Derek Maheux Program Manager
c/o Cellco Partnership d/b/a Verizon Wireless
Centerline Communications, LLC
750 West Center Street, Suite 301
West Bridgewater, MA 02379
Mobile: (508)649-3407
Dmaheux@clinellc.com

February 8, 2024

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

RE: Notice of Exempt Modification // Site: FRANKLIN CT (ATC: 6310)
89 Dr. Nott Road, North Franklin, CT 06254
N 41.597675 // W -72.144978

Dear Ms. Bachman,

Cellco Partnership d/b/a Verizon Wireless currently maintains twelve (12) antenna at the 170-ft level on the existing 302 ft Tower, located at 89 Dr. Nott Road, North Franklin, CT. The tower is owned by American Tower. Verizon Wireless proposed modification involves the removal of (3) existing antenna and associated (3) RHH and the installation of (3) antenna, (6) RRH and (3) diplexers on Verizon Wireless existing antenna platform and mounting assembly as described on the project documents.

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

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2). Enclosed to accommodate this filing are construction drawings dated January 29, 2024, by A.T Engineering Services, LLC, a structural analysis dated January 10, 2024, by American Tower Corp., and a structural mount analysis by Colliers Engineering and Design dated December 6, 2023, and Non-Ionizing Electromagnetic Radiation (NIER) Study dated January 17, 2024, by Tower Engineering Professionals.

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 new 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, as shown in the attached structural analysis and a structural mount analysis, pursuant to certain conditions defined therein. Design and engineering are fully illustrated within final construction drawings.

For the foregoing reasons, Verizon Wireless 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,

Derek Maheux

_____

Derek Maheux, Program Manager
c/o Cellco Partnership d/b/a Verizon Wireless
Centerline Communications, LLC
750 West Center Street, Suite 301
West Bridgewater, MA 02379
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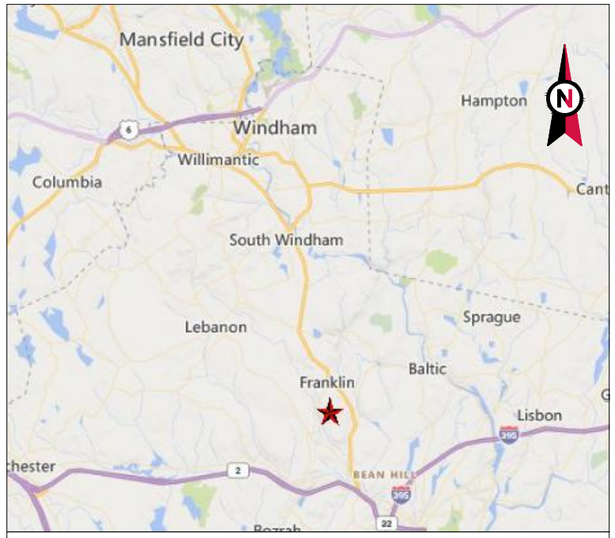
Attachments: Exhibit 1 – Construction Drawings
Exhibit 2 – Property Card and GIS
Exhibit 3 – Structural Analysis
Exhibit 4 – Mount Analysis
Exhibit 5 – RF Emissions Analysis Report Evaluation
Exhibit 6 – Available Original Tower Approval Records
Exhibit 7 – Notice Deliver Confirmations

cc: Alden Miner – First Selectman – Chief Elected Official
Ronald Chalecki – Zoning Enforcement Officer - as P&Z official
Hidden Brook Farms LLC – as ground owner
American Tower Corporation - as tower owner

EXHIBIT 1



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: FRANKLIN CT
ATC SITE NUMBER: 6310
VERIZON SITE NAME: FRANKLIN CT
VERIZON SITE NUMBER: 5000391689
VERIZON FUZE PID: 16271936
SITE ADDRESS: 89 DR. NOTT ROAD
NORTH FRANKLIN, CT 06254

LOCATION MAP

VERIZON AMENDMENT DRAWINGS

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. 2020 NFPA 70, NATIONAL ELECTRIC CODE (NEC)
2. 2022 CONNECTICUT STATE BUILDING CODE
3. 2021 INTERNATIONAL BUILDING CODE (IBC)

DESIGN CRITERIA FROM TOWER STRUCTUAL ANALYSIS:

BASIC WIND SPEED:	123 MPH
BASIC WIND SPEED W/ ICE:	50 MPH
CODE(S):	ANSI/TIA-222-H / 2021 IBC / 2022 CONNECTICUT STATE BUILDING CODE
EXPOSURE CATEGORY:	B
RISK CATEGORY:	II
TOPO FACTOR PROCEDURE:	METHOD 2
FEATURE:	HILL
CREST HEIGHT (H):	270 FT
CREST LENGTH (L):	1858 FT
SPECTRAL RESPONSE:	S_S=0.20, S_1=0.05
SITE CLASS:	D - STIFF SOIL - DEFAULT

INFORMATION TAKEN FROM STRUCTURAL ANALYSIS COMPLETED BY ATC, DATED 01/10/24.

UTILITY COMPANIES

POWER COMPANY: EVERSOURCE ENERGY
PHONE: (888) 783-6617

TELEPHONE COMPANY: UNKNOWN
PHONE: N/A

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

PROJECT SUMMARY

SITE ADDRESS:

89 DR. NOTT ROAD
NORTH FRANKLIN, CT 06254
COUNTY: NEW LONDON

GEOGRAPHIC COORDINATES:

LATITUDE: 41° 35' 51.586" N

LONGITUDE: 72° 8' 41.944" W

GROUND ELEVATION: 499' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

APPLICANT:

VERIZON WIRELESS

ENGINEER:

ATC TOWER SERVICES, LLC
1 FENTON MAIN, STE 300
CARY, NC 27511

PROPERTY OWNER:

CAROLINE HARRISON
TRUSTEE
89 DR. NOTT ROAD
NORTH FRANKLIN, CT 06254

PROJECT DESCRIPTION

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

REMOVE (3) ANTENNA(s) AND (3) RRH(s),

INSTALL MOUNT MODIFICATIONS, (3) ANTENNA(s), (6) RRH(s), AND (3) DIPLEXER(s)

EXISTING (9) ANTENNA(s), (1) OVP(s), AND (2) 1-5/8" HYBRIFLEX & (11) 1-5/8" COAX CABLE(s) TO REMAIN

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

395 SOUTH TO 608 WEST. FOLLOW TO 32 NORTH TO LEFT ON POUND HILL RD. LEFT ON DR. NOTT RD. SITE IS BEHIND FARM.

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	0	01/29/24	AM
G-002	GENERAL NOTES	0	01/29/24	AM
C-101	DETAILED SITE PLAN	0	01/29/24	AM
C-201	TOWER ELEVATION	0	01/29/24	AM
C-401	ANTENNA INFORMATION & SCHEDULE	0	01/29/24	AM
C-501	CONSTRUCTION DETAILS	0	01/29/24	AM
E-501	GROUNDING DETAILS	0	01/29/24	AM
R-601	SUPPLEMENTAL			
R-602	SUPPLEMENTAL			
R-603	SUPPLEMENTAL			
R-604	SUPPLEMENTAL			

CONTRACTOR PMI REQUIREMENTS

PMI ACCESSED AT:	HTTPS://PMI.VZWSMART.COM
SMART TOOL VENDOR PROJECT NUMBER:	10214450
VZW LOCATION CODE (PSLC):	5000391689

***PMI AND REQUIREMENTS ALSO EMBEDDED IN MOUNT ANALYSIS REPORT

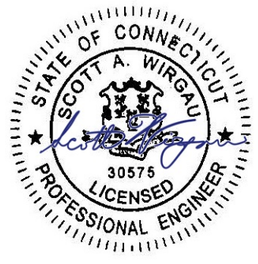
MOUNT MODIFICATION REQUIRED:	YES
VZW APPROVED SMART KIT VENDORS:	REFER TO MOUNT MODIFICATION DRAWINGS PAGES FOR VZW SMART KIT APPROVED VENDORS

AMERICAN TOWER®
A.T. ENGINEERING SERVICES, PLLC
1 FENTON MAIN STREET
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	AM	01/29/24

ATC SITE NUMBER:
6310
ATC SITE NAME:
FRANKLIN CT
VERIZON SITE NAME:
FRANKLIN CT
SITE ADDRESS:
89 DR. NOTT ROAD
NORTH FRANKLIN, CT 06254

SEAL:



verizon

ATC JOB NO:	14530659_G0
CUSTOMER ID:	FRANKLIN CT
CUSTOMER #:	5000391689

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	0

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, VERIZON "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 VERIZON 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 VERIZON REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE VERIZON REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE VERIZON 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 VERIZON 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 VERIZON 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 VERIZON 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 VERIZON 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 VERIZON REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO VERIZON FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON 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 VERIZON 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. WHEN THE PROJECT SCOPE REQUIRES THE USE OF THE SAFETY CLIMB, THE GENERAL CONTRACTOR SHALL ENSURE THE SAFETY CLIMB IS FREE OF OBSTRUCTIONS, NOT RUBBING ON OR TRAPPED BY ANY INSTALLED CUSTOMER EQUIPMENT, IS VISUALLY TAUT, MEETS MANUFACTURER INSTALLATION SPECIFICATIONS, AND IS FIRMLY SECURED AT ALL CABLE GUIDE LOCATIONS UPON PROJECT COMPLETION.
29. COMPLETION OF PROJECT SHALL NOT OBSTRUCT, TRAP, LOOSEN, OR OTHERWISE CAUSE FAILURE TO MEET MANUFACTURER INSTALLATION REQUIREMENTS FOR THE SAFETY CLIMB.
30. 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.
31. 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.
32. 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 VERIZON REP. ANY WORK FOUND BY THE VERIZON REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
33. 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.
34. VERIZON FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE VERIZON 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.
35. VERIZON 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 VERIZON OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
   - A. ANTENNA AND COAXIAL/HYBRID CABLES ARE FURNISHED BY VERIZON 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 VERIZON SPECIFICATIONS.
   - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.
   - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE.
   - E. INSTALL COAXIAL/HYBRID 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/HYBRID CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
2. ANTENNA AND COAXIAL/HYBRID CABLE GROUNDING:
   - A. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.
   - B. ALL COAXIAL/HYBRID CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL/HYBRID CABLE (NOT WITHIN BENDS)

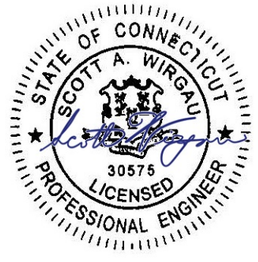
ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE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

AMERICAN TOWER®
A.T. ENGINEERING SERVICES, PLLC
1 FENTON MAIN STREET
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	AM	01/29/24

ATC SITE NUMBER:
6310
ATC SITE NAME:
FRANKLIN CT
VERIZON SITE NAME:
FRANKLIN CT
SITE ADDRESS:
89 DR. NOTT ROAD
NORTH FRANKLIN, CT 06254

SEAL:



Digitally Signed: 2024-02-01

verizon

ATC JOB NO:	14530659_G0
CUSTOMER ID:	FRANKLIN CT
CUSTOMER #:	5000391689

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	0

SITE PLAN NOTES:

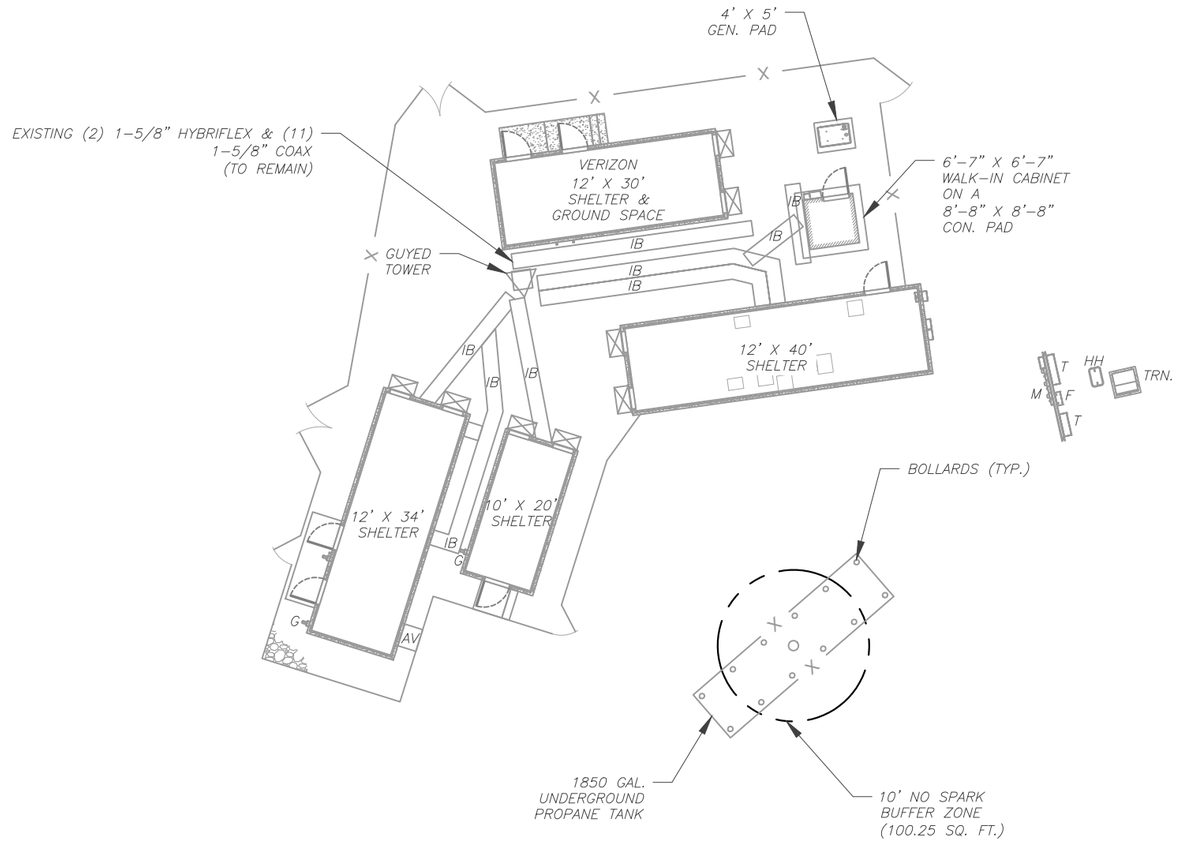
1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

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 RECEPTACLE
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

N

AMERICAN TOWER®
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1 FENTON MAIN STREET
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PHONE: (919) 468-0112
COA: PEC.0001553

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6310

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FRANKLIN CT

VERIZON SITE NAME:
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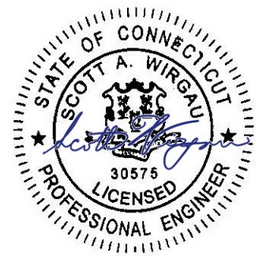
89 DR. NOTT ROAD
NORTH FRANKLIN, CT 06254

SEAL:



Digitally Signed: 2024-02-01

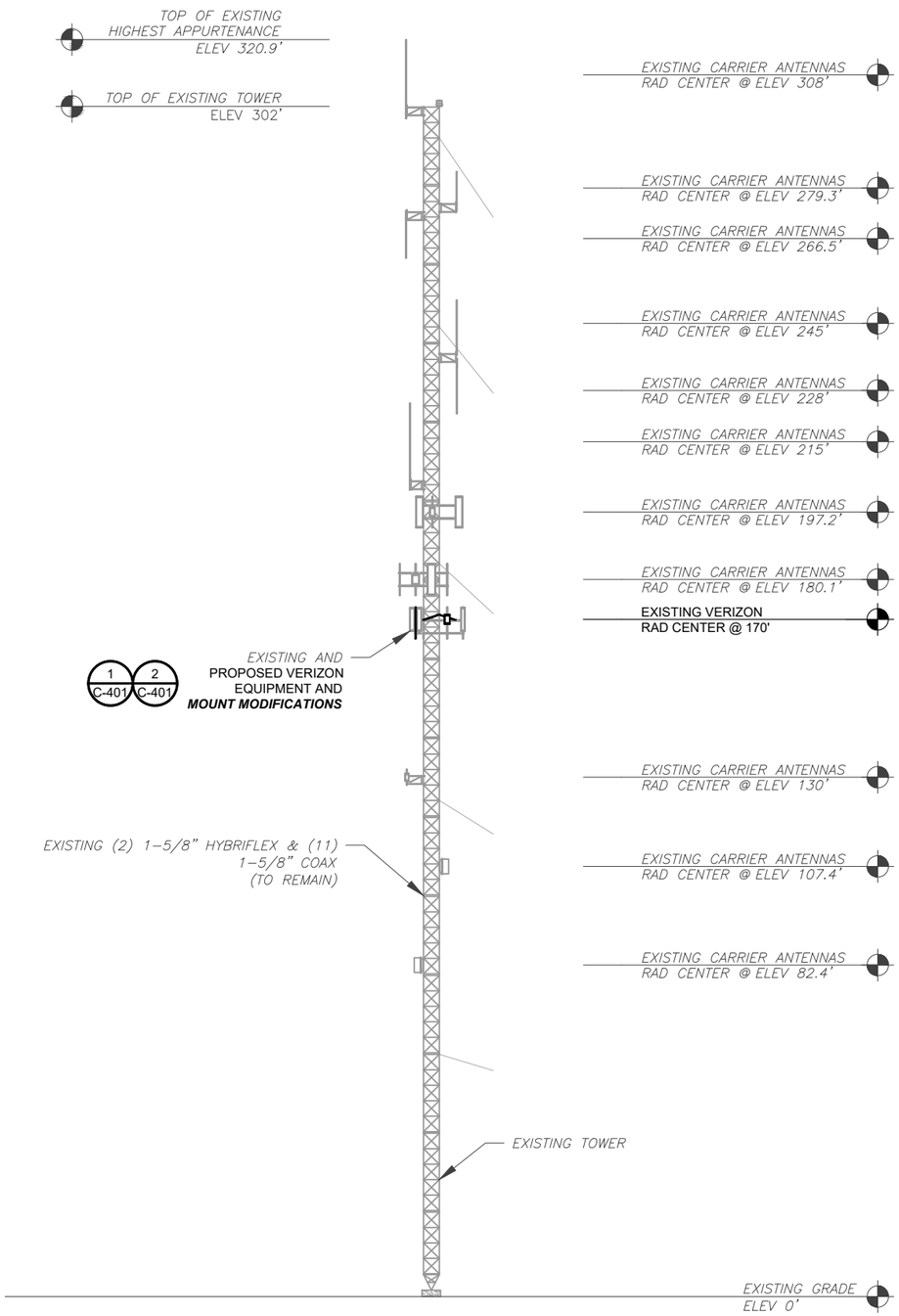
verizon

ATC JOB NO:	14530659_G0
CUSTOMER ID:	FRANKLIN CT
CUSTOMER #:	5000391689

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	0

PER MOUNT ANALYSIS COMPLETED BY COLLIERS ENGINEERING & DESIGN, DATED 12/07/23, THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION DETAILED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.



1 TOWER ELEVATION
SCALE: N.T.S.

ALL ELEVATIONS REFLECT ABOVE GROUND LEVEL (A.G.L.)

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. TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.

AMERICAN TOWER®
A.T. ENGINEERING SERVICES, PLLC
1 FENTON MAIN STREET
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	AM	01/29/24

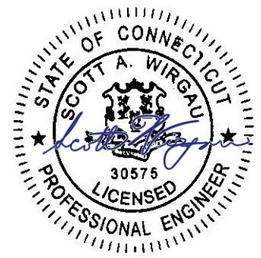
ATC SITE NUMBER:
6310

ATC SITE NAME:
FRANKLIN CT

VERIZON SITE NAME:
FRANKLIN CT

SITE ADDRESS:
89 DR. NOTT ROAD
NORTH FRANKLIN, CT 06254

SEAL:



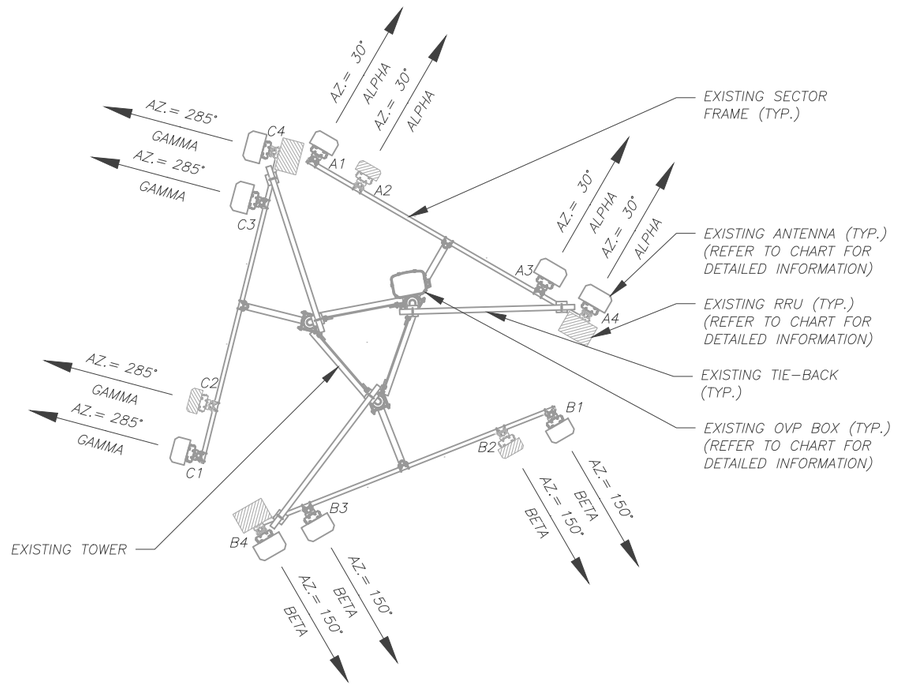
Digitally Signed: 2024-02-01

verizon

ATC JOB NO:	14530659_G0
CUSTOMER ID:	FRANKLIN CT
CUSTOMER #:	5000391689

TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	0

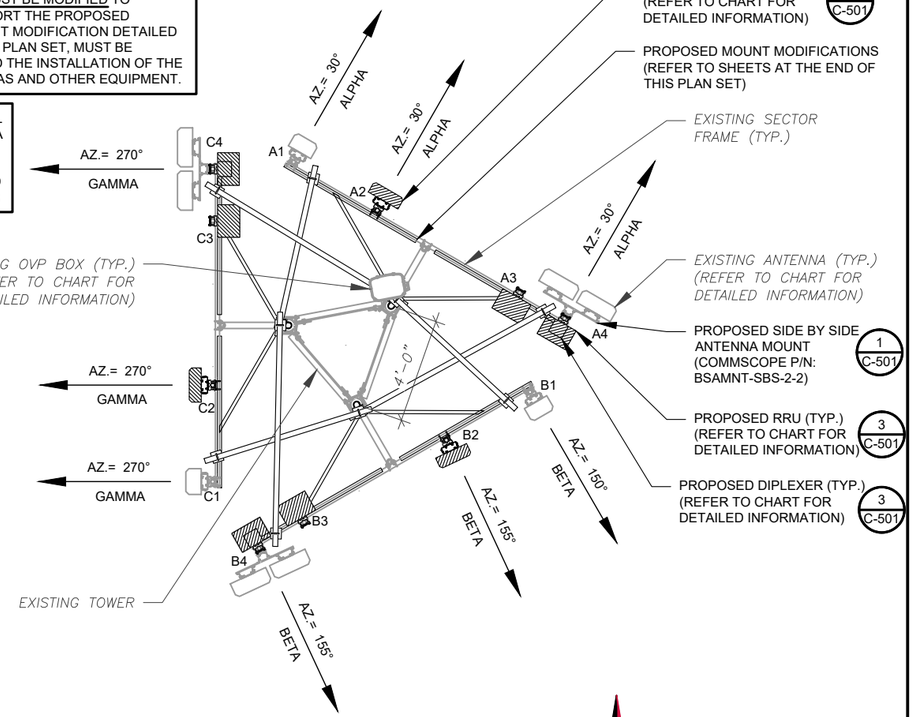


1 EXISTING ANTENNA PLAN

SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY COLLIERS ENGINEERING & DESIGN, DATED 12/07/23, THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION DETAILED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.

CONTRACTOR SHALL RE-ORIENT ANTENNA MOUNT(s) AS NECESSARY TO ACHIEVE PROPOSED ANTENNA AZIMUTHS



2 FINAL ANTENNA PLAN

SCALE: N.T.S.

EXISTING ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	170'	30°	A1	LNX-8513DS-A1M	-	RMN	-	-
			A2	BXA-70063-6CF-EDIN-X	700/850 LTE	RMV	-	-
			A3	JAHH-65B-R3B	700/850/1900/AWS LTE & 850 5G	REL	-	-
			A4	JAHH-65B-R3B	700/850/1900/AWS LTE & 850 5G	RMN	B5/B13 RRH-BR04C	RMV
BETA		150°	B1	LNX-8513DS-A1M	-	RMN	-	-
			B2	BXA-70063-6CF-EDIN-X	700/850 LTE	RMV	-	-
			B3	JAHH-65B-R3B	700/850/1900/AWS LTE & 850 5G	REL	-	-
			B4	JAHH-65B-R3B	700/850/1900/AWS LTE & 850 5G	RMN	B5/B13 RRH-BR04C	RMV
GAMMA		285°	C1	LNX-8513DS-A1M	-	RMN	-	-
			C2	BXA-70063-6CF-EDIN-X	700/850 LTE	RMV	-	-
			C3	JAHH-65B-R3B	700/850/1900/AWS LTE & 850 5G	REL	-	-
			C4	JAHH-65B-R3B	700/850/1900/AWS LTE & 850 5G	RMN	B5/B13 RRH-BR04C	RMV

NOTES

1. CONFIRM WITH VERIZON 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	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	170'	30°	A1	LNX-8513DS-A1M	-	RMN	-	-
			A2	MT6413-77A	L-SUB6 5G	ADD	-	-
			A3	-	-	-	RF4461D-13A	ADD
			A4	(2) JAHH-65B-R3B	700/850/1900/AWS LTE & 850 5G	RMN REL	RF4439D-25A CBC78T-DS-43-2X	ADD ADD
BETA		150°	B1	LNX-8513DS-A1M	-	RMN	-	-
		155°	B2	MT6413-77A	L-SUB6 5G	ADD	-	-
			B3	-	-	-	RF4461D-13A	ADD
			B4	(2) JAHH-65B-R3B	700/850/1900/AWS LTE & 850 5G	RMN REL	RF4439D-25A CBC78T-DS-43-2X	ADD ADD
GAMMA		270°	C1	LNX-8513DS-A1M	-	RMN	-	-
			C2	MT6413-77A	L-SUB6 5G	ADD	-	-
			C3	-	-	-	RF4461D-13A	ADD
			C4	(2) JAHH-65B-R3B	700/850/1900/AWS LTE & 850 5G	RMN REL	RF4439D-25A CBC78T-DS-43-2X	ADD ADD

EXISTING FIBER DISTRIBUTION / OVP BOX		EXISTING CABLING SUMMARY	
MODEL NUMBER	STATUS	CABLE QTY, SIZE, TYPE	STATUS
RVZDC-6627-PF-48	RMN	(2) 1-5/8" HYBRIFLEX & (11) 1-5/8" COAX	RMN
-	RMV	----	RMV

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY	
MODEL NUMBER	STATUS	CABLE QTY, SIZE, TYPE	STATUS
RVZDC-6627-PF-48	RMN	(2) 1-5/8" HYBRIFLEX & (11) 1-5/8" COAX	RMN
-	ADD	----	ADD

3 EQUIPMENT SCHEDULES

AMERICAN TOWER®
A.T. ENGINEERING SERVICES, PLLC
1 FENTON MAIN STREET
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	AM	01/29/24

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VERIZON SITE NAME:
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89 DR. NOTT ROAD
NORTH FRANKLIN, CT 06254

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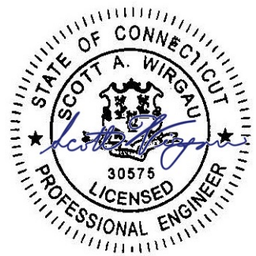


Digitally Signed: 2024-02-01

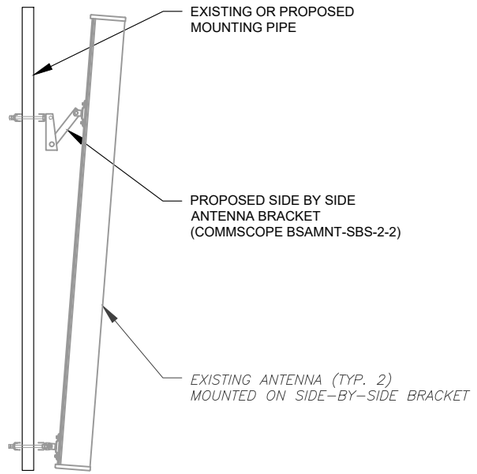
verizon

ATC JOB NO:	14530659_G0
CUSTOMER ID:	FRANKLIN CT
CUSTOMER #:	5000391689

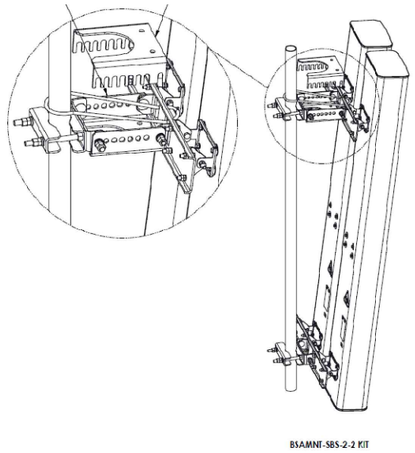
ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	0

EXISTING/PROPOSED MOUNTS AND/OR MOUNT MODIFICATIONS NOT SHOWN FOR CLARITY. REFER TO ANTENNA PLANS, MOUNT ANALYSES AND/OR MOUNT MODIFICATION DOCUMENTS FOR ADDITIONAL DETAIL.



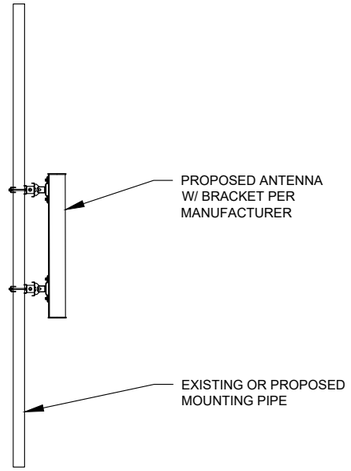
PROFILE VIEW



ISOMETRIC VIEW (BY MANUFACTURER)

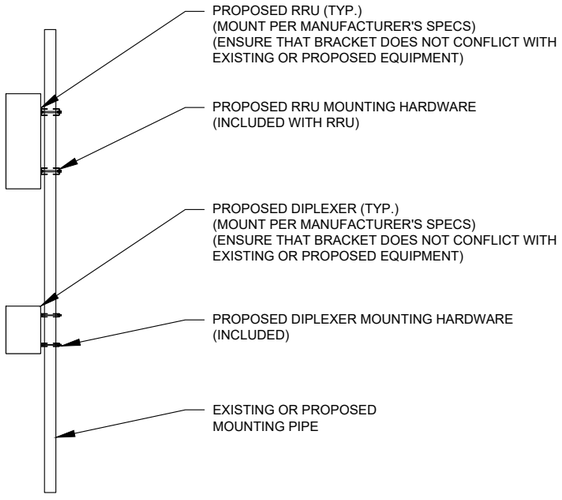
1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



2 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



3 PROPOSED RRU MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.

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CARY, NC 27511
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	AM	01/29/24

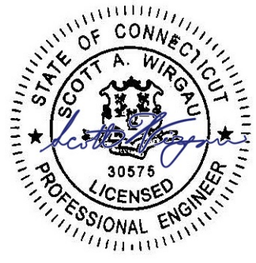
ATC SITE NUMBER:
6310

ATC SITE NAME:
FRANKLIN CT

VERIZON SITE NAME:
FRANKLIN CT

SITE ADDRESS:
89 DR. NOTT ROAD
NORTH FRANKLIN, CT 06254

SEAL:



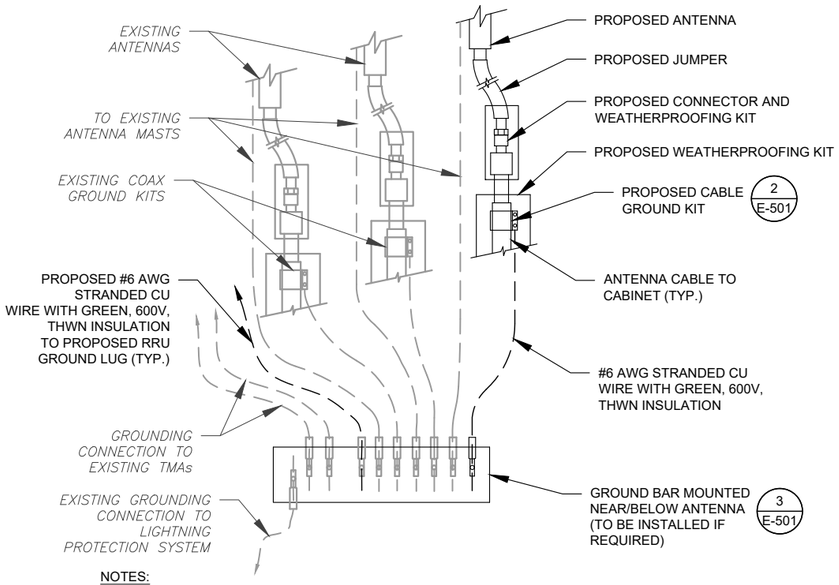
Digitally Signed: 2024-02-01

verizon

ATC JOB NO:	14530659_G0
CUSTOMER ID:	FRANKLIN CT
CUSTOMER #:	5000391689

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	0

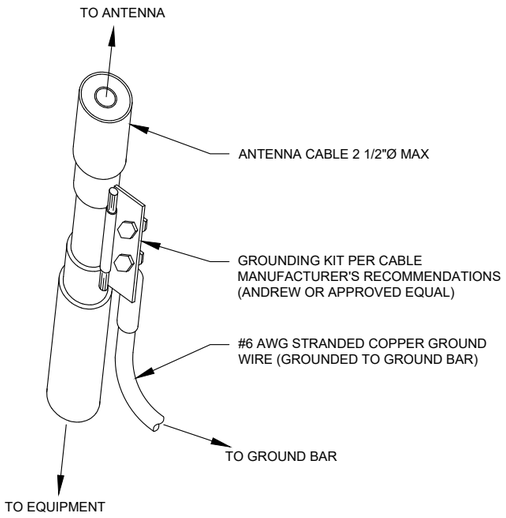


NOTES:

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 VERIZON GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH VERIZON 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.

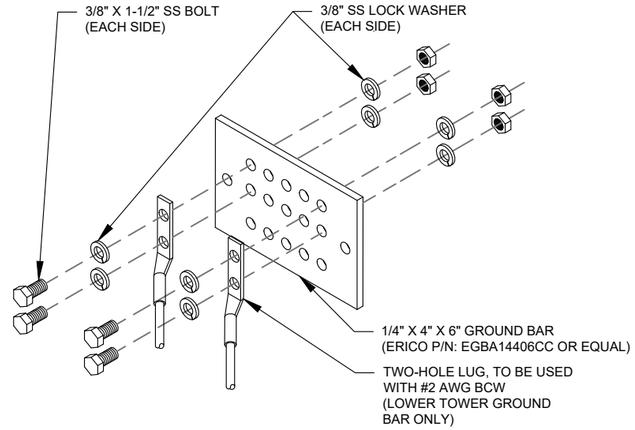


GROUND KIT NOTES:

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.

AMERICAN TOWER®
A.T. ENGINEERING SERVICES, PLLC
1 FENTON MAIN STREET
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	AM	01/29/24

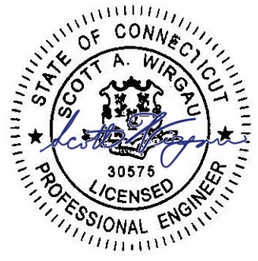
ATC SITE NUMBER:
6310

ATC SITE NAME:
FRANKLIN CT

VERIZON SITE NAME:
FRANKLIN CT

SITE ADDRESS:
89 DR. NOTT ROAD
NORTH FRANKLIN, CT 06254

SEAL:



Digitally Signed: 2024-02-01

verizon

ATC JOB NO:	14530659_G0
CUSTOMER ID:	FRANKLIN CT
CUSTOMER #:	5000391689

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	0

Colliers Engineering & Design,
Architecture, Landscape Architecture, Surveying, CT P.C.
1055 Washington Boulevard
Stamford, CT 06901
203.324.0800
peter.albano@collierseng.com

Post-Modification Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10214450
Colliers Engineering & Design Project #: 21777635 (Rev. 1)

December 6, 2023

Site Information

Site ID:	*5000391689-VZW / NE FRANKLIN*
Site Name:	*NE FRANKLIN*
Carrier Name:	*Verizon Wireless*
Address:	*89 Dr. Nott Road*
	Franklin, Connecticut 06254
	New London County
Latitude:	*41.597675°*
Longitude:	*-72.144978°*

Structure Information

Tower Type:	*Guyed*
Mount Type:	*12.50-Ft T-Frame*

FUZE ID # 16271936

Analysis Results

T-Frame: **86.1% Pass w/ Modifications***

***Antennas and equipment to be installed in compliance with PMI Requirements of this mount analysis.**

******Contractor PMI Requirements*:**
Included at the end of this MA report
Available & Submitted via portal at https://pmi.vzwsmart.com
For additional questions and support, please reach out to:
pmisupport@colliersengineering.com

Report Prepared By: Prasanna Dhakal

STATE OF CONNECTICUT · DEJIAN XU · No. 33733 · LICENSED PROFESSIONAL ENGINEER
12/07/2023

Mount Connection Envelope Reactions:

Connection Description	Elev. AGL (Ft)	Node Label	Envelope Wind Reactions				Envelope Wind + Ice Reactions			
			Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)	Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)
Sector A Top Standoff	168.63	N53B	597	1524	3.154	0.000	651	1255	2.100	0.000
Sector A Bottom Standoff	166.38	N52B	825	1432	3.058	0.000	794	1644	2.064	0.000
Sector A Reinforcement	170.00	N66	1390	3122	0.007	0.002	1282	1994	0.003	0.001

Notes:
- Axial loads act along the axis of the tower leg
- Lateral reactions act perpendicular to the tower leg
- Moment loads introduce bending moment to the tower leg
- Torsion loads introduce twisting moment to the tower leg
- Batch solutions by individual load cases are included at the end of this document

Mount Steel (EPA)a per ANSI/TIA-222-H Section 2.6.11.2:

Ice Thickness (In)	Mount Pipes Excluded		Mount Pipes Included	
	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)
0	29.9	13.0	39.3	22.4
0.5	38.4	18.4	51.4	31.5
1	46.1	22.9	62.9	39.6

Notes:
- (EPA)a values listed above may be used in the absence of more precise information
- (EPA)a values in the table above include 1 sector(s).
- Ka factors included in (EPA)a calculations

Requirements:

The existing mounts will be **SUFFICIENT** for the final loading configuration (attachment 2) after the modifications detailed in attachment 3 are successfully completed.

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

Attachments:

1. **Contractor Required PMI Report Deliverables**
2. Antenna Placement Diagrams
3. Mount Modification Drawings
4. Mount Photos
5. Mount Mapping Report (for reference only)
6. Analysis Calculations

1 MOUNT ANALYSIS

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

SUPPLEMENTAL

SHEET NUMBER: R-601

REVISION: 0

verizon

MOUNT MODIFICATION DRAWINGS
EXISTING 12.50' T-FRAME

TOWER OWNER: AMERICAN TOWER CORPORATION
TOWER OWNER SITE NUMBER: 6310

CARRIER SITE NAME: FRANKLIN CT
CARRIER SITE NUMBER: 5000391689
FUZE ID: 16271936

89 DR. NOTT ROAD
FRANKLIN, CT 06254
NEW LONDON COUNTY

LATITUDE: 41.597675° N
LONGITUDE: 72.144978° W

DESIGN CRITERIA

WIND LOADS

BASIC WIND SPEED (3 SECOND GUST), V = 135 MPH
EXPOSURE CATEGORY: C
TOPOGRAPHIC CATEGORY: 1
TOPOGRAPHIC CONSIDERED: N/A
TOPOGRAPHIC METHOD: N/A
MEAN BASE ELEVATION (AMSL) = 505.00'

ICE LOADS

ICE WIND SPEED (3 SECOND GUST), V = 50 MPH
ICE THICKNESS = 1.00 IN

SEISMIC LOADS

SEISMIC DESIGN CATEGORY: B
SHORT TERM MCER GROUND MOTION, S_s = .195
LONG TERM MCER GROUND MOTION, S_1 = .054

PROJECT INFORMATION

APPLICANT/LESSEE

COMPANY: VERIZON WIRELESS

CLIENT REPRESENTATIVE

COMPANY: VERIZON WIRELESS

PROJECT MANAGER

COMPANY: COLLIERS ENGINEERING & DESIGN
CONTACT: PETER ALBANO
PHONE: 806.797.8912
EMAIL: PETER.ALBANO@COLLIERSENG.COM

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION: HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT ID: 10214459
VZW MDG ID: 5000391689
ANALYSIS DATE: 12/6/2023

PMI REQUIRMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

SHEET INDEX

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Colliers Engineering & Design
www.collierseng.com
Suite 600 Building One Tower Bridgewater, NJ 08807
Phone: 908.393.1000 Fax: 908.393.1001
COA: PEN-0024 | LIC: GA0001955

verizon

811 Know what's below. Call before you dig.
PROJECT VOLUMES 7
ALL STATE REQUIRE NOTIFICATION OF EXCAVATION OR DEMOLITION BEFORE YOU DIG, DRILL OR BLAST. CALL OR USE ONE-CALL NOTIFICATION SYSTEM PROVIDING THE LOCATION OF UNDERGROUND UTILITY LINES AS REQUIRED BY LAW (811).
FOR STATE SPECIFIC DIGSAFE TOLL FREE NUMBERS VISIT: WWW.CALL811.COM

SCALE	AS SHOWN	DRAWING NO.	21727835

REV	DATE	DESCRIPTION	DRAWN BY	APP'D BY
4	-	-	-	-
3	-	-	-	-
2	10/23/23	ZONING REVISIONS	MW	JH
1	7/19/23	ZONING REVISIONS	RC	JH
REV	DATE	DESCRIPTION	DRAWN BY	APP'D BY

COLLIERS ENGINEERING & DESIGN CT, P.C.
CT.29.0028931

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF THE RESPONSIBLE LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SITE NAME:
FRANKLIN CT
5000391689
89 DR. NOTT ROAD
FRANKLIN, CT 06254
NEW LONDON COUNTY

Colliers Engineering & Design
2500 Dallas Parkway, Suite 550
Plano, Texas 75093
Phone: 972.731.6050
COA: PEN-0024 | LIC: GA0001955

SHEET TITLE: TITLE SHEET
SHEET NUMBER: ST-1

BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
6	VZWSMART	VZWSMART-SPK1	TIE BACK ASSEMBLY	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1.	84	504
3		VZWSMART-SPK3-SL	V-BRACING KIT FOR SMALL LEGS	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1.	117	351
3		VZWSMART-P40-278X096	96" LONG, PIPE 2.5 SCH40 (2.875"OD X 0.203" THK)		46	139
12		VZWSMART-MSK1	CROSSOVER PLATE		14	168
3		VZWSMART-AL333	CLIP ANGLE		3	10

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
6	-	-	66" LONG, PIPE 2 1/2 SCH40	GALVANIZED	32	191
-	-	-	1/2" DIA. GR.-1 U-BOLTS	GALVANIZED	-	

SECTION 3 - REQUIRED SAFETY CLIMB PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
					TOTAL:	1343

NOTES:

1. THE MANUFACTURERS LISTED ARE THE APPROVED VENDORS FOR THE VZW MOUNT KITS. EACH MANUFACTURER WILL BE AWARE OF WHICH KITS HAVE BEEN THROUGH THE VZW APPROVAL PROCESS AND THEY ARE IN TURN APPROVED TO SELL. PLEASE NOTE THAT THE MATERIAL LITILIZED ON THE MOUNT MODIFICATIONS WILL BE REVIEWED AS A PART OF THE DESKTOP PMI COMPLETED BY THE SMART TOOL VENDOR. IT WILL BE REQUIRED THAT THE VZW KITS SPECIFIED ARE UTILIZED IN THE MODIFICATIONS.
2. ALL MATERIALS REQUIRED FOR THE DESIGNED MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.

VZWSMART KITS - APPROVED VENDORS

COMMSCOPE	
CONTACT	SALVADOR ANGUIANO
PHONE	(817) 304-7493
EMAIL	SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE	WWW.COMMSCOPE.COM

METROSITE FABRICATORS, LLC	
CONTACT	KENT KARREY
PHONE	(706) 333-7045 (O), (706) 982-9788 (M)
EMAIL	KENT@METROSITELLC.COM
WEBSITE	METROSITEFABRICATORS.COM

PERFECTVISION	
CONTACT	WIRELESS SALES
PHONE	(844) 887-6723
EMAIL	WWW.PERFECT-VISION.COM
WEBSITE	WIRELESSSALES@PERFECT-VISION.COM

SABRE INDUSTRIES, INC.	
CONTACT	ANGIE WELCH
PHONE	(844) 428-6937
EMAIL	AKWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRESTRSOLUTIONS.COM

SITE PRO 1	
CONTACT	PAULA BOSWELL
PHONE	(972) 336-9843
EMAIL	PAULA.BOSWELL@VALMONT.COM
WEBSITE	WWW.SITEPRO1.COM

NEWAVE	
CONTACT	NEWAVE SALES TEAM
PHONE	(971) 229-4763
EMAIL	SALES@NEWAVETC.COM
WEBSITE	WWW.NEWAVETC.COM

BETTER METAL, LLC	
CONTACT	DAVID STANSBERRY
PHONE	(615) 535-0990 (O), (615) 631-2320 (M)
EMAIL	DLS@BETTERMETAL.COM
WEBSITE	WWW.BETTERMETAL.COM

SHEET TITLE: BILL OF MATERIALS
SHEET NUMBER: SBOM-1

GENERAL NOTES

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

STRUCTURAL STEEL

1. DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING PUBLICATIONS EXCEPT AS SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS.
   a. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION (15TH EDITION)
   b. SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS
   c. AISC CODE OF STANDARD PRACTICE
2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE SHOWN:

CHANNELS, ANGLES, PLATES, ETC.	ASTM A36 (GR 36)
STEEL PIPE	ASTM A53 (GR 35)
BOLTS	ASTM A325
NUTS	ASTM A563
LOCK WASHERS	LOCKING STRUCTURAL GRADE

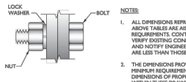
3. ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND REPLACEMENT REQUIREMENTS, SETBACK CONSTRAINTS, ASSOCIATED WORK THE SUBSTITUTION WILL REQUIRE (INCLUDING RE-DESIGN COSTS AND COSTS TO SUB-CONTRACTORS) SHALL BE PROVIDED TO THE ENGINEER. CONTRACTOR SHALL PROVIDE ADDITIONAL DOCUMENTATION AND/OR SPECIFICATIONS TO THE ENGINEER AS REQUESTED.
4. PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
   a. SUBMIT SHOP DRAWINGS TO
      PETER.ALBANO@COLLIERSENG.COM
   b. PROVIDE COLLIERS ENGINEERING & DESIGN PROJECT # AND COLLIERS ENGINEERING & DESIGN PROJECT ENGINEER CONTACT IN THE BODY OF THE EMAIL.
5. DRILL NO HOLES IN ANY NEW OR EXISTING STRUCTURAL STEEL MEMBERS OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.
6. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
7. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
8. ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH TIA-222-H SECTION 4.9.3 REQUIREMENTS.
9. WHERE CONNECTIONS ARE NOT FULLY DETAILED ON THESE DRAWINGS, FABRICATOR SHALL DESIGN CONNECTIONS TO RESIST LOADS AND FORCES WHERE SHOWN ON DRAWINGS AND AS OUTLINED IN SPECIFICATIONS.
10. FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE, MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
11. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT IS AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
12. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
13. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
14. ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINC COTE, OR EQ. FOR APPROVED EQUAL) AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).
15. ALL HOLES IN STEEL MEMBERS SHALL BE SIZED 1/16" LARGER THAN THE BOLT DIAMETER. STANDARD HOLES SHALL BE USED UNLESS NOTED OTHERWISE.

BOLT SCHEDULE (IN.)

BOLT DIAMETER	STANDARD HOLE	SHORT SLOT	MIN. EDGE DISTANCE	SPACING
1/2	9/16	9/16 x 1 1/16	7/8	1 1/2
5/8	11/16	11/16 x 7/8	1 1/8	1 7/8
3/4	13/16	13/16 x 1	1 1/4	2 1/4
7/8	15/16	15/16 x 1 1/8	1 1/2	2 5/8
1	1 1/16	1 1/16 x 1 5/16	1 3/4	3

WORKABLE GAGES (IN.)

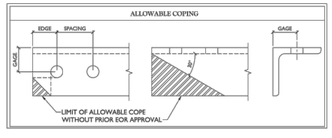
LEG	GAGE
4	2 1/2
3 1/2	2
3	1 3/4
2 1/2	1 3/8
2	1 1/8



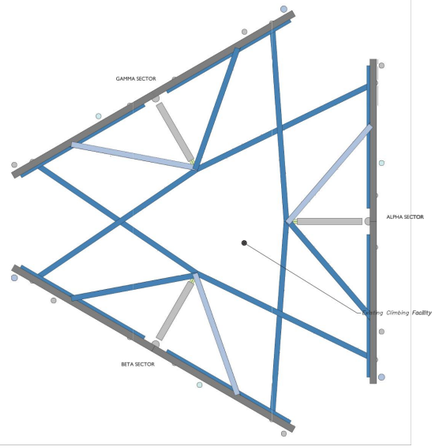
TYP. BOLT ASSEMBLY

NOTES:

1. ALL DIMENSIONS REPRESENTED IN THE ABOVE TABLES ARE AISC MINIMUM REQUIREMENTS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ENGINEER IF DISTANCES ARE LESS THAN THOSE PROVIDED.
2. THE DIMENSIONS PROVIDED ARE MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS OF PROPOSED MEMBERS WITHIN THESE DRAWINGS MAY VARY FROM THE AISC MINIMUM REQUIREMENTS.
3. SHORT SLOT HOLES SHALL ONLY BE USED WHEN DEPICTED IN THE DRAWINGS
4. MATCH EXISTING GAGES WHEN APPLICABLE, UNLESS MINIMUM EDGE DISTANCES ARE COMPROMISED.



SHEET TITLE: GENERAL NOTES
SHEET NUMBER: SGN-1



1 CLIMBING FACILITY LOCATION
SCALE : N.T.S.

STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY HIGHTOWER SOLUTIONS INC. ON 4/28/2020, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (167'-6") ARE IN GOOD CONDITION. COLLIERS ENGINEERING & DESIGN DOES NOT WARRANT THIS INFORMATION.
2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.

CLIMBING FACILITY PHOTO

SHEET TITLE: CLIMBING FACILITY DETAIL
SHEET NUMBER: SCF-1

1 MOUNT ANALYSIS

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

SUPPLEMENTAL

SHEET NUMBER: R-602
REVISION: 0

LEGEND:

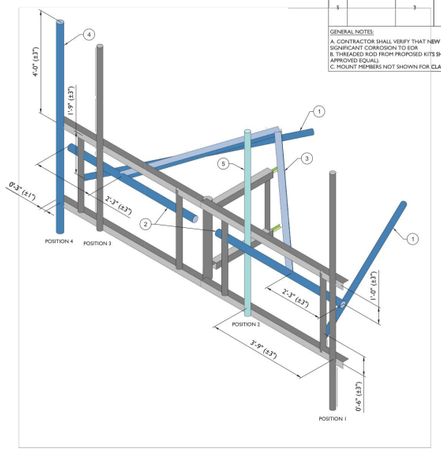
- PROPOSED
- RELOCATED
- EXISTING

MOUNT MODIFICATION SCHEDULE

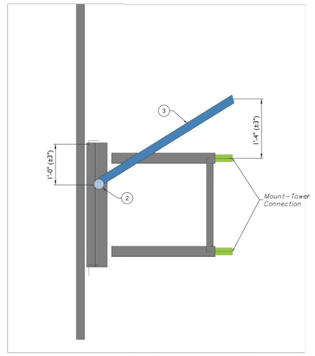
NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	167'-6"	6	PROPOSED TIEBACK ASSEMBLY (PART #: VZWSMART-SFK1)	CONNECT OTHER END TO ADJACENT TOWER LEG. PROPOSED TIE-BACK SHALL EXTEND NO MORE THAN 12" BEYOND THE TOWER LEG. CONTRACTOR SHALL TRIM AS REQUIRED AND PROTECT CUT END WITH TWO COATS OF ZINC KOTE. OR EOR APPROVED EQUAL. SEE GENERAL NOTE B.
2		6	PROPOSED 66" LONG, PIPE 2 1/2 S/CH40 FACE HORIZONTAL	RADIO AND/OR THE POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE. CONNECT NEW FACE HORIZONTAL TO ALL EXISTING VERTICAL FACE BRACING PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-PSK1).
3		3	PROPOSED V-BRACING KIT FOR SMALL LEGS (PART #: VZWSMART-SFK3-SL)	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE STRUCTURAL STEEL' NOTES ON SHEET SGN-1. CONTRACTOR SHALL INSTALL ONE PROPOSED CLIP ANGLE (PART #VZWSMART-AL333) AT EITHER END OF EACH LONG ANGLE IN THE SPK3-SL KIT.
4		3	PROPOSED 96" LONG, PIPE 3.5 SCH40 (PART #: VZWSMART-P40-278X096)	CONTRACTOR SHALL REMOVE EXISTING MOUNT PIPE AT POS. 4 (AS SEEN FROM BEHIND THE MOUNT) HORIZONTALLY. CONNECT NEW MOUNT PIPE TO EXISTING FACE HORIZONTAL ANGLES WITH (1) 1/2" DIA. U-BOLT AT EACH CONNECTION.
5		3	RELOCATED MOUNT PIPE	CONTRACTOR SHALL SHIFT EXISTING MOUNT PIPE AT POS. 2 (AS SEEN FROM BEHIND THE MOUNT) HORIZONTALLY. RECONNECT SHIFTED PIPES TO EXISTING FACE HORIZONTAL ANGLES WITH 1/2" DIA. U-BOLTS AT EACH CONNECTION. DRILL HOLES ON FACE HORIZONTAL ANGLES AS NECESSARY IN ACCORDANCE WITH THE STRUCTURAL STEEL' NOTES ON SHEET SGN-1.

GENERAL NOTES:

A. CONTRACTOR SHALL VERIFY THAT NEW & EXISTING STEEL IS FREE OF CORROSION. VISIBLE MINOR CORROSION SHALL BE WIRE BRUSHED CLEAN AND TREATED WITH COLD GALVANIZATION. REPORT ANY SIGNIFICANT CORROSION TO EOR.
B. THREADED ROD FROM PROPOSED KITS SHALL BE TRIMMED TO EXTEND NO MORE THAN 3" BEYOND THE LOCK NUT. TREAT ALL CUT ENDS WITH (2) COATS OF COLD GALVANIZATION (ZINC KOTE, OR EOR APPROVED EQUAL).
C. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.



1 PROPOSED ISOMETRIC VIEW (TYP. ALL SECTORS)
SCALE: N.T.S.



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

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FOR STATES BELOW, CONTACT MISS UTILITY PHONE 8006888100 VISIT1 WWW.MISSUTILITY.COM

SCALE	AS SHOWN	31777035
REV.	DESCRIPTION	BY DATE
2	ISSUED FOR CONSTRUCTION	MW JH 10/20/23
1	ISSUED FOR CONSTRUCTION	RC JH 06/30/23
REV.	DATE	DESCRIPTION DRAWN BY CHECKED BY

COLLIERS ENGINEERING & DESIGN CT, P.C.
CT LIC.# 0028997

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500039669
89 DR, NOTT ROAD
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NEW LONDON COUNTY

Colliers Engineering & Design
Prepared by:
Colliers Engineering & Design CT, P.C.
Bozrah, CT 06334
Phone: 860.889.1986
www.colliersengineering.com

SHEET TITLE:
MODIFICATION DETAILS

SHEET NUMBER:
SS-1

MOUNT PHOTO 1

MOUNT PHOTO 2

MOUNT PHOTO 3

MOUNT PHOTO 4

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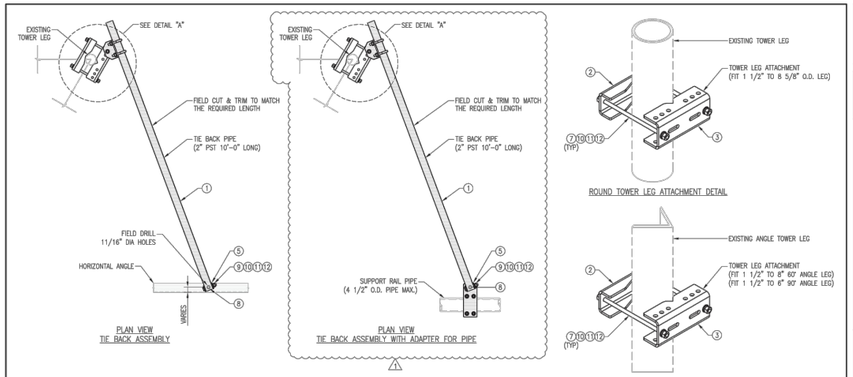
SHEET TITLE:
MOUNT PHOTOS
SHEET NUMBER:
SS-2

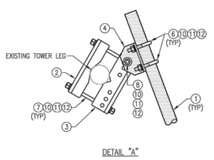


PLAN VIEW
TIE BACK ASSEMBLY

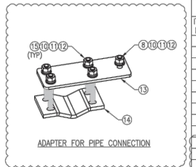
PLAN VIEW
TIE BACK ASSEMBLY WITH ADAPTER FOR PIPE

ROUND TOWER LEG ATTACHMENT DETAIL

ANGLE TOWER LEG ATTACHMENT DETAIL



DETAIL "A"



ADAPTER FOR PIPE CONNECTION

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

VzW SMART Tool Vendor

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FOR REFERENCE ONLY

DRAWN BY: BT CHECKED BY: HMA/KW

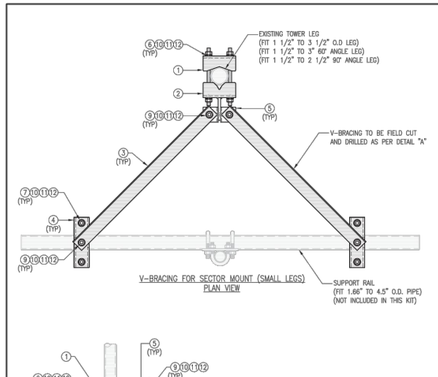
REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	BT	05/08/20
2	REVISED	BT	04/10/21

SHEET TITLE:
VZWSMART-SFK1
TIE BACK ASSEMBLY

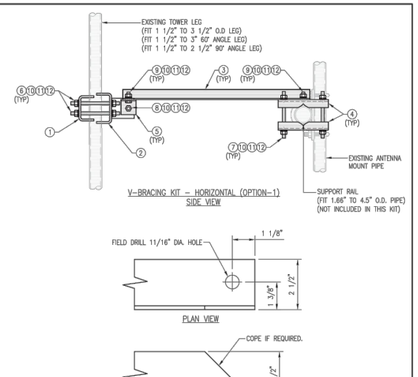
SHEET NUMBER: VZWSMART-SFK1
REV #: 1

VZWSMART-SFK1 (TIE BACK ASSEMBLY)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PST2375-10	2" PST (2.375" O.D. X 0.154" THK) X 10'-0" A53 GR-B 35KSI	SFK1-F1	38
2	1	BP825-12	PL 3/8" X 8 1/4" X 1'-0" A36 BENT PLATE	SFK1-F2	11
3	1	BP11125-12	PL 3/8" X 11 1/8" X 1'-0" A36 BENT PLATE	SFK1-F3	14
4	1	BP6-9375	PL 3/8" X 6" X 9 3/8" A36 BENT PLATE	SFK1-F4	6
5	1	BP2-875	PL 1/4" X 2" X 8 3/4" A36 BENT PLATE	SFK1-F4	1
6	2	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	2
7	2	----	THREADED ROD 5/8" DIA. X 1'-6" F1554-36 HDG	----	0
8	2	----	BOLT 5/8" X 2" A325	----	0
9	1	----	BOLT 5/8" X 4 1/4" A325	----	0
10	15	FW-625	5/8" HDG USS FLAT WASHER	----	1
11	15	LW-625	5/8" HDG LOCK WASHER	----	0
12	15	NUT-625	5/8" HDG HEX NUT	----	2
13	1	PL375-4511	PL 3/8" X 4 1/2" X 11" A36	SFK1-F1	4
14	1	V-CLAMP	PL 1/2" X 4 1/4" X 8 5/8" A36 BEND PLATE	SFK1-F5	5
15	4	----	BOLT 5/8" X 6" FULL THREAD SAE GR 5	----	0
			GALVANIZED WT		84

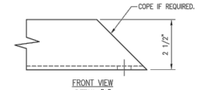


V-BRACING FOR SECTOR MOUNT (SMALL LEGS)
PLAN VIEW

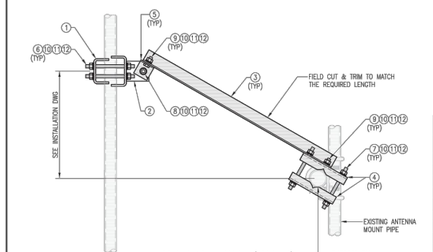


V-BRACING KIT - HORIZONTAL (OPTION-1)
SIDE VIEW

PLAN VIEW



FRONT VIEW
DETAIL "A"



V-BRACING KIT - VERTICAL (OPTION-2)
SIDE VIEW

VZWSMART-SFK3-SL (V-BRACING KIT FOR SMALL LEGS)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	BP9625-65	PL 3/8" X 9 5/8" X 6 1/2" A36 BENT PLATE	VBSM-SL-F1	12
2	1	BRKW-VBSM-SL	WELDMENT BRACKET	VBSM-SL-F3	11
3	2	L252525-8	L 2 1/2" X 2 1/2" X 1/4" X 8'-0" A36	VBSM-F5	67
4	4	BP6875-10	PL 3/8" X 6 7/8" X 10" A36 BENT PLATE	VBSM-F2	20
5	2	AL-333	L 3" X 3" X 1/4" X 3" A36	VBSM-F2	3
6	4	----	THREADED ROD 5/8" DIA. X 1'-0" F1554-36 HDG	----	----
7	4	----	THREADED ROD 5/8" DIA. X 10" F1554-36 HDG	----	----
8	1	----	BOLT 5/8" X 2 1/4" A325	----	----
9	4	----	BOLT 5/8" X 1 3/4" A325	----	----
10	21	FW-625	5/8" HDG USS FLAT WASHER	----	2
11	21	LW-625	5/8" HDG LOCK WASHER	----	0
12	21	NUT-625	5/8" HDG HEX NUT	----	2
			GALVANIZED WT		117

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

VzW SMART Tool Vendor

verizon

FOR REFERENCE ONLY

DRAWN BY: BT CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	BT	04/10/21

SHEET TITLE:
VZWSMART-SFK3-SL
V-BRACING KIT
FOR SMALL LEGS

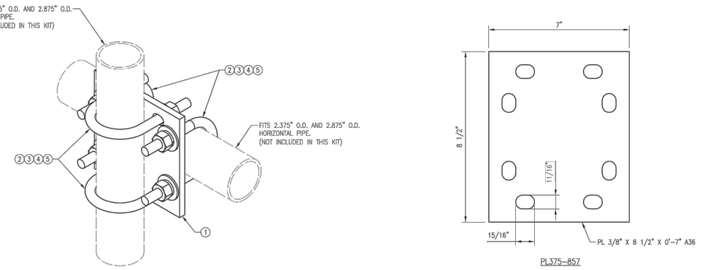
SHEET NUMBER: VZWSMART-SFK3-SL
REV #: 0

1 MOUNT ANALYSIS

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

SUPPLEMENTAL

SHEET NUMBER: R-603
REVISION: 0



PL375-857

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

VZWSMART-MSK1 (CROSSOVER PLATE)

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

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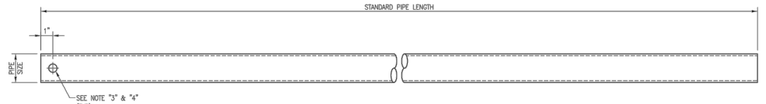
DRAWN BY: HJR | CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	HJR	05/08/20

SHEET TITLE: VZWSMART-MSK1 CROSSOVER PLATE

SHEET NUMBER: VZWSMART-MSK1 | REV #: 0



VZWSMART Standard Pipe

VZWSMART Number	Size	Length
P40-238X048	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	48"
P40-238X072	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	72"
P40-238X096	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	96"
P40-238X120	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	120"
P40-238X126	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	126"
P40-238X150	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	150"
P40-238X174	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	174"
P40-278X048	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	48"
P40-278X072	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	72"
P40-278X096	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	96"
P40-278X120	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	120"
P40-278X126	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	126"
P40-278X150	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	150"
P40-278X174	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	174"
P40-312X048	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	48"
P40-312X072	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	72"
P40-312X126	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	126"
P40-312X150	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	150"
P40-312X174	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	174"

NOTE:
APPROVED SMART KIT VENDORS ARE ALLOWED TO SUBSTITUTE AT THEIR DISCRETION PIPES LISTED ON THIS PAGE FOR CUSTOM LENGTH COMPONENTS OF MATCHING SIZE. SUBSTITUTIONS SHALL MEET THE ORIGINAL STRUCTURAL INTENT.

NOTES:
1. ALL PIPE GRADE A53-B OR BETTER.
2. HOT-DIPPED GALVANIZED PER ASTM A123.
3. ALL HOLES ARE 11/16" DIA. U/LO
4. HOLES MAY OR MAY NOT BE PRESENT, DEPEND UPON MANUFACTURE DISCRETION.
5. ALL FIELD CUT AND DRILLED SURFACES SHALL BE REPAIRED WITH A MINIMUM OF TWO COATS OF ZINGA OR ZINC COTE PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.

VzW SMART Tool© Vendor

verizon

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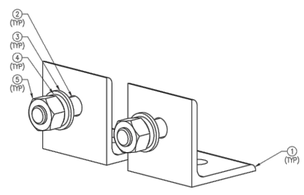
DRAWN BY: BF | CHECKED BY: HMA/KW

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BF	08/04/21

SHEET TITLE: VZWSMART STANDARD PIPE

SHEET NUMBER: VZWSMART-PIPE | REV #: 0



CLIP ANGLE ISOMETRIC VIEW

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

VZWSMART-AL333 (CLIP ANGLE)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	2	AL-333	L 3" X 3" X 1/4" X 3" A36	AL333-F1	2.50
2	2	----	BOLT 5/8" X 2" FULL THREAD SAE GR-5	----	0.77
3	2	FW-625	5/8" HDG USS FLAT WASHER	----	0
4	2	LW-625	5/8" HDG LOCK WASHER	----	0
5	2	NUT-625	5/8" HDG HEX NUT	----	0
			GALVANIZED WT		3.27

VzW SMART Tool© Vendor

verizon

FOR REFERENCE ONLY

DRAWN BY: JBM | CHECKED BY: ----

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	JBM	10/08/21

SHEET TITLE: VZWSMART-AL333 CLIP ANGLE

SHEET NUMBER: VZWSMART-AL333 | REV #: 0

1 MOUNT ANALYSIS

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

SUPPLEMENTAL

SHEET NUMBER: R-604 | REVISION: 0

EXHIBIT 2

Franklin

Unique ID: S1080900 **Card No:** 1 Of 1

Location:	89 DR NOTT RD	Map Id:	36 8	Zone:	R080	Date Printed:	2/8/2024
		Neighborhood:	R1			Last Update:	2/8/2024

Owner Of Record	Volume/Page	Date	Sales Type	Valid	Sale Price
HIDDEN BROOK FARMS LLC	0108/1028	11/1/2023	Warranty Deed	No	0
PO BOX 1128, BETHLEHEM, PA 18016			Exempt		

Prior Owner History

PENSKE AITCHISON VICTORIA L TR & PENSKE	JENSEN LISA TR & PENSKE R STEPHEN TR	0103/0226	5/27/2020	Warranty Deed	No	653,862
HIDDEN BROOK FARMS LLC		0091/0719	8/29/2013		Yes	650.000
SHAKUN THOMAS J		0091/0030	5/14/2013		No	0
SHAKUN THOMAS J AND	PAMELA CUMMINGS SHAKUN	0084/0530	1/14/2010		No	0
SHAKUN THOMAS J		0066/0180	1/16/2003		No	0

Permit Number	Date	Permit Description
803-23	9/5/2023	4200 SF METAL ROOF
600-22	6/16/2022	INSTALL CONDUITS AND WIRING 125 AMP SERVICE
206-22	2/15/2022	200 AMP SERVICE FOR AT&T WALK UP CABINET
1210-21	12/14/2021	REMOVE 6 ANT 12 RRH INSTALL 6 ANT
1207-21	12/9/2021	REPLACE 9 ANTENNAS
810-21	8/10/2021	INSTALLATION OF WALK-IN CABINET AND GENERATOR ON PLATFORM PLUS NEW ANTENNA AND MOUNTS ON TOWER

Supplemental Data

Census/Tract	7121	VisionPID	263
Dev Map ID		Sewer & Water Prc	
GIS ID		Vision NbrSite	02-5
Route		MLS Code	
District			
Utilities	Well, Septic		

Appraised Value

Total Land Value	354,000
Total Building Value	312,100
Total Outbldg Value	160,200
Total Market Value	826,300

Acres

Land Type	Acres	490	Total Value
Excess	42.32	0.00	
House Lot	1.84	0.00	
Primary Site	1.00	0.00	
Total			354,000

State Item Codes

Code	Quantity	Value
13-Residential Dwelling	1.00	218.470
12-Residential Excess Land	42.32	118.510
14-Residential Outbuilding	11.00	112.140
21-Commercial Land	0.00	70.000
11-Residential Land	1.84	59.290

Assessment History (Prior Years as of Oct 1)

	2023	2022	2021	2020	2019
Land	247,800	96,940	96,940	96,940	96,940
Building	218,470	154,960	154,960	154,960	154,960
Outbuilding	112,140	205,800	205,800	205,800	205,800
Total	**578,410**	**457,700**	**457,700**	**457,700**	**457,700**

490 Appraised Totals

Type	Acres	Value	Type	Acres	Value
			Totals	**0.00**	**0**

Application Date: **Expiration Date:**

Comments

6/30/2020 INLAW APARTMENT OVER GARAGE REMOVED PER ZONING & BUILDING OFFICIAL

Information may be deemed reliable, but not guaranteed.

