	P3	P4	P5	P6		P7	P8
Active Tech.	U1900 G1900		L700 L600 N600	L700 L600 N600					L2100
Dark Tech.									
Restricted Tech.									
Decomm. Tech.									
E. Tilt	2		2						2
Cables	Fiber Jumper **(x2)**		Coax Jumper **(x2)** Fiber Jumper **(x2)**	Coax Jumper **(x2)**					Fiber Jumper **(x2)**
TMAs									
Diplexers / Combiners									
Radio			Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)					
Sector Equipment									

Unconnected Equipment:

Scope of Work:

Replace LB Dual in Position 2 with (1) LB/MB Octo.
Replace RRUS11 B12 in Position 2 with (1) Radio 4449 B71+B12 for L600 and L700.
Coaxial lines and AWS TMA (all unused) can be removed.

*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.

RAN Template:	A&L Template:
67D5D998E Outdoor	67D5998E_1xAIR+1OP+1QP

CT11266A_Anchor_3

Print Name: Preliminary (RFDS_For_Scoping)
PORs: Anchor_Phase 3

Sector 2 (Proposed) view from behind

Coverage Type	A - Outdoor Macro								
Antenna	1		2				3	4	
Antenna Model	AIR 6419 B41 (Active Antenna - Massive MIMO)		RFS - APXVAARR24_43-U-NA20 (Octo)				Empty Antenna Mount (Empty mount)	Commscope_VV-65A-R1 (Quad)	
Azimuth	180		180					180	
M. Tilt	0		0					0	
Height	225		225					225	
Ports	P1	P2	P3	P4	P5	P6		P7	P8
Active Tech.	L2500 N2500	L2500 N2500	L700 L600 N600	L700 L600 N600				L2100 L1900 G1900 U1900	L2100 L1900 G1900 U1900
Dark Tech.									
Restricted Tech.									
Decomm. Tech.									
E. Tilt	2	2	2	2				2	2
Cables	Fiber Jumper **(x2)**	Fiber Jumper **(x2)**	Coax Jumper **(x2)** Fiber Jumper	Coax Jumper **(x2)** Fiber Jumper				Coax Jumper **(x2)** Fiber Jumper	Coax Jumper **(x2)** Fiber Jumper
TMAs									
Diplexers / Combiners									
Radio			Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)				Radio 4460 B25+B66 (At Antenna)	SHARED Radio 4460 B25+B66 (At Antenna)
Sector Equipment									

Unconnected Equipment:

Scope of Work:

There will be Three antennae per sector.

Remove all TMAs.

Remove all Coaxial Lines.

Replace AIR21 B2A/B4P from Position 1 with (1) AIR 6419 for L2500 and N2500.

Replace AIR21 B2P/B4A from position 4 with (1) mid-band Quad VV-65A-R1.

Add (1) Radio 4460 B25+B66 for L2100, L1900 (Both carriers), GSM and U1900 to Position 4 at antenna.

Ensure RET control is enabled for all technology layers according to the Design Documents

*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.

RAN Template:	A&L Template:
67D5D998E Outdoor	67D5998E_1xAIR+1OP+1QP

CT11266A_Anchor_3

Print Name: Preliminary (RFDS_For_Scoping)
PORs: Anchor_Phase 3

Sector 3 (Existing) view from behind

Coverage Type	A - Outdoor Macro								
Antenna	1		2				3	4	
Antenna Model	Ericsson - AIR21 KRC118023-1_B2A_B4P (Quad)		RFS - APXVAARR24_43-U-NA20 (Octo)				Empty Antenna Mount (Empty mount)	Ericsson - AIR21 KRC118023-1_B2P_B4A (Quad)	
Azimuth	300		300				300	300	
M. Tilt	0		0					0	
Height	225		225					225	
Ports	P1	P2	P3	P4	P5	P6		P7	P8
Active Tech.	U1900 G1900		L700 L600 N600	L700 L600 N600					L2100
Dark Tech.									
Restricted Tech.									
Decomm. Tech.									
E. Tilt	2		2						2
Cables	Fiber Jumper **(x2)**		Coax Jumper **(x2)** Fiber Jumper **(x2)**	Coax Jumper **(x2)**					Fiber Jumper **(x2)**
TMAs									
Diplexers / Combiners									
Radio			Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)					
Sector Equipment									

Unconnected Equipment:

Scope of Work:

Replace LB Dual in Position 2 with (1) LB/MB Octo.
Replace RRUS11 B12 in Position 2 with (1) Radio 4449 B71+B12 for L600 and L700.
Coaxial lines and AWS TMA (all unused) can be removed.

*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.

