Robinson+Cole

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Also admitted in Massachusetts
and New York

October 26, 2021

Via Electronic Mail

Melanie A. Bachman, Esq.
Executive Director/Staff Attorney
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification – Facility Modification**
St. Andrews Road (a/k/a Hoskins Road), Bloomfield, Connecticut

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains an existing wireless telecommunications facility at the above-referenced property address (the "Property"). The facility consists of antennas and remote radio heads attached to and associated equipment on the ground adjacent to the tower. The tower was approved by the Siting Council ("Council") in May of 1993 (Docket No. 158). Cellco's shared use of the tower was approved by the Council in October of 1993. A copy of the Council's Docket No 158 tower approval and Cellco's shared use approval are included in Attachment 1.

Cellco now intends to modify its facility by replacing nine (9) existing antennas with three (3) new Samsung MT6407-77A antennas and six (6) NHH-65B-R2B antennas on Cellco's existing T-Arm mounting structure. Cellco also intends to replace nine (9) remote radio heads ("RRHs") with six (6) new RRHs behind its antennas. A set of project plans showing Cellco's proposed facility modifications and specifications for the new antennas and RRHs are included in Attachment 2.

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

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

1. The proposed modifications will not result in an increase in the height of the existing tower. Cellco's replacement antennas will be installed on Cellco's existing T-Arm antenna mounts.

2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, will not require the extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The installation of Cellco's new antennas will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative General Power Density table for Cellco's modified facility is included in Attachment 3. The modified facility will be capable of providing Cellco's 5G wireless service.

5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. According to the attached Structural Analysis ("SA") and Mount Analysis ("MA"), the existing tower, tower foundation and antenna mounts, with certain modifications, can support Cellco's proposed modifications. Copies of the SA and MA are included in Attachment 4.

A copy of the parcel map and Property owner information is included in Attachment 5. A Certificate of Mailing verifying that this filing was sent to municipal officials and the property owner is included in Attachment 6.

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

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:

Stanley D. Hawthorne, Bloomfield Town Manager
Jose Giner, Director of Planning and Zoning
Connecticut Light and Power Company, Property Owner
Alex Tyurin, Verizon Wireless

ATTACHMENT 1

ORIGINAL

DOCKET NO. 158 - An application of Springwich Cellular Limited Partnership for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a cellular telecommunications tower and associated equipment for a proposed site located approximately 0.3 miles west of Hoskins Road, near the intersection of Andrews Road, Bloomfield, Connecticut. : Connecticut : Siting : Council : May 6, 1993

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a cellular telecommunications tower at the proposed site in Bloomfield, Connecticut, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental Compatibility and Public Need as provided by section 16-50k of the Connecticut General Statutes (CGS), be issued to Springwich Cellular Limited Partnership (Springwich), for the construction, operation, and maintenance of a cellular telecommunications tower at the proposed site off Hoskins Road in Bloomfield, Connecticut.

The facility shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The self-supporting lattice tower shall be no taller than necessary to provide the proposed communications service and in no event shall the tower exceed a total height of 183 feet above ground level with antennas and appurtenances.

2. Prior to the commencement of construction, the Certificate holder shall prepare a Development and Management (D&M) Plan for this site in compliance with sections 16-50j-75 through 16-50j-77 of the Regulations of State Agencies. The D&M Plan shall include detailed plans for the tower, tower foundation, and tower lighting; locations of all antennas to be attached to this tower; location of the security fence; detailed plans for site clearing; and detailed plans for erosion and sediment control. The D&M Plan shall be submitted to the Council for approval prior to the commencement of tower construction.

3. The Certificate holder shall request the tower owner for an engineering analysis of the existing 100-foot repeater tower on Talcott Mountain ridge to determine if the antennas on the repeater tower can be satisfactorily transferred to the new tower and the repeater tower removed. Any such engineering analysis shall be provided to the Council for its review and acceptance prior to the commencement of tower construction.

4. The Certificate holder shall comply with any existing and future radio frequency (RF) standard promulgated by State or federal regulatory agencies. Upon the establishment of any new governmental RF standards, the facility granted herein shall be brought into compliance with such standards.

5. The Certificate holder shall provide the Council a recalculated report of electromagnetic radio frequency power density if and when circumstances in operation cause a change in power density above the levels originally calculated and provided in the application.

6. The Certificate holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.

7. If the facility does not initially provide, or permanently ceases to provide cellular or other services following completion of construction, this Decision and Order shall be void, and the tower and all associated equipment shall be dismantled and removed or re-application for any continued or new use shall be made to the Council before any such use is made.

8. Unless otherwise approved by the Council, this Decision and Order shall be void if all construction authorized herein is not completed within three years of the effective date of this Decision and Order or within three years after all appeals to this Decision and Order have been resolved.

Pursuant to CGS section 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in the Hartford Courant.

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

The party to this proceeding is:

PARTY

Springwich Cellular
Limited Partnership

ITS REPRESENTATIVE

Peter J. Tyrrell
Senior Attorney
Springwich Cellular
Limited Partnership
227 Church Street-Room 1021
New Haven, CT 06506

6930E

CERTIFICATION

The undersigned members of the Connecticut Siting Council (Council) hereby certify that they have heard this case, or read the record thereof, in Docket No. 158, and voted as follows to approve the application of Springwich Cellular Limited Partnership for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a cellular telecommunications tower and associated equipment for a proposed site located approximately 0.3 miles west of Hoskins Road, near the intersection of Andrews Road, Bloomfield, Connecticut:

Council Members	Vote Cast
Mortimer A. Gelston Chairman	YES
Commissioner Clifton A. Leonhardt Designee: Gerald J. Heffernan	YES
Commissioner Timothy R.E. Keeney Designee: Brian Emerick	YES
Harry E. Covey	ABSENT
Daniel P. Lynch, Jr.	YES
Gloria Dibble Pond	YES
Paulann H. Sheets	ABSENT
Colin C. Tait	YES
Dana J. Wright	YES

Dated at New Britain, Connecticut, May 6, 1993.

6902E-2

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

136 Main Street, Suite 401
New Britain, Connecticut 06051-4225
Phone: 827-7682

FILE COPY

October 26, 1993

David S. Malko
General Manager - Engineering
Bell Atlantic Metro Mobile
20 Alexander Drive
Wallingford, CT 06492

RE: Metro Mobile CTS of Hartford, Inc., notice of intent to modify an existing telecommunications tower and associated equipment at 8 Hoskins Road in Bloomfield, Connecticut.

Dear Mr. Malko:

At a meeting held October 15, 1993, the Connecticut Siting Council (Council) acknowledged your notice of an exempt modification at an existing tower site at 8 Hoskins Road in Bloomfield, Connecticut, pursuant to section 16-50j-73 of the Regulations of State Agencies (RSA).

The proposed modification is to be implemented as specified in your notice dated October 6, 1993. The modification is in compliance with the exception criteria in RSA section 16-50j-72(b) as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by 6 decibels, and increase radio frequency electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to Section 22a-162 of the Connecticut General Statutes.

The Council is pleased to note that the shared use of an existing tower serves the Council's long-term goal of protecting the public interest and avoiding proliferation of additional unnecessary tower structures.

Please notify the Council when all work is complete.

Very truly yours,

Mortimer A. Gelston
Chariman

MAG:RKE:mmb

cc: Honorable Faith McMahon, Mayor, Town of Bloomfield
Louie Chapman, Town Manager, Town of Bloomfield
7425E

ATTACHMENT 2

verizon

WIRELESS COMMUNICATIONS FACILITY UPGRADE

TARIFFVILLE CT RELO - TALCOTT MTN

ST. ANDREWS ROAD

BLOOMFIELD, CT 06002

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2015 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2018 CONNECTICUT SUPPLEMENT, INCLUDING THE TIA/EIA-222 REVISION "G" STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND SUPPORTING STRUCTURES, 2017 CONNECTICUT FIRE SAFETY CODE, NATIONAL ELECTRICAL CODE, AND LOCAL CODES.
2. SHOULD ANY FIELD CONDITIONS PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL NOT PROCEED WITH ANY AFFECTED WORK.
3. CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS IN THE CONTRACT DOCUMENT SET. CONTRACTOR SHALL COORDINATE ALL WORK SHOWN IN THE SET OF DRAWINGS. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF DRAWINGS TO ALL SUBCONTRACTORS AND ALL RELATED PARTIES. THE SUBCONTRACTORS SHALL EXAMINE ALL THE DRAWINGS AND SPECIFICATIONS FOR THE INFORMATION THAT AFFECTS THEIR WORK.
4. CONTRACTOR SHALL PROVIDE A COMPLETE BUILD-OUT WITH ALL FINISHES, STRUCTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS AND PROVIDE ALL ITEMS AS SHOWN OR INDICATED ON THE DRAWINGS OR IN THE WRITTEN SPECIFICATIONS.
5. CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT TO COMPLETE THE WORK AND FURNISH A COMPLETED JOB ALL IN ACCORDANCE WITH LOCAL AND STATE GOVERNING AUTHORITIES AND OTHER AUTHORITIES HAVING LAWFUL JURISDICTION OVER THE WORK.
6. CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND ALL INSPECTIONS REQUIRED AND SHALL ALSO PAY FEES REQUIRED FOR THE GENERAL CONSTRUCTION, AND ALL TRADES AS APPLICABLE PERMITS SHALL BE PAID FOR BY THE RESPECTIVE SUBCONTRACTORS.
7. CONTRACTOR SHALL MAINTAIN A CURRENT SET OF DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES AND INSURE DISTRIBUTION OF NEW DRAWINGS TO SUBCONTRACTORS AND OTHER RELEVANT PARTIES AS SOON AS THEY ARE MADE AVAILABLE. ALL OLD DRAWINGS SHALL BE MARKED VOID AND REMOVED FROM THE CONTRACT AREA. THE CONTRACTOR SHALL FURNISH AN "AS-BUILT" SET OF DRAWINGS TO OWNER UPON COMPLETION OF PROJECT.
8. LOCATION OF EQUIPMENT, AND WORK SUPPLIED BY OTHERS THAT IS DIAGRAMMATICALLY INDICATED ON THE DRAWINGS SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL DETERMINE LOCATIONS AND DIMENSIONS SUBJECT TO STRUCTURAL CONDITIONS AND WORK OF THE SUBCONTRACTORS.
9. THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE EXISTING STRUCTURES AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY. MAINTAIN EXISTING BUILDING'S/PROPERTY'S OPERATIONS, COORDINATE WORK WITH BUILDING/PROPERTY OWNER.
10. DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS BEARING ON THE WORK, THE CONTRACTOR SHALL INCLUDE IN HIS WORK AND SHALL EXECUTE THE WORK CORRECTLY IN ACCORDANCE WITH SUCH ORDINANCES, LAWS, CODES, RULES OR REGULATIONS WITH NO INCREASE IN COSTS.
11. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.
12. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUBCONTRACTORS FOR ANY CONDITION PER MFR.'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
13. ANY AND ALL ERRORS, DISCREPANCIES, AND "MISSED" ITEMS ARE TO BE BROUGHT TO THE ATTENTION OF THE VERIZON WIRELESS CONSTRUCTION MANAGER DURING THE BIDDING PROCESS BY THE CONTRACTOR. ALL THESE ITEMS ARE TO BE INCLUDED IN THE BID. NO "EXTRA" WILL BE ALLOWED FOR MISSED ITEMS.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE SAFETY FROM THE TIME THE JOB IS AWARDED UNTIL ALL WORK IS COMPLETE AND ACCEPTED BY THE OWNER.
15. CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTING TO THE CONSTRUCTION MANAGER FOR REVIEW.
16. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES, AND EXISTING CONDITIONS AT THE SITE, PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE CONTRACT AREA.
17. COORDINATION, LAYOUT, FURNISHING AND INSTALLATION OF CONDUIT AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
18. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUB- CONTRACTORS FOR ANY CONDITION PER THE MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
19. ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD LIABLE FOR ALL REPAIRS REQUIRED FOR EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.
20. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT LEAST 48 HOURS PRIOR TO ANY EXCAVATIONS AT 1-800-922-4455. ALL UTILITIES SHALL BE IDENTIFIED AND CLEARLY MARKED PRIOR TO ANY EXCAVATION WORK. CONTRACTOR SHALL MAINTAIN AND PROTECT MARKED UTILITIES THROUGHOUT PROJECT COMPLETION.

SITE DIRECTIONS

FROM: 20 ALEXANDER DRIVE
WALLINGFORD, CONNECTICUT

TO: ST. ANDREWS ROAD
BLOOMFIELD, CT 06002

1.	START OUT GOING NORTH ON ALEXANDER DR TOWARD BARNES INDUSTRIAL RD.	0.18 MI
2.	TURN RIGHT ONTO BARNES INDUSTRIAL RD.	0.11 MI
3.	TAKE FIRST LEFT ONTO CT-68	0.35 MI
4.	TURN RIGHT ONTO RAMP	0.17 MI
5.	TURN RIGHT ONTO N COLONY RD/ US-5 N	0.30 MI
6.	MERGE ONTO CT-15 N TOWARD HARTFORD	3.58 MI
7.	MERGE ONTO I-91 N VIA EXIT 68N-E TOWARD MIDDLETOWN/HARTFORD/CT-66 E.	23.80 MI
8.	TAKE THE CT-178/PARK AVE EXIT, EXIT 36, TOWARD BLOOMFIELD.	0.23 MI
9.	TURN LEFT ONTO PARK AVE/CT-178. CONTINUE TO FOLLOW CT-178	1.86 MI
10.	TURN RIGHT ONTO BLUE HILLS AVE/CT-187. CONTINUE TO FOLLOW CT-187.	4.41 MI
11.	TURN SLIGHT RIGHT ONTO RAMP.	0.13 MI
12.	TURN LEFT ONTO TARIFFVILLE RD.	0.69 MI
13.	TURN SLIGHT LEFT ONTO HOSKINS RD.	0.17 MI
14.	SHARP RIGHT ONTO ST. ANDREWS RD. AND THE DESTINATION WILL BE ON THE LEFT	0.10 MI

VICINITY MAP

SCALE: 1" = 1000'

PROJECT SUMMARY

1. THE PROPOSED UPGRADE SCOPE OF WORK AT THE EXISTING UNMANNED TELECOMMUNICATIONS FACILITY GENERALLY INCLUDES THE FOLLOWING:

A. AT THE EXISTING SELF-SUPPORTING LATTICE TOWER MOUNTED ANTENNA SECTORS:

- RETAIN (3) EXISTING ANDREW - LNX-6514DS-A1M ANTENNAS.
- RETAIN (6) EXISTING COAX CABLES.
- REMOVE (6) EXISTING ANDREW - HBXX-6517DS-A2M ANTENNAS.
- REMOVE (3) EXISTING ANDREW - LNX-6514DS-A1M ANTENNAS.
- REMOVE (9) EXISTING NOKIA RRUs.
- REMOVE (2) EXISTING OVP-6 BOXES.
- REMOVE (2) EXISTING 6X12 HYBRID CABLES.
- PERFORM ANTENNA MOUNT MODIFICATIONS (DESIGNED BY OTHERS AS REFERENCED HEREIN)
- INSTALL (6) NEW COMMSCOPE NHH-65B-R2B ANTENNAS.
- INSTALL (3) MT6407-77A ALL-IN-ONE ANTENNA/ RRUs.
- INSTALL (3) NEW COMMSCOPE BASMNT-SBS-1-2 MOUNTS.
- INSTALL (3) NEW SAMSUNG B5/B13 RRH-BR04C & (3) NEW SAMSUNG B2/B66A RRH-BR049.
- INSTALL (1) NEW 12x24 LI HYBRID CABLES.
- INSTALL (1) NEW OVP-12 BOX.

PROJECT INFORMATION

SITE NAME:	TARIFFVILLE CT RELO - TALCOTT MTN
SITE ADDRESS:	ST. ANDREWS ROAD BLOOMFIELD, CT 06002
LESSEE/TENANT:	CELLCO PARTNERSHIP d.b.a. VERIZON WIRELESS 20 ALEXANDER DRIVE WALLINGFORD, CT 06492
CONTACT PERSON:	WALTER CHARCZNSKI (CONSTRUCTION MANAGER) VERIZON WIRELESS (860) 306-1806
ENGINEER:	CENTEK ENGINEERING, INC. 63-2 NORTH BRANFORD RD. BRANFORD, CT. 06405 (203) 488-0580
PROJECT COORDINATES:	LATITUDE: 41°-53'-34.225"N LONGITUDE: 72°-45'-55.817"W COORDINATES BASED ON VERIZON WIRELESS RFDS, DATED JANUARY 15, 2021.

SHEET INDEX

SHT. NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	0
N-1	NOTES AND SPECIFICATIONS	0
B-1	RF BILL OF MATERIALS	0
C-1	COMPOUND PLAN AND ELEVATION	0
C-2	ANTENNA SECTOR CONFIGURATION DETAILS	0
C-3	RF DETAILS	0
E-1	ELECTRICAL DETAILS AND SPECIFICATIONS	0

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
0	10/05/21	ANC	DMD	CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION
A	07/15/21	ANC	DMD	CONSTRUCTION DRAWINGS - ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

verizon

CENTEK engineering
Centered on Solutions
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless

TARIFFVILLE CT RELO - TALCOTT MTN

ST. ANDREWS ROAD
BLOOMFIELD, CT 06002

DATE: 07/15/21
SCALE: AS NOTED
JOB NO. 21007.01

TITLE SHEET

T-1

Sheet No. 1 of 7

NOTES AND SPECIFICATIONS

DESIGN BASIS:

GOVERNING CODE: 2015 INTERNATIONAL BUILDING (IBC) AS MODIFIED BY THE 2018 CT STATE BUILDING CODE AND AMENDMENTS.

1. DESIGN CRITERIA:

- RISK CATEGORY: II (BASED ON TABLE 1604.5 OF THE 2015 IBC)
- NOMINAL DESIGN SPEED (TOWER): 97 MPH (Vasd) (EXPOSURE B/IMPORTANCE FACTOR 1.0 BASED ON ASCE 7-10) PER 2015 INTERNATIONAL BUILDING CODE (IBC) AS MODIFIED BY THE 2018 CONNECTICUT STATE BUILDING CODE.
- SEISMIC LOAD (DOES NOT CONTROL): PER ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES.