Revaluation Date: 10/1/2018

Unique ID: S1080900 Franklin **Card No:** 1 Of 1

Location:	89 DR NOTT RD
Map Id:	36 8

General Description	
Building Use	Single Family
Units	
Overall Condition	Average
Class	C+
Stories	2.00
Design (Style)	Colonial
Construction	Wood Frame
Year Built	1986
Percent Complete	100
Finished Area	**2797**

Foundation	
Basement Area	816
Finished Basement	0
Garage Bays	0
Outside Entry	Hatch
Sump Pump	No

HVAC	
Heating Type	Hot Water
Fuel	Oil
Cooling Type	None

Interior	
Floors	Hardwood/Carpet
Attic Access	No
Walls	Drywall
Bath Cond	
Kitchen Cond	

Exterior	
Exterior	Clapboards
Roof Cover	Asphalt
Roof Type	Gambrel

Special Features

Type	Count/Area

Room Summary

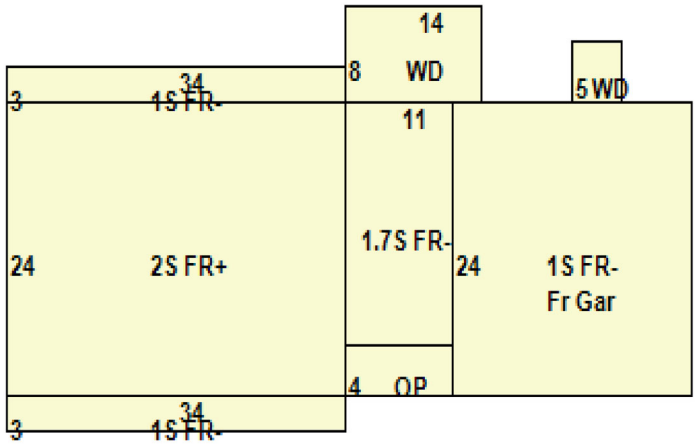
Total	Bedroom	Kitchens	Full Baths	Half Baths
8	3	2	2	1

Description	Area/Qty
Base Rate	2797
Additional Kitchens	1
Basement	816
Full Baths	2
Half Baths	1

Attached Components

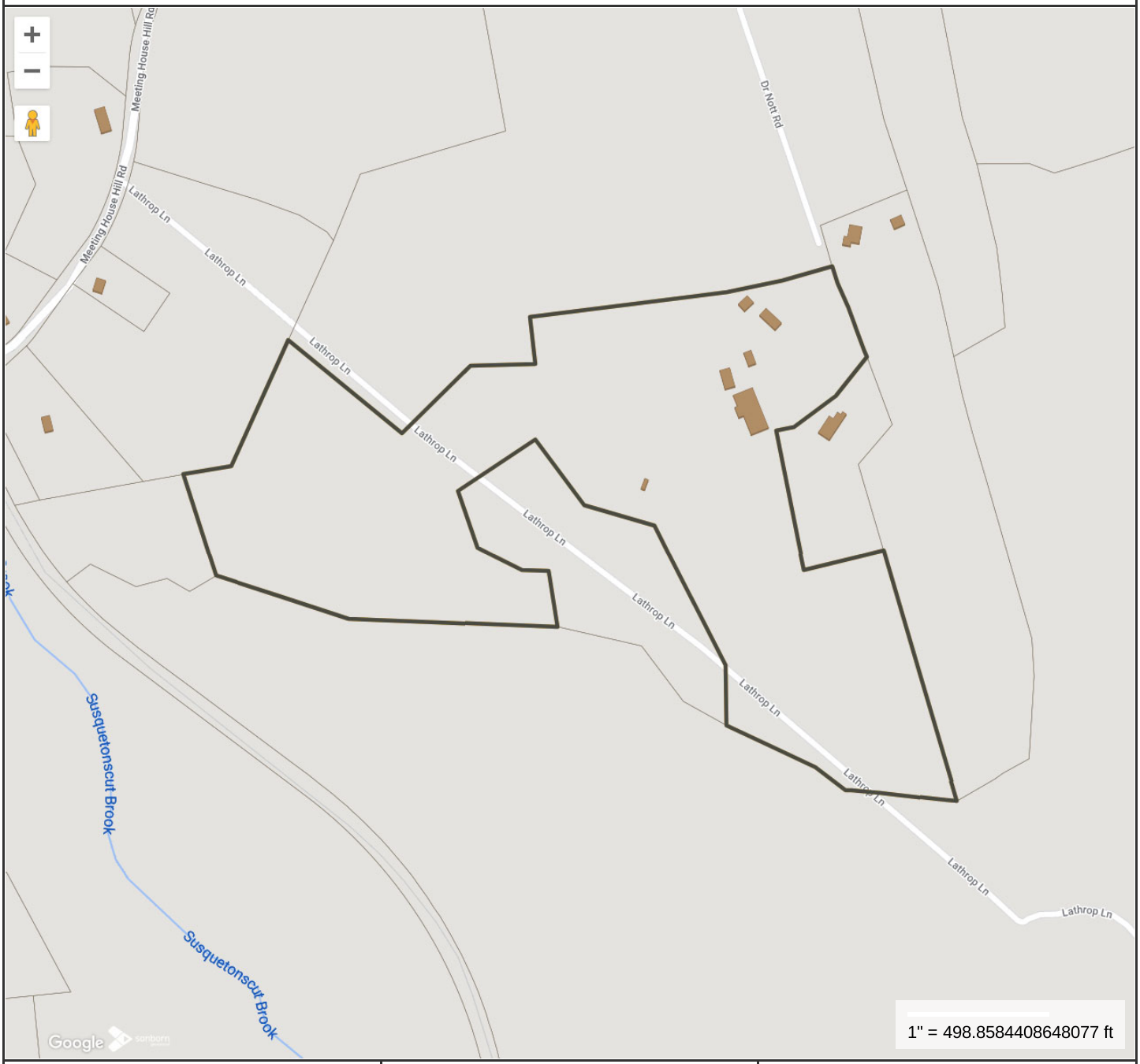
Type	Year	Area
Attatched Frame Garage	1986	576
Wood Deck	1986	112
Wood Deck	1986	25
Open Porch	1986	44

Total Building Value: 312.100



Detached Component Computations

Type	Year	Condition	Area/Qty
6 Ft Chain Fence	1986	Average	1000
Barn w/Loft	2007	Average	1800
Barn w/Loft	1986	Average	768
Canopy	1986	Average	345
Cell Tower	1999	Fair	1
Detached 1 Story Garage	1986	Average	925
Farm Utility Storage Shed	1999	Average	480
Farm Utility Storage Shed	2000	Average	408
Farm Utility Storage Shed	1999	Average	200
Lean To Shed	1986	Average	288
Pole Barn	2000	Average	7200



Property Information

Property ID	53-36 8
Location	89 DR NOTT RD
Owner	PENSKE AITCHISON VICTORIA L ETAL

SCCOG

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

SCCOG makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 05/31/2017
Data updated 09/21/2023

Print map scale is approximate. Critical layout or measurement activities should not be done using this resource.

EXHIBIT 3

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	300 ft Guyed Tower
ATC Asset Name	:	FRANKLIN CT
ATC Asset Number	:	6310
Engineering Number	:	14530659_C3_04
Proposed Carrier	:	VERIZON WIRELESS
Carrier Site Name	:	FRANKLIN CT
Carrier Site Number	:	5000391689
Site Location	:	89 Dr. Nott Road North Franklin, CT 06254-1316 41.5977° N, 72.145° W
County	:	New London
Date	:	January 10, 2024
Max Usage	:	91%
Analysis Result	:	Pass

Created By:

Nathan Lyle
Structural Engineer I

Nathan Lyle

COA: PEC.0001553

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 300 ft Guyed tower to reflect the change in loading by VERIZON WIRELESS.

Supporting Documents

Tower:	FWT Job #18504, dated January, 20, 1999
Foundation:	FWT Job #18504, dated January, 20, 1999
Geotechnical:	Tectonic Engineering Consultants P.C. Project #2174.FRANK, dated October 26, 1998

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:	123 mph (3-second gust)
Basic Wind Speed w/ Ice:	50 mph (3-second gust) w/ 1.00" radial ice concurrent
Code(s):	ANSI/TIA-222-H / 2021 IBC / 2022 Connecticut State Building Code
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 2
Feature:	Hill
Crest Height (H):	270 ft
Crest Length (L):	1858 ft
Spectral Response:	Ss = 0.20, 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 reach out to your American Tower contact. If you do not have an American Tower contact and have an Engineering question, please contact **Engineering@americantower.com** Please include the American Tower asset name, asset number, and engineering number in the subject line for any questions.

Structure Usages

Structural Component	Usage	Control	Location	Result
Leg	79.0%	Member X	Section 4	Pass
Diagonal	70.0%	Member	Section 8	Pass
Horizontal	48.0%	Member Z	Section 8	Pass
Torque Arm	25.0%	Compression	Elevation 124 ft	Pass
Cable	91.0%	Tension	Elevation 184 ft	Pass
Serviceability Usage	29.8%	Rotation	Elevation 300 ft	Pass
Mat & Pier	74.5%	Shear [Steel (Mat)]	Node 1	Pass
Guy Anchor	88.5%	Shear [Soil]	Node A1	Pass
Guy Anchor	88.8%	Shear [Soil]	Node A1a	Pass
Guy Anchor	88.5%	Shear [Soil]	Node A1b	Pass

Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Uplift (k)	Shear (k)
Guyed – Pivot Base	-	222.1	-	3.0
Guyed Anchor - A1	-	-	76.0	92.6

Reactions shown are maximum overall and not limited by Load Case

Structure base reactions were analyzed using available geotechnical and foundation information.

VERIZON WIRELESS Final Loading

Elev (ft)	Qty	Equipment	Lines
170.0	1	Raycap RVZDC-6627-PF-48 (29.5")	(11) 1 5/8" Coax (2) 1 5/8" Hybriflex
	3	Commscope CBC78T-DS-43-2X	
	3	Commscope LNX-8513DS-A1M	
	3	Light Sector Frame	
	3	Mount Reinforcement	
	3	Samsung B2/B66A RRH ORAN (RF 4439d-25A)	
	3	Samsung MT6413-77A	
	3	Samsung RF4461d-13A	
	6	Commscope JAHH-65B-R3B	

Other Existing/Reserved Loading

Elev (ft)	Qty	Equipment	Lines	Carrier
309.3	1	20' Dipole	-	UNKNOWN
307.9	1	18' Dipole	-	UNKNOWN
305.7	1	14' Omni	-	UNKNOWN
303.9	1	8' Omni	-	UNKNOWN
299.0	3	Side Arm	-	OTHER
289.7	1	18' Dipole	-	UNKNOWN
279.6	2	8' Omni	-	STATE OF CT
279.3	1	10' Dipole	-	STATE OF CT
273.0	3	Side Arm	-	STATE OF CT
266.4	1	11' Omni	-	STATE OF CT
263.0	1	Scala OGT9-840N	(1) 1 5/8" Coax	STATE OF CT
245.1	1	10' Omni	-	STATE OF CT
245.0	1	14' Omni	-	STATE OF CT
242.9	1	13' Omni	-	STATE OF CT
242.2	1	10' Omni	-	STATE OF CT
235.0	1	Bird 432E-83I-01-T	(2) 1 5/8" Coax	STATE OF CT
	3	Sinclair SC479-HF1LDF(E5765)		
234.4	1	12" x 12" Junction Box	-	STATE OF CT
233.0	3	Side Arm	-	OTHER
232.0	1	Side Arm	-	OTHER
230.5	1	10' Omni	-	STATE OF CT
229.0	1	Scala OGT9-840	(1) 1 5/8" Coax	STATE OF CT
228.3	2	14' Omni	-	STATE OF CT
215.0	2	22' Dipole	-	UNKNOWN
	1	Decibel DB224	(1) 7/8" Coax	NEW ENGLAND CENTRAL RAILROAD
204.0	2	Side Arm	-	OTHER
196.0	2	Raycap DC9-48-60-24-8C-EV	(2) 0.39" (10mm) Fiber Trunk (4) 0.92" (23.4mm) Cable	AT&T MOBILITY
	3	CCI DMP65R-BU8D		
	3	CCI TPA65R-BU8D		
	3	Ericsson AIR 6449 B77D/ C-Band		
	3	Ericsson RRUS 4449 B5, B12		
	3	Ericsson RRUS 4478 B14		
	3	Ericsson RRUS 8843 B2, B66A		
	3	Sabre C10857001C		

Elev (ft)	Qty	Equipment	Lines	Carrier
180.0	3	Ericsson Air6449 B41	(3) 1.99" (50.7mm) Hybrid	SPRINT NEXTEL
	3	Ericsson Radio 4460 B25+B66		
	3	Ericsson Radio 4480 B71+B85A		
	3	RFS APXVAALL24 43-U-NA20		
	3	Site Pro 1 VFA12-HD		
	1	Andrew DB224	(1) 1/2" Coax	PROV & WORCESTER RR
160.0	1	Side Arm	-	SIGFOX S.A.
130.1	1	12" x 12" Junction Box	-	STATE OF CT
130.0	3	24" X 12" Panel	(2) 1 5/8" Coax	STATE OF CT
	1	Side Arm	-	AT&T MOBILITY
125.0	3	Side Arm	-	AT&T MOBILITY
	1	Bird 432E-83I-01-T	(2) 1 5/8" Coax	STATE OF CT
	3	24" X 12" Panel		
118.1	1	20' Dipole	-	STATE OF CT
115.0	1	Side Arm	-	NEW ENGLAND CENTRAL RAILROAD
107.4	1	Kathrein Scala PR-850	-	STATE OF CT
107.1	1	1' Yagi	-	STATE OF CT
105.0	1	Side Arm	-	OTHER
87.4	1	6' Ice Shield	-	STATE OF CT
84.0	1	6' Ice Shield	-	STATE OF CT
82.4	1	RFS PA6-65AC w/ Radome	-	STATE OF CT
80.0	1	RFS PA6-65AC w/ Radome	(1) WE65	STATE OF CT

(If table breaks across pages, please see previous page for data in merged cells)

Standard Conditions

All engineering services performed by A.T. Engineering Services LLC 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 Services LLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Services LLC 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 Services LLC, 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 Services LLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

ANALYSIS PARAMETERS

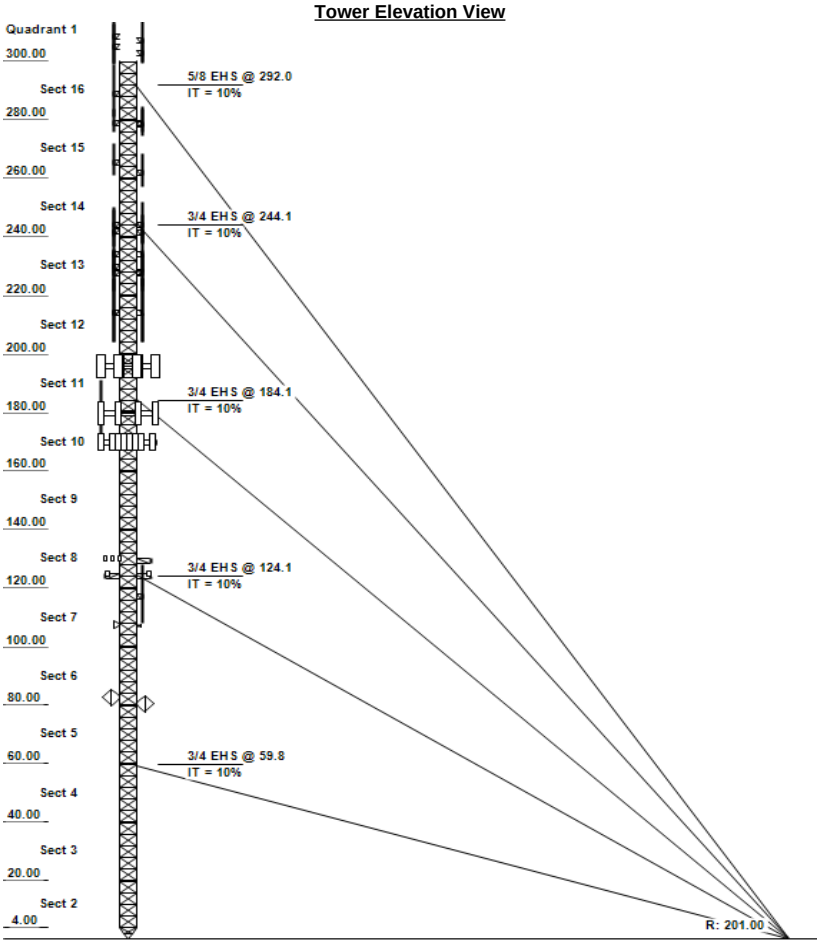
Nominal Wind:	123 mph	**Ice Wind:**	50 mph w/ 1" ice	**Service Wind:**	60 mph
Risk Category:	II	**Exposure:**	B	**S_s:** 0.195	**S_1:** 0.054
Topo Category:	3	**Topo Factor:**	Method 2	**Topo Feature:**	Hill
Structure Height:	300 ft	**Base Elevation:**	0 ft	**Shape:**	Triangle
Base Width:	4 ft	**Top Width:**	4 ft	**Base Type:**	Pivot

TOWER SECTION PROPERTIES

Section	Leg Members	Diagonal Members	Horizontal Members
1	SOL 50 ksi 2 1/4" SOL	PL 36 ksi PL 2 x 0.5"	SAE 36 ksi 3X3X0.3125
2-10	SOL 50 ksi 2 1/4" SOL	SOL 50 ksi 5/8" SOLID	SAE 36 ksi 2X2X0.1875
11-16	SOL 50 ksi 2" SOLID	SOL 50 ksi 5/8" SOLID	SAE 36 ksi 2X2X0.1875

SECONDARY BRACING MEMBERS

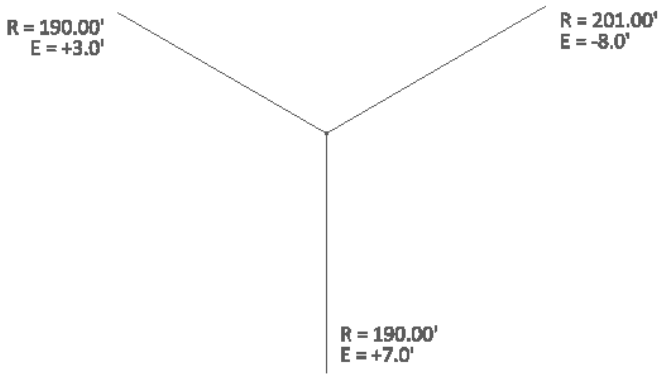
Tower Elevation View



BASE REACTIONS

Axial (k):	222.06
Shear (k):	2.99

Tower Plan View



DISCRETE APPURTENANCE

Elev (ft)	Description
309.3	(1) Generic 20' Dipole
307.9	(1) Generic 18' Dipole
305.7	(1) Generic 14' Omni
303.9	(1) Generic 8' Omni
299.0	(3) Generic Round Side Arm
289.7	(1) Generic 18' Dipole
279.6	(2) Generic 8' Omni
279.3	(1) Generic 10' Dipole
273.0	(3) Generic Round Side Arm
266.4	(1) Generic 11' Omni
263.0	(1) Scala OGT9-840N
245.1	(1) Generic 10' Omni
245.0	(1) Generic 14' Omni
242.9	(1) Generic 13' Omni
242.2	(1) Generic 10' Omni
235.0	(3) Sinclair SC479-HF1LDF(E5765)
235.0	(1) Bird 432E-83I-01-T
234.4	(1) Generic 12" x 12" Junction Box
233.0	(3) Generic Round Side Arm
232.0	(1) Generic Round Side Arm
230.5	(1) Generic 10' Omni
229.0	(1) Scala OGT9-840
228.3	(2) Generic 14' Omni
215.0	(2) Generic 22' Dipole
215.0	(1) Decibel DB224
204.0	(2) Generic Round Side Arm
196.0	(3) Sabre C10857001C
196.0	(3) CCI TPA65R-BU8D
196.0	(3) CCI DMP65R-BU8D
196.0	(3) Ericsson AIR 6449 B77D/ C-Band
196.0	(3) Ericsson RRUS 4449 B5, B12
196.0	(3) Ericsson RRUS 4478 B14
196.0	(3) Ericsson RRUS 8843 B2, B66A
196.0	(2) Raycap DC9-48-60-24-8C-EV
180.0	(3) Ericsson Radio 4460 B25+B66
180.0	(3) Ericsson Radio 4480 B71+B85A
180.0	(3) Ericsson Air6449 B41
180.0	(3) RFS APXVAALL24 43-U-NA20
180.0	(3) Site Pro 1 VFA12-HD
180.0	(1) Andrew DB224
170.0	(6) Commscope JAHH-65B-R3B
170.0	(3) Commscope CBC78T-DS-43-2X
170.0	(3) Samsung RF4461d-13A
170.0	(3) Generic Mount Reinforcement
170.0	(3) Generic Flat Light Sector Fram
170.0	(3) Commscope LNX-8513DS-A1M
170.0	(3) Samsung MT6413-77A
170.0	(3) Samsung B2/B66A RRH ORAN (RF 4
170.0	(1) Raycap RVZDC-6627-PF-48 (29.5"
160.0	(1) Flat Side Arm
130.1	(1) Generic 12" x 12" Junction Box
130.0	(3) Generic 24" X 12" Panel
130.0	(1) Round Side Arm
125.0	(3) Flat Side Arm
125.0	(3) Generic 24" X 12" Panel
125.0	(1) Bird 432E-83I-01-T
118.1	(1) Generic 20' Dipole
115.0	(1) Round Side Arm
107.4	(1) Kathrein Scala PR-850
107.1	(1) Generic 1' Yagi
105.0	(1) Round Side Arm
87.4	(1) Generic 6' Ice Shield

LINEAR APPURTENANCE

Elev To (ft)	Description
307.0	(5) 7/8" Coax
303.0	(6) 1 1/4" Coax
303.0	(2) 0.26" (6.6mm) Cat 5e
303.0	(1) 3/4" Carflex Non-Metallic Cond
300.0	(1) Climbing Ladder
288.0	(2) 7/8" Coax
277.0	(2) 1 5/8" Coax
263.0	(1) 1 5/8" Coax
243.0	(2) 1/2" Coax
235.0	(2) 1 5/8" Coax
234.0	(2) 0.26" (6.6mm) Cat 5e
229.0	(1) 1 5/8" Coax
228.0	(2) 1 5/8" Coax
215.0	(1) 7/8" Coax
196.0	(4) 0.92" (23.4mm) Cable
196.0	(2) 0.39" (10mm) Fiber Trunk
180.0	(3) 1.99" (50.7mm) Hybrid
180.0	(1) 1/2" Coax
170.0	(11) 1 5/8" Coax
170.0	(2) 1 5/8" Hybriflex
130.0	(2) 1 5/8" Coax
125.0	(2) 1 5/8" Coax
117.0	(2) 1 5/8" Coax
106.0	(2) 1/2" Coax
81.0	(1) EW52
80.0	(1) WE65

DISCRETE APPURTENANCE

Elev (ft)	Description
84.0	(1) Generic 6' Ice Shield
82.4	(1) RFS PA6-65AC w/ Radome
80.0	(1) RFS PA6-65AC w/ Radome

GUY ANCHOR REACTIONS

Radius (ft)	Drop (ft)	Azimuth (°)	Uplift (k)	Shear (k)
190.0	7.00	0	73.45	92.29
190.0	3.00	240	75.57	92.56
201.0	-8.00	120	75.99	92.27

ANALYSIS PARAMETERS

Location:	New London County, CT	**Height:**	300 ft
Type and Shape:	Guyed, Triangle	**Base Elevation:**	0.00 ft
Manufacturer:	FWT	**Bottom Face Width:**	4.00 ft
Kd	0.85	**Top Face Width:**	4.00 ft
Ke:	0.98		

ICE & WIND PARAMETERS

Exposure Category:	B	**Design Wind Speed Without Ice:**	123 mph
Risk Category:	II	**Design Wind Speed with Ice:**	50 mph
Topographic Factor Procedure:	Method 2	**Operational Windspeed:**	60 mph
		Design Ice Thickness:	1.00 in
		HMSL:	499 ft
Crest Height(H):	270 ft		
Crest Length(L):	1858 ft	**Distance from Apex (x):**	0
Feature:	Hill	**Upwind/Downwind:**	Upwind

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	D - Stiff Soil			**Period Based on Rayleigh Method (sec):**	1.07
T_L (sec):	6	**P:**	1.3	**C_s:**	0.030
S_s:	0.195	**S_1:**	0.054	**C_s Max:**	0.030
F_a:	1.600	**F_v:**	2.400	**C_s Min:**	0.030
S_{ds}:	0.208	**S_{d1}:**	0.086		

LOAD CASES

1.2D + 1.0W Normal	1.2D + 1.0W Normal - 123 mph Wind with No Ice
1.2D + 1.0W 60°	1.2D + 1.0W 60° - 123 mph Wind with No Ice
1.2D + 1.0W 90°	1.2D + 1.0W 90° - 123 mph Wind with No Ice
1.2D + 1.0W 120°	1.2D + 1.0W 120° - 123 mph Wind with No Ice
1.2D + 1.0W 180°	1.2D + 1.0W 180° - 123 mph Wind with No Ice
1.2D + 1.0W 210°	1.2D + 1.0W 210° - 123 mph Wind with No Ice
1.2D + 1.0W 240°	1.2D + 1.0W 240° - 123 mph Wind with No Ice
1.2D + 1.0W 300°	1.2D + 1.0W 300° - 123 mph Wind with No Ice
1.2D + 1.0W 330°	1.2D + 1.0W 330° - 123 mph Wind with No Ice
1.2D + 1.0Di + 1.0Wi Normal	1.2D + 1.0Di + 1.0Wi Normal - 50 mph Wind with 1" Radial Ice
1.2D + 1.0Di + 1.0Wi 60°	1.2D + 1.0Di + 1.0Wi 60° - 50 mph Wind with 1" Radial Ice
1.2D + 1.0Di + 1.0Wi 90°	1.2D + 1.0Di + 1.0Wi 90° - 50 mph Wind with 1" Radial Ice
1.2D + 1.0Di + 1.0Wi 120°	1.2D + 1.0Di + 1.0Wi 120° - 50 mph Wind with 1" Radial Ice
1.2D + 1.0Di + 1.0Wi 180°	1.2D + 1.0Di + 1.0Wi 180° - 50 mph Wind with 1" Radial Ice
1.2D + 1.0Di + 1.0Wi 210°	1.2D + 1.0Di + 1.0Wi 210° - 50 mph Wind with 1" Radial Ice
1.2D + 1.0Di + 1.0Wi 240°	1.2D + 1.0Di + 1.0Wi 240° - 50 mph Wind with 1" Radial Ice
1.2D + 1.0Di + 1.0Wi 300°	1.2D + 1.0Di + 1.0Wi 300° - 50 mph Wind with 1" Radial Ice
1.2D + 1.0Di + 1.0Wi 330°	1.2D + 1.0Di + 1.0Wi 330° - 50 mph Wind with 1" Radial Ice
1.2D + 1.0Ev + 1.0Eh Normal	1.2D + 1.0Ev + 1.0Eh Normal - Seismic
1.2D + 1.0Ev + 1.0Eh 60°	1.2D + 1.0Ev + 1.0Eh 60° - Seismic
1.2D + 1.0Ev + 1.0Eh 90°	1.2D + 1.0Ev + 1.0Eh 90° - Seismic
1.2D + 1.0Ev + 1.0Eh 120°	1.2D + 1.0Ev + 1.0Eh 120° - Seismic
1.2D + 1.0Ev + 1.0Eh 180°	1.2D + 1.0Ev + 1.0Eh 180° - Seismic
1.2D + 1.0Ev + 1.0Eh 210°	1.2D + 1.0Ev + 1.0Eh 210° - Seismic
1.2D + 1.0Ev + 1.0Eh 240°	1.2D + 1.0Ev + 1.0Eh 240° - Seismic

LOAD CASES	
1.2D + 1.0Ev + 1.0Eh 300°	1.2D + 1.0Ev + 1.0Eh 300° - Seismic
1.2D + 1.0Ev + 1.0Eh 330°	1.2D + 1.0Ev + 1.0Eh 330° - Seismic
1.0D + 1.0W Service Normal	1.0D + 1.0W Service Normal - 60 mph Wind with No Ice
1.0D + 1.0W Service 60°	1.0D + 1.0W Service 60° - 60 mph Wind with No Ice
1.0D + 1.0W Service 90°	1.0D + 1.0W Service 90° - 60 mph Wind with No Ice
1.0D + 1.0W Service 120°	1.0D + 1.0W Service 120° - 60 mph Wind with No Ice
1.0D + 1.0W Service 180°	1.0D + 1.0W Service 180° - 60 mph Wind with No Ice
1.0D + 1.0W Service 210°	1.0D + 1.0W Service 210° - 60 mph Wind with No Ice
1.0D + 1.0W Service 240°	1.0D + 1.0W Service 240° - 60 mph Wind with No Ice
1.0D + 1.0W Service 300°	1.0D + 1.0W Service 300° - 60 mph Wind with No Ice
1.0D + 1.0W Service 330°	1.0D + 1.0W Service 330° - 60 mph Wind with No Ice

TOWER LOADING – DISCRETE APPURTENANCE

Discrete Appurtenance Properties for LC: **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)
309.3	Generic 20' Dipole	1	60	7.5	20.0	3.0	3.0	1.00	1.00	0.0	0.00	50.85	325	72
307.9	Generic 18' Dipole	1	55	6.8	18.0	3.0	3.0	1.00	1.00	0.0	0.00	50.83	293	66
305.7	Generic 14' Omni	1	40	4.2	14.0	3.0	3.0	1.00	1.00	0.0	0.00	50.79	181	48
303.9	Generic 8' Omni	1	25	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.00	50.76	104	30
299.0	Generic Round Side Arm	3	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	50.68	450	675
289.7	Generic 18' Dipole	1	55	6.8	18.0	3.0	3.0	1.00	1.00	0.0	0.00	50.52	291	66
279.6	Generic 8' Omni	2	25	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.00	50.34	205	60
279.3	Generic 10' Dipole	1	30	3.8	10.0	3.0	3.0	1.00	1.00	0.0	0.00	50.33	161	36
273.0	Generic Round Side Arm	3	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	50.22	446	675
266.4	Generic 11' Omni	1	40	3.3	11.0	3.0	3.0	1.00	1.00	0.0	0.00	50.10	141	48
263.0	Scala OGT9-840N	1	19	2.3	11.4	2.0	2.0	1.00	1.00	0.0	0.00	50.03	97	22
245.1	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.00	49.69	127	30
245.0	Generic 14' Omni	1	40	4.2	14.0	3.0	3.0	1.00	1.00	0.0	0.00	49.68	177	48
242.9	Generic 13' Omni	1	40	3.9	13.0	3.0	3.0	1.00	1.00	0.0	0.00	49.64	165	48
242.2	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.00	49.63	127	30
235.0	Bird 432E-83I-01-T	1	25	1.2	1.0	12.0	7.5	1.00	1.00	0.0	0.00	49.48	50	30
235.0	Sinclair SC479-HF1LDF(E5765)	3	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.00	49.48	635	122
234.4	Generic 12" x 12" Junction Box	1	10	1.2	1.0	12.0	8.0	1.00	1.00	0.0	0.00	49.47	50	12
233.0	Generic Round Side Arm	3	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	49.44	439	675
232.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	49.42	218	225
230.5	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.00	49.38	126	30
229.0	Scala OGT9-840	1	19	2.3	11.4	2.0	2.0	1.00	1.00	0.0	0.00	49.35	95	22
228.3	Generic 14' Omni	2	40	4.2	14.0	3.0	3.0	1.00	1.00	0.0	0.00	49.34	352	96
215.0	Decibel DB224	1	32	5.4	21.3	2.0	2.0	1.00	1.00	0.0	0.00	49.04	227	38
215.0	Generic 22' Dipole	2	66	8.3	22.0	3.0	3.0	1.00	1.00	0.0	0.00	49.04	689	158
204.0	Generic Round Side Arm	2	188	5.2	0.0	0.0	0.0	1.00	0.90	0.0	0.00	48.78	388	450
196.0	Ericsson RRUS 8843 B2, B66A	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.00	48.57	81	259
196.0	Ericsson RRUS 4478 B14	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.00	48.57	91	216
196.0	Ericsson RRUS 4449 B5, B12	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.00	48.57	98	256
196.0	Ericsson AIR 6449 B77D/ C-Band	3	82	4.0	2.5	15.9	10.6	0.80	0.70	0.0	0.00	48.57	279	294
196.0	Raycap DC9-48-60-24-8C-EV	2	16	4.8	2.6	18.3	10.2	0.80	0.50	0.0	0.00	48.57	158	38
196.0	Sabre C10857001C	3	689	13.0	0.0	0.0	0.0	0.75	0.67	0.0	0.00	48.57	809	2480
196.0	CCI DMP65R-BU8D	3	96	17.9	8.0	20.7	7.7	0.80	0.63	0.0	0.00	48.57	1116	345
196.0	CCI TPA65R-BU8D	3	83	18.1	8.0	21.0	7.8	0.80	0.63	0.0	0.00	48.57	1129	297
180.0	Ericsson Radio 4460 B25+B66	3	109	2.6	1.6	15.7	12.1	0.80	0.50	0.0	0.00	48.13	126	392
180.0	Ericsson Radio 4480 B71+B85A	3	84	2.9	1.8	15.7	7.5	0.80	0.50	0.0	0.00	48.13	140	302
180.0	Ericsson Air6449 B41	3	104	5.7	2.8	20.6	8.6	0.80	0.63	0.0	0.00	48.13	351	374
180.0	Andrew DB224	1	38	6.0	23.0	0.0	0.0	1.00	1.00	0.0	0.00	48.13	248	46
180.0	Site Pro 1 VFA12-HD	3	690	13.3	0.0	0.0	0.0	0.75	0.75	0.0	0.00	48.13	921	2484
180.0	RFS APXVAALL24 43-U-NA20	3	123	20.2	8.0	24.0	8.5	0.80	0.63	0.0	0.00	48.13	1252	442
170.0	Commscope CBC78T-DS-43-2X	3	21	0.6	0.8	6.9	6.4	0.80	0.50	0.0	0.00	47.83	27	75
170.0	Samsung RF4461d-13A	3	79	1.9	1.3	15.0	10.2	0.80	0.50	0.0	0.00	47.83	91	285
170.0	Samsung B2/B66A RRH ORAN (RF 4	3	75	1.9	1.3	15.0	10.0	0.80	0.50	0.0	0.00	47.83	91	269
170.0	Samsung MT6413-77A	3	57	3.8	2.4	15.8	5.5	0.80	0.61	0.0	0.00	47.83	226	206
170.0	Raycap RVZDC-6627-PF-48 (29.5"	1	32	4.1	2.5	16.5	12.6	0.80	1.00	0.0	0.00	47.83	132	38
170.0	Generic Mount Reinforcement	3	200	5.0	0.0	0.0	0.0	0.75	0.67	0.0	0.00	47.83	305	720
170.0	Commscope LNX-8513DS-A1M	3	39	8.2	6.1	11.9	7.1	0.80	0.69	0.0	0.00	47.83	550	141
170.0	Commscope JAHH-65B-R3B	6	61	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.00	47.83	1227	436
170.0	Generic Flat Light Sector Fram	3	800	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.00	47.83	1097	2880
160.0	Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.00	47.50	254	180
130.1	Generic 12" x 12" Junction Box	1	10	1.2	1.0	12.0	8.0	1.00	1.00	0.0	0.00	46.30	47	12
130.0	Generic 24" X 12" Panel	3	20	2.4	2.0	12.0	6.0	0.90	0.67	0.0	0.00	46.29	171	72
130.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	46.29	205	180
125.0	Bird 432E-83I-01-T	1	25	1.2	1.0	12.0	7.5	1.00	1.00	0.0	0.00	46.05	47	30
125.0	Generic 24" X 12" Panel	3	20	2.4	2.0	12.0	6.0	1.00	0.67	0.0	0.00	46.05	189	72
125.0	Flat Side Arm	3	150	6.3	0.0	0.0	0.0	1.00	0.67	0.0	0.00	46.05	496	540
118.1	Generic 20' Dipole	1	60	7.5	20.0	3.0	3.0	1.00	1.00	0.0	0.00	45.69	292	72
115.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	45.52	201	180
107.4	Kathrein Scala PR-850	1	38	7.3	3.0	68.0	18.0	1.00	1.00	0.0	0.00	45.08	281	46
107.1	Generic 1' Yagi	1	5	0.4	1.0	12.0	2.0	0.80	1.00	0.0	0.00	45.06	12	6
105.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	44.92	199	180
87.4	Generic 6' Ice Shield	1	450	3.9	1.2	100.0	48.0	1.00	1.00	0.0	0.00	43.65	144	540
84.0	Generic 6' Ice Shield	1	450	3.9	1.2	100.0	48.0	1.00	1.00	0.0	0.00	43.36	143	540
82.4	RFS PA6-65AC w/ Radome	1	308	24.4	6.0	72.0	0.0	1.00	1.00	0.0	0.00	43.22	897	370
80.0	RFS PA6-65AC w/ Radome	1	308	24.4	6.0	72.0	0.0	1.00	1.00	0.0	0.00	43.00	892	370
	Totals	**127**	**17,065**	**802.1**									21,577	20,478

Discrete Appurtenance Properties for LC: **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. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
309.3	Generic 20' Dipole	1	227	16.5	20.0	3.0	3.0	1.00	1.00	0.0	0.00	8.40	118	239
307.9	Generic 18' Dipole	1	206	14.9	18.0	3.0	3.0	1.00	1.00	0.0	0.00	8.40	106	217
305.7	Generic 14' Omni	1	120	8.0	14.0	3.0	3.0	1.00	1.00	0.0	0.00	8.39	57	128
303.9	Generic 8' Omni	1	71	4.5	8.0	3.0	3.0	1.00	1.00	0.0	0.00	8.39	32	76

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)
299.0	Generic Round Side Arm	3	257	7.3	0.0	0.0	0.0	1.00	0.67	0.0	0.00	8.37	104	883
289.7	Generic 18' Dipole	1	206	14.9	18.0	3.0	3.0	1.00	1.00	0.0	0.00	8.35	105	217
279.6	Generic 8' Omni	2	71	4.5	8.0	3.0	3.0	1.00	1.00	0.0	0.00	8.32	63	152
279.3	Generic 10' Dipole	1	114	8.3	10.0	3.0	3.0	1.00	1.00	0.0	0.00	8.32	59	120
273.0	Generic Round Side Arm	3	257	7.3	0.0	0.0	0.0	1.00	0.67	0.0	0.00	8.30	103	882
266.4	Generic 11' Omni	1	103	6.3	11.0	3.0	3.0	1.00	1.00	0.0	0.00	8.28	44	111
263.0	Scala OGT9-840N	1	97	5.4	11.4	2.0	2.0	1.00	1.00	0.0	0.00	8.27	38	101
245.1	Generic 10' Omni	1	82	5.7	10.0	3.0	3.0	1.00	1.00	0.0	0.00	8.21	40	87
245.0	Generic 14' Omni	1	120	8.0	14.0	3.0	3.0	1.00	1.00	0.0	0.00	8.21	56	128
242.9	Generic 13' Omni	1	114	7.4	13.0	3.0	3.0	1.00	1.00	0.0	0.00	8.20	52	122
242.2	Generic 10' Omni	1	82	5.7	10.0	3.0	3.0	1.00	1.00	0.0	0.00	8.20	40	87
235.0	Bird 432E-83I-01-T	1	55	1.7	1.0	12.0	7.5	1.00	1.00	0.0	0.00	8.18	12	60
235.0	Sinclair SC479-HF1LDF(E5765)	3	127	8.9	14.4	3.5	3.5	1.00	1.00	0.0	0.00	8.18	185	402
234.4	Generic 12" x 12" Junction Box	1	41	1.7	1.0	12.0	8.0	1.00	1.00	0.0	0.00	8.17	12	43
233.0	Generic Round Side Arm	3	256	7.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	8.17	101	881
232.0	Generic Round Side Arm	1	256	7.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	8.17	50	294
230.5	Generic 10' Omni	1	82	5.7	10.0	3.0	3.0	1.00	1.00	0.0	0.00	8.16	40	87
229.0	Scala OGT9-840	1	97	5.3	11.4	2.0	2.0	1.00	1.00	0.0	0.00	8.16	37	101
228.3	Generic 14' Omni	2	119	8.0	14.0	3.0	3.0	1.00	1.00	0.0	0.00	8.15	110	255
215.0	Decibel DB224	1	157	17.5	21.3	2.0	2.0	1.00	1.00	0.0	0.00	8.10	121	163
215.0	Generic 22' Dipole	2	248	18.0	22.0	3.0	3.0	1.00	1.00	0.0	0.00	8.10	248	523
204.0	Generic Round Side Arm	2	256	7.2	0.0	0.0	0.0	1.00	0.90	0.0	0.00	8.06	89	587
196.0	Ericsson RRUS 8843 B2, B66A	3	118	2.3	1.2	13.2	10.9	0.80	0.50	0.0	0.00	8.03	19	397
196.0	Ericsson RRUS 4478 B14	3	101	2.5	1.4	13.4	7.7	0.80	0.50	0.0	0.00	8.03	21	340
196.0	Ericsson RRUS 4449 B5, B12	3	119	2.7	1.5	13.2	9.4	0.80	0.50	0.0	0.00	8.03	22	400
196.0	Ericsson AIR 6449 B77D/ C-Band	3	169	5.1	2.5	15.9	10.6	0.80	0.70	0.0	0.00	8.03	58	555
196.0	Raycap DC9-48-60-24-8C-EV	2	112	5.9	2.6	18.3	10.2	0.80	0.50	0.0	0.00	8.03	32	231
196.0	Sabre C10857001C	3	1434	23.0	0.0	0.0	0.0	0.75	0.67	0.0	0.00	8.03	237	4715
196.0	CCI DMP65R-BU8D	3	350	20.6	8.0	20.7	7.7	0.80	0.63	0.0	0.00	8.03	213	1106
196.0	CCI TPA65R-BU8D	3	340	20.8	8.0	21.0	7.8	0.80	0.63	0.0	0.00	8.03	215	1070
180.0	Ericsson Radio 4460 B25+B66	3	175	3.3	1.6	15.7	12.1	0.80	0.50	0.0	0.00	7.95	27	590
180.0	Ericsson Radio 4480 B71+B85A	3	140	3.7	1.8	15.7	7.5	0.80	0.50	0.0	0.00	7.95	30	471
180.0	Ericsson Air6449 B41	3	205	6.9	2.8	20.6	8.6	0.80	0.63	0.0	0.00	7.95	70	679
180.0	Andrew DB224	1	176	19.7	23.0	0.0	0.0	1.00	1.00	0.0	0.00	7.95	133	184
180.0	Site Pro 1 VFA12-HD	3	1435	23.5	0.0	0.0	0.0	0.75	0.75	0.0	0.00	7.95	268	4718
180.0	RFS APXVAALL24 43-U-NA20	3	413	23.0	8.0	24.0	8.5	0.80	0.63	0.0	0.00	7.95	235	1312
170.0	Commscope CBC78T-DS-43-2X	3	37	0.9	0.8	6.9	6.4	0.80	0.50	0.0	0.00	7.90	7	124
170.0	Samsung RF4461d-13A	3	127	2.5	1.3	15.0	10.2	0.80	0.50	0.0	0.00	7.90	21	429
170.0	Samsung B2/B66A RRH ORAN (RF 4	3	122	2.5	1.3	15.0	10.0	0.80	0.50	0.0	0.00	7.90	21	412
170.0	Samsung MT6413-77A	3	120	4.8	2.4	15.8	5.5	0.80	0.61	0.0	0.00	7.90	47	396
170.0	Raycap RVZDC-6627-PF-48 (29.5"	1	127	5.1	2.5	16.5	12.6	0.80	1.00	0.0	0.00	7.90	27	133
170.0	Generic Mount Reinforcement	3	344	8.7	0.0	0.0	0.0	0.75	0.67	0.0	0.00	7.90	88	1152
170.0	Commscope LNX-8513DS-A1M	3	170	10.3	6.1	11.9	7.1	0.80	0.69	0.0	0.00	7.90	114	534
170.0	Commscope JAHH-65B-R3B	6	211	11.2	6.0	13.8	8.2	0.80	0.69	0.0	0.00	7.90	249	1340
170.0	Generic Flat Light Sector Fram	3	1630	29.1	0.0	0.0	0.0	0.75	0.67	0.0	0.00	7.90	295	5369
160.0	Flat Side Arm	1	204	8.1	0.0	0.0	0.0	1.00	1.00	0.0	0.00	7.85	54	234
130.1	Generic 12" x 12" Junction Box	1	41	1.7	1.0	12.0	8.0	1.00	1.00	0.0	0.00	7.65	11	43
130.0	Generic 24" X 12" Panel	3	65	3.2	2.0	12.0	6.0	0.90	0.67	0.0	0.00	7.65	38	208
130.0	Round Side Arm	1	204	7.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	7.65	47	234
125.0	Bird 432E-83I-01-T	1	55	1.7	1.0	12.0	7.5	1.00	1.00	0.0	0.00	7.61	11	60
125.0	Generic 24" X 12" Panel	3	65	3.2	2.0	12.0	6.0	1.00	0.67	0.0	0.00	7.61	41	208
125.0	Flat Side Arm	3	204	8.1	0.0	0.0	0.0	1.00	0.67	0.0	0.00	7.61	105	702
118.1	Generic 20' Dipole	1	222	16.2	20.0	3.0	3.0	1.00	1.00	0.0	0.00	7.55	104	234
115.0	Round Side Arm	1	203	7.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	7.52	46	233
107.4	Kathrein Scala PR-850	1	264	42.1	3.0	68.0	18.0	1.00	1.00	0.0	0.00	7.45	267	272
107.1	Generic 1' Yagi	1	16	1.1	1.0	12.0	2.0	0.80	1.00	0.0	0.00	7.45	6	17
105.0	Round Side Arm	1	203	7.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	7.42	45	233
87.4	Generic 6' Ice Shield	1	903	6.5	1.2	100.0	48.0	1.00	1.00	0.0	0.00	7.21	40	993
84.0	Generic 6' Ice Shield	1	903	6.5	1.2	100.0	48.0	1.00	1.00	0.0	0.00	7.17	39	993
82.4	RFS PA6-65AC w/ Radome	1	821	26.1	6.0	72.0	0.0	1.00	1.00	0.0	0.00	7.14	159	883
80.0	RFS PA6-65AC w/ Radome	1	814	26.1	6.0	72.0	0.0	1.00	1.00	0.0	0.00	7.11	158	875
	Totals	**127**	**36,609**	**1205.6**									5640	40,022

Discrete Appurtenance Properties for LC: **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)
309.3	Generic 20' Dipole	1	60	7.5	20.0	3.0	3.0	1.00	1.00	0.0	0.00	12.10	77	60
307.9	Generic 18' Dipole	1	55	6.8	18.0	3.0	3.0	1.00	1.00	0.0	0.00	12.10	70	55
305.7	Generic 14' Omni	1	40	4.2	14.0	3.0	3.0	1.00	1.00	0.0	0.00	12.09	43	40
303.9	Generic 8' Omni	1	25	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.00	12.08	25	25
299.0	Generic Round Side Arm	3	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	12.06	107	562
289.7	Generic 18' Dipole	1	55	6.8	18.0	3.0	3.0	1.00	1.00	0.0	0.00	12.02	69	55
279.6	Generic 8' Omni	2	25	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.00	11.98	49	50
279.3	Generic 10' Dipole	1	30	3.8	10.0	3.0	3.0	1.00	1.00	0.0	0.00	11.98	38	30
273.0	Generic Round Side Arm	3	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	11.95	106	562
266.4	Generic 11' Omni	1	40	3.3	11.0	3.0	3.0	1.00	1.00	0.0	0.00	11.92	33	40
263.0	Scala OGT9-840N	1	19	2.3	11.4	2.0	2.0	1.00	1.00	0.0	0.00	11.91	23	18
245.1	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.00	11.82	30	25
245.0	Generic 14' Omni	1	40	4.2	14.0	3.0	3.0	1.00	1.00	0.0	0.00	11.82	42	40

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)
242.9	Generic 13' Omni	1	40	3.9	13.0	3.0	3.0	1.00	1.00	0.0	0.00	11.81	39	40
242.2	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.00	11.81	30	25
235.0	Bird 432E-83I-01-T	1	25	1.2	1.0	12.0	7.5	1.00	1.00	0.0	0.00	11.77	12	25
235.0	Sinclair SC479-HF1LDF(E5765)	3	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.00	11.77	151	102
234.4	Generic 12" x 12" Junction Box	1	10	1.2	1.0	12.0	8.0	1.00	1.00	0.0	0.00	11.77	12	10
233.0	Generic Round Side Arm	3	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	11.76	105	562
232.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	11.76	52	188
230.5	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.00	11.75	30	25
229.0	Scala OGT9-840	1	19	2.3	11.4	2.0	2.0	1.00	1.00	0.0	0.00	11.74	23	18
228.3	Generic 14' Omni	2	40	4.2	14.0	3.0	3.0	1.00	1.00	0.0	0.00	11.74	84	80
215.0	Decibel DB224	1	32	5.4	21.3	2.0	2.0	1.00	1.00	0.0	0.00	11.67	54	32
215.0	Generic 22' Dipole	2	66	8.3	22.0	3.0	3.0	1.00	1.00	0.0	0.00	11.67	164	132
204.0	Generic Round Side Arm	2	188	5.2	0.0	0.0	0.0	1.00	0.90	0.0	0.00	11.61	92	375
196.0	Ericsson RRUS 8843 B2, B66A	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.00	11.56	19	216
196.0	Ericsson RRUS 4478 B14	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.00	11.56	22	180
196.0	Ericsson RRUS 4449 B5, B12	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.00	11.56	23	213
196.0	Ericsson AIR 6449 B77D/ C-Band	3	82	4.0	2.5	15.9	10.6	0.80	0.70	0.0	0.00	11.56	66	245
196.0	Raycap DC9-48-60-24-8C-EV	2	16	4.8	2.6	18.3	10.2	0.80	0.50	0.0	0.00	11.56	38	32
196.0	Sabre C10857001C	3	689	13.0	0.0	0.0	0.0	0.75	0.67	0.0	0.00	11.56	193	2067
196.0	CCI DMP65R-BU8D	3	96	17.9	8.0	20.7	7.7	0.80	0.63	0.0	0.00	11.56	265	287
196.0	CCI TPA65R-BU8D	3	83	18.1	8.0	21.0	7.8	0.80	0.63	0.0	0.00	11.56	269	248
180.0	Ericsson Radio 4460 B25+B66	3	109	2.6	1.6	15.7	12.1	0.80	0.50	0.0	0.00	11.45	30	327
180.0	Ericsson Radio 4480 B71+B85A	3	84	2.9	1.8	15.7	7.5	0.80	0.50	0.0	0.00	11.45	33	252
180.0	Ericsson Air6449 B41	3	104	5.7	2.8	20.6	8.6	0.80	0.63	0.0	0.00	11.45	84	312
180.0	Andrew DB224	1	38	6.0	23.0	0.0	0.0	1.00	1.00	0.0	0.00	11.45	59	38
180.0	Site Pro 1 VFA12-HD	3	690	13.3	0.0	0.0	0.0	0.75	0.75	0.0	0.00	11.45	219	2070
180.0	RFS APXVAALL24 43-U-NA20	3	123	20.2	8.0	24.0	8.5	0.80	0.63	0.0	0.00	11.45	298	368
170.0	Commscope CBC78T-DS-43-2X	3	21	0.6	0.8	6.9	6.4	0.80	0.50	0.0	0.00	11.38	6	62
170.0	Samsung RF4461d-13A	3	79	1.9	1.3	15.0	10.2	0.80	0.50	0.0	0.00	11.38	22	237
170.0	Samsung B2/B66A RRH ORAN (RF 4	3	75	1.9	1.3	15.0	10.0	0.80	0.50	0.0	0.00	11.38	22	224
170.0	Samsung MT6413-77A	3	57	3.8	2.4	15.8	5.5	0.80	0.61	0.0	0.00	11.38	54	172
170.0	Raycap RVZDC-6627-PF-48 (29.5"	1	32	4.1	2.5	16.5	12.6	0.80	1.00	0.0	0.00	11.38	31	32
170.0	Generic Mount Reinforcement	3	200	5.0	0.0	0.0	0.0	0.75	0.67	0.0	0.00	11.38	73	600
170.0	Commscope LNX-8513DS-A1M	3	39	8.2	6.1	11.9	7.1	0.80	0.69	0.0	0.00	11.38	131	118
170.0	Commscope JAHH-65B-R3B	6	61	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.00	11.38	292	364
170.0	Generic Flat Light Sector Fram	3	800	17.9	0.0	0.0	0.0	0.75	0.67	0.0	0.00	11.38	261	2400
160.0	Flat Side Arm	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.00	11.30	61	150
130.1	Generic 12" x 12" Junction Box	1	10	1.2	1.0	12.0	8.0	1.00	1.00	0.0	0.00	11.02	11	10
130.0	Generic 24" X 12" Panel	3	20	2.4	2.0	12.0	6.0	0.90	0.67	0.0	0.00	11.02	41	60
130.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	11.02	49	150
125.0	Bird 432E-83I-01-T	1	25	1.2	1.0	12.0	7.5	1.00	1.00	0.0	0.00	10.96	11	25
125.0	Generic 24" X 12" Panel	3	20	2.4	2.0	12.0	6.0	1.00	0.67	0.0	0.00	10.96	45	60
125.0	Flat Side Arm	3	150	6.3	0.0	0.0	0.0	1.00	0.67	0.0	0.00	10.96	118	450
118.1	Generic 20' Dipole	1	60	7.5	20.0	3.0	3.0	1.00	1.00	0.0	0.00	10.87	70	60
115.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	10.83	48	150
107.4	Kathrein Scala PR-850	1	38	7.3	3.0	68.0	18.0	1.00	1.00	0.0	0.00	10.73	67	38
107.1	Generic 1' Yagi	1	5	0.4	1.0	12.0	2.0	0.80	1.00	0.0	0.00	10.72	3	5
105.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	10.69	47	150
87.4	Generic 6' Ice Shield	1	450	3.9	1.2	100.0	48.0	1.00	1.00	0.0	0.00	10.39	34	450
84.0	Generic 6' Ice Shield	1	450	3.9	1.2	100.0	48.0	1.00	1.00	0.0	0.00	10.32	34	450
82.4	RFS PA6-65AC w/ Radome	1	308	24.4	6.0	72.0	0.0	1.00	1.00	0.0	0.00	10.28	213	308
80.0	RFS PA6-65AC w/ Radome	1	308	24.4	6.0	72.0	0.0	1.00	1.00	0.0	0.00	10.23	212	308
	Totals	**127**	**17,065**	**802.1**									5,134	17,065

TOWER LOADING – LINEAR APPURTENANCE

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
5.0	180.0	1/2" Coax	1	0.63	0.15	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	307.0	7/8" Coax	5	1.09	0.33	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	303.0	1 1/4" Coax	6	1.55	0.63	50	3	Block	0.00	N	1.00	1.00	0.00
0.0	303.0	0.26" (6.6mm) Cat 5e	2	0.26	0.04	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	303.0	3/4" Carflex Non-Metallic Cond	1	1.04	0.18	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	300.0	Climbing Ladder	1	2.00	6.90	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.0	288.0	7/8" Coax	2	1.09	0.33	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	277.0	1 5/8" Coax	2	1.98	0.82	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	263.0	1 5/8" Coax	1	1.98	0.82	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	243.0	1/2" Coax	2	0.63	0.15	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	235.0	1 5/8" Coax	2	1.98	0.82	50	2	Block	0.00	N	1.00	1.00	0.00
0.0	234.0	0.26" (6.6mm) Cat 5e	2	0.26	0.04	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	229.0	1 5/8" Coax	1	1.98	0.82	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	228.0	1 5/8" Coax	2	1.98	0.82	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	215.0	7/8" Coax	1	1.09	0.33	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	196.0	0.92" (23.4mm) Cable	4	0.92	0.89	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	196.0	0.39" (10mm) Fiber Trunk	2	0.39	0.06	50	3	Block	0.00	N	1.00	1.00	0.00
0.0	180.0	1.99" (50.7mm) Hybrid	3	1.99	1.90	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	170.0	1 5/8" Coax	11	1.98	0.82	54	2	Block	0.00	N	1.00	1.00	0.00
0.0	170.0	1 5/8" Hybriflex	2	1.98	1.30	100	2	Individual	0.00	N	1.00	1.00	0.01
0.0	130.0	1 5/8" Coax	2	1.98	0.82	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	125.0	1 5/8" Coax	2	1.98	0.82	100	2	Individual	0.00	N	1.00	1.00	0.01
0.0	117.0	1 5/8" Coax	2	1.98	0.82	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	106.0	1/2" Coax	2	0.63	0.15	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	81.0	EW52	1	2.25	0.59	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	80.0	WE65	1	2.03	0.53	100	2	Individual	0.00	N	1.00	1.00	0.00

SECTION FORCES

1.2D + 1.0W Normal — Gust Response Factor (Gh): 0.85
123 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	50.52	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1547	0	1177	1006	2183	
15	270	50.16	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1545	0	1083	1254	2336	
14	250	49.78	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1617	0	1160	1369	2529	
13	230	49.37	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1631	0	1066	1648	2714	
12	210	48.92	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1681	0	1056	1886	2941	
11	190	48.41	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1802	0	1128	2044	3172	
10	170	47.83	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2256	0	1071	2898	3970	
9	150	47.14	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2396	0	1056	3365	4421	
8	130	46.29	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	2473	0	1115	3399	4515	
7	110	45.23	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2510	0	1013	3588	4601	
6	90	43.86	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2522	0	982	3550	4532	
5	70	42.00	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2548	0	941	3578	4518	
4	50	39.33	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	2595	0	948	3351	4298	
3	30	35.12	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2548	0	787	2992	3779	
2	12	36.21	3.177	8.250	0.00	0.170	2.70	1.00	1.00	0.0	7.92	21.37	0.00	2045	0	658	2467	3125	
1	2	36.88	2.561	1.732	0.00	0.491	1.91	1.00	1.00	0.0	3.74	7.15	0.00	676	0	224	530	576	**
													Totals	**32,390**	**0**			**54,211**	

*** = Section Force Exceeds Solidity Ratio Criteria*

1.2D + 1.0W 60° — Gust Response Factor (Gh): 0.85
123 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	50.52	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1547	0	1068	1006	2074	
15	270	50.16	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1545	0	993	1254	2247	
14	250	49.78	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1617	0	1052	1369	2422	
13	230	49.37	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1631	0	978	1648	2626	
12	210	48.92	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1681	0	969	1886	2854	
11	190	48.41	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1802	0	1023	2044	3068	
10	170	47.83	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2256	0	988	2898	3886	
9	150	47.14	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2396	0	973	3365	4339	
8	130	46.29	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	2473	0	1017	3399	4417	
7	110	45.23	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2510	0	934	3588	4522	
6	90	43.86	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2522	0	906	3550	4455	
5	70	42.00	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2548	0	867	3578	4445	
4	50	39.33	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	2595	0	864	3351	4215	
3	30	35.12	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2548	0	725	2992	3717	
2	12	36.21	3.177	8.250	0.00	0.170	2.70	0.80	1.00	0.0	7.29	19.66	0.00	2045	0	605	2467	3072	
1	2	36.88	2.561	1.732	0.00	0.491	1.91	0.80	1.00	0.0	3.23	6.17	0.00	676	0	193	530	576	**
													Totals	**32,390**	**0**			**52,934**	

*** = Section Force Exceeds Solidity Ratio Criteria*

1.2D + 1.0W 90° — Gust Response Factor (Gh): 0.85
123 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	50.52	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1547	0	1095	1006	2102	
15	270	50.16	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1545	0	1016	1254	2269	
14	250	49.78	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1617	0	1079	1369	2448	
13	230	49.37	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1631	0	1000	1648	2648	
12	210	48.92	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1681	0	990	1886	2876	
11	190	48.41	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1802	0	1050	2044	3094	
10	170	47.83	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2256	0	1009	2898	3907	
9	150	47.14	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2396	0	994	3365	4359	
8	130	46.29	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	2473	0	1042	3399	4441	
7	110	45.23	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2510	0	954	3588	4542	
6	90	43.86	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2522	0	925	3550	4475	
5	70	42.00	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2548	0	886	3578	4463	
4	50	39.33	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	2595	0	885	3351	4236	
3	30	35.12	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2548	0	741	2992	3733	
2	12	36.21	3.177	8.250	0.00	0.170	2.70	0.85	1.00	0.0	7.45	20.09	0.00	2045	0	618	2467	3085	
1	2	36.88	2.561	1.732	0.00	0.491	1.91	0.85	1.00	0.0	3.35	6.42	0.00	676	0	201	530	576	**
													Totals	**32,390**	**0**			**53,253**	

*** = Section Force Exceeds Solidity Ratio Criteria*

1.2D + 1.0W 120° — Gust Response Factor (Gh): 0.85
123 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	50.52	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1547	0	1177	1006	2183
15	270	50.16	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1545	0	1083	1254	2336
14	250	49.78	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1617	0	1160	1369	2529
13	230	49.37	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1631	0	1066	1648	2714
12	210	48.92	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1681	0	1056	1886	2941
11	190	48.41	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1802	0	1128	2044	3172
10	170	47.83	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2256	0	1071	2898	3970
9	150	47.14	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2396	0	1056	3365	4421

SECTION FORCES

1.2D + 1.0W 120° Gust Response Factor (Gh): 0.85
123 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
8	130	46.29	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	2473	0	1115	3399	4515	
7	110	45.23	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2510	0	1013	3588	4601	
6	90	43.86	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2522	0	982	3550	4532	
5	70	42.00	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2548	0	941	3578	4518	
4	50	39.33	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	2595	0	948	3351	4298	
3	30	35.12	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2548	0	787	2992	3779	
2	12	36.21	3.177	8.250	0.00	0.170	2.70	1.00	1.00	0.0	7.92	21.37	0.00	2045	0	658	2467	3125	
1	2	36.88	2.561	1.732	0.00	0.491	1.91	1.00	1.00	0.0	3.74	7.15	0.00	676	0	224	530	576	**
													Totals	**32,390**	**0**			**54,211**	

*** = Section Force Exceeds Solidity Ratio Criteria*

1.2D + 1.0W 180° Gust Response Factor (Gh): 0.85
123 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	50.52	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1547	0	1068	1006	2074	
15	270	50.16	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1545	0	993	1254	2247	
14	250	49.78	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1617	0	1052	1369	2422	
13	230	49.37	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1631	0	978	1648	2626	
12	210	48.92	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1681	0	969	1886	2854	
11	190	48.41	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1802	0	1023	2044	3068	
10	170	47.83	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2256	0	988	2898	3886	
9	150	47.14	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2396	0	973	3365	4339	
8	130	46.29	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	2473	0	1017	3399	4417	
7	110	45.23	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2510	0	934	3588	4522	
6	90	43.86	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2522	0	906	3550	4455	
5	70	42.00	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2548	0	867	3578	4445	
4	50	39.33	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	2595	0	864	3351	4215	
3	30	35.12	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2548	0	725	2992	3717	
2	12	36.21	3.177	8.250	0.00	0.170	2.70	0.80	1.00	0.0	7.29	19.66	0.00	2045	0	605	2467	3072	
1	2	36.88	2.561	1.732	0.00	0.491	1.91	0.80	1.00	0.0	3.23	6.17	0.00	676	0	193	530	576	**
													Totals	**32,390**	**0**			**52,934**	

*** = Section Force Exceeds Solidity Ratio Criteria*

1.2D + 1.0W 210° Gust Response Factor (Gh): 0.85
123 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	50.52	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1547	0	1095	1006	2102	
15	270	50.16	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1545	0	1016	1254	2269	
14	250	49.78	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1617	0	1079	1369	2448	
13	230	49.37	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1631	0	1000	1648	2648	
12	210	48.92	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1681	0	990	1886	2876	
11	190	48.41	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1802	0	1050	2044	3094	
10	170	47.83	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2256	0	1009	2898	3907	
9	150	47.14	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2396	0	994	3365	4359	
8	130	46.29	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	2473	0	1042	3399	4441	
7	110	45.23	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2510	0	954	3588	4542	
6	90	43.86	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2522	0	925	3550	4475	
5	70	42.00	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2548	0	886	3578	4463	
4	50	39.33	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	2595	0	885	3351	4236	
3	30	35.12	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2548	0	741	2992	3733	
2	12	36.21	3.177	8.250	0.00	0.170	2.70	0.85	1.00	0.0	7.45	20.09	0.00	2045	0	618	2467	3085	
1	2	36.88	2.561	1.732	0.00	0.491	1.91	0.85	1.00	0.0	3.35	6.42	0.00	676	0	201	530	576	**
													Totals	**32,390**	**0**			**53,253**	

*** = Section Force Exceeds Solidity Ratio Criteria*

1.2D + 1.0W 240° Gust Response Factor (Gh): 0.85
123 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	50.52	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1547	0	1177	1006	2183	
15	270	50.16	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1545	0	1083	1254	2336	
14	250	49.78	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1617	0	1160	1369	2529	
13	230	49.37	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1631	0	1066	1648	2714	
12	210	48.92	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1681	0	1056	1886	2941	
11	190	48.41	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1802	0	1128	2044	3172	
10	170	47.83	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2256	0	1071	2898	3970	
9	150	47.14	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2396	0	1056	3365	4421	
8	130	46.29	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	2473	0	1115	3399	4515	
7	110	45.23	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2510	0	1013	3588	4601	
6	90	43.86	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2522	0	982	3550	4532	
5	70	42.00	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2548	0	941	3578	4518	
4	50	39.33	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	2595	0	948	3351	4298	
3	30	35.12	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2548	0	787	2992	3779	
2	12	36.21	3.177	8.250	0.00	0.170	2.70	1.00	1.00	0.0	7.92	21.37	0.00	2045	0	658	2467	3125	
1	2	36.88	2.561	1.732	0.00	0.491	1.91	1.00	1.00	0.0	3.74	7.15	0.00	676	0	224	530	576	**

SECTION FORCES

1.2D + 1.0W 240° Gust Response Factor (Gh): 0.85
123 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
*** = Section Force Exceeds Solidity Ratio Criteria*													**Totals**	**32,390**	**0**			**54,211**	

1.2D + 1.0W 300° Gust Response Factor (Gh): 0.85
123 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	50.52	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1547	0	1068	1006	2074	
15	270	50.16	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1545	0	993	1254	2247	
14	250	49.78	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1617	0	1052	1369	2422	
13	230	49.37	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1631	0	978	1648	2626	
12	210	48.92	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1681	0	969	1886	2854	
11	190	48.41	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1802	0	1023	2044	3068	
10	170	47.83	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2256	0	988	2898	3886	
9	150	47.14	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2396	0	973	3365	4339	
8	130	46.29	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	2473	0	1017	3399	4417	
7	110	45.23	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2510	0	934	3588	4522	
6	90	43.86	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2522	0	906	3550	4455	
5	70	42.00	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2548	0	867	3578	4445	
4	50	39.33	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	2595	0	864	3351	4215	
3	30	35.12	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2548	0	725	2992	3717	
2	12	36.21	3.177	8.250	0.00	0.170	2.70	0.80	1.00	0.0	7.29	19.66	0.00	2045	0	605	2467	3072	
1	2	36.88	2.561	1.732	0.00	0.491	1.91	0.80	1.00	0.0	3.23	6.17	0.00	676	0	193	530	576	**
*** = Section Force Exceeds Solidity Ratio Criteria*													**Totals**	**32,390**	**0**			**52,934**	

1.2D + 1.0W 330° Gust Response Factor (Gh): 0.85
123 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	50.52	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1547	0	1095	1006	2102	
15	270	50.16	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1545	0	1016	1254	2269	
14	250	49.78	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1617	0	1079	1369	2448	
13	230	49.37	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1631	0	1000	1648	2648	
12	210	48.92	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1681	0	990	1886	2876	
11	190	48.41	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1802	0	1050	2044	3094	
10	170	47.83	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2256	0	1009	2898	3907	
9	150	47.14	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2396	0	994	3365	4359	
8	130	46.29	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	2473	0	1042	3399	4441	
7	110	45.23	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2510	0	954	3588	4542	
6	90	43.86	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2522	0	925	3550	4475	
5	70	42.00	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2548	0	886	3578	4463	
4	50	39.33	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	2595	0	885	3351	4236	
3	30	35.12	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2548	0	741	2992	3733	
2	12	36.21	3.177	8.250	0.00	0.170	2.70	0.85	1.00	0.0	7.45	20.09	0.00	2045	0	618	2467	3085	
1	2	36.88	2.561	1.732	0.00	0.491	1.91	0.85	1.00	0.0	3.35	6.42	0.00	676	0	201	530	576	**
*** = Section Force Exceeds Solidity Ratio Criteria*													**Totals**	**32,390**	**0**			**53,253**	

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

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	8.35	4.694	35.852	26.36	0.462	1.95	1.00	1.00	1.3	28.61	55.89	26.36	3780	2233	397	385	781	
15	270	8.29	3.833	35.796	26.30	0.452	1.97	1.00	1.00	1.3	27.52	54.23	26.30	4126	2580	382	489	871	
14	250	8.23	4.694	35.737	26.24	0.461	1.96	1.00	1.00	1.3	28.51	55.76	26.24	4263	2647	390	524	914	
13	230	8.16	3.833	35.673	26.18	0.450	1.97	1.00	1.00	1.3	27.42	54.09	26.18	4781	3150	375	678	1054	
12	210	8.08	3.833	35.602	26.10	0.450	1.97	1.00	1.00	1.3	27.36	54.00	26.10	5136	3455	371	778	1149	
11	190	8.00	4.694	35.520	26.02	0.459	1.96	1.00	1.00	1.3	28.32	55.50	26.02	5483	3681	377	867	1245	
10	170	7.90	3.812	36.246	25.93	0.455	1.97	1.00	1.00	1.3	27.86	54.76	25.93	6769	4513	368	1101	1243	**
9	150	7.79	3.812	36.129	25.81	0.454	1.97	1.00	1.00	1.3	27.76	54.62	25.81	7196	4800	362	1173	1224	**
8	130	7.65	4.677	35.982	25.66	0.462	1.95	1.00	1.00	1.3	28.68	56.05	25.66	7324	4852	364	1163	1202	**
7	110	7.47	3.812	35.791	25.47	0.450	1.97	1.00	1.00	1.3	27.47	54.22	25.47	7834	5324	344	1256	1174	**
6	90	7.25	3.812	35.535	25.22	0.447	1.98	1.00	1.00	1.3	27.26	53.91	25.22	7888	5366	332	1258	1138	**
5	70	6.94	3.812	35.173	24.85	0.444	1.98	1.00	1.00	1.2	26.96	53.49	24.85	8006	5458	316	1262	1089	**
4	50	6.50	4.677	34.628	24.31	0.448	1.98	1.00	1.00	1.2	27.53	54.44	24.31	7827	5232	301	1159	1019	**
3	30	5.80	3.812	33.674	23.35	0.428	2.01	1.00	1.00	1.2	25.72	51.74	23.35	7551	5004	255	1048	908	**
2	12	5.98	3.177	25.530	17.28	0.411	2.04	1.00	1.00	1.1	19.59	40.02	17.28	5612	3567	204	849	746	**
1	2	6.10	2.561	4.952	3.22	0.806	1.82	1.00	1.00	0.9	6.97	12.69	3.22	1319	643	66	63	101	**
*** = Section Force Exceeds Solidity Ratio Criteria*													**Totals**	**94,894**	**62,505**			**15,857**	

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

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	8.35	4.694	35.852	26.36	0.462	1.95	0.80	1.00	1.3	27.67	54.06	26.36	3780	2233	384	385	768

SECTION FORCES

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

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
15	270	8.29	3.833	35.796	26.30	0.452	1.97	0.80	1.00	1.3	26.76	52.72	26.30	4126	2580	371	489	861	
14	250	8.23	4.694	35.737	26.24	0.461	1.96	0.80	1.00	1.3	27.57	53.92	26.24	4263	2647	377	524	901	
13	230	8.16	3.833	35.673	26.18	0.450	1.97	0.80	1.00	1.3	26.65	52.57	26.18	4781	3150	365	678	1043	
12	210	8.08	3.833	35.602	26.10	0.450	1.97	0.80	1.00	1.3	26.59	52.49	26.10	5136	3455	361	778	1138	
11	190	8.00	4.694	35.520	26.02	0.459	1.96	0.80	1.00	1.3	27.38	53.66	26.02	5483	3681	365	867	1232	
10	170	7.90	3.812	36.246	25.93	0.455	1.97	0.80	1.00	1.3	27.10	53.26	25.93	6769	4513	358	1101	1243	**
9	150	7.79	3.812	36.129	25.81	0.454	1.97	0.80	1.00	1.3	27.00	53.12	25.81	7196	4800	352	1173	1224	**
8	130	7.65	4.677	35.982	25.66	0.462	1.95	0.80	1.00	1.3	27.74	54.22	25.66	7324	4852	353	1163	1202	**
7	110	7.47	3.812	35.791	25.47	0.450	1.97	0.80	1.00	1.3	26.71	52.71	25.47	7834	5324	335	1256	1174	**
6	90	7.25	3.812	35.535	25.22	0.447	1.98	0.80	1.00	1.3	26.50	52.41	25.22	7888	5366	323	1258	1138	**
5	70	6.94	3.812	35.173	24.85	0.444	1.98	0.80	1.00	1.2	26.19	51.97	24.85	8006	5458	307	1262	1089	**
4	50	6.50	4.677	34.628	24.31	0.448	1.98	0.80	1.00	1.2	26.60	52.59	24.31	7827	5232	291	1159	1019	**
3	30	5.80	3.812	33.674	23.35	0.428	2.01	0.80	1.00	1.2	24.96	50.21	23.35	7551	5004	248	1048	908	**
2	12	5.98	3.177	25.530	17.28	0.411	2.04	0.80	1.00	1.1	18.96	38.73	17.28	5612	3567	197	849	746	**
1	2	6.10	2.561	4.952	3.22	0.806	1.82	0.80	1.00	0.9	6.46	11.76	3.22	1319	643	61	63	101	**
													Totals	**94,894**	**62,505**			**15,787**	

*** = Section Force Exceeds Solidity Ratio Criteria*

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

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	8.35	4.694	35.852	26.36	0.462	1.95	0.85	1.00	1.3	27.90	54.52	26.36	3780	2233	387	385	772	
15	270	8.29	3.833	35.796	26.30	0.452	1.97	0.85	1.00	1.3	26.95	53.10	26.30	4126	2580	374	489	863	
14	250	8.23	4.694	35.737	26.24	0.461	1.96	0.85	1.00	1.3	27.80	54.38	26.24	4263	2647	380	524	904	
13	230	8.16	3.833	35.673	26.18	0.450	1.97	0.85	1.00	1.3	26.84	52.95	26.18	4781	3150	367	678	1046	
12	210	8.08	3.833	35.602	26.10	0.450	1.97	0.85	1.00	1.3	26.78	52.87	26.10	5136	3455	363	778	1141	
11	190	8.00	4.694	35.520	26.02	0.459	1.96	0.85	1.00	1.3	27.62	54.12	26.02	5483	3681	368	867	1235	
10	170	7.90	3.812	36.246	25.93	0.455	1.97	0.85	1.00	1.3	27.29	53.64	25.93	6769	4513	360	1101	1243	**
9	150	7.79	3.812	36.129	25.81	0.454	1.97	0.85	1.00	1.3	27.19	53.50	25.81	7196	4800	354	1173	1224	**
8	130	7.65	4.677	35.982	25.66	0.462	1.95	0.85	1.00	1.3	27.97	54.67	25.66	7324	4852	356	1163	1202	**
7	110	7.47	3.812	35.791	25.47	0.450	1.97	0.85	1.00	1.3	26.90	53.09	25.47	7834	5324	337	1256	1174	**
6	90	7.25	3.812	35.535	25.22	0.447	1.98	0.85	1.00	1.3	26.69	52.78	25.22	7888	5366	325	1258	1138	**
5	70	6.94	3.812	35.173	24.85	0.444	1.98	0.85	1.00	1.2	26.38	52.35	24.85	8006	5458	309	1262	1089	**
4	50	6.50	4.677	34.628	24.31	0.448	1.98	0.85	1.00	1.2	26.83	53.05	24.31	7827	5232	293	1159	1019	**
3	30	5.80	3.812	33.674	23.35	0.428	2.01	0.85	1.00	1.2	25.15	50.59	23.35	7551	5004	250	1048	908	**
2	12	5.98	3.177	25.530	17.28	0.411	2.04	0.85	1.00	1.1	19.12	39.05	17.28	5612	3567	199	849	746	**
1	2	6.10	2.561	4.952	3.22	0.806	1.82	0.85	1.00	0.9	6.59	11.99	3.22	1319	643	62	63	101	**
													Totals	**94,894**	**62,505**			**15,805**	