RAN Template:	A&L Template:
67D5D998E Outdoor	67D5998E_1xAIR+1OP+1QP

CT11266A_Anchor_3

Print Name: Preliminary (RFDS_For_Scoping)
PORs: Anchor_Phase 3

Sector 3 (Proposed) view from behind

Coverage Type	A - Outdoor Macro								
Antenna	1		2				3	4	
Antenna Model	AIR 6419 B41 (Active Antenna - Massive MIMO)		RFS - APXVAARR24_43-U-NA20 (Octo)				Empty Antenna Mount (Empty mount)	Commscope_VV-65A-R1 (Quad)	
Azimuth	300		300					300	
M. Tilt	0		0					0	
Height	225		225					225	
Ports	P1	P2	P3	P4	P5	P6		P7	P8
Active Tech.	L2500 N2500	L2500 N2500	L700 L600 N600	L700 L600 N600				L2100 L1900 G1900 U1900	L2100 L1900 G1900 U1900
Dark Tech.									
Restricted Tech.									
Decomm. Tech.									
E. Tilt	2	2	2	2				2	2
Cables	Fiber Jumper **(x2)**	Fiber Jumper **(x2)**	Coax Jumper **(x2)** Fiber Jumper	Coax Jumper **(x2)** Fiber Jumper				Coax Jumper **(x2)** Fiber Jumper	Coax Jumper **(x2)** Fiber Jumper
TMAs									
Diplexers / Combiners									
Radio			Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)				Radio 4460 B25+B66 (At Antenna)	SHARED Radio 4460 B25+B66 (At Antenna)
Sector Equipment									

Unconnected Equipment:

Scope of Work:

There will be Three antennae per sector.

Remove all TMAs.

Remove all Coaxial Lines.

Replace AIR21 B2A/B4P from Position 1 with (1) AIR 6419 for L2500 and N2500.

Replace AIR21 B2P/B4A from position 4 with (1) mid-band Quad VV-65A-R1.

Add (1) Radio 4460 B25+B66 for L2100, L1900 (Both carriers), GSM and U1900 to Position 4 at antenna.

Ensure RET control is enabled for all technology layers according to the Design Documents

*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.

RAN Template:	A&L Template:
67D5D998E Outdoor	67D5998E_1xAIR+1OP+1QP

CT11266A_Anchor_3

Print Name: Preliminary (RFDS_For_Scoping)
PORs: Anchor_Phase 3

Section 7 - Power Systems Equipment

Existing Power Systems Equipment
----- This section is intentionally blank. -----

	Proposed Power Systems Equipment
Enclosure	1
Enclosure Type	Enclosure 6160 AC V1

EBI Consulting

environmental | engineering | due diligence

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

T-Mobile Existing Facility

Site ID: CT11266A

North Stonington-3_1
118C Wintechog Hill Road
North Stonington, Connecticut 06359

April 12, 2022

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**16.70%**

21 B Street, Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

April 12, 2022

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

Emissions Analysis for Site: CT11266A - North Stonington-3_1

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **118C Wintechog Hill Road** in **North Stonington, 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 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu W/cm^2$). The number of $\mu W/cm^2$ 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 ($\mu W/cm^2$). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately 400 $\mu W/cm^2$ and 467 $\mu W/cm^2$, respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is 1000 $\mu W/cm^2$. 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 118C Wintechog Hill Road in North Stonington, 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) 1 NR channel (600 MHz Band) was considered for each sector of the proposed installation. This Channel has a transmit power of 80 Watts.

3) 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.

4) 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.

5) 2 UMTS 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.

6) 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.

7) 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.

8) 1 LTE Traffic channel (LTE 1C and 2C BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 60 Watts.

9) 1 LTE Broadcast channel (LTE 1C and 2C BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 20 Watts.

10) 1 NR Traffic channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 120 Watts.

11) 1 NR Broadcast channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 40 Watts.

12) 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.

13) 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.

14) The antennas used in this modeling are the Ericsson AIR 6419 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz channel(s), the Commscope VV-65A-R1B for the 1900 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s) in Sector A, the Ericsson AIR 6419 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz channel(s), the Commscope VV-65A-R1B for the 1900 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s) in Sector B, the Ericsson AIR 6419 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz channel(s), the Commscope VV-65A-R1B for the 1900 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.

15) The antenna mounting height centerline of the proposed antennas is 225 feet above ground level (AGL).

16) 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.