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE GOVERNING BUILDING CODE.
2. DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS BEARING ON THE WORK, THE CONTRACTOR SHALL INCLUDE IN HIS WORK AND SHALL EXECUTE THE WORK CORRECTLY IN ACCORDANCE WITH SUCH ORDINANCES, LAWS, CODES, RULES OR REGULATIONS WITH NO INCREASE IN COSTS.
3. BEFORE BEGINNING THE WORK, THE CONTRACTOR IS RESPONSIBLE FOR MAKING SUCH INVESTIGATIONS CONCERNING PHYSICAL CONDITIONS (SURFACE AND SUBSURFACE) AT OR CONTIGUOUS TO THE SITE WHICH MAY AFFECT PERFORMANCE AND COST OF THE WORK.
4. DIMENSIONS AND DETAILS SHALL BE CHECKED AGAINST EXISTING FIELD CONDITIONS.
5. THE CONTRACTOR SHALL VERIFY AND COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS, SLEEVES AND ANCHOR BOLTS AS REQUIRED BY ALL TRADES.
6. ALL DIMENSIONS, ELEVATIONS, AND OTHER REFERENCES TO EXISTING STRUCTURES, SURFACE, AND SUBSURFACE CONDITIONS ARE APPROXIMATE. NO GUARANTEE IS MADE FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS, ELEVATIONS, ANGLES WITH EXISTING CONDITIONS AND WITH ARCHITECTURAL AND SITE DRAWINGS BEFORE PROCEEDING WITH ANY WORK.
7. AS THE WORK PROGRESSES, THE CONTRACTOR SHALL NOTIFY THE OWNER OF ANY CONDITIONS WHICH ARE IN CONFLICT OR OTHERWISE NOT CONSISTENT WITH THE CONSTRUCTION DOCUMENTS AND SHALL NOT PROCEED WITH SUCH WORK UNTIL THE CONFLICT IS SATISFACTORILY RESOLVED.
8. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING AND MAINTAINING ADEQUATE SHORING, BRACING, AND BARRICADES AS MAY BE REQUIRED FOR THE PROTECTION OF EXISTING PROPERTY, CONSTRUCTION WORKERS, AND FOR PUBLIC SAFETY.
9. THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE EXISTING STRUCTURES AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY. MAINTAIN EXISTING SITE OPERATIONS, COORDINATE WORK WITH NORTHEAST UTILITIES
10. ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD LIABLE FOR ALL REPAIRS REQUIRED FOR EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.
11. REFER TO DRAWING T1 FOR ADDITIONAL NOTES AND REQUIREMENTS.

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
A	07/15/21	ANC	DMD	CONSTRUCTION DRAWINGS – ISSUED FOR CONSTRUCTION
B	10/05/21	ANC	DMD	CONSTRUCTION DRAWINGS – ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

verizon

CENTEK engineering
Centered on Solutions
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless

TARIFFVILLE CT RELO - TALCOTT MTN

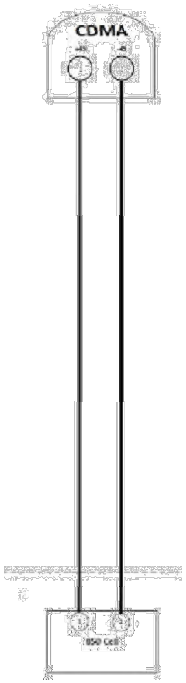
ST. ANDREWS ROAD
BLOOMFIELD, CT 06002

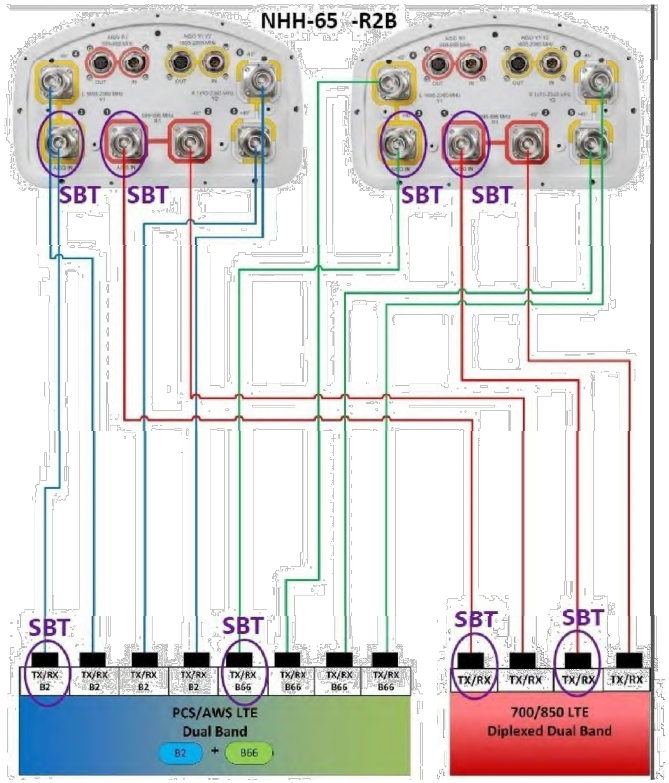
DATE: 07/15/21
SCALE: AS NOTED
JOB NO. 21007.01

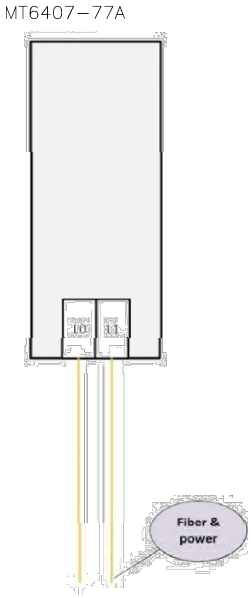
NOTES AND SPECIFICATIONS

N-1

Sheet No. 2 of 7







NOTES:

1. INFORMATION SHOWN HEREIN IS FOR USE BY VERIZON WIRELESS EQUIPMENT OPERATIONS.
2. THIS B.O.M. DRAWING IS BASED OFF FACILITY UPGRADE DESIGN DRAWINGS PREPARED BY CENTEK ENGINEERING (REV.0 DATED: 10.05.21), & VERIZON WIRELESS RF ANTENNA EQUIPMENT RECOMMENDATION (DATED 01.15.21).

BILL OF MATERIALS		
TECHNOLOGY	QUANTITY	ANTENNA
LTE 700 LTE 850 LTE PCS 1900 LTE AWS 2100	6	COMMSCOPE ANTENNA MODEL: NHH-65B-R2B
5G	3	SAMSUNG ANTENNA MODEL: MT6407-77A

CABLES	QUANTITY	LENGTH	COMMENTS
HYBRID CABLE	1	±275FT	12X24 LI

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

DIPLEXERS	QUANTITY	COMMENTS
–	–	–

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

ANTENNA MOUNT	QUANTITY	COMMENTS
SIDE-BY-SIDE MOUNTING KIT	3	COMMSCOPE MODEL: BASMNT-SBS-1-2

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
0	10/05/21	ANC	DMD	CONSTRUCTION DRAWINGS – ISSUED FOR CONSTRUCTION
A	07/15/21	ANC	DMD	CONSTRUCTION DRAWINGS – ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

verizon

CENTEK engineering
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DATE: 07/15/21
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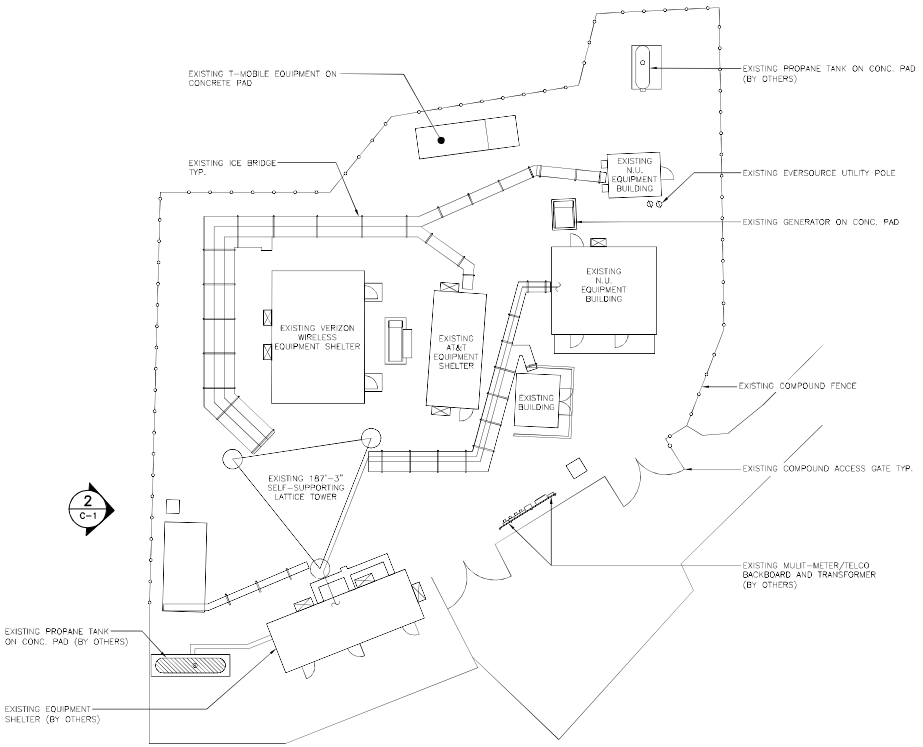
JOB NO. 21007.01

RF BILL OF MATERIALS

B-1

Sheet No. 3 of 7



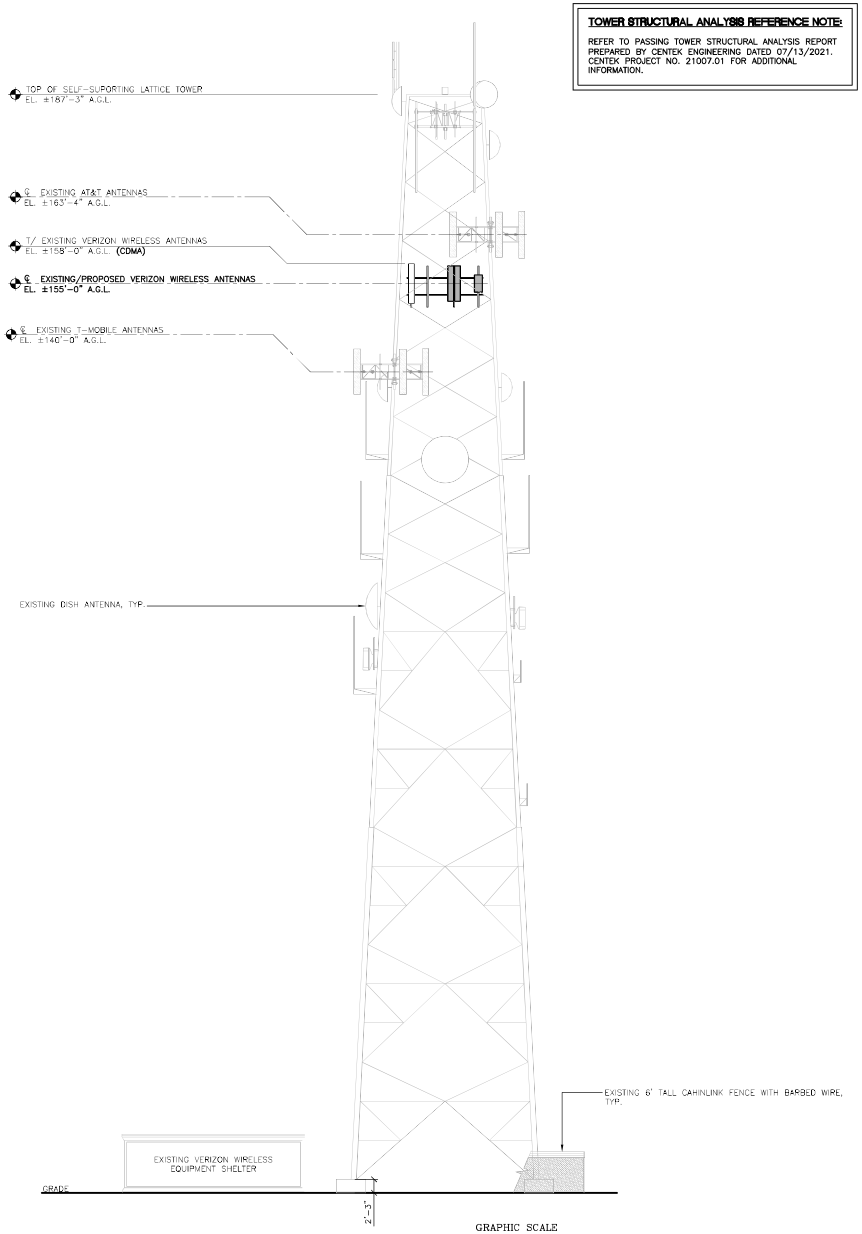
1 C-1 **COMPOUND PLAN**
SCALE: 1" = 15'

APPROXIMATE NORTH

GRAPHIC SCALE
15 0 7.5 15 30 60
(IN FEET)
1 inch = 15 ft.

TOWER STRUCTURAL ANALYSIS REFERENCE NOTE:

REFER TO PASSING TOWER STRUCTURAL ANALYSIS REPORT PREPARED BY CENTEK ENGINEERING DATED 07/13/2021. CENTEK PROJECT NO. 21007.01 FOR ADDITIONAL INFORMATION.



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

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.

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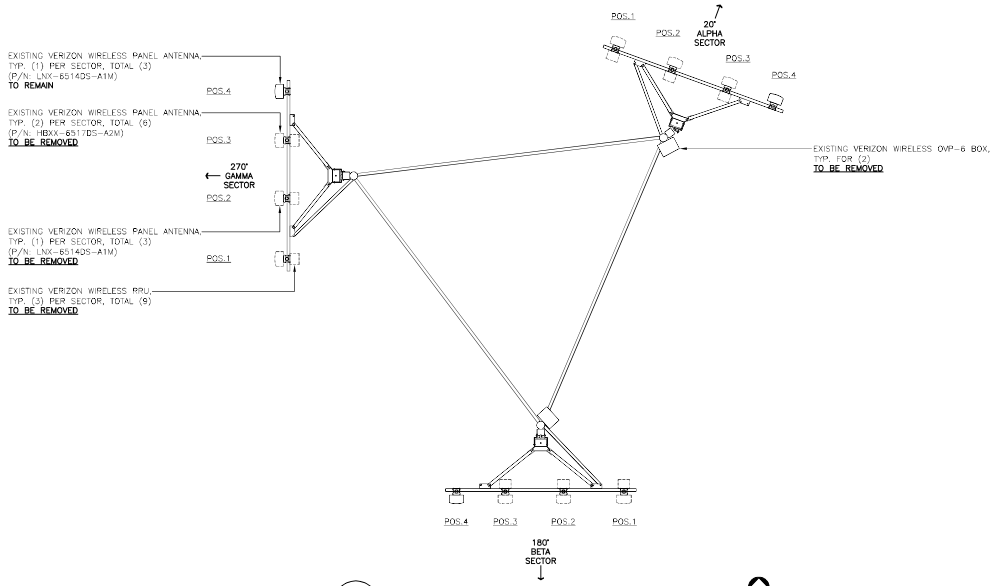
COMPOUND PLAN AND ELEVATION

C-1

Sheet No. 4 of 7

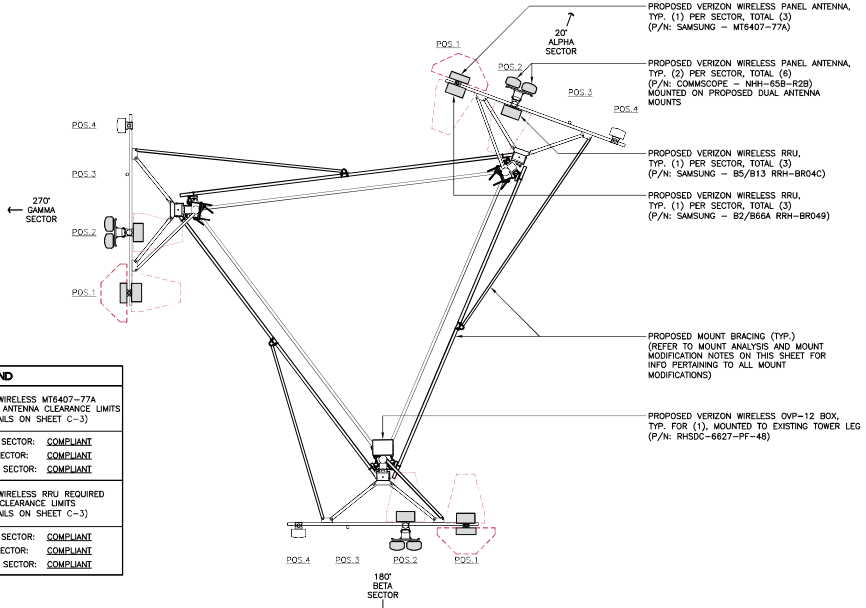
EXISTING ANTENNA CONFIGURATIONS



1 / C-2 **EXISTING SECTOR CONFIGURATION PLAN**
SCALE: 1/4" = 1'-0"

APPROXIMATE NORTH

PROPOSED ANTENNA CONFIGURATIONS



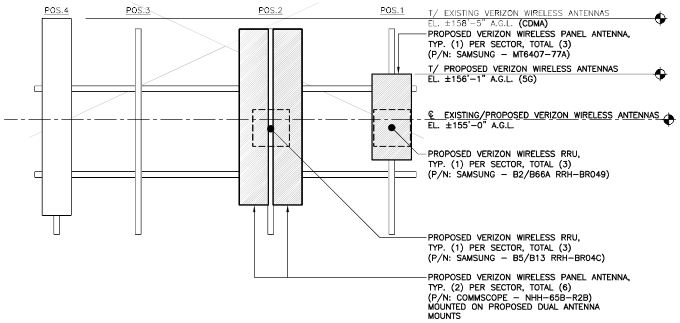
LEGEND		
- - - -	VERIZON WIRELESS MT6407-77A REQUIRED ANTENNA CLEARANCE LIMITS (PER DETAILS ON SHEET C-3)	
ANTENNA CLEARANCE STATUS	ALPHA SECTOR:	COMPLIANT
	BETA SECTOR:	COMPLIANT
	GAMMA SECTOR:	COMPLIANT
- - - -	VERIZON WIRELESS RRU REQUIRED ANTENNA CLEARANCE LIMITS (PER DETAILS ON SHEET C-3)	
RRU CLEARANCE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

2 / C-2 **PROPOSED SECTOR CONFIGURATION PLAN**
SCALE: 1/4" = 1'-0"

APPROXIMATE NORTH

ANTENNA MOUNT ANALYSIS AND MOD NOTES:

1. REFER TO PASSING VERIZON WIRELESS MOUNT ANALYSIS REPORT PREPARED BY MASER CONSULTING CONNECTICUT DATED 6/30/2021 FOR ADDITIONAL INFORMATION.
2. REFER TO FINAL VERIZON WIRELESS MOUNT MODIFICATION DESIGN PREPARED BY MASER CONSULTING CONNECTICUT DATED 7/1/2021 FOR ANTENNA MOUNT MODIFICATIONS.