*** = Section Force Exceeds Solidity Ratio Criteria*

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

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	8.35	4.694	35.852	26.36	0.462	1.95	1.00	1.00	1.3	28.61	55.89	26.36	3780	2233	397	385	781	
15	270	8.29	3.833	35.796	26.30	0.452	1.97	1.00	1.00	1.3	27.52	54.23	26.30	4126	2580	382	489	871	
14	250	8.23	4.694	35.737	26.24	0.461	1.96	1.00	1.00	1.3	28.51	55.76	26.24	4263	2647	390	524	914	
13	230	8.16	3.833	35.673	26.18	0.450	1.97	1.00	1.00	1.3	27.42	54.09	26.18	4781	3150	375	678	1054	
12	210	8.08	3.833	35.602	26.10	0.450	1.97	1.00	1.00	1.3	27.36	54.00	26.10	5136	3455	371	778	1149	
11	190	8.00	4.694	35.520	26.02	0.459	1.96	1.00	1.00	1.3	28.32	55.50	26.02	5483	3681	377	867	1245	
10	170	7.90	3.812	36.246	25.93	0.455	1.97	1.00	1.00	1.3	27.86	54.76	25.93	6769	4513	368	1101	1243	**
9	150	7.79	3.812	36.129	25.81	0.454	1.97	1.00	1.00	1.3	27.76	54.62	25.81	7196	4800	362	1173	1224	**
8	130	7.65	4.677	35.982	25.66	0.462	1.95	1.00	1.00	1.3	28.68	56.05	25.66	7324	4852	364	1163	1202	**
7	110	7.47	3.812	35.791	25.47	0.450	1.97	1.00	1.00	1.3	27.47	54.22	25.47	7834	5324	344	1256	1174	**
6	90	7.25	3.812	35.535	25.22	0.447	1.98	1.00	1.00	1.3	27.26	53.91	25.22	7888	5366	332	1258	1138	**
5	70	6.94	3.812	35.173	24.85	0.444	1.98	1.00	1.00	1.2	26.96	53.49	24.85	8006	5458	316	1262	1089	**
4	50	6.50	4.677	34.628	24.31	0.448	1.98	1.00	1.00	1.2	27.53	54.44	24.31	7827	5232	301	1159	1019	**
3	30	5.80	3.812	33.674	23.35	0.428	2.01	1.00	1.00	1.2	25.72	51.74	23.35	7551	5004	255	1048	908	**
2	12	5.98	3.177	25.530	17.28	0.411	2.04	1.00	1.00	1.1	19.59	40.02	17.28	5612	3567	204	849	746	**
1	2	6.10	2.561	4.952	3.22	0.806	1.82	1.00	1.00	0.9	6.97	12.69	3.22	1319	643	66	63	101	**
													Totals	**94,894**	**62,505**			**15,857**	

*** = Section Force Exceeds Solidity Ratio Criteria*

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

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	8.35	4.694	35.852	26.36	0.462	1.95	0.80	1.00	1.3	27.67	54.06	26.36	3780	2233	384	385	768	
15	270	8.29	3.833	35.796	26.30	0.452	1.97	0.80	1.00	1.3	26.76	52.72	26.30	4126	2580	371	489	861	
14	250	8.23	4.694	35.737	26.24	0.461	1.96	0.80	1.00	1.3	27.57	53.92	26.24	4263	2647	377	524	901	
13	230	8.16	3.833	35.673	26.18	0.450	1.97	0.80	1.00	1.3	26.65	52.57	26.18	4781	3150	365	678	1043	
12	210	8.08	3.833	35.602	26.10	0.450	1.97	0.80	1.00	1.3	26.59	52.49	26.10	5136	3455	361	778	1138	
11	190	8.00	4.694	35.520	26.02	0.459	1.96	0.80	1.00	1.3	27.38	53.66	26.02	5483	3681	365	867	1232	
10	170	7.90	3.812	36.246	25.93	0.455	1.97	0.80	1.00	1.3	27.10	53.26	25.93	6769	4513	358	1101	1243	**
9	150	7.79	3.812	36.129	25.81	0.454	1.97	0.80	1.00	1.3	27.00	53.12	25.81	7196	4800	352	1173	1224	**
8	130	7.65	4.677	35.982	25.66	0.462	1.95	0.80	1.00	1.3	27.74	54.22	25.66	7324	4852	353	1163	1202	**

SECTION FORCES

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

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
7	110	7.47	3.812	35.791	25.47	0.450	1.97	0.80	1.00	1.3	26.71	52.71	25.47	7834	5324	335	1256	1174	**
6	90	7.25	3.812	35.535	25.22	0.447	1.98	0.80	1.00	1.3	26.50	52.41	25.22	7888	5366	323	1258	1138	**
5	70	6.94	3.812	35.173	24.85	0.444	1.98	0.80	1.00	1.2	26.19	51.97	24.85	8006	5458	307	1262	1089	**
4	50	6.50	4.677	34.628	24.31	0.448	1.98	0.80	1.00	1.2	26.60	52.59	24.31	7827	5232	291	1159	1019	**
3	30	5.80	3.812	33.674	23.35	0.428	2.01	0.80	1.00	1.2	24.96	50.21	23.35	7551	5004	248	1048	908	**
2	12	5.98	3.177	25.530	17.28	0.411	2.04	0.80	1.00	1.1	18.96	38.73	17.28	5612	3567	197	849	746	**
1	2	6.10	2.561	4.952	3.22	0.806	1.82	0.80	1.00	0.9	6.46	11.76	3.22	1319	643	61	63	101	**
													Totals	**94,894**	**62,505**			**15,787**	

*** = Section Force Exceeds Solidity Ratio Criteria*

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

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	8.35	4.694	35.852	26.36	0.462	1.95	0.85	1.00	1.3	27.90	54.52	26.36	3780	2233	387	385	772	
15	270	8.29	3.833	35.796	26.30	0.452	1.97	0.85	1.00	1.3	26.95	53.10	26.30	4126	2580	374	489	863	
14	250	8.23	4.694	35.737	26.24	0.461	1.96	0.85	1.00	1.3	27.80	54.38	26.24	4263	2647	380	524	904	
13	230	8.16	3.833	35.673	26.18	0.450	1.97	0.85	1.00	1.3	26.84	52.95	26.18	4781	3150	367	678	1046	
12	210	8.08	3.833	35.602	26.10	0.450	1.97	0.85	1.00	1.3	26.78	52.87	26.10	5136	3455	363	778	1141	
11	190	8.00	4.694	35.520	26.02	0.459	1.96	0.85	1.00	1.3	27.62	54.12	26.02	5483	3681	368	867	1235	
10	170	7.90	3.812	36.246	25.93	0.455	1.97	0.85	1.00	1.3	27.29	53.64	25.93	6769	4513	360	1101	1243	**
9	150	7.79	3.812	36.129	25.81	0.454	1.97	0.85	1.00	1.3	27.19	53.50	25.81	7196	4800	354	1173	1224	**
8	130	7.65	4.677	35.982	25.66	0.462	1.95	0.85	1.00	1.3	27.97	54.67	25.66	7324	4852	356	1163	1202	**
7	110	7.47	3.812	35.791	25.47	0.450	1.97	0.85	1.00	1.3	26.90	53.09	25.47	7834	5324	337	1256	1174	**
6	90	7.25	3.812	35.535	25.22	0.447	1.98	0.85	1.00	1.3	26.69	52.78	25.22	7888	5366	325	1258	1138	**
5	70	6.94	3.812	35.173	24.85	0.444	1.98	0.85	1.00	1.2	26.38	52.35	24.85	8006	5458	309	1262	1089	**
4	50	6.50	4.677	34.628	24.31	0.448	1.98	0.85	1.00	1.2	26.83	53.05	24.31	7827	5232	293	1159	1019	**
3	30	5.80	3.812	33.674	23.35	0.428	2.01	0.85	1.00	1.2	25.15	50.59	23.35	7551	5004	250	1048	908	**
2	12	5.98	3.177	25.530	17.28	0.411	2.04	0.85	1.00	1.1	19.12	39.05	17.28	5612	3567	199	849	746	**
1	2	6.10	2.561	4.952	3.22	0.806	1.82	0.85	1.00	0.9	6.59	11.99	3.22	1319	643	62	63	101	**
													Totals	**94,894**	**62,505**			**15,805**	

*** = Section Force Exceeds Solidity Ratio Criteria*

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

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	8.35	4.694	35.852	26.36	0.462	1.95	1.00	1.00	1.3	28.61	55.89	26.36	3780	2233	397	385	781	
15	270	8.29	3.833	35.796	26.30	0.452	1.97	1.00	1.00	1.3	27.52	54.23	26.30	4126	2580	382	489	871	
14	250	8.23	4.694	35.737	26.24	0.461	1.96	1.00	1.00	1.3	28.51	55.76	26.24	4263	2647	390	524	914	
13	230	8.16	3.833	35.673	26.18	0.450	1.97	1.00	1.00	1.3	27.42	54.09	26.18	4781	3150	375	678	1054	
12	210	8.08	3.833	35.602	26.10	0.450	1.97	1.00	1.00	1.3	27.36	54.00	26.10	5136	3455	371	778	1149	
11	190	8.00	4.694	35.520	26.02	0.459	1.96	1.00	1.00	1.3	28.32	55.50	26.02	5483	3681	377	867	1245	
10	170	7.90	3.812	36.246	25.93	0.455	1.97	1.00	1.00	1.3	27.86	54.76	25.93	6769	4513	368	1101	1243	**
9	150	7.79	3.812	36.129	25.81	0.454	1.97	1.00	1.00	1.3	27.76	54.62	25.81	7196	4800	362	1173	1224	**
8	130	7.65	4.677	35.982	25.66	0.462	1.95	1.00	1.00	1.3	28.68	56.05	25.66	7324	4852	364	1163	1202	**
7	110	7.47	3.812	35.791	25.47	0.450	1.97	1.00	1.00	1.3	27.47	54.22	25.47	7834	5324	344	1256	1174	**
6	90	7.25	3.812	35.535	25.22	0.447	1.98	1.00	1.00	1.3	27.26	53.91	25.22	7888	5366	332	1258	1138	**
5	70	6.94	3.812	35.173	24.85	0.444	1.98	1.00	1.00	1.2	26.96	53.49	24.85	8006	5458	316	1262	1089	**
4	50	6.50	4.677	34.628	24.31	0.448	1.98	1.00	1.00	1.2	27.53	54.44	24.31	7827	5232	301	1159	1019	**
3	30	5.80	3.812	33.674	23.35	0.428	2.01	1.00	1.00	1.2	25.72	51.74	23.35	7551	5004	255	1048	908	**
2	12	5.98	3.177	25.530	17.28	0.411	2.04	1.00	1.00	1.1	19.59	40.02	17.28	5612	3567	204	849	746	**
1	2	6.10	2.561	4.952	3.22	0.806	1.82	1.00	1.00	0.9	6.97	12.69	3.22	1319	643	66	63	101	**
													Totals	**94,894**	**62,505**			**15,857**	

*** = Section Force Exceeds Solidity Ratio Criteria*

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

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	8.35	4.694	35.852	26.36	0.462	1.95	0.80	1.00	1.3	27.67	54.06	26.36	3780	2233	384	385	768	
15	270	8.29	3.833	35.796	26.30	0.452	1.97	0.80	1.00	1.3	26.76	52.72	26.30	4126	2580	371	489	861	
14	250	8.23	4.694	35.737	26.24	0.461	1.96	0.80	1.00	1.3	27.57	53.92	26.24	4263	2647	377	524	901	
13	230	8.16	3.833	35.673	26.18	0.450	1.97	0.80	1.00	1.3	26.65	52.57	26.18	4781	3150	365	678	1043	
12	210	8.08	3.833	35.602	26.10	0.450	1.97	0.80	1.00	1.3	26.59	52.49	26.10	5136	3455	361	778	1138	
11	190	8.00	4.694	35.520	26.02	0.459	1.96	0.80	1.00	1.3	27.38	53.66	26.02	5483	3681	365	867	1232	
10	170	7.90	3.812	36.246	25.93	0.455	1.97	0.80	1.00	1.3	27.10	53.26	25.93	6769	4513	358	1101	1243	**
9	150	7.79	3.812	36.129	25.81	0.454	1.97	0.80	1.00	1.3	27.00	53.12	25.81	7196	4800	352	1173	1224	**
8	130	7.65	4.677	35.982	25.66	0.462	1.95	0.80	1.00	1.3	27.74	54.22	25.66	7324	4852	353	1163	1202	**
7	110	7.47	3.812	35.791	25.47	0.450	1.97	0.80	1.00	1.3	26.71	52.71	25.47	7834	5324	335	1256	1174	**
6	90	7.25	3.812	35.535	25.22	0.447	1.98	0.80	1.00	1.3	26.50	52.41	25.22	7888	5366	323	1258	1138	**
5	70	6.94	3.812	35.173	24.85	0.444	1.98	0.80	1.00	1.2	26.19	51.97	24.85	8006	5458	307	1262	1089	**
4	50	6.50	4.677	34.628	24.31	0.448	1.98	0.80	1.00	1.2	26.60	52.59	24.31	7827	5232	291	1159	1019	**
3	30	5.80	3.812	33.674	23.35	0.428	2.01	0.80	1.00	1.2	24.96	50.21	23.35	7551	5004	248	1048	908	**
2	12	5.98	3.177	25.530	17.28	0.411	2.04	0.80	1.00	1.1	18.96	38.73	17.28	5612	3567	197	849	746	**
1	2	6.10	2.561	4.952	3.22	0.806	1.82	0.80	1.00	0.9	6.46	11.76	3.22	1319	643	61	63	101	**
													Totals	**94,894**	**62,505**			**15,787**	

*** = Section Force Exceeds Solidity Ratio Criteria*

SECTION FORCES

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

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	8.35	4.694	35.852	26.36	0.462	1.95	0.85	1.00	1.3	27.90	54.52	26.36	3780	2233	387	385	772	
15	270	8.29	3.833	35.796	26.30	0.452	1.97	0.85	1.00	1.3	26.95	53.10	26.30	4126	2580	374	489	863	
14	250	8.23	4.694	35.737	26.24	0.461	1.96	0.85	1.00	1.3	27.80	54.38	26.24	4263	2647	380	524	904	
13	230	8.16	3.833	35.673	26.18	0.450	1.97	0.85	1.00	1.3	26.84	52.95	26.18	4781	3150	367	678	1046	
12	210	8.08	3.833	35.602	26.10	0.450	1.97	0.85	1.00	1.3	26.78	52.87	26.10	5136	3455	363	778	1141	
11	190	8.00	4.694	35.520	26.02	0.459	1.96	0.85	1.00	1.3	27.62	54.12	26.02	5483	3681	368	867	1235	
10	170	7.90	3.812	36.246	25.93	0.455	1.97	0.85	1.00	1.3	27.29	53.64	25.93	6769	4513	360	1101	1243	**
9	150	7.79	3.812	36.129	25.81	0.454	1.97	0.85	1.00	1.3	27.19	53.50	25.81	7196	4800	354	1173	1224	**
8	130	7.65	4.677	35.982	25.66	0.462	1.95	0.85	1.00	1.3	27.97	54.67	25.66	7324	4852	356	1163	1202	**
7	110	7.47	3.812	35.791	25.47	0.450	1.97	0.85	1.00	1.3	26.90	53.09	25.47	7834	5324	337	1256	1174	**
6	90	7.25	3.812	35.535	25.22	0.447	1.98	0.85	1.00	1.3	26.69	52.78	25.22	7888	5366	325	1258	1138	**
5	70	6.94	3.812	35.173	24.85	0.444	1.98	0.85	1.00	1.2	26.38	52.35	24.85	8006	5458	309	1262	1089	**
4	50	6.50	4.677	34.628	24.31	0.448	1.98	0.85	1.00	1.2	26.83	53.05	24.31	7827	5232	293	1159	1019	**
3	30	5.80	3.812	33.674	23.35	0.428	2.01	0.85	1.00	1.2	25.15	50.59	23.35	7551	5004	250	1048	908	**
2	12	5.98	3.177	25.530	17.28	0.411	2.04	0.85	1.00	1.1	19.12	39.05	17.28	5612	3567	199	849	746	**
1	2	6.10	2.561	4.952	3.22	0.806	1.82	0.85	1.00	0.9	6.59	11.99	3.22	1319	643	62	63	101	**
	*** = Section Force Exceeds Solidity Ratio Criteria*												**Totals**	**94,894**	**62,505**			**15,805**	

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

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	12.02	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1289	0	280	239	519	
15	270	11.94	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1288	0	258	298	556	
14	250	11.85	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1347	0	276	326	602	
13	230	11.75	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1359	0	254	392	646	
12	210	11.64	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1401	0	251	449	700	
11	190	11.52	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1501	0	268	486	755	
10	170	11.38	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1880	0	255	690	945	
9	150	11.22	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1996	0	251	801	1052	
8	130	11.02	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	2060	0	265	809	1074	
7	110	10.76	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2092	0	241	854	1095	
6	90	10.44	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2101	0	234	845	1078	
5	70	9.99	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2123	0	224	851	1075	
4	50	9.36	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	2163	0	225	797	1023	
3	30	8.36	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2123	0	187	712	899	
2	12	8.62	3.177	8.250	0.00	0.170	2.70	1.00	1.00	0.0	7.92	21.37	0.00	1704	0	157	587	744	
1	2	8.78	2.561	1.732	0.00	0.491	1.91	1.00	1.00	0.0	3.74	7.15	0.00	563	0	53	126	137	**
	*** = Section Force Exceeds Solidity Ratio Criteria*												**Totals**	**26,991**	**0**			**12,900**	

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

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	12.02	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1289	0	254	239	494	
15	270	11.94	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1288	0	236	298	535	
14	250	11.85	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1347	0	250	326	576	
13	230	11.75	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1359	0	233	392	625	
12	210	11.64	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1401	0	230	449	679	
11	190	11.52	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1501	0	244	486	730	
10	170	11.38	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1880	0	235	690	925	
9	150	11.22	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1996	0	232	801	1032	
8	130	11.02	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	2060	0	242	809	1051	
7	110	10.76	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2092	0	222	854	1076	
6	90	10.44	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2101	0	215	845	1060	
5	70	9.99	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2123	0	206	851	1058	
4	50	9.36	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	2163	0	206	797	1003	
3	30	8.36	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2123	0	173	712	885	
2	12	8.62	3.177	8.250	0.00	0.170	2.70	0.80	1.00	0.0	7.29	19.66	0.00	1704	0	144	587	731	
1	2	8.78	2.561	1.732	0.00	0.491	1.91	0.80	1.00	0.0	3.23	6.17	0.00	563	0	46	126	137	**
	*** = Section Force Exceeds Solidity Ratio Criteria*												**Totals**	**26,991**	**0**			**12,596**	

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

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	12.02	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1289	0	261	239	500
15	270	11.94	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1288	0	242	298	540
14	250	11.85	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1347	0	257	326	583
13	230	11.75	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1359	0	238	392	630
12	210	11.64	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1401	0	236	449	684
11	190	11.52	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1501	0	250	486	736
10	170	11.38	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1880	0	240	690	930

SECTION FORCES

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

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
9	150	11.22	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1996	0	237	801	1037	
8	130	11.02	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	2060	0	248	809	1057	
7	110	10.76	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2092	0	227	854	1081	
6	90	10.44	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2101	0	220	845	1065	
5	70	9.99	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2123	0	211	851	1062	
4	50	9.36	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	2163	0	211	797	1008	
3	30	8.36	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2123	0	176	712	888	
2	12	8.62	3.177	8.250	0.00	0.170	2.70	0.85	1.00	0.0	7.45	20.09	0.00	1704	0	147	587	734	
1	2	8.78	2.561	1.732	0.00	0.491	1.91	0.85	1.00	0.0	3.35	6.42	0.00	563	0	48	126	137	**
	*** = Section Force Exceeds Solidity Ratio Criteria*												**Totals**	**26,991**	**0**			**12,672**	

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

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	12.02	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1289	0	280	239	519	
15	270	11.94	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1288	0	258	298	556	
14	250	11.85	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1347	0	276	326	602	
13	230	11.75	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1359	0	254	392	646	
12	210	11.64	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1401	0	251	449	700	
11	190	11.52	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1501	0	268	486	755	
10	170	11.38	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1880	0	255	690	945	
9	150	11.22	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1996	0	251	801	1052	
8	130	11.02	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	2060	0	265	809	1074	
7	110	10.76	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2092	0	241	854	1095	
6	90	10.44	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2101	0	234	845	1078	
5	70	9.99	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2123	0	224	851	1075	
4	50	9.36	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	2163	0	225	797	1023	
3	30	8.36	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2123	0	187	712	899	
2	12	8.62	3.177	8.250	0.00	0.170	2.70	1.00	1.00	0.0	7.92	21.37	0.00	1704	0	157	587	744	
1	2	8.78	2.561	1.732	0.00	0.491	1.91	1.00	1.00	0.0	3.74	7.15	0.00	563	0	53	126	137	**
	*** = Section Force Exceeds Solidity Ratio Criteria*												**Totals**	**26,991**	**0**			**12,900**	

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

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	12.02	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1289	0	254	239	494	
15	270	11.94	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1288	0	236	298	535	
14	250	11.85	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1347	0	250	326	576	
13	230	11.75	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1359	0	233	392	625	
12	210	11.64	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1401	0	230	449	679	
11	190	11.52	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1501	0	244	486	730	
10	170	11.38	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1880	0	235	690	925	
9	150	11.22	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1996	0	232	801	1032	
8	130	11.02	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	2060	0	242	809	1051	
7	110	10.76	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2092	0	222	854	1076	
6	90	10.44	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2101	0	215	845	1060	
5	70	9.99	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2123	0	206	851	1058	
4	50	9.36	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	2163	0	206	797	1003	
3	30	8.36	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2123	0	173	712	885	
2	12	8.62	3.177	8.250	0.00	0.170	2.70	0.80	1.00	0.0	7.29	19.66	0.00	1704	0	144	587	731	
1	2	8.78	2.561	1.732	0.00	0.491	1.91	0.80	1.00	0.0	3.23	6.17	0.00	563	0	46	126	137	**
	*** = Section Force Exceeds Solidity Ratio Criteria*												**Totals**	**26,991**	**0**			**12,596**	

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

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
16	290	12.02	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1289	0	261	239	500
15	270	11.94	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1288	0	242	298	540
14	250	11.85	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1347	0	257	326	583
13	230	11.75	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1359	0	238	392	630
12	210	11.64	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1401	0	236	449	684
11	190	11.52	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1501	0	250	486	736
10	170	11.38	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1880	0	240	690	930
9	150	11.22	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1996	0	237	801	1037
8	130	11.02	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	2060	0	248	809	1057
7	110	10.76	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2092	0	227	854	1081
6	90	10.44	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2101	0	220	845	1065
5	70	9.99	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2123	0	211	851	1062
4	50	9.36	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	2163	0	211	797	1008
3	30	8.36	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2123	0	176	712	888
2	12	8.62	3.177	8.250	0.00	0.170	2.70	0.85	1.00	0.0	7.45	20.09	0.00	1704	0	147	587	734

SECTION FORCES

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

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
1	2	8.78	2.561	1.732	0.00	0.491	1.91	0.85	1.00	0.0	3.35	6.42	0.00	563	0	48	126	137	**
	** = Section Force Exceeds Solidity Ratio Criteria												**Totals**	**26,991**	**0**			**12,672**	

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

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	12.02	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1289	0	280	239	519	
15	270	11.94	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1288	0	258	298	556	
14	250	11.85	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1347	0	276	326	602	
13	230	11.75	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1359	0	254	392	646	
12	210	11.64	3.833	9.497	0.00	0.160	2.74	1.00	1.00	0.0	9.28	25.39	0.00	1401	0	251	449	700	
11	190	11.52	4.694	9.497	0.00	0.170	2.70	1.00	1.00	0.0	10.16	27.40	0.00	1501	0	268	486	755	
10	170	11.38	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1880	0	255	690	945	
9	150	11.22	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	1996	0	251	801	1052	
8	130	11.02	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	2060	0	265	809	1074	
7	110	10.76	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2092	0	241	854	1095	
6	90	10.44	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2101	0	234	845	1078	
5	70	9.99	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2123	0	224	851	1075	
4	50	9.36	4.677	10.319	0.00	0.179	2.67	1.00	1.00	0.0	10.63	28.35	0.00	2163	0	225	797	1023	
3	30	8.36	3.812	10.319	0.00	0.169	2.70	1.00	1.00	0.0	9.75	26.35	0.00	2123	0	187	712	899	
2	12	8.62	3.177	8.250	0.00	0.170	2.70	1.00	1.00	0.0	7.92	21.37	0.00	1704	0	157	587	744	
1	2	8.78	2.561	1.732	0.00	0.491	1.91	1.00	1.00	0.0	3.74	7.15	0.00	563	0	53	126	137	**
	** = Section Force Exceeds Solidity Ratio Criteria												**Totals**	**26,991**	**0**			**12,900**	

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

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	12.02	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1289	0	254	239	494	
15	270	11.94	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1288	0	236	298	535	
14	250	11.85	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1347	0	250	326	576	
13	230	11.75	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1359	0	233	392	625	
12	210	11.64	3.833	9.497	0.00	0.160	2.74	0.80	1.00	0.0	8.52	23.29	0.00	1401	0	230	449	679	
11	190	11.52	4.694	9.497	0.00	0.170	2.70	0.80	1.00	0.0	9.22	24.87	0.00	1501	0	244	486	730	
10	170	11.38	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1880	0	235	690	925	
9	150	11.22	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	1996	0	232	801	1032	
8	130	11.02	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	2060	0	242	809	1051	
7	110	10.76	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2092	0	222	854	1076	
6	90	10.44	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2101	0	215	845	1060	
5	70	9.99	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2123	0	206	851	1058	
4	50	9.36	4.677	10.319	0.00	0.179	2.67	0.80	1.00	0.0	9.69	25.85	0.00	2163	0	206	797	1003	
3	30	8.36	3.812	10.319	0.00	0.169	2.70	0.80	1.00	0.0	8.98	24.29	0.00	2123	0	173	712	885	
2	12	8.62	3.177	8.250	0.00	0.170	2.70	0.80	1.00	0.0	7.29	19.66	0.00	1704	0	144	587	731	
1	2	8.78	2.561	1.732	0.00	0.491	1.91	0.80	1.00	0.0	3.23	6.17	0.00	563	0	46	126	137	**
	** = Section Force Exceeds Solidity Ratio Criteria												**Totals**	**26,991**	**0**			**12,596**	

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

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
16	290	12.02	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1289	0	261	239	500	
15	270	11.94	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1288	0	242	298	540	
14	250	11.85	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1347	0	257	326	583	
13	230	11.75	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1359	0	238	392	630	
12	210	11.64	3.833	9.497	0.00	0.160	2.74	0.85	1.00	0.0	8.71	23.82	0.00	1401	0	236	449	684	
11	190	11.52	4.694	9.497	0.00	0.170	2.70	0.85	1.00	0.0	9.45	25.50	0.00	1501	0	250	486	736	
10	170	11.38	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1880	0	240	690	930	
9	150	11.22	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	1996	0	237	801	1037	
8	130	11.02	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	2060	0	248	809	1057	
7	110	10.76	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2092	0	227	854	1081	
6	90	10.44	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2101	0	220	845	1065	
5	70	9.99	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2123	0	211	851	1062	
4	50	9.36	4.677	10.319	0.00	0.179	2.67	0.85	1.00	0.0	9.92	26.47	0.00	2163	0	211	797	1008	
3	30	8.36	3.812	10.319	0.00	0.169	2.70	0.85	1.00	0.0	9.18	24.81	0.00	2123	0	176	712	888	
2	12	8.62	3.177	8.250	0.00	0.170	2.70	0.85	1.00	0.0	7.45	20.09	0.00	1704	0	147	587	734	
1	2	8.78	2.561	1.732	0.00	0.491	1.91	0.85	1.00	0.0	3.35	6.42	0.00	563	0	48	126	137	**
	** = Section Force Exceeds Solidity Ratio Criteria												**Totals**	**26,991**	**0**			**12,672**	

EQUIVALENT LATERAL FORCE METHOD

Spectral Response Acceleration for Short Period (S_S):	0.20
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}):	0.21
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.09
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):	1.07
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.28
Total Unfactored Dead Load:	44.06 k
Seismic Base Shear (E):	1.72 k

SEISMIC FORCES

1.2D + 1.0Ev + 1.0Eh

Section/Appurtenance	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	Cvx	Horizontal Force (lb)	Vertical Force (lb)
16	290.00	1,289	1,866,025	0.064	110	1,601
15	270.00	1,288	1,700,716	0.058	100	1,599
14	250.00	1,347	1,611,763	0.055	95	1,673
13	230.00	1,359	1,460,774	0.050	86	1,687
12	210.00	1,401	1,340,274	0.046	79	1,740
11	190.00	1,501	1,262,928	0.043	74	1,864
10	170.00	1,880	1,371,097	0.047	81	2,334
9	150.00	1,996	1,239,773	0.042	73	2,479
8	130.00	2,060	1,064,926	0.036	63	2,558
7	110.00	2,092	872,366	0.030	51	2,597
6	90.00	2,101	677,406	0.023	40	2,609
5	70.00	2,123	495,725	0.017	29	2,636
4	50.00	2,163	327,872	0.011	19	2,685
3	30.00	2,123	167,080	0.006	10	2,636
2	12.00	1,704	41,363	0.001	2	2,115
1	2.00	563	1,371	0.000	0	699
Generic 20' Dipole	300.00	60	90,710	0.003	5	74
Generic 18' Dipole	300.00	55	83,151	0.003	5	68
Generic 14' Omni	300.00	40	60,474	0.002	4	50
Generic 8' Omni	300.00	25	37,796	0.001	2	31
Generic Round Side Arm	299.00	562	846,772	0.029	50	698
Generic 18' Dipole	289.70	55	79,505	0.003	5	68
Generic 8' Omni	279.60	50	69,059	0.002	4	62
Generic 10' Dipole	279.30	30	41,378	0.001	2	37
Generic Round Side Arm	273.00	562	753,452	0.026	44	698
Generic 11' Omni	266.40	40	51,922	0.002	3	50
Scala OGT9-840N	263.00	18	23,621	0.001	1	23
Generic 10' Omni	245.10	25	29,159	0.001	2	31
Generic 14' Omni	245.00	40	46,631	0.002	3	50
Generic 13' Omni	242.90	40	46,118	0.002	3	50
Generic 10' Omni	242.20	25	28,717	0.001	2	31
Bird 432E-83I-01-T	235.00	25	27,626	0.001	2	31
Sinclair SC479-HF1LDF(E5765)	235.00	102	112,715	0.004	7	127
Generic 12" x 12" Junction Box	234.40	10	11,014	0.000	1	12
Generic Round Side Arm	233.00	562	614,807	0.021	36	698
Generic Round Side Arm	232.00	188	203,807	0.007	12	233
Generic 10' Omni	230.50	25	26,949	0.001	2	31
Scala OGT9-840	229.00	18	19,776	0.001	1	23
Generic 14' Omni	228.30	80	85,182	0.003	5	99
Decibel DB224	215.00	32	31,546	0.001	2	40
Generic 22' Dipole	215.00	132	130,128	0.004	8	164
Generic Round Side Arm	204.00	375	345,584	0.012	20	466

Ericsson RRUS 8843 B2, B66A		196.00	216	189,093	0.006	11	268
Ericsson RRUS 4478 B14		196.00	180	157,315	0.005	9	223
Ericsson RRUS 4449 B5, B12		196.00	213	186,467	0.006	11	264
Ericsson AIR 6449 B77D/ C-Band		196.00	245	214,306	0.007	13	304
Raycap DC9-48-60-24-8C-EV		196.00	32	28,014	0.001	2	40
Sabre C10857001C		196.00	2,067	1,809,516	0.062	106	2,566
CCI DMP65R-BU8D		196.00	287	251,336	0.009	15	356
CCI TPA65R-BU8D		196.00	248	216,669	0.007	13	307
Ericsson Radio 4460 B25+B66		180.00	327	256,625	0.009	15	406
Ericsson Radio 4480 B71+B85A		180.00	252	197,766	0.007	12	313
Ericsson Air6449 B41		180.00	312	244,853	0.008	14	387
Andrew DB224		180.00	38	29,822	0.001	2	47
Site Pro 1 VFA12-HD		180.00	2,070	1,624,509	0.056	95	2,570
RFS APXVAALL24 43-U-NA20		180.00	368	289,115	0.010	17	457
Commscope CBC78T-DS-43-2X		170.00	62	45,288	0.002	3	77
Samsung RF4461d-13A		170.00	237	173,056	0.006	10	295
Samsung B2/B66A RRH ORAN (RF 4439d-25A)		170.00	224	163,430	0.006	10	278
Samsung MT6413-77A		170.00	172	125,362	0.004	7	213
Raycap RVZDC-6627-PF-48 (29.5")		170.00	32	23,337	0.001	1	40
Generic Mount Reinforcement		170.00	600	437,563	0.015	26	745
Commscope LNX-8513DS-A1M		170.00	118	85,762	0.003	5	146
Commscope JAHH-65B-R3B		170.00	364	265,163	0.009	16	451
Generic Flat Light Sector Frame		170.00	2,400	1,750,252	0.060	103	2,980
Flat Side Arm		160.00	150	101,201	0.004	6	186
Generic 12" x 12" Junction Box		130.10	10	5,173	0.000	0	12
Generic 24" X 12" Panel		130.00	60	31,010	0.001	2	74
Round Side Arm		130.00	150	77,525	0.003	5	186
Bird 432E-83I-01-T		125.00	25	12,286	0.000	1	31
Generic 24" X 12" Panel		125.00	60	29,487	0.001	2	74
Flat Side Arm		125.00	450	221,156	0.008	13	559
Generic 20' Dipole		118.10	60	27,415	0.001	2	74
Round Side Arm		115.00	150	66,236	0.002	4	186
Kathrein Scala PR-850		107.40	38	15,370	0.000	1	47
Generic 1' Yagi		107.10	5	2,015	0.000	0	6
Round Side Arm		105.00	150	58,937	0.002	3	186
Generic 6' Ice Shield		87.40	450	139,713	0.005	8	559
Generic 6' Ice Shield		84.00	450	132,776	0.004	8	559
RFS PA6-65AC w/ Radome		82.40	308	88,662	0.003	5	382
RFS PA6-65AC w/ Radome		80.00	308	85,361	0.003	5	382
	Totals		**44,056**	**29,258,004**	**1.000**	**1,718**	**54,701**

FORCE/STRESS SUMMARY

Section 1 – 0.0' to 4.00'

Member 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	-85.67	1.2D + 1.0Di + 1.0Wi N	2.309	100	100	100	49.27	50.00	149.83	0.00	0.00	0	0	57	Member X
D PL - PL 2 x 0.5"	-3.25	1.2D + 1.0W N	3.652	50	50	50	136.65	36.00	15.33	0.00	0.00	0	0	0	Member Y

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 3X3X0.3125	21.63	1.2D + 1.0Di + 1.0Wi N	36.0	58	57.67	0.00	0.00	0.00	0	0	37	Member

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

Section 2 – 4.0' to 20.00'

Member 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	-75.97	1.2D + 1.0Di + 1.0Wi 60°	3.9	100	100	100	83.20	50.00	107.86	0.00	0.00	0	0	70	Member X
H SAE - 2X2X0.1875	-1.95	1.2D + 1.0W N	4	100	100	100	121.12	36.00	13.87	0.00	0.00	0	0	14	Member Z
D SOL - 5/8" SOLID	-1.83	1.2D + 1.0W N	5.587	50	50	50	193.38	50.00	1.85	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.1875	4.90	1.2D + 1.0W N	36.0	58	23.17	0.00	0.00	0.00	0	0	21	Member
D SOL - 5/8" SOLID	2.93	1.2D + 1.0W 90°	50.0	65	13.81	0.00	0.00	0.00	0	0	21	Member

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

Section 3 – 20.0' to 40.00'

Member 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	-75.56	1.2D + 1.0Di + 1.0Wi 60°	3.92	100	100	100	83.63	50.00	107.30	0.00	0.00	0	0	70	Member X
H SAE - 2X2X0.1875	-1.65	1.2D + 1.0W 90°	4	100	100	100	121.12	36.00	13.87	0.00	0.00	0	0	11	Member Z
D SOL - 5/8" SOLID	-0.14	1.2D + 1.0W N	5.601	50	50	50	193.87	50.00	1.84	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.1875	2.11	1.2D + 1.0W 210°	36.0	58	23.17	0.00	0.00	0.00	0	0	9	Member
D SOL - 5/8" SOLID	2.72	1.2D + 1.0W 90°	50.0	65	13.81	0.00	0.00	0.00	0	0	19	Member

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

Section 4 – 40.0' to 60.00'

Member 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	-84.89	1.2D + 1.0W N	3.92	100	100	100	83.63	50.00	107.30	0.00	0.00	0	0	79	Member X
H SAE - 2X2X0.1875	-4.07	1.2D + 1.0W 90°	4	100	100	100	121.12	36.00	13.87	0.00	0.00	0	0	29	Member Z
D SOL - 5/8" SOLID	-0.13	1.2D + 1.0W N	5.601	50	50	50	193.87	50.00	1.84	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.1875	2.55	1.2D + 1.0W 240°	36.0	58	23.17	0.00	0.00	0.00	0	0	11	Member
D SOL - 5/8" SOLID	6.05	1.2D + 1.0W 90°	50.0	65	13.81	0.00	0.00	0.00	0	0	43	Member

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

Section 5 – 60.0' to 80.00'

FORCE/STRESS SUMMARY

Member 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	-84.13	1.2D + 1.0W N	3.92	100	100	100	83.63	50.00	107.30	0.00	0.00	0	0	78	Member X
H SAE - 2X2X0.1875	-5.74	1.2D + 1.0W 330°	4	100	100	100	121.12	36.00	13.87	0.00	0.00	0	0	41	Member Z
D SOL - 5/8" SOLID	-1.53	1.2D + 1.0W N	5.601	50	50	50	193.87	50.00	1.84	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.1875	2.53	1.2D + 1.0W N	36.0	58	23.17	0.00	0.00	0.00	0	0	10	Member
D SOL - 5/8" SOLID	8.38	1.2D + 1.0W 330°	50.0	65	13.81	0.00	0.00	0.00	0	0	60	Member

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

FORCE/STRESS SUMMARY

Section 6 – 80.0' to 100.00'

Member 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	-66.55	1.2D + 1.0W 330°	3.92	100	100	100	83.63	50.00	107.30	0.00	0.00	0	0	62	Member X
H SAE - 2X2X0.1875	-1.96	1.2D + 1.0W 120°	4	100	100	100	121.12	36.00	13.87	0.00	0.00	0	0	14	Member Z
D SOL - 5/8" SOLID	-0.04	1.2D + 1.0W N	5.601	50	50	50	193.87	50.00	1.84	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.1875	2.58	1.2D + 1.0W 210°	36.0	58	23.17	0.00	0.00	0.00	0	0	11	Member
D SOL - 5/8" SOLID	3.27	1.2D + 1.0W 330°	50.0	65	13.81	0.00	0.00	0.00	0	0	23	Member

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

Section 7 – 100.0' to 120.00'

Member 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	-69.79	1.2D + 1.0W 120°	3.92	100	100	100	83.63	50.00	107.30	0.00	0.00	0	0	65	Member X
H SAE - 2X2X0.1875	-4.70	1.2D + 1.0W 210°	4	100	100	100	121.12	36.00	13.87	0.00	0.00	0	0	33	Member Z
D SOL - 5/8" SOLID	-0.13	1.2D + 1.0W N	5.601	50	50	50	193.87	50.00	1.84	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.1875	2.60	1.2D + 1.0W N	36.0	58	23.17	0.00	0.00	0.00	0	0	11	Member
D SOL - 5/8" SOLID	7.32	1.2D + 1.0W 210°	50.0	65	13.81	0.00	0.00	0.00	0	0	53	Member

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

Section 8 – 120.0' to 140.00'

Member 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	-80.09	1.2D + 1.0W 120°	3.92	100	100	100	83.63	50.00	107.30	0.00	0.00	0	0	74	Member X
H SAE - 2X2X0.1875	-6.77	1.2D + 1.0W 330°	4	100	100	100	121.12	36.00	13.87	0.00	0.00	0	0	48	Member Z
D SOL - 5/8" SOLID	-1.00	1.2D + 1.0W N	5.601	50	50	50	193.87	50.00	1.84	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.1875	2.19	1.2D + 1.0W 180°	36.0	58	23.17	0.00	0.00	0.00	0	0	9	Member
D SOL - 5/8" SOLID	9.72	1.2D + 1.0W 330°	50.0	65	13.81	0.00	0.00	0.00	0	0	70	Member

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

Section 9 – 140.0' to 160.00'

Member 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	-67.93	1.2D + 1.0W 330°	3.92	100	100	100	83.63	50.00	107.30	0.00	0.00	0	0	63	Member X
H SAE - 2X2X0.1875	-4.25	1.2D + 1.0W 330°	4	100	100	100	121.12	36.00	13.87	0.00	0.00	0	0	30	Member Z
D SOL - 5/8" SOLID	-1.64	1.2D + 1.0W N	5.601	50	50	50	193.87	50.00	1.84	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2X2X0.1875	2.43	1.2D + 1.0W N	36.0	58	23.17	0.00	0.00	0.00	0	0	10	Member
D SOL - 5/8" SOLID	6.52	1.2D + 1.0W 330°	50.0	65	13.81	0.00	0.00	0.00	0	0	47	Member

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

FORCE/STRESS SUMMARY

Section 10 – 160.0' to 180.00'

Member 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	-68.93	1.2D + 1.0W 330°	3.92	100	100	100	83.63	50.00	107.30	0.00	0.00	0	0	64	Member X
H SAE - 2X2X0.1875	-3.35	1.2D + 1.0W 210°	4	100	100	100	121.12	36.00	13.87	0.00	0.00	0	0	24	Member Z
D SOL - 5/8" SOLID	-1.76	1.2D + 1.0W N	5.601	50	50	50	193.87	50.00	1.84	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (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	1.84	1.2D + 1.0W N	50.0	65	178.92	0.00	0.00		0	0	1	Member
H SAE - 2X2X0.1875	3.33	1.2D + 1.0W 240°	36.0	58	23.17	0.00	0.00	0.00	0	0	14	Member
D SOL - 5/8" SOLID	5.31	1.2D + 1.0W 210°	50.0	65	13.81	0.00	0.00	0.00	0	0	38	Member

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

Section 11 – 180.0' to 200.00'

Member 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	-52.84	1.2D + 1.0W 240°	3.92	100	100	100	94.08	50.00	74.01	0.00	0.00	0	0	71	Member X
H SAE - 2X2X0.1875	-5.87	1.2D + 1.0W 330°	4	100	100	100	121.12	36.00	13.87	0.00	0.00	0	0	42	Member Z
D SOL - 5/8" SOLID	-1.65	1.2D + 1.0W N	5.601	50	50	50	193.87	50.00	1.84	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	12.45	1.2D + 1.0W N	50.0	65	141.37	0.00	0.00		0	0	8	Member
H SAE - 2X2X0.1875	2.89	1.2D + 1.0W N	36.0	58	23.17	0.00	0.00	0.00	0	0	12	Member
D SOL - 5/8" SOLID	9.15	1.2D + 1.0W 210°	50.0	65	13.81	0.00	0.00	0.00	0	0	66	Member

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

Section 12 – 200.0' to 220.00'

Member 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	-48.44	1.2D + 1.0W 90°	3.92	100	100	100	94.08	50.00	74.01	0.00	0.00	0	0	65	Member X
H SAE - 2X2X0.1875	-1.56	1.2D + 1.0W 300°	4	100	100	100	121.12	36.00	13.87	0.00	0.00	0	0	11	Member Z
D SOL - 5/8" SOLID	-1.46	1.2D + 1.0W N	5.601	50	50	50	193.87	50.00	1.84	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	17.00	1.2D + 1.0W N	50.0	65	141.37	0.00	0.00		0	0	12	Member
H SAE - 2X2X0.1875	2.39	1.2D + 1.0W N	36.0	58	23.17	0.00	0.00	0.00	0	0	10	Member
D SOL - 5/8" SOLID	2.76	1.2D + 1.0W 300°	50.0	65	13.81	0.00	0.00	0.00	0	0	19	Member

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

Section 13 – 220.0' to 240.00'

Member 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	-46.80	1.2D + 1.0W 330°	3.92	100	100	100	94.08	50.00	74.01	0.00	0.00	0	0	63	Member X
H SAE - 2X2X0.1875	-4.11	1.2D + 1.0W 90°	4	100	100	100	121.12	36.00	13.87	0.00	0.00	0	0	29	Member Z
D SOL - 5/8" SOLID	-1.52	1.2D + 1.0W N	5.601	50	50	50	193.87	50.00	1.84	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	15.18	1.2D + 1.0W N	50.0	65	141.37	0.00	0.00		0	0	10	Member
H SAE - 2X2X0.1875	2.16	1.2D + 1.0W N	36.0	58	23.17	0.00	0.00	0.00	0	0	9	Member

FORCE/STRESS SUMMARY

D SOL - 5/8" SOLID	6.51	1.2D + 1.0W 90°	50.0	65	13.81	0.00	0.00	0.00	0	0	47	Member

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

Section 14 – 240.0' to 260.00'

Member 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	-28.21	1.2D + 1.0W N	3.92	100	100	100	94.08	50.00	74.01	0.00	0.00	0	0	38	Member X
H SAE - 2X2X0.1875	-2.66	1.2D + 1.0W 60°	4	100	100	100	121.12	36.00	13.87	0.00	0.00	0	0	19	Member Z
D SOL - 5/8" SOLID	-0.73	1.2D + 1.0W N	5.601	50	50	50	193.87	50.00	1.84	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	4.38	1.2D + 1.0W 180°	50.0	65	141.37	0.00	0.00		0	0	3	Member
H SAE - 2X2X0.1875	1.33	1.2D + 1.0W N	36.0	58	23.17	0.00	0.00	0.00	0	0	5	Member
D SOL - 5/8" SOLID	7.41	1.2D + 1.0W 90°	50.0	65	13.81	0.00	0.00	0.00	0	0	53	Member

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

Section 15 – 260.0' to 280.00'

Member 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	-14.93	1.2D + 1.0W 90°	3.92	100	100	100	94.08	50.00	74.01	0.00	0.00	0	0	20	Member X
H SAE - 2X2X0.1875	-0.04	1.2D + 1.0W 60°	4	100	100	100	121.12	36.00	13.87	0.00	0.00	0	0	0	Member Z
D SOL - 5/8" SOLID	-0.90	1.2D + 1.0W N	5.601	50	50	50	193.87	50.00	1.84	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	1.65	1.2D + 1.0W N	50.0	65	141.37	0.00	0.00		0	0	1	Member
H SAE - 2X2X0.1875	0.80	1.2D + 1.0W N	36.0	58	23.17	0.00	0.00	0.00	0	0	3	Member
D SOL - 5/8" SOLID	0.88	1.2D + 1.0W 60°	50.0	65	13.81	0.00	0.00	0.00	0	0	6	Member

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

Section 16 – 280.0' to 300.00'

Member 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	-13.75	1.2D + 1.0W 90°	3.92	100	100	100	94.08	50.00	74.01	0.00	0.00	0	0	18	Member X
H SAE - 2X2X0.1875	-0.57	1.2D + 1.0W 90°	4	100	100	100	121.12	36.00	13.87	0.00	0.00	0	0	4	Member Z
D SOL - 5/8" SOLID	-0.43	1.2D + 1.0W N	5.601	50	50	50	193.87	50.00	1.84	0.00	0.00	0	0	0	Member X

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2" SOLID	2.87	1.2D + 1.0W 60°	50.0	65	141.37	0.00	0.00		0	0	2	Member
H SAE - 2X2X0.1875	0.58	1.2D + 1.0W N	36.0	58	23.17	0.00	0.00	0.00	0	0	2	Member
D SOL - 5/8" SOLID	1.39	1.2D + 1.0W 60°	50.0	65	13.81	0.00	0.00	0.00	0	0	10	Member

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

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
1.2D + 1.0W Normal	59.80	3/4 EHS	A1	22	34.98	0.74	2
		3/4 EHS	A1b	22a	34.98	18.53	53
		3/4 EHS	A1a	22b	34.98	18.39	53
	124.12	3/4 EHS	A1	46	34.98	0.24	1
		3/4 EHS	A1b	46a	34.98	26.04	74
		3/4 EHS	A1a	46b	34.98	25.68	73
	184.12	3/4 EHS	A1	67	34.98	0.48	1
		3/4 EHS	A1b	67a	34.98	26.9	77
		3/4 EHS	A1a	67b	34.98	27	77
	244.12	3/4 EHS	A1	88	34.98	1.26	4
		3/4 EHS	A1b	88a	34.98	21.91	63
		3/4 EHS	A1a	88b	34.98	22.08	63
	291.96	5/8 EHS	A1	104	25.44	1.85	7
		5/8 EHS	A1b	104a	25.44	13.31	52
		5/8 EHS	A1a	104b	25.44	13.45	53
1.2D + 1.0W 60°	59.80	3/4 EHS	A1	22	34.98	3.02	9
		3/4 EHS	A1b	22a	34.98	3	9
		3/4 EHS	A1a	22b	34.98	19.75	56
	124.12	3/4 EHS	A1	46	34.98	2.79	8
		3/4 EHS	A1b	46a	34.98	2.82	8
		3/4 EHS	A1a	46b	34.98	27.71	79
	184.12	3/4 EHS	A1	67	34.98	3.28	9
		3/4 EHS	A1b	67a	34.98	3.33	10
		3/4 EHS	A1a	67b	34.98	30.37	87
	244.12	3/4 EHS	A1	88	34.98	4.5	13
		3/4 EHS	A1b	88a	34.98	4.54	13
		3/4 EHS	A1a	88b	34.98	25.14	72
	291.96	5/8 EHS	A1	104	25.44	4.63	18
		5/8 EHS	A1b	104a	25.44	4.67	18
		5/8 EHS	A1a	104b	25.44	15.19	60
1.2D + 1.0W 90°	59.80	3/4 EHS	A1	22	34.98	11.31	32
		3/4 EHS	A1b	22a	34.98	0.98	3
		3/4 EHS	A1a	22b	34.98	20.92	60
	124.12	3/4 EHS	A1	46	34.98	15.28	44
		3/4 EHS	A1b	46a	34.98	0.78	2
		3/4 EHS	A1a	46b	34.98	29.71	85
	184.12	3/4 EHS	A1	67	34.98	15.64	45
		3/4 EHS	A1b	67a	34.98	1.16	3
		3/4 EHS	A1a	67b	34.98	31.78	91
	244.12	3/4 EHS	A1	88	34.98	13.54	39
		3/4 EHS	A1b	88a	34.98	2	6
		3/4 EHS	A1a	88b	34.98	25.79	74
	291.96	5/8 EHS	A1	104	25.44	9.29	37
		5/8 EHS	A1b	104a	25.44	2.53	10
		5/8 EHS	A1a	104b	25.44	15.28	60
1.2D + 1.0W 120°	59.80	3/4 EHS	A1	22	34.98	18.13	52
		3/4 EHS	A1b	22a	34.98	0.81	2
		3/4 EHS	A1a	22b	34.98	18.33	52
	124.12	3/4 EHS	A1	46	34.98	25.54	73
		3/4 EHS	A1b	46a	34.98	0.24	1
		3/4 EHS	A1a	46b	34.98	25.72	74
	184.12	3/4 EHS	A1	67	34.98	26.79	77
		3/4 EHS	A1b	67a	34.98	0.55	2
		3/4 EHS	A1a	67b	34.98	27	77
	244.12	3/4 EHS	A1	88	34.98	21.86	62
		3/4 EHS	A1b	88a	34.98	1.36	4
		3/4 EHS	A1a	88b	34.98	22.16	63
	291.96	5/8 EHS	A1	104	25.44	13.33	52
		5/8 EHS	A1b	104a	25.44	1.96	8

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		5/8 EHS	A1a	104b	25.44	13.49	53
1.2D + 1.0W 180°	59.80	3/4 EHS	A1	22	34.98	19.62	56
		3/4 EHS	A1b	22a	34.98	3.04	9
		3/4 EHS	A1a	22b	34.98	3.01	9
	124.12	3/4 EHS	A1	46	34.98	27.44	78
		3/4 EHS	A1b	46a	34.98	2.88	8
		3/4 EHS	A1a	46b	34.98	2.84	8
	184.12	3/4 EHS	A1	67	34.98	30.17	86
		3/4 EHS	A1b	67a	34.98	3.39	10
		3/4 EHS	A1a	67b	34.98	3.36	10
	244.12	3/4 EHS	A1	88	34.98	24.93	71
		3/4 EHS	A1b	88a	34.98	4.58	13
		3/4 EHS	A1a	88b	34.98	4.61	13
	291.96	5/8 EHS	A1	104	25.44	15.04	59
		5/8 EHS	A1b	104a	25.44	4.69	18
		5/8 EHS	A1a	104b	25.44	4.75	19
1.2D + 1.0W 210°	59.80	3/4 EHS	A1	22	34.98	20.71	59
		3/4 EHS	A1b	22a	34.98	11.49	33
		3/4 EHS	A1a	22b	34.98	0.89	3
	124.12	3/4 EHS	A1	46	34.98	29.33	84
		3/4 EHS	A1b	46a	34.98	15.45	44
		3/4 EHS	A1a	46b	34.98	0.71	2
	184.12	3/4 EHS	A1	67	34.98	31.45	90
		3/4 EHS	A1b	67a	34.98	15.67	45
		3/4 EHS	A1a	67b	34.98	1.09	3
	244.12	3/4 EHS	A1	88	34.98	25.42	73
		3/4 EHS	A1b	88a	34.98	13.54	39
		3/4 EHS	A1a	88b	34.98	1.93	6
	291.96	5/8 EHS	A1	104	25.44	15.08	59
		5/8 EHS	A1b	104a	25.44	9.31	37
		5/8 EHS	A1a	104b	25.44	2.48	10
1.2D + 1.0W 240°	59.80	3/4 EHS	A1	22	34.98	18.1	52
		3/4 EHS	A1b	22a	34.98	18.64	53
		3/4 EHS	A1a	22b	34.98	0.74	2
	124.12	3/4 EHS	A1	46	34.98	25.55	73
		3/4 EHS	A1b	46a	34.98	25.9	74
		3/4 EHS	A1a	46b	34.98	0.23	1
	184.12	3/4 EHS	A1	67	34.98	26.75	76
		3/4 EHS	A1b	67a	34.98	26.95	77
		3/4 EHS	A1a	67b	34.98	0.51	1
	244.12	3/4 EHS	A1	88	34.98	21.85	62
		3/4 EHS	A1b	88a	34.98	21.96	63
		3/4 EHS	A1a	88b	34.98	1.31	4
	291.96	5/8 EHS	A1	104	25.44	13.32	52
		5/8 EHS	A1b	104a	25.44	13.34	52
		5/8 EHS	A1a	104b	25.44	1.91	8
1.2D + 1.0W 300°	59.80	3/4 EHS	A1	22	34.98	2.79	8
		3/4 EHS	A1b	22a	34.98	19.83	57
		3/4 EHS	A1a	22b	34.98	2.73	8
	124.12	3/4 EHS	A1	46	34.98	2.6	7
		3/4 EHS	A1b	46a	34.98	27.72	79
		3/4 EHS	A1a	46b	34.98	2.6	7
	184.12	3/4 EHS	A1	67	34.98	3.13	9
		3/4 EHS	A1b	67a	34.98	30.13	86
		3/4 EHS	A1a	67b	34.98	3.14	9
	244.12	3/4 EHS	A1	88	34.98	4.34	12
		3/4 EHS	A1b	88a	34.98	24.82	71
		3/4 EHS	A1a	88b	34.98	4.41	13
	291.96	5/8 EHS	A1	104	25.44	4.53	18

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		5/8 EHS	A1b	104a	25.44	14.94	59
		5/8 EHS	A1a	104b	25.44	4.63	18
1.2D + 1.0W 330°	59.80	3/4 EHS	A1	22	34.98	0.87	2
		3/4 EHS	A1b	22a	34.98	21.2	61
		3/4 EHS	A1a	22b	34.98	11.33	32
	124.12	3/4 EHS	A1	46	34.98	0.68	2
		3/4 EHS	A1b	46a	34.98	29.86	85
		3/4 EHS	A1a	46b	34.98	15.31	44
	184.12	3/4 EHS	A1	67	34.98	1.03	3
		3/4 EHS	A1b	67a	34.98	31.63	90
		3/4 EHS	A1a	67b	34.98	15.6	45
	244.12	3/4 EHS	A1	88	34.98	1.84	5
		3/4 EHS	A1b	88a	34.98	25.46	73
		3/4 EHS	A1a	88b	34.98	13.61	39
	291.96	5/8 EHS	A1	104	25.44	2.38	9
		5/8 EHS	A1b	104a	25.44	15.05	59
		5/8 EHS	A1a	104b	25.44	9.37	37
1.2D + 1.0Di + 1.0Wi Normal	59.80	3/4 EHS	A1	22	34.98	6	17
		3/4 EHS	A1b	22a	34.98	10.78	31
		3/4 EHS	A1a	22b	34.98	10.59	30
	124.12	3/4 EHS	A1	46	34.98	4.48	13
		3/4 EHS	A1b	46a	34.98	11.87	34
		3/4 EHS	A1a	46b	34.98	11.75	34
	184.12	3/4 EHS	A1	67	34.98	3.83	11
		3/4 EHS	A1b	67a	34.98	12.04	34
		3/4 EHS	A1a	67b	34.98	12.04	34
	244.12	3/4 EHS	A1	88	34.98	3.99	11
		3/4 EHS	A1b	88a	34.98	11.25	32
		3/4 EHS	A1a	88b	34.98	11.36	32
	291.96	5/8 EHS	A1	104	25.44	3.52	14
		5/8 EHS	A1b	104a	25.44	9.08	36
		5/8 EHS	A1a	104b	25.44	9.14	36
1.2D + 1.0Di + 1.0Wi 60°	59.80	3/4 EHS	A1	22	34.98	7.52	21
		3/4 EHS	A1b	22a	34.98	7.69	22
		3/4 EHS	A1a	22b	34.98	11.79	34
	124.12	3/4 EHS	A1	46	34.98	6.61	19
		3/4 EHS	A1b	46a	34.98	6.73	19
		3/4 EHS	A1a	46b	34.98	13.74	39
	184.12	3/4 EHS	A1	67	34.98	6.24	18
		3/4 EHS	A1b	67a	34.98	6.34	18
		3/4 EHS	A1a	67b	34.98	15.05	43
	244.12	3/4 EHS	A1	88	34.98	6.67	19
		3/4 EHS	A1b	88a	34.98	6.73	19
		3/4 EHS	A1a	88b	34.98	14.46	41
	291.96	5/8 EHS	A1	104	25.44	6.15	24
		5/8 EHS	A1b	104a	25.44	6.22	24
		5/8 EHS	A1a	104b	25.44	11.11	44
1.2D + 1.0Di + 1.0Wi 90°	59.80	3/4 EHS	A1	22	34.98	9.16	26
		3/4 EHS	A1b	22a	34.98	6.61	19
		3/4 EHS	A1a	22b	34.98	11.61	33
	124.12	3/4 EHS	A1	46	34.98	9.25	26
		3/4 EHS	A1b	46a	34.98	5.2	15
		3/4 EHS	A1a	46b	34.98	13.36	38
	184.12	3/4 EHS	A1	67	34.98	9.09	26
		3/4 EHS	A1b	67a	34.98	4.57	13
		3/4 EHS	A1a	67b	34.98	14.33	41
	244.12	3/4 EHS	A1	88	34.98	8.94	26
		3/4 EHS	A1b	88a	34.98	4.86	14
		3/4 EHS	A1a	88b	34.98	13.57	39

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
	291.96	5/8 EHS	A1	104	25.44	7.65	30
		5/8 EHS	A1b	104a	25.44	4.57	18
		5/8 EHS	A1a	104b	25.44	10.51	41
1.2D + 1.0Di + 1.0Wi 120°	59.80	3/4 EHS	A1	22	34.98	10.77	31
		3/4 EHS	A1b	22a	34.98	6.27	18
		3/4 EHS	A1a	22b	34.98	10.76	31
	124.12	3/4 EHS	A1	46	34.98	11.82	34
		3/4 EHS	A1b	46a	34.98	4.81	14
		3/4 EHS	A1a	46b	34.98	11.96	34
	184.12	3/4 EHS	A1	67	34.98	12.11	35
		3/4 EHS	A1b	67a	34.98	4.08	12
		3/4 EHS	A1a	67b	34.98	12.22	35
	244.12	3/4 EHS	A1	88	34.98	11.26	32
		3/4 EHS	A1b	88a	34.98	4.15	12
		3/4 EHS	A1a	88b	34.98	11.41	33
	291.96	5/8 EHS	A1	104	25.44	8.98	35
		5/8 EHS	A1b	104a	25.44	3.55	14
		5/8 EHS	A1a	104b	25.44	9.13	36
1.2D + 1.0Di + 1.0Wi 180°	59.80	3/4 EHS	A1	22	34.98	11.77	34
		3/4 EHS	A1b	22a	34.98	7.68	22
		3/4 EHS	A1a	22b	34.98	7.56	22
	124.12	3/4 EHS	A1	46	34.98	13.59	39
		3/4 EHS	A1b	46a	34.98	6.76	19
		3/4 EHS	A1a	46b	34.98	6.72	19
	184.12	3/4 EHS	A1	67	34.98	14.95	43
		3/4 EHS	A1b	67a	34.98	6.38	18
		3/4 EHS	A1a	67b	34.98	6.33	18
	244.12	3/4 EHS	A1	88	34.98	14.31	41
		3/4 EHS	A1b	88a	34.98	6.75	19
		3/4 EHS	A1a	88b	34.98	6.79	19
	291.96	5/8 EHS	A1	104	25.44	10.95	43
		5/8 EHS	A1b	104a	25.44	6.23	24
		5/8 EHS	A1a	104b	25.44	6.28	25
1.2D + 1.0Di + 1.0Wi 210°	59.80	3/4 EHS	A1	22	34.98	11.47	33
		3/4 EHS	A1b	22a	34.98	9.25	26
		3/4 EHS	A1a	22b	34.98	6.43	18
	124.12	3/4 EHS	A1	46	34.98	13.05	37
		3/4 EHS	A1b	46a	34.98	9.31	27
		3/4 EHS	A1a	46b	34.98	5.04	14
	184.12	3/4 EHS	A1	67	34.98	14.14	40
		3/4 EHS	A1b	67a	34.98	9.09	26
		3/4 EHS	A1a	67b	34.98	4.44	13
	244.12	3/4 EHS	A1	88	34.98	13.4	38
		3/4 EHS	A1b	88a	34.98	9	26
		3/4 EHS	A1a	88b	34.98	4.84	14
	291.96	5/8 EHS	A1	104	25.44	10.38	41
		5/8 EHS	A1b	104a	25.44	7.76	31
		5/8 EHS	A1a	104b	25.44	4.65	18
1.2D + 1.0Di + 1.0Wi 240°	59.80	3/4 EHS	A1	22	34.98	10.61	30
		3/4 EHS	A1b	22a	34.98	10.82	31
		3/4 EHS	A1a	22b	34.98	5.99	17
	124.12	3/4 EHS	A1	46	34.98	11.57	33
		3/4 EHS	A1b	46a	34.98	11.85	34
		3/4 EHS	A1a	46b	34.98	4.56	13
	184.12	3/4 EHS	A1	67	34.98	11.95	34
		3/4 EHS	A1b	67a	34.98	12.04	34
		3/4 EHS	A1a	67b	34.98	3.88	11
	244.12	3/4 EHS	A1	88	34.98	11.23	32
		3/4 EHS	A1b	88a	34.98	11.26	32

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		3/4 EHS	A1a	88b	34.98	4.04	12
	291.96	5/8 EHS	A1	104	25.44	9	35
		5/8 EHS	A1b	104a	25.44	9.1	36
		5/8 EHS	A1a	104b	25.44	3.63	14
1.2D + 1.0Di + 1.0Wi 300°	59.80	3/4 EHS	A1	22	34.98	7.37	21
		3/4 EHS	A1b	22a	34.98	11.83	34
		3/4 EHS	A1a	22b	34.98	7.47	21
	124.12	3/4 EHS	A1	46	34.98	6.44	18
		3/4 EHS	A1b	46a	34.98	13.73	39
		3/4 EHS	A1a	46b	34.98	6.46	18
	184.12	3/4 EHS	A1	67	34.98	6.1	17
		3/4 EHS	A1b	67a	34.98	14.87	43
		3/4 EHS	A1a	67b	34.98	6.15	18
	244.12	3/4 EHS	A1	88	34.98	6.57	19
		3/4 EHS	A1b	88a	34.98	14.22	41
		3/4 EHS	A1a	88b	34.98	6.67	19
	291.96	5/8 EHS	A1	104	25.44	6.11	24
		5/8 EHS	A1b	104a	25.44	10.99	43
		5/8 EHS	A1a	104b	25.44	6.23	24
1.2D + 1.0Di + 1.0Wi 330°	59.80	3/4 EHS	A1	22	34.98	6.32	18
		3/4 EHS	A1b	22a	34.98	11.66	33
		3/4 EHS	A1a	22b	34.98	8.99	26
	124.12	3/4 EHS	A1	46	34.98	4.86	14
		3/4 EHS	A1b	46a	34.98	13.26	38
		3/4 EHS	A1a	46b	34.98	9.12	26
	184.12	3/4 EHS	A1	67	34.98	4.31	12
		3/4 EHS	A1b	67a	34.98	14.12	40
		3/4 EHS	A1a	67b	34.98	8.97	26
	244.12	3/4 EHS	A1	88	34.98	4.68	13
		3/4 EHS	A1b	88a	34.98	13.34	38
		3/4 EHS	A1a	88b	34.98	8.98	26
	291.96	5/8 EHS	A1	104	25.44	4.49	18
		5/8 EHS	A1b	104a	25.44	10.42	41
		5/8 EHS	A1a	104b	25.44	7.77	31
1.2D + 1.0Ev + 1.0Eh Normal	59.80	3/4 EHS	A1	22	34.98	5.57	16
		3/4 EHS	A1b	22a	34.98	5.77	17
		3/4 EHS	A1a	22b	34.98	5.71	16
	124.12	3/4 EHS	A1	46	34.98	5	14
		3/4 EHS	A1b	46a	34.98	5.59	16
		3/4 EHS	A1a	46b	34.98	5.53	16
	184.12	3/4 EHS	A1	67	34.98	4.63	13
		3/4 EHS	A1b	67a	34.98	5.46	16
		3/4 EHS	A1a	67b	34.98	5.45	16
	244.12	3/4 EHS	A1	88	34.98	4.68	13
		3/4 EHS	A1b	88a	34.98	5.34	15
		3/4 EHS	A1a	88b	34.98	5.36	15
	291.96	5/8 EHS	A1	104	25.44	3.51	14
		5/8 EHS	A1b	104a	25.44	3.87	15
		5/8 EHS	A1a	104b	25.44	3.9	15
1.2D + 1.0Ev + 1.0Eh 60°	59.80	3/4 EHS	A1	22	34.98	5.61	16
		3/4 EHS	A1b	22a	34.98	5.7	16
		3/4 EHS	A1a	22b	34.98	5.75	16
	124.12	3/4 EHS	A1	46	34.98	5.17	15
		3/4 EHS	A1b	46a	34.98	5.27	15
		3/4 EHS	A1a	46b	34.98	5.7	16
	184.12	3/4 EHS	A1	67	34.98	4.9	14
		3/4 EHS	A1b	67a	34.98	4.97	14
		3/4 EHS	A1a	67b	34.98	5.73	16
	244.12	3/4 EHS	A1	88	34.98	4.9	14

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		3/4 EHS	A1b	88a	34.98	4.93	14
		3/4 EHS	A1a	88b	34.98	5.59	16
	291.96	5/8 EHS	A1	104	25.44	3.63	14
		5/8 EHS	A1b	104a	25.44	3.63	14
		5/8 EHS	A1a	104b	25.44	4.03	16
1.2D + 1.0Ev + 1.0Eh 90°	59.80	3/4 EHS	A1	22	34.98	5.64	16
		3/4 EHS	A1b	22a	34.98	5.68	16
		3/4 EHS	A1a	22b	34.98	5.74	16
	124.12	3/4 EHS	A1	46	34.98	5.34	15
		3/4 EHS	A1b	46a	34.98	5.16	15
		3/4 EHS	A1a	46b	34.98	5.67	16
	184.12	3/4 EHS	A1	67	34.98	5.16	15
		3/4 EHS	A1b	67a	34.98	4.78	14
		3/4 EHS	A1a	67b	34.98	5.67	16
	244.12	3/4 EHS	A1	88	34.98	5.11	15
		3/4 EHS	A1b	88a	34.98	4.77	14
		3/4 EHS	A1a	88b	34.98	5.55	16
	291.96	5/8 EHS	A1	104	25.44	3.76	15
		5/8 EHS	A1b	104a	25.44	3.54	14
		5/8 EHS	A1a	104b	25.44	4.01	16
1.2D + 1.0Ev + 1.0Eh 120°	59.80	3/4 EHS	A1	22	34.98	5.68	16
		3/4 EHS	A1b	22a	34.98	5.67	16
		3/4 EHS	A1a	22b	34.98	5.72	16
	124.12	3/4 EHS	A1	46	34.98	5.5	16
		3/4 EHS	A1b	46a	34.98	5.12	15
		3/4 EHS	A1a	46b	34.98	5.55	16
	184.12	3/4 EHS	A1	67	34.98	5.42	15
		3/4 EHS	A1b	67a	34.98	4.73	14
		3/4 EHS	A1a	67b	34.98	5.48	16
	244.12	3/4 EHS	A1	88	34.98	5.33	15
		3/4 EHS	A1b	88a	34.98	4.73	14
		3/4 EHS	A1a	88b	34.98	5.38	15
	291.96	5/8 EHS	A1	104	25.44	3.88	15
		5/8 EHS	A1b	104a	25.44	3.52	14
		5/8 EHS	A1a	104b	25.44	3.91	15
1.2D + 1.0Ev + 1.0Eh 180°	59.80	3/4 EHS	A1	22	34.98	5.71	16
		3/4 EHS	A1b	22a	34.98	5.7	16
		3/4 EHS	A1a	22b	34.98	5.64	16
	124.12	3/4 EHS	A1	46	34.98	5.65	16
		3/4 EHS	A1b	46a	34.98	5.28	15
		3/4 EHS	A1a	46b	34.98	5.23	15
	184.12	3/4 EHS	A1	67	34.98	5.68	16
		3/4 EHS	A1b	67a	34.98	4.97	14
		3/4 EHS	A1a	67b	34.98	4.96	14
	244.12	3/4 EHS	A1	88	34.98	5.54	16
		3/4 EHS	A1b	88a	34.98	4.93	14
		3/4 EHS	A1a	88b	34.98	4.95	14
	291.96	5/8 EHS	A1	104	25.44	4	16
		5/8 EHS	A1b	104a	25.44	3.63	14
		5/8 EHS	A1a	104b	25.44	3.66	14
1.2D + 1.0Ev + 1.0Eh 210°	59.80	3/4 EHS	A1	22	34.98	5.7	16
		3/4 EHS	A1b	22a	34.98	5.74	16
		3/4 EHS	A1a	22b	34.98	5.62	16
	124.12	3/4 EHS	A1	46	34.98	5.61	16
		3/4 EHS	A1b	46a	34.98	5.43	16
		3/4 EHS	A1a	46b	34.98	5.1	15
	184.12	3/4 EHS	A1	67	34.98	5.6	16
		3/4 EHS	A1b	67a	34.98	5.22	15
		3/4 EHS	A1a	67b	34.98	4.76	14