17) 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 #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	Ericsson AIR 6419	Make / Model:	Ericsson AIR 6419	Make / Model:	Ericsson AIR 6419
Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz
Gain:	22.05 dBd / 15.55 dBd / 22.05 dBd / 15.55 dBd	Gain:	22.05 dBd / 15.55 dBd / 22.05 dBd / 15.55 dBd	Gain:	22.05 dBd / 15.55 dBd / 22.05 dBd / 15.55 dBd
Height (AGL):	225 feet	Height (AGL):	225 feet	Height (AGL):	225 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	240.00 Watts	Total TX Power (W):	240.00 Watts	Total TX Power (W):	240.00 Watts
ERP (W):	31,011.95	ERP (W):	31,011.95	ERP (W):	31,011.95
Antenna A1 MPE %:	**2.32%**	Antenna B1 MPE %:	**2.32%**	Antenna C1 MPE %:	**2.32%**
Antenna #:	**2**	Antenna #:	**2**	Antenna #:	**2**
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 / 600 MHz / 700 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz
Gain:	12.95 dBd / 12.95 dBd / 13.35 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.35 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.35 dBd
Height (AGL):	225 feet	Height (AGL):	225 feet	Height (AGL):	225 feet
Channel Count:	5	Channel Count:	5	Channel Count:	5
Total TX Power (W):	200.00 Watts	Total TX Power (W):	200.00 Watts	Total TX Power (W):	200.00 Watts
ERP (W):	4,059.02	ERP (W):	4,059.02	ERP (W):	4,059.02
Antenna A2 MPE %:	**0.73%**	Antenna B2 MPE %:	**0.73%**	Antenna C2 MPE %:	**0.73%**
Antenna #:	**3**	Antenna #:	**3**	Antenna #:	**3**
Make / Model:	Commscope VV-65A-R1B	Make / Model:	Commscope VV-65A-R1B	Make / Model:	Commscope VV-65A-R1B
Frequency Bands:	1900 MHz / 1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 1900 MHz / 1900 MHz / 2100 MHz
Gain:	15.15 dBd / 15.15 dBd / 15.15 dBd / 15.8 dBd	Gain:	15.15 dBd / 15.15 dBd / 15.15 dBd / 15.8 dBd	Gain:	15.15 dBd / 15.15 dBd / 15.15 dBd / 15.8 dBd
Height (AGL):	225 feet	Height (AGL):	225 feet	Height (AGL):	225 feet
Channel Count:	10	Channel Count:	10	Channel Count:	10
Total TX Power (W):	420.00 Watts	Total TX Power (W):	420.00 Watts	Total TX Power (W):	420.00 Watts
ERP (W):	14,382.49	ERP (W):	14,382.49	ERP (W):	14,382.49
Antenna A3 MPE %:	**1.08%**	Antenna B3 MPE %:	**1.08%**	Antenna C3 MPE %:	**1.08%**

Site Composite MPE %	
Carrier	**MPE %**
T-Mobile (Max at Sector A):	4.13%
Dish	0.94%
AT&T	3.36%
Metro PCS	0.22%
Sprint	0.8%
Various Others	7.25%
Site Total MPE % :	16.70%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	4.13%
T-Mobile Sector B Total:	4.13%
T-Mobile Sector C Total:	4.13%
Site Total MPE % :	16.70%

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 (μW/cm²)	Frequency (MHz)	Allowable MPE (μW/cm²)	Calculated % MPE
T-Mobile 2500 MHz LTE 1C & 2C Traffic	1	9619.47	225.0	7.21	2500 MHz LTE 1C & 2C Traffic	1000	0.72%
T-Mobile 2500 MHz LTE 1C & 2C Broadcast	1	717.84	225.0	0.54	2500 MHz LTE 1C & 2C Broadcast	1000	0.05%
T-Mobile 2500 MHz NR Traffic	1	19238.94	225.0	14.42	2500 MHz NR Traffic	1000	1.44%
T-Mobile 2500 MHz NR Broadcast	1	1435.69	225.0	1.08	2500 MHz NR Broadcast	1000	0.11%
T-Mobile 600 MHz LTE	2	591.73	225.0	0.89	600 MHz LTE	400	0.22%
T-Mobile 600 MHz NR	1	1577.94	225.0	1.18	600 MHz NR	400	0.30%
T-Mobile 700 MHz LTE	2	648.82	225.0	0.97	700 MHz LTE	467	0.21%
T-Mobile 1900 MHz GSM	4	982.02	225.0	2.94	1900 MHz GSM	1000	0.29%
T-Mobile 1900 MHz UMTS	2	982.02	225.0	1.47	1900 MHz UMTS	1000	0.15%
T-Mobile 1900 MHz LTE	2	1964.04	225.0	2.94	1900 MHz LTE	1000	0.29%
T-Mobile 2100 MHz LTE	2	2281.14	225.0	3.42	2100 MHz LTE	1000	0.34%
						Total:	**4.13%**

• 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:	4.13%
Sector B:	4.13%
Sector C:	4.13%
T-Mobile Maximum MPE % (Sector A):	4.13%
Site Total:	16.70%
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **16.70%** 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.