TYPICAL SECTOR

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

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
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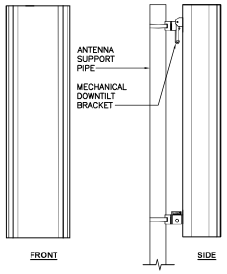
ANTENNA SECTOR CONFIGURATION DETAILS

C-2
Sheet No. 5 of 7

ANTENNA FRONT

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

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

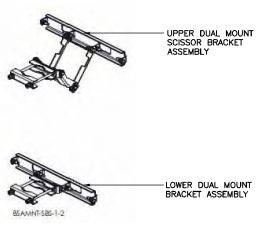


NHH-65B-R2B (BOTTOM VIEW)

ALPHA/BETA/GAMMA ANTENNA		
EQUIPMENT	DIMENSIONS	WEIGHT (WITH MOUNTING KIT)
MAKE: COMMSCOPE MODEL: NHH-65B-R2B	72.0"L x 11.9"W x 7.0"D	43.7 LBS.

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

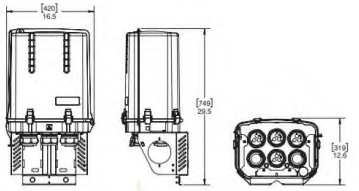
ELEVATION



ISOMETRIC

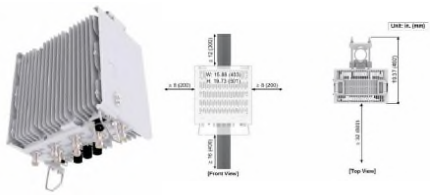
SIDE-BY-SIDE ANTENNA MOUNTING KIT			
MOUNT	DESCRIPTION	SUPPORTED ANTENNAS	GAP BETWEEN ANTENNAS
MAKE: COMMSCOPE MODEL: BASMNT-SBS-1-2	(2) BRACKET KIT FOR MOUNTING (2) ANTENNAS SIDE-BY-SIDE	SBNHH 65" AND 85" NHH 65" AND 85"	3-3/8"
NOTES: 1. MOUNT ACCOMMODATES MAST DIAMETERS FROM 2.375" TO 4.5" (O.D.). 2. CONTRACTOR TO CONFIRM MOUNT MAKE/MODEL AND QUANTITY WITH VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR TO ORDERING.			

3 C-3 **PROPOSED SIDE-BY-SIDE ANTENNA MOUNT**
NOT TO SCALE



OVP BOX		
EQUIPMENT	DIMENSIONS	WEIGHT
MAKE: RAYCAP MODEL: RHSDC-6627-PF-48	29.5"H x 16.5"W x 12.6"D	32.0 LBS.
NOTES: 1. CONTRACTOR TO CONFIRM OVP BOX MAKE/MODEL AND QUANTITY WITH VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR TO ORDERING. 2. UNIT PROVIDES DC SURGE PROTECTION FOR 12 RRH UNITS.		

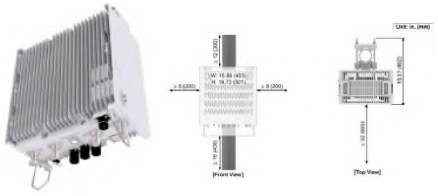
4 C-3 **PROPOSED OVER-VOLTAGE PROTECTION BOX**
NOT TO SCALE



RRH ISOMETRIC RRH CLEARANCES

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

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



RRH ISOMETRIC RRH CLEARANCES

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

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

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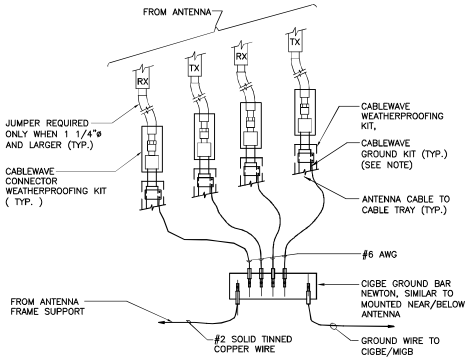
RF DETAILS

C-3
Sheet No. 6 of 7

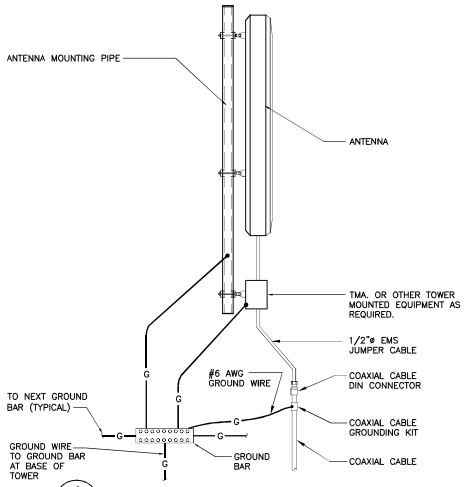


NOTES:

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

1 E-1 CONNECTION OF GROUND WIRES TO GROUND BAR

NOT TO SCALE

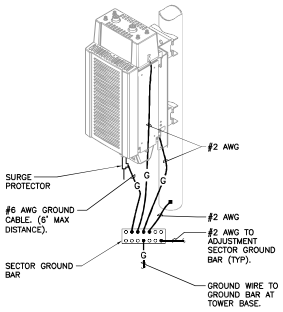


4 E-1 TYPICAL ANTENNA GROUNDING DETAIL

NOT TO SCALE

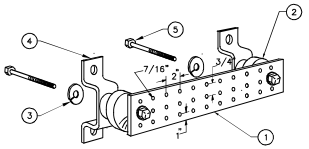
EACH RRH CABINET SHALL BE GROUNDED IN THE FOLLOWING MANNER:

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



2 E-1 RRH POLE MOUNT GROUNDING

NOT TO SCALE

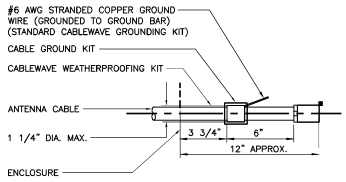


NOTES

1. TINNED COPPER GROUND BAR, 1/4" x 4" x 20", NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
2. INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4.
3. 5/8" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8.
4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056.
5. 5/8-11 x 1" STAINLESS STEEL TRUSS SPANNER MACHINE SCREWS.

5 E-1 GROUND BAR DETAIL

NOT TO SCALE



NOTES:

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

3 E-1 ANTENNA CABLE GROUNDING DETAIL

NOT TO SCALE

ELECTRICAL SPECIFICATIONS

SECTION 16010

1.01. SCOPE OF WORK

A. WORK SHALL INCLUDE ALL LABOR, EQUIPMENT AND SERVICES REQUIRED TO COMPLETE (MAKE READY FOR OPERATION) ALL THE ELECTRICAL WORK INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

1. CELLULAR GROUNDING SYSTEMS CONSISTING OF ANTENNA GROUNDING, GROUND BARS, ETC.

1.02. GENERAL REQUIREMENTS

A. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE MADE IN STRICT ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES AND REGULATIONS WHICH MAY APPLY AND NOTHING IN THE DRAWINGS OR SPECIFICATIONS SHALL BE INTERPRETED AS AN INFRINGEMENT OF SUCH CODES OR REGULATIONS.

B. THE ELECTRICAL CONTRACTOR IS TO BE RESPONSIBLE FOR THE COMPLETE INSTALLATION AND COORDINATION OF THE ENTIRE ELECTRICAL SERVICE. ALL ACTIVITIES TO BE COORDINATED THROUGH OWNERS REPRESENTATIVE, DESIGN ENGINEER AND OTHER AUTHORITIES HAVING JURISDICTION OF TRADES.

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND PAY ALL FEES THAT MAY BE REQUIRED FOR THE ELECTRICAL WORK AND FOR SCHEDULING OF ALL INSPECTIONS THAT MAY BE REQUIRED BY THE LOCAL AUTHORITY.

D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE BUILDING OWNER FOR NEW AND/OR DEMOLITION WORK INVOLVED.

E. NO MATERIAL OTHER THAN THAT CONTAINED IN THE "LATEST LIST OF ELECTRICAL FITTINGS" APPROVED BY THE UNDERWRITERS' LABORATORIES, SHALL BE USED IN ANY PART OF THE WORK. ALL MATERIAL FOR WHICH LABEL SERVICE HAS BEEN ESTABLISHED SHALL BEAR THE U.L. LABEL.

F. THE CONTRACTOR SHALL GUARANTEE ALL NEW WORK FOR A PERIOD OF ONE YEAR FROM THE ACCEPTANCE DATE BY THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING WARRANTIES FROM ALL EQUIPMENT MANUFACTURERS FOR SUBMISSION TO THE OWNER.

G. DRAWINGS INDICATE GENERAL ARRANGEMENT OF WORK INCLUDED IN CONTRACT. CONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE MODIFICATIONS TO THE LAYOUT OF THE WORK TO PREVENT CONFLICT WITH WORK OF OTHER TRADES AND FOR THE PROPER INSTALLATION OF WORK. CHECK ALL DRAWINGS AND VISIT JOB SITE TO VERIFY SPACE AND TYPE OF EXISTING CONDITIONS IN WHICH WORK WILL BE DONE, PRIOR TO SUBMITTAL OF BID.

H. THE ELECTRICAL CONTRACTOR SHALL SUPPLY THREE (3) COMPLETE SETS OF APPROVED DRAWINGS, ENGINEERING DATA SHEETS, MAINTENANCE AND OPERATING INSTRUCTION MANUALS FOR ALL SYSTEMS AND THEIR RESPECTIVE EQUIPMENT. THESE MANUALS SHALL BE INSERTED IN VINYL COVERED 3-RING BINDERS AND TURNED OVER TO OWNER'S REPRESENTATIVE ONE (1) WEEK PRIOR TO FINAL PUNCH LIST.

I. ALL WORK SHALL BE INSTALLED IN A NEAT AND WORKMAN LIKE MANNER AND WILL BE SUBJECT TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE.

J. ALL EQUIPMENT AND MATERIALS TO BE INSTALLED SHALL BE NEW, UNLESS OTHERWISE NOTED.

K. BEFORE FINAL PAYMENT, THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF PRINTS (AS-BUILTS), LEGIBLY MARKED IN RED PENCIL TO SHOW ALL CHANGES FROM THE ORIGINAL PLANS.

L. ENTIRE ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH OWNER'S SPECIFICATIONS, AND REQUIREMENTS OF ALL LOCAL AUTHORITIES HAVING JURISDICTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH APPROPRIATE INDIVIDUALS TO OBTAIN ALL SUCH SPECIFICATIONS AND REQUIREMENTS. NOTHING CONTAINED IN, OR OMITTED FROM, THESE DOCUMENTS SHALL RELIEVE CONTRACTOR FROM THIS OBLIGATION.

SECTION 16450

1.01. GROUNDING

A. ALL NON-CURRENT CARRYING PARTS OF THE ELECTRICAL AND TELEPHONE CONDUIT SYSTEMS SHALL BE MECHANICALLY AND ELECTRICALLY CONNECTED TO PROVIDE AN INDEPENDENT RETURN PATH TO THE EQUIPMENT GROUNDING SOURCES.

B. GROUNDING SYSTEM WILL BE IN ACCORDANCE WITH THE LATEST ACCEPTABLE EDITION OF THE NATIONAL ELECTRICAL CODE AND REQUIREMENTS PER LOCAL INSPECTOR HAVING JURISDICTION.

C. EQUIPMENT GROUNDING CONDUCTOR:

1. EACH EQUIPMENT GROUND CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH THE N.E.C. ARTICLE 250-122.

2. THE MINIMUM SIZE OF EQUIPMENT GROUND CONDUCTOR SHALL BE #12 AWG COPPER.

D. CELLULAR GROUNDING SYSTEM:

PROVIDE THE CELLULAR GROUNDING SYSTEM AS SPECIFIED ON DRAWINGS, INCLUDING, BUT NOT LIMITED TO:

1. GROUND BARS
2. ANTENNA GROUND CONNECTIONS AND PLATES.

E. ALL EQUIPMENT SHALL BE BONDED TO GROUND AS REQUIRED BY N.E.C., MFG. SPECIFICATIONS, AND OWNER'S SPECIFICATIONS.

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ELECTRICAL DETAILS AND SPECIFICATIONS

E-1

Sheet No. 7 of 7

SAMSUNG

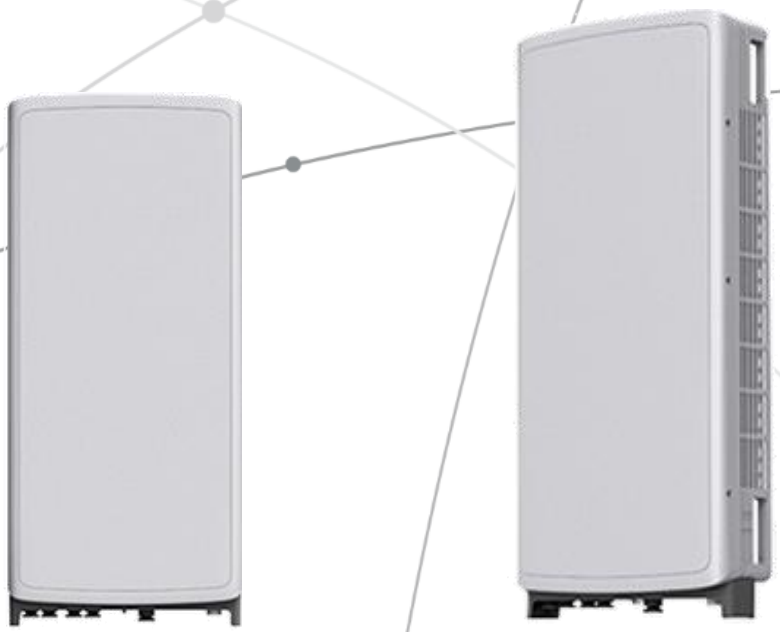
SAMSUNG

C-Band 64T64R Massive MIMO Radio

for High Capacity and Wide Coverage

Samsung C-Band 64T64R Massive MIMO Radio enables mobile operators to increase coverage range, boost data speeds and ultimately offer enriched 5G experiences to users in the U.S..

Model Code : MT6407-77A

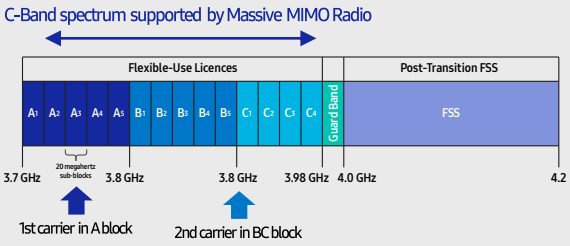


Points of Differentiation

Wide Bandwidth

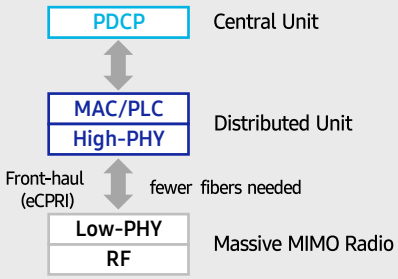
With capability to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

Samsung C-Band massive MIMO Radio covers the entire C-Band 280 MHz spectrum, so it can meet the operator's needs in current A block and future B/C blocks



Future Proof Product

Samsung C-Band 64T64R Massive MIMO radio supports not only CPRI but also eCPRI as front-haul interface.
It enables operators can cut down on OPEX/CAPEX by reducing front-haul bandwidth through low layer split and using ethernet based higher efficient line.



Enhanced Performance

C-Band massive MIMO Radio creates sharp beams and extends networks' coverage on the critical mid-band spectrum using a large number of antenna elements and high output power to boost data speeds.

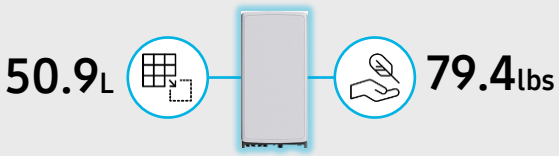
This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

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

Well Matched Design

Samsung C-Band Massive MIMO radio utilizes 64 antennas, supports up to 280MHz bandwidth, and delivers a 200W output power. despite the above advanced performance, the Radio has a compact size of 50.9L and 79.4lbs. This makes it easy to install the Radio.

It is designed to look solid and compact, with a low profile appearance so that, when installed, harmonizes well with the surrounding environment..



Technical Specifications

Item	Specification
Tech	NR
Band	n77
Frequency Band	3700 - 3980 MHz
EIRP	78.5dBm (53.0 dBm+25.5 dBi)
IBW/OBW	280 MHz / 200 MHz
Installation	Pole/Wall
Size/ Weight	16.06 x 35.06 x 5.51 inch (50.86L)/ 79.4 lbs

SAMSUNG

About Samsung Electronics Co., Ltd.

Samsung inspires the world and shapes the future with transformative ideas and technologies. The company is redefining the worlds of TVs, smartphones, wearable devices, tablets, digital appliances, network systems, and memory, system LSI, foundry and LED solutions.

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SAMSUNG

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

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

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

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

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

Features and Benefits

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

Key Technical Specifications

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

SAMSUNG

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

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

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

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

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

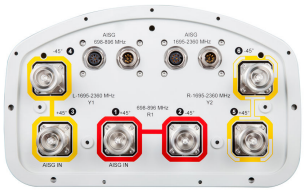
Features and Benefits

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

Key Technical Specifications

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

NHH-65B-R2B



6-port sector antenna, 2x 698–896 and 4x 1695–2360 MHz, 65° HPBW, 2x RET. Both high bands share the same electrical tilt.