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
	244.12	3/4 EHS	A1	88	34.98	5.48	16
		3/4 EHS	A1b	88a	34.98	5.13	15
		3/4 EHS	A1a	88b	34.98	4.79	14
	291.96	5/8 EHS	A1	104	25.44	3.97	16
		5/8 EHS	A1b	104a	25.44	3.75	15
		5/8 EHS	A1a	104b	25.44	3.57	14
1.2D + 1.0Ev + 1.0Eh 240°	59.80	3/4 EHS	A1	22	34.98	5.68	16
		3/4 EHS	A1b	22a	34.98	5.77	17
		3/4 EHS	A1a	22b	34.98	5.6	16
	124.12	3/4 EHS	A1	46	34.98	5.48	16
		3/4 EHS	A1b	46a	34.98	5.59	16
		3/4 EHS	A1a	46b	34.98	5.06	14
	184.12	3/4 EHS	A1	67	34.98	5.4	15
		3/4 EHS	A1b	67a	34.98	5.46	16
		3/4 EHS	A1a	67b	34.98	4.7	13
	244.12	3/4 EHS	A1	88	34.98	5.31	15
		3/4 EHS	A1b	88a	34.98	5.33	15
		3/4 EHS	A1a	88b	34.98	4.75	14
	291.96	5/8 EHS	A1	104	25.44	3.87	15
		5/8 EHS	A1b	104a	25.44	3.87	15
		5/8 EHS	A1a	104b	25.44	3.55	14
1.2D + 1.0Ev + 1.0Eh 300°	59.80	3/4 EHS	A1	22	34.98	5.6	16
		3/4 EHS	A1b	22a	34.98	5.81	17
		3/4 EHS	A1a	22b	34.98	5.64	16
	124.12	3/4 EHS	A1	46	34.98	5.16	15
		3/4 EHS	A1b	46a	34.98	5.74	16
		3/4 EHS	A1a	46b	34.98	5.21	15
	184.12	3/4 EHS	A1	67	34.98	4.89	14
		3/4 EHS	A1b	67a	34.98	5.7	16
		3/4 EHS	A1a	67b	34.98	4.94	14
	244.12	3/4 EHS	A1	88	34.98	4.9	14
		3/4 EHS	A1b	88a	34.98	5.53	16
		3/4 EHS	A1a	88b	34.98	4.94	14
	291.96	5/8 EHS	A1	104	25.44	3.64	14
		5/8 EHS	A1b	104a	25.44	3.98	16
		5/8 EHS	A1a	104b	25.44	3.66	14
1.2D + 1.0Ev + 1.0Eh 330°	59.80	3/4 EHS	A1	22	34.98	5.58	16
		3/4 EHS	A1b	22a	34.98	5.8	17
		3/4 EHS	A1a	22b	34.98	5.67	16
	124.12	3/4 EHS	A1	46	34.98	5.04	14
		3/4 EHS	A1b	46a	34.98	5.7	16
		3/4 EHS	A1a	46b	34.98	5.37	15
	184.12	3/4 EHS	A1	67	34.98	4.7	13
		3/4 EHS	A1b	67a	34.98	5.65	16
		3/4 EHS	A1a	67b	34.98	5.19	15
	244.12	3/4 EHS	A1	88	34.98	4.73	14
		3/4 EHS	A1b	88a	34.98	5.49	16
		3/4 EHS	A1a	88b	34.98	5.15	15
	291.96	5/8 EHS	A1	104	25.44	3.54	14
		5/8 EHS	A1b	104a	25.44	3.96	16
		5/8 EHS	A1a	104b	25.44	3.78	15
1.0D + 1.0W Service Normal	59.80	3/4 EHS	A1	22	34.98	3.09	9
		3/4 EHS	A1b	22a	34.98	7.37	21
		3/4 EHS	A1a	22b	34.98	7.28	21
	124.12	3/4 EHS	A1	46	34.98	1.99	6
		3/4 EHS	A1b	46a	34.98	8.01	23
		3/4 EHS	A1a	46b	34.98	7.95	23
	184.12	3/4 EHS	A1	67	34.98	1.62	5
		3/4 EHS	A1b	67a	34.98	7.84	22

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		3/4 EHS	A1a	67b	34.98	7.84	22
	244.12	3/4 EHS	A1	88	34.98	1.92	5
		3/4 EHS	A1b	88a	34.98	7	20
		3/4 EHS	A1a	88b	34.98	7.05	20
	291.96	5/8 EHS	A1	104	25.44	2.21	9
		5/8 EHS	A1b	104a	25.44	4.88	19
		5/8 EHS	A1a	104b	25.44	4.93	19
1.0D + 1.0W Service 60°	59.80	3/4 EHS	A1	22	34.98	4.52	13
		3/4 EHS	A1b	22a	34.98	4.58	13
		3/4 EHS	A1a	22b	34.98	8.47	24
	124.12	3/4 EHS	A1	46	34.98	3.72	11
		3/4 EHS	A1b	46a	34.98	3.81	11
		3/4 EHS	A1a	46b	34.98	9.7	28
	184.12	3/4 EHS	A1	67	34.98	3.51	10
		3/4 EHS	A1b	67a	34.98	3.56	10
		3/4 EHS	A1a	67b	34.98	9.91	28
	244.12	3/4 EHS	A1	88	34.98	3.92	11
		3/4 EHS	A1b	88a	34.98	3.94	11
		3/4 EHS	A1a	88b	34.98	8.82	25
	291.96	5/8 EHS	A1	104	25.44	3.31	13
		5/8 EHS	A1b	104a	25.44	3.32	13
		5/8 EHS	A1a	104b	25.44	5.93	23
1.0D + 1.0W Service 90°	59.80	3/4 EHS	A1	22	34.98	5.96	17
		3/4 EHS	A1b	22a	34.98	3.63	10
		3/4 EHS	A1a	22b	34.98	8.24	24
	124.12	3/4 EHS	A1	46	34.98	5.86	17
		3/4 EHS	A1b	46a	34.98	2.55	7
		3/4 EHS	A1a	46b	34.98	9.35	27
	184.12	3/4 EHS	A1	67	34.98	5.65	16
		3/4 EHS	A1b	67a	34.98	2.2	6
		3/4 EHS	A1a	67b	34.98	9.43	27
	244.12	3/4 EHS	A1	88	34.98	5.47	16
		3/4 EHS	A1b	88a	34.98	2.65	8
		3/4 EHS	A1a	88b	34.98	8.34	24
	291.96	5/8 EHS	A1	104	25.44	4.11	16
		5/8 EHS	A1b	104a	25.44	2.58	10
		5/8 EHS	A1a	104b	25.44	5.63	22
1.0D + 1.0W Service 120°	59.80	3/4 EHS	A1	22	34.98	7.39	21
		3/4 EHS	A1b	22a	34.98	3.3	9
		3/4 EHS	A1a	22b	34.98	7.43	21
	124.12	3/4 EHS	A1	46	34.98	8.03	23
		3/4 EHS	A1b	46a	34.98	2.2	6
		3/4 EHS	A1a	46b	34.98	8.12	23
	184.12	3/4 EHS	A1	67	34.98	7.9	23
		3/4 EHS	A1b	67a	34.98	1.78	5
		3/4 EHS	A1a	67b	34.98	7.97	23
	244.12	3/4 EHS	A1	88	34.98	7.03	20
		3/4 EHS	A1b	88a	34.98	2.04	6
		3/4 EHS	A1a	88b	34.98	7.11	20
	291.96	5/8 EHS	A1	104	25.44	4.87	19
		5/8 EHS	A1b	104a	25.44	2.21	9
		5/8 EHS	A1a	104b	25.44	4.94	19
1.0D + 1.0W Service 180°	59.80	3/4 EHS	A1	22	34.98	8.43	24
		3/4 EHS	A1b	22a	34.98	4.59	13
		3/4 EHS	A1a	22b	34.98	4.55	13
	124.12	3/4 EHS	A1	46	34.98	9.62	27
		3/4 EHS	A1b	46a	34.98	3.84	11
		3/4 EHS	A1a	46b	34.98	3.8	11
	184.12	3/4 EHS	A1	67	34.98	9.86	28

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		3/4 EHS	A1b	67a	34.98	3.6	10
		3/4 EHS	A1a	67b	34.98	3.58	10
	244.12	3/4 EHS	A1	88	34.98	8.75	25
		3/4 EHS	A1b	88a	34.98	3.97	11
		3/4 EHS	A1a	88b	34.98	4	11
	291.96	5/8 EHS	A1	104	25.44	5.87	23
		5/8 EHS	A1b	104a	25.44	3.34	13
		5/8 EHS	A1a	104b	25.44	3.38	13
1.0D + 1.0W Service 210°	59.80	3/4 EHS	A1	22	34.98	8.12	23
		3/4 EHS	A1b	22a	34.98	5.98	17
		3/4 EHS	A1a	22b	34.98	3.52	10
	124.12	3/4 EHS	A1	46	34.98	9.16	26
		3/4 EHS	A1b	46a	34.98	5.89	17
		3/4 EHS	A1a	46b	34.98	2.44	7
	184.12	3/4 EHS	A1	67	34.98	9.3	27
		3/4 EHS	A1b	67a	34.98	5.67	16
		3/4 EHS	A1a	67b	34.98	2.12	6
	244.12	3/4 EHS	A1	88	34.98	8.26	24
		3/4 EHS	A1b	88a	34.98	5.49	16
		3/4 EHS	A1a	88b	34.98	2.66	8
	291.96	5/8 EHS	A1	104	25.44	5.58	22
		5/8 EHS	A1b	104a	25.44	4.14	16
		5/8 EHS	A1a	104b	25.44	2.64	10
1.0D + 1.0W Service 240°	59.80	3/4 EHS	A1	22	34.98	7.26	21
		3/4 EHS	A1b	22a	34.98	7.39	21
		3/4 EHS	A1a	22b	34.98	3.12	9
	124.12	3/4 EHS	A1	46	34.98	7.88	23
		3/4 EHS	A1b	46a	34.98	8.03	23
		3/4 EHS	A1a	46b	34.98	2.04	6
	184.12	3/4 EHS	A1	67	34.98	7.79	22
		3/4 EHS	A1b	67a	34.98	7.86	22
		3/4 EHS	A1a	67b	34.98	1.66	5
	244.12	3/4 EHS	A1	88	34.98	7	20
		3/4 EHS	A1b	88a	34.98	7.03	20
		3/4 EHS	A1a	88b	34.98	1.97	6
	291.96	5/8 EHS	A1	104	25.44	4.89	19
		5/8 EHS	A1b	104a	25.44	4.9	19
		5/8 EHS	A1a	104b	25.44	2.28	9
1.0D + 1.0W Service 300°	59.80	3/4 EHS	A1	22	34.98	4.4	13
		3/4 EHS	A1b	22a	34.98	8.45	24
		3/4 EHS	A1a	22b	34.98	4.41	13
	124.12	3/4 EHS	A1	46	34.98	3.58	10
		3/4 EHS	A1b	46a	34.98	9.63	28
		3/4 EHS	A1a	46b	34.98	3.62	10
	184.12	3/4 EHS	A1	67	34.98	3.4	10
		3/4 EHS	A1b	67a	34.98	9.8	28
		3/4 EHS	A1a	67b	34.98	3.44	10
	244.12	3/4 EHS	A1	88	34.98	3.87	11
		3/4 EHS	A1b	88a	34.98	8.7	25
		3/4 EHS	A1a	88b	34.98	3.91	11
	291.96	5/8 EHS	A1	104	25.44	3.3	13
		5/8 EHS	A1b	104a	25.44	5.85	23
		5/8 EHS	A1a	104b	25.44	3.35	13
1.0D + 1.0W Service 330°	59.80	3/4 EHS	A1	22	34.98	3.42	10
		3/4 EHS	A1b	22a	34.98	8.19	23
		3/4 EHS	A1a	22b	34.98	5.83	17
	124.12	3/4 EHS	A1	46	34.98	2.32	7
		3/4 EHS	A1b	46a	34.98	9.24	26
		3/4 EHS	A1a	46b	34.98	5.73	16

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
	184.12	3/4 EHS	A1	67	34.98	2.02	6
		3/4 EHS	A1b	67a	34.98	9.29	27
		3/4 EHS	A1a	67b	34.98	5.57	16
	244.12	3/4 EHS	A1	88	34.98	2.55	7
		3/4 EHS	A1b	88a	34.98	8.22	23
		3/4 EHS	A1a	88b	34.98	5.46	16
	291.96	5/8 EHS	A1	104	25.44	2.57	10
		5/8 EHS	A1b	104a	25.44	5.56	22
		5/8 EHS	A1a	104b	25.44	4.15	16

MAXIMUM CABLE FORCES SUMMARY

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
1.2D + 1.0W 330°	59.80	3/4 EHS	A1b	22a	34.98	21.20	61
1.2D + 1.0W 90°	124.12	3/4 EHS	A1a	46b	34.98	29.71	85
1.2D + 1.0W 90°	184.12	3/4 EHS	A1a	67b	34.98	31.78	91
1.2D + 1.0W 90°	244.12	3/4 EHS	A1a	88b	34.98	25.79	74
1.2D + 1.0W 60°	291.96	5/8 EHS	A1a	104b	25.44	15.19	60

MAXIMUM TORQUE ARM STRESS SUMMARY

Load Case	Elevation (ft)	Member	Type	Compression (%)	Tension (%)
1.2D + 1.0W Normal	59.80	PL 4.5 x 0.375"	Horiz	0	21
1.2D + 1.0W Normal	124.00	PL 4.5 x 0.375"	Horiz	0	25
1.2D + 1.0W 120°	184.00	PL 4.5 x 0.375"	Horiz	0	24
1.2D + 1.0W Normal	244.00	PL 4.5 x 0.375"	Horiz	0	15
1.2D + 1.0W Normal	292.00	PL 4.5 x 0.375"	Horiz	0	8

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	80.00	0.1301	-0.4708	0.1084	0.483
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	84.12	0.1365	-0.4740	0.0807	0.4809
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	88.04	0.1411	-0.4753	0.0791	0.4819
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	104.12	0.1612	-0.4783	0.0620	0.4823
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	108.04	0.1641	-0.4789	0.0561	0.4822
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	115.88	0.1726	-0.4790	0.0621	0.483
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	119.80	0.175	-0.4789	0.0194	0.4793
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	124.12	0.1799	-0.4787	0.0779	0.485
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	128.04	0.1858	-0.4803	0.0894	0.4886
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	131.96	0.1907	-0.4824	0.0911	0.4909
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	160.00	0.2315	-0.4980	0.0705	0.5029
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	168.04	0.2387	-0.5025	0.0424	0.5043
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	180.00	0.2442	-0.5081	0.0241	0.5085
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	195.88	0.2511	-0.5233	0.0221	0.5237
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	204.12	0.2528	-0.5334	0.0144	0.5335
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	215.88	0.251	-0.5462	0.0278	0.5468
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	228.04	0.2435	-0.5553	0.0537	0.5577
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	231.96	0.24	-0.5572	0.0615	0.5604
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	235.88	0.2362	-0.5588	0.0583	0.5616
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	244.12	0.2269	-0.5625	0.0541	0.5651
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	264.12	0.2108	-0.5747	0.0599	0.5777
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	268.04	0.2074	-0.5770	0.0581	0.5799
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	271.96	0.2039	-0.5791	0.0629	0.5824
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	279.80	0.1965	-0.5832	0.0725	0.5877
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	288.04	0.1879	-0.5859	0.0719	0.5903
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	299.80	0.1763	-0.5906	0.0651	0.5938
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	300.00	0.1762	-0.5905	0.0496	0.5926
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	80.00	0.1439	-0.8747	0.1010	0.8806
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	84.12	0.1498	-0.8799	0.0743	0.883
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	88.04	0.1548	-0.8817	0.0717	0.8846
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	104.12	0.1721	-0.8847	0.0557	0.8865
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	108.04	0.1756	-0.8852	0.0504	0.8866
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	115.88	0.1823	-0.8843	0.0586	0.8862
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	119.80	0.1855	-0.8836	0.0183	0.8838
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	124.12	0.189	-0.8825	0.0743	0.8856
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	128.04	0.1947	-0.8843	0.0867	0.8886
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	131.96	0.2007	-0.8869	0.0905	0.8915
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	160.00	0.2417	-0.9058	0.0752	0.9089
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	168.04	0.25	-0.9113	0.0493	0.9126
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	180.00	0.2574	-0.9173	0.0155	0.9173
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	195.88	0.2685	-0.9373	0.0348	0.938
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	204.12	0.273	-0.9510	0.0183	0.9512
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	215.88	0.2753	-0.9684	0.0034	0.9684
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	228.04	0.2724	-0.9832	0.0288	0.9835
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	231.96	0.2705	-0.9869	0.0361	0.9874
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	235.88	0.2681	-0.9900	0.0321	0.9905
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	244.12	0.262	-0.9974	0.0275	0.9978
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	264.12	0.2537	-1.0184	0.0320	1.0189
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	268.04	0.2519	-1.0225	0.0275	1.0229
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	271.96	0.2498	-1.0261	0.0348	1.0265
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	279.80	0.2452	-1.0332	0.0440	1.0339
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	288.04	0.2395	-1.0385	0.0428	1.0394
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	299.80	0.2318	-1.0471	0.0375	1.0472
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	300.00	0.2317	-1.0471	0.0169	1.0472
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	80.00	0.1536	-0.7455	0.1163	0.7545
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	84.12	0.1605	-0.7500	0.0862	0.755
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	88.04	0.1664	-0.7512	0.0844	0.756
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	104.12	0.1869	-0.7517	0.0666	0.7545
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	108.04	0.1912	-0.7516	0.0605	0.754

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	115.88	0.1991	-0.7494	0.0654	0.7522
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	119.80	0.2029	-0.7480	0.0269	0.7485
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	124.12	0.2068	-0.7461	0.0809	0.7502
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	128.04	0.2128	-0.7470	0.0919	0.7526
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	131.96	0.219	-0.7485	0.0926	0.7542
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	160.00	0.2582	-0.7599	0.0658	0.7627
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	168.04	0.2647	-0.7633	0.0352	0.7641
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	180.00	0.2684	-0.7661	0.0342	0.7666
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	195.88	0.2719	-0.7806	0.0053	0.7807
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	204.12	0.2713	-0.7909	0.0220	0.7911
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	215.88	0.2651	-0.8042	0.0458	0.8054
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	228.04	0.2523	-0.8188	0.0777	0.822
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	231.96	0.247	-0.8231	0.0869	0.8272
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	235.88	0.2412	-0.8269	0.0826	0.8308
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	244.12	0.2276	-0.8358	0.0798	0.8396
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	264.12	0.2007	-0.8573	0.0869	0.8615
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	268.04	0.1951	-0.8614	0.0827	0.8654
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	271.96	0.1893	-0.8651	0.0906	0.8695
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	279.80	0.177	-0.8724	0.1040	0.8783
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	288.04	0.1632	-0.8788	0.1003	0.8845
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	299.80	0.1438	-0.8879	0.0938	0.8923
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	300.00	0.1435	-0.8879	0.0744	0.891
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	80.00	0.1161	-0.2646	0.0998	0.2828
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	84.12	0.1218	-0.2666	0.0726	0.2762
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	88.04	0.1268	-0.2669	0.0714	0.2763
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	104.12	0.144	-0.2652	0.0561	0.271
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	108.04	0.1476	-0.2647	0.0510	0.2695
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	115.88	0.1543	-0.2625	0.0580	0.2689
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	119.80	0.1576	-0.2612	0.0168	0.2618
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	124.12	0.161	-0.2596	0.0746	0.2702
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	128.04	0.1667	-0.2592	0.0863	0.2732
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	131.96	0.1726	-0.2592	0.0879	0.2737
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	160.00	0.2116	-0.2591	0.0709	0.2686
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	168.04	0.2189	-0.2592	0.0447	0.263
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	180.00	0.2248	-0.2581	0.0235	0.2591
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	195.88	0.2326	-0.2617	0.0290	0.2633
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	204.12	0.235	-0.2648	0.0207	0.2654
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	215.88	0.2343	-0.2689	0.0274	0.2703
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	228.04	0.2282	-0.2760	0.0506	0.2803
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	231.96	0.2252	-0.2785	0.0585	0.2841
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	235.88	0.2219	-0.2807	0.0554	0.2858
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	244.12	0.212	-0.2860	0.0524	0.2908
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	264.12	0.2001	-0.2976	0.0577	0.303
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	268.04	0.1943	-0.2998	0.0552	0.3048
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	271.96	0.1943	-0.3017	0.0608	0.3076
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	279.80	0.1841	-0.3057	0.0717	0.3138
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	288.04	0.176	-0.3096	0.0702	0.3174
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	299.80	0.1706	-0.3149	0.0643	0.3211
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	300.00	0.1649	-0.3149	0.0483	0.3186
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	80.00	0.1054	0.0949	0.0915	0.1317
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	84.12	0.1107	0.0956	0.0665	0.1165
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	88.04	0.1119	0.0961	0.0651	0.116
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	104.12	0.1309	0.0990	0.0509	0.1113
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	108.04	0.1307	0.0996	0.0468	0.11
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	115.88	0.1405	0.1009	0.0559	0.1153
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	119.80	0.1402	0.1017	0.0123	0.1024
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	124.12	0.1471	0.1033	0.0727	0.1259
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	128.04	0.1526	0.1037	0.0853	0.1343
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	131.96	0.155	0.1049	0.0875	0.1365

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	160.00	0.1996	0.1141	0.0769	0.1374
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	168.04	0.2081	0.1170	0.0519	0.128
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	180.00	0.2163	0.1208	0.0118	0.121
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	195.88	0.2284	0.1277	0.0396	0.1337
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	204.12	0.2335	0.1317	0.0238	0.1338
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	215.88	0.2368	0.1369	0.0068	0.137
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	228.04	0.235	0.1381	0.0192	0.1394
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	231.96	0.2334	0.1378	0.0271	0.1404
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	235.88	0.2315	0.1374	0.0239	0.1395
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	244.12	0.2217	0.1364	0.0199	0.1378
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	264.12	0.2199	0.1370	0.0242	0.139
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	268.04	0.214	0.1370	0.0221	0.1388
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	271.96	0.2168	0.1373	0.0260	0.1397
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	279.80	0.2129	0.1374	0.0362	0.142
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	288.04	0.2037	0.1368	0.0378	0.1419
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	299.80	0.2012	0.1365	0.0301	0.1397
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	300.00	0.1969	0.1364	0.0149	0.1372
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	80.00	0.1577	0.8457	0.1181	0.8539
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	84.12	0.1647	0.8509	0.0878	0.8554
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	88.04	0.1707	0.8527	0.0862	0.8571
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	104.12	0.1918	0.8559	0.0686	0.8586
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	108.04	0.1963	0.8565	0.0629	0.8588
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	115.88	0.2045	0.8556	0.0679	0.8582
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	119.80	0.2085	0.8548	0.0301	0.8554
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	124.12	0.2126	0.8537	0.0839	0.8576
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	128.04	0.2189	0.8558	0.0958	0.8612
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	131.96	0.2255	0.8586	0.0965	0.864
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	160.00	0.2668	0.8795	0.0707	0.8823
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	168.04	0.274	0.8856	0.0399	0.8865
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	180.00	0.2788	0.8924	0.0297	0.8927
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	195.88	0.2838	0.9140	0.0082	0.914
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	204.12	0.284	0.9285	0.0181	0.9286
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	215.88	0.279	0.9471	0.0424	0.9479
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	228.04	0.2671	0.9633	0.0743	0.9658
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	231.96	0.2621	0.9674	0.0834	0.9707
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	235.88	0.2565	0.9710	0.0797	0.9741
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	244.12	0.2433	0.9793	0.0774	0.9823
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	264.12	0.2173	1.0017	0.0857	1.0052
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	268.04	0.2118	1.0060	0.0817	1.0093
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	271.96	0.2061	1.0098	0.0898	1.0135
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	279.80	0.1942	1.0174	0.1006	1.0222
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	288.04	0.1805	1.0233	0.1001	1.0282
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	299.80	0.1615	1.0322	0.0932	1.0358
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	300.00	0.1613	1.0322	0.0741	1.0348
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	80.00	0.1555	1.0040	0.1078	1.0098
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	84.12	0.1619	1.0097	0.0797	1.0129
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	88.04	0.1673	1.0115	0.0772	1.0145
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	104.12	0.1862	1.0139	0.0614	1.0157
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	108.04	0.1902	1.0142	0.0560	1.0157
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	115.88	0.1976	1.0126	0.0630	1.0144
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	119.80	0.2012	1.0114	0.0257	1.0117
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	124.12	0.205	1.0098	0.0793	1.0128
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	128.04	0.2111	1.0115	0.0920	1.0157
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	131.96	0.2174	1.0140	0.0944	1.0184
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	160.00	0.2595	1.0325	0.0750	1.0352
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	168.04	0.2676	1.0379	0.0479	1.0391
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	180.00	0.2744	1.0435	0.0189	1.0435
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	195.88	0.2837	1.0640	0.0300	1.0644
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	204.12	0.2869	1.0780	0.0182	1.0782

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	215.88	0.2868	1.0962	0.0259	1.0964
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	228.04	0.281	1.1137	0.0499	1.1146
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	231.96	0.2781	1.1185	0.0576	1.1197
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	235.88	0.2747	1.1227	0.0535	1.1239
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	244.12	0.2664	1.1325	0.0516	1.1337
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	264.12	0.2524	1.1577	0.0585	1.159
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	268.04	0.2495	1.1625	0.0537	1.1637
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	271.96	0.2464	1.1668	0.0617	1.1682
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	279.80	0.2396	1.1753	0.0710	1.1772
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	288.04	0.2316	1.1823	0.0696	1.1844
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	299.80	0.2207	1.1927	0.0648	1.1938
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	300.00	0.2206	1.1927	0.0468	1.1936
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	80.00	0.1315	0.7374	0.0968	0.7438
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	84.12	0.1373	0.7418	0.0712	0.7452
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	88.04	0.142	0.7430	0.0686	0.7461
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	104.12	0.1586	0.7433	0.0540	0.7452
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	108.04	0.1621	0.7431	0.0489	0.7447
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	115.88	0.1686	0.7409	0.0583	0.7431
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	119.80	0.1718	0.7395	0.0179	0.7397
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	124.12	0.1754	0.7376	0.0748	0.7413
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	128.04	0.181	0.7382	0.0873	0.7433
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	131.96	0.1871	0.7395	0.0910	0.7451
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	160.00	0.2289	0.7494	0.0781	0.7534
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	168.04	0.2376	0.7523	0.0530	0.7542
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	180.00	0.2459	0.7546	0.0103	0.7546
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	195.88	0.2584	0.7679	0.0411	0.769
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	204.12	0.2638	0.7774	0.0253	0.7778
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	215.88	0.2676	0.7898	0.0079	0.7898
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	228.04	0.2666	0.8034	0.0199	0.8036
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	231.96	0.2653	0.8075	0.0273	0.8078
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	235.88	0.2636	0.8111	0.0231	0.8114
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	244.12	0.2589	0.8195	0.0181	0.8197
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	264.12	0.254	0.8402	0.0220	0.8404
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	268.04	0.2529	0.8441	0.0175	0.8443
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	271.96	0.2516	0.8476	0.0247	0.8479
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	279.80	0.2484	0.8547	0.0366	0.8552
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	288.04	0.2441	0.8608	0.0326	0.8614
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	299.80	0.2385	0.8697	0.0276	0.8697
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	300.00	0.2384	0.8697	0.0070	0.8697
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	80.00	0.1315	-0.0980	0.1177	0.1531
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	84.12	0.1384	-0.0988	0.0891	0.133
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	88.04	0.1415	-0.0993	0.0878	0.1325
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	104.12	0.1661	-0.1022	0.0692	0.1233
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	108.04	0.1674	-0.1027	0.0628	0.1204
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	115.88	0.1789	-0.1042	0.0674	0.124
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	119.80	0.1796	-0.1048	0.0234	0.1074
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	124.12	0.187	-0.1065	0.0824	0.1341
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	128.04	0.1932	-0.1070	0.0927	0.1416
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	131.96	0.1961	-0.1081	0.0932	0.1427
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	160.00	0.239	-0.1175	0.0654	0.1342
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	168.04	0.2454	-0.1205	0.0349	0.1255
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	180.00	0.2491	-0.1243	0.0350	0.1286
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	195.88	0.2521	-0.1312	0.0051	0.1313
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	204.12	0.2511	-0.1353	0.0224	0.137
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	215.88	0.2446	-0.1405	0.0462	0.1476
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	228.04	0.2311	-0.1417	0.0763	0.1609
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	231.96	0.2256	-0.1414	0.0857	0.1653
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	235.88	0.2197	-0.1410	0.0821	0.1632
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	244.12	0.2008	-0.1399	0.0790	0.1607

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	264.12	0.1781	-0.1405	0.0858	0.1645
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	268.04	0.1674	-0.1405	0.0846	0.164
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	271.96	0.1666	-0.1407	0.0885	0.1662
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	279.80	0.1543	-0.1408	0.1008	0.1731
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	288.04	0.1351	-0.1402	0.0997	0.172
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	299.80	0.1211	-0.1399	0.0921	0.1674
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	300.00	0.1154	-0.1398	0.0759	0.1591
1.2D + 1.0Ev + 1.0Eh 330° Seismic	80.00	0.0066	0.0000	0.0088	0.0088
1.2D + 1.0Ev + 1.0Eh 330° Seismic	84.12	0.0073	0.0000	0.0091	0.0091
1.2D + 1.0Ev + 1.0Eh 330° Seismic	88.04	0.0079	0.0000	0.0087	0.0087
1.2D + 1.0Ev + 1.0Eh 330° Seismic	104.12	0.0106	0.0000	0.0109	0.0109
1.2D + 1.0Ev + 1.0Eh 330° Seismic	108.04	0.0113	0.0000	0.0105	0.0105
1.2D + 1.0Ev + 1.0Eh 330° Seismic	115.88	0.0128	0.0000	0.0126	0.0126
1.2D + 1.0Ev + 1.0Eh 330° Seismic	119.80	0.0136	0.0000	0.0102	0.0102
1.2D + 1.0Ev + 1.0Eh 330° Seismic	124.12	0.0146	0.0000	0.0152	0.0152
1.2D + 1.0Ev + 1.0Eh 330° Seismic	128.04	0.0156	0.0000	0.0170	0.017
1.2D + 1.0Ev + 1.0Eh 330° Seismic	131.96	0.0167	0.0000	0.0173	0.0173
1.2D + 1.0Ev + 1.0Eh 330° Seismic	160.00	0.0248	0.0000	0.0170	0.017
1.2D + 1.0Ev + 1.0Eh 330° Seismic	168.04	0.0266	0.0001	0.0118	0.0118
1.2D + 1.0Ev + 1.0Eh 330° Seismic	180.00	0.0285	0.0001	0.0031	0.0031
1.2D + 1.0Ev + 1.0Eh 330° Seismic	195.88	0.0306	-0.0001	0.0070	0.007
1.2D + 1.0Ev + 1.0Eh 330° Seismic	204.12	0.0314	-0.0001	0.0047	0.0047
1.2D + 1.0Ev + 1.0Eh 330° Seismic	215.88	0.032	-0.0001	0.0024	0.0024
1.2D + 1.0Ev + 1.0Eh 330° Seismic	228.04	0.032	0.0000	0.0024	0.0024
1.2D + 1.0Ev + 1.0Eh 330° Seismic	231.96	0.0319	0.0000	0.0030	0.003
1.2D + 1.0Ev + 1.0Eh 330° Seismic	235.88	0.0317	0.0000	0.0025	0.0025
1.2D + 1.0Ev + 1.0Eh 330° Seismic	244.12	0.0312	-0.0001	0.0019	0.0019
1.2D + 1.0Ev + 1.0Eh 330° Seismic	264.12	0.031	0.0000	0.0025	0.0025
1.2D + 1.0Ev + 1.0Eh 330° Seismic	268.04	0.0309	0.0000	0.0021	0.0021
1.2D + 1.0Ev + 1.0Eh 330° Seismic	271.96	0.0308	0.0000	0.0026	0.0026
1.2D + 1.0Ev + 1.0Eh 330° Seismic	279.80	0.0305	0.0000	0.0041	0.0041
1.2D + 1.0Ev + 1.0Eh 330° Seismic	288.04	0.03	0.0000	0.0043	0.0043
1.2D + 1.0Ev + 1.0Eh 330° Seismic	299.80	0.0293	0.0000	0.0036	0.0036
1.2D + 1.0Ev + 1.0Eh 330° Seismic	300.00	0.0293	0.0000	0.0030	0.003
1.2D + 1.0Ev + 1.0Eh 300° Seismic	80.00	0.0065	0.0000	0.0085	0.0085
1.2D + 1.0Ev + 1.0Eh 300° Seismic	84.12	0.0071	0.0000	0.0086	0.0086
1.2D + 1.0Ev + 1.0Eh 300° Seismic	88.04	0.0077	0.0000	0.0084	0.0084
1.2D + 1.0Ev + 1.0Eh 300° Seismic	104.12	0.0102	0.0000	0.0102	0.0102
1.2D + 1.0Ev + 1.0Eh 300° Seismic	108.04	0.0109	0.0000	0.0100	0.01
1.2D + 1.0Ev + 1.0Eh 300° Seismic	115.88	0.0124	0.0000	0.0121	0.0121
1.2D + 1.0Ev + 1.0Eh 300° Seismic	119.80	0.0131	0.0000	0.0100	0.01
1.2D + 1.0Ev + 1.0Eh 300° Seismic	124.12	0.0141	0.0001	0.0142	0.0142
1.2D + 1.0Ev + 1.0Eh 300° Seismic	128.04	0.015	0.0000	0.0164	0.0164
1.2D + 1.0Ev + 1.0Eh 300° Seismic	131.96	0.0161	0.0000	0.0163	0.0163
1.2D + 1.0Ev + 1.0Eh 300° Seismic	160.00	0.0237	0.0001	0.0163	0.0163
1.2D + 1.0Ev + 1.0Eh 300° Seismic	168.04	0.0254	0.0001	0.0108	0.0108
1.2D + 1.0Ev + 1.0Eh 300° Seismic	180.00	0.0271	0.0001	0.0020	0.002
1.2D + 1.0Ev + 1.0Eh 300° Seismic	195.88	0.0289	0.0001	0.0058	0.0058
1.2D + 1.0Ev + 1.0Eh 300° Seismic	204.12	0.0296	0.0001	0.0032	0.0032
1.2D + 1.0Ev + 1.0Eh 300° Seismic	215.88	0.0299	0.0001	0.0009	0.0009
1.2D + 1.0Ev + 1.0Eh 300° Seismic	228.04	0.0296	0.0000	0.0027	0.0027
1.2D + 1.0Ev + 1.0Eh 300° Seismic	231.96	0.0294	0.0000	0.0035	0.0035
1.2D + 1.0Ev + 1.0Eh 300° Seismic	235.88	0.0292	0.0000	0.0028	0.0028
1.2D + 1.0Ev + 1.0Eh 300° Seismic	244.12	0.0286	-0.0001	0.0020	0.002
1.2D + 1.0Ev + 1.0Eh 300° Seismic	264.12	0.0281	0.0000	0.0027	0.0027
1.2D + 1.0Ev + 1.0Eh 300° Seismic	268.04	0.0279	0.0000	0.0022	0.0022
1.2D + 1.0Ev + 1.0Eh 300° Seismic	271.96	0.0277	0.0000	0.0028	0.0028
1.2D + 1.0Ev + 1.0Eh 300° Seismic	279.80	0.0273	0.0000	0.0044	0.0044
1.2D + 1.0Ev + 1.0Eh 300° Seismic	288.04	0.0267	0.0000	0.0047	0.0047

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh 300° Seismic	299.80	0.0258	0.0000	0.0039	0.0039
1.2D + 1.0Ev + 1.0Eh 300° Seismic	300.00	0.0258	0.0000	0.0032	0.0032
1.2D + 1.0Ev + 1.0Eh 240° Seismic	80.00	0.0051	0.0000	0.0077	0.0077
1.2D + 1.0Ev + 1.0Eh 240° Seismic	84.12	0.0056	0.0000	0.0083	0.0083
1.2D + 1.0Ev + 1.0Eh 240° Seismic	88.04	0.006	0.0000	0.0082	0.0082
1.2D + 1.0Ev + 1.0Eh 240° Seismic	104.12	0.0085	0.0001	0.0104	0.0104
1.2D + 1.0Ev + 1.0Eh 240° Seismic	108.04	0.009	0.0001	0.0102	0.0102
1.2D + 1.0Ev + 1.0Eh 240° Seismic	115.88	0.0105	0.0001	0.0119	0.0119
1.2D + 1.0Ev + 1.0Eh 240° Seismic	119.80	0.0112	0.0000	0.0106	0.0106
1.2D + 1.0Ev + 1.0Eh 240° Seismic	124.12	0.0122	0.0001	0.0149	0.0149
1.2D + 1.0Ev + 1.0Eh 240° Seismic	128.04	0.0132	0.0001	0.0165	0.0165
1.2D + 1.0Ev + 1.0Eh 240° Seismic	131.96	0.0141	0.0001	0.0163	0.0163
1.2D + 1.0Ev + 1.0Eh 240° Seismic	160.00	0.0221	0.0001	0.0166	0.0166
1.2D + 1.0Ev + 1.0Eh 240° Seismic	168.04	0.0238	0.0001	0.0116	0.0116
1.2D + 1.0Ev + 1.0Eh 240° Seismic	180.00	0.0257	0.0001	0.0035	0.0035
1.2D + 1.0Ev + 1.0Eh 240° Seismic	195.88	0.0278	0.0001	0.0071	0.0071
1.2D + 1.0Ev + 1.0Eh 240° Seismic	204.12	0.0286	0.0001	0.0049	0.0049
1.2D + 1.0Ev + 1.0Eh 240° Seismic	215.88	0.0292	0.0001	0.0030	0.003
1.2D + 1.0Ev + 1.0Eh 240° Seismic	228.04	0.0292	0.0001	0.0027	0.0027
1.2D + 1.0Ev + 1.0Eh 240° Seismic	231.96	0.029	0.0001	0.0032	0.0032
1.2D + 1.0Ev + 1.0Eh 240° Seismic	235.88	0.0289	0.0001	0.0028	0.0028
1.2D + 1.0Ev + 1.0Eh 240° Seismic	244.12	0.0284	0.0000	0.0024	0.0024
1.2D + 1.0Ev + 1.0Eh 240° Seismic	264.12	0.0284	0.0001	0.0028	0.0028
1.2D + 1.0Ev + 1.0Eh 240° Seismic	268.04	0.0284	0.0000	0.0025	0.0025
1.2D + 1.0Ev + 1.0Eh 240° Seismic	271.96	0.0283	0.0001	0.0028	0.0028
1.2D + 1.0Ev + 1.0Eh 240° Seismic	279.80	0.0281	0.0001	0.0038	0.0038
1.2D + 1.0Ev + 1.0Eh 240° Seismic	288.04	0.0277	0.0000	0.0042	0.0042
1.2D + 1.0Ev + 1.0Eh 240° Seismic	299.80	0.0272	0.0001	0.0035	0.0035
1.2D + 1.0Ev + 1.0Eh 240° Seismic	300.00	0.0272	0.0000	0.0030	0.003
1.2D + 1.0Ev + 1.0Eh 210° Seismic	80.00	0.0039	0.0000	0.0075	0.0075
1.2D + 1.0Ev + 1.0Eh 210° Seismic	84.12	0.0045	0.0001	0.0081	0.0081
1.2D + 1.0Ev + 1.0Eh 210° Seismic	88.04	0.0047	0.0000	0.0082	0.0082
1.2D + 1.0Ev + 1.0Eh 210° Seismic	104.12	0.0073	0.0001	0.0104	0.0104
1.2D + 1.0Ev + 1.0Eh 210° Seismic	108.04	0.0077	0.0001	0.0106	0.0106
1.2D + 1.0Ev + 1.0Eh 210° Seismic	115.88	0.0094	0.0001	0.0126	0.0126
1.2D + 1.0Ev + 1.0Eh 210° Seismic	119.80	0.01	0.0000	0.0110	0.011
1.2D + 1.0Ev + 1.0Eh 210° Seismic	124.12	0.0111	0.0001	0.0155	0.0155
1.2D + 1.0Ev + 1.0Eh 210° Seismic	128.04	0.0122	0.0001	0.0175	0.0175
1.2D + 1.0Ev + 1.0Eh 210° Seismic	131.96	0.0131	0.0001	0.0169	0.0169
1.2D + 1.0Ev + 1.0Eh 210° Seismic	160.00	0.0216	0.0001	0.0179	0.0179
1.2D + 1.0Ev + 1.0Eh 210° Seismic	168.04	0.0235	0.0001	0.0129	0.0129
1.2D + 1.0Ev + 1.0Eh 210° Seismic	180.00	0.0256	0.0001	0.0049	0.0049
1.2D + 1.0Ev + 1.0Eh 210° Seismic	195.88	0.0282	0.0001	0.0089	0.0089
1.2D + 1.0Ev + 1.0Eh 210° Seismic	204.12	0.0293	0.0001	0.0066	0.0066
1.2D + 1.0Ev + 1.0Eh 210° Seismic	215.88	0.0302	0.0001	0.0047	0.0047
1.2D + 1.0Ev + 1.0Eh 210° Seismic	228.04	0.0306	0.0001	0.0028	0.0028
1.2D + 1.0Ev + 1.0Eh 210° Seismic	231.96	0.0307	0.0001	0.0028	0.0028
1.2D + 1.0Ev + 1.0Eh 210° Seismic	235.88	0.0306	0.0001	0.0029	0.0029
1.2D + 1.0Ev + 1.0Eh 210° Seismic	244.12	0.0304	0.0000	0.0029	0.0029
1.2D + 1.0Ev + 1.0Eh 210° Seismic	264.12	0.0312	0.0001	0.0030	0.003
1.2D + 1.0Ev + 1.0Eh 210° Seismic	268.04	0.0313	0.0000	0.0030	0.003
1.2D + 1.0Ev + 1.0Eh 210° Seismic	271.96	0.0314	0.0001	0.0028	0.0028
1.2D + 1.0Ev + 1.0Eh 210° Seismic	279.80	0.0314	0.0001	0.0031	0.0031
1.2D + 1.0Ev + 1.0Eh 210° Seismic	288.04	0.0313	0.0000	0.0033	0.0033
1.2D + 1.0Ev + 1.0Eh 210° Seismic	299.80	0.0312	0.0001	0.0031	0.0031
1.2D + 1.0Ev + 1.0Eh 210° Seismic	300.00	0.0312	0.0000	0.0025	0.0025
1.2D + 1.0Ev + 1.0Eh 180° Seismic	80.00	0.0029	0.0000	0.0076	0.0076
1.2D + 1.0Ev + 1.0Eh 180° Seismic	84.12	0.0034	0.0001	0.0081	0.0081
1.2D + 1.0Ev + 1.0Eh 180° Seismic	88.04	0.0038	0.0000	0.0085	0.0085

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh 180° Seismic	104.12	0.0064	0.0001	0.0107	0.0107
1.2D + 1.0Ev + 1.0Eh 180° Seismic	108.04	0.007	0.0000	0.0111	0.0111
1.2D + 1.0Ev + 1.0Eh 180° Seismic	115.88	0.0087	0.0001	0.0133	0.0133
1.2D + 1.0Ev + 1.0Eh 180° Seismic	119.80	0.0094	0.0000	0.0117	0.0117
1.2D + 1.0Ev + 1.0Eh 180° Seismic	124.12	0.0106	0.0001	0.0160	0.016
1.2D + 1.0Ev + 1.0Eh 180° Seismic	128.04	0.0117	0.0000	0.0183	0.0183
1.2D + 1.0Ev + 1.0Eh 180° Seismic	131.96	0.0128	0.0000	0.0176	0.0176
1.2D + 1.0Ev + 1.0Eh 180° Seismic	160.00	0.0217	0.0001	0.0190	0.019
1.2D + 1.0Ev + 1.0Eh 180° Seismic	168.04	0.0238	0.0001	0.0139	0.0139
1.2D + 1.0Ev + 1.0Eh 180° Seismic	180.00	0.0261	0.0001	0.0057	0.0057
1.2D + 1.0Ev + 1.0Eh 180° Seismic	195.88	0.029	0.0001	0.0100	0.01
1.2D + 1.0Ev + 1.0Eh 180° Seismic	204.12	0.0303	0.0001	0.0077	0.0077
1.2D + 1.0Ev + 1.0Eh 180° Seismic	215.88	0.0315	0.0001	0.0056	0.0056
1.2D + 1.0Ev + 1.0Eh 180° Seismic	228.04	0.0322	0.0001	0.0030	0.003
1.2D + 1.0Ev + 1.0Eh 180° Seismic	231.96	0.0323	0.0001	0.0026	0.0026
1.2D + 1.0Ev + 1.0Eh 180° Seismic	235.88	0.0324	0.0001	0.0031	0.0031
1.2D + 1.0Ev + 1.0Eh 180° Seismic	244.12	0.0323	0.0000	0.0033	0.0033
1.2D + 1.0Ev + 1.0Eh 180° Seismic	264.12	0.0337	0.0001	0.0032	0.0032
1.2D + 1.0Ev + 1.0Eh 180° Seismic	268.04	0.0338	0.0000	0.0033	0.0033
1.2D + 1.0Ev + 1.0Eh 180° Seismic	271.96	0.034	0.0001	0.0029	0.0029
1.2D + 1.0Ev + 1.0Eh 180° Seismic	279.80	0.0342	0.0001	0.0023	0.0023
1.2D + 1.0Ev + 1.0Eh 180° Seismic	288.04	0.0343	0.0000	0.0023	0.0023
1.2D + 1.0Ev + 1.0Eh 180° Seismic	299.80	0.0344	0.0001	0.0026	0.0026
1.2D + 1.0Ev + 1.0Eh 180° Seismic	300.00	0.0344	0.0000	0.0022	0.0022
1.2D + 1.0Ev + 1.0Eh 120° Seismic	80.00	0.0033	0.0000	0.0087	0.0087
1.2D + 1.0Ev + 1.0Eh 120° Seismic	84.12	0.0039	0.0000	0.0096	0.0096
1.2D + 1.0Ev + 1.0Eh 120° Seismic	88.04	0.0044	0.0000	0.0096	0.0096
1.2D + 1.0Ev + 1.0Eh 120° Seismic	104.12	0.0075	-0.0001	0.0126	0.0126
1.2D + 1.0Ev + 1.0Eh 120° Seismic	108.04	0.0081	-0.0001	0.0125	0.0125
1.2D + 1.0Ev + 1.0Eh 120° Seismic	115.88	0.0101	-0.0001	0.0146	0.0146
1.2D + 1.0Ev + 1.0Eh 120° Seismic	119.80	0.0109	0.0000	0.0135	0.0135
1.2D + 1.0Ev + 1.0Eh 120° Seismic	124.12	0.0123	-0.0001	0.0181	0.0181
1.2D + 1.0Ev + 1.0Eh 120° Seismic	128.04	0.0135	0.0000	0.0198	0.0198
1.2D + 1.0Ev + 1.0Eh 120° Seismic	131.96	0.0147	0.0000	0.0198	0.0198
1.2D + 1.0Ev + 1.0Eh 120° Seismic	160.00	0.0245	-0.0001	0.0207	0.0207
1.2D + 1.0Ev + 1.0Eh 120° Seismic	168.04	0.0269	0.0001	0.0157	0.0157
1.2D + 1.0Ev + 1.0Eh 120° Seismic	180.00	0.0296	-0.0001	0.0069	0.0069
1.2D + 1.0Ev + 1.0Eh 120° Seismic	195.88	0.033	-0.0001	0.0114	0.0114
1.2D + 1.0Ev + 1.0Eh 120° Seismic	204.12	0.0345	-0.0001	0.0090	0.009
1.2D + 1.0Ev + 1.0Eh 120° Seismic	215.88	0.036	-0.0001	0.0064	0.0064
1.2D + 1.0Ev + 1.0Eh 120° Seismic	228.04	0.0369	-0.0001	0.0032	0.0032
1.2D + 1.0Ev + 1.0Eh 120° Seismic	231.96	0.0371	0.0000	0.0024	0.0024
1.2D + 1.0Ev + 1.0Eh 120° Seismic	235.88	0.0373	0.0000	0.0031	0.0031
1.2D + 1.0Ev + 1.0Eh 120° Seismic	244.12	0.0374	0.0000	0.0035	0.0035
1.2D + 1.0Ev + 1.0Eh 120° Seismic	264.12	0.0389	0.0000	0.0032	0.0032
1.2D + 1.0Ev + 1.0Eh 120° Seismic	268.04	0.0391	0.0000	0.0034	0.0034
1.2D + 1.0Ev + 1.0Eh 120° Seismic	271.96	0.0393	0.0000	0.0028	0.0028
1.2D + 1.0Ev + 1.0Eh 120° Seismic	279.80	0.0396	0.0000	0.0013	0.0013
1.2D + 1.0Ev + 1.0Eh 120° Seismic	288.04	0.0398	0.0000	0.0005	0.0005
1.2D + 1.0Ev + 1.0Eh 120° Seismic	299.80	0.04	0.0000	0.0021	0.0021
1.2D + 1.0Ev + 1.0Eh 120° Seismic	300.00	0.04	0.0000	0.0018	0.0018
1.2D + 1.0Ev + 1.0Eh 90° Seismic	80.00	0.004	-0.0001	0.0090	0.009
1.2D + 1.0Ev + 1.0Eh 90° Seismic	84.12	0.0046	-0.0001	0.0096	0.0096
1.2D + 1.0Ev + 1.0Eh 90° Seismic	88.04	0.0052	-0.0001	0.0097	0.0097
1.2D + 1.0Ev + 1.0Eh 90° Seismic	104.12	0.0081	-0.0001	0.0126	0.0126
1.2D + 1.0Ev + 1.0Eh 90° Seismic	108.04	0.0089	-0.0001	0.0125	0.0125
1.2D + 1.0Ev + 1.0Eh 90° Seismic	115.88	0.0107	-0.0001	0.0149	0.0149
1.2D + 1.0Ev + 1.0Eh 90° Seismic	119.80	0.0116	-0.0001	0.0135	0.0135
1.2D + 1.0Ev + 1.0Eh 90° Seismic	124.12	0.0129	-0.0001	0.0181	0.0181

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh 90° Seismic	128.04	0.0141	-0.0001	0.0201	0.0201
1.2D + 1.0Ev + 1.0Eh 90° Seismic	131.96	0.0154	-0.0001	0.0201	0.0201
1.2D + 1.0Ev + 1.0Eh 90° Seismic	160.00	0.0252	-0.0001	0.0211	0.0211
1.2D + 1.0Ev + 1.0Eh 90° Seismic	168.04	0.0276	-0.0001	0.0160	0.016
1.2D + 1.0Ev + 1.0Eh 90° Seismic	180.00	0.0304	-0.0001	0.0075	0.0075
1.2D + 1.0Ev + 1.0Eh 90° Seismic	195.88	0.0338	-0.0001	0.0118	0.0118
1.2D + 1.0Ev + 1.0Eh 90° Seismic	204.12	0.0354	-0.0001	0.0095	0.0095
1.2D + 1.0Ev + 1.0Eh 90° Seismic	215.88	0.037	-0.0001	0.0070	0.007
1.2D + 1.0Ev + 1.0Eh 90° Seismic	228.04	0.038	-0.0001	0.0038	0.0038
1.2D + 1.0Ev + 1.0Eh 90° Seismic	231.96	0.0382	-0.0001	0.0029	0.003
1.2D + 1.0Ev + 1.0Eh 90° Seismic	235.88	0.0384	-0.0001	0.0037	0.0037
1.2D + 1.0Ev + 1.0Eh 90° Seismic	244.12	0.0386	0.0000	0.0040	0.004
1.2D + 1.0Ev + 1.0Eh 90° Seismic	264.12	0.0402	-0.0001	0.0037	0.0037
1.2D + 1.0Ev + 1.0Eh 90° Seismic	268.04	0.0405	0.0000	0.0039	0.0039
1.2D + 1.0Ev + 1.0Eh 90° Seismic	271.96	0.0407	-0.0001	0.0033	0.0033
1.2D + 1.0Ev + 1.0Eh 90° Seismic	279.80	0.0411	-0.0001	0.0019	0.0019
1.2D + 1.0Ev + 1.0Eh 90° Seismic	288.04	0.0412	0.0000	0.0010	0.001
1.2D + 1.0Ev + 1.0Eh 90° Seismic	299.80	0.0415	-0.0001	0.0026	0.0026
1.2D + 1.0Ev + 1.0Eh 90° Seismic	300.00	0.0415	0.0000	0.0023	0.0023
1.2D + 1.0Ev + 1.0Eh 60° Seismic	80.00	0.0048	-0.0001	0.0088	0.0088
1.2D + 1.0Ev + 1.0Eh 60° Seismic	84.12	0.0054	-0.0001	0.0091	0.0091
1.2D + 1.0Ev + 1.0Eh 60° Seismic	88.04	0.0059	-0.0001	0.0091	0.0091
1.2D + 1.0Ev + 1.0Eh 60° Seismic	104.12	0.0087	-0.0001	0.0116	0.0116
1.2D + 1.0Ev + 1.0Eh 60° Seismic	108.04	0.0094	-0.0001	0.0116	0.0116
1.2D + 1.0Ev + 1.0Eh 60° Seismic	115.88	0.0111	-0.0001	0.0141	0.0141
1.2D + 1.0Ev + 1.0Eh 60° Seismic	119.80	0.0119	-0.0001	0.0122	0.0122
1.2D + 1.0Ev + 1.0Eh 60° Seismic	124.12	0.013	-0.0001	0.0167	0.0167
1.2D + 1.0Ev + 1.0Eh 60° Seismic	128.04	0.0142	-0.0001	0.0191	0.0191
1.2D + 1.0Ev + 1.0Eh 60° Seismic	131.96	0.0154	-0.0001	0.0190	0.019
1.2D + 1.0Ev + 1.0Eh 60° Seismic	160.00	0.0245	-0.0001	0.0199	0.0199
1.2D + 1.0Ev + 1.0Eh 60° Seismic	168.04	0.0267	-0.0001	0.0146	0.0146
1.2D + 1.0Ev + 1.0Eh 60° Seismic	180.00	0.0292	-0.0001	0.0062	0.0062
1.2D + 1.0Ev + 1.0Eh 60° Seismic	195.88	0.0322	-0.0001	0.0105	0.0105
1.2D + 1.0Ev + 1.0Eh 60° Seismic	204.12	0.0335	-0.0001	0.0081	0.0081
1.2D + 1.0Ev + 1.0Eh 60° Seismic	215.88	0.0349	-0.0001	0.0060	0.006
1.2D + 1.0Ev + 1.0Eh 60° Seismic	228.04	0.0356	-0.0001	0.0031	0.0031
1.2D + 1.0Ev + 1.0Eh 60° Seismic	231.96	0.0358	-0.0001	0.0026	0.0026
1.2D + 1.0Ev + 1.0Eh 60° Seismic	235.88	0.0359	-0.0001	0.0032	0.0032
1.2D + 1.0Ev + 1.0Eh 60° Seismic	244.12	0.0359	0.0000	0.0033	0.0033
1.2D + 1.0Ev + 1.0Eh 60° Seismic	264.12	0.0371	-0.0001	0.0032	0.0032
1.2D + 1.0Ev + 1.0Eh 60° Seismic	268.04	0.0373	0.0000	0.0033	0.0033
1.2D + 1.0Ev + 1.0Eh 60° Seismic	271.96	0.0375	-0.0001	0.0029	0.0029
1.2D + 1.0Ev + 1.0Eh 60° Seismic	279.80	0.0377	-0.0001	0.0024	0.0024
1.2D + 1.0Ev + 1.0Eh 60° Seismic	288.04	0.0378	0.0000	0.0018	0.0018
1.2D + 1.0Ev + 1.0Eh 60° Seismic	299.80	0.0379	-0.0001	0.0026	0.0026
1.2D + 1.0Ev + 1.0Eh 60° Seismic	300.00	0.0379	0.0000	0.0022	0.0022
1.2D + 1.0Ev + 1.0Eh Normal Seismic	80.00	0.0063	0.0000	0.0087	0.0087
1.2D + 1.0Ev + 1.0Eh Normal Seismic	84.12	0.0069	-0.0001	0.0092	0.0092
1.2D + 1.0Ev + 1.0Eh Normal Seismic	88.04	0.0075	0.0000	0.0088	0.0088
1.2D + 1.0Ev + 1.0Eh Normal Seismic	104.12	0.0102	-0.0001	0.0113	0.0113
1.2D + 1.0Ev + 1.0Eh Normal Seismic	108.04	0.0109	0.0000	0.0107	0.0107
1.2D + 1.0Ev + 1.0Eh Normal Seismic	115.88	0.0125	-0.0001	0.0128	0.0128
1.2D + 1.0Ev + 1.0Eh Normal Seismic	119.80	0.0133	0.0000	0.0105	0.0105
1.2D + 1.0Ev + 1.0Eh Normal Seismic	124.12	0.0143	-0.0001	0.0158	0.0158
1.2D + 1.0Ev + 1.0Eh Normal Seismic	128.04	0.0154	-0.0001	0.0174	0.0174
1.2D + 1.0Ev + 1.0Eh Normal Seismic	131.96	0.0166	0.0000	0.0179	0.0179
1.2D + 1.0Ev + 1.0Eh Normal Seismic	160.00	0.0249	-0.0001	0.0177	0.0177
1.2D + 1.0Ev + 1.0Eh Normal Seismic	168.04	0.0268	-0.0001	0.0126	0.0126
1.2D + 1.0Ev + 1.0Eh Normal Seismic	180.00	0.0289	-0.0001	0.0045	0.0045

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh Normal Seismic	195.88	0.0313	-0.0001	0.0082	0.0082
1.2D + 1.0Ev + 1.0Eh Normal Seismic	204.12	0.0323	-0.0001	0.0059	0.0059
1.2D + 1.0Ev + 1.0Eh Normal Seismic	215.88	0.0331	-0.0001	0.0039	0.0039
1.2D + 1.0Ev + 1.0Eh Normal Seismic	228.04	0.0333	-0.0001	0.0026	0.0026
1.2D + 1.0Ev + 1.0Eh Normal Seismic	231.96	0.0333	-0.0001	0.0029	0.0029
1.2D + 1.0Ev + 1.0Eh Normal Seismic	235.88	0.0332	-0.0001	0.0028	0.0028
1.2D + 1.0Ev + 1.0Eh Normal Seismic	244.12	0.0329	0.0000	0.0025	0.0025
1.2D + 1.0Ev + 1.0Eh Normal Seismic	264.12	0.0331	-0.0001	0.0028	0.0028
1.2D + 1.0Ev + 1.0Eh Normal Seismic	268.04	0.0331	0.0000	0.0025	0.0025
1.2D + 1.0Ev + 1.0Eh Normal Seismic	271.96	0.0331	-0.0001	0.0027	0.0027
1.2D + 1.0Ev + 1.0Eh Normal Seismic	279.80	0.0329	-0.0001	0.0038	0.0038
1.2D + 1.0Ev + 1.0Eh Normal Seismic	288.04	0.0326	0.0000	0.0037	0.0037
1.2D + 1.0Ev + 1.0Eh Normal Seismic	299.80	0.0322	-0.0001	0.0034	0.0034
1.2D + 1.0Ev + 1.0Eh Normal Seismic	300.00	0.0322	0.0000	0.0029	0.0029
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	80.00	0.1835	0.0013	0.2034	0.2034
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	84.12	0.196	-0.0346	0.1692	0.1723
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	88.04	0.2064	-0.0849	0.1493	0.1718
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	104.12	0.2416	-0.2848	0.0779	0.2953
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	108.04	0.2442	-0.3153	0.0709	0.3232
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	115.88	0.2557	-0.3687	0.0759	0.3765
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	119.80	0.2568	-0.3906	0.0161	0.3909
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	124.12	0.264	-0.4115	0.1338	0.4327
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	128.04	0.2769	-0.3888	0.2275	0.4484
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	131.96	0.2871	-0.3598	0.1932	0.4084
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	160.00	0.3741	-0.3924	0.1470	0.4169
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	168.04	0.3875	-0.3966	0.0874	0.406
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	180.00	0.4007	-0.3998	0.0463	0.4014
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	195.88	0.4211	-0.5509	0.0750	0.5542
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	204.12	0.4256	-0.5631	0.0448	0.5645
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	215.88	0.4246	-0.5749	0.0585	0.5777
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	228.04	0.4137	-0.5801	0.0995	0.5884
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	231.96	0.4083	-0.5805	0.1133	0.5914
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	235.88	0.4022	-0.5805	0.1130	0.5913
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	244.12	0.3869	-0.5807	0.1170	0.5923
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	264.12	0.3568	-0.5929	0.1404	0.6092
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	268.04	0.3505	-0.5953	0.1425	0.6121
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	271.96	0.3439	-0.5973	0.1499	0.6156
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	279.80	0.3302	-0.6012	0.1730	0.6256
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	288.04	0.315	-0.6029	0.1686	0.626
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	299.80	0.2958	-0.6090	0.1582	0.6288
1.2D + 1.0Di + 1.0Wi 330° 50 mph Wind with 1" Radial Ice	300.00	0.2956	-0.6090	0.1383	0.6245
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	80.00	0.1977	-0.7978	0.2132	0.8247
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	84.12	0.2113	-0.8382	0.1711	0.8523
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	88.04	0.2221	-0.8503	0.1371	0.8612
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	104.12	0.2474	-0.9297	0.0656	0.9317
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	108.04	0.2513	-0.9222	0.0544	0.9238
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	115.88	0.2577	-0.9127	0.0736	0.9156
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	119.80	0.2597	-0.8752	0.0358	0.8759
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	124.12	0.2619	-0.8361	0.1313	0.8464
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	128.04	0.274	-0.8411	0.1974	0.8625
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	131.96	0.2872	-0.8345	0.1923	0.8564
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	160.00	0.3759	-0.8568	0.1564	0.8703
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	168.04	0.3918	-0.8594	0.1035	0.8657
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	180.00	0.4097	-0.8627	0.0309	0.8627
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	195.88	0.4414	-0.9079	0.1226	0.9148
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	204.12	0.4558	-0.9514	0.0582	0.953
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	215.88	0.4663	-0.9717	0.0333	0.9723
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	228.04	0.4686	-0.9867	0.0118	0.9867
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	231.96	0.4677	-0.9901	0.0232	0.9903

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	235.88	0.4662	-0.9929	0.0192	0.9931
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	244.12	0.461	-0.9996	0.0178	0.9998
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	264.12	0.4562	-1.0258	0.0300	1.0262
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	268.04	0.4547	-1.0309	0.0249	1.0312
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	271.96	0.4528	-1.0353	0.0353	1.0358
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	279.80	0.4482	-1.0441	0.0526	1.0451
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	288.04	0.4417	-1.0501	0.0518	1.0514
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	299.80	0.4328	-1.0622	0.0449	1.0624
1.2D + 1.0Di + 1.0Wi 300° 50 mph Wind with 1" Radial Ice	300.00	0.4328	-1.0622	0.0165	1.0623
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	80.00	0.2154	-0.5199	0.2256	0.5667
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	84.12	0.2308	-0.6038	0.1772	0.6293
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	88.04	0.2403	-0.6509	0.1291	0.6635
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	104.12	0.2714	-0.7419	0.0967	0.7461
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	108.04	0.277	-0.7405	0.0802	0.7448
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	115.88	0.2863	-0.7286	0.0832	0.7327
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	119.80	0.2905	-0.7199	0.0232	0.7203
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	124.12	0.295	-0.7103	0.1437	0.7241
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	128.04	0.3087	-0.7114	0.2168	0.7437
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	131.96	0.3228	-0.7115	0.2025	0.7398
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	160.00	0.4036	-0.7052	0.1162	0.7142
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	168.04	0.4151	-0.7058	0.0665	0.7089
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	180.00	0.4232	-0.7061	0.0649	0.7068
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	195.88	0.4325	-0.7613	0.0318	0.7614
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	204.12	0.4288	-0.7743	0.0589	0.7763
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	215.88	0.4126	-0.7889	0.1127	0.7966
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	228.04	0.3816	-0.8046	0.1814	0.8238
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	231.96	0.3689	-0.8092	0.2019	0.833
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	235.88	0.3549	-0.8131	0.2030	0.8377
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	244.12	0.3219	-0.8225	0.2164	0.8505
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	264.12	0.2416	-0.8504	0.2569	0.888
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	268.04	0.2242	-0.8557	0.2584	0.8939
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	271.96	0.2063	-0.8604	0.2731	0.9023
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	279.80	0.1687	-0.8699	0.3068	0.9223
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	288.04	0.1269	-0.8776	0.3000	0.9274
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	299.80	0.0732	-0.8906	0.2893	0.9358
1.2D + 1.0Di + 1.0Wi 240° 50 mph Wind with 1" Radial Ice	300.00	0.0669	-0.8906	0.2615	0.9282
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	80.00	0.176	0.0863	0.1920	0.2105
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	84.12	0.1823	0.0096	0.1752	0.1754
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	88.04	0.193	-0.0241	0.1294	0.1316
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	104.12	0.2162	-0.0462	0.0745	0.0877
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	108.04	0.2207	-0.0770	0.0653	0.1009
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	115.88	0.2286	-0.1289	0.0705	0.1464
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	119.80	0.2323	-0.1528	0.0147	0.1535
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	124.12	0.2362	-0.1721	0.1302	0.2158
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	128.04	0.2487	-0.1456	0.2269	0.2684
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	131.96	0.2616	-0.1152	0.1892	0.2215
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	160.00	0.3453	-0.0560	0.1511	0.1604
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	168.04	0.3593	-0.0566	0.0961	0.1112
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	180.00	0.374	-0.0546	0.0576	0.0785
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	195.88	0.3968	-0.1889	0.0974	0.2084
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	204.12	0.4037	-0.1926	0.0721	0.2051
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	215.88	0.4062	-0.1943	0.0815	0.2107
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	228.04	0.3994	-0.1999	0.1132	0.2293
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	231.96	0.3956	-0.2020	0.1258	0.2372
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	235.88	0.391	-0.2038	0.1261	0.2392
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	244.12	0.3766	-0.2082	0.1330	0.247
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	264.12	0.3603	-0.2215	0.1556	0.2705
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	268.04	0.3512	-0.2240	0.1566	0.2734
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	271.96	0.3525	-0.2262	0.1653	0.2798

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	279.80	0.3378	-0.2307	0.1865	0.2964
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	288.04	0.3281	-0.2347	0.1845	0.2985
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	299.80	0.3269	-0.2419	0.1772	0.2992
1.2D + 1.0Di + 1.0Wi 210° 50 mph Wind with 1" Radial Ice	300.00	0.3172	-0.2419	0.1565	0.2881
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	80.00	0.1591	0.0356	0.1710	0.1744
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	84.12	0.1692	0.0541	0.1052	0.117
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	88.04	0.1744	0.0411	0.1055	0.1132
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	104.12	0.1987	0.0779	0.0617	0.0968
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	108.04	0.2011	0.0749	0.0549	0.0928
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	115.88	0.2092	0.0825	0.0647	0.1036
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	119.80	0.2113	0.0828	0.0080	0.0832
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	124.12	0.2179	0.1111	0.1327	0.172
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	128.04	0.2301	0.1183	0.1995	0.2299
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	131.96	0.241	0.1176	0.1917	0.2249
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	160.00	0.3357	0.1418	0.1673	0.2184
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	168.04	0.3532	0.1451	0.1158	0.1857
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	180.00	0.374	0.1508	0.0477	0.1572
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	195.88	0.41	0.1678	0.1242	0.2076
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	204.12	0.4246	0.1728	0.0822	0.1914
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	215.88	0.4392	0.1800	0.0561	0.1882
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	228.04	0.446	0.1807	0.0199	0.1818
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	231.96	0.4466	0.1800	0.0142	0.1806
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	235.88	0.4465	0.1793	0.0152	0.1799
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	244.12	0.4395	0.1772	0.0153	0.1778
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	264.12	0.4469	0.1777	0.0155	0.1783
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	268.04	0.4423	0.1776	0.0148	0.1782
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	271.96	0.4464	0.1779	0.0181	0.1788
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	279.80	0.4444	0.1778	0.0320	0.1806
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	288.04	0.4363	0.1766	0.0367	0.1804
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	299.80	0.4351	0.1764	0.0284	0.1787
1.2D + 1.0Di + 1.0Wi 180° 50 mph Wind with 1" Radial Ice	300.00	0.431	0.1762	0.0142	0.1768
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	80.00	0.2167	0.4988	0.2110	0.5399
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	84.12	0.23	0.5371	0.1877	0.5689
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	88.04	0.2441	0.5773	0.2128	0.6153
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	104.12	0.2872	0.7871	0.0972	0.793
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	108.04	0.2931	0.7974	0.0804	0.8015
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	115.88	0.303	0.7918	0.0871	0.796
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	119.80	0.3076	0.7853	0.0275	0.7858
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	124.12	0.3125	0.7781	0.1483	0.7919
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	128.04	0.3268	0.7824	0.2252	0.8141
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	131.96	0.3415	0.7859	0.2114	0.8139
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	160.00	0.433	0.8350	0.1428	0.8449
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	168.04	0.4465	0.8419	0.0801	0.8457
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	180.00	0.4578	0.8475	0.0492	0.8475
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	195.88	0.4725	0.9193	0.0227	0.9196
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	204.12	0.4717	0.9383	0.0396	0.939
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	215.88	0.4599	0.9601	0.0930	0.9642
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	228.04	0.4334	0.9773	0.1608	0.9897
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	231.96	0.4221	0.9814	0.1810	0.9973
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	235.88	0.4096	0.9849	0.1828	1.0014
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	244.12	0.3796	0.9930	0.1964	1.0122
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	264.12	0.3066	1.0218	0.2378	1.0486
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	268.04	0.2906	1.0273	0.2395	1.0549
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	271.96	0.2742	1.0321	0.2544	1.0625
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	279.80	0.2396	1.0419	0.2860	1.0803
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	288.04	0.2011	1.0488	0.2819	1.0861
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	299.80	0.1473	1.0615	0.2708	1.0948
1.2D + 1.0Di + 1.0Wi 120° 50 mph Wind with 1" Radial Ice	300.00	0.1465	1.0615	0.2434	1.0891
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	80.00	0.2189	0.9719	0.2327	0.9994

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	84.12	0.2343	1.0228	0.2085	1.0439
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	88.04	0.2478	1.0658	0.1591	1.0776
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	104.12	0.2824	1.2107	0.0826	1.2133
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	108.04	0.2858	1.1816	0.0469	1.1826
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	115.88	0.2908	1.1053	0.0858	1.1084
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	119.80	0.2931	1.0646	0.0095	1.0647
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	124.12	0.2959	1.0257	0.1430	1.0349
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	128.04	0.3106	1.0515	0.2399	1.0785
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	131.96	0.3264	1.0818	0.2274	1.1055
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	160.00	0.4181	1.1065	0.1612	1.1182
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	168.04	0.4342	1.1051	0.1040	1.11
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	180.00	0.4513	1.1047	0.0338	1.1049
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	195.88	0.4755	1.1030	0.0959	1.1068
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	204.12	0.484	1.1191	0.0609	1.1207
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	215.88	0.4882	1.1407	0.0632	1.1423
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	228.04	0.4823	1.1605	0.0941	1.1639
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	231.96	0.4785	1.1658	0.1064	1.1703
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	235.88	0.4739	1.1707	0.1055	1.1752
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	244.12	0.4618	1.2117	0.1172	1.2173
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	264.12	0.4396	1.2452	0.1386	1.2525
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	268.04	0.4347	1.2516	0.1369	1.2591
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	271.96	0.4295	1.2572	0.1490	1.2654
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	279.80	0.4185	1.2686	0.1669	1.2792
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	288.04	0.406	1.2773	0.1664	1.2881
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	299.80	0.3902	1.2923	0.1604	1.3009
1.2D + 1.0Di + 1.0Wi 90° 50 mph Wind with 1" Radial Ice	300.00	0.39	1.2923	0.1391	1.2998
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	80.00	0.1853	0.6547	0.2080	0.6865
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	84.12	0.1991	0.6996	0.1923	0.7255
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	88.04	0.2111	0.7279	0.1172	0.7373
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	104.12	0.232	0.7523	0.0793	0.7545
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	108.04	0.2361	0.7505	0.0545	0.7525
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	115.88	0.2432	0.7421	0.0764	0.7461
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	119.80	0.2455	0.7049	0.0235	0.7053
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	124.12	0.2481	0.6658	0.1368	0.6797
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	128.04	0.2605	0.6690	0.2035	0.6977
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	131.96	0.2741	0.6606	0.1981	0.6896
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	160.00	0.3669	0.6693	0.1664	0.6896
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	168.04	0.3845	0.6699	0.1172	0.68
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	180.00	0.4056	0.6702	0.0482	0.671
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	195.88	0.4423	0.6958	0.1281	0.7066
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	204.12	0.4575	0.7066	0.0863	0.7119
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	215.88	0.4733	0.7213	0.0609	0.7238
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	228.04	0.4819	0.7372	0.0255	0.7376
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	231.96	0.4832	0.7418	0.0144	0.742
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	235.88	0.4839	0.7459	0.0172	0.7461
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	244.12	0.4835	0.7558	0.0176	0.756
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	264.12	0.4908	0.7832	0.0110	0.7833
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	268.04	0.4918	0.7884	0.0131	0.7885
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	271.96	0.4924	0.7931	0.0070	0.7931
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	279.80	0.4928	0.8025	0.0180	0.8026
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	288.04	0.4916	0.8101	0.0138	0.8103
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	299.80	0.4902	0.8230	0.0211	0.8233
1.2D + 1.0Di + 1.0Wi 60° 50 mph Wind with 1" Radial Ice	300.00	0.4903	0.8230	0.0236	0.8234
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	80.00	0.2006	-0.1235	0.2238	0.2551
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	84.12	0.2136	-0.0992	0.2123	0.2338
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	88.04	0.2222	-0.0745	0.1652	0.1812
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	104.12	0.2599	-0.0760	0.0876	0.1136
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	108.04	0.262	-0.0737	0.0776	0.107
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	115.88	0.275	-0.0810	0.0813	0.1116

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	119.80	0.2759	-0.0778	0.0194	0.0802
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	124.12	0.284	-0.0829	0.1398	0.1625
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	128.04	0.2976	-0.0868	0.2144	0.2313
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	131.96	0.3076	-0.0843	0.1989	0.216
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	160.00	0.396	-0.1665	0.1263	0.207
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	168.04	0.4071	-0.1727	0.0636	0.184
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	180.00	0.4147	-0.1780	0.0704	0.1893
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	195.88	0.423	-0.1935	0.0171	0.1943
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	204.12	0.4191	-0.1972	0.0585	0.2056
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	215.88	0.4029	-0.2036	0.1111	0.2312
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	228.04	0.3723	-0.2037	0.1758	0.269
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	231.96	0.3598	-0.2028	0.1960	0.282
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	235.88	0.3463	-0.2018	0.1970	0.282
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	244.12	0.3059	-0.1992	0.2081	0.2881
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	264.12	0.2373	-0.1992	0.2458	0.3164
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	268.04	0.2118	-0.1990	0.2508	0.3202
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	271.96	0.2042	-0.1991	0.2601	0.3276
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	279.80	0.1696	-0.1988	0.2936	0.3546
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	288.04	0.1214	-0.1977	0.2862	0.3479
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	299.80	0.0847	-0.1976	0.2734	0.3369
1.2D + 1.0Di + 1.0Wi Normal 50 mph Wind with 1" Radial Ice	300.00	0.0711	-0.1971	0.2498	0.3182
1.2D + 1.0W 330° 123 mph Wind with No Ice	80.00	0.8892	-0.6229	0.8116	1.022
1.2D + 1.0W 330° 123 mph Wind with No Ice	84.12	0.9396	-0.6194	0.6648	0.9086
1.2D + 1.0W 330° 123 mph Wind with No Ice	88.04	0.9735	-0.6212	0.6312	0.8856
1.2D + 1.0W 330° 123 mph Wind with No Ice	104.12	1.1377	-0.6767	0.4977	0.8398
1.2D + 1.0W 330° 123 mph Wind with No Ice	108.04	1.1567	-0.6982	0.4610	0.8366
1.2D + 1.0W 330° 123 mph Wind with No Ice	115.88	1.2311	-0.7441	0.4776	0.8837
1.2D + 1.0W 330° 123 mph Wind with No Ice	119.80	1.2454	-0.7575	0.2830	0.8087
1.2D + 1.0W 330° 123 mph Wind with No Ice	124.12	1.291	-0.7746	0.6108	0.9864
1.2D + 1.0W 330° 123 mph Wind with No Ice	128.04	1.3418	-0.7641	0.7876	1.093
1.2D + 1.0W 330° 123 mph Wind with No Ice	131.96	1.3779	-0.7403	0.7538	1.0565
1.2D + 1.0W 330° 123 mph Wind with No Ice	160.00	1.7249	-0.6265	0.6045	0.8692
1.2D + 1.0W 330° 123 mph Wind with No Ice	168.04	1.7961	-0.6838	0.4407	0.8131
1.2D + 1.0W 330° 123 mph Wind with No Ice	180.00	1.8623	-0.7659	0.1774	0.7861
1.2D + 1.0W 330° 123 mph Wind with No Ice	195.88	1.964	-0.8391	0.3418	0.9051
1.2D + 1.0W 330° 123 mph Wind with No Ice	204.12	2.0059	-0.9132	0.2131	0.9377
1.2D + 1.0W 330° 123 mph Wind with No Ice	215.88	2.0364	-0.9594	0.0952	0.9639
1.2D + 1.0W 330° 123 mph Wind with No Ice	228.04	2.0368	-0.9954	0.0828	0.9989
1.2D + 1.0W 330° 123 mph Wind with No Ice	231.96	2.0304	-1.0005	0.1377	1.0086
1.2D + 1.0W 330° 123 mph Wind with No Ice	235.88	2.0212	-1.0240	0.1572	1.0321
1.2D + 1.0W 330° 123 mph Wind with No Ice	244.12	1.9729	-1.0722	0.0890	1.0759
1.2D + 1.0W 330° 123 mph Wind with No Ice	264.12	1.9771	-1.2582	0.1094	1.2625
1.2D + 1.0W 330° 123 mph Wind with No Ice	268.04	1.9467	-1.2663	0.1042	1.2706
1.2D + 1.0W 330° 123 mph Wind with No Ice	271.96	1.9629	-1.2740	0.1259	1.2796
1.2D + 1.0W 330° 123 mph Wind with No Ice	279.80	1.9451	-1.2881	0.1761	1.3001
1.2D + 1.0W 330° 123 mph Wind with No Ice	288.04	1.8982	-1.2959	0.1714	1.3072
1.2D + 1.0W 330° 123 mph Wind with No Ice	299.80	1.8916	-1.3145	0.1436	1.321
1.2D + 1.0W 330° 123 mph Wind with No Ice	300.00	1.8671	-1.3145	0.0860	1.3173
1.2D + 1.0W 300° 123 mph Wind with No Ice	80.00	0.6506	-1.9677	0.5736	2.0447
1.2D + 1.0W 300° 123 mph Wind with No Ice	84.12	0.6848	-1.9899	0.4122	2.0311
1.2D + 1.0W 300° 123 mph Wind with No Ice	88.04	0.7116	-1.9929	0.3817	2.0292
1.2D + 1.0W 300° 123 mph Wind with No Ice	104.12	0.7975	-1.9444	0.2655	1.9618
1.2D + 1.0W 300° 123 mph Wind with No Ice	108.04	0.8137	-1.9237	0.2288	1.9373
1.2D + 1.0W 300° 123 mph Wind with No Ice	115.88	0.8428	-1.9037	0.2610	1.9211
1.2D + 1.0W 300° 123 mph Wind with No Ice	119.80	0.8567	-1.8687	0.0519	1.8694
1.2D + 1.0W 300° 123 mph Wind with No Ice	124.12	0.8702	-1.8183	0.4069	1.8631
1.2D + 1.0W 300° 123 mph Wind with No Ice	128.04	0.9053	-1.8335	0.5576	1.9124
1.2D + 1.0W 300° 123 mph Wind with No Ice	131.96	0.9432	-1.8269	0.5529	1.9087
1.2D + 1.0W 300° 123 mph Wind with No Ice	160.00	1.1915	-1.8971	0.4393	1.9447

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W 300° 123 mph Wind with No Ice	168.04	1.2423	-1.9103	0.2824	1.9302
1.2D + 1.0W 300° 123 mph Wind with No Ice	180.00	1.2789	-1.9172	0.0457	1.9176
1.2D + 1.0W 300° 123 mph Wind with No Ice	195.88	1.36	-2.0309	0.3048	2.0498
1.2D + 1.0W 300° 123 mph Wind with No Ice	204.12	1.3981	-2.1374	0.2008	2.1455
1.2D + 1.0W 300° 123 mph Wind with No Ice	215.88	1.4279	-2.2279	0.0882	2.2296
1.2D + 1.0W 300° 123 mph Wind with No Ice	228.04	1.4338	-2.3517	0.0700	2.3527
1.2D + 1.0W 300° 123 mph Wind with No Ice	231.96	1.4289	-2.3757	0.1093	2.3782
1.2D + 1.0W 300° 123 mph Wind with No Ice	235.88	1.4215	-2.3903	0.0968	2.3923
1.2D + 1.0W 300° 123 mph Wind with No Ice	244.12	1.4003	-2.4099	0.0439	2.4103
1.2D + 1.0W 300° 123 mph Wind with No Ice	264.12	1.4085	-2.6338	0.0409	2.6341
1.2D + 1.0W 300° 123 mph Wind with No Ice	268.04	1.4073	-2.6486	0.0204	2.6487
1.2D + 1.0W 300° 123 mph Wind with No Ice	271.96	1.4055	-2.6612	0.0470	2.6615
1.2D + 1.0W 300° 123 mph Wind with No Ice	279.80	1.3996	-2.6860	0.0845	2.6869
1.2D + 1.0W 300° 123 mph Wind with No Ice	288.04	1.3897	-2.7027	0.0820	2.704
1.2D + 1.0W 300° 123 mph Wind with No Ice	299.80	1.3776	-2.7364	0.0610	2.7364
1.2D + 1.0W 300° 123 mph Wind with No Ice	300.00	1.3777	-2.7364	0.0269	2.7365
1.2D + 1.0W 240° 123 mph Wind with No Ice	80.00	1.0277	-1.3749	0.8961	1.6411
1.2D + 1.0W 240° 123 mph Wind with No Ice	84.12	1.0861	-1.4365	0.7641	1.627
1.2D + 1.0W 240° 123 mph Wind with No Ice	88.04	1.1366	-1.4586	0.6935	1.6151
1.2D + 1.0W 240° 123 mph Wind with No Ice	104.12	1.2981	-1.2630	0.5609	1.3782
1.2D + 1.0W 240° 123 mph Wind with No Ice	108.04	1.3318	-1.2162	0.4857	1.3095
1.2D + 1.0W 240° 123 mph Wind with No Ice	115.88	1.3951	-1.1094	0.5436	1.2274
1.2D + 1.0W 240° 123 mph Wind with No Ice	119.80	1.4253	-1.0571	0.3104	1.1017
1.2D + 1.0W 240° 123 mph Wind with No Ice	124.12	1.4588	-1.0244	0.6789	1.2246
1.2D + 1.0W 240° 123 mph Wind with No Ice	128.04	1.5148	-1.0237	0.8574	1.3353
1.2D + 1.0W 240° 123 mph Wind with No Ice	131.96	1.5719	-1.0221	0.8286	1.3158
1.2D + 1.0W 240° 123 mph Wind with No Ice	160.00	1.9439	-1.0614	0.6750	1.2578
1.2D + 1.0W 240° 123 mph Wind with No Ice	168.04	2.0208	-1.0968	0.4741	1.1925
1.2D + 1.0W 240° 123 mph Wind with No Ice	180.00	2.0957	-1.0904	0.1518	1.0997
1.2D + 1.0W 240° 123 mph Wind with No Ice	195.88	2.2135	-1.1562	0.4081	1.2261
1.2D + 1.0W 240° 123 mph Wind with No Ice	204.12	2.2619	-1.2254	0.2694	1.2527
1.2D + 1.0W 240° 123 mph Wind with No Ice	215.88	2.3047	-1.3682	0.1503	1.3754
1.2D + 1.0W 240° 123 mph Wind with No Ice	228.04	2.3155	-1.5251	0.0736	1.5254
1.2D + 1.0W 240° 123 mph Wind with No Ice	231.96	2.3108	-1.5571	0.1238	1.5604
1.2D + 1.0W 240° 123 mph Wind with No Ice	235.88	2.3027	-1.5805	0.1228	1.5841
1.2D + 1.0W 240° 123 mph Wind with No Ice	244.12	2.2767	-1.6225	0.0718	1.6241
1.2D + 1.0W 240° 123 mph Wind with No Ice	264.12	2.2681	-1.8435	0.0980	1.8456
1.2D + 1.0W 240° 123 mph Wind with No Ice	268.04	2.2625	-1.8591	0.0856	1.861
1.2D + 1.0W 240° 123 mph Wind with No Ice	271.96	2.256	-1.8724	0.1196	1.8755
1.2D + 1.0W 240° 123 mph Wind with No Ice	279.80	2.2397	-1.8995	0.1842	1.9071
1.2D + 1.0W 240° 123 mph Wind with No Ice	288.04	2.218	-1.9213	0.1669	1.9286
1.2D + 1.0W 240° 123 mph Wind with No Ice	299.80	2.189	-1.9591	0.1365	1.9608
1.2D + 1.0W 240° 123 mph Wind with No Ice	300.00	2.1888	-1.9591	0.0533	1.9598
1.2D + 1.0W 210° 123 mph Wind with No Ice	80.00	0.8255	-0.4107	0.7681	0.8698
1.2D + 1.0W 210° 123 mph Wind with No Ice	84.12	0.8731	-0.4106	0.6216	0.745
1.2D + 1.0W 210° 123 mph Wind with No Ice	88.04	0.915	-0.4289	0.5917	0.7308
1.2D + 1.0W 210° 123 mph Wind with No Ice	104.12	1.0584	-0.4443	0.4663	0.6441
1.2D + 1.0W 210° 123 mph Wind with No Ice	108.04	1.0886	-0.4651	0.4396	0.64
1.2D + 1.0W 210° 123 mph Wind with No Ice	115.88	1.1456	-0.4980	0.4500	0.6709
1.2D + 1.0W 210° 123 mph Wind with No Ice	119.80	1.173	-0.5108	0.2880	0.5864
1.2D + 1.0W 210° 123 mph Wind with No Ice	124.12	1.2018	-0.5185	0.5853	0.7813
1.2D + 1.0W 210° 123 mph Wind with No Ice	128.04	1.2504	-0.4966	0.7711	0.9139
1.2D + 1.0W 210° 123 mph Wind with No Ice	131.96	1.2999	-0.4688	0.7199	0.8591
1.2D + 1.0W 210° 123 mph Wind with No Ice	160.00	1.6202	-0.2599	0.5911	0.6449
1.2D + 1.0W 210° 123 mph Wind with No Ice	168.04	1.688	-0.2457	0.4137	0.4812
1.2D + 1.0W 210° 123 mph Wind with No Ice	180.00	1.7524	-0.2557	0.1547	0.2988
1.2D + 1.0W 210° 123 mph Wind with No Ice	195.88	1.8519	-0.2418	0.3513	0.4247
1.2D + 1.0W 210° 123 mph Wind with No Ice	204.12	1.8901	-0.2195	0.2164	0.3074
1.2D + 1.0W 210° 123 mph Wind with No Ice	215.88	1.9214	-0.2306	0.1031	0.2522

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W 210° 123 mph Wind with No Ice	228.04	1.9265	-0.3039	0.0806	0.3135
1.2D + 1.0W 210° 123 mph Wind with No Ice	231.96	1.9212	-0.3426	0.1460	0.3698
1.2D + 1.0W 210° 123 mph Wind with No Ice	235.88	1.9133	-0.3828	0.1427	0.405
1.2D + 1.0W 210° 123 mph Wind with No Ice	244.12	1.8881	-0.4605	0.0730	0.4662
1.2D + 1.0W 210° 123 mph Wind with No Ice	264.12	1.8773	-0.6474	0.1035	0.6548
1.2D + 1.0W 210° 123 mph Wind with No Ice	268.04	1.8717	-0.6562	0.0968	0.6633
1.2D + 1.0W 210° 123 mph Wind with No Ice	271.96	1.8652	-0.6637	0.1198	0.6737
1.2D + 1.0W 210° 123 mph Wind with No Ice	279.80	1.8496	-0.6791	0.1714	0.6994
1.2D + 1.0W 210° 123 mph Wind with No Ice	288.04	1.8291	-0.6934	0.1609	0.7119
1.2D + 1.0W 210° 123 mph Wind with No Ice	299.80	1.8016	-0.7159	0.1371	0.7267
1.2D + 1.0W 210° 123 mph Wind with No Ice	300.00	1.8015	-0.7159	0.0821	0.7205
1.2D + 1.0W 180° 123 mph Wind with No Ice	80.00	0.5342	0.1955	0.5084	0.5427
1.2D + 1.0W 180° 123 mph Wind with No Ice	84.12	0.5647	0.1966	0.3693	0.4172
1.2D + 1.0W 180° 123 mph Wind with No Ice	88.04	0.5822	0.1968	0.3442	0.3965
1.2D + 1.0W 180° 123 mph Wind with No Ice	104.12	0.6659	0.2115	0.2324	0.3104
1.2D + 1.0W 180° 123 mph Wind with No Ice	108.04	0.6742	0.2082	0.2064	0.2932
1.2D + 1.0W 180° 123 mph Wind with No Ice	115.88	0.7066	0.2211	0.2338	0.3171
1.2D + 1.0W 180° 123 mph Wind with No Ice	119.80	0.7132	0.2195	0.0330	0.2219
1.2D + 1.0W 180° 123 mph Wind with No Ice	124.12	0.7345	0.2506	0.3833	0.4576
1.2D + 1.0W 180° 123 mph Wind with No Ice	128.04	0.768	0.2650	0.5336	0.5925
1.2D + 1.0W 180° 123 mph Wind with No Ice	131.96	0.797	0.2644	0.5225	0.5855
1.2D + 1.0W 180° 123 mph Wind with No Ice	160.00	1.0458	0.3137	0.4322	0.532
1.2D + 1.0W 180° 123 mph Wind with No Ice	168.04	1.0961	0.3272	0.2813	0.4298
1.2D + 1.0W 180° 123 mph Wind with No Ice	180.00	1.1338	0.3475	0.0456	0.3505
1.2D + 1.0W 180° 123 mph Wind with No Ice	195.88	1.2159	0.3914	0.3114	0.4945
1.2D + 1.0W 180° 123 mph Wind with No Ice	204.12	1.2549	0.4417	0.1950	0.4811
1.2D + 1.0W 180° 123 mph Wind with No Ice	215.88	1.286	0.4647	0.1153	0.4788
1.2D + 1.0W 180° 123 mph Wind with No Ice	228.04	1.2915	0.4680	0.0322	0.4689
1.2D + 1.0W 180° 123 mph Wind with No Ice	231.96	1.288	0.4644	0.0733	0.4693
1.2D + 1.0W 180° 123 mph Wind with No Ice	235.88	1.2823	0.4597	0.0633	0.4634
1.2D + 1.0W 180° 123 mph Wind with No Ice	244.12	1.2506	0.4433	0.0222	0.4439
1.2D + 1.0W 180° 123 mph Wind with No Ice	264.12	1.2731	0.4447	0.0125	0.4448
1.2D + 1.0W 180° 123 mph Wind with No Ice	268.04	1.2599	0.4445	0.0170	0.4449
1.2D + 1.0W 180° 123 mph Wind with No Ice	271.96	1.2746	0.4453	0.0103	0.4454
1.2D + 1.0W 180° 123 mph Wind with No Ice	279.80	1.2734	0.4451	0.0410	0.4469
1.2D + 1.0W 180° 123 mph Wind with No Ice	288.04	1.2544	0.4412	0.0465	0.4437
1.2D + 1.0W 180° 123 mph Wind with No Ice	299.80	1.2631	0.4402	0.0458	0.4423
1.2D + 1.0W 180° 123 mph Wind with No Ice	300.00	1.2494	0.4399	0.0529	0.4431
1.2D + 1.0W 120° 123 mph Wind with No Ice	80.00	0.9849	1.4990	0.8693	1.7328
1.2D + 1.0W 120° 123 mph Wind with No Ice	84.12	1.0415	1.5621	0.7390	1.7281
1.2D + 1.0W 120° 123 mph Wind with No Ice	88.04	1.0902	1.5855	0.6701	1.7213
1.2D + 1.0W 120° 123 mph Wind with No Ice	104.12	1.2461	1.3952	0.5420	1.4929
1.2D + 1.0W 120° 123 mph Wind with No Ice	108.04	1.2787	1.3503	0.4700	1.4297
1.2D + 1.0W 120° 123 mph Wind with No Ice	115.88	1.3401	1.2471	0.5294	1.3465
1.2D + 1.0W 120° 123 mph Wind with No Ice	119.80	1.3695	1.1965	0.2989	1.2333
1.2D + 1.0W 120° 123 mph Wind with No Ice	124.12	1.4023	1.1655	0.6699	1.3409
1.2D + 1.0W 120° 123 mph Wind with No Ice	128.04	1.4579	1.1698	0.8537	1.4482
1.2D + 1.0W 120° 123 mph Wind with No Ice	131.96	1.5148	1.1735	0.8262	1.4352
1.2D + 1.0W 120° 123 mph Wind with No Ice	160.00	1.8889	1.2524	0.6829	1.4265
1.2D + 1.0W 120° 123 mph Wind with No Ice	168.04	1.9683	1.3209	0.4912	1.4093
1.2D + 1.0W 120° 123 mph Wind with No Ice	180.00	2.0463	1.3344	0.1623	1.3443
1.2D + 1.0W 120° 123 mph Wind with No Ice	195.88	2.1731	1.5024	0.4596	1.5711
1.2D + 1.0W 120° 123 mph Wind with No Ice	204.12	2.2269	1.6321	0.2941	1.6553
1.2D + 1.0W 120° 123 mph Wind with No Ice	215.88	2.2755	1.7967	0.1823	1.804
1.2D + 1.0W 120° 123 mph Wind with No Ice	228.04	2.2923	1.9499	0.0457	1.95
1.2D + 1.0W 120° 123 mph Wind with No Ice	231.96	2.2894	1.9760	0.0899	1.9774
1.2D + 1.0W 120° 123 mph Wind with No Ice	235.88	2.2833	1.9929	0.0904	1.9944
1.2D + 1.0W 120° 123 mph Wind with No Ice	244.12	2.2614	2.0210	0.0426	2.0214
1.2D + 1.0W 120° 123 mph Wind with No Ice	264.12	2.2648	2.2429	0.0645	2.2436

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W 120° 123 mph Wind with No Ice	268.04	2.2616	2.2585	0.0522	2.2591
1.2D + 1.0W 120° 123 mph Wind with No Ice	271.96	2.2575	2.2718	0.0850	2.2729
1.2D + 1.0W 120° 123 mph Wind with No Ice	279.80	2.2461	2.2983	0.1370	2.3016
1.2D + 1.0W 120° 123 mph Wind with No Ice	288.04	2.2295	2.3165	0.1325	2.3203
1.2D + 1.0W 120° 123 mph Wind with No Ice	299.80	2.2078	2.3527	0.1006	2.3529
1.2D + 1.0W 120° 123 mph Wind with No Ice	300.00	2.2077	2.3527	0.0205	2.3528
1.2D + 1.0W 90° 123 mph Wind with No Ice	80.00	0.8822	1.8927	0.7922	2.0512
1.2D + 1.0W 90° 123 mph Wind with No Ice	84.12	0.9327	1.9464	0.6402	2.0473
1.2D + 1.0W 90° 123 mph Wind with No Ice	88.04	0.9742	1.9430	0.5700	2.0249
1.2D + 1.0W 90° 123 mph Wind with No Ice	104.12	1.1125	1.8135	0.4754	1.8739
1.2D + 1.0W 90° 123 mph Wind with No Ice	108.04	1.1403	1.7675	0.4071	1.8137
1.2D + 1.0W 90° 123 mph Wind with No Ice	115.88	1.1921	1.6598	0.4703	1.7228
1.2D + 1.0W 90° 123 mph Wind with No Ice	119.80	1.2169	1.5994	0.2598	1.6204
1.2D + 1.0W 90° 123 mph Wind with No Ice	124.12	1.2436	1.5372	0.6001	1.644
1.2D + 1.0W 90° 123 mph Wind with No Ice	128.04	1.294	1.5605	0.7866	1.7461
1.2D + 1.0W 90° 123 mph Wind with No Ice	131.96	1.3465	1.5893	0.7637	1.7632
1.2D + 1.0W 90° 123 mph Wind with No Ice	160.00	1.6894	1.8006	0.6080	1.9005
1.2D + 1.0W 90° 123 mph Wind with No Ice	168.04	1.7606	1.8166	0.4296	1.8667
1.2D + 1.0W 90° 123 mph Wind with No Ice	180.00	1.8264	1.7887	0.1754	1.7933
1.2D + 1.0W 90° 123 mph Wind with No Ice	195.88	1.9384	1.9539	0.4161	1.9977
1.2D + 1.0W 90° 123 mph Wind with No Ice	204.12	1.987	2.0961	0.2663	2.1079
1.2D + 1.0W 90° 123 mph Wind with No Ice	215.88	2.0303	2.2611	0.1430	2.2656
1.2D + 1.0W 90° 123 mph Wind with No Ice	228.04	2.0411	2.4061	0.0660	2.4066
1.2D + 1.0W 90° 123 mph Wind with No Ice	231.96	2.0379	2.4445	0.0991	2.4465
1.2D + 1.0W 90° 123 mph Wind with No Ice	235.88	2.0323	2.4745	0.0942	2.476
1.2D + 1.0W 90° 123 mph Wind with No Ice	244.12	2.0088	2.4898	0.0746	2.4909
1.2D + 1.0W 90° 123 mph Wind with No Ice	264.12	1.9983	2.5855	0.0865	2.5866
1.2D + 1.0W 90° 123 mph Wind with No Ice	268.04	1.9947	2.6038	0.0729	2.6048
1.2D + 1.0W 90° 123 mph Wind with No Ice	271.96	1.9902	2.6197	0.1027	2.6212
1.2D + 1.0W 90° 123 mph Wind with No Ice	279.80	1.9785	2.6518	0.1426	2.6546
1.2D + 1.0W 90° 123 mph Wind with No Ice	288.04	1.9619	2.6764	0.1361	2.6799
1.2D + 1.0W 90° 123 mph Wind with No Ice	299.80	1.9401	2.7190	0.1153	2.7197
1.2D + 1.0W 90° 123 mph Wind with No Ice	300.00	1.9401	2.7190	0.0599	2.7197
1.2D + 1.0W 60° 123 mph Wind with No Ice	80.00	0.6011	1.7342	0.5435	1.8123
1.2D + 1.0W 60° 123 mph Wind with No Ice	84.12	0.6334	1.7538	0.3867	1.7947
1.2D + 1.0W 60° 123 mph Wind with No Ice	88.04	0.6585	1.7550	0.3573	1.791
1.2D + 1.0W 60° 123 mph Wind with No Ice	104.12	0.7379	1.6968	0.2463	1.7141
1.2D + 1.0W 60° 123 mph Wind with No Ice	108.04	0.7527	1.6733	0.2088	1.6862
1.2D + 1.0W 60° 123 mph Wind with No Ice	115.88	0.7793	1.6485	0.2466	1.6666
1.2D + 1.0W 60° 123 mph Wind with No Ice	119.80	0.7922	1.6108	0.0403	1.6113
1.2D + 1.0W 60° 123 mph Wind with No Ice	124.12	0.8044	1.5536	0.4011	1.6036
1.2D + 1.0W 60° 123 mph Wind with No Ice	128.04	0.8375	1.5386	0.5466	1.6329
1.2D + 1.0W 60° 123 mph Wind with No Ice	131.96	0.8745	1.5217	0.5431	1.6157
1.2D + 1.0W 60° 123 mph Wind with No Ice	160.00	1.1201	1.5403	0.4374	1.6011
1.2D + 1.0W 60° 123 mph Wind with No Ice	168.04	1.1712	1.5400	0.2895	1.5665
1.2D + 1.0W 60° 123 mph Wind with No Ice	180.00	1.2092	1.5270	0.0404	1.5272
1.2D + 1.0W 60° 123 mph Wind with No Ice	195.88	1.2933	1.5962	0.3202	1.6244
1.2D + 1.0W 60° 123 mph Wind with No Ice	204.12	1.3337	1.6779	0.2188	1.6899
1.2D + 1.0W 60° 123 mph Wind with No Ice	215.88	1.368	1.7473	0.1132	1.751
1.2D + 1.0W 60° 123 mph Wind with No Ice	228.04	1.3801	1.8684	0.0415	1.8688
1.2D + 1.0W 60° 123 mph Wind with No Ice	231.96	1.3776	1.8973	0.0800	1.899
1.2D + 1.0W 60° 123 mph Wind with No Ice	235.88	1.3727	1.9176	0.0663	1.9188
1.2D + 1.0W 60° 123 mph Wind with No Ice	244.12	1.3568	1.9495	0.0127	1.9495
1.2D + 1.0W 60° 123 mph Wind with No Ice	264.12	1.3771	2.1743	0.0108	2.1743
1.2D + 1.0W 60° 123 mph Wind with No Ice	268.04	1.3783	2.1891	0.0182	2.1892
1.2D + 1.0W 60° 123 mph Wind with No Ice	271.96	1.3789	2.2016	0.0126	2.2016
1.2D + 1.0W 60° 123 mph Wind with No Ice	279.80	1.378	2.2267	0.0542	2.2269
1.2D + 1.0W 60° 123 mph Wind with No Ice	288.04	1.3734	2.2473	0.0443	2.2477
1.2D + 1.0W 60° 123 mph Wind with No Ice	299.80	1.3687	2.2828	0.0553	2.2835

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W 60° 123 mph Wind with No Ice	300.00	1.3689	2.2828	0.0625	2.2837
1.2D + 1.0W Normal 123 mph Wind with No Ice	80.00	0.9965	-0.1658	0.9004	0.9151
1.2D + 1.0W Normal 123 mph Wind with No Ice	84.12	1.0519	-0.1338	0.7657	0.7773
1.2D + 1.0W Normal 123 mph Wind with No Ice	88.04	1.0977	-0.1087	0.7165	0.7247
1.2D + 1.0W Normal 123 mph Wind with No Ice	104.12	1.2729	-0.0539	0.5595	0.5613
1.2D + 1.0W Normal 123 mph Wind with No Ice	108.04	1.3069	-0.0480	0.5255	0.5277
1.2D + 1.0W Normal 123 mph Wind with No Ice	115.88	1.379	-0.0606	0.5458	0.5484
1.2D + 1.0W Normal 123 mph Wind with No Ice	119.80	1.4096	-0.0565	0.3206	0.3255
1.2D + 1.0W Normal 123 mph Wind with No Ice	124.12	1.4479	-0.0675	0.6914	0.694
1.2D + 1.0W Normal 123 mph Wind with No Ice	128.04	1.505	-0.0744	0.8717	0.8749
1.2D + 1.0W Normal 123 mph Wind with No Ice	131.96	1.5592	-0.0703	0.8419	0.8448
1.2D + 1.0W Normal 123 mph Wind with No Ice	160.00	1.9416	-0.1795	0.6818	0.7051
1.2D + 1.0W Normal 123 mph Wind with No Ice	168.04	2.0207	-0.2569	0.5003	0.5624
1.2D + 1.0W Normal 123 mph Wind with No Ice	180.00	2.0985	-0.3088	0.1556	0.3458
1.2D + 1.0W Normal 123 mph Wind with No Ice	195.88	2.2161	-0.3495	0.4056	0.5354
1.2D + 1.0W Normal 123 mph Wind with No Ice	204.12	2.2629	-0.3632	0.2453	0.4383
1.2D + 1.0W Normal 123 mph Wind with No Ice	215.88	2.3016	-0.3809	0.1280	0.4018
1.2D + 1.0W Normal 123 mph Wind with No Ice	228.04	2.3084	-0.3843	0.0608	0.389
1.2D + 1.0W Normal 123 mph Wind with No Ice	231.96	2.3026	-0.3800	0.1103	0.3957
1.2D + 1.0W Normal 123 mph Wind with No Ice	235.88	2.2939	-0.3746	0.1125	0.3911
1.2D + 1.0W Normal 123 mph Wind with No Ice	244.12	2.2544	-0.3545	0.0779	0.363
1.2D + 1.0W Normal 123 mph Wind with No Ice	264.12	2.2466	-0.3555	0.0931	0.3672
1.2D + 1.0W Normal 123 mph Wind with No Ice	268.04	2.2284	-0.3549	0.0921	0.3667
1.2D + 1.0W Normal 123 mph Wind with No Ice	271.96	2.2339	-0.3558	0.1112	0.3727
1.2D + 1.0W Normal 123 mph Wind with No Ice	279.80	2.2173	-0.3553	0.1721	0.3942
1.2D + 1.0W Normal 123 mph Wind with No Ice	288.04	2.1831	-0.3513	0.1652	0.3881
1.2D + 1.0W Normal 123 mph Wind with No Ice	299.80	2.1659	-0.3500	0.1338	0.374
1.2D + 1.0W Normal 123 mph Wind with No Ice	300.00	2.1534	-0.3495	0.0680	0.356

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX* (kip)	FY* (kip)	FZ* (kip)
					*(-) Uplift and (+) Down		
1.2D + 1.0W Normal	0.00	0.00		1	0.00	191.06	-1.71
	190.00	7.00	0	A1	0.00	-2.69	2.06
	190.00	3.00	240	A1a	-68.05	-65.10	-41.63
	201.00	-8.00	120	A1b	68.02	-65.73	-41.64
1.2D + 1.0W 60°	0.00	0.00		1	-2.52	152.12	-1.52
	190.00	7.00	0	A1	-1.48	-11.26	12.22
	190.00	3.00	240	A1a	-76.48	-72.60	-44.17
	201.00	-8.00	120	A1b	9.74	-11.56	-7.39
1.2D + 1.0W 90°	0.00	0.00		1	-2.19	176.47	-0.59
	190.00	7.00	0	A1	-2.13	-39.16	48.46
	190.00	3.00	240	A1a	-80.72	-75.57	-45.30
	201.00	-8.00	120	A1b	3.10	-4.68	-2.61
1.2D + 1.0W 120°	0.00	0.00		1	-1.57	189.08	0.97
	190.00	7.00	0	A1	-2.02	-63.51	79.75
	190.00	3.00	240	A1a	-70.10	-65.20	-38.19
	201.00	-8.00	120	A1b	1.91	-2.95	-1.10
1.2D + 1.0W 180°	0.00	0.00		1	0.04	150.91	2.99
	190.00	7.00	0	A1	-0.02	-70.86	88.38
	190.00	3.00	240	A1a	-11.41	-11.67	-4.87
	201.00	-8.00	120	A1b	11.42	-11.70	-4.82
1.2D + 1.0W 210°	0.00	0.00		1	0.58	175.39	2.26
	190.00	7.00	0	A1	1.18	-73.45	92.28
	190.00	3.00	240	A1a	-3.60	-4.48	-1.28
	201.00	-8.00	120	A1b	42.83	-40.37	-22.24
1.2D + 1.0W 240°	0.00	0.00		1	1.48	189.59	0.99
	190.00	7.00	0	A1	2.04	-63.46	79.68
	190.00	3.00	240	A1a	-1.80	-2.83	-1.04
	201.00	-8.00	120	A1b	70.10	-65.78	-38.15
1.2D + 1.0W 300°	0.00	0.00		1	2.51	151.38	-1.48
	190.00	7.00	0	A1	1.48	-10.78	11.57
	190.00	3.00	240	A1a	-9.22	-11.05	-7.03
	201.00	-8.00	120	A1b	75.92	-72.75	-43.87
1.2D + 1.0W 330°	0.00	0.00		1	1.57	177.29	-1.52
	190.00	7.00	0	A1	0.68	-4.23	3.63
	190.00	3.00	240	A1a	-40.61	-39.90	-25.89
	201.00	-8.00	120	A1b	79.30	-75.99	-47.17
1.2D + 1.0Di + 1.0Wi Normal	0.00	0.00		1	-0.01	221.02	-0.33
	190.00	7.00	0	A1	0.00	-9.15	15.01
	190.00	3.00	240	A1a	-33.82	-30.06	-20.81
	201.00	-8.00	120	A1b	33.81	-30.22	-20.85
1.2D + 1.0Di + 1.0Wi 60°	0.00	0.00		1	-0.39	222.06	-0.22
	190.00	7.00	0	A1	-1.09	-16.47	23.33
	190.00	3.00	240	A1a	-41.48	-37.50	-23.95
	201.00	-8.00	120	A1b	19.64	-17.10	-12.63
1.2D + 1.0Di + 1.0Wi 90°	0.00	0.00		1	-0.37	221.79	-0.05
	190.00	7.00	0	A1	-1.36	-23.01	31.77
	190.00	3.00	240	A1a	-40.08	-35.56	-22.51
	201.00	-8.00	120	A1b	14.91	-11.99	-9.23
1.2D + 1.0Di + 1.0Wi 120°	0.00	0.00		1	-0.27	221.31	0.15
	190.00	7.00	0	A1	-1.12	-29.50	40.19
	190.00	3.00	240	A1a	-35.36	-30.38	-19.14
	201.00	-8.00	120	A1b	13.42	-9.93	-7.74
1.2D + 1.0Di + 1.0Wi 180°	0.00	0.00		1	0.04	221.75	0.48
	190.00	7.00	0	A1	-0.01	-36.54	47.93
	190.00	3.00	240	A1a	-20.83	-17.08	-10.77
	201.00	-8.00	120	A1b	20.82	-17.17	-10.72
1.2D + 1.0Di + 1.0Wi 210°	0.00	0.00		1	0.18	221.18	0.41
	190.00	7.00	0	A1	0.54	-34.44	45.68
	190.00	3.00	240	A1a	-15.26	-11.77	-8.20

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX* (kip)	FY* (kip)	FZ* (kip)
					*(-) Uplift and (+) Down		
1.2D + 1.0Di + 1.0Wi 240°	201.00	-8.00	120	A1b	28.00	-23.70	-14.56
	0.00	0.00		1	0.28	220.56	0.18
	190.00	7.00	0	A1	1.11	-29.21	39.71
	190.00	3.00	240	A1a	-13.01	-9.54	-7.51
	201.00	-8.00	120	A1b	34.99	-30.24	-18.88
1.2D + 1.0Di + 1.0Wi 300°	0.00	0.00		1	0.42	221.14	-0.19
	190.00	7.00	0	A1	1.08	-16.13	22.85
	190.00	3.00	240	A1a	-19.28	-16.65	-12.38
	201.00	-8.00	120	A1b	41.05	-37.30	-23.71
1.2D + 1.0Di + 1.0Wi 330°	0.00	0.00		1	0.21	221.05	-0.30
	190.00	7.00	0	A1	0.52	-11.10	16.97
	190.00	3.00	240	A1a	-26.34	-23.31	-16.76
	201.00	-8.00	120	A1b	39.04	-35.32	-23.20
1.2D + 1.0Ev + 1.0Eh Normal	0.00	0.00		1	0.01	101.81	0.03
	190.00	7.00	0	A1	0.00	-12.91	17.49
	190.00	3.00	240	A1a	-16.58	-14.91	-9.57
	201.00	-8.00	120	A1b	16.57	-15.07	-9.57
1.2D + 1.0Ev + 1.0Eh 60°	0.00	0.00		1	0.04	101.88	0.01
	190.00	7.00	0	A1	0.00	-13.47	18.07
	190.00	3.00	240	A1a	-17.08	-15.48	-9.86
	201.00	-8.00	120	A1b	15.65	-14.01	-9.04
1.2D + 1.0Ev + 1.0Eh 90°	0.00	0.00		1	0.05	101.92	-0.01
	190.00	7.00	0	A1	0.00	-14.02	18.64
	190.00	3.00	240	A1a	-16.99	-15.37	-9.81
	201.00	-8.00	120	A1b	15.30	-13.60	-8.83
1.2D + 1.0Ev + 1.0Eh 120°	0.00	0.00		1	0.04	101.93	-0.03
	190.00	7.00	0	A1	0.00	-14.56	19.20
	190.00	3.00	240	A1a	-16.62	-14.95	-9.59
	201.00	-8.00	120	A1b	15.20	-13.49	-8.77
1.2D + 1.0Ev + 1.0Eh 180°	0.00	0.00		1	0.01	101.89	-0.04
	190.00	7.00	0	A1	0.00	-15.10	19.75
	190.00	3.00	240	A1a	-15.66	-13.85	-9.04
	201.00	-8.00	120	A1b	15.66	-14.02	-9.04
1.2D + 1.0Ev + 1.0Eh 210°	0.00	0.00		1	-0.01	101.85	-0.04
	190.00	7.00	0	A1	0.00	-14.94	19.59
	190.00	3.00	240	A1a	-15.30	-13.44	-8.83
	201.00	-8.00	120	A1b	16.12	-14.55	-9.31
1.2D + 1.0Ev + 1.0Eh 240°	0.00	0.00		1	-0.02	101.82	-0.02
	190.00	7.00	0	A1	0.00	-14.51	19.15
	190.00	3.00	240	A1a	-15.18	-13.32	-8.76
	201.00	-8.00	120	A1b	16.57	-15.06	-9.57
1.2D + 1.0Ev + 1.0Eh 300°	0.00	0.00		1	-0.02	101.78	0.01
	190.00	7.00	0	A1	0.00	-13.46	18.05
	190.00	3.00	240	A1a	-15.62	-13.82	-9.02
	201.00	-8.00	120	A1b	17.02	-15.57	-9.83
1.2D + 1.0Ev + 1.0Eh 330°	0.00	0.00		1	-0.01	101.79	0.02
	190.00	7.00	0	A1	0.00	-13.05	17.63
	190.00	3.00	240	A1a	-16.09	-14.35	-9.29
	201.00	-8.00	120	A1b	16.92	-15.46	-9.77
1.0D + 1.0W Service Normal	0.00	0.00		1	0.01	94.92	-0.80
	190.00	7.00	0	A1	0.00	-5.47	7.78
	190.00	3.00	240	A1a	-22.41	-20.42	-13.35
	201.00	-8.00	120	A1b	22.39	-20.63	-13.36
1.0D + 1.0W Service 60°	0.00	0.00		1	-0.72	94.97	-0.43
	190.00	7.00	0	A1	-0.35	-10.51	13.90
	190.00	3.00	240	A1a	-27.61	-25.33	-15.94
	201.00	-8.00	120	A1b	11.85	-10.93	-7.26
1.0D + 1.0W Service 90°	0.00	0.00		1	-0.82	95.10	-0.02
	190.00	7.00	0	A1	-0.44	-15.29	20.16

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX* (kip)	FY* (kip)	FZ* (kip)
					*(-) Uplift and (+) Down		
1.0D + 1.0W Service 120°	190.00	3.00	240	A1a	-26.57	-24.14	-15.14
	201.00	-8.00	120	A1b	8.32	-7.39	-5.00
	0.00	0.00		1	-0.69	95.21	0.41
	190.00	7.00	0	A1	-0.36	-20.13	26.50
	190.00	3.00	240	A1a	-23.13	-20.70	-12.94
	201.00	-8.00	120	A1b	7.11	-6.01	-4.10
1.0D + 1.0W Service 180°	0.00	0.00		1	0.01	94.84	0.85
	190.00	7.00	0	A1	0.00	-24.73	31.96
	190.00	3.00	240	A1a	-12.29	-10.90	-6.70
	201.00	-8.00	120	A1b	12.29	-11.01	-6.68
1.0D + 1.0W Service 210°	0.00	0.00		1	0.41	94.71	0.73
	190.00	7.00	0	A1	0.18	-23.40	30.39
	190.00	3.00	240	A1a	-8.35	-7.22	-4.63
	201.00	-8.00	120	A1b	17.52	-15.79	-9.60
1.0D + 1.0W Service 240°	0.00	0.00		1	0.71	94.75	0.40
	190.00	7.00	0	A1	0.36	-19.93	26.16
	190.00	3.00	240	A1a	-6.81	-5.73	-3.93
	201.00	-8.00	120	A1b	22.83	-20.70	-12.76
1.0D + 1.0W Service 300°	0.00	0.00		1	0.74	94.41	-0.42
	190.00	7.00	0	A1	0.35	-10.28	13.55
	190.00	3.00	240	A1a	-11.56	-10.58	-7.07
	201.00	-8.00	120	A1b	27.29	-25.33	-15.76
1.0D + 1.0W Service 330°	0.00	0.00		1	0.44	94.57	-0.70
	190.00	7.00	0	A1	0.17	-6.79	9.25
	190.00	3.00	240	A1a	-16.84	-15.41	-10.22
	201.00	-8.00	120	A1b	25.98	-24.05	-15.21

MAXIMUM GUY ANCHOR REACTIONS

Radius (ft)	Drop (ft)	Azimuth (deg)	Uplift (kip)	Shear (kip)
190.00	7.00	0	73.45	92.29
190.00	3.00	240	75.57	92.56
201.00	-8.00	120	75.99	92.27

MAXIMUM REACTIONS SUMMARY

Base / Anchor Group	Vertical Load *(Compression for Base; Uplift for Anchor)*	Horizontal Shear
Base	222.06 (kip)	2.99 (kip)
A1	75.99 (kip)	92.56 (kip)

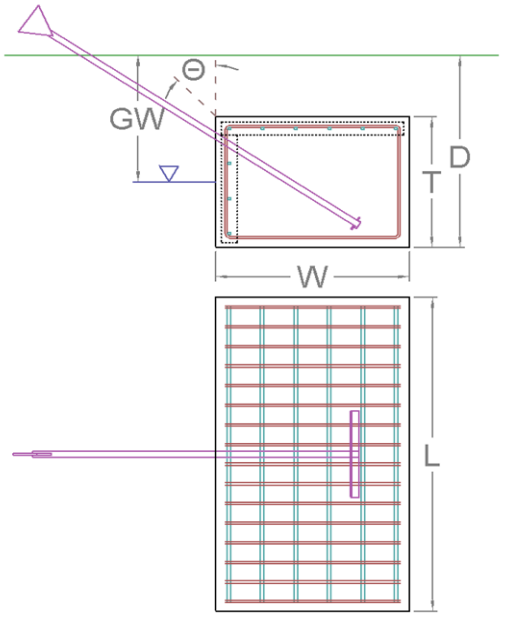
GUY ANCHOR BLOCK FOUNDATION ANALYSIS (NODE A1 @ r = 190 ft)

APPLIED REACTIONS

Uplift (k)	Shear (k)
73.45	92.29

FOUNDATION PARAMETERS

Base Depth:	D	7	ft
Block Width:	W	3	ft
Block Length:	L	22	ft
Block Thickness:	T	2.5	ft
Concrete Compressive Strength:		3,000	psi
Top Rebar Quantity, Size, & Yield:		(6) #7 bars [60 ksi]	
Side Rebar Quantity, Size, & Yield:		(5) #7 bars [60 ksi]	



SOIL PARAMETERS

Water Table Depth [BGL]:	GW	6	ft
Soil Unit Weight:		122	pcf
Friction Angle:		33	°
Cohesion:		0	psf
Ultimate Skin Friction		700	psf
Coefficient of Shear Friction:		0.3	
Uplift Pullout Angle:	θ	30	°
Uplift at ____ of Anchor:		Base	

SOIL STRENGTH ANALYSIS

Uplift Strength Reduction Factor, Φ_u	Shear Strength Reduction Factor, Φ_v	Dead Load Factor
0.75	0.75	0.9

SOIL UPLIFT ANALYSIS

Uplift Resistance from Skin Friction and Soil Shear (k)	Additional Uplift Resistance (k)	Uplift Capacity, ΦT_n (k)	Soil Uplift Usage, T_u / ΦT_n	
45.04	0	126.16	58.2%	✓

SOIL SHEAR ANALYSIS

Skin Friction Resistance (k)	Normal Force Resistance (k)	Passive Pressure (psf)	Passive Pressure Resistance (k)	Additional Shear Resistance (k)	Shear Capacity, ΦV_n (k)	Soil Shear Usage, V_u / ΦV_n	
8.22	0.00	2,379.57	130.88	0	104.32	88.5%	✓

REINFORCING STEEL STRENGTH ANALYSIS			
Strength Shear Reduction Factor, Φ_V	Strength Reduction Factor for Lateral Flexure, Φ_{BV}	Strength Reduction Factor for Vertical Flexure, Φ_{BT}	Compression Zone Factor, β_1
0.75	0.9	0.9	0.65

REINFORCING ONE WAY SHEAR ANALYSIS - SHEAR		
One Way Shear due to Shear, V_u (k)	One Way Shear Capacity due to Shear, $\Phi_c V_n$ (k)	Rebar One Way Shear Usage, $V_u / \Phi_c V_n$
40.55	79.03	51.3%

REINFORCING ONE WAY SHEAR ANALYSIS – UPLIFT		
One Way Shear due to Uplift, V_u (k)	One Way Shear Capacity due to Uplift, $\Phi_c V_n$ (k)	Rebar One Way Shear Usage, $V_u / \Phi_c V_n$
33.11	77.09	43.0%

REINFORCING FLEXURE ANALYSIS - SHEAR					
Flexure Load, M_{uv} (k-ft)	Distance to steel, d_v (in)	Whitney Block, a_v (in)	Strain in Rebar, ε_t (in/in)	Flexural Capacity, $\Phi_{bv} M_{nv}$ (k-ft)	Rebar Flexural Usage, $M_{uv} / \Phi_{bv} M_{nv}$
253.80	32.062	2.353	0.0317	416.96	60.9%

REINFORCING FLEXURE ANALYSIS – UPLIFT					
Flexure Load, M_{ut} (k-ft)	Depth to steel, d_t (in)	Whitney Block, a_t (in)	Strain in Rebar, ε_t (in/in)	Flexural Capacity, $\Phi_{bt} M_{nt}$ (k-ft)	Rebar Flexural Usage, $M_{ut} / \Phi_{bt} M_{nt}$
201.99	26.062	2.353	0.0252	403.15	50.1%

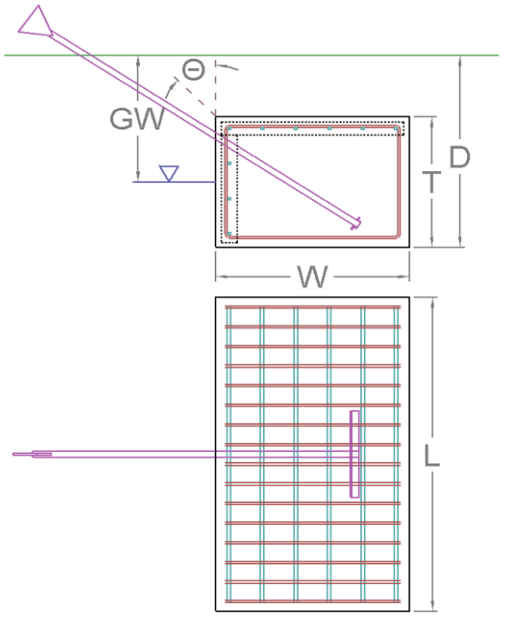
GUY ANCHOR BLOCK FOUNDATION ANALYSIS (NODE A1a @ r = 190 ft)

APPLIED REACTIONS

Uplift (k)	Shear (k)
75.57	92.56

FOUNDATION PARAMETERS

Base Depth:	D	7	ft
Block Width:	W	3	ft
Block Length:	L	22	ft
Block Thickness:	T	2.5	ft
Concrete Compressive Strength:		3,000	psi
Top Rebar Quantity, Size, & Yield:		(6) #7 bars [60 ksi]	
Side Rebar Quantity, Size, & Yield:		(5) #7 bars [60 ksi]	



SOIL PARAMETERS

Water Table Depth [BGL]:	GW	6	ft
Soil Unit Weight:		122	pcf
Friction Angle:		33	°
Cohesion:		0	psf
Ultimate Skin Friction		700	psf
Coefficient of Shear Friction:		0.3	
Uplift Pullout Angle:	θ	30	°
Uplift at ____ of Anchor:		Base	

SOIL STRENGTH ANALYSIS

Uplift Strength Reduction Factor, Φ_u	Shear Strength Reduction Factor, Φ_v	Dead Load Factor
0.75	0.75	0.9

SOIL UPLIFT ANALYSIS

Uplift Resistance from Skin Friction and Soil Shear (k)	Additional Uplift Resistance (k)	Uplift Capacity, ΦT_n (k)	Soil Uplift Usage, $T_u / \Phi T_n$	
45.14	0	126.16	59.9%	✓

SOIL SHEAR ANALYSIS

Skin Friction Resistance (k)	Normal Force Resistance (k)	Passive Pressure (psf)	Passive Pressure Resistance (k)	Additional Shear Resistance (k)	Shear Capacity, ΦV_n (k)	Soil Shear Usage, $V_u / \Phi V_n$	
8.13	0.00	2,379.57	130.88	0	104.26	88.8%	✓

REINFORCING STEEL STRENGTH ANALYSIS			
Strength Shear Reduction Factor, Φ_V	Strength Reduction Factor for Lateral Flexure, Φ_{BV}	Strength Reduction Factor for Vertical Flexure, Φ_{BT}	Compression Zone Factor, β_1
0.75	0.9	0.9	0.65

REINFORCING ONE WAY SHEAR ANALYSIS - SHEAR		
One Way Shear due to Shear, V_u (k)	One Way Shear Capacity due to Shear, $\Phi_c V_n$ (k)	Rebar One Way Shear Usage, $V_u / \Phi_c V_n$
40.67	79.03	51.5%

REINFORCING ONE WAY SHEAR ANALYSIS – UPLIFT		
One Way Shear due to Uplift, V_u (k)	One Way Shear Capacity due to Uplift, $\Phi_c V_n$ (k)	Rebar One Way Shear Usage, $V_u / \Phi_c V_n$
34.06	77.09	44.2%

REINFORCING FLEXURE ANALYSIS - SHEAR					
Flexure Load, M_{uv} (k-ft)	Distance to steel, d_v (in)	Whitney Block, a_v (in)	Strain in Rebar, ε_t (in/in)	Flexural Capacity, $\Phi_{bv} M_{nv}$ (k-ft)	Rebar Flexural Usage, $M_{uv} / \Phi_{bv} M_{nv}$
254.54	32.062	2.353	0.0317	416.96	61.0%

REINFORCING FLEXURE ANALYSIS – UPLIFT					
Flexure Load, M_{ut} (k-ft)	Depth to steel, d_t (in)	Whitney Block, a_t (in)	Strain in Rebar, ε_t (in/in)	Flexural Capacity, $\Phi_{bt} M_{nt}$ (k-ft)	Rebar Flexural Usage, $M_{ut} / \Phi_{bt} M_{nt}$
207.82	26.062	2.353	0.0252	403.15	51.5%

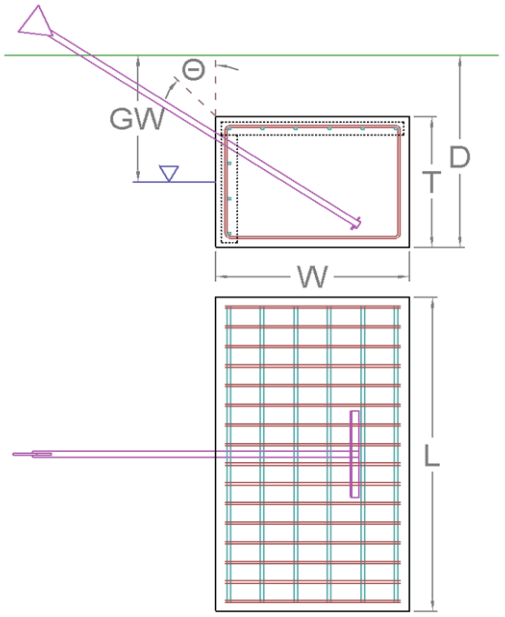
GUY ANCHOR BLOCK FOUNDATION ANALYSIS (NODE A1b @ r = 201 ft)

APPLIED REACTIONS

Uplift (k)	Shear (k)
75.99	92.27

FOUNDATION PARAMETERS

Base Depth:	D	7	ft
Block Width:	W	3	ft
Block Length:	L	22	ft
Block Thickness:	T	2.5	ft
Concrete Compressive Strength:		3,000	psi
Top Rebar Quantity, Size, & Yield:		(6) #7 bars [60 ksi]	
Side Rebar Quantity, Size, & Yield:		(5) #7 bars [60 ksi]	



SOIL PARAMETERS

Water Table Depth [BGL]:	GW	6	ft
Soil Unit Weight:		122	pcf
Friction Angle:		33	°
Cohesion:		0	psf
Ultimate Skin Friction		700	psf
Coefficient of Shear Friction:		0.3	
Uplift Pullout Angle:	θ	30	°
Uplift at ____ of Anchor:		Base	

SOIL STRENGTH ANALYSIS

Uplift Strength Reduction Factor, Φ_u	Shear Strength Reduction Factor, Φ_v	Dead Load Factor
0.75	0.75	0.9

SOIL UPLIFT ANALYSIS

Uplift Resistance from Skin Friction and Soil Shear (k)	Additional Uplift Resistance (k)	Uplift Capacity, ΦT_n (k)	Soil Uplift Usage, T_u / ΦT_n	
45.18	0	126.16	60.2%	✓

SOIL SHEAR ANALYSIS

Skin Friction Resistance (k)	Normal Force Resistance (k)	Passive Pressure (psf)	Passive Pressure Resistance (k)	Additional Shear Resistance (k)	Shear Capacity, ΦV_n (k)	Soil Shear Usage, V_u / ΦV_n	
8.11	0.00	2,379.57	130.88	0	104.24	88.5%	✓

REINFORCING STEEL STRENGTH ANALYSIS

Strength Shear Reduction Factor, Φ_V	Strength Reduction Factor for Lateral Flexure, Φ_{BV}	Strength Reduction Factor for Vertical Flexure, Φ_{BT}	Compression Zone Factor, β_1
0.75	0.9	0.9	0.65

REINFORCING ONE WAY SHEAR ANALYSIS - SHEAR

One Way Shear due to Shear, V_u (k)	One Way Shear Capacity due to Shear, $\Phi_c V_n$ (k)	Rebar One Way Shear Usage, V_u / $\Phi_c V_n$	
40.54	79.03	51.3%	✓

REINFORCING ONE WAY SHEAR ANALYSIS – UPLIFT

One Way Shear due to Uplift, V_u (k)	One Way Shear Capacity due to Uplift, $\Phi_c V_n$ (k)	Rebar One Way Shear Usage, $V_u / \Phi_c V_n$	
34.25	77.09	44.4%	✓

REINFORCING FLEXURE ANALYSIS - SHEAR

Flexure Load, M_{uv} (k-ft)	Distance to steel, d_v (in)	Whitney Block, a_v (in)	Strain in Rebar, ε_t (in/in)	Flexural Capacity, $\Phi_{bv} M_{nv}$ (k-ft)	Rebar Flexural Usage, $M_{uv} / \Phi_{bv} M_{nv}$	
253.74	32.062	2.353	0.0317	416.96	60.9%	✓

REINFORCING FLEXURE ANALYSIS – UPLIFT

Flexure Load, M_{ut} (k-ft)	Depth to steel, d_t (in)	Whitney Block, a_t (in)	Strain in Rebar, ε_t (in/in)	Flexural Capacity, $\Phi_{bt} M_{nt}$ (k-ft)	Rebar Flexural Usage, $M_{ut} / \Phi_{bt} M_{nt}$	
208.97	26.062	2.353	0.0252	403.15	51.8%	✓

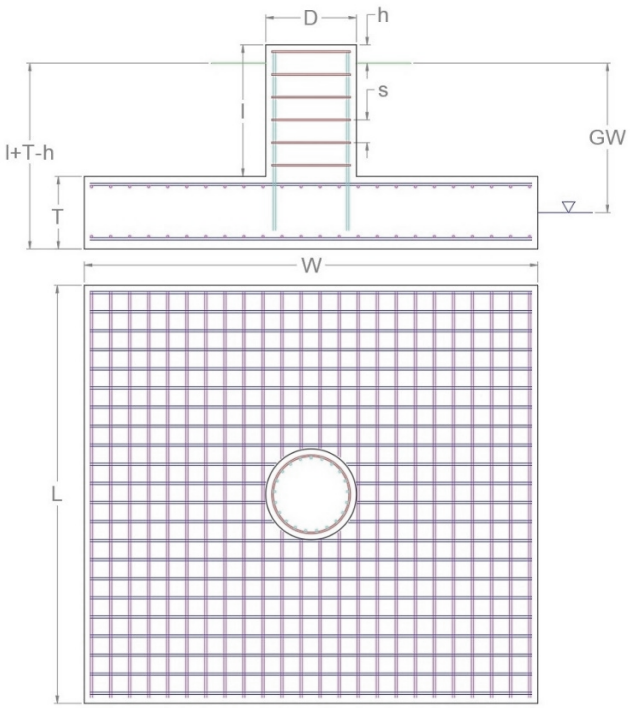
MAT & PIER FOUNDATION ANALYSIS (NODE 1)

APPLIED GLOBAL REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
0.00	222.06	0.45

FOUNDATION PARAMETERS

Mat Length:	L	5.5	ft
Mat Width:	W	5.5	ft
Mat Thickness:	T	1.25	ft
Base Depth:	L+T-h	4	ft
Pier Shape:		Square	
Pier Width:	D	2.5	ft
Pier Height above Grade:	h	0.5	ft
Concrete Compressive Strength:		3,000	psi
Mat Bottom Rebar:		(6) #6 bars [60 ksi]	
Pier Vertical Rebar:		(8) #5 bars [60 ksi]	
Pier Rebar Ties:	s	#5 bars @ 6.0" c/c [60 ksi]	
Rebar Clear Cover:		3.0	in
Tower Eccentricity:	ecc	0	ft
Tower Leg Count		1	



SOIL PARAMETERS

Water Table Depth [BGL]:	GW	6	ft
Soil Unit Weight:		105	pcf
Ultimate Skin Friction:		0	psf
Ultimate Bearing Pressure:		20,000	psf
Bearing Pressure Type:		Net	
Coefficient of Shear Friction:		0.3	

SOIL STRENGTH ANALYSIS

Soil Strength Reduction Factor, Φ_s	Uplift Strength Reduction Factor, Φ_s	Asset Dead Load Factor	Dead Load Factor
0.6	0.75	1.2	1.2

SOIL OVERTURNING ANALYSIS

Design Moment, $M_{u,Design}$ (k-ft)	Nominal Overturning Capacity, $\Phi_m M_n$ (k-ft)	Soil Overturning Usage, $M_{u,Design} / \Phi_m M_n$	
2.02	667.57	**0.3%**	✓

SOIL BEARING ANALYSIS

Net Bearing Pressure, $P_{u,Net}$ (psf)	Nominal Bearing Capacity, $\Phi_b P_n$ (k-ft)	Bearing Pressure Controlling Load Direction	Soil Bearing Usage, $P_{u,net} / \Phi_b P_n$	
7,982.00	12,252.00	Parallel to Pad Edge	**65.1%**	✓

SOIL SLIDING SHEAR ANALYSIS

Applied Shear Force, V_u (k)	Friction Resistance (k)	Passive Pressure (psf)	Passive Pressure Resistance (k)	Nominal Shear Capacity, $\Phi_s V_n$ (k)	Soil Sliding Shear Usage, $V_u / \Phi_s V_n$	
0.45	0.00	354.4	2.44	37.59	**1.0%**	✓

MAT REINFORCING STEEL STRENGTH ANALYSIS

Steel Elastic Modulus, E (ksi)	Strength Bending/Tension Reduction Factor, Φ_b	Strength Shear Reduction Factor, Φ_v	Strength Compression Reduction Factor, Φ_c
29,000	0.9	0.75	0.65

MAT REINFORCING ONE WAY SHEAR ANALYSIS

One Way Design Shear, V_u (k)	Nominal One Way Shear Capacity, $\Phi_c V_n$ (k)	One Way Shear Controlling Load Direction	Mat One Way Shear Usage, $V_u / \Phi_c V_n$	
20.17	37.75	Diagonal to Pad Edge	**53.4%**	✓

MAT REINFORCING PUNCHING SHEAR ANALYSIS

Punching Shear Design Stress, v_u (psi)	Nominal Punching Shear Capacity, $\Phi_c v_n$ (psi)	Mat Punching Shear Usage, $v_u / \Phi_c v_n$	
122.5	164.3	**74.5%**	✓

MAT REINFORCING MOMENT TRANSFER ANALYSIS

Moment Transfer Effective Flexural Width, w_f (in)	Neutral Axis Depth (in)	Pier Moment at Joint, M_{ut} (k-in)	Nominal Moment Transfer Capacity, $\Phi M_{sc,f}$ (k-in)	Mat Moment Transfer Usage, $0.6\ M_{ut} / \Phi M_{sc,f}$	
6.25	1.01	0.00	1,874.4	**0.0%**	✓

MAT REINFORCING FLEXURE ANALYSIS – LOWER STEEL

Factored Moment, M_u (k-ft)	Nominal Flexural Capacity, ΦM_n (k-ft)	Flexural Steel Controlling Load Direction	Mat Lower Rebar Flexure Usage, $M_u / \Phi M_n$	
48.00	128.90	Parallel to Pad Edge	**37.2%**	✓

PIER REINFORCING STEEL STRENGTH ANALYSIS

Rebar Cage Diameter (in)	Steel Elastic Modulus, E (ksi)	Strength Bending/Tension Reduction Factor, Φ_b	Strength Shear Reduction Factor, Φ_v	Strength Compression Reduction Factor, Φ_c
22.12	29,000	0.9	0.75	0.65

PIER REINFORCING MOMENT ANALYSIS

Design Moment, M_u (k-ft)	Nominal Moment Capacity, $\Phi_b M_n$ (k-ft)	Bending Reinforcement Ratio	Pier Rebar Flexure Usage, $M_u/\Phi_b M_n$	
1.46	122.94	0.003	**1.2%**	✓

PIER REINFORCING COMPRESSION ANALYSIS

Design Compression, P_u (k)	Nominal Compressive Capacity, $\Phi_p P_n$ (k)	Pier Rebar Compressive Usage, $P_u / \Phi_p P_n$	
222.06	1,199.78	**18.5%**	✓

PIER REINFORCING SHEAR ANALYSIS

Design Shear, V_u (k)	Nominal Shear Capacity, $\Phi_v V_n$ (k)	Pier Rebar Shear Usage, $V_u / \Phi_v V_n$	
0.45	194.66	**0.2%**	✓

EXHIBIT 4

Colliers Engineering & Design,
Architecture, Landscape Architecture, Surveying, CT P.C.
1055 Washington Boulevard
Stamford, CT 06901
203.324.0800
peter.albano@collierseng.com

Post-Modification Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10214450
Colliers Engineering & Design Project #: 21777635 (Rev. 1)

December 6, 2023

Site Information	*Site ID:*	*5000391689-VZW / NE FRANKLIN*
	Site Name:	*NE FRANKLIN*
	Carrier Name:	*Verizon Wireless*
	Address:	*89 Dr. Nott Road* *Franklin, Connecticut 06254* *New London County*
	Latitude:	*41.597675°*
	Longitude:	*-72.144978°*
Structure Information	*Tower Type:*	*Guyed*
	Mount Type:	*12.50-Ft T-Frame*

FUZE ID # 16271936

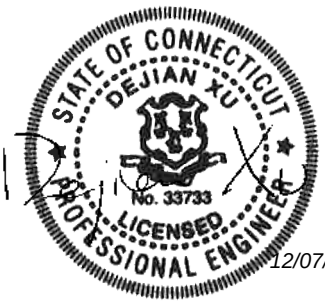
Analysis Results

T-Frame: **86.1% Pass w/ Modifications***

***Antennas and equipment to be installed in compliance with PMI Requirements of this mount analysis.**

******Contractor PMI Requirements***:
Included at the end of this MA report
Available & Submitted via portal at https://pmi.vzwsmart.com
For additional questions and support, please reach out to:
pmisupport@colliersengineering.com

Report Prepared By: Prasanna Dhakal



12/07/2023

Executive Summary:

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

This analysis is inclusive of the mount structure only and does not address the structural capacity of the supporting structure. This mounting frame was not analyzed as an anchor attachment point for fall protection. All climbing activities are required to have a fall protection plan completed by a competent person.

Sources of Information:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	*Verizon RFDS, Site ID: 323922, dated July 26, 2023*
Mount Mapping Report	*HighTower Solutions Inc., Site ID: VZW:469215, dated April 28, 2020*
Previous Mount Analysis	*Colliers Engineering & Design, Project #: 21777635 (Rev. 1), dated November 8, 2023*
Mount Modification Drawings	*Colliers Engineering & Design, Project #: 21777635 (Rev. 1), dated December 6, 2023*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H 2022 Connecticut State Building Code (CSBC), Effective October 1, 2022	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	125 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.00 in
	Risk Category:	II
	Exposure Category:	C
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.982
Seismic Parameters:	S_S:	0.195 g
	S_1:	0.054 g
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Load, Lv:	250 lbs.
	Maintenance Load, Lm:	500 lbs.
Analysis Software:	RISA-3D (V17)	

Final Loading Configuration:

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
167.50	170.00	6	Commscope	JAHH-65B-R3B	Added
		3	Samsung	MT6413-77A	
		3	Commscope	CBC78T-DS-43-2X	
		1	Raycap	RVZDC-6627-PF-48	
		3	Samsung	RF4439d-25A	
		3	Samsung	RF4461d-13A	
		3	Andrew	LNX-8513DS-A1M	Retained

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

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

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to Colliers Engineering & Design and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to Colliers Engineering & Design to verify deviation will not adversely impact the analysis.

2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

   Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping and reported in the Mount Mapping Report are assumed to be corrected and documented as part of the PMI process and are not considered in the mount analysis.

   The mount analysis and the mount mapping are not a condition assessment of the mount. Proper maintenance and condition assessments are still required post analysis.

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped in accordance with the NSTD-446 Standard, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.

5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.

6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Colliers Engineering & Design is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.

7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
   - Channel, Solid Round, Angle, Plate — ASTM A36 (Gr. 36)
   - HSS (Rectangular) — ASTM 500 (Gr. B-46)
   - Pipe — ASTM A53 (Gr. B-35)
   - Threaded Rod — F1554 (Gr. 36)
   - Bolts — ASTM A325

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

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Colliers Engineering & Design.

Analysis Results:

Component	Utilization %	Pass/Fail
Face Horizontal	*76.1%*	*Pass*
Face Vertical	*86.1%*	*Pass*
Mast Pipe	*49.8%*	*Pass*
Standoff Horizontal	*63.1%*	*Pass*
Standoff Vertical	*67.3%*	*Pass*
Mod Mount Pipe	*36.5%*	*Pass*
Mount Pipe	*34.3%*	*Pass*
Mod Tieback	*49.6%*	*Pass*
Mod Face Horizontal	*48.4%*	*Pass*
Mod V-Bracing Kit	*16.1%*	*Pass*
Mount Connection	*49.0%*	*Pass*

Structure Rating – *(Controlling Utilization of all Components)*	**86.1%**

Mount Connection Envelope Reactions:

Connection Description	Elev. AGL (Ft)	Node Label	Envelope Wind Reactions				Envelope Wind + Ice Reactions			
			Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)	Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)
Sector A Top Standoff	168.63	N53B	597	1524	3.154	0.000	651	1255	2.100	0.000
Sector A Bottom Standoff	166.38	N52B	825	1432	3.058	0.000	794	1644	2.064	0.000
Sector A Reinforcement	170.00	N66	1390	3122	0.007	0.002	1282	1994	0.003	0.001

Notes:
- Axial loads act along the axis of the tower leg
- Lateral reactions act perpendicular to the tower leg
- Moment loads introduce bending moment to the tower leg
- Torsion loads introduce twisting moment to the tower leg
- Batch solutions by individual load cases are included at the end of this document

Mount Steel (EPA)a per ANSI/TIA-222-H Section 2.6.11.2:

Ice Thickness (In)	Mount Pipes Excluded		Mount Pipes Included	
	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)
0	29.9	13.0	39.3	22.4
0.5	38.4	18.4	51.4	31.5
1	46.1	22.9	62.9	39.6

Notes:
- (EPA)a values listed above may be used in the absence of more precise information
- (EPA)a values in the table above include 1 sector(s).
- Ka factors included in (EPA)a calculations

Requirements:

The existing mounts will be **SUFFICIENT** for the final loading configuration (attachment 2) after the modifications detailed in attachment 3 are successfully completed.

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

Attachments:

1. **Contractor Required PMI Report Deliverables**
2. Antenna Placement Diagrams
3. Mount Modification Drawings
4. Mount Photos
5. Mount Mapping Report (for reference only)
6. Analysis Calculations

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Mount Modification

Electronic pdf version of this can be downloaded at https://pmi.vzwsmart.com
For additional questions and support, please reach out to pmisupport@colliersengineering.com

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MDG #: 5000391689 SMART Project #: 10214450 Fuze Project ID: 16271936

Purpose – to upload the proper documentation to the SMART Tool in order to allow the SMART Tool engineering vendor to complete the required Mount Desktop review of the Post Modification Inspection Report.

- Contractor is responsible for making certain the photos provided as noted below provide confirmation that the modification was completed in accordance with the modification drawings.
- Contractor shall relay any data that can impact the performance of the mount or the mount modification, this includes safety issues.

Base Requirements:

- If installation of the modification will cause damage to the structure, the climbing facility, or safety climb if present or any installed system, SMART Tool vendor to be notified prior to install. Any special photos outside of the standard requirements will be indicated on the drawings.
- Provide "as built drawings" showing contractor's name, preparer's signature, and date. Any deviations from the drawings (proposed modification) shall be shown. NOTE: If loading is different than what is conveyed in the post-modification passing mount analysis (MA) contact the SMART Tool vendor immediately.
- Each photo shall be time and date stamped.
- Photos should be high resolution.
- Contractor shall ensure that the safety climb wire rope is not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope. If there is conflict, contact the SMART Tool engineer for recommendations.
- The PMI can be accessed at the following portal: **https://pmi.vzwsmart.com**

Photo Requirements:

- *Photos taken at ground level*
  - Photo of Gate Signs showing the tower owner, site name, and number.
  - Overall tower structure after installation of the modifications.
  - Photos of the mount after installation of the modifications; if the mounts are at different rad elevations, pictures must be provided for all elevations that the modifications were installed

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

- Photos showing each individual sector after installation of modifications. Each entire sector must be in one photo to show the interconnection of members.
    - These photos shall also certify that the placement and geometry of the equipment on the mount is as depicted in the antenna placement diagram in this form.
- Photos that show the model number of each antenna and piece of equipment installed per sector.
- Photos of each installed modification per the modification drawings; pictures shall also include connection hardware (U-bolts, bolts, nuts, all-threaded rods, etc.)
- Photos showing the distances (relative distance between collars) of the installed modifications from the appropriate reference locations shown in the modification drawings.
- Photos showing the installed modifications onto the tower (i.e. ring/collar mounts, tie-backs, V-bracing kits, etc.); if the existing mount elevation needs to be changed according to the modification drawings, an elevation measurement shall be provided before the elevation change.

Material Certification:

- Materials utilized must be as per specification on the drawings or the equivalent as validated by the SMART Tool vendor.
    - If the materials are as specified on the drawings
        - The contractor shall provide the packing list, or the materials certifications for the materials utilized to perform the mount modification
        - Commscope, Metrosite, Perfect Vision, Sabre, and Site Pro have all agreed to support Verizon vendors with the necessary material certifications
    - If seeking permission to use an equivalent
        - It is required that the SMART Tool engineering vendor approval of such is included in the contractor submission package. There may be an additional charge for approval if the equivalent submission doesn't meet specifications as prescribed in the drawings.

☐ All hardware has been properly installed, and the existing hardware was inspected.

☐ The material utilized was as specified on the SMART Tool engineering vendor Mount Modification Drawings and included in the material certification folder is a packing list or invoice for these materials.

OR

☐ The material utilized was approved by a SMART Tool engineering vendor as an "equivalent" and this approval is included as part of the contractor submission.

Antenna & Equipment Placement and Geometry Confirmation:

☐ The contractor certifies that the photos support and the equipment on the mount is as depicted on the sketch and table included in this form and with the mount analysis provided.

OR

☐ The contractor notes that the equipment on the mount is not in accordance with the sketch and has noted the differences below and provided photo documentation of any alterations.

Comments:

Was the mount modification completed in conjunction with the equipment change / installation?

☐ Yes ☐ No

Special Instructions / Validation as required from the MA or Mod Drawings:

Issue:

1. Contractor shall install proposed OVP on existing standoff vertical pipe in Alpha sector.

Response:

Special Instruction Confirmation:

☐ The contractor has read and acknowledges the above special instructions.