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

General Specifications

Antenna Type	Sector
Band	Multiband
Color	Light gray
Effective Projective Area (EPA), frontal	0.26 m^2 | 2.799 ft^2
Effective Projective Area (EPA), lateral	0.22 m^2 | 2.368 ft^2
Grounding Type	RF connector body grounded to reflector and mounting bracket
Performance Note	Outdoor usage | Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
Radome Material	Fiberglass, UV resistant
Radiator Material	Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	7-16 DIN Female
RF Connector Location	Bottom
RF Connector Quantity, high band	4
RF Connector Quantity, low band	2
RF Connector Quantity, total	6

Remote Electrical Tilt (RET) Information, General

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

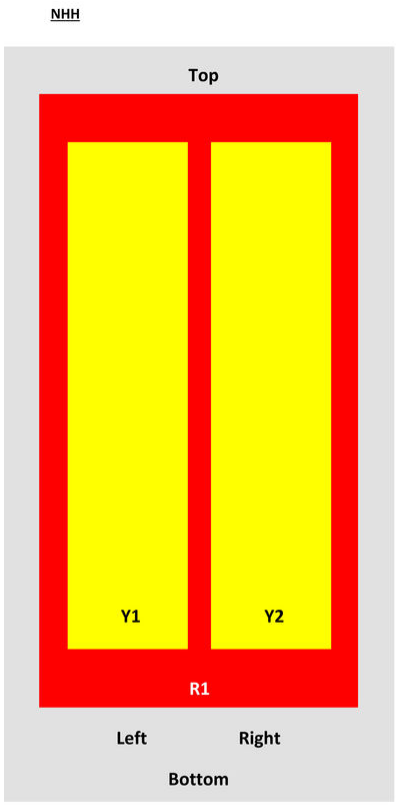
Dimensions

Width	301 mm | 11.85 in
Length	1828 mm | 71.969 in

NHH-65B-R2B

Depth	180 mm | 7.087 in

Array Layout



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	698-896	1-2	1	ANxxxxxxxxxxxxxxx1
Y1	1695-2360	3-4	2	ANxxxxxxxxxxxxxxx2
Y2	1695-2360	5-6		

View from the front of the antenna

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

Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2360 MHz | 698 – 896 MHz
Polarization	±45°
Total Input Power, maximum	900 W @ 50 °C

Remote Electrical Tilt (RET) Information, Electrical

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

NHH-65B-R2B

Power Consumption, normal conditions, maximum	13 W
Input Voltage	10–30 Vdc
Internal Bias Tee	Port 1 | Port 3
Internal RET	High band (1) | Low band (1)

Electrical Specifications

Frequency Band, MHz	**698–806**	**806–896**	**1695–1880**	**1850–1990**	**1920–2200**	**2300–2360**
Gain, dBi	14.9	15	17.7	17.9	18.4	18.7
Beamwidth, Horizontal, degrees	65	60	71	69	64	57
Beamwidth, Vertical, degrees	12.4	11.2	5.7	5.2	4.9	4.6
Beam Tilt, degrees	0–14	0–14	0–7	0–7	0–7	0–7
USLS (First Lobe), dB	13	14	18	18	19	18
Front-to-Back Ratio at 180°, dB	30	29	31	30	29	31
Isolation, Cross Polarization, dB	25	25	25	25	25	25
Isolation, Inter-band, dB	30	30	30	30	30	30
VSWR | Return loss, dB	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port at 50° C, maximum, watts	300	300	300	300	300	300

Electrical Specifications, BASTA

Frequency Band, MHz	**698–806**	**806–896**	**1695–1880**	**1850–1990**	**1920–2200**	**2300–2360**
Gain by all Beam Tilts, average, dBi	14.5	14.5	17.3	17.7	18.1	18.5
Gain by all Beam Tilts Tolerance, dB	±0.6	±1.1	±0.4	±0.4	±0.5	±0.3
Gain by Beam Tilt, average, dBi	0 ° | 14.4 7 ° | 14.6 14 ° | 14.3	0 ° | 14.7 7 ° | 14.7 14 ° | 14.1	0 ° | 17.2 4 ° | 17.3 7 ° | 17.3	0 ° | 17.6 4 ° | 17.7 7 ° | 17.7	0 ° | 18.0 4 ° | 18.2 7 ° | 18.1	0 ° | 18.3 4 ° | 18.5 7 ° | 18.6
Beamwidth, Horizontal Tolerance, degrees	±2	±2.1	±3	±4.1	±6.5	±2.9
Beamwidth, Vertical Tolerance, degrees	±0.7	±0.7	±0.3	±0.2	±0.3	±0.2
USLS, beampeak to 20° above beampeak, dB	13	14	16	16	17	15
Front-to-Back Total Power at 180° ± 30°, dB	23	22	27	27	25	25
CPR at Boresight, dB	22	21	23	23	22	19

NHH-65B-R2B

CPR at Sector, dB	10	7	16	13	11	4

Mechanical Specifications

Wind Loading at Velocity, frontal	278.0 N @ 150 km/h | 63.6 lbf @ 150 km/h
Wind Loading at Velocity, lateral	230.0 N @ 150 km/h | 51.7 lbf @ 150 km/h
Wind Loading at Velocity, maximum	120.7 lbf @ 150 km/h | 537.0 N @ 150 km/h
Wind Speed, maximum	241 km/h | 149.75 mph

Packaging and Weights

Width, packed	409 mm | 16.102 in
Depth, packed	299 mm | 11.772 in
Length, packed	1952 mm | 76.85 in
Net Weight, without mounting kit	19.8 kg | 43.651 lb
Weight, gross	32.3 kg | 71.209 lb

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on www.commscope.com/ProductCompliance
ROHS	Compliant

Included Products

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

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance

ATTACHMENT 3

	General	Power	Density					
Site Name: Tariffville Relo								
Tower Height: Verizon @ 155ft								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**FREQ.**	**CALC. POWER DENS**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*Eversource Energy	4	124	188	217	0.0054	0.2000	0.27%	
*DESPP-DSET	12	463	185	853	0.0624	0.5687	1.10%	
*Cingular UMTS	1	280	155	850	0.0045	0.5667	0.08%	
*Cingular UMTS	2	1476	155	700	0.0478	0.4667	1.02%	
*Cingular UMTS	1	2951	155	700	0.0478	0.4667	1.02%	
*Cingular UMTS	1	1000	155	850	0.0162	0.5667	0.29%	
*Cingular UMTS	1	1000	155	850	0.0162	0.5667	0.29%	
*Cingular UMTS	2	3664	155	1900	0.1187	1.0000	1.19%	
*Cingular UMTS	1	3837	155	2100	0.0622	1.0000	0.62%	
*Cingular UMTS	1	1285	155	2300	0.0208	1.0000	0.21%	
*T-Mobile	2	2334	140	1900	0.0935	1.0000	0.93%	
*T-Mobile	2	1167	140	2100	0.0467	1.0000	0.47%	
*T-Mobile	2	2334	140	2100	0.0935	1.0000	0.93%	
*T-Mobile	2	592	140	600	0.0237	0.4000	0.59%	
*T-Mobile	1	1578	140	600	0.0316	0.4000	0.79%	
*T-Mobile	2	695	140	700	0.0278	0.4667	0.60%	
*T-Mobile	1	11044	140	2500	0.2212	1.0000	2.21%	
*T-Mobile	1	1074	140	2500	0.0215	1.0000	0.22%	
*T-Mobile	1	22089	140	2500	0.4424	1.0000	4.42%	
*T-Mobile	1	2148	140	2500	0.0430	1.0000	0.43%	
VZW 700	**4**	**689**	**155**	**751**	**0.0041**	**0.5007**	**0.82%**	
VZW CDMA	**2**	**442**	**155**	**877.26**	**0.0013**	**0.5848**	**0.23%**	
VZW Cellular	**4**	**699**	**155**	**874**	**0.0042**	**0.5827**	**0.72%**	
VZW PCS	**4**	**1496**	**155**	**1975**	**0.0090**	**1.0000**	**0.90%**	
VZW AWS	**4**	**1671**	**155**	**2120**	**0.0100**	**1.0000**	**1.00%**	
VZW CBAND	**4**	**6531**	**155**	**3730.08**	**0.0391**	**1.0000**	**3.91%**	
								25.26%
* Source: Siting Council								

ATTACHMENT 4

CENTEK engineering

Centered on Solutions℠

Structural Analysis Report

185' Existing Lattice Tower

Proposed Verizon Wireless
Antenna Upgrade

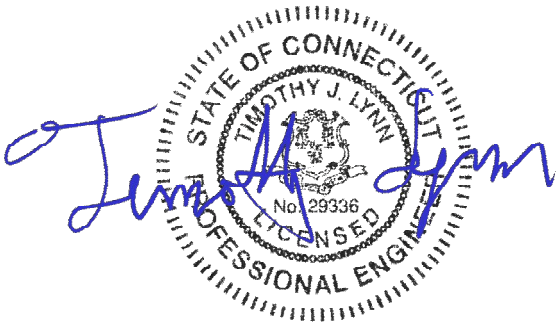
Site Ref: Tariffville Relo

7 Hoskins Road
Bloomfield, CT

CENTEK Project No. 21007.01

Date: July 13, 2021

Max Stress Ratio = 92.2%



Prepared for:

Verizon Wireless
20 Alexander Drive
Wallingford, CT 06492

Table of Contents

Introduction

The purpose of this report is to summarize the results of the non-linear, P-Δ structural analysis of the antenna upgrade proposed by Verizon on the existing lattice tower located in Bloomfield, Connecticut.

The host tower is a 185-ft, three legged, lattice tower originally designed and manufactured by Sabre Industries project no. 127272 dated 9/26/15. The tower geometry, structure member sizes and foundation information were taken from the aforementioned design documents.

Antenna and appurtenance inventory was taken from a previous structural analysis report prepared by Centek job no. 21022.20 dated July 8, 2021 and a Verizon RFDS.

The tower consists of ten (10) vertical sections consisting of pipe legs conforming to ASTM A572 Gr. 50 and steel angle lateral bracing conforming to ASTM A36. The vertical tower sections are connected by bolted flange plates with the diagonal and horizontal bracing to pipe legs consisting of bolted connections. The width of the tower face is 18-ft 6-in at the top and 37-ft 0-in at the bottom.

Antenna and Appurtenance Summary

The existing and proposed loads considered in the analysis consist of the following:

- Unknown (Existing):
  Antenna: One (1) dBSpectra DS2C03F36D-D antenna, one (1) dBSpectra DS9A09F36D-N antenna, one (1) RFS BA8080-67 dipole antenna, one (1) Kreco CO-41A antenna, one (1) Telewave ANT450F-6 antenna and one (1) TTA pipe mounted to the top of the tower.
  Coax Cable: Two (2) 1-5/8”∅, five (5) 7/8”∅ and one (1) 1/2”∅ cables running on a leg/face of the existing tower as specified in Section 3 of this report.
- Unknown (Existing):
  Antenna: Three (3) dBSpectra DS7C09P36D-D antennas mounted on (1) 10-ft V-frame with an elevation of 183-ft above tower base.
  Coax Cable: Three (3) 1-5/8”∅ and one (1) 1/2”∅ cables running on a leg/face of the existing tower as specified in Section 3 of this report.
- Unknown (Existing):
  Antenna: Two (2) 8-ft microwave dishes pipe mounted with an elevation of 183-ft above tower base.
  Coax Cable: Four (4) EW63 cables running on a leg/face of the existing tower as specified in Section 3 of this report.
- Unknown (Existing):
  Antenna: One (1) Decibel DB411-B antenna leg mounted with an elevation of 176-ft above tower base.
  Coax Cable: One (1) 7/8”∅ cable running on a leg/face of the existing tower as specified in Section 3 of this report.
- Unknown (Existing):
  Antenna: One (1) 4-ft microwave dish pipe mounted with an elevation of 177-ft above tower base.
  Coax Cable: One (1) EW90 cable running on a leg/face of the existing tower as specified in Section 3 of this report.

- Unknown (Existing):
  Antenna: One (1) 8-ft microwave dish pipe mounted with an elevation of 172-ft above tower base.
  Coax Cable: Two (2) EW63 cables running on a leg/face of the existing tower as specified in Section 3 of this report.
- Unknown (Existing):
  Antenna: One (1) 8-ft microwave dish pipe mounted with an elevation of 171-ft above tower base.
  Coax Cable: Two (2) EW63 cables running on a leg/face of the existing tower as specified in Section 3 of this report.
- Unknown (Existing):
  Antenna: One (1) Kathrein PR-900 grid dish pipe mounted with an elevation of 168-ft above tower base.
  Coax Cable: One (1) 7/8"∅ cable running on a leg/face of the existing tower as specified in Section 3 of this report.
- Unknown (Existing):
  Antenna: One (1) Telewave ANT150F6 antenna mounted one a sidearm with an elevation of 165-ft above tower base.
  Coax Cable: One (1) 7/8"∅ cable running on a leg/face of the existing tower as specified in Section 3 of this report.
- AT&T (Existing):
  Antenna: Three (3) Powerwave 7770 panel antennas, four (4) Kathrein 800-10966 panel antennas, two (2) Kathrein 800-10965 panel antennas, two (2) CCI OPA-65R-LCUU-H8 panel antennas, one (1) CCI OPA-65R-LCUU-H6 panel antenna, three (3) Powerwave TT08-19DB111-001 TMAs, three (3) Ericsson 4478 B14 remote radio heads, three (3) Ericsson 4449 B5/B12 remote radio heads, three (3) Ericsson 8843 B2/B66A remote radio heads, three (3) Ericsson RRUS32 remote radio heads, three (3) Ericsson E2 remote radio heads and three (3) Raycap DC6-48-60-18-8F surge arrestors mounted on three (3) 12-ft Sector Frames with a RAD center elevation of ±163.3-ft above grade level.
  Coax Cable: Six (6) 2-1/4" ∅ cables, three (3) 5/16" ∅ cables and twelve (12) 5/8" ∅ cables running on a leg/face of the existing tower as specified in Section 3 of this report.
- T-MOBILE (Existing):
  Antennas: Three (3) RFS APXVAALL24_43 panel antennas, three (3) Ericsson AIR6449 panel antennas, three (3) RFS APX16DWV-16DWVS panel antennas, three (3) Ericsson 4460 remote radio heads and three (3) Ericsson 4449 remote radio heads mounted on three (3) 10-ft V-Frames with a RAD center elevation of ±140-ft above grade level.
  Coax Cables: Six (6) 6x12 fiber cables and three (3) 6x24 fiber cables running on a face of the existing tower as specified in Section 3 of this report.
- Unknown (Existing):
  Antenna: Two (2) 6-ft microwave dishes pipe mounted with an elevation of 135-ft above tower base.
  Coax Cable: Four (4) EW63 cables running on a leg/face of the existing tower as specified in Section 3 of this report.

- Unknown (Existing):
  Antenna: One (1) Telewave ANT150F6 antenna mounted one a sidearm with an elevation of 125-ft above tower base.
  Coax Cable: One (1) 7/8"∅ cable running on a leg/face of the existing tower as specified in Section 3 of this report.
- Unknown (Existing):
  Antenna: One (1) Comprod 531-70HD antenna mounted one a sidearm with an elevation of 125-ft above tower base.
  Coax Cable: One (1) 7/8"∅ cable running on a leg/face of the existing tower as specified in Section 3 of this report.
- Unknown (Existing):
  Antenna: One (1) 8-ft microwave dish pipe mounted with an elevation of 125-ft above tower base.
  Coax Cable: Two (2) EW63 cables running on a leg/face of the existing tower as specified in Section 3 of this report.
- Unknown (Existing):
  Antenna: One (1) Comprod 531-70HD antenna mounted one a sidearm with an elevation of 109-ft above tower base.
  Coax Cable: One (1) 7/8"∅ cable running on a leg/face of the existing tower as specified in Section 3 of this report.
- Unknown (Existing):
  Antenna: One (1) Kreco CO-41A antenna mounted one a sidearm with an elevation of 108-ft above tower base.
  Coax Cable: One (1) 7/8"∅ cable running on a leg/face of the existing tower as specified in Section 3 of this report.
- Unknown (Existing):
  Antenna: One (1) 8-ft microwave dish pipe mounted with an elevation of 100-ft above tower base.
  Coax Cable: Two (2) EW63 cables running on a leg/face of the existing tower as specified in Section 3 of this report.
- Unknown (Existing):
  Antenna: One (1) 3-ft microwave dish pipe mounted with an elevation of 98-ft above tower base.
  Coax Cable: One (1) 3/8"∅ cable running on a leg/face of the existing tower as specified in Section 3 of this report.
- Unknown (Existing):
  Antenna: One (1) 3-ft microwave dish pipe mounted with an elevation of 91-ft above tower base.
  Coax Cable: One (1) 3/8"∅ cable running on a leg/face of the existing tower as specified in Section 3 of this report.

- Unknown (Existing):
  Antenna: One (1) Telewave ANT150F2 antenna mounted one a sidearm with an elevation of 87-ft above tower base.
  Coax Cable: One (1) 7/8"∅ cable running on a leg/face of the existing tower as specified in Section 3 of this report.
- Unknown (Existing):
  Antenna: One (1) Comprod 531-70HD antenna mounted one a sidearm with an elevation of 85-ft above tower base.
  Coax Cable: One (1) 7/8"∅ cable running on a leg/face of the existing tower as specified in Section 3 of this report.
- Unknown (Existing):
  Antenna: One (1) 2'x2' panel antenna mounted one a sidearm with an elevation of 66-ft above tower base.
  Coax Cable: One (1) 1/4"∅ cable running on a leg/face of the existing tower as specified in Section 3 of this report.
- Verizon (Existing to Remain):
  Antennas: Three (3) Andrew LNX-6514DS panel antennas mounted on (3) Sector Frames with a RAD center elevation of ±155-ft above grade level.
  Coax Cable: Six (6) 1-5/8" ∅ coax cables running on a leg/face of the existing tower as specified in Section 3 of this report.
- Verizon (Existing to Remove):
  Antennas: Six (6) Andrew HBXX-6517DS panel antennas, three (3) Andrew LNX-6514DS panel antennas, three (3) Nokia B13 RRH2x40 remote radio heads, three (3) Nokia B25 RRH4x30 remote radio heads, three (3) Nokia B4 RRH2x40 remote radio heads and two (2) 6-OVP boxes mounted on (3) Sector Frames with a RAD center elevation of ±155-ft above grade level.
  Coax Cable: Two (2) 6x12 hybrid cables running on a leg/face of the existing tower as specified in Section 3 of this report.
- **VERIZON (Proposed):**
  Antennas: Six (6) Commscope NHH-65B-R2B panel antennas, three (3) Samsung MT6407-77A (AKA VZS01) panel antennas, three (3) B2/B66A remote radio heads, three (3) B5/B13 remote radio heads and one (1) 12-OVP box mounted on (3) Sector Frames with a RAD center elevation of ±155-ft above grade level.
  Mount Modifications: Mount modifications per Maser consulting report dated June 30, 2021 and modification drawings dated July 1, 2021.
  Coax Cables: One (1) 12x24 hybrid cable running on a face of the tower.

Primary Assumptions Used in the Analysis

- The tower structure's theoretical capacity not including any assessment of the condition of the tower.
- The tower carries the horizontal and vertical loads due to the weight of antennas, ice load and wind.
- Tower is properly installed and maintained.
- Tower is in plumb condition.
- Tower loading for antennas and mounts as listed in this report.
- All bolts are appropriately tightened providing the necessary connection continuity.
- All welds are fabricated with ER-70S-6 electrodes.
- All members are assumed to be as specified in the original tower design documents.
- All members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
- All member protective coatings are in good condition.
- All tower members were properly designed, detailed, fabricated, installed and have been properly maintained since erection.
- Any deviation from the analyzed antenna loading will require a new analysis for verification of structural adequacy.
- All coax cables should be routed as specified in section 3 of this report.

Analysis

The existing tower was analyzed using a comprehensive computer program entitled tnxTower. The program analyzes the tower, considering the worst case loading condition. The tower is considered as loaded by concentric forces along the tower, and the model assumes that the tower members are subjected to bending, axial, and shear forces.