Comments:

Contractor certifies that the climbing facility / safety climb was not damaged prior to starting work:

☐ Yes ☐ No

Contractor certifies no new damage created during the current installation:

☐ Yes ☐ No

Contractor to certify the condition of the safety climb and verify no damage when leaving the site:

☐ Safety Climb in Good Condition ☐ Safety Climb Damaged

Comments:

Certifying Individual:

Company:	
Employee Name:	
Contact Phone:	
Email:	
Date:	

Structure: **391689-VZW - NE FRANKLIN**

Se tor: **A** 12/6/2023

Str t re Type: G yed 10214450

Mo t Elev: 167.50 P ge: 1

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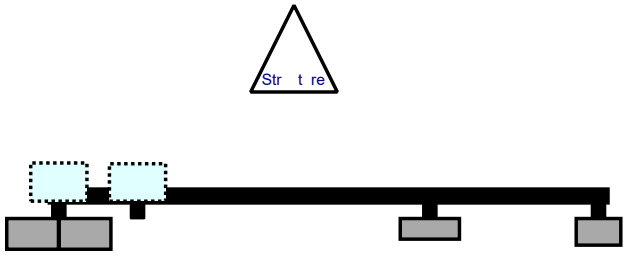
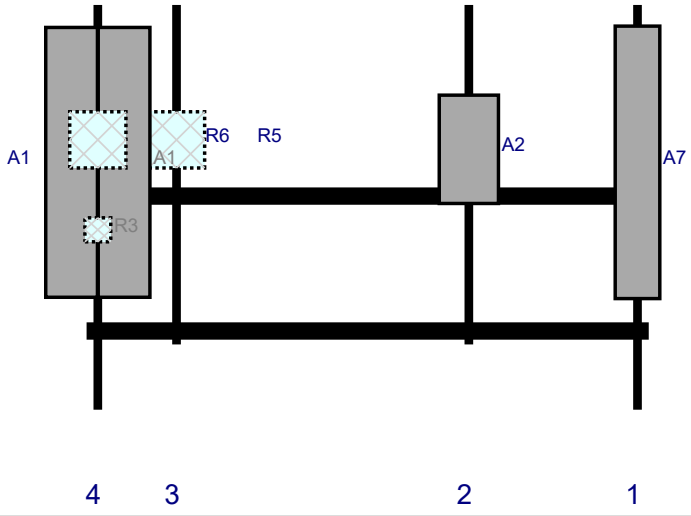
Plan View



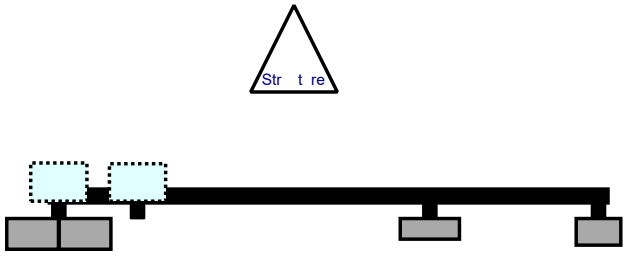
Front View - Loo i g t Str t re



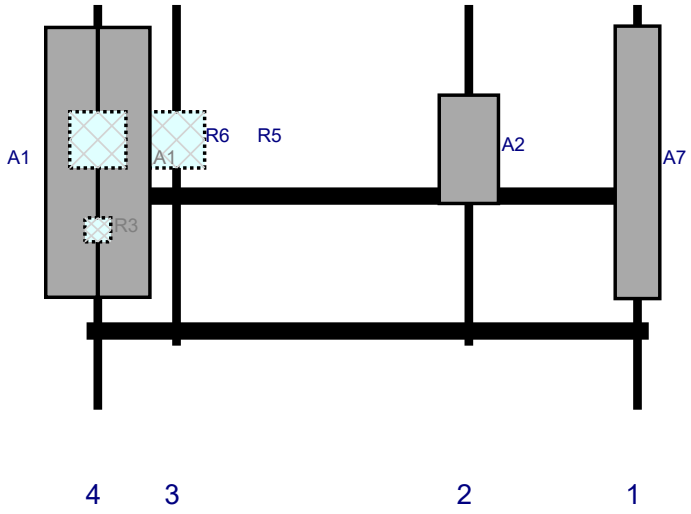
Re #	Model	Height (i)	Width (i)	H Dist Fr L.	Pipe #	Pipe Pos V	A t Pos	C. A t Fr T.	A t H O	St t s	V lid tio
A7	LNX-8513DS-A1M	72.7	11.9	147	1		Fro t	42	0	Ret i ed	04/28/2020
A2	MT6413-77A	28.9	15.8	102	2		Fro t	38.52	0	Added	
R5	RF4439d-25A	15	15	24	3		Behi d	36	0	Added	
A1	JAHH-65B-R3B	72	13.8	3	4		Fro t	42	7	Added	
A1	JAHH-65B-R3B	72	13.8	3	4		Fro t	42	-7	Added	
R3	CBC78T-DS-43-2X	6.4	6.9	3	4		Behi d	60	0	Added	
R6	RF4461d-13A	15	15	3	4		Behi d	36	0	Added	
OVP	RVZDC-6627-PF-48	29.5	16.5		Me er					Added	

Colliers Engineering & Design

Plan View



Front View - Loo i g t Str t re



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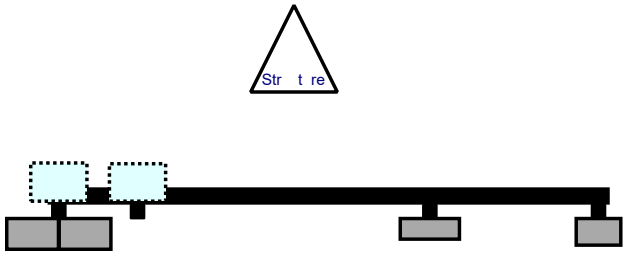
R3	CBC78T-DS-43-2X	6.4	6.9	3	4		Behi d	60	0	Added	
R6	RF4461d-13A	15	15	3	4		Behi d	36	0	Added	

Plan View



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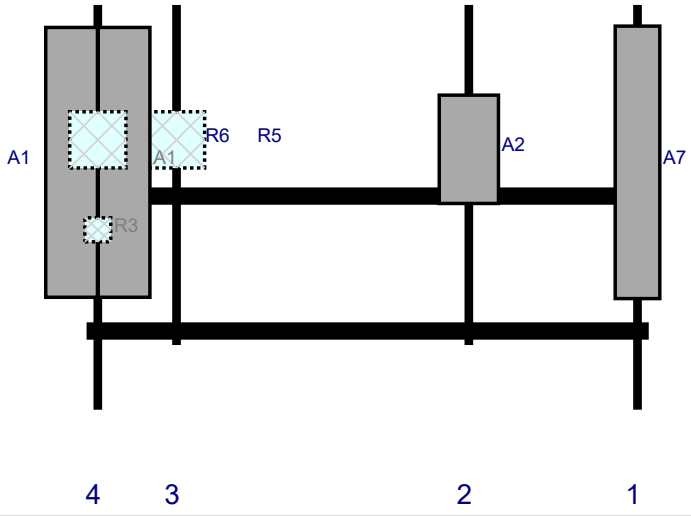

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R6	RF4461d-13A	15	15	3	4		Behi d	36	0	Added	

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MOUNT MODIFICATION DRAWINGS
EXISTING 12.50' T-FRAME

TOWER OWNER: AMERICAN TOWER CORPORATION
TOWER OWNER SITE NUMBER: 6310

CARRIER SITE NAME: FRANKLIN CT
CARRIER SITE NUMBER: 5000391689
FUZE ID: 16271936

89 DR. NOTT ROAD
FRANKLIN, CT 06254
NEW LONDON COUNTY

LATITUDE: 41.597675° N
LONGITUDE: 72.144978° W

DESIGN CRITERIA

WIND LOADS

BASIC WIND SPEED (3 SECOND GUST), V = 125 MPH
EXPOSURE CATEGORY C
TOPOGRAPHIC CATEGORY: 1
TOPOGRAPHIC CONSIDERED: N/A
TOPOGRAPHIC METHOD: N/A
MEAN BASE ELEVATION (AMSL) = 505.05'

ICE LOADS

ICE WIND SPEED (3 SECOND GUST), V = 50 MPH
ICE THICKNESS = 1.00 IN

SEISMIC LOADS

SEISMIC DESIGN CATEGORY B
SHORT TERM MCER GROUND MOTION, S_S = .195
LONG TERM MCER GROUND MOTION, S_1 = .054

PROJECT INFORMATION

APPLICANT/LESSEE

COMPANY: VERIZON WIRELESS

CLIENT REPRESENTATIVE

COMPANY: VERIZON WIRELESS

PROJECT MANAGER

COMPANY: COLLIERS ENGINEERING & DESIGN
CONTACT: PETER ALBANO
PHONE: 856.797.0412
E-MAIL: PETER.ALBANO@COLLIERSENG.COM

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION: HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #: 10214450
VZW MDG #: 5000391689
ANALYSIS DATE: 12/6/2023

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

SHEET INDEX

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

SCALE: AS SHOWN

JOB NUMBER: 21777635

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
0	07/27/21	ISSUED FOR CONSTRUCTION	MSG	JPL
1	12/06/23	ISSUED FOR CONSTRUCTION	PD	DX

COLLIERS ENGINEERING & DESIGN CT, P.C.
C.T. JPC.0000131

SITE NAME:

FRANKLIN CT
5000391689

89 DR. NOTT ROAD
FRANKLIN, CT 06254
NEW LONDON COUNTY

Colliers Engineering & Design

RED BANK (Headquarters)
331 Newman Springs Road, Suite 203
Red Bank, NJ 07701
Phone: 732.383.1950
COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING

SHEET TITLE: TITLE SHEET

SHEET NUMBER: ST-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
6	VZWSMART	VZWSMART-SFK1	TIE BACK ASSEMBLY	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1.	84	504
3		VZWSMART-SFK3-SL	V-BRACING KIT FOR SMALL LEGS	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1.	117	351
3		VZWSMART-P40-278X096	96" LONG, PIPE 2.5 SCH40 (2.875"OD X 0.203" THK)		46	139
12		VZWSMART-MSK1	CROSSOVER PLATE		14	168
3		VZWSMART-AL333	CLIP ANGLE		3	10

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
6	-	-	66" LONG, PIPE 2 1/2 SCH40	GALVANIZED	32	191
-	-	-	1/2" DIA. GR-1 U-BOLTS	GALVANIZED	-	

SECTION 3 - REQUIRED SAFETY CLIMB PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
					TOTAL:	1363

NOTES:

1. THE MANUFACTURERS LISTED ARE THE APPROVED VENDORS FOR THE VZW MOUNT KITS. EACH MANUFACTURER WILL BE AWARE OF WHICH KITS HAVE BEEN THROUGH THE VZW APPROVAL PROCESS AND THEY ARE IN TURN APPROVED TO SELL. PLEASE NOTE THAT THE MATERIAL UTILIZED ON THE MOUNT MODIFICATIONS WILL BE REVIEWED AS A PART OF THE DESKTOP PMI COMPLETED BY THE SMART TOOL VENDOR. IT WILL BE REQUIRED THAT THE VZW KITS SPECIFIED ARE UTILIZED IN THE MODIFICATIONS.

2. ALL MATERIALS REQUIRED FOR THE DESIGNED MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.

VZWSMART KITS - APPROVED VENDORS

COMMSCOPE	
CONTACT	SALVADOR ANGUIANO
PHONE	(817) 304-7492
EMAIL	SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE	WWW.COMMSCOPE.COM

METROSITE FABRICATORS, LLC	
CONTACT	KENT RAMEY
PHONE	(706) 335-7045 (O), (706) 982-9788 (M)
EMAIL	KENT@METROSITELLC.COM
WEBSITE	METROSITEFABRICATORS.COM

PERFECTVISION	
CONTACT	WIRELESS SALES
PHONE	(844) 887-6723
EMAIL	WWW.PERFECT-VISION.COM
WEBSITE	WIRELESSSALES@PERFECT-VISION.COM

SABRE INDUSTRIES, INC.	
CONTACT	ANGIE WELCH
PHONE	(866) 428-6937
EMAIL	AKWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRESITESOLUTIONS.COM

SITE PRO 1	
CONTACT	PAULA BOSWELL
PHONE	(972) 236-9843
EMAIL	PAULA.BOSWELL@VALMONT.COM
WEBSITE	WWW.SITEPRO1.COM

NEWAVE	
CONTACT	NEWAVE SALES TEAM
PHONE	(971) 239-4762
EMAIL	SALES@NEWAVETC.COM
WEBSITE	WWW.NEWAVETC.COM

BETTER METAL, LLC	
CONTACT	DAVID STANSBERRY
PHONE	(615) 535-0990 (O), (615) 631-2520 (M)
EMAIL	DLS@BETTERMETAL.COM
WEBSITE	WWW.BETTERMETAL.COM

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DOING BUSINESS AS MASER CONSULTING

SHEET TITLE: BILL OF MATERIALS

SHEET NUMBER: SBOM-1

GENERAL NOTES

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

STRUCTURAL STEEL

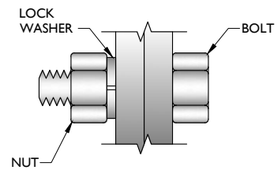
1. DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING PUBLICATIONS EXCEPT AS SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS.
   a. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION (15TH EDITION)
   b. SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS
   c. AISC CODE OF STANDARD PRACTICE
2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE SHOWN:

CHANNELS, ANGLES, PLATES, ETC.	ASTM A36 (GR 36)
STEEL PIPE	ASTM A53 (GR 35)
BOLTS	ASTM A325
NUTS	ASTM A563
LOCK WASHERS	LOCKING STRUCTURAL GRADE

3. ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND REPLACEMENT, SHALL BE NOTED. ESTIMATES OF COSTS/CREDITS ASSOCIATED WITH THE SUBSTITUTION (INCLUDING RE-DESIGN COSTS AND COSTS TO SUB-CONTRACTORS) SHALL BE PROVIDED TO THE ENGINEER. CONTRACTOR SHALL PROVIDE ADDITIONAL DOCUMENTATION AND/OR SPECIFICATIONS TO THE ENGINEER AS REQUESTED.
4. PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
   a. SUBMIT SHOP DRAWINGS TO
      PETER.ALBANO@COLLIERSENG.COM
   b. PROVIDE COLLIERS ENGINEERING & DESIGN PROJECT # AND COLLIERS ENGINEERING & DESIGN PROJECT ENGINEER CONTACT IN THE BODY OF THE EMAIL.
5. DRILL NO HOLES IN ANY NEW OR EXISTING STRUCTURAL STEEL MEMBERS OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.
6. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
7. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
8. ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH TIA-222-H SECTION 4.9.2 REQUIREMENTS.
9. WHERE CONNECTIONS ARE NOT FULLY DETAILED ON THESE DRAWINGS, FABRICATOR SHALL DESIGN CONNECTIONS TO RESIST LOADS AND FORCES WHERE SHOWN ON DRAWINGS AND AS OUTLINED IN SPECIFICATIONS.
10. FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE. MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
11. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT IS AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
12. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
13. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
14. ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINC COTE, OR EOR APPROVED EQUAL), AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).
15. ALL HOLES IN STEEL MEMBERS SHALL BE SIZED 1/16" LARGER THAN THE BOLT DIAMETER. STANDARD HOLES SHALL BE USED UNLESS NOTED OTHERWISE.

BOLT SCHEDULE (IN.)				
BOLT DIAMETER	**STANDARD HOLE**	**SHORT SLOT**	**MIN. EDGE DISTANCE**	**SPACING**
1/2	9/16	9/16 x 11/16	7/8	1 1/2
5/8	11/16	11/16 x 7/8	1 1/8	1 7/8
3/4	13/16	13/16 x 1	1 1/4	2 1/4
7/8	15/16	15/16 x 1 1/8	1 1/2	2 5/8
1	1 1/16	1 1/16 x 1 5/16	1 3/4	3

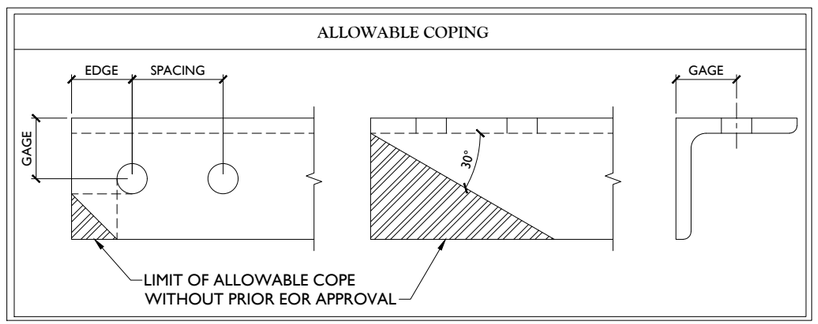
WORKABLE GAGES (IN.)	
LEG	**GAGE**
4	2 1/2
3 1/2	2
3	1 3/4
2 1/2	1 3/8
2	1 1/8



TYP. BOLT ASSEMBLY

NOTES:

1. ALL DIMENSIONS REPRESENTED IN THE ABOVE TABLES ARE AISC MINIMUM REQUIREMENTS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ENGINEER IF DISTANCES ARE LESS THAN THOSE PROVIDED.
2. THE DIMENSIONS PROVIDED ARE MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS OF PROPOSED MEMBERS WITHIN THESE DRAWINGS MAY VARY FROM THE AISC MINIMUM REQUIREMENTS.
3. SHORT SLOT HOLES SHALL ONLY BE USED WHEN DEPICTED IN THE DRAWINGS
4. MATCH EXISTING GAGES WHEN APPLICABLE, UNLESS MINIMUM EDGE DISTANCES ARE COMPROMISED.



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0	07/27/21	ISSUED FOR CONSTRUCTION	MSG	JPL
1	12/06/23	ISSUED FOR CONSTRUCTION	PD	DX

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RED BANK (Headquarters)
331 Newman Springs Road, Suite 203
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Phone: 732.383.1950
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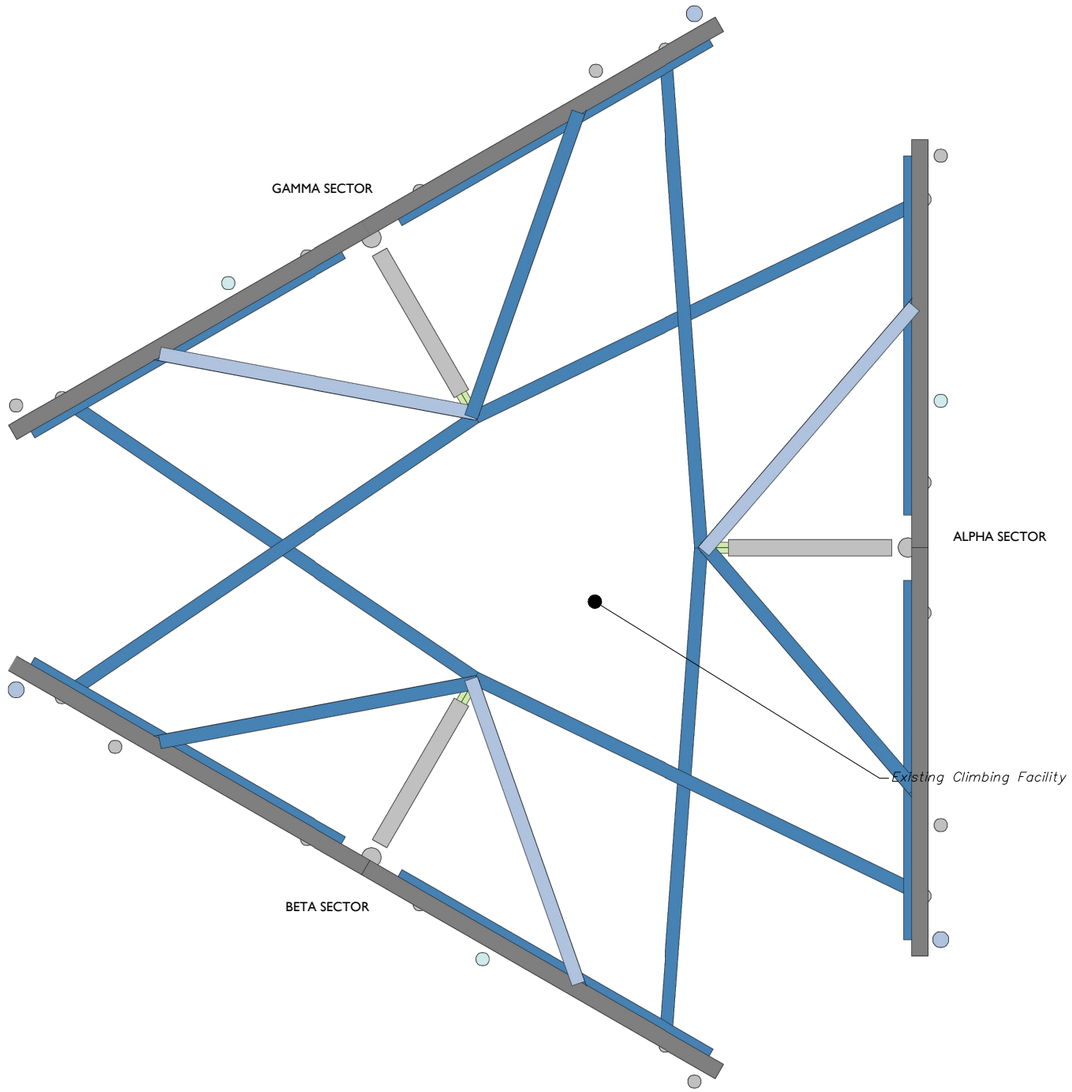
SHEET TITLE: GENERAL NOTES
SHEET NUMBER: SGN-1



1 CLIMBING FACILITY LOCATION

SCALE : N.T.S.

STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY HIGHTOWER SOLUTIONS INC. ON 4/28/2020, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (167'-6") ARE IN GOOD CONDITION. COLLIERS ENGINEERING & DESIGN DOES NOT WARRANT THIS INFORMATION.

2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.

CLIMBING FACILITY PHOTO

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SHEET TITLE :

CLIMBING FACILITY DETAIL

SHEET NUMBER :

SCF-1

LEGEND:

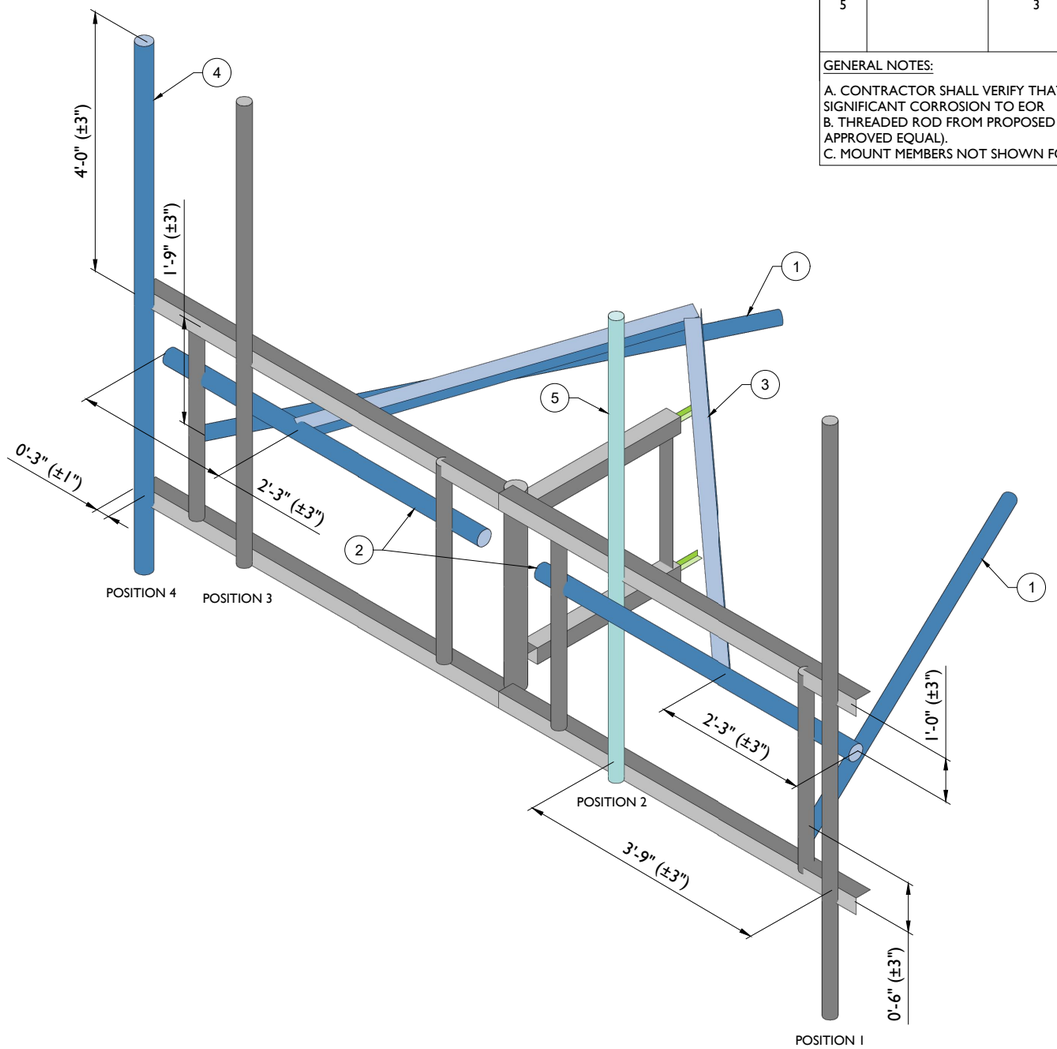
- PROPOSED
- RELOCATED
- EXISTING

MOUNT MODIFICATION SCHEDULE

NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	167'-6"	6	PROPOSED TIEBACK ASSEMBLY (PART #: VZWSMART-SFK1)	CONNECT OTHER END TO ADJACENT TOWER LEG. PROPOSED TIE-BACK SHALL EXTEND NO MORE THAN 12" BEYOND THE TOWER LEG. CONTRACTOR SHALL TRIM AS REQUIRED AND PROTECT CUT END WITH TWO COATS OF ZINC KOTE, OR EOR APPROVED EQUAL. SEE GENERAL NOTE B.
2		6	PROPOSED 66" LONG, PIPE 2 1/2 SCH40 FACE HORIZONTAL	RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE. CONNECT NEW FACE HORIZONTAL TO ALL EXISTING VERTICAL FACE BRACING PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).
3		3	PROPOSED V-BRACING KIT FOR SMALL LEGS (PART #: VZWSMART-SFK3-SL)	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1. CONTRACTOR SHALL INSTALL ONE PROPOSED CLIP ANGLE (PART #:VZWSMART-AL333) AT EITHER END OF EACH LONG ANGLE IN THE SFK3-SL KIT.
4		3	PROPOSED 96" LONG, PIPE 2.5 SCH40 (PART #: VZWSMART-P40-278X096)	CONTRACTOR SHALL REPLACE EXISTING MOUNT PIPE AT POS. 4 (AS SEEN FROM BEHIND THE MOUNT) WITH PROPOSED MOUNT PIPE. CONNECT NEW MOUNT PIPE TO EXISTING FACE HORIZONTAL ANGLES WITH (1) 1/2" DIA. U-BOLT AT EACH CONNECTION.
5		3	RELOCATED MOUNT PIPE	CONTRACTOR SHALL SHIFT EXISTING MOUNT PIPE AT POS. 2 (AS SEEN FROM BEHIND THE MOUNT) HORIZONTALLY. RECONNECT SHIFTED PIPES TO EXSITING FACE HORIZONTAL ANGLES WITH 1/2" DIA. U-BOLTS AT EACH CONNECTION. DRILL HOLES ON FACE HORIZONTAL ANGLES AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1.

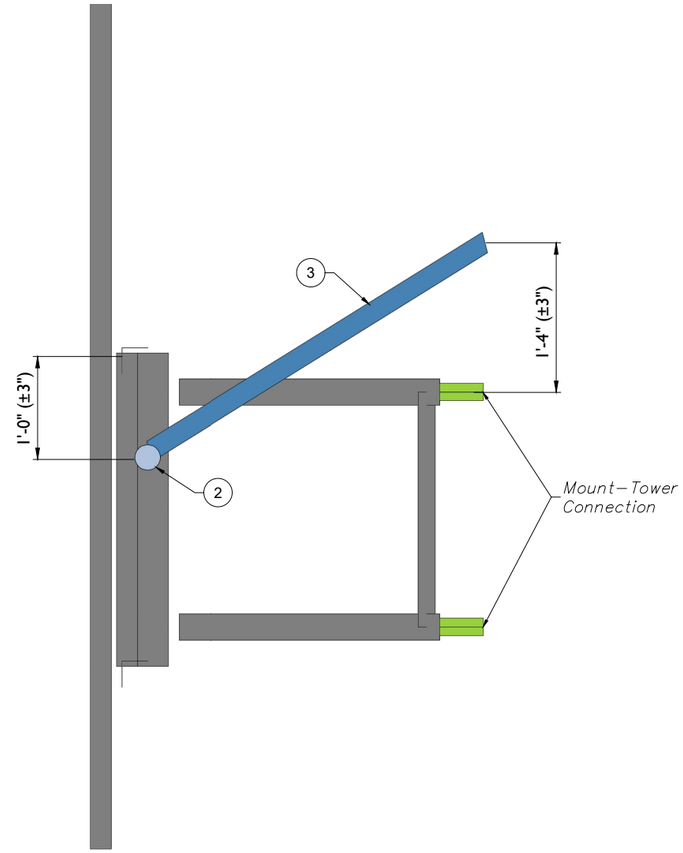
GENERAL NOTES:

A. CONTRACTOR SHALL VERIFY THAT NEW & EXISTING STEEL IS FREE OF CORROSION. VISIBLE MINOR CORROSION SHALL BE WIRE BRUSHED CLEAN AND TREATED WITH COLD GALVANIZATION. REPORT ANY SIGNIFICANT CORROSION TO EOR
B. THREADED ROD FROM PROPOSED KITS SHALL BE TRIMMED TO EXTEND NO MORE THAN 3" BEYOND THE LOCK NUT. TREAT ALL CUT ENDS WITH (2) COATS OF COLD GALVANIZATION (ZINC KOTE, OR EOR APPROVED EQUAL).
C. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.



1 PROPOSED ISOMETRIC VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.



2 PROPOSED SIDE ELEVATION VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.

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SHEET TITLE : MODIFICATION DETAILS

SHEET NUMBER : SS-1

MOUNT PHOTO 1

MOUNT PHOTO 2

MOUNT PHOTO 3

MOUNT PHOTO 4

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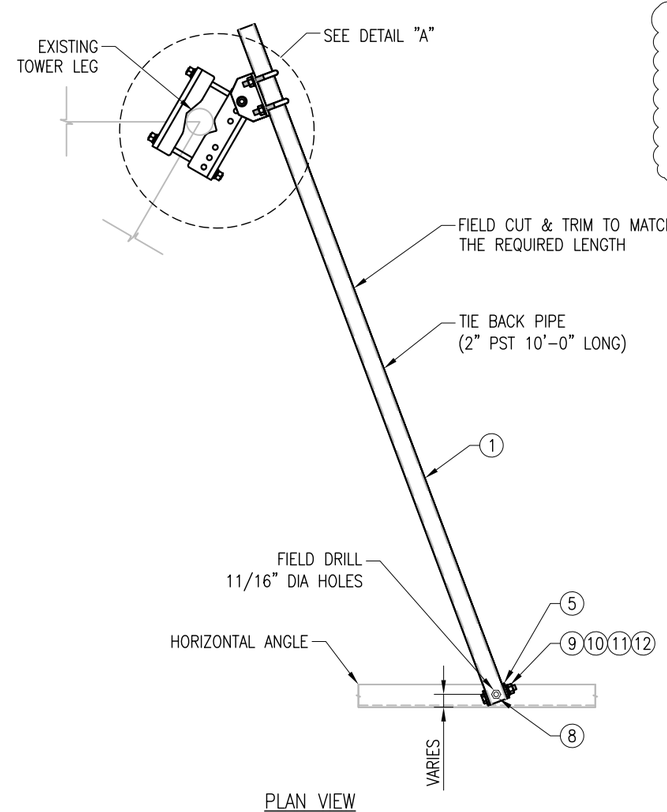
SHEET TITLE :

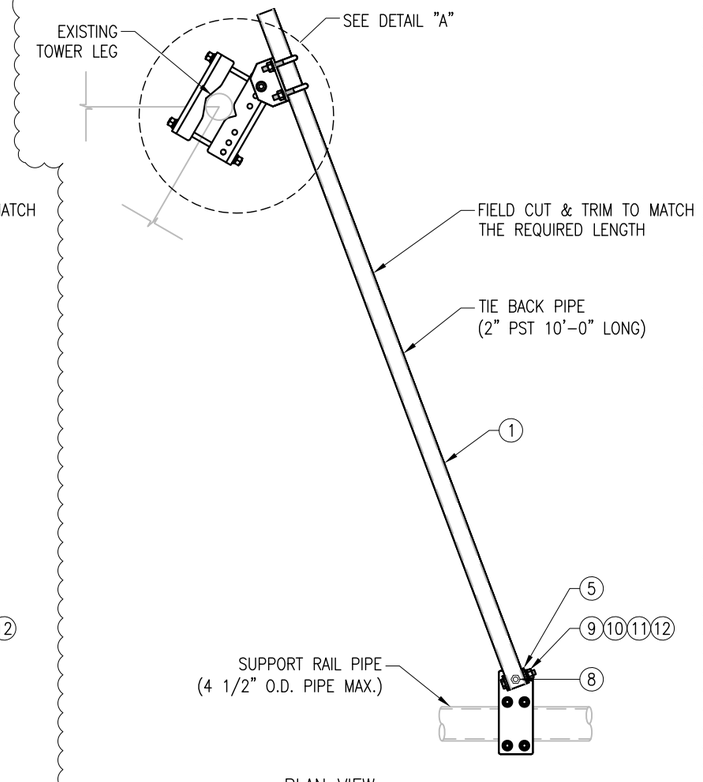
MOUNT PHOTOS

SHEET NUMBER :

SS-2

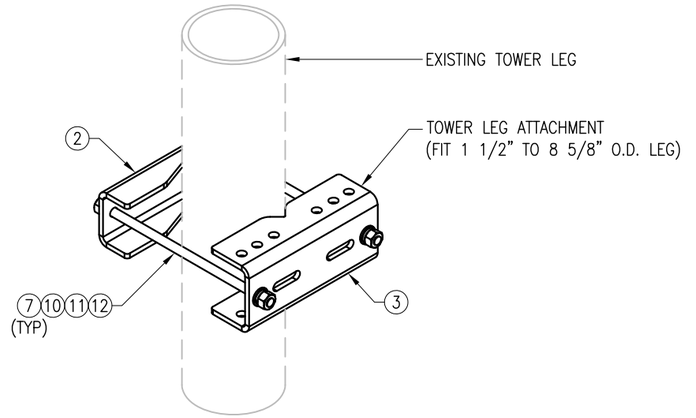


PLAN VIEW
TIE BACK ASSEMBLY

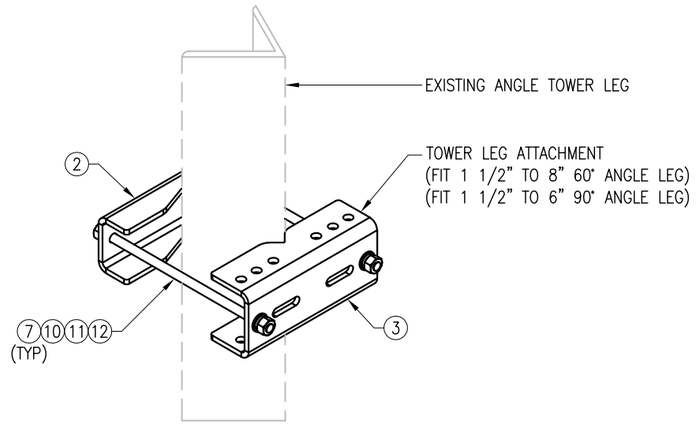


PLAN VIEW
TIE BACK ASSEMBLY WITH ADAPTER FOR PIPE

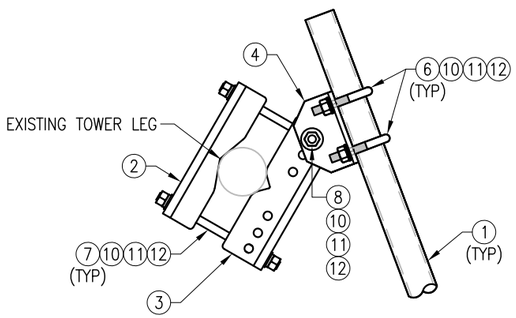
1



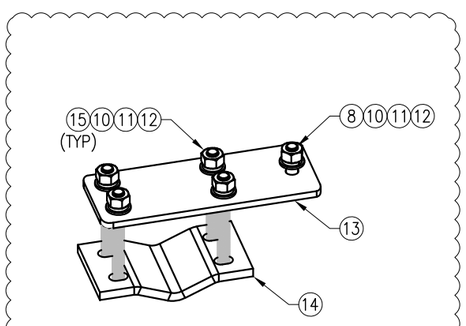
ROUND TOWER LEG ATTACHMENT DETAIL



ANGLE TOWER LEG ATTACHMENT DETAIL



DETAIL "A"



ADAPTER FOR PIPE CONNECTION

1

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

VZWSMART-SFK1 (TIE BACK ASSEMBLY)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PST2375-10	2" PST (2.375" O.D. X 0.154" THK) X 10'-0" A53 GR-B 35KSI	SFK1-F1	38
2	1	BP825-12	PL 3/8" X 8 1/4" X 1'-0" A36 BENT PLATE	SFK1-F2	11
3	1	BP11125-12	PL 3/8" X 11 1/8" X 1'-0" A36 BENT PLATE	SFK1-F3	14
4	1	BP6-9375	PL 3/8" X 6" X 9 3/8" A36 BENT PLATE	SFK1-F4	6
5	1	BP2-875	PL 1/4" X 2" X 8 3/4" A36 BENT PLATE	SFK1-F4	1
6	2	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	2
7	2	---	THREADED ROD 5/8" DIA. X 1'-6" F1554-36 HDG	---	0
8	2	---	BOLT 5/8" X 2" A325	---	0
9	1	---	BOLT 5/8" X 4 1/4" A325	---	0
10	15	FW-625	5/8" HDG USS FLAT WASHER	---	1
11	15	LW-625	5/8" HDG LOCK WASHER	---	0
12	15	NUT-625	5/8" HDG HEX NUT	---	2
13	1	PL375-4511	PL 3/8" X 4 1/2" X 11" A36	SFK1-F1	4
14	1	V-CLAMP	PL 1/2" X 4 1/4" X 8 5/8" A36 BEND PLATE	SFK1-F5	5
15	4	---	BOLT 5/8" X 6" FULL THREAD SAE GR 5	---	0
			GALVANIZED WT		84

1

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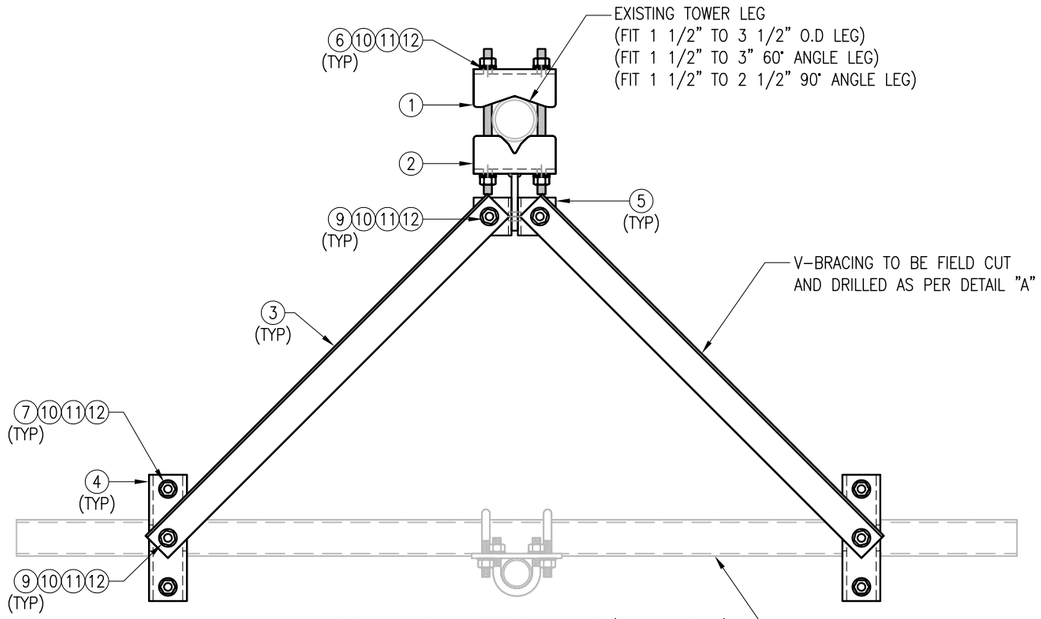
DRAWN BY: BT	CHECKED BY: HMA/KW

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	05/08/20
1	REVISED	BT	04/10/21

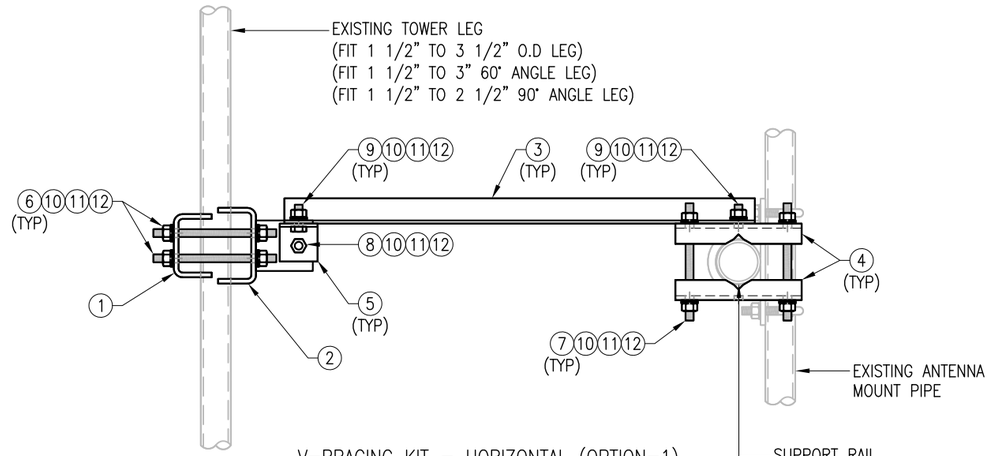
SHEET TITLE:
VZWSMART-SFK1
TIE BACK ASSEMBLY

SHEET NUMBER: VZWSMART-SFK1

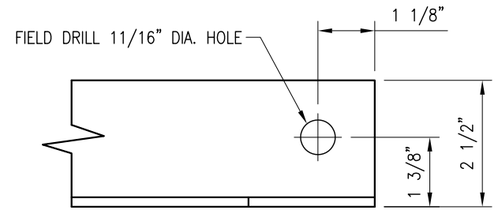
REV #: 1



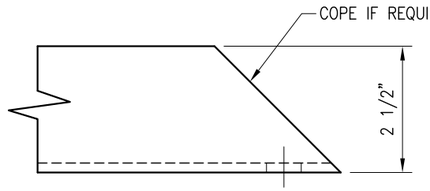
V-BRACING FOR SECTOR MOUNT (SMALL LEGS)
PLAN VIEW



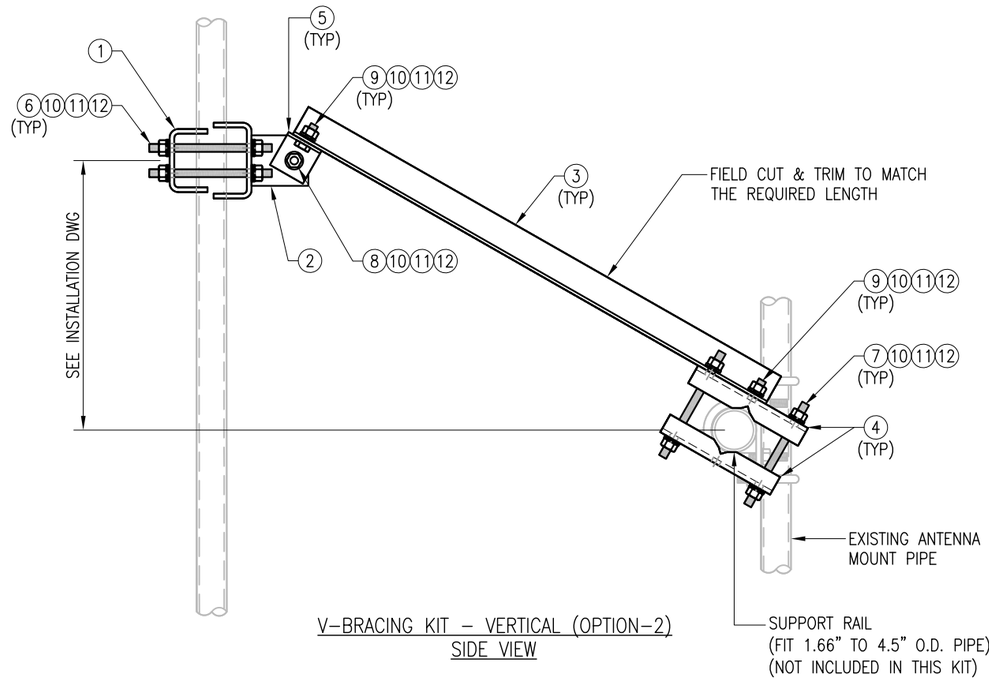
V-BRACING KIT – HORIZONTAL (OPTION-1)
SIDE VIEW



PLAN VIEW



FRONT VIEW
DETAIL "A"



V-BRACING KIT – VERTICAL (OPTION-2)
SIDE VIEW

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

VZWSMART-SFK3-SL (V-BRACING KIT FOR SMALL LEGS)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	BP9625-65	PL 3/8" X 9 5/8" X 6 1/2" A36 BENT PLATE	VBSM-SL-F1	12
2	1	BRKW-VBSM-SL	WELDMENT BRACKET	VBSM-SL-F3	11
3	2	L252525-8	L 2 1/2" X 2 1/2" X 1/4" X 8'-0" A36	VBSM-F5	67
4	4	BP6875-10	PL 3/8" X 6 7/8" X 10" A36 BENT PLATE	VBSM-F2	20
5	2	AL-333	L 3" X 3" X 1/4" X 3" A36	VBSM-F2	3
6	4	---	THREADED ROD 5/8" DIA. X 1'-0" F1554-36 HDG	---	--
7	4	---	THREADED ROD 5/8" DIA. X 10" F1554-36 HDG	---	--
8	1	---	BOLT 5/8" X 2 1/4" A325	---	--
9	4	---	BOLT 5/8" X 1 3/4" A325	---	--
10	21	FW-625	5/8" HDG USS FLAT WASHER	---	2
11	21	LW-625	5/8" HDG LOCK WASHER	---	0
12	21	NUT-625	5/8" HDG HEX NUT	---	2
				GALVANIZED WT	117

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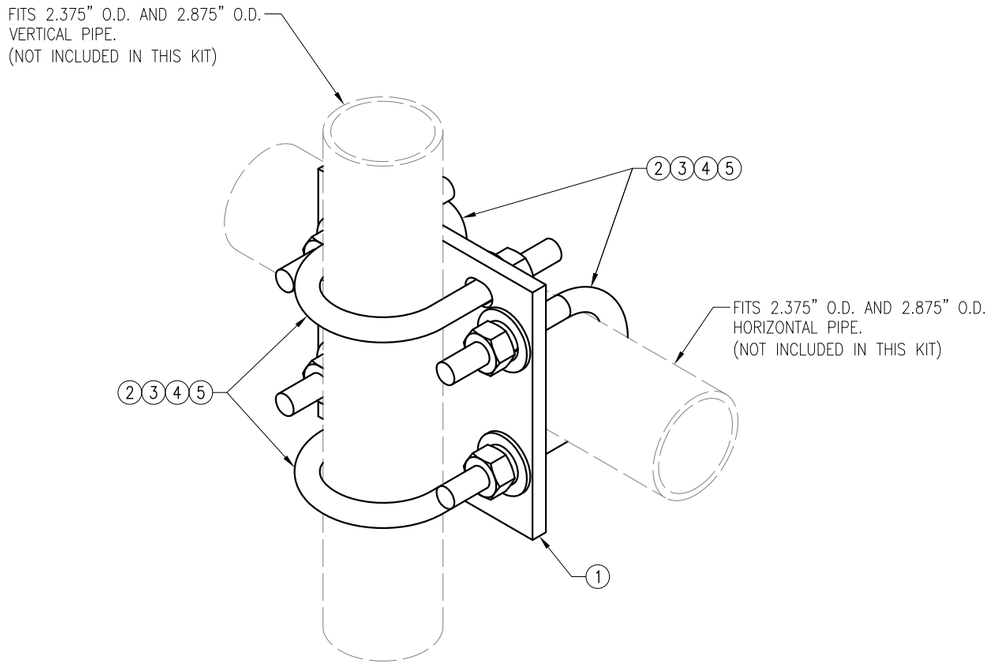
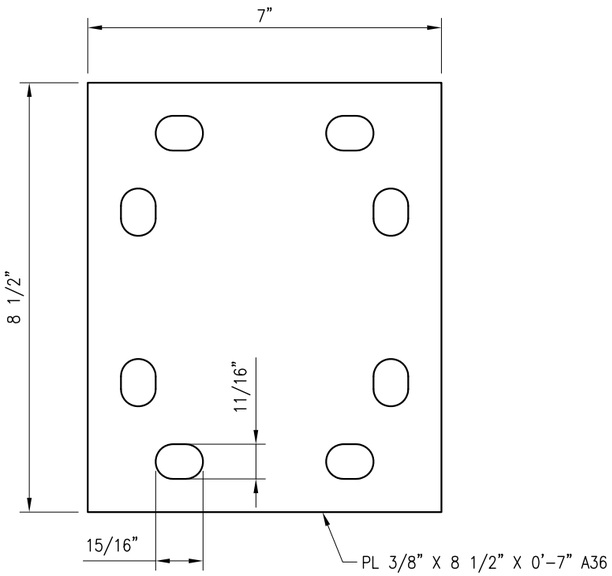
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	04/10/21

SHEET TITLE:
VZWSMART-SFK3-SL
V-BRACING KIT
FOR SMALL LEGS

SHEET NUMBER: VZWSMART-SFK3-SL

REV #: 0





PL375-857

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

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

VzW SMART Tool© Vendor

verizon

FOR REFERENCE ONLY

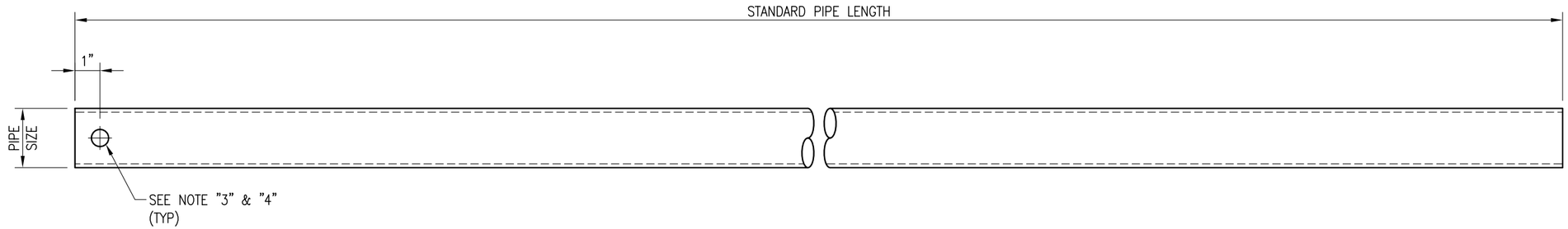
DRAWN BY: H.R | CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:
VZWSMART-MSK1
CROSSOVER PLATE

SHEET NUMBER: VZWSMART-MSK1

REV #: 0



VZWSMART Standard Pipe		
VZWSMART Number	Size	Length
P40-238X048	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	48"
P40-238X072	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	72"
P40-238X096	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	96"
P40-238X120	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	120"
P40-238X126	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	126"
P40-238X150	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	150"
P40-238X174	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	174"
P40-278X048	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	48"
P40-278X072	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	72"
P40-278X096	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	96"
P40-278X120	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	120"
P40-278X126	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	126"
P40-278X150	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	150"
P40-278X174	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	174"
P40-312X048	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	48"
P40-312X072	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	72"
P40-312X126	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	126"
P40-312X150	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	150"
P40-312X174	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	174"

NOTE:
APPROVED SMART KIT VENDORS ARE ALLOWED TO SUBSTITUTE AT THEIR DISCRETION PIPES LISTED ON THIS PAGE FOR CUSTOM LENGTH COMPONENTS OF MATCHING SIZE. SUBSTITUTIONS SHALL MEET THE ORIGINAL STRUCTURAL INTENT.

NOTES:
1. ALL PIPE GRADE A53-B OR BETTER.
2. HOT-DIPPED GALVANIZED PER ASTM A123.
3. ALL HOLES ARE 11/16" DIA. U.N.O
4. HOLES MAY OR MAY NOT BE PRESENT, DEPEND UPON MANUFACTURE DISCRETION.
5. ALL FIELD CUT AND DRILLED SURFACES SHALL BE REPAIRED WITH A MINIMUM OF TWO COATS OF ZINGA OR ZINC COTE PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.

VzW SMART Tool© Vendor

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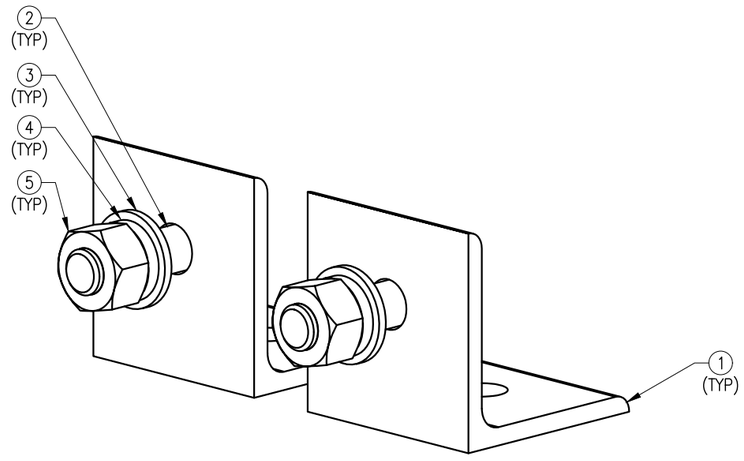
DRAWN BY: BT | CHECKED BY: HMA/KW

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	08/04/21

SHEET TITLE:
VZWSMART STANDARD PIPE

SHEET NUMBER: VZWSMART-PIPE

REV #: 0



CLIP ANGLE
ISOMETRIC VIEW

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

VZWSMART-AL333 (CLIP ANGLE)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	2	AL-333	L 3" X 3" X 1/4" X 3" A36	AL333-F1	2.50
2	2	---	BOLT 5/8" X 2" FULL THREAD SAE GR-5	---	0.77
3	2	FW-625	5/8" HDG USS FLAT WASHER	---	0
4	2	LW-625	5/8" HDG LOCK WASHER	---	0
5	2	NUT-625	5/8" HDG HEX NUT	---	0
				GALVANIZED WT	3.27

VzW
SMART Tool©
Vendor

verizon

FOR REFERENCE ONLY

DRAWN BY: JBM | CHECKED BY: ----

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	JBM	10/08/21

SHEET TITLE:
VZWSMART-AL333
CLIP ANGLE

SHEET NUMBER: VZWSMART-AL333

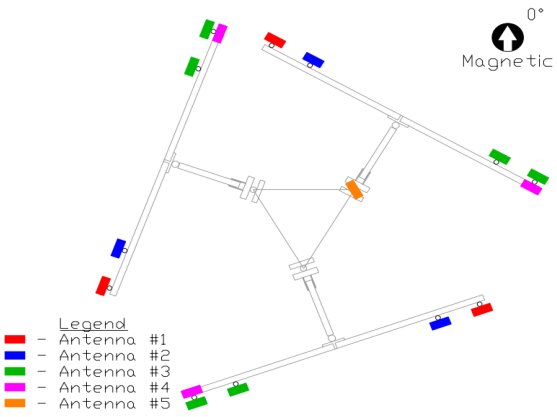
REV #: 0

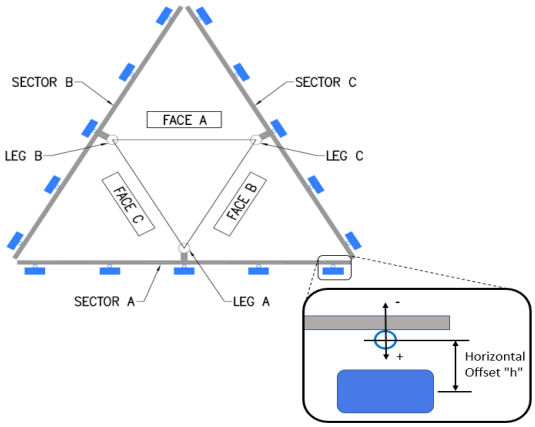
Updated on 3-03-2020

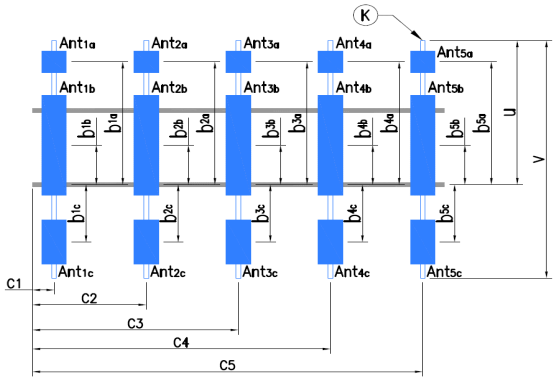
Antenna Mount Mapping Form (PATENT PENDING)

FCC # 1059887

Tower Owner:	American Tower	**Mapping Date:**	4/28/2020
Site Name:	FRANKLIN CT	**Tower Type:**	Guyed Tower
Site Number or ID:	469215	**Tower Height (Ft.):**	
Mapping Contractor:	HighTower Solutions Inc.	**Mount Elevation (Ft.):**	166'4"







Antenna Layout

Mount Azimuth (Degree) for Each Sector and Climbing Information			
Sector A:	30.00	Deg	
Sector B:	160.00	Deg	
Sector C:	290.00	Deg	

Mount Pipe Configuration and Geometries [Unit = Inches]

Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	9'Tx2.38"Dia.Pipe x.15"	87.00	3.00	C1	6'Tx2.38"Dia.Pipe x.15"	69.50	3.00
A2	7'Tx2.38"Dia.Pipe x.15"	83.50	24.00	C2	7'Tx2.38"Dia.Pipe x.15"	83.50	24.00
A3	7'Tx2.38"Dia.Pipe x.15"	83.50	126.00	C3	7'Tx2.38"Dia.Pipe x.15"	83.50	126.00
A4	9'Tx2.38"Dia.Pipe x.15"	87.00	147.00	C4	6'Tx2.38"Dia.Pipe x.15"	69.50	147.00
A5				C5			
A6				C6			
B1	6'Tx2.38"Dia.Pipe x.15"	69.50	3.00	D1			
B2	7'Tx2.38"Dia.Pipe x.15"	83.50	24.00	D2			
B3	7'Tx2.38"Dia.Pipe x.15"	83.50	126.00	D3			
B4	6'Tx2.38"Dia.Pipe x.15"	69.50	147.00	D4			
B5				D5			
B6				D6			

Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.)	
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.)	

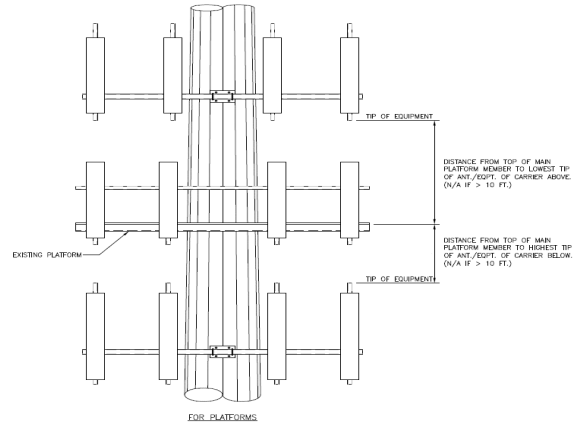
Please enter additional infomation or comments below.

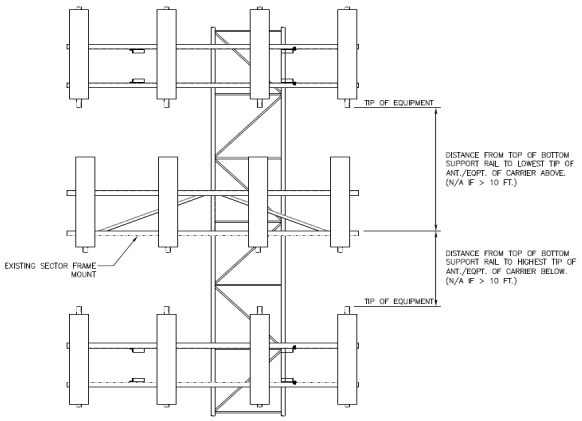
RRFDC-3315-PF-48 = 15x10x19, (1)1.5"O.D., Pic.526

Tower Face Width at Mount Elev. (ft.):	4	Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	2.3

	Enter antenna model. If not labled, enter "Unknown".					Mounting Locations [Units are inches and degrees]			Photos of antennas
Ants. Items	Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (In.)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photo Numbers
Sector A									
Ant_{1a}	B4 RRH2x60-4R	12.00	6.00	36.00	1)1.5"O.D	60.00	-7.50		523
Ant_{1b}	1270-09-5344	12.00	6.00	75.00	(1)1.5"O.D.	33.00	9.00	40.00	521
Ant_{1c}									
Ant_{2a}									
Ant_{2b}	1270-09-5344	12.00	6.00	75.00	(1)1.5"O.D.	33.00	13.00	40.00	521
Ant_{2c}									
Ant_{3a}									
Ant_{3b}	BXA-70063-6CF-EDIN-	11.25	4.00	72.00	(2)1 5/8"	33.00	8.50	40.00	519
Ant_{3c}									
Ant_{4a}									
Ant_{4b}	LNX-8513DS-A1M	12.00	6.00	73.00	(2)1 5/8"	33.00	7.00	40.00	516
Ant_{4c}									
Ant_{5a}									
Ant_{5b}									
Ant_{5c}									
Sector B									
Ant_{1a}	B4 RRH2x60-4R	12.00	6.00	36.00	1)1.5"O.D	60.00	-7.50		523
Ant_{1b}	1270-09-5344	12.00	6.00	75.00	(1)1.5"O.D.	33.00	9.00	160.00	521
Ant_{1c}									
Ant_{2a}									
Ant_{2b}	1270-09-5344	12.00	6.00	75.00	(1)1.5"O.D.	33.00	9.00	160.00	521
Ant_{2c}									
Ant_{3a}									
Ant_{3b}	BXA-70063-6CF-EDIN-	11.25	4.00	72.00	(2)1 5/8"	33.00	8.50	160.00	519
Ant_{3c}									
Ant_{4a}									

Sector D:		Deg		Ant_{4b}	LNX-8513DS-A1M	12.00	6.00	73.00	(2)1 5/8"	33.00	7.00	160.00	516
Climbing		Deg		Ant_{4c}									
Climbing Facility	Corrosion Type:		Good condition.	Ant_{5a}									
	Access:		N/A	Ant_{5b}									
	Condition:		N/A	Ant_{5c}									





Sector C									
Ant_{1a}	B4 RRH2x60-4R	12.00	6.00	36.00	1)1.5"O.D	60.00	-7.50		523
Ant_{1b}	1270-09-5344	12.00	6.00	75.00	(1)1.5"O.D.	33.00	9.00	290.00	521
Ant_{1c}									
Ant_{2a}									
Ant_{2b}	1270-09-5344	12.00	6.00	75.00	(1)1.5"O.D.	33.00	9.00	290.00	521
Ant_{2c}									
Ant_{3a}									
Ant_{3b}	BXA-70063-6CF-EDIN-	11.25	4.00	72.00	(2)1 5/8"	33.00	8.50	290.00	519
Ant_{3c}									
Ant_{4a}									
Ant_{4b}	LNX-8513DS-A1M	12.00	6.00	73.00	(2)1 5/8"	33.00	7.00	290.00	516
Ant_{4c}									
Ant_{5a}									
Ant_{5b}									
Ant_{5c}									
Sector D									
Ant_{1a}									
Ant_{1b}									
Ant_{1c}									
Ant_{2a}									
Ant_{2b}									
Ant_{2c}									
Ant_{3a}									
Ant_{3b}									
Ant_{3c}									
Ant_{4a}									
Ant_{4b}									
Ant_{4c}									
Ant_{5a}									
Ant_{5b}									
Ant_{5c}									

Observed Safety and Structural Issues During the Mount Mapping		
Issue #	Description of Issue	Photo #
1		
2		
3		
4		
5		
6		
7		
8		

Mapping Notes

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

Standard Conditions

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

Updated on 3-03-2020

Antenna Mount Mapping Form (PATENT PENDING)

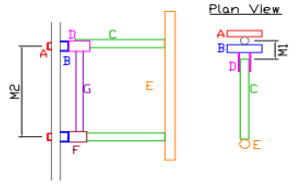
FCC # 1059887

Tower Owner:	American Tower	**Mapping Date:**	4/28/2020
Site Name:	FRANKLIN CT	**Tower Type:**	Guyed Tower
Site Number or ID:	469215	**Tower Height (Ft.):**	
Mapping Contractor:	HighTower Solutions Inc.	**Mount Elevation (Ft.):**	166'4"

Please Insert Sketches of the Antenna Mount

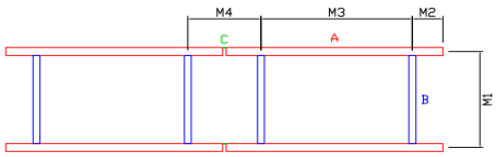
Side Elevation

Plan View



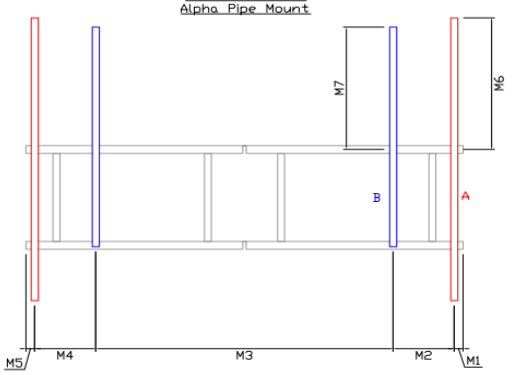
Label	Member Size	Bolt Size
A	11.5"L/1.75"x3.25"x.25"Channel	4-.50"All-Threads
B	12"L/3"x4.5"x.40"Channel	Shared with A
C	2'6.5"L/3"Sq.Tube x.19"	1-.50"Bolt
D	4"Tx7.25"Wx.40"Flat	Welded
E	3'T/3.5"Dia.Pipe x.20"	Welded
F	4"Tx5"Wx.40"Flat	Welded
G	2'.25"T/1.92"Dia.Pipe x.148"	Welded
M1	5"	
M2	2'1.5"	

Front Elevation



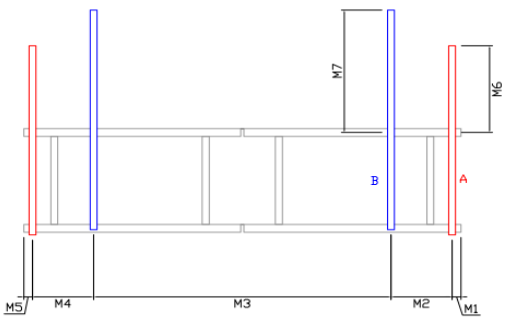
Label	Member Size	Bolt Size
A	6'2.5"L/3"x3"x.20"Angle	2-.62"Bolts
B	3'.25"T/2.38"Dia.Pipe x.15"	Welded
C	5.75"Lx11"Wx.30"Flat	1-.75"Bolt
M1	3'.50"	
M2	11"	
M3	4'4"	
M4	2'	

Front Elevation
Alpha Pipe Mount

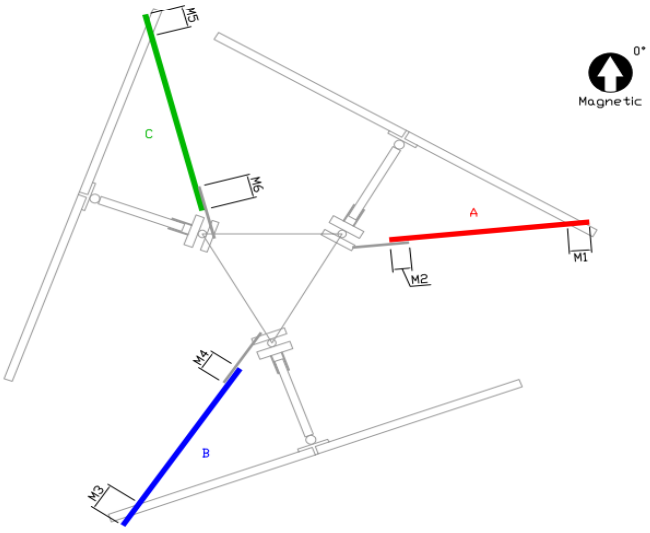


Label	Member Size	Bolt Size
A	9'T/2.38"Dia.Pipe x.15"	1-.50"U-Bolt
B	7'T/2.38"Dia.Pipe x.15"	1-.50"U-Bolt
M1	3"	
M2	1'9"	
M3	8'6"	
M4	1'9"	
M5	3"	
M6	4'2.5"	
M7	3'11"	

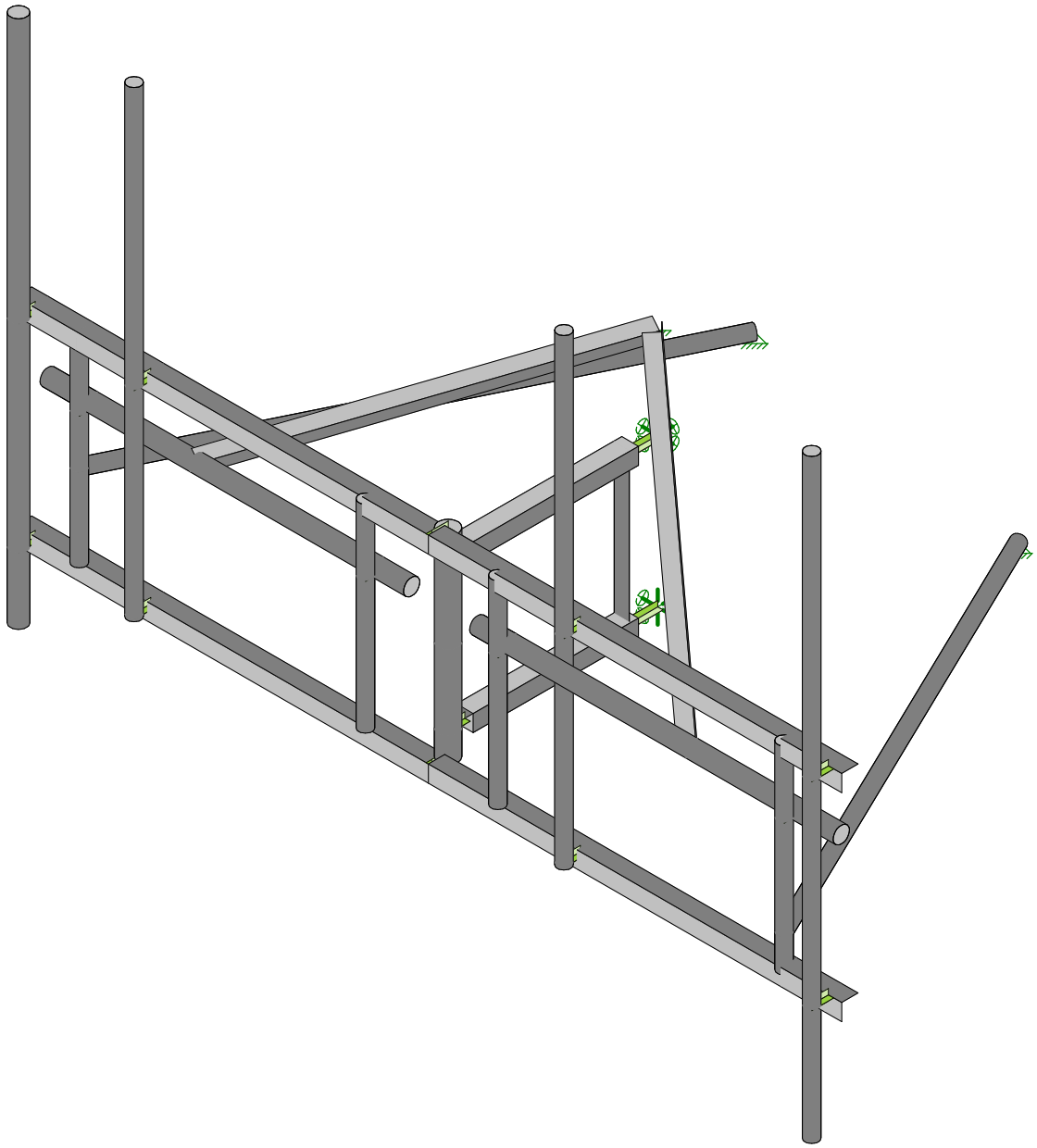
Front Elevation
Beta & Gamma Pipe Mount



Label	Member Size	Bolt Size
A	6'T/2.38"Dia.Pipe x.15"	1-.50"U-Bolt
B	7'T/2.38"Dia.Pipe x.15"	1-.50"U-Bolt
M1	3"	
M2	1'9"	
M3	8'6"	
M4	1'9"	
M5	3"	
M6	2'9"	
M7	3'11"	

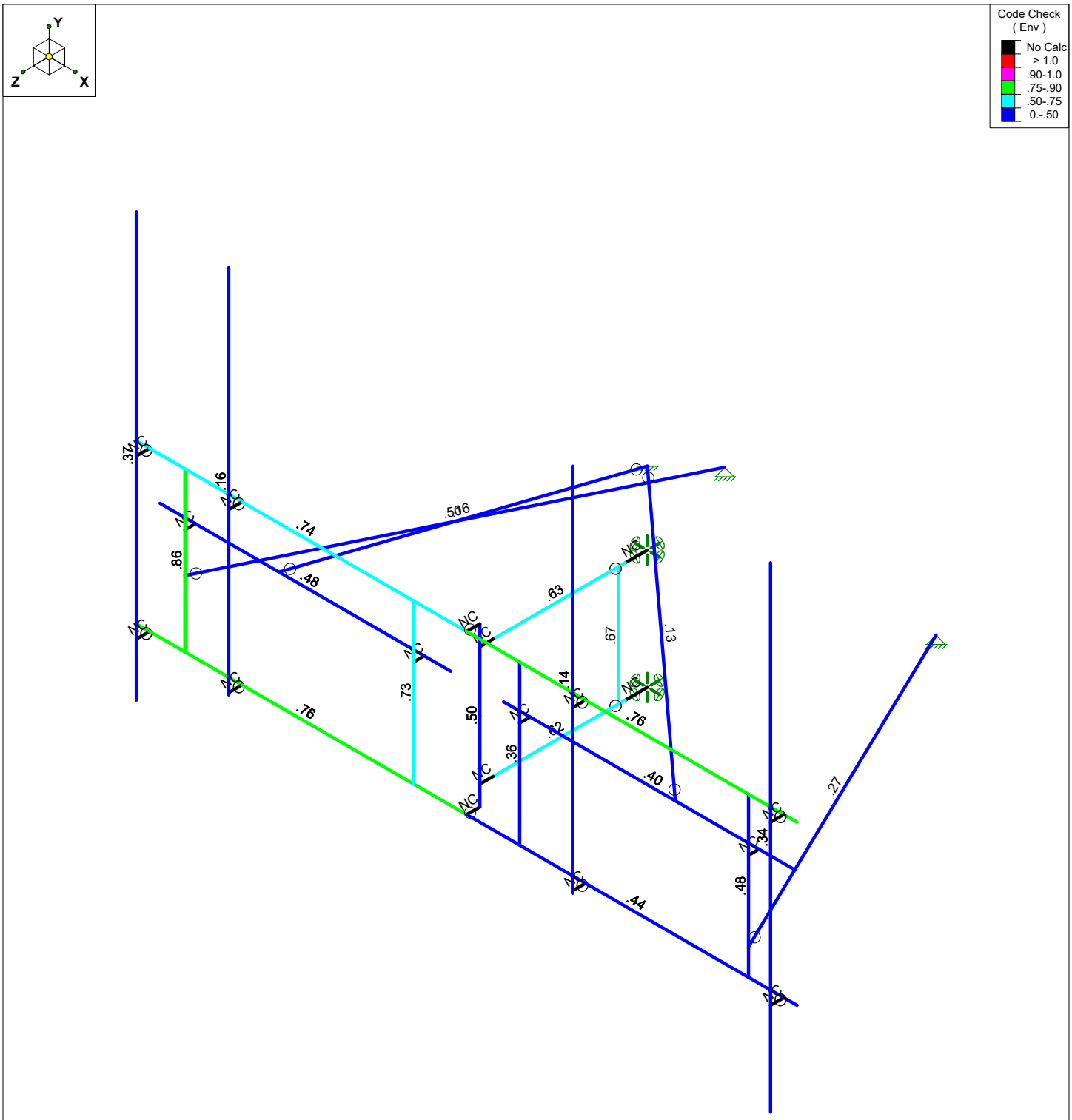


Label	Member Size
A	6'L/2.38"Dia.Pipe x.15"
B	6'L/2.38"Dia.Pipe x.15"
C	6'L/2.38"Dia.Pipe x.15"
M1	8"
M2	10"
M3	6"
M4	6.5"
M5	8"
M6	6.5"



Envelope Only Solution

Colliers Engineering & De...	Antenna Mount Analysis	SK - 1
		Dec 6, 2023 at 1:05 PM
Project # 21777635		5000391689-VZW_MT_LOT_A_H....



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

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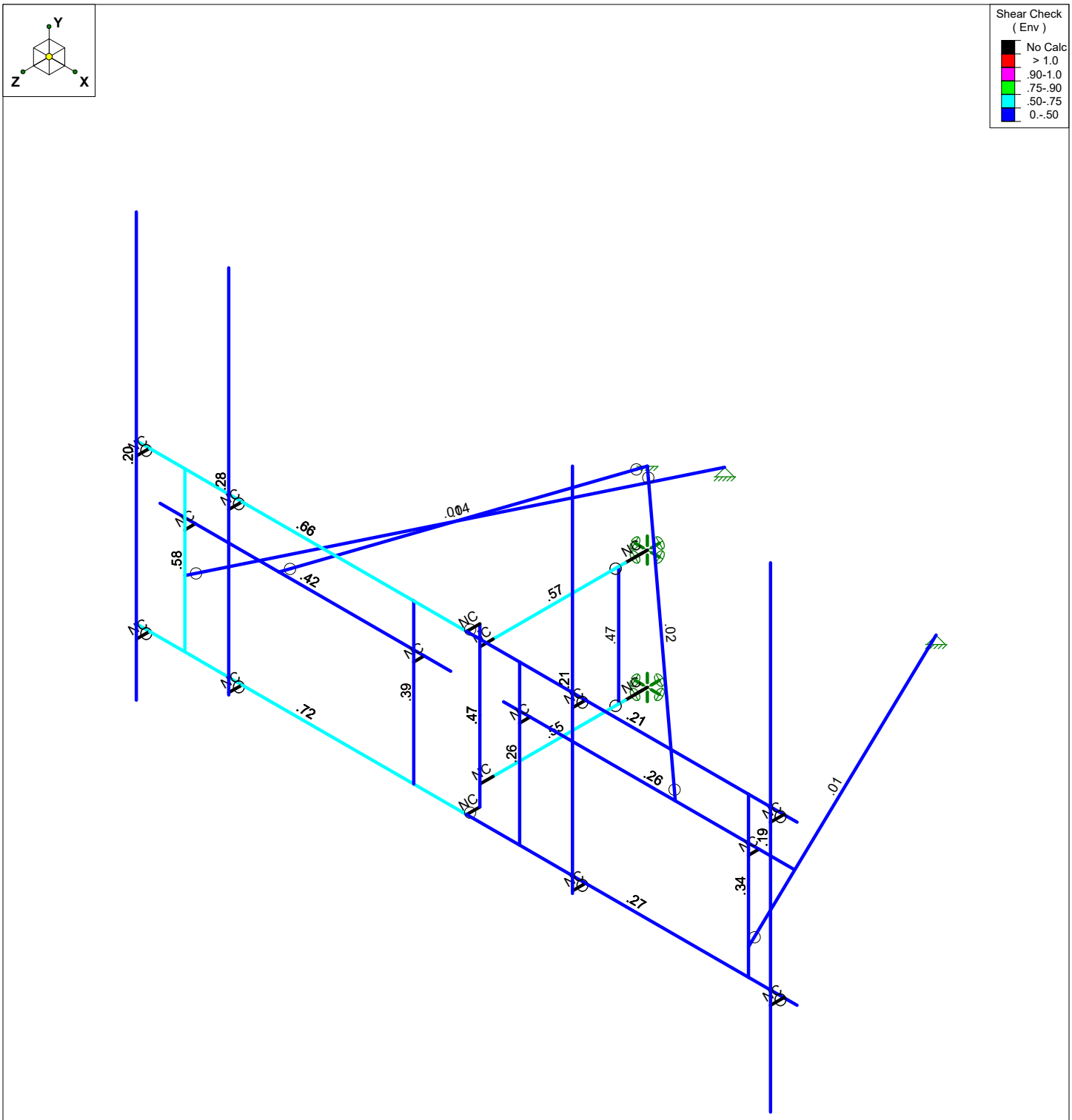
Project # 21777635		5000391689-VZW_MT_LOT_A_H....



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Colliers Engineering & De...	Antenna Mount Analysis	SK - 3
		Dec 6, 2023 at 1:05 PM
Project # 21777635		5000391689-VZW_MT_LOT_A_H....

Basic Load Cases

	BLC Description	Category	X Gr...	Y Gr...	Z Gr...	Joint	Point	Distributed	Area(Member)	Surfa...
1	Antenna D	None					36			
2	Antenna Di	None					36			
3	Antenna Wo (0 Deg)	None					36			
4	Antenna Wo (30 Deg)	None					36			
5	Antenna Wo (60 Deg)	None					36			
6	Antenna Wo (90 Deg)	None					36			
7	Antenna Wo (120 Deg)	None					36			
8	Antenna Wo (150 Deg)	None					36			
9	Antenna Wo (180 Deg)	None					36			
10	Antenna Wo (210 Deg)	None					36			
11	Antenna Wo (240 Deg)	None					36			
12	Antenna Wo (270 Deg)	None					36			
13	Antenna Wo (300 Deg)	None					36			
14	Antenna Wo (330 Deg)	None					36			
15	Antenna Wi (0 Deg)	None					36			
16	Antenna Wi (30 Deg)	None					36			
17	Antenna Wi (60 Deg)	None					36			
18	Antenna Wi (90 Deg)	None					36			
19	Antenna Wi (120 Deg)	None					36			
20	Antenna Wi (150 Deg)	None					36			
21	Antenna Wi (180 Deg)	None					36			
22	Antenna Wi (210 Deg)	None					36			
23	Antenna Wi (240 Deg)	None					36			
24	Antenna Wi (270 Deg)	None					36			
25	Antenna Wi (300 Deg)	None					36			
26	Antenna Wi (330 Deg)	None					36			
27	Antenna Wm (0 Deg)	None					36			
28	Antenna Wm (30 Deg)	None					36			
29	Antenna Wm (60 Deg)	None					36			
30	Antenna Wm (90 Deg)	None					36			
31	Antenna Wm (120 Deg)	None					36			
32	Antenna Wm (150 Deg)	None					36			
33	Antenna Wm (180 Deg)	None					36			
34	Antenna Wm (210 Deg)	None					36			
35	Antenna Wm (240 Deg)	None					36			
36	Antenna Wm (270 Deg)	None					36			
37	Antenna Wm (300 Deg)	None					36			
38	Antenna Wm (330 Deg)	None					36			
39	Structure D	None		-1						
40	Structure Di	None						22		
41	Structure Wo (0 Deg)	None						44		
42	Structure Wo (30 Deg)	None						44		
43	Structure Wo (60 Deg)	None						44		
44	Structure Wo (90 Deg)	None						44		
45	Structure Wo (120 Deg)	None						44		
46	Structure Wo (150 Deg)	None						44		
47	Structure Wo (180 Deg)	None						44		
48	Structure Wo (210 Deg)	None						44		
49	Structure Wo (240 Deg)	None						44		
50	Structure Wo (270 Deg)	None						44		
51	Structure Wo (300 Deg)	None						44		
52	Structure Wo (330 Deg)	None						44		
53	Structure Wi (0 Deg)	None						44		
54	Structure Wi (30 Deg)	None						44		
55	Structure Wi (60 Deg)	None						44		
56	Structure Wi (90 Deg)	None						44		

Basic Load Cases (Continued)

	BLC Description	Category	X Gr...	Y Gr...	Z Gr...	Joint	Point	Distributed	Area(Member)	Surfa...
57	Structure Wi (120 Deg)	None						44		
58	Structure Wi (150 Deg)	None						44		
59	Structure Wi (180 Deg)	None						44		
60	Structure Wi (210 Deg)	None						44		
61	Structure Wi (240 Deg)	None						44		
62	Structure Wi (270 Deg)	None						44		
63	Structure Wi (300 Deg)	None						44		
64	Structure Wi (330 Deg)	None						44		
65	Structure Wm (0 Deg)	None						44		
66	Structure Wm (30 Deg)	None						44		
67	Structure Wm (60 Deg)	None						44		
68	Structure Wm (90 Deg)	None						44		
69	Structure Wm (120 Deg)	None						44		
70	Structure Wm (150 Deg)	None						44		
71	Structure Wm (180 Deg)	None						44		
72	Structure Wm (210 Deg)	None						44		
73	Structure Wm (240 Deg)	None						44		
74	Structure Wm (270 Deg)	None						44		
75	Structure Wm (300 Deg)	None						44		
76	Structure Wm (330 Deg)	None						44		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			
81	Antenna Ev	None					36			
82	Antenna Eh (0 Deg)	None					24			
83	Antenna Eh (90 Deg)	None					24			
84	Structure Ev	ELY		-.0416						
85	Structure Eh (0 Deg)	ELZ			-.104					
86	Structure Eh (90 Deg)	ELX	.104							

Load Combinations

	Description	S...	PDel...	SR...	BLC	Fa...	BLC	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.2D+1.0Wo (0 Deg)	Yes	Y		1	1.2	39	1.2	3	1	41	1												
2	1.2D+1.0Wo (30 Deg)	Yes	Y		1	1.2	39	1.2	4	1	42	1												
3	1.2D+1.0Wo (60 Deg)	Yes	Y		1	1.2	39	1.2	5	1	43	1												
4	1.2D+1.0Wo (90 Deg)	Yes	Y		1	1.2	39	1.2	6	1	44	1												
5	1.2D+1.0Wo (120 De...	Yes	Y		1	1.2	39	1.2	7	1	45	1												
6	1.2D+1.0Wo (150 De...	Yes	Y		1	1.2	39	1.2	8	1	46	1												
7	1.2D+1.0Wo (180 De...	Yes	Y		1	1.2	39	1.2	9	1	47	1												
8	1.2D+1.0Wo (210 De...	Yes	Y		1	1.2	39	1.2	10	1	48	1												
9	1.2D+1.0Wo (240 De...	Yes	Y		1	1.2	39	1.2	11	1	49	1												
10	1.2D+1.0Wo (270 De...	Yes	Y		1	1.2	39	1.2	12	1	50	1												
11	1.2D+1.0Wo (300 De...	Yes	Y		1	1.2	39	1.2	13	1	51	1												
12	1.2D+1.0Wo (330 De...	Yes	Y		1	1.2	39	1.2	14	1	52	1												
13	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1								
14	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1								
15	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1								
16	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1								
17	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1								
18	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1								
19	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1								
20	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1								
21	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1								
22	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1								

Load Combinations (Continued)

	Description	S...	PDel...	SR...	BLC	Fa...	BLC	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
23	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1								
24	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1								
25	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1										
26	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1										
27	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1										
28	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1										
29	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1										
30	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1										
31	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1										
32	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1										
33	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1										
34	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1										
35	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1										
36	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1										
37	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1										
38	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1										
39	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1										
40	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1										
41	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1										
42	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1										
43	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1										
44	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1										
45	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1										
46	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1										
47	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1										
48	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	38	1	76	1										
49	1.2D + 1.5Lv1	Yes	Y		1	1.2	39	1.2	79	1.5														
50	1.2D + 1.5Lv2	Yes	Y		1	1.2	39	1.2	80	1.5														
51	1.4D	Yes	Y		1	1.4	39	1.4																
52	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	1	83		ELZ	1	E...					
53	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.866	83	.5	ELZ	.866	E...	.5				
54	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.5	83	.866	ELZ	.5	E...	.866				
55	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82		83	1	ELZ		E...	1				
56	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.5	83	.866	ELZ	-.5	E...	.866				
57	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.8...	83	.5	ELZ	-.8...	E...	.5				
58	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-1	83		ELZ	-1	E...					
59	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.8...	83	-.5	ELZ	-.8...	E...	-.5				
60	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.5	83	-.8...	ELZ	-.5	E...	-.8...				
61	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82		83	-1	ELZ		E...	-1				
62	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.5	83	-.8...	ELZ	.5	E...	-.8...				
63	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.866	83	-.5	ELZ	.866	E...	-.5				
64	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	1	83		ELZ	1	E...					
65	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.866	83	.5	ELZ	.866	E...	.5				
66	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.5	83	.866	ELZ	.5	E...	.866				
67	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82		83	1	ELZ		E...	1				
68	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.5	83	.866	ELZ	-.5	E...	.866				
69	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.8...	83	.5	ELZ	-.8...	E...	.5				
70	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-1	83		ELZ	-1	E...					
71	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.8...	83	-.5	ELZ	-.8...	E...	-.5				
72	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.5	83	-.8...	ELZ	-.5	E...	-.8...				
73	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82		83	-1	ELZ		E...	-1				
74	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.5	83	-.8...	ELZ	.5	E...	-.8...				
75	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.866	83	-.5	ELZ	.866	E...	-.5				

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Desig...	A [in2]	Iyy [i...	Izz [i...	J [in4]
1	Mount Pipe	PIPE_2.0	None	None	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Face Horizontal	L3X3X3	None	None	A36 Gr.36	Typical	1.09	.948	.948	.0136
3	Face Vertical	PIPE_2.0	None	None	A53 Gr. B	Typical	1.02	.627	.627	1.25
4	Standoff Horizontal	HSS3X3X3	None	None	A500 Gr. B 46	Typical	1.89	2.46	2.46	4.03
5	Standoff Vertical	PIPE_1.5	None	None	A53 Gr. B	Typical	.749	.293	.293	.586
6	Standoff Diagonal	SR_0.75	None	None	A36 Gr.36	Typical	.4418	.0155	.0155	.0311
7	Mod Tieback	PIPE_2.0	None	None	A53 Gr. B	Typical	1.02	.627	.627	1.25
8	Mast Pipe	PIPE_3.0	Column	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
9	Mod Face Horizontal	PIPE_2.5	None	None	A53 Gr. B	Typical	1.61	1.45	1.45	2.89
10	Mod V-Bracing Kit	L2.5x2.5x4	None	None	A36 Gr.36	Typical	1.19	.692	.692	.0261
11	Mod Mount Pipe	PIPE_2.5	Column	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89

Hot Rolled Steel Properties

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

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Ru...
1	M1	N2	N1		180	Face Horizontal	None	None	A36 Gr.36	Typical
2	M2	N1	N3		180	Face Horizontal	None	None	A36 Gr.36	Typical
3	M7A	N17	N16		180	Face Horizontal	None	None	A36 Gr.36	Typical
4	M8	N16	N18		180	Face Horizontal	None	None	A36 Gr.36	Typical
5	M13	N7	N22			Face Vertical	None	None	A53 Gr. B	Typical
6	M14	N6	N21			Face Vertical	None	None	A53 Gr. B	Typical
7	M15	N5	N20			Face Vertical	None	None	A53 Gr. B	Typical
8	M16	N4	N19			Face Vertical	None	None	A53 Gr. B	Typical
9	M17	N16	N32			RIGID	None	None	RIGID	Typical
10	M18	N1	N31			RIGID	None	None	RIGID	Typical
11	M28	N31	N32			Mast Pipe	Column	Pipe	A53 Gr. B	Typical
12	OVP1	N52A	N49		90	Standoff Horizontal	None	None	A500 Gr...	Typical
13	M31	N49	N53B		90	RIGID	None	None	RIGID	Typical
14	M28B	N53	N50		90	Standoff Horizontal	None	None	A500 Gr...	Typical
15	M29A	N50	N52B		90	RIGID	None	None	RIGID	Typical
16	M30	N58	N52A			RIGID	None	None	RIGID	Typical
17	M31A	N59	N53			RIGID	None	None	RIGID	Typical
18	OVP	N61	N60			Standoff Vertical	None	None	A53 Gr. B	Typical
19	M19	N42	N34			RIGID	None	None	RIGID	Typical
20	M20	N43	N35			RIGID	None	None	RIGID	Typical
21	M21	N41	N33			RIGID	None	None	RIGID	Typical
22	M22	N40	N32A			RIGID	None	None	RIGID	Typical
23	M23	N38	N30			RIGID	None	None	RIGID	Typical
24	M24	N39	N31A			RIGID	None	None	RIGID	Typical
25	M25	N36	N28			RIGID	None	None	RIGID	Typical
26	M26	N37	N29			RIGID	None	None	RIGID	Typical
27	MP4A	N45	N47			Mod Mount Pipe	Column	Pipe	A53 Gr. B	Typical
28	MP1A	N44	N46			Mount Pipe	None	None	A53 Gr. B	Typical
29	MP3A	N49A	N51A			Mount Pipe	None	None	A53 Gr. B	Typical
30	MP2A	N48	N50A			Mount Pipe	None	None	A53 Gr. B	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Ru...
31	M31B	N52	N68			Mod Tieback	None	None	A53 Gr. B	Typical
32	M36	N54	N78			Mod Face Horizon...	None	None	A53 Gr. B	Typical
33	M37	N64	N66			Mod V-Bracing Kit	None	None	A36 Gr.36	Typical
34	M38	N65	N66		270	Mod V-Bracing Kit	None	None	A36 Gr.36	Typical
35	M39	N68A	N72			RIGID	None	None	RIGID	Typical
36	M40	N69	N73			RIGID	None	None	RIGID	Typical
37	M41	N70	N74			RIGID	None	None	RIGID	Typical
38	M42	N71	N75			RIGID	None	None	RIGID	Typical
39	M43	N76	N77			Mod Tieback	None	None	A53 Gr. B	Typical
40	M44	N77A	N55			Mod Face Horizon...	None	None	A53 Gr. B	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ratio Opti...	Analysis ...	Inactive	Seismi...
1	M1						Yes	** NA **			None
2	M2						Yes	** NA **			None
3	M7A						Yes	** NA **			None
4	M8						Yes	** NA **			None
5	M13						Yes	** NA **			None
6	M14						Yes	** NA **			None
7	M15						Yes	** NA **			None
8	M16						Yes	** NA **			None
9	M17		OOOOOO				Yes	** NA **			None
10	M18		OOOOOO				Yes	** NA **			None
11	M28						Yes	** NA **			None
12	OVP1		OOOOOO				Yes	** NA **			None
13	M31						Yes	** NA **			None
14	M28B		OOOOOO				Yes	** NA **			None
15	M29A						Yes	** NA **			None
16	M30						Yes	** NA **			None
17	M31A						Yes	** NA **			None
18	OVP						Yes	** NA **			None
19	M19	OOOXOX					Yes	** NA **			None
20	M20	OOOXOX					Yes	** NA **			None
21	M21	OOOXOX					Yes	** NA **			None
22	M22	OOOXOX					Yes	** NA **			None
23	M23	OOOXOX					Yes	** NA **			None
24	M24	OOOXOX					Yes	** NA **			None
25	M25	OOOXOX					Yes	** NA **			None
26	M26	OOOXOX					Yes	** NA **			None
27	MP4A						Yes	** NA **			None
28	MP1A						Yes	** NA **			None
29	MP3A						Yes	** NA **			None
30	MP2A						Yes	** NA **			None
31	M31B	OOOOXO					Yes	** NA **			None
32	M36						Yes	** NA **			None
33	M37	BenPIN	BenPIN				Yes	** NA **			None
34	M38	BenPIN	BenPIN				Yes	** NA **			None
35	M39						Yes	** NA **			None
36	M40						Yes	** NA **			None
37	M41						Yes	** NA **			None
38	M42						Yes	** NA **			None
39	M43	OOOOXO					Yes	** NA **			None
40	M44						Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	Y	-31.65	1.5
2	MP4A	My	-.0237	1.5
3	MP4A	Mz	.0185	1.5
4	MP4A	Y	-31.65	5.5
5	MP4A	My	-.0237	5.5
6	MP4A	Mz	.0185	5.5
7	MP4A	Y	-31.65	1.5
8	MP4A	My	-.0237	1.5
9	MP4A	Mz	-.0185	1.5
10	MP4A	Y	-31.65	5.5
11	MP4A	My	-.0237	5.5
12	MP4A	Mz	-.0185	5.5
13	MP2A	Y	-28.65	2.21
14	MP2A	My	-.0215	2.21
15	MP2A	Mz	0	2.21
16	MP2A	Y	-28.65	4.21
17	MP2A	My	-.0215	4.21
18	MP2A	Mz	0	4.21
19	MP4A	Y	-10.4	5
20	MP4A	My	.0052	5
21	MP4A	Mz	0	5
22	OVP	Y	-32	1.5
23	OVP	My	0	1.5
24	OVP	Mz	0	1.5
25	MP3A	Y	-74.7	3
26	MP3A	My	.0374	3
27	MP3A	Mz	0	3
28	MP4A	Y	-79.1	3
29	MP4A	My	.0396	3
30	MP4A	Mz	0	3
31	MP1A	Y	-13.15	1.5
32	MP1A	My	-.0099	1.5
33	MP1A	Mz	0	1.5
34	MP1A	Y	-13.15	5.5
35	MP1A	My	-.0099	5.5
36	MP1A	Mz	0	5.5

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	Y	-71.4345	1.5
2	MP4A	My	-.0536	1.5
3	MP4A	Mz	.0417	1.5
4	MP4A	Y	-71.4345	5.5
5	MP4A	My	-.0536	5.5
6	MP4A	Mz	.0417	5.5
7	MP4A	Y	-71.4345	1.5
8	MP4A	My	-.0536	1.5
9	MP4A	Mz	-.0417	1.5
10	MP4A	Y	-71.4345	5.5
11	MP4A	My	-.0536	5.5
12	MP4A	Mz	-.0417	5.5
13	MP2A	Y	-30.4277	2.21
14	MP2A	My	-.0228	2.21
15	MP2A	Mz	0	2.21
16	MP2A	Y	-30.4277	4.21

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP2A	My	-.0228	4.21
18	MP2A	Mz	0	4.21
19	MP4A	Y	-11.0059	5
20	MP4A	My	.0055	5
21	MP4A	Mz	0	5
22	OVP	Y	-89.7837	1.5
23	OVP	My	0	1.5
24	OVP	Mz	0	1.5
25	MP3A	Y	-45.8866	3
26	MP3A	My	.0229	3
27	MP3A	Mz	0	3
28	MP4A	Y	-46.3723	3
29	MP4A	My	.0232	3
30	MP4A	Mz	0	3
31	MP1A	Y	-62.4518	1.5
32	MP1A	My	-.0468	1.5
33	MP1A	Mz	0	1.5
34	MP1A	Y	-62.4518	5.5
35	MP1A	My	-.0468	5.5
36	MP1A	Mz	0	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	1.5
2	MP4A	Z	-215.793	1.5
3	MP4A	Mx	-.1259	1.5
4	MP4A	X	0	5.5
5	MP4A	Z	-215.793	5.5
6	MP4A	Mx	-.1259	5.5
7	MP4A	X	0	1.5
8	MP4A	Z	-215.793	1.5
9	MP4A	Mx	.1259	1.5
10	MP4A	X	0	5.5
11	MP4A	Z	-215.793	5.5
12	MP4A	Mx	.1259	5.5
13	MP2A	X	0	2.21
14	MP2A	Z	-89.776	2.21
15	MP2A	Mx	0	2.21
16	MP2A	X	0	4.21
17	MP2A	Z	-89.776	4.21
18	MP2A	Mx	0	4.21
19	MP4A	X	0	5
20	MP4A	Z	-17.529	5
21	MP4A	Mx	0	5
22	OVP	X	0	1.5
23	OVP	Z	-141.178	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	0	3
26	MP3A	Z	-73.431	3
27	MP3A	Mx	0	3
28	MP4A	X	0	3
29	MP4A	Z	-88.591	3
30	MP4A	Mx	0	3
31	MP1A	X	0	1.5
32	MP1A	Z	-193.527	1.5
33	MP1A	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
34	MP1A	X	0	5.5
35	MP1A	Z	-193.527	5.5
36	MP1A	Mx	0	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	98.639	1.5
2	MP4A	Z	-170.848	1.5
3	MP4A	Mx	-.1736	1.5
4	MP4A	X	98.639	5.5
5	MP4A	Z	-170.848	5.5
6	MP4A	Mx	-.1736	5.5
7	MP4A	X	98.639	1.5
8	MP4A	Z	-170.848	1.5
9	MP4A	Mx	.0257	1.5
10	MP4A	X	98.639	5.5
11	MP4A	Z	-170.848	5.5
12	MP4A	Mx	.0257	5.5
13	MP2A	X	37.988	2.21
14	MP2A	Z	-65.797	2.21
15	MP2A	Mx	-.0285	2.21
16	MP2A	X	37.988	4.21
17	MP2A	Z	-65.797	4.21
18	MP2A	Mx	-.0285	4.21
19	MP4A	X	8.089	5
20	MP4A	Z	-14.011	5
21	MP4A	Mx	.004	5
22	OVP	X	61.588	1.5
23	OVP	Z	-106.673	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	33.696	3
26	MP3A	Z	-58.362	3
27	MP3A	Mx	.0168	3
28	MP4A	X	40.772	3
29	MP4A	Z	-70.619	3
30	MP4A	Mx	.0204	3
31	MP1A	X	88.578	1.5
32	MP1A	Z	-153.421	1.5
33	MP1A	Mx	-.0664	1.5
34	MP1A	X	88.578	5.5
35	MP1A	Z	-153.421	5.5
36	MP1A	Mx	-.0664	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	138.777	1.5
2	MP4A	Z	-80.123	1.5
3	MP4A	Mx	-.1508	1.5
4	MP4A	X	138.777	5.5
5	MP4A	Z	-80.123	5.5
6	MP4A	Mx	-.1508	5.5
7	MP4A	X	138.777	1.5
8	MP4A	Z	-80.123	1.5
9	MP4A	Mx	-.0573	1.5
10	MP4A	X	138.777	5.5
11	MP4A	Z	-80.123	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
12	MP4A	Mx	-.0573	5.5
13	MP2A	X	41.896	2.21
14	MP2A	Z	-24.188	2.21
15	MP2A	Mx	-.0314	2.21
16	MP2A	X	41.896	4.21
17	MP2A	Z	-24.188	4.21
18	MP2A	Mx	-.0314	4.21
19	MP4A	X	11.672	5
20	MP4A	Z	-6.739	5
21	MP4A	Mx	.0058	5
22	OVP	X	98.878	1.5
23	OVP	Z	-57.087	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	47.9	3
26	MP3A	Z	-27.655	3
27	MP3A	Mx	.0239	3
28	MP4A	X	58.414	3
29	MP4A	Z	-33.725	3
30	MP4A	Mx	.0292	3
31	MP1A	X	125.064	1.5
32	MP1A	Z	-72.206	1.5
33	MP1A	Mx	-.0938	1.5
34	MP1A	X	125.064	5.5
35	MP1A	Z	-72.206	5.5
36	MP1A	Mx	-.0938	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	141.73	1.5
2	MP4A	Z	0	1.5
3	MP4A	Mx	-.1063	1.5
4	MP4A	X	141.73	5.5
5	MP4A	Z	0	5.5
6	MP4A	Mx	-.1063	5.5
7	MP4A	X	141.73	1.5
8	MP4A	Z	0	1.5
9	MP4A	Mx	-.1063	1.5
10	MP4A	X	141.73	5.5
11	MP4A	Z	0	5.5
12	MP4A	Mx	-.1063	5.5
13	MP2A	X	34.577	2.21
14	MP2A	Z	0	2.21
15	MP2A	Mx	-.0259	2.21
16	MP2A	X	34.577	4.21
17	MP2A	Z	0	4.21
18	MP2A	Mx	-.0259	4.21
19	MP4A	X	12.128	5
20	MP4A	Z	0	5
21	MP4A	Mx	.0061	5
22	OVP	X	123.175	1.5
23	OVP	Z	0	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	49.27	3
26	MP3A	Z	0	3
27	MP3A	Mx	.0246	3
28	MP4A	X	60.403	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP4A	Z	0	3
30	MP4A	Mx	.0302	3
31	MP1A	X	128.04	1.5
32	MP1A	Z	0	1.5
33	MP1A	Mx	-.096	1.5
34	MP1A	X	128.04	5.5
35	MP1A	Z	0	5.5
36	MP1A	Mx	-.096	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	138.777	1.5
2	MP4A	Z	80.123	1.5
3	MP4A	Mx	-.0573	1.5
4	MP4A	X	138.777	5.5
5	MP4A	Z	80.123	5.5
6	MP4A	Mx	-.0573	5.5
7	MP4A	X	138.777	1.5
8	MP4A	Z	80.123	1.5
9	MP4A	Mx	-.1508	1.5
10	MP4A	X	138.777	5.5
11	MP4A	Z	80.123	5.5
12	MP4A	Mx	-.1508	5.5
13	MP2A	X	41.896	2.21
14	MP2A	Z	24.188	2.21
15	MP2A	Mx	-.0314	2.21
16	MP2A	X	41.896	4.21
17	MP2A	Z	24.188	4.21
18	MP2A	Mx	-.0314	4.21
19	MP4A	X	11.672	5
20	MP4A	Z	6.739	5
21	MP4A	Mx	.0058	5
22	OVP	X	122.263	1.5
23	OVP	Z	70.589	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	47.9	3
26	MP3A	Z	27.655	3
27	MP3A	Mx	.0239	3
28	MP4A	X	58.414	3
29	MP4A	Z	33.725	3
30	MP4A	Mx	.0292	3
31	MP1A	X	125.064	1.5
32	MP1A	Z	72.206	1.5
33	MP1A	Mx	-.0938	1.5
34	MP1A	X	125.064	5.5
35	MP1A	Z	72.206	5.5
36	MP1A	Mx	-.0938	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	98.639	1.5
2	MP4A	Z	170.848	1.5
3	MP4A	Mx	.0257	1.5
4	MP4A	X	98.639	5.5
5	MP4A	Z	170.848	5.5
6	MP4A	Mx	.0257	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
7	MP4A	X	98.639	1.5
8	MP4A	Z	170.848	1.5
9	MP4A	Mx	-.1736	1.5
10	MP4A	X	98.639	5.5
11	MP4A	Z	170.848	5.5
12	MP4A	Mx	-.1736	5.5
13	MP2A	X	37.988	2.21
14	MP2A	Z	65.797	2.21
15	MP2A	Mx	-.0285	2.21
16	MP2A	X	37.988	4.21
17	MP2A	Z	65.797	4.21
18	MP2A	Mx	-.0285	4.21
19	MP4A	X	8.089	5
20	MP4A	Z	14.011	5
21	MP4A	Mx	.004	5
22	OVP	X	75.089	1.5
23	OVP	Z	130.059	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	33.696	3
26	MP3A	Z	58.362	3
27	MP3A	Mx	.0168	3
28	MP4A	X	40.772	3
29	MP4A	Z	70.619	3
30	MP4A	Mx	.0204	3
31	MP1A	X	88.578	1.5
32	MP1A	Z	153.421	1.5
33	MP1A	Mx	-.0664	1.5
34	MP1A	X	88.578	5.5
35	MP1A	Z	153.421	5.5
36	MP1A	Mx	-.0664	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	1.5
2	MP4A	Z	215.793	1.5
3	MP4A	Mx	.1259	1.5
4	MP4A	X	0	5.5
5	MP4A	Z	215.793	5.5
6	MP4A	Mx	.1259	5.5
7	MP4A	X	0	1.5
8	MP4A	Z	215.793	1.5
9	MP4A	Mx	-.1259	1.5
10	MP4A	X	0	5.5
11	MP4A	Z	215.793	5.5
12	MP4A	Mx	-.1259	5.5
13	MP2A	X	0	2.21
14	MP2A	Z	89.776	2.21
15	MP2A	Mx	0	2.21
16	MP2A	X	0	4.21
17	MP2A	Z	89.776	4.21
18	MP2A	Mx	0	4.21
19	MP4A	X	0	5
20	MP4A	Z	17.529	5
21	MP4A	Mx	0	5
22	OVP	X	0	1.5
23	OVP	Z	141.178	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
24	OVP	Mx	0	1.5
25	MP3A	X	0	3
26	MP3A	Z	73.431	3
27	MP3A	Mx	0	3
28	MP4A	X	0	3
29	MP4A	Z	88.591	3
30	MP4A	Mx	0	3
31	MP1A	X	0	1.5
32	MP1A	Z	193.527	1.5
33	MP1A	Mx	0	1.5
34	MP1A	X	0	5.5
35	MP1A	Z	193.527	5.5
36	MP1A	Mx	0	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-98.639	1.5
2	MP4A	Z	170.848	1.5
3	MP4A	Mx	.1736	1.5
4	MP4A	X	-98.639	5.5
5	MP4A	Z	170.848	5.5
6	MP4A	Mx	.1736	5.5
7	MP4A	X	-98.639	1.5
8	MP4A	Z	170.848	1.5
9	MP4A	Mx	-.0257	1.5
10	MP4A	X	-98.639	5.5
11	MP4A	Z	170.848	5.5
12	MP4A	Mx	-.0257	5.5
13	MP2A	X	-37.988	2.21
14	MP2A	Z	65.797	2.21
15	MP2A	Mx	.0285	2.21
16	MP2A	X	-37.988	4.21
17	MP2A	Z	65.797	4.21
18	MP2A	Mx	.0285	4.21
19	MP4A	X	-8.089	5
20	MP4A	Z	14.011	5
21	MP4A	Mx	-.004	5
22	OVP	X	-61.588	1.5
23	OVP	Z	106.673	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	-33.696	3
26	MP3A	Z	58.362	3
27	MP3A	Mx	-.0168	3
28	MP4A	X	-40.772	3
29	MP4A	Z	70.619	3
30	MP4A	Mx	-.0204	3
31	MP1A	X	-88.578	1.5
32	MP1A	Z	153.421	1.5
33	MP1A	Mx	.0664	1.5
34	MP1A	X	-88.578	5.5
35	MP1A	Z	153.421	5.5
36	MP1A	Mx	.0664	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-138.777	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
2	MP4A	Z	80.123	1.5
3	MP4A	Mx	.1508	1.5
4	MP4A	X	-138.777	5.5
5	MP4A	Z	80.123	5.5
6	MP4A	Mx	.1508	5.5
7	MP4A	X	-138.777	1.5
8	MP4A	Z	80.123	1.5
9	MP4A	Mx	.0573	1.5
10	MP4A	X	-138.777	5.5
11	MP4A	Z	80.123	5.5
12	MP4A	Mx	.0573	5.5
13	MP2A	X	-41.896	2.21
14	MP2A	Z	24.188	2.21
15	MP2A	Mx	.0314	2.21
16	MP2A	X	-41.896	4.21
17	MP2A	Z	24.188	4.21
18	MP2A	Mx	.0314	4.21
19	MP4A	X	-11.672	5
20	MP4A	Z	6.739	5
21	MP4A	Mx	-.0058	5
22	OVP	X	-98.878	1.5
23	OVP	Z	57.087	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	-47.9	3
26	MP3A	Z	27.655	3
27	MP3A	Mx	-.0239	3
28	MP4A	X	-58.414	3
29	MP4A	Z	33.725	3
30	MP4A	Mx	-.0292	3
31	MP1A	X	-125.064	1.5
32	MP1A	Z	72.206	1.5
33	MP1A	Mx	.0938	1.5
34	MP1A	X	-125.064	5.5
35	MP1A	Z	72.206	5.5
36	MP1A	Mx	.0938	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-141.73	1.5
2	MP4A	Z	0	1.5
3	MP4A	Mx	.1063	1.5
4	MP4A	X	-141.73	5.5
5	MP4A	Z	0	5.5
6	MP4A	Mx	.1063	5.5
7	MP4A	X	-141.73	1.5
8	MP4A	Z	0	1.5
9	MP4A	Mx	.1063	1.5
10	MP4A	X	-141.73	5.5
11	MP4A	Z	0	5.5
12	MP4A	Mx	.1063	5.5
13	MP2A	X	-34.577	2.21
14	MP2A	Z	0	2.21
15	MP2A	Mx	.0259	2.21
16	MP2A	X	-34.577	4.21
17	MP2A	Z	0	4.21
18	MP2A	Mx	.0259	4.21

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
19	MP4A	X	-12.128	5
20	MP4A	Z	0	5
21	MP4A	Mx	-.0061	5
22	OVP	X	-123.175	1.5
23	OVP	Z	0	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	-49.27	3
26	MP3A	Z	0	3
27	MP3A	Mx	-.0246	3
28	MP4A	X	-60.403	3
29	MP4A	Z	0	3
30	MP4A	Mx	-.0302	3
31	MP1A	X	-128.04	1.5
32	MP1A	Z	0	1.5
33	MP1A	Mx	.096	1.5
34	MP1A	X	-128.04	5.5
35	MP1A	Z	0	5.5
36	MP1A	Mx	.096	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-138.777	1.5
2	MP4A	Z	-80.123	1.5
3	MP4A	Mx	.0573	1.5
4	MP4A	X	-138.777	5.5
5	MP4A	Z	-80.123	5.5
6	MP4A	Mx	.0573	5.5
7	MP4A	X	-138.777	1.5
8	MP4A	Z	-80.123	1.5
9	MP4A	Mx	.1508	1.5
10	MP4A	X	-138.777	5.5
11	MP4A	Z	-80.123	5.5
12	MP4A	Mx	.1508	5.5
13	MP2A	X	-41.896	2.21
14	MP2A	Z	-24.188	2.21
15	MP2A	Mx	.0314	2.21
16	MP2A	X	-41.896	4.21
17	MP2A	Z	-24.188	4.21
18	MP2A	Mx	.0314	4.21
19	MP4A	X	-11.672	5
20	MP4A	Z	-6.739	5
21	MP4A	Mx	-.0058	5
22	OVP	X	-122.263	1.5
23	OVP	Z	-70.589	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	-47.9	3
26	MP3A	Z	-27.655	3
27	MP3A	Mx	-.0239	3
28	MP4A	X	-58.414	3
29	MP4A	Z	-33.725	3
30	MP4A	Mx	-.0292	3
31	MP1A	X	-125.064	1.5
32	MP1A	Z	-72.206	1.5
33	MP1A	Mx	.0938	1.5
34	MP1A	X	-125.064	5.5
35	MP1A	Z	-72.206	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
36	MP1A	Mx	.0938	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-98.639	1.5
2	MP4A	Z	-170.848	1.5
3	MP4A	Mx	-.0257	1.5
4	MP4A	X	-98.639	5.5
5	MP4A	Z	-170.848	5.5
6	MP4A	Mx	-.0257	5.5
7	MP4A	X	-98.639	1.5
8	MP4A	Z	-170.848	1.5
9	MP4A	Mx	.1736	1.5
10	MP4A	X	-98.639	5.5
11	MP4A	Z	-170.848	5.5
12	MP4A	Mx	.1736	5.5
13	MP2A	X	-37.988	2.21
14	MP2A	Z	-65.797	2.21
15	MP2A	Mx	.0285	2.21
16	MP2A	X	-37.988	4.21
17	MP2A	Z	-65.797	4.21
18	MP2A	Mx	.0285	4.21
19	MP4A	X	-8.089	5
20	MP4A	Z	-14.011	5
21	MP4A	Mx	-.004	5
22	OVP	X	-75.089	1.5
23	OVP	Z	-130.059	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	-33.696	3
26	MP3A	Z	-58.362	3
27	MP3A	Mx	-.0168	3
28	MP4A	X	-40.772	3
29	MP4A	Z	-70.619	3
30	MP4A	Mx	-.0204	3
31	MP1A	X	-88.578	1.5
32	MP1A	Z	-153.421	1.5
33	MP1A	Mx	.0664	1.5
34	MP1A	X	-88.578	5.5
35	MP1A	Z	-153.421	5.5
36	MP1A	Mx	.0664	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	1.5
2	MP4A	Z	-37.902	1.5
3	MP4A	Mx	-.0221	1.5
4	MP4A	X	0	5.5
5	MP4A	Z	-37.902	5.5
6	MP4A	Mx	-.0221	5.5
7	MP4A	X	0	1.5
8	MP4A	Z	-37.902	1.5
9	MP4A	Mx	.0221	1.5
10	MP4A	X	0	5.5
11	MP4A	Z	-37.902	5.5
12	MP4A	Mx	.0221	5.5
13	MP2A	X	0	2.21

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
14	MP2A	Z	-16.461	2.21
15	MP2A	Mx	0	2.21
16	MP2A	X	0	4.21
17	MP2A	Z	-16.461	4.21
18	MP2A	Mx	0	4.21
19	MP4A	X	0	5
20	MP4A	Z	-4.146	5
21	MP4A	Mx	0	5
22	OVP	X	0	1.5
23	OVP	Z	-33.037	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	0	3
26	MP3A	Z	-17.017	3
27	MP3A	Mx	0	3
28	MP4A	X	0	3
29	MP4A	Z	-17.017	3
30	MP4A	Mx	0	3
31	MP1A	X	0	1.5
32	MP1A	Z	-34.223	1.5
33	MP1A	Mx	0	1.5
34	MP1A	X	0	5.5
35	MP1A	Z	-34.223	5.5
36	MP1A	Mx	0	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	17.447	1.5
2	MP4A	Z	-30.22	1.5
3	MP4A	Mx	-.0307	1.5
4	MP4A	X	17.447	5.5
5	MP4A	Z	-30.22	5.5
6	MP4A	Mx	-.0307	5.5
7	MP4A	X	17.447	1.5
8	MP4A	Z	-30.22	1.5
9	MP4A	Mx	.0045	1.5
10	MP4A	X	17.447	5.5
11	MP4A	Z	-30.22	5.5
12	MP4A	Mx	.0045	5.5
13	MP2A	X	7.043	2.21
14	MP2A	Z	-12.199	2.21
15	MP2A	Mx	-.0053	2.21
16	MP2A	X	7.043	4.21
17	MP2A	Z	-12.199	4.21
18	MP2A	Mx	-.0053	4.21
19	MP4A	X	1.944	5
20	MP4A	Z	-3.368	5
21	MP4A	Mx	.000972	5
22	OVP	X	14.617	1.5
23	OVP	Z	-25.318	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	7.862	3
26	MP3A	Z	-13.618	3
27	MP3A	Mx	.0039	3
28	MP4A	X	7.888	3
29	MP4A	Z	-13.663	3
30	MP4A	Mx	.0039	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
31	MP1A	X	15.786	1.5
32	MP1A	Z	-27.342	1.5
33	MP1A	Mx	-.0118	1.5
34	MP1A	X	15.786	5.5
35	MP1A	Z	-27.342	5.5
36	MP1A	Mx	-.0118	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	25.011	1.5
2	MP4A	Z	-14.44	1.5
3	MP4A	Mx	-.0272	1.5
4	MP4A	X	25.011	5.5
5	MP4A	Z	-14.44	5.5
6	MP4A	Mx	-.0272	5.5
7	MP4A	X	25.011	1.5
8	MP4A	Z	-14.44	1.5
9	MP4A	Mx	-.0103	1.5
10	MP4A	X	25.011	5.5
11	MP4A	Z	-14.44	5.5
12	MP4A	Mx	-.0103	5.5
13	MP2A	X	8.087	2.21
14	MP2A	Z	-4.669	2.21
15	MP2A	Mx	-.0061	2.21
16	MP2A	X	8.087	4.21
17	MP2A	Z	-4.669	4.21
18	MP2A	Mx	-.0061	4.21
19	MP4A	X	2.921	5
20	MP4A	Z	-1.687	5
21	MP4A	Mx	.0015	5
22	OVP	X	23.671	1.5
23	OVP	Z	-13.666	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	11.379	3
26	MP3A	Z	-6.57	3
27	MP3A	Mx	.0057	3
28	MP4A	X	11.513	3
29	MP4A	Z	-6.647	3
30	MP4A	Mx	.0058	3
31	MP1A	X	22.752	1.5
32	MP1A	Z	-13.136	1.5
33	MP1A	Mx	-.0171	1.5
34	MP1A	X	22.752	5.5
35	MP1A	Z	-13.136	5.5
36	MP1A	Mx	-.0171	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	25.873	1.5
2	MP4A	Z	0	1.5
3	MP4A	Mx	-.0194	1.5
4	MP4A	X	25.873	5.5
5	MP4A	Z	0	5.5
6	MP4A	Mx	-.0194	5.5
7	MP4A	X	25.873	1.5
8	MP4A	Z	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
9	MP4A	Mx	-.0194	1.5
10	MP4A	X	25.873	5.5
11	MP4A	Z	0	5.5
12	MP4A	Mx	-.0194	5.5
13	MP2A	X	6.963	2.21
14	MP2A	Z	0	2.21
15	MP2A	Mx	-.0052	2.21
16	MP2A	X	6.963	4.21
17	MP2A	Z	0	4.21
18	MP2A	Mx	-.0052	4.21
19	MP4A	X	3.115	5
20	MP4A	Z	0	5
21	MP4A	Mx	.0016	5
22	OVP	X	29.234	1.5
23	OVP	Z	0	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	11.846	3
26	MP3A	Z	0	3
27	MP3A	Mx	.0059	3
28	MP4A	X	12.053	3
29	MP4A	Z	0	3
30	MP4A	Mx	.006	3
31	MP1A	X	23.621	1.5
32	MP1A	Z	0	1.5
33	MP1A	Mx	-.0177	1.5
34	MP1A	X	23.621	5.5
35	MP1A	Z	0	5.5
36	MP1A	Mx	-.0177	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	25.011	1.5
2	MP4A	Z	14.44	1.5
3	MP4A	Mx	-.0103	1.5
4	MP4A	X	25.011	5.5
5	MP4A	Z	14.44	5.5
6	MP4A	Mx	-.0103	5.5
7	MP4A	X	25.011	1.5
8	MP4A	Z	14.44	1.5
9	MP4A	Mx	-.0272	1.5
10	MP4A	X	25.011	5.5
11	MP4A	Z	14.44	5.5
12	MP4A	Mx	-.0272	5.5
13	MP2A	X	8.087	2.21
14	MP2A	Z	4.669	2.21
15	MP2A	Mx	-.0061	2.21
16	MP2A	X	8.087	4.21
17	MP2A	Z	4.669	4.21
18	MP2A	Mx	-.0061	4.21
19	MP4A	X	2.921	5
20	MP4A	Z	1.687	5
21	MP4A	Mx	.0015	5
22	OVP	X	28.611	1.5
23	OVP	Z	16.518	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	11.379	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
26	MP3A	Z	6.57	3
27	MP3A	Mx	.0057	3
28	MP4A	X	11.513	3
29	MP4A	Z	6.647	3
30	MP4A	Mx	.0058	3
31	MP1A	X	22.752	1.5
32	MP1A	Z	13.136	1.5
33	MP1A	Mx	-.0171	1.5
34	MP1A	X	22.752	5.5
35	MP1A	Z	13.136	5.5
36	MP1A	Mx	-.0171	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	17.447	1.5
2	MP4A	Z	30.22	1.5
3	MP4A	Mx	.0045	1.5
4	MP4A	X	17.447	5.5
5	MP4A	Z	30.22	5.5
6	MP4A	Mx	.0045	5.5
7	MP4A	X	17.447	1.5
8	MP4A	Z	30.22	1.5
9	MP4A	Mx	-.0307	1.5
10	MP4A	X	17.447	5.5
11	MP4A	Z	30.22	5.5
12	MP4A	Mx	-.0307	5.5
13	MP2A	X	7.043	2.21
14	MP2A	Z	12.199	2.21
15	MP2A	Mx	-.0053	2.21
16	MP2A	X	7.043	4.21
17	MP2A	Z	12.199	4.21
18	MP2A	Mx	-.0053	4.21
19	MP4A	X	1.944	5
20	MP4A	Z	3.368	5
21	MP4A	Mx	.000972	5
22	OVP	X	17.469	1.5
23	OVP	Z	30.257	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	7.862	3
26	MP3A	Z	13.618	3
27	MP3A	Mx	.0039	3
28	MP4A	X	7.888	3
29	MP4A	Z	13.663	3
30	MP4A	Mx	.0039	3
31	MP1A	X	15.786	1.5
32	MP1A	Z	27.342	1.5
33	MP1A	Mx	-.0118	1.5
34	MP1A	X	15.786	5.5
35	MP1A	Z	27.342	5.5
36	MP1A	Mx	-.0118	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	1.5
2	MP4A	Z	37.902	1.5
3	MP4A	Mx	.0221	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP4A	X	0	5.5
5	MP4A	Z	37.902	5.5
6	MP4A	Mx	.0221	5.5
7	MP4A	X	0	1.5
8	MP4A	Z	37.902	1.5
9	MP4A	Mx	-.0221	1.5
10	MP4A	X	0	5.5
11	MP4A	Z	37.902	5.5
12	MP4A	Mx	-.0221	5.5
13	MP2A	X	0	2.21
14	MP2A	Z	16.461	2.21
15	MP2A	Mx	0	2.21
16	MP2A	X	0	4.21
17	MP2A	Z	16.461	4.21
18	MP2A	Mx	0	4.21
19	MP4A	X	0	5
20	MP4A	Z	4.146	5
21	MP4A	Mx	0	5
22	OVP	X	0	1.5
23	OVP	Z	33.037	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	0	3
26	MP3A	Z	17.017	3
27	MP3A	Mx	0	3
28	MP4A	X	0	3
29	MP4A	Z	17.017	3
30	MP4A	Mx	0	3
31	MP1A	X	0	1.5
32	MP1A	Z	34.223	1.5
33	MP1A	Mx	0	1.5
34	MP1A	X	0	5.5
35	MP1A	Z	34.223	5.5
36	MP1A	Mx	0	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-17.447	1.5
2	MP4A	Z	30.22	1.5
3	MP4A	Mx	.0307	1.5
4	MP4A	X	-17.447	5.5
5	MP4A	Z	30.22	5.5
6	MP4A	Mx	.0307	5.5
7	MP4A	X	-17.447	1.5
8	MP4A	Z	30.22	1.5
9	MP4A	Mx	-.0045	1.5
10	MP4A	X	-17.447	5.5
11	MP4A	Z	30.22	5.5
12	MP4A	Mx	-.0045	5.5
13	MP2A	X	-7.043	2.21
14	MP2A	Z	12.199	2.21
15	MP2A	Mx	.0053	2.21
16	MP2A	X	-7.043	4.21
17	MP2A	Z	12.199	4.21
18	MP2A	Mx	.0053	4.21
19	MP4A	X	-1.944	5
20	MP4A	Z	3.368	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
21	MP4A	Mx	-.000972	5
22	OVP	X	-14.617	1.5
23	OVP	Z	25.318	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	-7.862	3
26	MP3A	Z	13.618	3
27	MP3A	Mx	-.0039	3
28	MP4A	X	-7.888	3
29	MP4A	Z	13.663	3
30	MP4A	Mx	-.0039	3
31	MP1A	X	-15.786	1.5
32	MP1A	Z	27.342	1.5
33	MP1A	Mx	.0118	1.5
34	MP1A	X	-15.786	5.5
35	MP1A	Z	27.342	5.5
36	MP1A	Mx	.0118	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-25.011	1.5
2	MP4A	Z	14.44	1.5
3	MP4A	Mx	.0272	1.5
4	MP4A	X	-25.011	5.5
5	MP4A	Z	14.44	5.5
6	MP4A	Mx	.0272	5.5
7	MP4A	X	-25.011	1.5
8	MP4A	Z	14.44	1.5
9	MP4A	Mx	.0103	1.5
10	MP4A	X	-25.011	5.5
11	MP4A	Z	14.44	5.5
12	MP4A	Mx	.0103	5.5
13	MP2A	X	-8.087	2.21
14	MP2A	Z	4.669	2.21
15	MP2A	Mx	.0061	2.21
16	MP2A	X	-8.087	4.21
17	MP2A	Z	4.669	4.21
18	MP2A	Mx	.0061	4.21
19	MP4A	X	-2.921	5
20	MP4A	Z	1.687	5
21	MP4A	Mx	-.0015	5
22	OVP	X	-23.671	1.5
23	OVP	Z	13.666	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	-11.379	3
26	MP3A	Z	6.57	3
27	MP3A	Mx	-.0057	3
28	MP4A	X	-11.513	3
29	MP4A	Z	6.647	3
30	MP4A	Mx	-.0058	3
31	MP1A	X	-22.752	1.5
32	MP1A	Z	13.136	1.5
33	MP1A	Mx	.0171	1.5
34	MP1A	X	-22.752	5.5
35	MP1A	Z	13.136	5.5
36	MP1A	Mx	.0171	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-25.873	1.5
2	MP4A	Z	0	1.5
3	MP4A	Mx	.0194	1.5
4	MP4A	X	-25.873	5.5
5	MP4A	Z	0	5.5
6	MP4A	Mx	.0194	5.5
7	MP4A	X	-25.873	1.5
8	MP4A	Z	0	1.5
9	MP4A	Mx	.0194	1.5
10	MP4A	X	-25.873	5.5
11	MP4A	Z	0	5.5
12	MP4A	Mx	.0194	5.5
13	MP2A	X	-6.963	2.21
14	MP2A	Z	0	2.21
15	MP2A	Mx	.0052	2.21
16	MP2A	X	-6.963	4.21
17	MP2A	Z	0	4.21
18	MP2A	Mx	.0052	4.21
19	MP4A	X	-3.115	5
20	MP4A	Z	0	5
21	MP4A	Mx	-.0016	5
22	OVP	X	-29.234	1.5
23	OVP	Z	0	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	-11.846	3
26	MP3A	Z	0	3
27	MP3A	Mx	-.0059	3
28	MP4A	X	-12.053	3
29	MP4A	Z	0	3
30	MP4A	Mx	-.006	3
31	MP1A	X	-23.621	1.5
32	MP1A	Z	0	1.5
33	MP1A	Mx	.0177	1.5
34	MP1A	X	-23.621	5.5
35	MP1A	Z	0	5.5
36	MP1A	Mx	.0177	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-25.011	1.5
2	MP4A	Z	-14.44	1.5
3	MP4A	Mx	.0103	1.5
4	MP4A	X	-25.011	5.5
5	MP4A	Z	-14.44	5.5
6	MP4A	Mx	.0103	5.5
7	MP4A	X	-25.011	1.5
8	MP4A	Z	-14.44	1.5
9	MP4A	Mx	.0272	1.5
10	MP4A	X	-25.011	5.5
11	MP4A	Z	-14.44	5.5
12	MP4A	Mx	.0272	5.5
13	MP2A	X	-8.087	2.21
14	MP2A	Z	-4.669	2.21
15	MP2A	Mx	.0061	2.21
16	MP2A	X	-8.087	4.21
17	MP2A	Z	-4.669	4.21

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
18	MP2A	Mx	.0061	4.21
19	MP4A	X	-2.921	5
20	MP4A	Z	-1.687	5
21	MP4A	Mx	-.0015	5
22	OVP	X	-28.611	1.5
23	OVP	Z	-16.518	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	-11.379	3
26	MP3A	Z	-6.57	3
27	MP3A	Mx	-.0057	3
28	MP4A	X	-11.513	3
29	MP4A	Z	-6.647	3
30	MP4A	Mx	-.0058	3
31	MP1A	X	-22.752	1.5
32	MP1A	Z	-13.136	1.5
33	MP1A	Mx	.0171	1.5
34	MP1A	X	-22.752	5.5
35	MP1A	Z	-13.136	5.5
36	MP1A	Mx	.0171	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-17.447	1.5
2	MP4A	Z	-30.22	1.5
3	MP4A	Mx	-.0045	1.5
4	MP4A	X	-17.447	5.5
5	MP4A	Z	-30.22	5.5
6	MP4A	Mx	-.0045	5.5
7	MP4A	X	-17.447	1.5
8	MP4A	Z	-30.22	1.5
9	MP4A	Mx	.0307	1.5
10	MP4A	X	-17.447	5.5
11	MP4A	Z	-30.22	5.5
12	MP4A	Mx	.0307	5.5
13	MP2A	X	-7.043	2.21
14	MP2A	Z	-12.199	2.21
15	MP2A	Mx	.0053	2.21
16	MP2A	X	-7.043	4.21
17	MP2A	Z	-12.199	4.21
18	MP2A	Mx	.0053	4.21
19	MP4A	X	-1.944	5
20	MP4A	Z	-3.368	5
21	MP4A	Mx	-.000972	5
22	OVP	X	-17.469	1.5
23	OVP	Z	-30.257	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	-7.862	3
26	MP3A	Z	-13.618	3
27	MP3A	Mx	-.0039	3
28	MP4A	X	-7.888	3
29	MP4A	Z	-13.663	3
30	MP4A	Mx	-.0039	3
31	MP1A	X	-15.786	1.5
32	MP1A	Z	-27.342	1.5
33	MP1A	Mx	.0118	1.5
34	MP1A	X	-15.786	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
35	MP1A	Z	-27.342	5.5
36	MP1A	Mx	.0118	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	1.5
2	MP4A	Z	-12.43	1.5
3	MP4A	Mx	-.0073	1.5
4	MP4A	X	0	5.5
5	MP4A	Z	-12.43	5.5
6	MP4A	Mx	-.0073	5.5
7	MP4A	X	0	1.5
8	MP4A	Z	-12.43	1.5
9	MP4A	Mx	.0073	1.5
10	MP4A	X	0	5.5
11	MP4A	Z	-12.43	5.5
12	MP4A	Mx	.0073	5.5
13	MP2A	X	0	2.21
14	MP2A	Z	-5.171	2.21
15	MP2A	Mx	0	2.21
16	MP2A	X	0	4.21
17	MP2A	Z	-5.171	4.21
18	MP2A	Mx	0	4.21
19	MP4A	X	0	5
20	MP4A	Z	-1.01	5
21	MP4A	Mx	0	5
22	OVP	X	0	1.5
23	OVP	Z	-8.132	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	0	3
26	MP3A	Z	-4.23	3
27	MP3A	Mx	0	3
28	MP4A	X	0	3
29	MP4A	Z	-5.103	3
30	MP4A	Mx	0	3
31	MP1A	X	0	1.5
32	MP1A	Z	-11.147	1.5
33	MP1A	Mx	0	1.5
34	MP1A	X	0	5.5
35	MP1A	Z	-11.147	5.5
36	MP1A	Mx	0	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	5.682	1.5
2	MP4A	Z	-9.841	1.5
3	MP4A	Mx	-.01	1.5
4	MP4A	X	5.682	5.5
5	MP4A	Z	-9.841	5.5
6	MP4A	Mx	-.01	5.5
7	MP4A	X	5.682	1.5
8	MP4A	Z	-9.841	1.5
9	MP4A	Mx	.0015	1.5
10	MP4A	X	5.682	5.5
11	MP4A	Z	-9.841	5.5
12	MP4A	Mx	.0015	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP2A	X	2.188	2.21
14	MP2A	Z	-3.79	2.21
15	MP2A	Mx	-.0016	2.21
16	MP2A	X	2.188	4.21
17	MP2A	Z	-3.79	4.21
18	MP2A	Mx	-.0016	4.21
19	MP4A	X	.466	5
20	MP4A	Z	-.807	5
21	MP4A	Mx	.000233	5
22	OVP	X	3.547	1.5
23	OVP	Z	-6.144	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	1.941	3
26	MP3A	Z	-3.362	3
27	MP3A	Mx	.000971	3
28	MP4A	X	2.348	3
29	MP4A	Z	-4.068	3
30	MP4A	Mx	.0012	3
31	MP1A	X	5.102	1.5
32	MP1A	Z	-8.837	1.5
33	MP1A	Mx	-.0038	1.5
34	MP1A	X	5.102	5.5
35	MP1A	Z	-8.837	5.5
36	MP1A	Mx	-.0038	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	7.994	1.5
2	MP4A	Z	-4.615	1.5
3	MP4A	Mx	-.0087	1.5
4	MP4A	X	7.994	5.5
5	MP4A	Z	-4.615	5.5
6	MP4A	Mx	-.0087	5.5
7	MP4A	X	7.994	1.5
8	MP4A	Z	-4.615	1.5
9	MP4A	Mx	-.0033	1.5
10	MP4A	X	7.994	5.5
11	MP4A	Z	-4.615	5.5
12	MP4A	Mx	-.0033	5.5
13	MP2A	X	2.413	2.21
14	MP2A	Z	-1.393	2.21
15	MP2A	Mx	-.0018	2.21
16	MP2A	X	2.413	4.21
17	MP2A	Z	-1.393	4.21
18	MP2A	Mx	-.0018	4.21
19	MP4A	X	.672	5
20	MP4A	Z	-.388	5
21	MP4A	Mx	.000336	5
22	OVP	X	5.695	1.5
23	OVP	Z	-3.288	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	2.759	3
26	MP3A	Z	-1.593	3
27	MP3A	Mx	.0014	3
28	MP4A	X	3.365	3
29	MP4A	Z	-1.943	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
30	MP4A	Mx	.0017	3
31	MP1A	X	7.204	1.5
32	MP1A	Z	-4.159	1.5
33	MP1A	Mx	-.0054	1.5
34	MP1A	X	7.204	5.5
35	MP1A	Z	-4.159	5.5
36	MP1A	Mx	-.0054	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	8.164	1.5
2	MP4A	Z	0	1.5
3	MP4A	Mx	-.0061	1.5
4	MP4A	X	8.164	5.5
5	MP4A	Z	0	5.5
6	MP4A	Mx	-.0061	5.5
7	MP4A	X	8.164	1.5
8	MP4A	Z	0	1.5
9	MP4A	Mx	-.0061	1.5
10	MP4A	X	8.164	5.5
11	MP4A	Z	0	5.5
12	MP4A	Mx	-.0061	5.5
13	MP2A	X	1.992	2.21
14	MP2A	Z	0	2.21
15	MP2A	Mx	-.0015	2.21
16	MP2A	X	1.992	4.21
17	MP2A	Z	0	4.21
18	MP2A	Mx	-.0015	4.21
19	MP4A	X	.699	5
20	MP4A	Z	0	5
21	MP4A	Mx	.00035	5
22	OVP	X	7.095	1.5
23	OVP	Z	0	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	2.838	3
26	MP3A	Z	0	3
27	MP3A	Mx	.0014	3
28	MP4A	X	3.479	3
29	MP4A	Z	0	3
30	MP4A	Mx	.0017	3
31	MP1A	X	7.375	1.5
32	MP1A	Z	0	1.5
33	MP1A	Mx	-.0055	1.5
34	MP1A	X	7.375	5.5
35	MP1A	Z	0	5.5
36	MP1A	Mx	-.0055	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	7.994	1.5
2	MP4A	Z	4.615	1.5
3	MP4A	Mx	-.0033	1.5
4	MP4A	X	7.994	5.5
5	MP4A	Z	4.615	5.5
6	MP4A	Mx	-.0033	5.5
7	MP4A	X	7.994	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
8	MP4A	Z	4.615	1.5
9	MP4A	Mx	-.0087	1.5
10	MP4A	X	7.994	5.5
11	MP4A	Z	4.615	5.5
12	MP4A	Mx	-.0087	5.5
13	MP2A	X	2.413	2.21
14	MP2A	Z	1.393	2.21
15	MP2A	Mx	-.0018	2.21
16	MP2A	X	2.413	4.21
17	MP2A	Z	1.393	4.21
18	MP2A	Mx	-.0018	4.21
19	MP4A	X	.672	5
20	MP4A	Z	.388	5
21	MP4A	Mx	.000336	5
22	OVP	X	7.042	1.5
23	OVP	Z	4.066	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	2.759	3
26	MP3A	Z	1.593	3
27	MP3A	Mx	.0014	3
28	MP4A	X	3.365	3
29	MP4A	Z	1.943	3
30	MP4A	Mx	.0017	3
31	MP1A	X	7.204	1.5
32	MP1A	Z	4.159	1.5
33	MP1A	Mx	-.0054	1.5
34	MP1A	X	7.204	5.5
35	MP1A	Z	4.159	5.5
36	MP1A	Mx	-.0054	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	5.682	1.5
2	MP4A	Z	9.841	1.5
3	MP4A	Mx	.0015	1.5
4	MP4A	X	5.682	5.5
5	MP4A	Z	9.841	5.5
6	MP4A	Mx	.0015	5.5
7	MP4A	X	5.682	1.5
8	MP4A	Z	9.841	1.5
9	MP4A	Mx	-.01	1.5
10	MP4A	X	5.682	5.5
11	MP4A	Z	9.841	5.5
12	MP4A	Mx	-.01	5.5
13	MP2A	X	2.188	2.21
14	MP2A	Z	3.79	2.21
15	MP2A	Mx	-.0016	2.21
16	MP2A	X	2.188	4.21
17	MP2A	Z	3.79	4.21
18	MP2A	Mx	-.0016	4.21
19	MP4A	X	.466	5
20	MP4A	Z	.807	5
21	MP4A	Mx	.000233	5
22	OVP	X	4.325	1.5
23	OVP	Z	7.491	1.5
24	OVP	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP3A	X	1.941	3
26	MP3A	Z	3.362	3
27	MP3A	Mx	.000971	3
28	MP4A	X	2.348	3
29	MP4A	Z	4.068	3
30	MP4A	Mx	.0012	3
31	MP1A	X	5.102	1.5
32	MP1A	Z	8.837	1.5
33	MP1A	Mx	-.0038	1.5
34	MP1A	X	5.102	5.5
35	MP1A	Z	8.837	5.5
36	MP1A	Mx	-.0038	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	1.5
2	MP4A	Z	12.43	1.5
3	MP4A	Mx	.0073	1.5
4	MP4A	X	0	5.5
5	MP4A	Z	12.43	5.5
6	MP4A	Mx	.0073	5.5
7	MP4A	X	0	1.5
8	MP4A	Z	12.43	1.5
9	MP4A	Mx	-.0073	1.5
10	MP4A	X	0	5.5
11	MP4A	Z	12.43	5.5
12	MP4A	Mx	-.0073	5.5
13	MP2A	X	0	2.21
14	MP2A	Z	5.171	2.21
15	MP2A	Mx	0	2.21
16	MP2A	X	0	4.21
17	MP2A	Z	5.171	4.21
18	MP2A	Mx	0	4.21
19	MP4A	X	0	5
20	MP4A	Z	1.01	5
21	MP4A	Mx	0	5
22	OVP	X	0	1.5
23	OVP	Z	8.132	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	0	3
26	MP3A	Z	4.23	3
27	MP3A	Mx	0	3
28	MP4A	X	0	3
29	MP4A	Z	5.103	3
30	MP4A	Mx	0	3
31	MP1A	X	0	1.5
32	MP1A	Z	11.147	1.5
33	MP1A	Mx	0	1.5
34	MP1A	X	0	5.5
35	MP1A	Z	11.147	5.5
36	MP1A	Mx	0	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-5.682	1.5
2	MP4A	Z	9.841	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
3	MP4A	Mx	.01	1.5
4	MP4A	X	-5.682	5.5
5	MP4A	Z	9.841	5.5
6	MP4A	Mx	.01	5.5
7	MP4A	X	-5.682	1.5
8	MP4A	Z	9.841	1.5
9	MP4A	Mx	-.0015	1.5
10	MP4A	X	-5.682	5.5
11	MP4A	Z	9.841	5.5
12	MP4A	Mx	-.0015	5.5
13	MP2A	X	-2.188	2.21
14	MP2A	Z	3.79	2.21
15	MP2A	Mx	.0016	2.21
16	MP2A	X	-2.188	4.21
17	MP2A	Z	3.79	4.21
18	MP2A	Mx	.0016	4.21
19	MP4A	X	-.466	5
20	MP4A	Z	.807	5
21	MP4A	Mx	-.000233	5
22	OVP	X	-3.547	1.5
23	OVP	Z	6.144	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	-1.941	3
26	MP3A	Z	3.362	3
27	MP3A	Mx	-.000971	3
28	MP4A	X	-2.348	3
29	MP4A	Z	4.068	3
30	MP4A	Mx	-.0012	3
31	MP1A	X	-5.102	1.5
32	MP1A	Z	8.837	1.5
33	MP1A	Mx	.0038	1.5
34	MP1A	X	-5.102	5.5
35	MP1A	Z	8.837	5.5
36	MP1A	Mx	.0038	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-7.994	1.5
2	MP4A	Z	4.615	1.5
3	MP4A	Mx	.0087	1.5
4	MP4A	X	-7.994	5.5
5	MP4A	Z	4.615	5.5
6	MP4A	Mx	.0087	5.5
7	MP4A	X	-7.994	1.5
8	MP4A	Z	4.615	1.5
9	MP4A	Mx	.0033	1.5
10	MP4A	X	-7.994	5.5
11	MP4A	Z	4.615	5.5
12	MP4A	Mx	.0033	5.5
13	MP2A	X	-2.413	2.21
14	MP2A	Z	1.393	2.21
15	MP2A	Mx	.0018	2.21
16	MP2A	X	-2.413	4.21
17	MP2A	Z	1.393	4.21
18	MP2A	Mx	.0018	4.21
19	MP4A	X	-.672	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	MP4A	Z	.388	5
21	MP4A	Mx	-.000336	5
22	OVP	X	-5.695	1.5
23	OVP	Z	3.288	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	-2.759	3
26	MP3A	Z	1.593	3
27	MP3A	Mx	-.0014	3
28	MP4A	X	-3.365	3
29	MP4A	Z	1.943	3
30	MP4A	Mx	-.0017	3
31	MP1A	X	-7.204	1.5
32	MP1A	Z	4.159	1.5
33	MP1A	Mx	.0054	1.5
34	MP1A	X	-7.204	5.5
35	MP1A	Z	4.159	5.5
36	MP1A	Mx	.0054	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-8.164	1.5
2	MP4A	Z	0	1.5
3	MP4A	Mx	.0061	1.5
4	MP4A	X	-8.164	5.5
5	MP4A	Z	0	5.5
6	MP4A	Mx	.0061	5.5
7	MP4A	X	-8.164	1.5
8	MP4A	Z	0	1.5
9	MP4A	Mx	.0061	1.5
10	MP4A	X	-8.164	5.5
11	MP4A	Z	0	5.5
12	MP4A	Mx	.0061	5.5
13	MP2A	X	-1.992	2.21
14	MP2A	Z	0	2.21
15	MP2A	Mx	.0015	2.21
16	MP2A	X	-1.992	4.21
17	MP2A	Z	0	4.21
18	MP2A	Mx	.0015	4.21
19	MP4A	X	-.699	5
20	MP4A	Z	0	5
21	MP4A	Mx	-.00035	5
22	OVP	X	-7.095	1.5
23	OVP	Z	0	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	-2.838	3
26	MP3A	Z	0	3
27	MP3A	Mx	-.0014	3
28	MP4A	X	-3.479	3
29	MP4A	Z	0	3
30	MP4A	Mx	-.0017	3
31	MP1A	X	-7.375	1.5
32	MP1A	Z	0	1.5
33	MP1A	Mx	.0055	1.5
34	MP1A	X	-7.375	5.5
35	MP1A	Z	0	5.5
36	MP1A	Mx	.0055	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-7.994	1.5
2	MP4A	Z	-4.615	1.5
3	MP4A	Mx	.0033	1.5
4	MP4A	X	-7.994	5.5
5	MP4A	Z	-4.615	5.5
6	MP4A	Mx	.0033	5.5
7	MP4A	X	-7.994	1.5
8	MP4A	Z	-4.615	1.5
9	MP4A	Mx	.0087	1.5
10	MP4A	X	-7.994	5.5
11	MP4A	Z	-4.615	5.5
12	MP4A	Mx	.0087	5.5
13	MP2A	X	-2.413	2.21
14	MP2A	Z	-1.393	2.21
15	MP2A	Mx	.0018	2.21
16	MP2A	X	-2.413	4.21
17	MP2A	Z	-1.393	4.21
18	MP2A	Mx	.0018	4.21
19	MP4A	X	-.672	5
20	MP4A	Z	-.388	5
21	MP4A	Mx	-.000336	5
22	OVP	X	-7.042	1.5
23	OVP	Z	-4.066	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	-2.759	3
26	MP3A	Z	-1.593	3
27	MP3A	Mx	-.0014	3
28	MP4A	X	-3.365	3
29	MP4A	Z	-1.943	3
30	MP4A	Mx	-.0017	3
31	MP1A	X	-7.204	1.5
32	MP1A	Z	-4.159	1.5
33	MP1A	Mx	.0054	1.5
34	MP1A	X	-7.204	5.5
35	MP1A	Z	-4.159	5.5
36	MP1A	Mx	.0054	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-5.682	1.5
2	MP4A	Z	-9.841	1.5
3	MP4A	Mx	-.0015	1.5
4	MP4A	X	-5.682	5.5
5	MP4A	Z	-9.841	5.5
6	MP4A	Mx	-.0015	5.5
7	MP4A	X	-5.682	1.5
8	MP4A	Z	-9.841	1.5
9	MP4A	Mx	.01	1.5
10	MP4A	X	-5.682	5.5
11	MP4A	Z	-9.841	5.5
12	MP4A	Mx	.01	5.5
13	MP2A	X	-2.188	2.21
14	MP2A	Z	-3.79	2.21
15	MP2A	Mx	.0016	2.21
16	MP2A	X	-2.188	4.21
17	MP2A	Z	-3.79	4.21