The existing tower was analyzed for the controlling basic wind speed (3-second gust) with no ice and the applicable wind and ice combination to determine stresses in members as per guidelines of TIA-222-H entitled "Structural Standard for Antenna Support Structures, Antennas and Small Wind Turbine Support Structures", the American Institute of Steel Construction (AISC) and the Manual of Steel Construction; Load and Resistance Factor Design (LRFD).

The controlling wind speed is determined by evaluating the local available wind speed data as provided in Appendix N of the CSBC[1] and the wind speed data available in the TIA-222-H Standard.

Tower Loading

Tower loading was determined by the basic wind speed as applied to projected surface areas with modification factors per TIA-222-H, gravity loads of the tower structure and its components, and the application of 1.5" radial ice on the tower structure and its components.

Load Cases:	Load Case 1; 130 mph (Risk Cat III) wind speed w/ no ice plus gravity load – used in calculation of tower stresses and rotation.	*[Appendix N of the 2018 CT Building Code]*
	Load Case 2; 50 mph wind speed w/ 1.50" radial ice plus gravity load – used in calculation of tower stresses.	*[Annex B of TIA-222-H]*

[1] The 2015 International Building Code as amended by the 2018 Connecticut State Building Code (CSBC).

Tower Capacity

Tower stresses were calculated utilizing the structural analysis software tnxTower.

- Calculated stresses **were found to be within allowable limits**.

Tower Section	Elevation (AGL)	Stress Ratio (percentage of capacity)	Result
Diagonal (T3)	142'-4"-162'-4"	92.2%	**PASS**
Leg (T10)	55'-8"-62'-4"	64.3%	**PASS**

- The tower combined deflection is **0.351 degrees**.

Deflection Criteria	Proposed (degrees)	Allowable (degrees)	Result
Sway (Tilt)	0.3489	0.5	**n/a**
Twist	0.0380	0.5	**n/a**
Combined	0.351	0.5	**PASS**

Foundation and Anchors

The existing foundation consists of a three (3) 6-ft ∅ x 5.5-ft long reinforced concrete piers concentrically bearing on a 45.5-ft square x 1-ft 6-in thick reinforced concrete mat. The sub grade conditions used in the foundation analysis were derived from a geotechnical report prepared by Design Earth Technology job no. 2014.15 dated October 14, 2014. The base of the tower is connected to the foundation by means of (6) 1.75"∅, ASTM F1554 Grade 105 anchor bolts per leg embedded 6-ft 6-in into the concrete foundation structure.

- The tower reactions developed from the governing Load Case were used in the verification of the foundation and anchor bolts:

Load Effect	Proposed Tower Reactions
Leg Shear	82 kips
Leg Compression	511 kips
Leg Tension	434 kips
Base Moment	15359 ft-kips
Base Shear	142 kips

- The anchor bolts were found to be within allowable limits.

Tower Section	Component	Stress Ratio (percentage of capacity)	Result
Anchor Bolts	Tension	36.9%	**PASS**

- The foundation was found to be within allowable limits.

Foundation	Design Limit	TIA-222-H Section 9.4 FS[1]	Proposed Loading (FS)[1]	Result
Reinforced Concrete Pad and Piers	Overturning	1.0	1.8	**PASS**

Note 1: FS denotes Factor of Safety

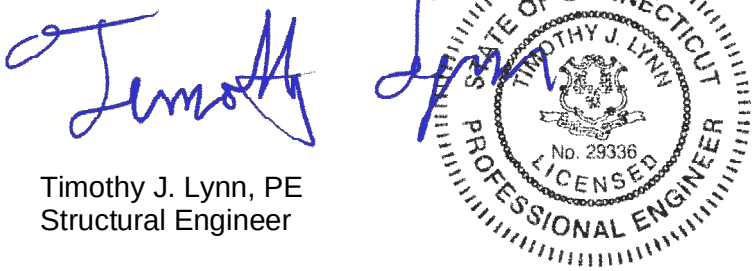
Conclusion

This analysis shows that the subject tower **is adequate** to support the proposed antenna configuration with the below recommendations.

The analysis is based, in part, on the information provided to this office by Verizon. If the existing conditions are different than the information in this report, Centek Engineering, Inc. must be contacted for resolution of any potential issues.

Please feel free to call with any questions or comments.

Respectfully Submitted by:



Timothy J. Lynn, PE
Structural Engineer

Standard Conditions for Furnishing of Professional Engineering Services on Existing Structures

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessarily limited to:

- Information supplied by the client regarding the structure itself, its foundations, the soil conditions, the antenna and feed line loading on the structure and its components, or other relevant information.
- Information from the field and/or drawings in the possession of Centek Engineering, Inc. or generated by field inspections or measurements of the structure.
- It is the responsibility of the client to ensure that the information provided to Centek Engineering, Inc. and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and are in an un-corroded condition and have not deteriorated. It is therefore assumed that its capacity has not significantly changed from the “as new” condition.
- All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement. In the absence of information to the contrary, all work will be performed in accordance with the latest revision of ANSI/ASCE10 & ANSI/EIA-222
- All services performed, results obtained, and recommendations made are in accordance with generally accepted engineering principles and practices. Centek Engineering, Inc. is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

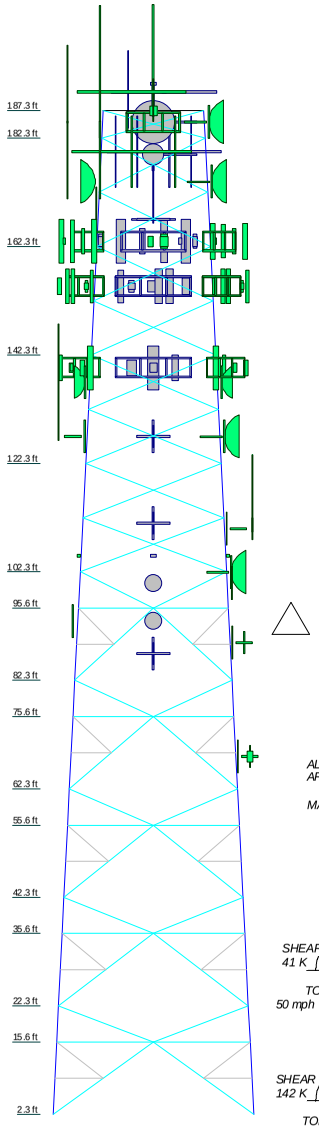
GENERAL DESCRIPTION OF STRUCTURAL ANALYSIS PROGRAM

tnxTower, is an integrated structural analysis and design software package for Designed specifically for the telecommunications industry, tnxTower, formerly RISA Tower, automates much of the tower analysis and design required by the TIA/EIA 222 Standard.

tnxTower Features:

- tnxTower can analyze and design 3- and 4-sided guyed towers, 3- and 4-sided self-supporting towers and either round or tapered ground mounted poles with or without guys.
- The program analyzes towers using the TIA-222-G (2005) standard or any of the previous TIA/EIA standards back to RS-222 (1959). Steel design is checked using the AISC ASD 9th Edition or the AISC LRFD specifications.
- Linear and non-linear (P-delta) analyses can be used in determining displacements and forces in the structure. Wind pressures and forces are automatically calculated.
- Extensive graphics plots include material take-off, shear-moment, leg compression, displacement, twist, feed line, guy anchor and stress plots.
- tnxTower contains unique features such as True Cable behavior, hog rod take-up, foundation stiffness and much more.

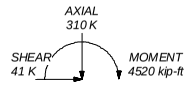
Section		T1
Legs	P12x.5 / P10x.5 / P10x.365 / P8x.5 / P8x.322 / P8x.28	T2 T3 T4 T5 T6 T7 T8 T9 T10 T11 T12 T13 T14 T15
Leg Grade	A572-50	
Diagonals	L6x6x1/2 / L6x6x3/8 / L6x4x1/2 / L5x5x3/8 / L5x5x5/16 / L4x4x1/4	A B C
Diagonal Grade	A36	
Top Girts	N.A.	
Horizontals	L5x5x5/16 / L5x5x5/16 / L4x4x5/16 / N.A.	T15 T14 T13 T12 T11 T10 T9 T8 T7 T6 T5 T4 T3 T2 T1
Redt. Horizontals	L4x3 1/2x5/16 / L3x3x5/16 / L3x3x1/4 / N.A.	T15 T14 T13 T12 T11 T10 T9 T8 T7 T6 T5 T4 T3 T2 T1
Redt. Diagonals	L4x3 1/2x5/16 / L3x3x5/16 / L3x3x1/4 / N.A.	T15 T14 T13 T12 T11 T10 T9 T8 T7 T6 T5 T4 T3 T2 T1
Inner Bracing	L3 1/2x3 1/2x1/4 / L3 1/2x3 1/2x1/4 / L3 1/2x3 1/2x1/4 / N.A.	T15 T14 T13 T12 T11 T10 T9 T8 T7 T6 T5 T4 T3 T2 T1
Face Width (ft)	37 / 35 / 33.6667 / 33 / 31.6667 / 31 / 29.6667 / 29 / 27.6667 / 27 / 25 / 23 / 21 / 19 / 18.5	T15 T14 T13 T12 T11 T10 T9 T8 T7 T6 T5 T4 T3 T2 T1
# Panels @ (ft)	1 @ 13.33 / 1 @ 6.67 / 1 @ 13.33 / 1 @ 6.67 / 1 @ 13.33 / 1 @ 6.67 / 1 @ 13.33 / 1 @ 6.67 / 1 @ 13.33 / 1 @ 6.67 / 8 @ 10 / 1 @ 5	T15 T14 T13 T12 T11 T10 T9 T8 T7 T6 T5 T4 T3 T2 T1
Weight (K)	60.7 / 7.6 / 3.5 / 6.8 / 2.7 / 5.4 / 2.3 / 5.0 / 2.3 / 4.4 / 1.9 / 5.8 / 4.4 / 4.1 / 2.9 / 1.5	T15 T14 T13 T12 T11 T10 T9 T8 T7 T6 T5 T4 T3 T2 T1



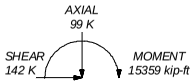
ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE:
DOWN: 511 K
SHEAR: 82 K

UPLIFT: -434 K
SHEAR: 72 K



TORQUE 64 kip-ft
50 mph WIND - 1.5000 in ICE



TORQUE 156 kip-ft
REACTIONS - 130 mph WIND

DESIGNED APPURTENANCE LOADING

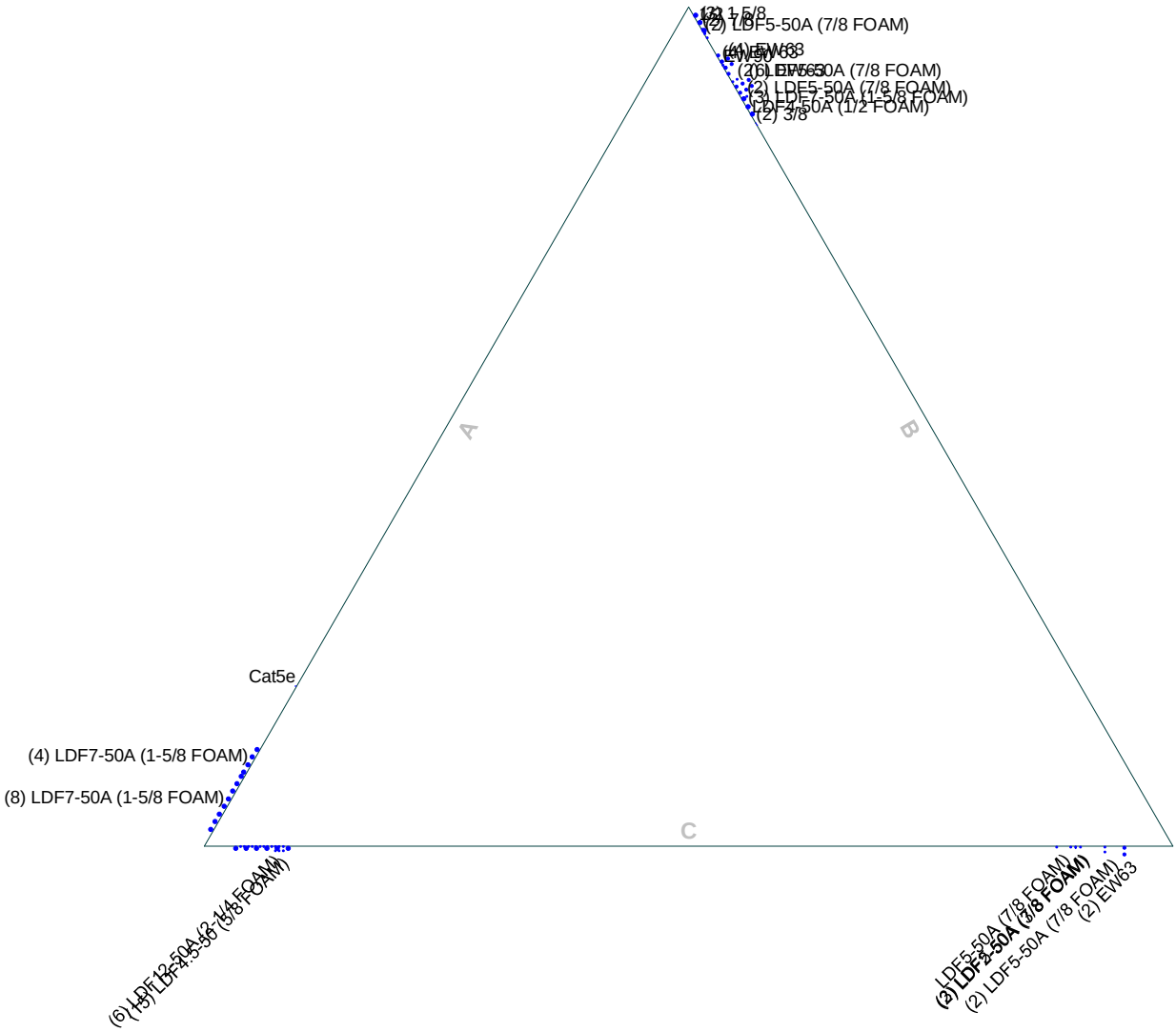
TYPE	ELEVATION	TYPE	ELEVATION
6'x4" Pipe Mount	187.3	13'x2" Pipe (Verizon - Proposed)	155
Light Beacon	187.3	13'x2" Pipe (Verizon - Proposed)	155
CO-41A	187.3	13'x2" Pipe (Verizon - Proposed)	155
DS9A09F36D-N	187.3	LNX-6514DS (Verizon)	155
Tower Top Amplifier	187.3	NHH-65B-R2B (Verizon - Proposed)	155
ANT450F6	187.3	NHH-65B-R2B (Verizon - Proposed)	155
20' 8 Bay Di-Pole	187.3	MT6407-77A (Verizon - Proposed)	155
6'x4" Pipe Mount	185.3	LNX-6514DS (Verizon)	155
8' x 2" Horz. Pipe	185.3	NHH-65B-R2B (Verizon - Proposed)	155
6'x4" Pipe Mount	185.3	NHH-65B-R2B (Verizon - Proposed)	155
8' x 2" Horz. Pipe	185.3	MT6407-77A (Verizon - Proposed)	155
DS2C03F36D-D	185.3	LNX-6514DS (Verizon)	155
DS7C09P36U-D	185.3	NHH-65B-R2B (Verizon - Proposed)	155
DS7C09P36U-D	185.3	NHH-65B-R2B (Verizon - Proposed)	155
DS7C09P36U-D	185.3	MT6407-77A (Verizon - Proposed)	155
SitePro VFA10-HD	185.3	B2/B66A RRH (Verizon - Proposed)	155
8' Dish	185.3	B2/B66A RRH (Verizon - Proposed)	155
8' Dish	185.3	B2/B66A RRH (Verizon - Proposed)	155
20' Horz. 4x4x1/4"	184.3	B5/B13 RRH (Verizon - Proposed)	155
20' Horz. 4x4x1/4"	184.3	B5/B13 RRH (Verizon - Proposed)	155
20' Horz. 4x4x1/4"	184.3	B5/B13 RRH (Verizon - Proposed)	155
DB411-B	183.3	DB-T1-6Z-8AB-0Z (Verizon)	155
6'x4" Pipe Mount	179.3	Pirod 12' T-Frame Sector Mount (1) (Verizon)	155
8' x 2" Horz. Pipe	179.3	Pirod 12' T-Frame Sector Mount (1) (Verizon)	155
4' Dish	179.3	Pirod 12' T-Frame Sector Mount (1) (Verizon)	155
6'x4" Pipe Mount	174.3	Andrew TFL-M2-20 (Verizon - Proposed)	155
8' x 2" Horz. Pipe	174.3	Andrew TFL-M2-20 (Verizon - Proposed)	155
8' Dish	174.3	Andrew TFL-M2-20 (Verizon - Proposed)	155
8' Dish	174.3	AIR6449 (T-Mobile)	140
13'x2" Pipe	173.3	APXVAALL24-43 (T-Mobile)	140
13'x2" Pipe	173.3	APX16DWV-16DWVS-E-A20 (T-Mobile)	140
13'x2" Pipe	173.3	AIR6449 (T-Mobile)	140
13'x2" Pipe	173.3	APX16DWV-16DWVS-E-A20 (T-Mobile)	140
13'x2" Pipe	173.3	AIR6449 (T-Mobile)	140
13'x2" Pipe	173.3	APXVAALL24-43 (T-Mobile)	140
22' Horz. 4x4x1/4	173.3	4449 B12,B71 (T-Mobile)	140
22' Horz. 4x4x1/4	173.3	4460 B25+B66 (T-Mobile)	140
22' Horz. 4x4x1/4	173.3	4460 B25+B66 (T-Mobile)	140
6'x2" Pipe Mount	170.3	4460 B25+B66 (T-Mobile)	140
PR-900	170.3	SitePro VFA10-HD (T-Mobile)	140
8' x 2" Horz. Pipe	167.3	APX16DWV-16DWVS-E-A20 (T-Mobile)	140
6 Standoff Arm	167.3	SitePro VFA10-HD (T-Mobile)	140
ANT150F6	167.3	SitePro VFA10-HD (T-Mobile)	140
8843 B2/B66A (AT⊥)	163.3	4449 B12,B71 (T-Mobile)	140
8843 B2/B66A (AT⊥)	163.3	4449 B12,B71 (T-Mobile)	140
RRUS-32 (AT⊥)	163.3	APXVAALL24-43 (T-Mobile)	140
RRUS-32 (AT⊥)	163.3	6'x4" Pipe Mount	137.3
RRUS-32 (AT⊥)	163.3	6'x4" Pipe Mount	137.3
RRUS-E2 (AT⊥)	163.3	6' Dish	137.3
RRUS-E2 (AT⊥)	163.3	6' Dish	137.3
RRUS-E2 (AT⊥)	163.3	ANT150F6	127.3
Pirod 12' T-Frame Sector Mount (1) (AT⊥)	163.3	6'x4" Pipe Mount	127.3
Pirod 12' T-Frame Sector Mount (1) (AT⊥)	163.3	8' x 2" Horz. Pipe	127.3
Pirod 12' T-Frame Sector Mount (1) (AT⊥)	163.3	6'x3" Pipe Mount	127.3
80010966 (AT⊥)	163.3	4' x 2.875" Pipe Mount	127.3
TT08-19DB111-001 TMA (AT⊥)	163.3	6' Standoff Arm	127.3
TT08-19DB111-001 TMA (AT⊥)	163.3	531-70HD	127.3
TT08-19DB111-001 TMA (AT⊥)	163.3	6'x3" Pipe Mount	127.3
DC6-48-60-18-8F Surge Arrestor (AT⊥)	163.3	6' Standoff Arm	127.3
DC6-48-60-18-8F Surge Arrestor (AT⊥)	163.3	8' Dish	127.3
80010966 (AT⊥)	163.3	6'x3" Pipe Mount	111.3
80010966 (AT⊥)	163.3	4' x 2.875" Pipe Mount	111.3
7770.00 (AT⊥)	163.3	6' Standoff Arm	111.3
OPA-65R-LCUU-H8 (AT⊥)	163.3	531-70HD	111.3
DC6-48-60-18-8F Surge Arrestor (AT⊥)	163.3	6'x3" Pipe Mount	110.3
4478 B14 (AT⊥)	163.3	4' x 2.875" Pipe Mount	110.3
4478 B14 (AT⊥)	163.3	6' Standoff Arm	110.3
80010965 (AT⊥)	163.3	CO-41A	110.3
80010966 (AT⊥)	163.3	Light Beacon	105.3
80010965 (AT⊥)	163.3	Light Beacon	105.3
7770.00 (AT⊥)	163.3	Light Beacon	105.3
4449 B5/B12 (AT⊥)	163.3	6'x4" Pipe Mount	102.3
4449 B5/B12 (AT⊥)	163.3	8' x 2" Horz. Pipe	102.3
8843 B2/B66A (AT⊥)	163.3	8' Dish	102.3
4478 B14 (AT⊥)	163.3	6'x4" Pipe Mount	100.3
4449 B5/B12 (AT⊥)	163.3	SC3-W100AB	100.3
7770.00 (AT⊥)	163.3	6'x4" Pipe Mount	93.3
OPA-65R-LCUU-H8 (AT⊥)	163.3	SC3-W100AB	93.3
OPA-65R-LCUU-H6 (AT⊥)	163.3	4' x 2.875" Pipe Mount	89.3