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
18	MP2A	Mx	.0016	4.21
19	MP4A	X	-.466	5
20	MP4A	Z	-.807	5
21	MP4A	Mx	-.000233	5
22	OVP	X	-4.325	1.5
23	OVP	Z	-7.491	1.5
24	OVP	Mx	0	1.5
25	MP3A	X	-1.941	3
26	MP3A	Z	-3.362	3
27	MP3A	Mx	-.000971	3
28	MP4A	X	-2.348	3
29	MP4A	Z	-4.068	3
30	MP4A	Mx	-.0012	3
31	MP1A	X	-5.102	1.5
32	MP1A	Z	-8.837	1.5
33	MP1A	Mx	.0038	1.5
34	MP1A	X	-5.102	5.5
35	MP1A	Z	-8.837	5.5
36	MP1A	Mx	.0038	5.5

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-500	%4

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M2	Y	-500	%36

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-250	0

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-250	%100

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	Y	-1.3166	1.5
2	MP4A	My	-.000987	1.5
3	MP4A	Mz	.000768	1.5
4	MP4A	Y	-1.3166	5.5
5	MP4A	My	-.000987	5.5
6	MP4A	Mz	.000768	5.5
7	MP4A	Y	-1.3166	1.5
8	MP4A	My	-.000987	1.5
9	MP4A	Mz	-.000768	1.5
10	MP4A	Y	-1.3166	5.5
11	MP4A	My	-.000987	5.5
12	MP4A	Mz	-.000768	5.5
13	MP2A	Y	-1.1918	2.21
14	MP2A	My	-.000894	2.21
15	MP2A	Mz	0	2.21
16	MP2A	Y	-1.1918	4.21

Member Point Loads (BLC 81 : Antenna Ev) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP2A	My	-.000894	4.21
18	MP2A	Mz	0	4.21
19	MP4A	Y	-.4326	5
20	MP4A	My	.000216	5
21	MP4A	Mz	0	5
22	OVP	Y	-1.3312	1.5
23	OVP	My	0	1.5
24	OVP	Mz	0	1.5
25	MP3A	Y	-3.1075	3
26	MP3A	My	.0016	3
27	MP3A	Mz	0	3
28	MP4A	Y	-3.2906	3
29	MP4A	My	.0016	3
30	MP4A	Mz	0	3
31	MP1A	Y	-.547	1.5
32	MP1A	My	-.00041	1.5
33	MP1A	Mz	0	1.5
34	MP1A	Y	-.547	5.5
35	MP1A	My	-.00041	5.5
36	MP1A	Mz	0	5.5

Member Point Loads (BLC 82 : Antenna Eh (0 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	Z	-3.2916	1.5
2	MP4A	Mx	-.0019	1.5
3	MP4A	Z	-3.2916	5.5
4	MP4A	Mx	-.0019	5.5
5	MP4A	Z	-3.2916	1.5
6	MP4A	Mx	.0019	1.5
7	MP4A	Z	-3.2916	5.5
8	MP4A	Mx	.0019	5.5
9	MP2A	Z	-2.9796	2.21
10	MP2A	Mx	0	2.21
11	MP2A	Z	-2.9796	4.21
12	MP2A	Mx	0	4.21
13	MP4A	Z	-1.0816	5
14	MP4A	Mx	0	5
15	OVP	Z	-3.328	1.5
16	OVP	Mx	0	1.5
17	MP3A	Z	-7.7688	3
18	MP3A	Mx	0	3
19	MP4A	Z	-8.2264	3
20	MP4A	Mx	0	3
21	MP1A	Z	-1.3676	1.5
22	MP1A	Mx	0	1.5
23	MP1A	Z	-1.3676	5.5
24	MP1A	Mx	0	5.5

Member Point Loads (BLC 83 : Antenna Eh (90 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	3.2916	1.5
2	MP4A	Mx	-.0025	1.5
3	MP4A	X	3.2916	5.5
4	MP4A	Mx	-.0025	5.5
5	MP4A	X	3.2916	1.5
6	MP4A	Mx	-.0025	1.5

Member Point Loads (BLC 83 : Antenna Eh (90 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
7	MP4A	X	3.2916	5.5
8	MP4A	Mx	-.0025	5.5
9	MP2A	X	2.9796	2.21
10	MP2A	Mx	-.0022	2.21
11	MP2A	X	2.9796	4.21
12	MP2A	Mx	-.0022	4.21
13	MP4A	X	1.0816	5
14	MP4A	Mx	.000541	5
15	OVP	X	3.328	1.5
16	OVP	Mx	0	1.5
17	MP3A	X	7.7688	3
18	MP3A	Mx	.0039	3
19	MP4A	X	8.2264	3
20	MP4A	Mx	.0041	3
21	MP1A	X	1.3676	1.5
22	MP1A	Mx	-.001	1.5
23	MP1A	X	1.3676	5.5
24	MP1A	Mx	-.001	5.5

Member Area Loads

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

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	L...	MZ [k-ft]	LC
1	N53B	...	373.763	30	650.613	14	563.41	12	.028	8	0	75	1.486	11
2		...	-134.302	12	-66.648	8	-1494.068	6	-.271	14	0	1	-3.15	5
3	N52B	...	238.559	11	825.187	2	1624.544	17	.082	8	0	75	1.413	11
4		...	-404.074	5	-195.873	8	-47.634	12	-.344	2	0	1	-3.055	5
5	N66	...	2928.096	11	1390.082	8	924.491	2	.007	1	.003	26	0	8
6		...	-2923.943	5	-539.357	2	-2260.226	8	-.006	7	0	8	-.004	26
7	N68	...	771.93	6	134.194	12	2187.689	12	0	75	0	75	0	75
8		...	-1056.066	12	-65.834	7	-1722.159	6	0	1	0	1	0	1
9	N77	...	465.469	2	84.187	2	1009.454	3	0	75	0	75	0	75
10		...	-214.646	8	-30.987	8	-533.415	9	0	1	0	1	0	1
11	Totals:	...	1979.072	11	2423.861	17	3182.027	1						
12		...	-1979.114	5	755.378	73	-3182.098	7						

Joint Reactions

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	1	N53B	30.971	467.488	269.857	-.195	0	-.23
2	1	N52B	-30.424	777.001	257.499	-.324	0	-.218
3	1	N66	466.011	-366.127	692.329	.007	.001	-.002
4	1	N68	-704.278	119.686	1465.297	0	0	0
5	1	N77	237.714	57.925	497.044	0	0	0
6	1	Totals:	-.006	1055.973	3182.027			
7	1	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
8	2	N53B	229.911	597.066	-369.714	-.249	0	-2.075
9	2	N52B	-282.701	825.187	713.937	-.344	0	-2.013
10	2	N66	-1737.227	-539.357	924.491	.006	.002	-.003
11	2	N68	-108.038	88.936	230.032	0	0	0
12	2	N77	465.469	84.187	982.382	0	0	0

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
13	2	Totals:	-1432.585	1056.019	2481.129			
14	2	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
15	3	N53B	272.738	551.257	-807.689	-.23	0	-2.737
16	3	N52B	-371.307	671.382	986.64	-.28	0	-2.651
17	3	N66	-2573.255	-305.113	501.227	.004	.002	-.003
18	3	N68	251.918	57.817	-560.681	0	0	0
19	3	N77	464.186	80.69	1009.454	0	0	0
20	3	Totals:	-1955.719	1056.034	1128.951			
21	3	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
22	4	N53B	255.537	462.781	-1030.031	-.193	0	-2.814
23	4	N52B	-381.374	496.177	1152.589	-.207	0	-2.718
24	4	N66	-2668.658	4.241	-21.986	.001	.001	-.002
25	4	N68	417.348	26.766	-974.529	0	0	0
26	4	N77	408.822	66.07	873.794	0	0	0
27	4	Totals:	-1968.325	1056.035	-.163			
28	4	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
29	5	N53B	296.251	402.882	-1324.928	-.168	0	-3.15
30	5	N52B	-404.074	330.258	1356.239	-.138	0	-3.055
31	5	N66	-2923.943	267.685	-483.562	0	0	-.001
32	5	N68	646.639	.334	-1502.446	0	0	0
33	5	N77	406.014	54.883	811.906	0	0	0
34	5	Totals:	-1979.114	1056.042	-1142.792			
35	5	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
36	6	N53B	299.219	264.137	-1494.068	-.11	0	-2.89
37	6	N52B	-350.962	81.767	1387.912	-.034	0	-2.827
38	6	N66	-2443.394	720.063	-1222.332	-.004	0	0
39	6	N68	771.93	-35.311	-1722.159	0	0	0
40	6	N77	277.102	25.377	545.853	0	0	0
41	6	Totals:	-1446.107	1056.033	-2504.794			
42	6	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
43	7	N53B	168.59	47.049	-1174.983	-.02	0	-1.346
44	7	N52B	-160.237	-159.105	1074.521	.066	0	-1.337
45	7	N66	-461.644	1250.437	-2046.454	-.006	0	0
46	7	N68	469.01	-65.834	-995.13	0	0	0
47	7	N77	-15.753	-16.553	-40.052	0	0	0
48	7	Totals:	-.034	1055.994	-3182.098			
49	7	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
50	8	N53B	2.649	-66.648	-579.612	.028	0	.342
51	8	N52B	56.197	-195.873	653.643	.082	0	.303
52	8	N66	1690.036	1390.082	-2260.226	-.005	0	0
53	8	N68	-101.695	-40.622	208.446	0	0	0
54	8	N77	-214.646	-30.987	-503.457	0	0	0
55	8	Totals:	1432.54	1055.952	-2481.207			
56	8	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
57	9	N53B	-52.63	-17.014	-160.881	.007	0	.994
58	9	N52B	158.053	-44.756	388.407	.019	0	.93
59	9	N66	2538.266	1127.159	-1818.058	-.002	0	0
60	9	N68	-482.042	11.101	994.917	0	0	0
61	9	N77	-205.972	-20.553	-533.415	0	0	0
62	9	Totals:	1955.674	1055.937	-1129.029			
63	9	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
64	10	N53B	-50.369	67.504	67.645	-.028	0	1.112
65	10	N52B	188.166	125.043	214.231	-.052	0	1.038
66	10	N66	2650.933	817.742	-1290.091	0	0	0
67	10	N68	-663.251	52.898	1413.523	0	0	0
68	10	N77	-157.197	-7.252	-405.221	0	0	0
69	10	Totals:	1968.282	1055.935	.086			

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
70	10	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
71	11	N53B	-112.08	125.986	363.076	-.052	0	1.486
72	11	N52B	238.559	287.777	7.127	-.12	0	1.413
73	11	N66	2928.096	537.312	-818.521	.002	0	0
74	11	N68	-917.747	99.281	1944.046	0	0	0
75	11	N77	-157.756	5.572	-353.01	0	0	0
76	11	Totals:	1979.072	1055.927	1142.717			
77	11	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
78	12	N53B	-134.302	254.937	563.41	-.106	0	1.333
79	12	N52B	202.958	531.035	-47.634	-.221	0	1.289
80	12	N66	2481.243	108.909	-97.675	.005	0	-.001
81	12	N68	-1056.066	134.194	2187.689	0	0	0
82	12	N77	-47.767	26.857	-101.067	0	0	0
83	12	Totals:	1446.066	1055.933	2504.723			
84	12	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
85	13	N53B	185.732	620.193	-832.13	-.258	0	-1.435
86	13	N52B	-171.2	783.727	1420.134	-.327	0	-1.416
87	13	N66	56.929	901.121	-1317.517	.002	.001	-.002
88	13	N68	-383.951	57.955	811.077	0	0	0
89	13	N77	312.453	60.85	633.616	0	0	0
90	13	Totals:	-.037	2423.846	715.179			
91	13	COG (ft):	X: -1.314	Y: 2.712	Z: 3.6			
92	14	N53B	226.419	650.613	-973.942	-.271	0	-1.853
93	14	N52B	-222.569	794.312	1512.972	-.331	0	-1.822
94	14	N66	-432.392	858.945	-1260.105	.002	.001	-.002
95	14	N68	-257.537	53.322	545.797	0	0	0
96	14	N77	360.118	66.665	739.696	0	0	0
97	14	Totals:	-325.962	2423.856	564.418			
98	14	COG (ft):	X: -1.314	Y: 2.712	Z: 3.6			
99	15	N53B	235.619	644.409	-1074.123	-.269	0	-2.007
100	15	N52B	-243.342	761.668	1561.678	-.317	0	-1.969
101	15	N66	-627.52	905.469	-1344.858	.002	.001	-.002
102	15	N68	-181.034	46.447	378.818	0	0	0
103	15	N77	356.605	65.868	743.747	0	0	0
104	15	Totals:	-459.672	2423.86	265.262			
105	15	COG (ft):	X: -1.314	Y: 2.712	Z: 3.6			
106	16	N53B	231.684	627.424	-1130.15	-.261	0	-2.024
107	16	N52B	-246.8	722.388	1590.765	-.301	0	-1.984
108	16	N66	-653.499	971.5	-1458.22	.001	.001	-.002
109	16	N68	-147.347	39.777	289.549	0	0	0
110	16	N77	342.894	62.771	707.951	0	0	0
111	16	Totals:	-473.068	2423.86	-.104			
112	16	COG (ft):	X: -1.314	Y: 2.712	Z: 3.6			
113	17	N53B	240.245	614.955	-1197.224	-.256	0	-2.084
114	17	N52B	-250.626	683.595	1624.544	-.285	0	-2.044
115	17	N66	-695.063	1031.901	-1563.178	0	.001	-.002
116	17	N68	-100.096	33.43	180.989	0	0	0
117	17	N77	340.927	59.981	686.544	0	0	0
118	17	Totals:	-464.613	2423.861	-268.324			
119	17	COG (ft):	X: -1.314	Y: 2.712	Z: 3.6			
120	18	N53B	239.401	585.995	-1232.269	-.244	0	-2.002
121	18	N52B	-236.174	627.973	1616.185	-.262	0	-1.97
122	18	N66	-565.125	1128.957	-1723.362	0	.001	-.002
123	18	N68	-77.936	27.112	147.463	0	0	0
124	18	N77	311.017	53.823	622.432	0	0	0
125	18	Totals:	-328.817	2423.859	-569.552			
126	18	COG (ft):	X: -1.314	Y: 2.712	Z: 3.6			

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
127	19	N53B	205.719	538.165	-1157.389	-.224	0	-1.623
128	19	N52B	-189.405	574.222	1537.172	-.239	0	-1.604
129	19	N66	-108.697	1242.468	-1901.525	0	0	-.001
130	19	N68	-151.629	24.324	317.584	0	0	0
131	19	N77	243.97	44.67	488.831	0	0	0
132	19	Totals:	-.041	2423.849	-715.328			
133	19	COG (ft):	X: -1.314	Y: 2.712	Z: 3.6			
134	20	N53B	166.661	508.672	-1018.143	-.212	0	-1.214
135	20	N52B	-139.445	564.267	1446.385	-.235	0	-1.208
136	20	N66	377.572	1282.4	-1957.608	0	0	-.001
137	20	N68	-276.853	28.904	580.937	0	0	0
138	20	N77	197.947	39.596	383.863	0	0	0
139	20	Totals:	325.883	2423.839	-564.566			
140	20	COG (ft):	X: -1.314	Y: 2.712	Z: 3.6			
141	21	N53B	156.682	515.116	-918.995	-.215	0	-1.06
142	21	N52B	-117.927	596.812	1398.078	-.249	0	-1.06
143	21	N66	573.548	1234.225	-1871.91	0	0	-.001
144	21	N68	-354.537	36.916	747.821	0	0	0
145	21	N77	201.827	40.767	379.595	0	0	0
146	21	Totals:	459.592	2423.836	-265.41			
147	21	COG (ft):	X: -1.314	Y: 2.712	Z: 3.6			
148	22	N53B	159.727	531.871	-862.558	-.222	0	-1.04
149	22	N52B	-113.463	635.804	1368.463	-.265	0	-1.043
150	22	N66	600.769	1168.262	-1758.443	.001	0	-.001
151	22	N68	-389.146	44.153	837.549	0	0	0
152	22	N77	215.104	43.746	414.946	0	0	0
153	22	Totals:	472.99	2423.836	-.044			
154	22	COG (ft):	X: -1.314	Y: 2.712	Z: 3.6			
155	23	N53B	150.02	544.215	-795.295	-.227	0	-.978
156	23	N52B	-108.344	674.396	1334.337	-.281	0	-.98
157	23	N66	643.788	1107.295	-1653.189	.002	0	-.002
158	23	N68	-437.674	51.402	946.515	0	0	0
159	23	N77	216.745	46.526	435.807	0	0	0
160	23	Totals:	464.534	2423.834	268.176			
161	23	COG (ft):	X: -1.314	Y: 2.712	Z: 3.6			
162	24	N53B	150.053	572.583	-758.42	-.239	0	-1.054
163	24	N52B	-122.294	729.714	1341.368	-.304	0	-1.049
164	24	N66	515.638	1011.955	-1494.183	.002	.001	-.002
165	24	N68	-460.257	57.418	981.378	0	0	0
166	24	N77	245.599	52.167	499.26	0	0	0
167	24	Totals:	328.739	2423.837	569.404			
168	24	COG (ft):	X: -1.314	Y: 2.712	Z: 3.6			
169	25	N53B	360.008	458.394	-805.153	-.191	0	-2.785
170	25	N52B	-338.688	565.028	1184.467	-.235	0	-2.745
171	25	N66	-12.861	706.397	-1080.033	.002	.003	-.004
172	25	N68	-218.247	51.46	467.771	0	0	0
173	25	N77	209.719	24.758	416.124	0	0	0
174	25	Totals:	-.07	1806.035	183.175			
175	25	COG (ft):	X: -3.456	Y: 1.609	Z: 3.789			
176	26	N53B	369.907	465.888	-841.639	-.194	0	-2.888
177	26	N52B	-351.094	567.563	1210.227	-.236	0	-2.845
178	26	N66	-138.44	695.443	-1066.445	.002	.003	-.004
179	26	N68	-185.35	50.829	397.51	0	0	0
180	26	N77	222.389	26.315	443.149	0	0	0
181	26	Totals:	-82.587	1806.038	142.803			
182	26	COG (ft):	X: -3.456	Y: 1.609	Z: 3.789			
183	27	N53B	372.108	463.187	-866.205	-.193	0	-2.925

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
184	27	N52B	-355.743	558.667	1225.277	-.233	0	-2.881
185	27	N66	-186.242	709.104	-1091.134	.002	.003	-.004
186	27	N68	-164.813	49.123	352.618	0	0	0
187	27	N77	221.969	25.957	444.359	0	0	0
188	27	Totals:	-112.721	1806.039	64.916			
189	27	COG (ft):	X: -3.456	Y: 1.609	Z: 3.789			
190	28	N53B	371.152	458.118	-878.843	-.191	0	-2.929
191	28	N52B	-356.345	548.593	1234.476	-.229	0	-2.884
192	28	N66	-191.607	726.849	-1121.321	.002	.003	-.004
193	28	N68	-155.371	47.404	329.136	0	0	0
194	28	N77	218.722	25.075	436.432	0	0	0
195	28	Totals:	-113.448	1806.039	-.12			
196	28	COG (ft):	X: -3.456	Y: 1.609	Z: 3.789			
197	29	N53B	373.609	454.703	-895.694	-.189	0	-2.948
198	29	N52B	-357.738	538.996	1245.817	-.225	0	-2.904
199	29	N66	-206.361	742.193	-1147.952	.001	.003	-.004
200	29	N68	-142.043	45.785	299.117	0	0	0
201	29	N77	218.464	24.362	432.777	0	0	0
202	29	Totals:	-114.068	1806.039	-65.935			
203	29	COG (ft):	X: -3.456	Y: 1.609	Z: 3.789			
204	30	N53B	373.763	446.745	-905.618	-.186	0	-2.933
205	30	N52B	-354.681	524.59	1247.354	-.219	0	-2.89
206	30	N66	-178.479	768.007	-1190.12	.001	.003	-.004
207	30	N68	-135.07	44.004	286.598	0	0	0
208	30	N77	211.1	22.693	417.398	0	0	0
209	30	Totals:	-83.366	1806.039	-144.388			
210	30	COG (ft):	X: -3.456	Y: 1.609	Z: 3.789			
211	31	N53B	365.322	433.75	-886.533	-.181	0	-2.841
212	31	N52B	-343.051	510.302	1228.302	-.213	0	-2.801
213	31	N66	-62.279	799.01	-1237.438	.001	.003	-.004
214	31	N68	-153.786	42.888	329.095	0	0	0
215	31	N77	193.722	20.086	383.174	0	0	0
216	31	Totals:	-.072	1806.036	-183.401			
217	31	COG (ft):	X: -3.456	Y: 1.609	Z: 3.789			
218	32	N53B	355.528	426.314	-850.206	-.178	0	-2.738
219	32	N52B	-330.755	507.806	1202.669	-.212	0	-2.702
220	32	N66	63.124	809.834	-1250.958	.001	.003	-.004
221	32	N68	-186.604	43.508	399.246	0	0	0
222	32	N77	181.153	18.572	356.221	0	0	0
223	32	Totals:	82.446	1806.034	-143.029			
224	32	COG (ft):	X: -3.456	Y: 1.609	Z: 3.789			
225	33	N53B	353.281	429.027	-825.701	-.179	0	-2.702
226	33	N52B	-326.058	516.692	1187.64	-.215	0	-2.666
227	33	N66	110.972	796.077	-1226.206	.001	.003	-.004
228	33	N68	-207.212	45.284	444.127	0	0	0
229	33	N77	181.595	18.952	354.998	0	0	0
230	33	Totals:	112.579	1806.033	-65.142			
231	33	COG (ft):	X: -3.456	Y: 1.609	Z: 3.789			
232	34	N53B	354.186	434.081	-813.038	-.181	0	-2.697
233	34	N52B	-325.39	526.748	1178.409	-.219	0	-2.663
234	34	N66	116.398	778.338	-1196.005	.002	.003	-.004
235	34	N68	-216.707	47.037	467.629	0	0	0
236	34	N77	184.818	19.829	362.899	0	0	0
237	34	Totals:	113.306	1806.033	-.106			
238	34	COG (ft):	X: -3.456	Y: 1.609	Z: 3.789			
239	35	N53B	351.659	437.49	-796.182	-.182	0	-2.678
240	35	N52B	-323.906	536.333	1167.054	-.223	0	-2.643

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
241	35	N66	131.229	762.943	-1169.343	.002	.003	-.004
242	35	N68	-230.117	48.72	497.659	0	0	0
243	35	N77	185.062	20.545	366.522	0	0	0
244	35	Totals:	113.926	1806.032	65.709			
245	35	COG (ft):	X: -3.456	Y: 1.609	Z: 3.789			
246	36	N53B	351.446	445.413	-786.147	-.186	0	-2.692
247	36	N52B	-326.913	550.722	1165.435	-.229	0	-2.656
248	36	N66	103.458	737.221	-1127.24	.002	.003	-.004
249	36	N68	-237.128	50.493	510.258	0	0	0
250	36	N77	192.361	22.185	381.856	0	0	0
251	36	Totals:	83.224	1806.033	144.162			
252	36	COG (ft):	X: -3.456	Y: 1.609	Z: 3.789			
253	37	N53B	9.512	497.78	-831.652	-.207	0	-.063
254	37	N52B	-8.597	556.206	1197.286	-.232	0	-.07
255	37	N66	25.67	684.678	-1049.054	.001	0	0
256	37	N68	-222.929	27.321	461.763	0	0	0
257	37	N77	196.341	39.985	404.932	0	0	0
258	37	Totals:	-.003	1805.969	183.274			
259	37	COG (ft):	X: -.03	Y: 1.609	Z: 3.789			
260	38	N53B	19.943	504.717	-867.084	-.21	0	-.165
261	38	N52B	-21.699	558.559	1222.405	-.233	0	-.17
262	38	N66	-100.48	676.268	-1036.26	.001	0	0
263	38	N68	-188.934	25.314	391.57	0	0	0
264	38	N77	208.65	41.113	432.27	0	0	0
265	38	Totals:	-82.52	1805.971	142.902			
266	38	COG (ft):	X: -.03	Y: 1.609	Z: 3.789			
267	39	N53B	22.864	501.982	-891.825	-.209	0	-.203
268	39	N52B	-27.175	549.787	1237.946	-.229	0	-.207
269	39	N66	-149.47	690.732	-1061.095	0	0	0
270	39	N68	-167.328	22.722	345.99	0	0	0
271	39	N77	208.455	40.749	433.998	0	0	0
272	39	Totals:	-112.654	1805.972	65.014			
273	39	COG (ft):	X: -.03	Y: 1.609	Z: 3.789			
274	40	N53B	22.392	497.033	-904.903	-.207	0	-.21
275	40	N52B	-28.446	539.889	1247.834	-.225	0	-.212
276	40	N66	-155.658	708.504	-1091.295	0	0	0
277	40	N68	-157.202	20.551	321.873	0	0	0
278	40	N77	205.534	39.994	426.468	0	0	0
279	40	Totals:	-113.38	1805.972	-.022			
280	40	COG (ft):	X: -.03	Y: 1.609	Z: 3.789			
281	41	N53B	25.4	493.646	-921.961	-.206	0	-.23
282	41	N52B	-30.575	530.457	1259.735	-.221	0	-.233
283	41	N66	-171.262	724.153	-1118.115	0	0	0
284	41	N68	-143.118	18.365	291.258	0	0	0
285	41	N77	205.553	39.352	423.246	0	0	0
286	41	Totals:	-114.001	1805.973	-65.837			
287	41	COG (ft):	X: -.03	Y: 1.609	Z: 3.789			
288	42	N53B	26.253	485.99	-932.713	-.202	0	-.219
289	42	N52B	-28.189	516.378	1262.347	-.215	0	-.223
290	42	N66	-144.681	749.292	-1160.048	0	0	0
291	42	N68	-135.447	16.347	277.72	0	0	0
292	42	N77	198.765	37.965	408.405	0	0	0
293	42	Totals:	-83.299	1805.972	-144.29			
294	42	COG (ft):	X: -.03	Y: 1.609	Z: 3.789			
295	43	N53B	18.04	473.704	-915.227	-.197	0	-.13
296	43	N52B	-16.585	502.509	1244.732	-.209	0	-.137
297	43	N66	-29.277	777.775	-1206.463	0	0	0

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
298	43	N68	-154.349	16.05	319.236	0	0	0
299	43	N77	182.165	35.932	374.417	0	0	0
300	43	Totals:	-.005	1805.97	-183.303			
301	43	COG (ft):	X: -.03	Y: 1.609	Z: 3.789			
302	44	N53B	7.719	466.818	-879.938	-.195	0	-.028
303	44	N52B	-3.602	500.193	1219.728	-.208	0	-.039
304	44	N66	96.7	786.079	-1219.198	0	0	0
305	44	N68	-188.256	18.036	389.325	0	0	0
306	44	N77	169.951	34.842	347.152	0	0	0
307	44	Totals:	82.512	1805.968	-142.931			
308	44	COG (ft):	X: -.03	Y: 1.609	Z: 3.789			
309	45	N53B	4.758	469.566	-855.263	-.196	0	.01
310	45	N52B	1.918	508.957	1204.214	-.212	0	-.001
311	45	N66	145.728	771.518	-1194.299	0	0	0
312	45	N68	-209.929	20.695	434.89	0	0	0
313	45	N77	170.171	35.23	345.415	0	0	0
314	45	Totals:	112.646	1805.967	-65.044			
315	45	COG (ft):	X: -.03	Y: 1.609	Z: 3.789			
316	46	N53B	5.181	474.503	-842.166	-.198	0	.016
317	46	N52B	3.254	518.837	1194.299	-.216	0	.004
318	46	N66	151.973	753.744	-1164.083	0	0	0
319	46	N68	-220.107	22.903	459.021	0	0	0
320	46	N77	173.071	35.98	352.921	0	0	0
321	46	Totals:	113.373	1805.967	-.008			
322	46	COG (ft):	X: -.03	Y: 1.609	Z: 3.789			
323	47	N53B	2.103	477.886	-825.108	-.199	0	.038
324	47	N52B	5.475	528.259	1182.389	-.22	0	.025
325	47	N66	167.651	738.036	-1137.229	0	0	0
326	47	N68	-234.276	25.156	489.645	0	0	0
327	47	N77	173.041	36.628	356.111	0	0	0
328	47	Totals:	113.993	1805.966	65.807			
329	47	COG (ft):	X: -.03	Y: 1.609	Z: 3.789			
330	48	N53B	1.185	485.509	-814.253	-.202	0	.027
331	48	N52B	3.147	542.321	1179.701	-.226	0	.016
332	48	N66	141.185	712.974	-1095.354	.001	0	0
333	48	N68	-241.993	27.174	503.263	0	0	0
334	48	N77	179.767	37.988	370.904	0	0	0
335	48	Totals:	83.291	1805.966	144.26			
336	48	COG (ft):	X: -.03	Y: 1.609	Z: 3.789			
337	49	N53B	240.258	351.201	-652.717	-.146	0	-1.848
338	49	N52B	-229.031	422.318	937.181	-.176	0	-1.822
339	49	N66	-19.389	599.419	-916.519	.001	.002	-.003
340	49	N68	-149.292	36.623	315.778	0	0	0
341	49	N77	157.407	21.449	316.202	0	0	0
342	49	Totals:	-.047	1431.011	-.076			
343	49	COG (ft):	X: -2.855	Y: 2.031	Z: 3.733			
344	50	N53B	105.88	371.295	-753.111	-.155	0	-.819
345	50	N52B	-100.633	464.871	1020.674	-.194	0	-.809
346	50	N66	-8.788	544.615	-830.317	0	0	0
347	50	N68	-134.632	24.751	281.07	0	0	0
348	50	N77	138.152	25.453	281.646	0	0	0
349	50	Totals:	-.021	1430.985	-.038			
350	50	COG (ft):	X: -1.217	Y: 2.031	Z: 3.733			
351	51	N53B	123.164	302.58	-540.423	-.126	0	-.943
352	51	N52B	-118.316	358.028	779.672	-.149	0	-.931
353	51	N66	-8.351	518.485	-781.643	0	0	-.001
354	51	N68	-129.729	27.219	271.261	0	0	0

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
355	51	N77	133.208	25.669	271.091	0	0	0
356	51	Totals:	-.024	1231.981	-.043			
357	51	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
358	52	N53B	106.096	270.97	-447.207	-.113	0	-.809
359	52	N52B	-102.423	327.611	676.986	-.137	0	-.798
360	52	N66	13.034	443.874	-665.606	0	0	-.001
361	52	N68	-135.391	27.438	283.938	0	0	0
362	52	N77	118.663	22.698	243.372	0	0	0
363	52	Totals:	-.021	1092.591	91.482			
364	52	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
365	53	N53B	111.268	275.314	-464.968	-.115	0	-.861
366	53	N52B	-109.734	330.535	689.464	-.138	0	-.849
367	53	N66	-51.556	436.498	-654.531	0	0	-.001
368	53	N68	-120.755	26.762	251.976	0	0	0
369	53	N77	124.996	23.483	257.274	0	0	0
370	53	Totals:	-45.78	1092.592	79.216			
371	53	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
372	54	N53B	115.899	277.754	-486.499	-.116	0	-.907
373	54	N52B	-115.894	330.012	702.448	-.138	0	-.894
374	54	N66	-104.074	435.316	-653.877	0	0	-.001
375	54	N68	-104.665	25.456	216.966	0	0	0
376	54	N77	129.459	24.054	266.68	0	0	0
377	54	Totals:	-79.277	1092.593	45.717			
378	54	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
379	55	N53B	118.746	277.631	-506.01	-.116	0	-.933
380	55	N52B	-119.254	326.178	712.441	-.136	0	-.919
381	55	N66	-130.451	440.675	-663.834	0	0	-.001
382	55	N68	-91.425	23.859	188.295	0	0	0
383	55	N77	130.843	24.251	269.064	0	0	0
384	55	Totals:	-91.541	1092.594	-.044			
385	55	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
386	56	N53B	119.058	274.972	-518.257	-.115	0	-.933
387	56	N52B	-118.923	320.06	716.758	-.133	0	-.92
388	56	N66	-123.617	451.163	-681.751	0	0	-.001
389	56	N68	-84.57	22.382	173.658	0	0	0
390	56	N77	128.775	24.016	263.789	0	0	0
391	56	Totals:	-79.277	1092.594	-45.803			
392	56	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
393	57	N53B	116.769	270.497	-519.973	-.113	0	-.906
394	57	N52B	-115.007	313.304	714.255	-.131	0	-.894
395	57	N66	-85.437	463.961	-702.823	0	0	-.001
396	57	N68	-85.921	21.417	176.962	0	0	0
397	57	N77	123.815	23.415	252.281	0	0	0
398	57	Totals:	-45.782	1092.593	-79.297			
399	57	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
400	58	N53B	112.492	265.411	-510.723	-.111	0	-.86
401	58	N52B	-108.554	307.723	705.621	-.128	0	-.85
402	58	N66	-26.142	475.612	-721.392	0	0	0
403	58	N68	-95.122	21.231	197.311	0	0	0
404	58	N77	117.304	22.615	237.625	0	0	0
405	58	Totals:	-.022	1092.592	-91.558			
406	58	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
407	59	N53B	107.362	261.081	-492.997	-.109	0	-.808
408	59	N52B	-101.28	304.813	693.175	-.127	0	-.799
409	59	N66	38.391	482.97	-732.464	0	0	0
410	59	N68	-109.725	21.891	229.249	0	0	0
411	59	N77	110.99	21.835	223.746	0	0	0

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
412	59	Totals:	45.738	1092.591	-79.291			
413	59	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
414	60	N53B	102.736	258.662	-471.535	-.108	0	-.763
415	60	N52B	-95.121	305.348	680.241	-.127	0	-.755
416	60	N66	90.885	484.071	-733.075	0	0	0
417	60	N68	-125.826	23.226	264.223	0	0	0
418	60	N77	106.56	21.282	214.354	0	0	0
419	60	Totals:	79.234	1092.589	-45.793			
420	60	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
421	61	N53B	99.853	258.794	-452.059	-.108	0	-.737
422	61	N52B	-91.726	309.18	670.265	-.129	0	-.729
423	61	N66	117.295	478.649	-723.078	0	0	-.001
424	61	N68	-139.111	24.868	292.88	0	0	0
425	61	N77	105.186	21.098	211.96	0	0	0
426	61	Totals:	91.498	1092.589	-.032			
427	61	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
428	62	N53B	99.499	261.439	-439.778	-.109	0	-.737
429	62	N52B	-92.018	315.284	665.916	-.131	0	-.729
430	62	N66	110.518	468.179	-705.163	0	0	-.001
431	62	N68	-146	26.36	307.542	0	0	0
432	62	N77	107.235	21.327	217.211	0	0	0
433	62	Totals:	79.235	1092.589	45.727			
434	62	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
435	63	N53B	101.783	265.892	-437.993	-.111	0	-.763
436	63	N52B	-95.933	322.028	668.369	-.134	0	-.754
437	63	N66	72.362	455.462	-684.134	0	0	-.001
438	63	N68	-144.637	27.297	304.274	0	0	0
439	63	N77	112.164	21.91	228.706	0	0	0
440	63	Totals:	45.739	1092.59	79.221			
441	63	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
442	64	N53B	72.376	187.927	-298.898	-.078	0	-.548
443	64	N52B	-70.657	229.766	463.352	-.096	0	-.541
444	64	N66	16.544	301.839	-452.069	0	0	0
445	64	N68	-100.262	20.312	209.881	0	0	0
446	64	N77	81.984	15.537	169.227	0	0	0
447	64	Totals:	-.014	755.38	91.494			
448	64	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
449	65	N53B	77.588	192.226	-316.528	-.08	0	-.6
450	65	N52B	-78.095	232.688	475.731	-.097	0	-.592
451	65	N66	-47.928	294.592	-441.051	0	0	0
452	65	N68	-85.605	19.593	177.927	0	0	0
453	65	N77	88.266	16.283	183.149	0	0	0
454	65	Totals:	-45.774	755.381	79.227			
455	65	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
456	66	N53B	82.277	194.638	-337.958	-.081	0	-.646
457	66	N52B	-84.388	232.176	488.648	-.097	0	-.636
458	66	N66	-100.385	293.507	-440.434	0	0	0
459	66	N68	-69.469	18.238	142.889	0	0	0
460	66	N77	92.694	16.823	192.584	0	0	0
461	66	Totals:	-79.27	755.382	45.729			
462	66	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
463	67	N53B	85.186	194.51	-357.423	-.081	0	-.672
464	67	N52B	-87.852	228.364	498.628	-.095	0	-.662
465	67	N66	-126.772	298.906	-450.4	0	0	0
466	67	N68	-56.169	16.598	114.162	0	0	0
467	67	N77	94.073	17.004	195.001	0	0	0
468	67	Totals:	-91.534	755.383	-.032			

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
469	67	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
470	68	N53B	85.548	191.873	-369.693	-.08	0	-.672
471	68	N52B	-87.568	222.273	502.988	-.093	0	-.662
472	68	N66	-120.02	309.365	-468.294	0	0	0
473	68	N68	-49.257	15.097	99.455	0	0	0
474	68	N77	92.026	16.775	189.753	0	0	0
475	68	Totals:	-79.271	755.383	-45.791			
476	68	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
477	69	N53B	83.281	187.438	-371.494	-.078	0	-.645
478	69	N52B	-83.629	215.542	500.573	-.09	0	-.637
479	69	N66	-81.968	322.074	-489.317	0	0	0
480	69	N68	-50.569	14.131	102.696	0	0	0
481	69	N77	87.111	16.198	178.257	0	0	0
482	69	Totals:	-45.775	755.382	-79.285			
483	69	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
484	70	N53B	78.994	182.401	-362.369	-.076	0	-.6
485	70	N52B	-77.09	209.976	492.047	-.087	0	-.593
486	70	N66	-22.815	333.6	-507.825	0	0	0
487	70	N68	-59.76	13.969	123.003	0	0	0
488	70	N77	80.656	15.434	163.598	0	0	0
489	70	Totals:	-.015	755.381	-91.546			
490	70	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
491	71	N53B	73.824	178.116	-344.772	-.074	0	-.548
492	71	N52B	-69.69	207.069	479.7	-.086	0	-.543
493	71	N66	41.601	340.83	-518.841	0	0	0
494	71	N68	-74.384	14.672	154.934	0	0	0
495	71	N77	74.394	14.694	149.7	0	0	0
496	71	Totals:	45.744	755.38	-79.279			
497	71	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
498	72	N53B	69.14	175.725	-323.411	-.073	0	-.503
499	72	N52B	-63.398	207.592	466.831	-.086	0	-.499
500	72	N66	94.035	341.834	-519.416	0	0	0
501	72	N68	-90.532	16.056	189.936	0	0	0
502	72	N77	69.996	14.172	140.279	0	0	0
503	72	Totals:	79.241	755.379	-45.781			
504	72	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
505	73	N53B	66.195	175.861	-303.98	-.073	0	-.477
506	73	N52B	-59.899	211.402	456.868	-.088	0	-.473
507	73	N66	120.455	336.372	-509.41	0	0	0
508	73	N68	-103.876	17.74	218.649	0	0	0
509	73	N77	68.629	14.002	137.853	0	0	0
510	73	Totals:	91.505	755.378	-.02			
511	73	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
512	74	N53B	65.792	178.485	-291.676	-.074	0	-.477
513	74	N52B	-60.145	217.479	452.477	-.091	0	-.472
514	74	N66	113.759	325.93	-491.518	0	0	0
515	74	N68	-110.822	19.257	233.38	0	0	0
516	74	N77	70.657	14.226	143.077	0	0	0
517	74	Totals:	79.241	755.378	45.739			
518	74	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			
519	75	N53B	68.054	182.898	-289.807	-.076	0	-.503
520	75	N52B	-64.082	224.199	454.843	-.093	0	-.497
521	75	N66	75.731	313.302	-470.537	0	0	0
522	75	N68	-109.497	20.195	230.175	0	0	0
523	75	N77	75.54	14.785	154.558	0	0	0
524	75	Totals:	45.746	755.379	79.233			
525	75	COG (ft):	X: -1.649	Y: 2.752	Z: 3.639			

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

	Member	Shape	Code Check	Lo...	LC	Shear Check	Lo...	...	LC	phi*Pnc...	phi*Pnt [...	phi*Mn y...	phi*Mn...	Cb	Eqn
1	M1	L3X3X3	.761	6.25	6	.715	.911	y	19	14909.4...	35316	1.32	2.711	2.498	H2-1
2	M2	L3X3X3	.440	0	2	.269	5....	y	19	14909.4...	35316	1.32	2.661	2.268	H2-1
3	M7A	L3X3X3	.744	6.25	1	.656	.911	y	13	14909.4...	35316	1.32	2.766	2.795	H2-1
4	M8	L3X3X3	.760	0	1	.214	5....	y	13	14909.4...	35316	1.32	2.739	2.647	H2-1
5	M13	PIPE_2.0	.861	2	12	.579	2		12	28843.4...	32130	1.872	1.872	2.713	H3-6
6	M14	PIPE_2.0	.731	2	6	.395	2		6	28843.4...	32130	1.872	1.872	2.383	H3-6
7	M15	PIPE_2.0	.361	2	6	.264	2		5	28843.4...	32130	1.872	1.872	2.29	H1-...
8	M16	PIPE_2.0	.485	2	4	.341	2		3	28843.4...	32130	1.872	1.872	2.33	H3-6
9	M28	PIPE_3.0	.498	2....	5	.472	2....		5	62138.0...	65205	5.749	5.749	1.94	H3-6
10	OVP1	HSS3X3X3	.631	0	29	.566	2.5	z	5	74689.8...	78246	6.796	6.796	1.852	H3-6
11	M28B	HSS3X3X3	.618	0	5	.553	2.5	y	5	74689.8...	78246	6.796	6.796	1.82	H3-6
12	OVP	PIPE_1.5	.673	2.25	5	.467	2.25		5	22661.6...	23593.5	1.105	1.105	2.364	H3-6
13	MP4A	PIPE_2.5	.365	4	7	.203	5.5		6	30038.4...	50715	3.596	3.596	1.386	H1-...
14	MP1A	PIPE_2.0	.343	4....	7	.187	5....		2	12143.9...	32130	1.872	1.872	1.462	H1-...
15	MP3A	PIPE_2.0	.160	4.01	1	.275	4.01		6	17855.0...	32130	1.872	1.872	1.373	H3-6
16	MP2A	PIPE_2.0	.145	3....	7	.214	4....		2	17855.0...	32130	1.872	1.872	1.373	H1-...
17	M31B	PIPE_2.0	.496	0	1	.013	7....		1	15941.2...	32130	1.872	1.872	1.601	H1-...
18	M36	PIPE_2.5	.484	2....	11	.419	.688		12	39593.7...	50715	3.596	3.596	1.812	H3-6
19	M37	L2.5x2.5x4	.161	2....	3	.036	0	z	1	15251.2...	38556	1.114	2.217	1.136	H2-1
20	M38	L2.5x2.5x4	.127	2....	12	.021	5....	y	7	15251.3...	38556	1.114	2.217	1.136	H2-1
21	M43	PIPE_2.0	.270	0	2	.008	7....		3	15941.2...	32130	1.872	1.872	1.546	H1-...
22	M44	PIPE_2.5	.404	3....	6	.257	4....		2	39593.7...	50715	3.596	3.596	1.712	H1-...

VzW SMART Tool© Vendor

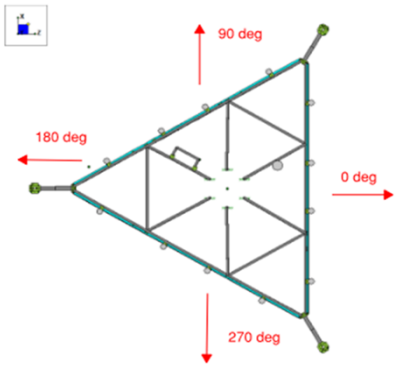
Client:	Verizon Wireless	Date:	12/6/2023
Site Name:	FRANKLIN CT		
MDG #:	5000391689		
Fuze ID #:	16271936	Page:	1

Version 2.00

I. Mount-to-Tower Connection Check

Custom Orientation Required	Yes

Nodes (labeled per Risa)	Orientation (per graphic of typical platform)
N52B	0
N53B	0



Tower Connection Bolt Checks	Yes
Bolt Orientation	Parallel
Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)* :	10
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	2
Bolt Type:	A307
Bolt Diameter (in):	0.5
Required Tensile Strength / bolt (kips):	0.8
Required Shear Strength / bolt (kips):	1.9
Tensile Capacity / bolt (kips):	6.6
Shear Capacity / bolt (kips):	4.0
Bolt Overall Utilization:	**49.0%**
Tower Connection Baseplate Checks	No

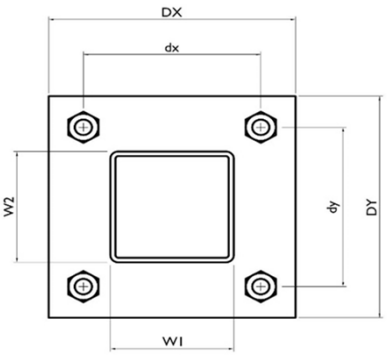


EXHIBIT 5

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Non-Ionizing Electromagnetic Radiation (NIER) Study

Site Number:

6310

Site Name:

Franklin CT

Location:

North Franklin, Connecticut

Tenants:

AT&T Mobility, Verizon Wireless, Sprint,

State of CT, & Prov and Worcester RR

Prepared For:

American Tower, Inc.
Woburn, Massachusetts

January 17th, 2024

25556 P-415413

Prepared By:

Adam Carlson MS, CBRE, CPI
Program Manager RF Design & Service
Tower Engineering Professionals

Approved By:

TOWER ENGINEERING PROFESSIONALS

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Non-Ionizing Electromagnetic Radiation (NIER) Study

6310 Franklin CT
North Franklin, Connecticut

INTRODUCTION

Tower Engineering Professionals RF Design & Services Division (TEP-RF) of Raleigh, North Carolina, has been retained by American Tower, Inc. (ATC), of Woburn, Massachusetts to evaluate the RF emissions compared to the Maximum Permissible Exposure (MPE) limit for facilities at this location. This evaluation uses compliance standards as outlined in Federal Communications Commission (FCC) document OET-65.

SITE AND FACILITY CONSIDERATIONS

Site 6310 Franklin CT is located at 289 Mountain St., in North Franklin, Connecticut at coordinates 41.597663, -72.144985. The support structure is a 302' guyed lattice tower. An aerial view of the tower can be found in Appendix 1, Site Photos. The tenants are AT&T Mobility (AT&T), Verizon Wireless (VZW) Sprint (Sprint), State of CT (CT), & Prov and Worcester RR (PWRR). A table listing all antennae and effective radiated power (ERP) levels that were used in this study may be found in Appendix 2, Antenna Inventory.

POWER DENSITY CALCULATIONS

Power densities were calculated based on FCC MPE limits for both General Population/Uncontrolled and Occupational/Controlled environments.

For the purpose of this study, a radius of 100' from the base of the tower with a height of 6' above ground level was used, beyond 100' the MPE levels become *di minimus*. This study utilized FCC recognized and accepted software programs using the maximum ERP levels for the antenna models provided by ATC. Diagrams depicting the predicted spatial average power density level at any specific location may be found in Appendix 3, MPE Limit Study. A discussion regarding the FCC limits may be found in Appendix 4, Information Pertaining to MPE Studies. Study methodology describing Non-ionizing Radiation Prediction Models used in this study may be found in Appendix 5, MPE Standards Methodology.

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All data used in this study was collected from one or more of the following sources:

- ATC furnished data and does not include other unidentified communication facilities.
- Load List at 6310 Franklin CT.RF NIER Study 12/20/23.
- FCC databases.
- Carrier standard configurations.
- Empirical data collected by TEP.

SITE MITIGATION & CONTROL

In order to comply with FCC, tenant, & ATC requirements, TEP recommends the placement of signage at the base of the tower and all compound access points to alert workers of potential exposure to RF fields while working on or near the antennae.

TEP recommends that all personnel working on this tower be trained in RF safety procedures and carry a personal RF monitor at all times.

COMPLIANCE DETERMINATION

This installation ***IS*** in compliance with current FCC MPE limits as described in FCC OET-65.

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APPENDIX 1 Site Photos

Aerial View of Site

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Appendix 2.1 Antenna Inventory

6310 Franklin CT							
Antenna Inventory							
Antenna #	Carrier	Antenna Manufacturer	Antenna Model	Frequency Band (MHz)	Azmiuth (°)	Effective Radiated Power (W)	Radiation Center (ft)
1	CT	Scala	OGT9-840N	800	000	250	263.0
2	CT	Sinclair	SC479-HF1LDF	800	001	250	235.0
3	CT	Sinclair	SC479-HF1LDF	800	001	250	235.0
4	CT	Sinclair	SC479-HF1LDF	800	001	250	235.0
5	CT	Scala	OGT9-840N	800	001	250	229.0
6	AT&T	Ericsson	Air 6449	700/800/2100	030	70300	196.0
7	AT&T	Ericsson	Air 6449	700/800/2100	150	70300	196.0
8	AT&T	Ericsson	Air 6449	700/800/2100	270	70300	196.0
9	AT&T	CCI	TPA65R-BU8D	700/800/2100	030	81640	196.0
10	AT&T	CCI	TPA65R-BU8D	700/800/2100	150	81640	196.0
11	AT&T	CCI	TPA65R-BU8D	700/800/2100	270	81640	196.0
12	AT&T	CCI	DMP65R-BU8D	700/800/2100	030	81640	196.0
13	AT&T	CCI	DMP65R-BU8D	700/800/2100	150	81640	196.0
14	AT&T	CCI	DMP65R-BU8D	700/800/2100	270	81640	196.0
15	Sprint	RFS	APXVAALL24	600/1900/2100	060	10543	180.0
16	Sprint	RFS	APXVAALL24	600/1900/2100	180	10543	180.0
17	Sprint	RFS	APXVAALL24	600/1900/2100	300	10543	180.0
18	Sprint	Ericsson	Air 6449	2500-2699	060	18970	180.0
19	Sprint	Ericsson	Air 6449	2500-2699	180	18970	180.0
20	Sprint	Ericsson	Air 6449	2500-2699	300	18970	180.0

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Appendix 2.2 Antenna Inventory

6310 Franklin CT							
Antenna Inventory							
Antenna #	Carrier	Antenna Manufacturer	Antenna Model	Frequency Band (MHz)	Azmiuth (°)	Effective Radiated Power (W)	Radiation Center (ft)
21	PWRR	Andrew	DB224	100	000	1000	180.0
22	Verizon	Amphonel	BXA-70063-6CF	700/800/900	039	22966	170.4
23	Verizon	Amphonel	BXA-70063-6CF	700/800/900	159	22966	170.4
24	Verizon	Amphonel	BXA-70063-6CF	700/800/900	286	22966	170.4
25	Verizon	Samsung	MT6407-77A	3700-3900	030	18286	170.0
26	Verizon	Samsung	MT6407-77A	3700-3900	180	18286	170.0
27	Verizon	Samsung	MT6407-77A	3700-3900	270	18286	170.0
28	Verizon	Commscope	JAHH-65B-R3B	700/800/1900/2100	040	32167	170.0
29	Verizon	Commscope	JAHH-65B-R3B	700/800/1900/2100	130	32167	170.0
30	Verizon	Commscope	JAHH-65B-R3B	700/800/1900/2100	270	32167	170.0
31	Verizon	Commscope	JAHH-65B-R3B	700/800/1900/2100	040	32167	170.0
32	Verizon	Commscope	JAHH-65B-R3B	700/800/1900/2100	130	32167	170.0
33	Verizon	Commscope	JAHH-65B-R3B	700/800/1900/2100	270	32167	170.0
34	Verizon	Commscope	LNX-6514DS-VTM	800	030	18970	170.0
35	Verizon	Commscope	LNX-6514DS-VTM	800	130	18970	170.0
36	Verizon	Commscope	LNX-6514DS-VTM	800	270	18970	170.0
37	CT	Generic	24"X12"	800	001	250	125.0
38	CT	Generic	24"X12"	800	001	250	125.0
39	CT	Generic	24"X12"	800	001	250	125.0
40	CT	RFS	PA6-65AC	6000	159	250	80.0

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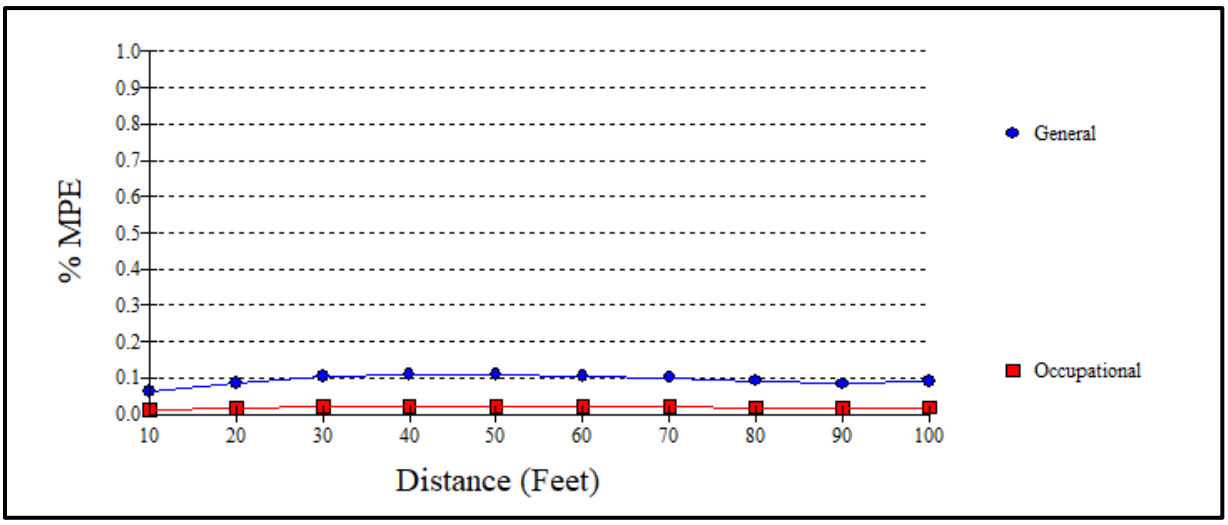
Appendix 3.1 MPE Limit Study



Maximum Power Density (@40'):	0.0008 mW/cm²
General Population MPE (@40'):	0.1099%
Occupational MPE (@40'):	0.0220%

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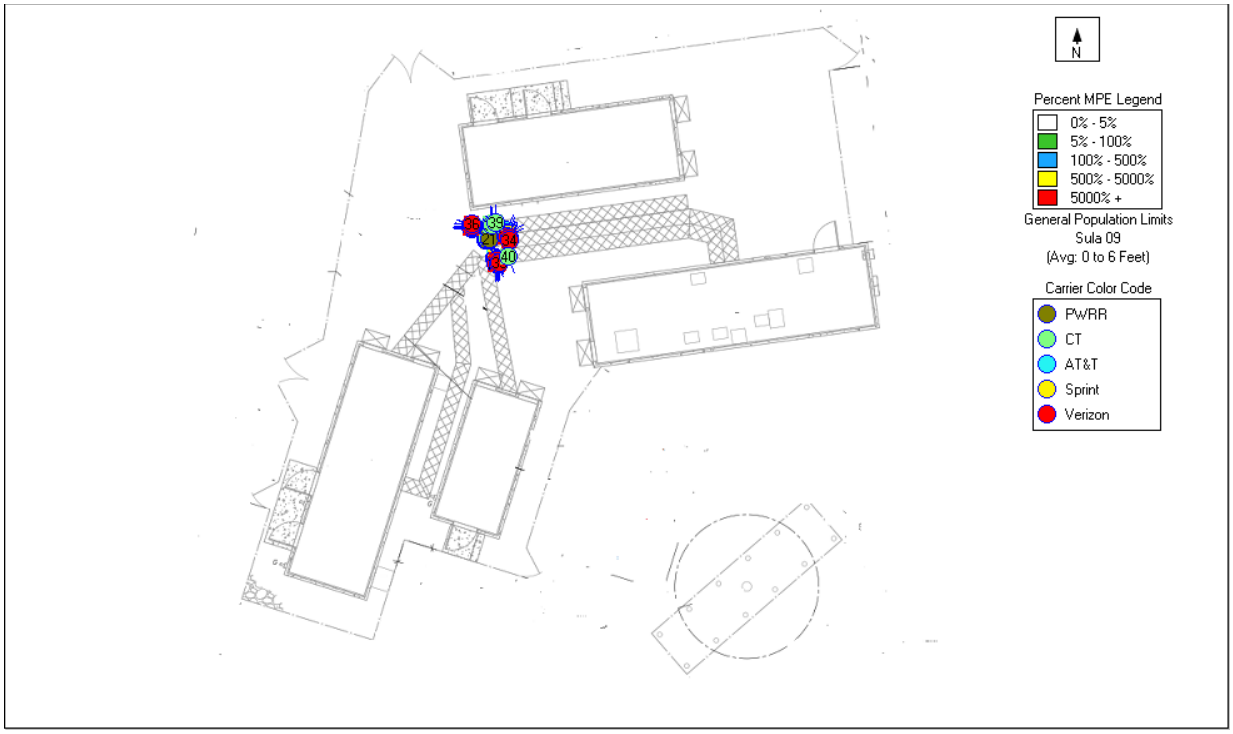
Appendix 3.2 MPE Limit Study



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Appendix 4 Information Pertaining to MPE Studies

In 1985, the FCC first adopted guidelines to be used for evaluating human exposure to RF emissions. The FCC revised and updated these guidelines on August 1, 1996, as a result of a rule-making proceeding initiated in 1993. The new guidelines incorporate limits for Maximum Permissible Exposure (MPE) in terms of electric and magnetic field strength and power density for transmitters operating at frequencies between 300 kHz and 100 GHz.

The FCC's MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP), and, over a wide range of frequencies, the exposure limits were developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC's limits, and the NCRP and ANSI/IEEE limits on which they are based, are derived from exposure criteria quantified in terms of specific absorption rate (SAR). The basis for these limits is a whole-body averaged SAR threshold level of 4 watts per kilogram (4 W/kg), as averaged over the entire mass of the body, above which expert organizations have determined that potentially hazardous exposures may occur. The MPE limits are derived by incorporating safety factors that lead, in some cases, to limits that are more conservative than the limits originally adopted by the FCC in 1985. Where more conservative limits exist, they do not arise from a fundamental change in the RF safety criteria for whole-body averaged SAR, but from a precautionary desire to protect subgroups of the general population who, potentially, may be more at risk.

The FCC exposure limits are also based on data showing that the human body absorbs RF energy at some frequencies more efficiently than at others. The most restrictive limits occur in the frequency range of 30-300 MHz where whole-body absorption of RF energy by human beings is most efficient. At other frequencies, whole-body absorption is less efficient, and consequently, the MPE limits are less restrictive.

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MPE limits are defined in terms of power density (units of milliwatts per centimeter squared: mW/cm^2), electric field strength (units of volts per meter: V/m) and magnetic field strength (units of amperes per meter: A/m). The far-field of a transmitting antenna is where the electric field vector (E), the magnetic field vector (H), and the direction of propagation can be considered to be all mutually orthogonal ("plane-wave" conditions).

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.

General population/uncontrolled exposure limits apply to situations in which the general public 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 public 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. Additional details can be found in FCC OET 65.

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Appendix 5 MPE Standards Methodology

This study predicts RF field strength and power density levels that emanate from communications system antennae. It considers all transmitter power levels (less filter and line losses) delivered to each active transmitting antenna at the communications site. Calculations are performed to determine power density and MPE levels for each antenna as well as composite levels from all antennas. The calculated levels are based on where a human (Observer) would be standing at various locations at the site. The point of interest where the MPE level is predicted is based on the height of the Observer.

Compliance with the FCC limits on RF emissions are determined by spatially averaging a person's exposure over the projected area of an adult human body, that is approximately six-feet or two-meters, as defined in the ANSI/IEEE C95.1 standard. The MPE limits are specified as time-averaged exposure limits. This means that exposure is averaged over an identifiable time interval. It is 30 minutes for the general population/uncontrolled RF environment and 6 minutes for the occupational/controlled RF environment. However, in the case of the general public, time averaging should not be applied because the general public is typically not aware of RF exposure, and they do not have control of their exposure time. Therefore, it should be assumed that any RF exposure to the general public will be continuous.

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The FCC's limits for exposure at different frequencies are shown in the following Tables.

Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	**Electric Field Strength (E) (V/m)**	**Magnetic Field Strength (H) (A/m)**	**Power Density (S) (mW/cm^2)**	**Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)**
0.3 - 3.0	614	1.63	100*	6
3.0 - 30	1842/f	4.89/f	$900/F^2$	6
30 - 300	61.4	0.163	1.0	6
300 - 1500	--	--	f/300	6
1500 - 100,000	--	--	5	6

f = frequency

* = Plane-wave equivalent power density

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Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (E) (V/m)**	**Magnetic Field Strength (H) (A/m)**	**Power Density (S) (mW/cm^2)**	**Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)**
0.3 - 1.34	614	1.63	100*	30
1.34 - 30	824/f	2.19/f	$180/F^2$	30
30 -300	27.5	0.073	0.2	30
300 -1500	--	--	f/1500	30
1500 -100,000	--	--	1.0	30

f = frequency

* = Plane-wave equivalent power density

General population/uncontrolled exposures apply in situations in which the general public may be exposed or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

It is important to understand that these limits apply cumulatively to all sources of RF emissions affecting a given area. For example, if several different communications system antennas occupy a shared facility such as a tower or rooftop, then the total exposure from all systems at the facility must be within compliance of the FCC guidelines.

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The field strength emanating from an antenna can be estimated based on the characteristics of an antenna radiating in free space. There are basically two field areas associated with a radiating antenna. When close to the antenna, the region is known as the Near Field. Within this region, the characteristics of the RF fields are very complex, and the wave front is extremely curved. As you move further from the antenna, the wave front has less curvature and becomes planar. The wave front still has a curvature, but it appears to occupy a flat plane in space (plane-wave radiation). This region is known as the Far Field.

Two models are utilized to predict Near and Far field power densities. They are based on the formulae in FCC OET 65.

Cylindrical Model (Near Field Predictions)

Spatially averaged plane-wave equivalent power densities parallel to the antenna may be estimated by dividing the antenna input power by the surface area of an imaginary cylinder surrounding the length of the radiating antenna. While the actual power density will vary along the height of the antenna, the average value along its length will closely follow the relation given by the following equation:

$$S = P \div 2\pi RL$$

Where:

S = Power Density

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

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For directional-type antennas, power densities can be estimated by dividing the input power by that portion of a cylindrical surface area corresponding to the angular beam width of the antenna. For example, for the case of a 120-degree azimuthal beam width, the surface area should correspond to 1/3 that of a full cylinder. This would increase the power density near the antenna by a factor of three over that for a purely omni-directional antenna. Mathematically, this can be represented by the following formula:

$$S = (180 / \theta_{BW}) P \div \pi RL$$

Where:

S = Power Density

θ_{BW} = Beam width of antenna in degrees (3 dB half-power point)

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

If the antenna is a 360-degree omni-directional antenna, this formula would be equivalent to the previous formula.

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Spherical Model (Far Field Predictions)

Spatially averaged plane-wave power densities in the Far Field of an antenna may be estimated by considering the additional factors of antenna gain and reflective waves that would contribute to exposure.

The radiation pattern of an antenna has developed in the Far Field region and the power gain needs to be considered in exposure predictions. Also, if the vertical radiation pattern of the antenna is considered, the exposure predictions would most likely be reduced significantly at ground level, resulting in a more realistic estimate of the actual exposure levels.

Additionally, to model a truly "worst case" prediction of exposure levels at or near a surface, such as at ground-level or on a rooftop, reflection off the surface of antenna radiation power can be assumed, resulting in a potential four-fold increase in power density.

These additional factors are considered, and the Far Field prediction model is determined by the following equation:

$$S = EIRP \times Rc \div 4\pi R^2$$

Where:

S = Power Density

EIRP = Effective Radiated Power from antenna

Rc = Reflection Coefficient (2.56)

R = Distance from the antenna

The EIRP includes the antenna gain. If the antenna pattern is considered, the antenna gain is relative based on the horizontal and vertical pattern gain values at that particular location in space, on a rooftop or on the ground. However, it is recommended that the antenna radiation pattern characteristics not be considered to provide a conservative "worst case" prediction. This is the equation is utilized for the Far Field exposure predictions herein.

EXHIBIT 6

1759

PERMIT

m36 L 8

TOWN OF FRANKLIN

APPLICATION FOR BASIC BUILDING PERMIT

APPLICATION FOR ZONING PERMIT

DATE: January 5, 1999

OWNER: American Tower Corporation

ADDRESS: 321 Columbus Avenue, 5th floor, Boston, MA02116 MAP #: 13 LOT #: 51

DESCRIPTION: Installation of new 300' guyed tower

CLASS:	FLOORING:	HEATING:
TYPE:		AIR COND.:
STORIES:	INT. WALLS:	GAS:
FLOOR AREA:	ELECTRICAL:	ELEC.:
	BATH RMS.:	OIL:
FOUNDATION:	TOILET RMS.:	CHIMNEY:
EXT. WALLS:	HOT WATER:	FIREPLACE:
ROOFING:	GAS:	
BASEMENT:	ELEC.:	OTHER:
	OIL:	

APPLICATION FOR ZONING PERMIT

		FRONT	L. SIDE	R. SIDE	REAR
DISTANCE	WELL:				
FROM	SEPTIC:				
PROP. LINE	BUILDING:				

DISTANCE OF ANY ACTIVITY FROM WETLANDS FEET

I CERTIFY THAT THE ABOVE INCLUDED INFORMATION IS ACCURATE AND FACTUAL TO THE BEST OF MY KNOWLEDGE

1/11/99

Michael Levine

PAID CK# 2568

APPLICANT: Michael Levine, Construction Manager

BUILDING INSPECTOR:

EST. COST: $250,000

BLD. PER:	2500.00
DRIVEWAY:	
HEATING:	
PLUMBING:	
ELECTRIC:	PAID
C.O.:	PAID
TOTAL FEE:	2500.00

received
1/11/99 OSB
$10.00 State surcharge

TOWN OF FRANKLIN
ZONING PERMIT APPLICATION

PERMIT #: ZP-991 DATE: 1-5-99

APPLICATION IS HEREBY APPLIED FOR A ZONING PERMIT FOR THE PURPOSE DESCRIBED HEREIN:

APPLICANT: AMERICAN TOWER ADDRESS: 3721 COLUMBUS AVE, BOSTON MA

OWNER: THOMAS SHAKUN ADDRESS: 89 DR. NOTT RD

LOT SIZE: ~~R-80~~ ASSESSOR'S MAP #: 13 ASSESSOR'S LOT #: 51

PROPERTY IN FLOOD PLAIN (check one): [ ] YES or [X] NO

ZONE DISTRICT: R-80 SPECIAL PERMIT (check one): [ ] YES or [X] NO

PROVIDED SETBACKS:
800' FRONT 1300 RIGHT SIDE 700' LEFT SIDE 170' REAR

PROPOSED PURPOSE DESCRIPTION: CONSTRUCT TOWER & 5 SHELTER (4-10'X20' PRECAST) (1-12'X40' PRECAST)

DIMENSIONS: SEE APPROVED SITE PLAN FLOOR AREA: SITE PLAN ESTIMATED COST: $ 25,000

APPLICANTS FOR PERMITTED SINGLE-FAMILY DWELLINGS AND ACCESSORY BUILDINGS OR EXPANSIONS/ADDITIONS OF SUCH BUILDINGS ON RESIDENTIAL LOTS SHALL COMPLETE A PLOT PLAN.. APPLICANTS FOR ALL OTHER BUILDINGS AND USES SHALL SUBMIT APPLICATION DESIGNED BY THE PLANNING AND ZONING COMMISSION.

CONDITIONS OF APPROVAL: APPROVAL OF ZBA 9-22-98

****

PLANNING AND ZONING COMMISSION DECISION: 9-16-98

(check one) [X] APPROVED or [ ] DENIED

****

REQUIREMENTS OF SITE PLAN MUST BE ADHERED TO. FAILURE TO COMPLY WITH ZONING REGULATIONS OR OF THE APPROVED SITE PLAN SHALL CONSTITUTE A VIOLATION OF THIS PERMIT AND SHALL BE DECLARED INVALID. THIS PERMIT IS ISSUED ON THE BASIS OF THE APPLICATION CERTIFIES CONFORMANCE WITH FRANKLIN ZONING REGULATIONS. OTHER PERMITS MAY BE REQUIRED, SUCH AS THOSE CONCERNING DRIVEWAYS, WETLANDS, BUILDINGS, AND HEALTH CODES. OBTAINING THE ADDITIONAL PERMITS IS THE RESPONSIBILITY OF THE APPLICANT.

SIGNATURE OF APPLICANT: Melissa Lewis, American Tower

SIGNATURE OF ZONING ENFORCEMENT OFFICER: [signature]

DATE: 1-5-99

EXHIBIT 7

Hello, your package has been delivered.

Delivery Date: Tuesday, 02/13/2024
Delivery Time: 12:16 PM
Signed by: DONNA

CENTERLINE SITE ACQUISITION

Tracking Number:	**1Z9Y45030335997015**
Ship To:	AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 018011053 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	14530659

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Read Compass Online

UPS Delivery Notification, Tracking Number 1Z9Y45030327310799

UPS <pkginfo@ups.com>

Wed 2/14/2024 11:31 AM

To:Barbara Kassabian <BKASSABIAN@CLINELLC.COM>

Hello, your package has been delivered.

Delivery Date: Wednesday, 02/14/2024
Delivery Time: 11:30 AM
Signed by: LINDA

CENTERLINE SITE ACQUISITION

Tracking Number:	**1Z9Y45030327310799**
Ship To:	ALDEN MINER FIRST SELECTMAN 7 MEETINGHOUSE HILL ROAD FRANKLIN TOWN HALL NORTH FRANKLIN, CT 062541313 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	14530659

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UPS Delivery Notification, Tracking Number 1Z9Y45030331357400

UPS <pkginfo@ups.com>
Wed 2/14/2024 11:31 AM
To:Barbara Kassabian <BKASSABIAN@CLINELLC.COM>

Hello, your package has been delivered.

Delivery Date: Wednesday, 02/14/2024
Delivery Time: 11:30 AM
Signed by: LINDA

CENTERLINE SITE ACQUISITION

Tracking Number:	**1Z9Y45030331357400**
Ship To:	RONALD CHALECKI ZONING ENFORCEMENT 7 MEETINGHOUSE HILL ROAD FRANKLIN TOWN HALL NORTH FRANKLIN, CT 062541313 US
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Package Weight:	1.0 LBS
Reference Number:	14530659

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Tracking Number:

9505513170414043794677

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Your item has been delivered and is available at a PO Box at 9:45 am on February 14, 2024 in BETHLEHEM, PA 18016.

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Delivered

Delivered, PO Box

BETHLEHEM, PA 18016
February 14, 2024, 9:45 am

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