Centek Engineering Inc.
63-2 North Branford Rd.
Branford, CT 06405
Phone: (203) 488-0580
FAX: (203) 488-8587

Job:	***21007.01 - Tariffville Relo***		
Project:	***185' Lattice Tower - Bloomfield, CT***		
Client: Verizon		Drawn by: TJL	Appd:
Code: TIA-222-H		Date: 07/13/21	Scale: NTS
Path: J:\Jobs\21007\01 MEIS_Tariffville Relo\CTDS_Structural\Backup Documents\ERI Files\185ft Stable Lattice Tower.eri			Dwg No. E-1

Feed Line Plan

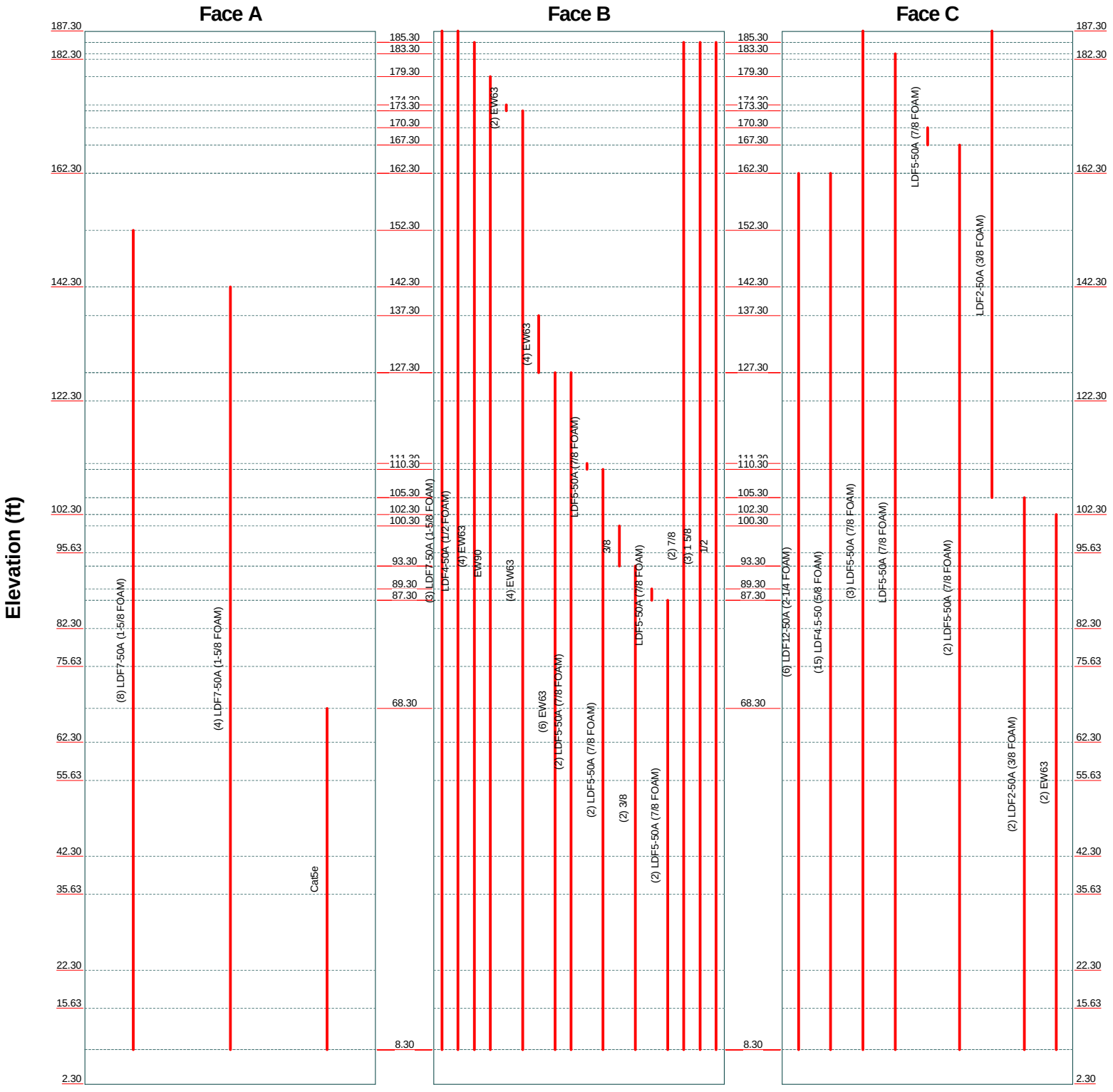
Round Flat App In Face App Out Face



Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	Job: ***21007.01 - Tariffville Relo***		
	Project: ***185' Lattice Tower - Bloomfield, CT***		
	Client: Verizon	Drawn by: TJL	App'd:
	Code: TIA-222-H	Date: 07/13/21	Scale: NTS
	Path: J:\Jobs\21000\700.W\01_Tariffville Relo CT\05_Structural\Backup Documentation\ER Files\185-ft Sabre Lattice Tower.eri		Dwg No. E-7

Feed Line Distribution Chart
2'3-19/32" - 187'3-19/32"

Round | Flat | App In Face | App Out Face | Truss Leg



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Path: J:\Jobs\21007\00 W\01 Tariffville Relo CT\05 Structural\Backup Documentation\ERI Files\185-ft Sabre Lattice Tower.eri		Dwg No. E-7

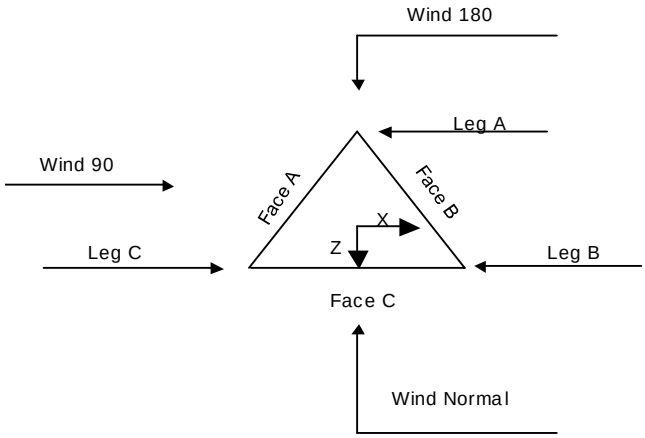
Tower Input Data

The main tower is a 3x free standing tower with an overall height of 187.30 ft above the ground line.
The base of the tower is set at an elevation of 2.30 ft above the ground line.
The face width of the tower is 18.50 ft at the top and 37.00 ft at the base.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

Tower base elevation above sea level: 407.30 ft.
Basic wind speed of 130 mph.
Risk Category III.
Exposure Category B.
Crest Height: 200.00 ft.
Rigorous Topographic Factor Procedure for wind speed-up calculations is used.
Topographic Feature: Continuous Ridge.
Slope Distance L: 1698.00 ft.
Distance from Crest x: 397.00 ft.
Horizontal Distance Downwind: No.
Nominal ice thickness of 1.5000 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in tower member design is 1.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

	Consider Moments - Legs		Distribute Leg Loads As Uniform		Use ASCE 10 X-Brace Ly Rules
	Consider Moments - Horizontals		Assume Legs Pinned	√	Calculate Redundant Bracing Forces
	Consider Moments - Diagonals	√	Assume Rigid Index Plate		Ignore Redundant Members in FEA
	Use Moment Magnification	√	Use Clear Spans For Wind Area	√	SR Leg Bolts Resist Compression
√	Use Code Stress Ratios	√	Use Clear Spans For KL/r	√	All Leg Panels Have Same Allowable
√	Use Code Safety Factors - Guys		Retension Guys To Initial Tension		Offset Girt At Foundation
	Escalate Ice		Bypass Mast Stability Checks	√	Consider Feed Line Torque
	Always Use Max Kz	√	Use Azimuth Dish Coefficients		Include Angle Block Shear Check
	Use Special Wind Profile	√	Project Wind Area of Appurt.		Use TIA-222-H Bracing Resist. Exemption
√	Include Bolts In Member Capacity		Autocalc Torque Arm Areas		Use TIA-222-H Tension Splice Exemption
	Leg Bolts Are At Top Of Section		Add IBC .6D+W Combination		Poles
	Secondary Horizontal Braces Leg	√	Sort Capacity Reports By Component		Include Shear-Torsion Interaction
	Use Diamond Inner Bracing (4 Sided)		Triangulate Diamond Inner Bracing		Always Use Sub-Critical Flow
√	SR Members Have Cut Ends		Treat Feed Line Bundles As Cylinder		Use Top Mounted Sockets
	SR Members Are Concentric		Ignore KL/ry For 60 Deg. Angle Legs		Pole Without Linear Attachments
					Pole With Shroud Or No Appurtenances
					Outside and Inside Corner Radii Are Known



Triangular Tower

Tower Section Geometry

Tower Section	Tower Elevation ft	Assembly Database	Description	Section Width ft	Number of Sections	Section Length ft
T1	187.30-182.30			18.50	1	5.00
T2	182.30-162.30			19.00	1	20.00
T3	162.30-142.30			21.00	1	20.00
T4	142.30-122.30			23.00	1	20.00
T5	122.30-102.30			25.00	1	20.00
T6	102.30-95.63			27.00	1	6.67
T7	95.63-82.30			27.67	1	13.33
T8	82.30-75.63			29.00	1	6.67
T9	75.63-62.30			29.67	1	13.33
T10	62.30-55.63			31.00	1	6.67
T11	55.63-42.30			31.67	1	13.33
T12	42.30-35.63			33.00	1	6.67
T13	35.63-22.30			33.67	1	13.33
T14	22.30-15.63			35.00	1	6.67
T15	15.63-2.30			35.67	1	13.33

Tower Section Geometry *(cont'd)*

Tower Section	Tower Elevation ft	Diagonal Spacing ft	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset in	Bottom Girt Offset in

Tower Section	Tower Elevation ft	Diagonal Spacing ft	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset in	Bottom Girt Offset in
T1	187.30-182.30	5.00	X Brace	No	No	0.0000	0.0000
T2	182.30-162.30	10.00	X Brace	No	No	0.0000	0.0000
T3	162.30-142.30	10.00	X Brace	No	No	0.0000	0.0000
T4	142.30-122.30	10.00	X Brace	No	No	0.0000	0.0000
T5	122.30-102.30	10.00	X Brace	No	No	0.0000	0.0000
T6	102.30-95.63	6.67	K Brace Up	No	Yes	0.0000	0.0000
T7	95.63-82.30	13.33	K1 Down	No	Yes	0.0000	0.0000
T8	82.30-75.63	6.67	K Brace Up	No	Yes	0.0000	0.0000
T9	75.63-62.30	13.33	K1 Down	No	Yes	0.0000	0.0000
T10	62.30-55.63	6.67	K Brace Up	No	Yes	0.0000	0.0000
T11	55.63-42.30	13.33	K1 Down	No	Yes	0.0000	0.0000
T12	42.30-35.63	6.67	K Brace Up	No	Yes	0.0000	0.0000
T13	35.63-22.30	13.33	K1 Down	No	Yes	0.0000	0.0000
T14	22.30-15.63	6.67	K Brace Up	No	Yes	0.0000	0.0000
T15	15.63-2.30	13.33	K1 Down	No	Yes	0.0000	0.0000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 187.30-182.30	Pipe	P6x.28	A572-50 (50 ksi)	Single Angle	L3 1/2x3 1/2x1/4	A36 (36 ksi)
T2 182.30-162.30	Pipe	P6x.28	A572-50 (50 ksi)	Single Angle	L4x4x1/4	A36 (36 ksi)
T3 162.30-142.30	Pipe	P6x.28	A572-50 (50 ksi)	Single Angle	L5x5x5/16	A36 (36 ksi)
T4 142.30-122.30	Pipe	P6x.28	A572-50 (50 ksi)	Single Angle	L5x5x5/16	A36 (36 ksi)
T5 122.30-102.30	Pipe	P8x.322	A572-50 (50 ksi)	Single Angle	L5x5x3/8	A36 (36 ksi)
T6 102.30-95.63	Pipe	P8x.322	A572-50 (50 ksi)	Single Angle	L6x6x3/8	A36 (36 ksi)
T7 95.63-82.30	Pipe	P8x.322	A572-50 (50 ksi)	Single Angle	L6x4x1/2	A36 (36 ksi)
T8 82.30-75.63	Pipe	P8x.5	A572-50 (50 ksi)	Single Angle	L6x6x3/8	A36 (36 ksi)
T9 75.63-62.30	Pipe	P8x.5	A572-50 (50 ksi)	Single Angle	L6x6x3/8	A36 (36 ksi)
T10 62.30-55.63	Pipe	P10x.365	A572-50 (50 ksi)	Single Angle	L6x6x3/8	A36 (36 ksi)
T11 55.63-42.30	Pipe	P10x.365	A572-50 (50 ksi)	Single Angle	L6x6x3/8	A36 (36 ksi)
T12 42.30-35.63	Pipe	P10x.5	A572-50 (50 ksi)	Single Angle	L6x6x3/8	A36 (36 ksi)
T13 35.63-22.30	Pipe	P10x.5	A572-50 (50 ksi)	Single Angle	L6x6x1/2	A36 (36 ksi)
T14 22.30-15.63	Pipe	P12x.5	A572-50 (50 ksi)	Single Angle	L6x6x1/2	A36 (36 ksi)
T15 15.63-2.30	Pipe	P12x.5	A572-50 (50 ksi)	Single Angle	L6x6x1/2	A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 187.30-182.30	Single Angle	L5x5x5/16	A36 (36 ksi)	Single Angle		A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T6 102.30-95.63	None	Single Angle		A36 (36 ksi)	Single Angle	L1x1x1/8	A36 (36 ksi)
T7 95.63-82.30	None	Single Angle		A36 (36 ksi)	Single Angle	L4x4x5/16	A36 (36 ksi)
T8 82.30-75.63	None	Single Angle		A36 (36 ksi)	Single Angle	L1x1x1/8	A36 (36 ksi)
T9 75.63-62.30	None	Single Angle		A36 (36 ksi)	Single Angle	L4x4x5/16	A36 (36 ksi)
T10 62.30-55.63	None	Single Angle		A36 (36 ksi)	Single Angle	L1x1x1/8	A36 (36 ksi)
T11 55.63-42.30	None	Single Angle		A36 (36 ksi)	Single Angle	L5x5x5/16	A36 (36 ksi)
T12 42.30-35.63	None	Single Angle		A36 (36 ksi)	Single Angle	L1x1x1/8	A36 (36 ksi)
T13 35.63-22.30	None	Single Angle		A36 (36 ksi)	Single Angle	L5x5x5/16	A36 (36 ksi)
T14 22.30-15.63	None	Single Angle		A36 (36 ksi)	Single Angle	L1x1x1/8	A36 (36 ksi)
T15 15.63-2.30	None	Single Angle		A36 (36 ksi)	Single Angle	L5x5x5/16	A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Secondary Horizontal Type	Secondary Horizontal Size	Secondary Horizontal Grade	Inner Bracing Type	Inner Bracing Size	Inner Bracing Grade
T7 95.63-82.30	Single Angle		A36 (36 ksi)	Single Angle	L3x3x1/4	A36 (36 ksi)
T9 75.63-62.30	Single Angle		A36 (36 ksi)	Single Angle	L3x3x1/4	A36 (36 ksi)
T11 55.63-42.30	Single Angle		A36 (36 ksi)	Single Angle	L3 1/2x3 1/2x1/4	A36 (36 ksi)
T13 35.63-22.30	Single Angle		A36 (36 ksi)	Single Angle	L3 1/2x3 1/2x1/4	A36 (36 ksi)
T15 15.63-2.30	Single Angle		A36 (36 ksi)	Single Angle	L3 1/2x3 1/2x1/4	A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Redundant Bracing Grade		Redundant Type	Redundant Size	K Factor
T7	A36	Horizontal (1)	Single Angle	L3x3x1/4	1
95.63-82.30	(36 ksi)	Diagonal (1)	Single Angle	L3x3x1/4	1
T9	A36	Horizontal (1)	Single Angle	L3x3x1/4	1
75.63-62.30	(36 ksi)	Diagonal (1)	Single Angle	L3x3x1/4	1
T11	A36	Horizontal (1)	Single Angle	L3x3x5/16	1
55.63-42.30	(36 ksi)	Diagonal (1)	Single Angle	L3x3x5/16	1
T13	A36	Horizontal (1)	Single Angle	L3x3x5/16	1
35.63-22.30	(36 ksi)	Diagonal (1)	Single Angle	L3x3x5/16	1
T15	A36	Horizontal (1)	Single Angle	L4x3 1/2x5/16	1
15.63-2.30	(36 ksi)	Diagonal (1)	Single Angle	L4x3 1/2x5/16	1

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
T1	0.00	0.0000	A36	1	1	1	30.0000	30.0000	36.0000
187.30-182.30			(36 ksi)						
T2	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
182.30-162.30			(36 ksi)						
T3	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
162.30-142.30			(36 ksi)						
T4	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
142.30-122.30			(36 ksi)						
T5	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
122.30-102.30			(36 ksi)						
T6	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
102.30-95.63			(36 ksi)						
T7 95.63-82.30	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
			(36 ksi)						
T8 82.30-75.63	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
			(36 ksi)						
T9 75.63-62.30	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
			(36 ksi)						
T10	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
62.30-55.63			(36 ksi)						
T11	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
55.63-42.30			(36 ksi)						
T12	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
42.30-35.63			(36 ksi)						
T13	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
35.63-22.30			(36 ksi)						
T14	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
22.30-15.63			(36 ksi)						
T15 15.63-2.30	0.00	0.0000	A36	1	1	1	36.0000	36.0000	36.0000
			(36 ksi)						

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X Y	K Brace Diags X Y	Single Diags X Y	Girts X Y	Horiz. X Y	Sec. Horiz. X Y	Inner Brace X Y
T1	Yes	Yes	1	1	1	1	1	1	1	1
187.30-182.30				1	1	1	1	1	1	1
T2	Yes	Yes	1	1	1	1	1	1	1	1
182.30-162.30				1	1	1	1	1	1	1
T3	Yes	Yes	1	1	1	1	1	1	1	1
162.30-142.30				1	1	1	1	1	1	1
T4	Yes	Yes	1	1	1	1	1	1	1	1
142.30-122.30				1	1	1	1	1	1	1
T5	Yes	Yes	1	1	1	1	1	1	1	1
122.30-102.30				1	1	1	1	1	1	1
T6	Yes	Yes	1	1	1	1	1	1	1	1
102.30-95.63				1	1	1	1	1	1	1
T7	Yes	Yes	1	1	1	1	1	1	1	1
95.63-82.30				1	1	1	1	1	1	1
T8	Yes	Yes	1	1	1	1	1	1	1	1
82.30-75.63				1	1	1	1	1	1	1
T9	Yes	Yes	1	1	1	1	1	1	1	1
75.63-62.30				1	1	1	1	1	1	1
T10	Yes	Yes	1	1	1	1	1	1	1	1
62.30-55.63				1	1	1	1	1	1	1
T11	Yes	Yes	1	1	1	1	1	1	1	1
55.63-42.30				1	1	1	1	1	1	1
T12	Yes	Yes	1	1	1	1	1	1	1	1
42.30-35.63				1	1	1	1	1	1	1
T13	Yes	Yes	1	1	1	1	1	1	1	1
35.63-22.30				1	1	1	1	1	1	1
T14	Yes	Yes	1	1	1	1	1	1	1	1
22.30-15.63				1	1	1	1	1	1	1
T15	Yes	Yes	1	1	1	1	1	1	1	1
15.63-2.30				1	1	1	1	1	1	1

[1]*Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.*

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Net Width Deduct in	Leg U	Diagonal Net Width Deduct in	Diagonal U	Top Girt Net Width Deduct in	Top Girt U	Bottom Girt Net Width Deduct in	Bottom Girt U	Mid Girt Net Width Deduct in	Mid Girt U	Long Horizontal Net Width Deduct in	Long Horizontal U	Short Horizontal Net Width Deduct in	Short Horizontal U
T1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	0.75
187.30-182.30														
T2	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
182.30-162.30														
T3	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
162.30-142.30														
T4	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
142.30-122.30														

Tower Elevation ft	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T5 122.30-102.30	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T6 102.30-95.63	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T7 95.63-82.30	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T8 82.30-75.63	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T9 75.63-62.30	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T10 62.30-55.63	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T11 55.63-42.30	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T12 42.30-35.63	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T13 35.63-22.30	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T14 22.30-15.63	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T15 15.63-2.30	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1

Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T1 187.30-182.30	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T2 182.30-162.30	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T3 162.30-142.30	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T4 142.30-122.30	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T5 122.30-102.30	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T6 102.30-95.63	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T7 95.63-82.30	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T8 82.30-75.63	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T9 75.63-62.30	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T10 62.30-55.63	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T11 55.63-42.30	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T12 42.30-35.63	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T13 35.63-22.30	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T14 22.30-15.63	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T15 15.63-2.30	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Connection Type	Leg Bolt Size in	Leg No.	Diagonal Bolt Size in	Diagonal No.	Top Girt Bolt Size in	Top Girt No.	Bottom Girt Bolt Size in	Bottom Girt No.	Mid Girt Bolt Size in	Mid Girt No.	Long Horizontal Bolt Size in	Long Horizontal No.	Short Horizontal Bolt Size in	Short Horizontal No.
T1	Flange	1.2500	6	0.7500	1	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0
187.30-182.30		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T2	Flange	1.2500	6	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
182.30-162.30		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T3	Flange	1.2500	6	0.7500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
162.30-142.30		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T4	Flange	1.2500	8	0.6250	2	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
142.30-122.30		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T5	Flange	1.5000	8	0.7500	2	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
122.30-102.30		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T6	Flange	0.0000	0	1.0000	2	0.6250	0	0.0000	0	0.6250	0	0.6250	0	0.6250	0
102.30-95.63		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T7 95.63-82.30	Flange	1.5000	8	1.0000	2	0.6250	0	0.0000	0	0.6250	0	1.0000	2	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T8 82.30-75.63	Flange	0.0000	0	0.8750	2	0.6250	0	0.0000	0	0.6250	0	0.6250	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T9 75.63-62.30	Flange	1.5000	8	0.8750	2	0.6250	0	0.0000	0	0.6250	0	0.8750	2	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T10	Flange	0.0000	0	0.8750	2	0.6250	0	0.0000	0	0.6250	0	0.6250	0	0.6250	0
62.30-55.63		A325N		A325N		A325N		A325N		A325X		A325N		A325X	
T11	Flange	1.5000	8	0.8750	2	0.6250	0	0.0000	0	0.6250	0	0.8750	2	0.6250	0
55.63-42.30		A325N		A325N		A325N		A325N		A325X		A325N		A325X	
T12	Flange	0.0000	0	1.0000	2	0.6250	0	0.0000	0	0.6250	0	0.6250	0	0.6250	0
42.30-35.63		A325N		A325N		A325N		A325N		A325X		A325N		A325X	
T13	Flange	1.5000	8	1.0000	2	0.6250	0	0.0000	0	0.6250	0	1.0000	2	0.6250	0
35.63-22.30		A325N		A325N		A325N		A325N		A325X		A325N		A325X	
T14	Flange	0.0000	0	1.0000	2	0.6250	0	0.0000	0	0.6250	0	0.6250	0	0.6250	0
22.30-15.63		A325N		A325N		A325N		A325N		A325X		A325N		A325X	
T15 15.63-2.30	Flange	1.7500	6	1.0000	2	0.6250	0	0.0000	0	0.6250	0	1.0000	2	0.6250	0
		F1554-105		A325N		A325N		A325N		A325X		A325N		A325X	

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Redundant Horizontal Bolt Size in	Redundant Horizontal No.	Redundant Diagonal Bolt Size in	Redundant Diagonal No.	Redundant Sub-Diagonal Bolt Size in	Redundant Sub-Diagonal No.	Redundant Sub-Horizontal Bolt Size in	Redundant Sub-Horizontal No.	Redundant Vertical Bolt Size in	Redundant Vertical No.	Redundant Hip Bolt Size in	Redundant Hip No.	Redundant Hip Diagonal Bolt Size in	Redundant Hip Diagonal No.
T1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
187.30-182.30	A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T2	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
182.30-162.30	A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T3	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
162.30-142.30	A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T4	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
142.30-122.30	A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T5	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
122.30-102.30	A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T6	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
102.30-95.63	A325N		A325N		A325N		A325N		A325N		A325N		A325N	

Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T7 95.63-82.30	1.0000 A325N	1	1.0000 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T8 82.30-75.63	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T9 75.63-62.30	0.8750 A325N	1	0.8750 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T10 62.30-55.63	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T11 55.63-42.30	0.8750 A325N	1	0.8750 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T12 42.30-35.63	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T13 35.63-22.30	1.0000 A325N	1	1.0000 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T14 22.30-15.63	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T15 15.63-2.30	1.0000 A325N	1	1.0000 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
LDF12-50A (2-1/4 FOAM)	C	No	No	Ar (CaAa)	162.30 - 8.30	0.0000	0.44	6	6	2.3500	2.3500		1.22
LDF4.5-50 (5/8 FOAM)	C	No	No	Ar (CaAa)	162.30 - 8.30	0.0000	0.44	15	12	0.8700	0.8700		0.15
LDF7-50A (1-5/8 FOAM)	A	No	No	Ar (CaAa)	152.30 - 8.30	0.0000	-0.45	8	8	1.9800	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	A	No	No	Ar (CaAa)	142.30 - 8.30	0.0000	-0.4	4	4	1.9800	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	B	No	No	Ar (CaAa)	187.30 - 8.30	0.0000	-0.38	3	3	1.9800	1.9800		0.82
LDF5-50A (7/8 FOAM)	C	No	No	Ar (CaAa)	187.30 - 8.30	0.0000	-0.4	3	3	1.0900	1.0900		0.33
LDF5-50A (7/8 FOAM)	C	No	No	Ar (CaAa)	183.30 - 8.30	0.0000	-0.38	1	1	1.0900	1.0900		0.33
LDF4-50A (1/2 FOAM)	B	No	No	Ar (CaAa)	187.30 - 8.30	0.0000	-0.37	1	1	0.6300	0.6300		0.15
EW63	B	No	No	Ar (CaAa)	185.30 - 8.30	0.0000	-0.43	4	4	1.5742	1.5742		0.51
EW90	B	No	No	Ar (CaAa)	179.30 - 8.30	0.0000	-0.43	1	1	0.9869	0.9869		0.32
EW63	B	No	No	Ar (CaAa)	174.30 - 173.30	0.0000	-0.43	2	2	1.5742	1.5742		0.51
EW63	B	No	No	Ar (CaAa)	173.30 - 8.30	0.0000	-0.43	4	2	1.5742	1.5742		0.51
LDF5-50A (7/8 FOAM)	C	No	No	Ar (CaAa)	170.30 - 167.30	0.0000	-0.43	1	1	1.0900	1.0900		0.33
LDF5-50A (7/8 FOAM)	C	No	No	Ar (CaAa)	167.30 - 8.30	0.0000	-0.43	2	1	1.0900	1.0900		0.33
EW63	B	No	No	Ar (CaAa)	137.30 -	0.0000	-0.4	4	2	1.5742	1.5742		0.51

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
					127.30								
EW63	B	No	No	Ar (CaAa)	127.30 - 8.30	0.0000	-0.4	6	2	1.5742	1.5742		0.51
LDF5-50A (7/8 FOAM)	B	No	No	Ar (CaAa)	127.30 - 8.30	0.0000	-0.465	2	2	1.0900	1.0900		0.33
LDF5-50A (7/8 FOAM)	B	No	No	Ar (CaAa)	111.30 - 110.30	0.0000	-0.41	1	1	1.0900	1.0900		0.33
LDF5-50A (7/8 FOAM)	B	No	No	Ar (CaAa)	110.30 - 8.30	0.0000	-0.41	2	1	1.0900	1.0900		0.33
LDF2-50A (3/8 FOAM)	C	No	No	Ar (CaAa)	187.30 - 105.30	0.0000	-0.4	1	1	0.4400	0.4400		0.08
LDF2-50A (3/8 FOAM)	C	No	No	Ar (CaAa)	105.30 - 8.30	0.0000	-0.4	2	1	0.4400	0.4400		0.08
EW63	C	No	No	Ar (CaAa)	102.30 - 8.30	0.0000	-0.45	2	1	1.5742	1.5742		0.51
3/8	B	No	No	Ar (CaAa)	100.30 - 93.30	0.0000	-0.36	1	1	0.5000	0.5000		0.40
3/8	B	No	No	Ar (CaAa)	93.30 - 8.30	0.0000	-0.36	2	2	0.5000	0.5000		0.40
LDF5-50A (7/8 FOAM)	B	No	No	Ar (CaAa)	89.30 - 87.30	0.0000	-0.39	1	1	1.0900	1.0900		0.33
LDF5-50A (7/8 FOAM)	B	No	No	Ar (CaAa)	87.30 - 8.30	0.0000	-0.39	2	1	1.0900	1.0900		0.33
Cat5e	A	No	No	Ar (CaAa)	68.30 - 8.30	0.0000	-0.31	1	1	0.3600	0.3600		0.06
7/8	B	No	No	Ar (CaAa)	185.30 - 8.30	0.0000	-0.47	2	2	1.1100	1.1100		0.54
1 5/8	B	No	No	Ar (CaAa)	185.30 - 8.30	0.0000	-0.48	3	3	1.9800	1.9800		1.04
1/2	B	No	No	Ar (CaAa)	185.30 - 8.30	0.0000	-0.48	1	1	0.5800	0.5800		0.25

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
T1	187.30-182.30	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	7.796	0.000	0.03
		C	0.000	0.000	1.964	0.000	0.01
T2	182.30-162.30	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	52.133	0.000	0.21
		C	0.000	0.000	11.017	0.000	0.03
T3	162.30-142.30	A	0.000	0.000	15.840	0.000	0.07
		B	0.000	0.000	57.781	0.000	0.23
		C	0.000	0.000	68.260	0.000	0.23
T4	142.30-122.30	A	0.000	0.000	47.520	0.000	0.20
		B	0.000	0.000	69.891	0.000	0.27
		C	0.000	0.000	68.260	0.000	0.23
T5	122.30-102.30	A	0.000	0.000	47.520	0.000	0.20
		B	0.000	0.000	82.857	0.000	0.31
		C	0.000	0.000	68.392	0.000	0.23
T6	102.30-95.63	A	0.000	0.000	15.848	0.000	0.07
		B	0.000	0.000	28.712	0.000	0.11
		C	0.000	0.000	25.158	0.000	0.08
T7	95.63-82.30	A	0.000	0.000	31.672	0.000	0.13
		B	0.000	0.000	59.426	0.000	0.22
		C	0.000	0.000	50.279	0.000	0.17

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
T8	82.30-75.63	A	0.000	0.000	15.848	0.000	0.07
		B	0.000	0.000	30.599	0.000	0.12
		C	0.000	0.000	25.158	0.000	0.08
T9	75.63-62.30	A	0.000	0.000	31.888	0.000	0.13
		B	0.000	0.000	61.153	0.000	0.23
		C	0.000	0.000	50.279	0.000	0.17
T10	62.30-55.63	A	0.000	0.000	16.088	0.000	0.07
		B	0.000	0.000	30.599	0.000	0.12
		C	0.000	0.000	25.158	0.000	0.08
T11	55.63-42.30	A	0.000	0.000	32.152	0.000	0.13
		B	0.000	0.000	61.153	0.000	0.23
		C	0.000	0.000	50.279	0.000	0.17
T12	42.30-35.63	A	0.000	0.000	16.088	0.000	0.07
		B	0.000	0.000	30.599	0.000	0.12
		C	0.000	0.000	25.158	0.000	0.08
T13	35.63-22.30	A	0.000	0.000	32.152	0.000	0.13
		B	0.000	0.000	61.153	0.000	0.23
		C	0.000	0.000	50.279	0.000	0.17
T14	22.30-15.63	A	0.000	0.000	16.088	0.000	0.07
		B	0.000	0.000	30.599	0.000	0.12
		C	0.000	0.000	25.158	0.000	0.08
T15	15.63-2.30	A	0.000	0.000	17.680	0.000	0.07
		B	0.000	0.000	33.627	0.000	0.13
		C	0.000	0.000	27.648	0.000	0.09

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
T1	187.30-182.30	A	2.204	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	29.455	0.000	0.45
		C		0.000	0.000	10.029	0.000	0.14
T2	182.30-162.30	A	2.196	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	191.463	0.000	2.96
		C		0.000	0.000	55.783	0.000	0.81
T3	162.30-142.30	A	2.180	0.000	0.000	43.307	0.000	0.78
		B		0.000	0.000	205.507	0.000	3.20
		C		0.000	0.000	212.736	0.000	3.52
T4	142.30-122.30	A	2.162	0.000	0.000	134.619	0.000	2.34
		B		0.000	0.000	235.974	0.000	3.71
		C		0.000	0.000	212.111	0.000	3.49
T5	122.30-102.30	A	2.139	0.000	0.000	134.345	0.000	2.32
		B		0.000	0.000	274.180	0.000	4.31
		C		0.000	0.000	212.680	0.000	3.47
T6	102.30-95.63	A	2.121	0.000	0.000	44.731	0.000	0.77
		B		0.000	0.000	97.519	0.000	1.52
		C		0.000	0.000	82.131	0.000	1.32
T7	95.63-82.30	A	2.106	0.000	0.000	89.268	0.000	1.52
		B		0.000	0.000	207.850	0.000	3.18
		C		0.000	0.000	163.681	0.000	2.62
T8	82.30-75.63	A	2.088	0.000	0.000	44.595	0.000	0.76
		B		0.000	0.000	108.553	0.000	1.64
		C		0.000	0.000	81.639	0.000	1.30
T9	75.63-62.30	A	2.067	0.000	0.000	91.649	0.000	1.54
		B		0.000	0.000	215.818	0.000	3.24
		C		0.000	0.000	162.544	0.000	2.56
T10	62.30-55.63	A	2.042	0.000	0.000	47.373	0.000	0.78

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		B		0.000	0.000	107.322	0.000	1.60
		C		0.000	0.000	80.970	0.000	1.27
T11	55.63-42.30	A	2.012	0.000	0.000	94.350	0.000	1.54
		B		0.000	0.000	212.861	0.000	3.14
		C		0.000	0.000	160.936	0.000	2.49
T12	42.30-35.63	A	1.974	0.000	0.000	47.006	0.000	0.76
		B		0.000	0.000	105.490	0.000	1.54
		C		0.000	0.000	79.974	0.000	1.22
T13	35.63-22.30	A	1.923	0.000	0.000	93.403	0.000	1.48
		B		0.000	0.000	208.130	0.000	2.99
		C		0.000	0.000	158.365	0.000	2.37
T14	22.30-15.63	A	1.851	0.000	0.000	46.348	0.000	0.72
		B		0.000	0.000	102.203	0.000	1.43
		C		0.000	0.000	78.188	0.000	1.14
T15	15.63-2.30	A	1.725	0.000	0.000	50.191	0.000	0.74
		B		0.000	0.000	108.593	0.000	1.46
		C		0.000	0.000	83.903	0.000	1.16

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
T1	187.30-182.30	2.5999	-9.1993	6.3436	-15.9182
T2	182.30-162.30	6.2491	-25.7820	13.2144	-39.1374
T3	162.30-142.30	-17.0062	-4.7676	-15.4345	-11.7549
T4	142.30-122.30	-25.3127	-3.8934	-26.7425	-9.5553
T5	122.30-102.30	-24.7660	-8.5584	-26.2939	-15.9154
T6	102.30-95.63	-23.3627	-8.4635	-21.5772	-15.7438
T7	95.63-82.30	-21.9623	-9.0923	-20.2469	-17.9794
T8	82.30-75.63	-23.8282	-10.8017	-21.4675	-21.4893
T9	75.63-62.30	-22.7372	-10.3066	-21.3800	-20.5500
T10	62.30-55.63	-24.4882	-10.9245	-23.5965	-21.5415
T11	55.63-42.30	-22.7079	-10.2198	-22.7852	-20.5858
T12	42.30-35.63	-25.3575	-11.3331	-25.0653	-22.1954
T13	35.63-22.30	-23.4664	-10.5788	-24.2281	-21.0284
T14	22.30-15.63	-25.7659	-11.5085	-26.5881	-22.2165
T15	15.63-2.30	-14.9185	-6.8427	-18.6127	-14.8720

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T1	5	LDF7-50A (1-5/8 FOAM)	182.30 - 187.30	0.6000	0.5109
T1	6	LDF5-50A (7/8 FOAM)	182.30 - 187.30	0.6000	0.5109
T1	7	LDF5-50A (7/8 FOAM)	182.30 - 183.30	0.6000	0.5109
T1	8	LDF4-50A (1/2 FOAM)	182.30 - 187.30	0.6000	0.5109

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T1	9	EW63	182.30 - 185.30	0.6000	0.5109
T1	20	LDF2-50A (3/8 FOAM)	182.30 - 187.30	0.6000	0.5109
T1	28	7/8	182.30 - 185.30	0.6000	0.5109
T1	29	1 5/8	182.30 - 185.30	0.6000	0.5109
T1	30	1/2	182.30 - 185.30	0.6000	0.5109
T2	5	LDF7-50A (1-5/8 FOAM)	162.30 - 182.30	0.6000	0.6000
T2	6	LDF5-50A (7/8 FOAM)	162.30 - 182.30	0.6000	0.6000
T2	7	LDF5-50A (7/8 FOAM)	162.30 - 182.30	0.6000	0.6000
T2	8	LDF4-50A (1/2 FOAM)	162.30 - 182.30	0.6000	0.6000
T2	9	EW63	162.30 - 182.30	0.6000	0.6000
T2	10	EW90	162.30 - 179.30	0.6000	0.6000
T2	11	EW63	173.30 - 174.30	0.6000	0.6000
T2	12	EW63	162.30 - 173.30	0.6000	0.6000
T2	13	LDF5-50A (7/8 FOAM)	167.30 - 170.30	0.6000	0.6000
T2	14	LDF5-50A (7/8 FOAM)	162.30 - 167.30	0.6000	0.6000
T2	20	LDF2-50A (3/8 FOAM)	162.30 - 182.30	0.6000	0.6000
T2	28	7/8	162.30 - 182.30	0.6000	0.6000
T2	29	1 5/8	162.30 - 182.30	0.6000	0.6000
T2	30	1/2	162.30 - 182.30	0.6000	0.6000
T3	1	LDF12-50A (2-1/4 FOAM)	142.30 - 162.30	0.6000	0.6000
T3	2	LDF4.5-50 (5/8 FOAM)	142.30 - 162.30	0.6000	0.6000
T3	3	LDF7-50A (1-5/8 FOAM)	142.30 - 152.30	0.6000	0.6000
T3	5	LDF7-50A (1-5/8 FOAM)	142.30 - 162.30	0.6000	0.6000
T3	6	LDF5-50A (7/8 FOAM)	142.30 - 162.30	0.6000	0.6000
T3	7	LDF5-50A (7/8 FOAM)	142.30 - 162.30	0.6000	0.6000
T3	8	LDF4-50A (1/2 FOAM)	142.30 - 162.30	0.6000	0.6000
T3	9	EW63	142.30 - 162.30	0.6000	0.6000
T3	10	EW90	142.30 - 162.30	0.6000	0.6000
T3	12	EW63	142.30 - 162.30	0.6000	0.6000
T3	14	LDF5-50A (7/8 FOAM)	142.30 - 162.30	0.6000	0.6000
T3	20	LDF2-50A (3/8 FOAM)	142.30 - 162.30	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T3	28	7/8	142.30 - 162.30	0.6000	0.6000
T3	29	1 5/8	142.30 - 162.30	0.6000	0.6000
T3	30	1/2	142.30 - 162.30	0.6000	0.6000
T4	1	LDF12-50A (2-1/4 FOAM)	122.30 - 142.30	0.6000	0.6000
T4	2	LDF4.5-50 (5/8 FOAM)	122.30 - 142.30	0.6000	0.6000
T4	3	LDF7-50A (1-5/8 FOAM)	122.30 - 142.30	0.6000	0.6000
T4	4	LDF7-50A (1-5/8 FOAM)	122.30 - 142.30	0.6000	0.6000
T4	5	LDF7-50A (1-5/8 FOAM)	122.30 - 142.30	0.6000	0.6000
T4	6	LDF5-50A (7/8 FOAM)	122.30 - 142.30	0.6000	0.6000
T4	7	LDF5-50A (7/8 FOAM)	122.30 - 142.30	0.6000	0.6000
T4	8	LDF4-50A (1/2 FOAM)	122.30 - 142.30	0.6000	0.6000
T4	9	EW63	122.30 - 142.30	0.6000	0.6000
T4	10	EW90	122.30 - 142.30	0.6000	0.6000
T4	12	EW63	122.30 - 142.30	0.6000	0.6000
T4	14	LDF5-50A (7/8 FOAM)	122.30 - 142.30	0.6000	0.6000
T4	15	EW63	127.30 - 137.30	0.6000	0.6000
T4	16	EW63	122.30 - 127.30	0.6000	0.6000
T4	17	LDF5-50A (7/8 FOAM)	122.30 - 127.30	0.6000	0.6000
T4	20	LDF2-50A (3/8 FOAM)	122.30 - 142.30	0.6000	0.6000
T4	28	7/8	122.30 - 142.30	0.6000	0.6000
T4	29	1 5/8	122.30 - 142.30	0.6000	0.6000
T4	30	1/2	122.30 - 142.30	0.6000	0.6000
T5	1	LDF12-50A (2-1/4 FOAM)	102.30 - 122.30	0.6000	0.6000
T5	2	LDF4.5-50 (5/8 FOAM)	102.30 - 122.30	0.6000	0.6000
T5	3	LDF7-50A (1-5/8 FOAM)	102.30 - 122.30	0.6000	0.6000
T5	4	LDF7-50A (1-5/8 FOAM)	102.30 - 122.30	0.6000	0.6000
T5	5	LDF7-50A (1-5/8 FOAM)	102.30 - 122.30	0.6000	0.6000
T5	6	LDF5-50A (7/8 FOAM)	102.30 - 122.30	0.6000	0.6000
T5	7	LDF5-50A (7/8 FOAM)	102.30 - 122.30	0.6000	0.6000
T5	8	LDF4-50A (1/2 FOAM)	102.30 - 122.30	0.6000	0.6000
T5	9	EW63	102.30 - 122.30	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T5	10	EW90	102.30 - 122.30	0.6000	0.6000
T5	12	EW63	102.30 - 122.30	0.6000	0.6000
T5	14	LDF5-50A (7/8 FOAM)	102.30 - 122.30	0.6000	0.6000
T5	16	EW63	102.30 - 122.30	0.6000	0.6000
T5	17	LDF5-50A (7/8 FOAM)	102.30 - 122.30	0.6000	0.6000
T5	18	LDF5-50A (7/8 FOAM)	110.30 - 111.30	0.6000	0.6000
T5	19	LDF5-50A (7/8 FOAM)	102.30 - 110.30	0.6000	0.6000
T5	20	LDF2-50A (3/8 FOAM)	105.30 - 122.30	0.6000	0.6000
T5	21	LDF2-50A (3/8 FOAM)	102.30 - 105.30	0.6000	0.6000
T5	28	7/8	102.30 - 122.30	0.6000	0.6000
T5	29	1 5/8	102.30 - 122.30	0.6000	0.6000
T5	30	1/2	102.30 - 122.30	0.6000	0.6000
T6	1	LDF12-50A (2-1/4 FOAM)	95.63 - 102.30	0.6000	0.6000
T6	2	LDF4.5-50 (5/8 FOAM)	95.63 - 102.30	0.6000	0.6000
T6	3	LDF7-50A (1-5/8 FOAM)	95.63 - 102.30	0.6000	0.6000
T6	4	LDF7-50A (1-5/8 FOAM)	95.63 - 102.30	0.6000	0.6000
T6	5	LDF7-50A (1-5/8 FOAM)	95.63 - 102.30	0.6000	0.6000
T6	6	LDF5-50A (7/8 FOAM)	95.63 - 102.30	0.6000	0.6000
T6	7	LDF5-50A (7/8 FOAM)	95.63 - 102.30	0.6000	0.6000
T6	8	LDF4-50A (1/2 FOAM)	95.63 - 102.30	0.6000	0.6000
T6	9	EW63	95.63 - 102.30	0.6000	0.6000
T6	10	EW90	95.63 - 102.30	0.6000	0.6000
T6	12	EW63	95.63 - 102.30	0.6000	0.6000
T6	14	LDF5-50A (7/8 FOAM)	95.63 - 102.30	0.6000	0.6000
T6	16	EW63	95.63 - 102.30	0.6000	0.6000
T6	17	LDF5-50A (7/8 FOAM)	95.63 - 102.30	0.6000	0.6000
T6	19	LDF5-50A (7/8 FOAM)	95.63 - 102.30	0.6000	0.6000
T6	21	LDF2-50A (3/8 FOAM)	95.63 - 102.30	0.6000	0.6000
T6	22	EW63	95.63 - 102.30	0.6000	0.6000
T6	23	3/8	95.63 - 100.30	0.6000	0.6000
T6	28	7/8	95.63 - 102.30	0.6000	0.6000
T6	29	1 5/8	95.63 - 102.30	0.6000	0.6000
T6	30	1/2	95.63 - 102.30	0.6000	0.6000
T7	1	LDF12-50A (2-1/4 FOAM)	82.30 - 95.63	0.6000	0.6000
T7	2	LDF4.5-50 (5/8 FOAM)	82.30 - 95.63	0.6000	0.6000
T7	3	LDF7-50A (1-5/8 FOAM)	82.30 - 95.63	0.6000	0.6000
T7	4	LDF7-50A (1-5/8 FOAM)	82.30 - 95.63	0.6000	0.6000
T7	5	LDF7-50A (1-5/8 FOAM)	82.30 - 95.63	0.6000	0.6000
T7	6	LDF5-50A (7/8 FOAM)	82.30 - 95.63	0.6000	0.6000
T7	7	LDF5-50A (7/8 FOAM)	82.30 - 95.63	0.6000	0.6000
T7	8	LDF4-50A (1/2 FOAM)	82.30 - 95.63	0.6000	0.6000
T7	9	EW63	82.30 - 95.63	0.6000	0.6000
T7	10	EW90	82.30 - 95.63	0.6000	0.6000
T7	12	EW63	82.30 - 95.63	0.6000	0.6000
T7	14	LDF5-50A (7/8 FOAM)	82.30 - 95.63	0.6000	0.6000
T7	16	EW63	82.30 - 95.63	0.6000	0.6000
T7	17	LDF5-50A (7/8 FOAM)	82.30 - 95.63	0.6000	0.6000
T7	19	LDF5-50A (7/8 FOAM)	82.30 - 95.63	0.6000	0.6000
T7	21	LDF2-50A (3/8 FOAM)	82.30 - 95.63	0.6000	0.6000
T7	22	EW63	82.30 - 95.63	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T7	23	3/8	93.30 - 95.63	0.6000	0.6000
T7	24	3/8	82.30 - 93.30	0.6000	0.6000
T7	25	LDF5-50A (7/8 FOAM)	87.30 - 89.30	0.6000	0.6000
T7	26	LDF5-50A (7/8 FOAM)	82.30 - 87.30	0.6000	0.6000
T7	28	7/8	82.30 - 95.63	0.6000	0.6000
T7	29	1 5/8	82.30 - 95.63	0.6000	0.6000
T7	30	1/2	82.30 - 95.63	0.6000	0.6000
T8	1	LDF12-50A (2-1/4 FOAM)	75.63 - 82.30	0.6000	0.6000
T8	2	LDF4.5-50 (5/8 FOAM)	75.63 - 82.30	0.6000	0.6000
T8	3	LDF7-50A (1-5/8 FOAM)	75.63 - 82.30	0.6000	0.6000
T8	4	LDF7-50A (1-5/8 FOAM)	75.63 - 82.30	0.6000	0.6000
T8	5	LDF7-50A (1-5/8 FOAM)	75.63 - 82.30	0.6000	0.6000
T8	6	LDF5-50A (7/8 FOAM)	75.63 - 82.30	0.6000	0.6000
T8	7	LDF5-50A (7/8 FOAM)	75.63 - 82.30	0.6000	0.6000
T8	8	LDF4-50A (1/2 FOAM)	75.63 - 82.30	0.6000	0.6000
T8	9	EW63	75.63 - 82.30	0.6000	0.6000
T8	10	EW90	75.63 - 82.30	0.6000	0.6000
T8	12	EW63	75.63 - 82.30	0.6000	0.6000
T8	14	LDF5-50A (7/8 FOAM)	75.63 - 82.30	0.6000	0.6000
T8	16	EW63	75.63 - 82.30	0.6000	0.6000
T8	17	LDF5-50A (7/8 FOAM)	75.63 - 82.30	0.6000	0.6000
T8	19	LDF5-50A (7/8 FOAM)	75.63 - 82.30	0.6000	0.6000
T8	21	LDF2-50A (3/8 FOAM)	75.63 - 82.30	0.6000	0.6000
T8	22	EW63	75.63 - 82.30	0.6000	0.6000
T8	24	3/8	75.63 - 82.30	0.6000	0.6000
T8	26	LDF5-50A (7/8 FOAM)	75.63 - 82.30	0.6000	0.6000
T8	28	7/8	75.63 - 82.30	0.6000	0.6000
T8	29	1 5/8	75.63 - 82.30	0.6000	0.6000
T8	30	1/2	75.63 - 82.30	0.6000	0.6000
T9	1	LDF12-50A (2-1/4 FOAM)	62.30 - 75.63	0.6000	0.6000
T9	2	LDF4.5-50 (5/8 FOAM)	62.30 - 75.63	0.6000	0.6000
T9	3	LDF7-50A (1-5/8 FOAM)	62.30 - 75.63	0.6000	0.6000
T9	4	LDF7-50A (1-5/8 FOAM)	62.30 - 75.63	0.6000	0.6000
T9	5	LDF7-50A (1-5/8 FOAM)	62.30 - 75.63	0.6000	0.6000
T9	6	LDF5-50A (7/8 FOAM)	62.30 - 75.63	0.6000	0.6000
T9	7	LDF5-50A (7/8 FOAM)	62.30 - 75.63	0.6000	0.6000
T9	8	LDF4-50A (1/2 FOAM)	62.30 - 75.63	0.6000	0.6000
T9	9	EW63	62.30 - 75.63	0.6000	0.6000
T9	10	EW90	62.30 - 75.63	0.6000	0.6000
T9	12	EW63	62.30 - 75.63	0.6000	0.6000
T9	14	LDF5-50A (7/8 FOAM)	62.30 - 75.63	0.6000	0.6000
T9	16	EW63	62.30 - 75.63	0.6000	0.6000
T9	17	LDF5-50A (7/8 FOAM)	62.30 - 75.63	0.6000	0.6000
T9	19	LDF5-50A (7/8 FOAM)	62.30 - 75.63	0.6000	0.6000
T9	21	LDF2-50A (3/8 FOAM)	62.30 - 75.63	0.6000	0.6000
T9	22	EW63	62.30 - 75.63	0.6000	0.6000
T9	24	3/8	62.30 - 75.63	0.6000	0.6000
T9	26	LDF5-50A (7/8 FOAM)	62.30 - 75.63	0.6000	0.6000
T9	27	Cat5e	62.30 - 68.30	0.6000	0.6000
T9	28	7/8	62.30 - 75.63	0.6000	0.6000
T9	29	1 5/8	62.30 - 75.63	0.6000	0.6000
T9	30	1/2	62.30 - 75.63	0.6000	0.6000
T10	1	LDF12-50A (2-1/4 FOAM)	55.63 - 62.30	0.6000	0.6000
T10	2	LDF4.5-50 (5/8 FOAM)	55.63 - 62.30	0.6000	0.6000
T10	3	LDF7-50A (1-5/8 FOAM)	55.63 - 62.30	0.6000	0.6000
T10	4	LDF7-50A (1-5/8 FOAM)	55.63 - 62.30	0.6000	0.6000
T10	5	LDF7-50A (1-5/8 FOAM)	55.63 - 62.30	0.6000	0.6000
T10	6	LDF5-50A (7/8 FOAM)	55.63 - 62.30	0.6000	0.6000
T10	7	LDF5-50A (7/8 FOAM)	55.63 - 62.30	0.6000	0.6000
T10	8	LDF4-50A (1/2 FOAM)	55.63 - 62.30	0.6000	0.6000
T10	9	EW63	55.63 - 62.30	0.6000	0.6000
T10	10	EW90	55.63 - 62.30	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T10	12	EW63	55.63 - 62.30	0.6000	0.6000
T10	14	LDF5-50A (7/8 FOAM)	55.63 - 62.30	0.6000	0.6000
T10	16	EW63	55.63 - 62.30	0.6000	0.6000
T10	17	LDF5-50A (7/8 FOAM)	55.63 - 62.30	0.6000	0.6000
T10	19	LDF5-50A (7/8 FOAM)	55.63 - 62.30	0.6000	0.6000
T10	21	LDF2-50A (3/8 FOAM)	55.63 - 62.30	0.6000	0.6000
T10	22	EW63	55.63 - 62.30	0.6000	0.6000
T10	24	3/8	55.63 - 62.30	0.6000	0.6000
T10	26	LDF5-50A (7/8 FOAM)	55.63 - 62.30	0.6000	0.6000
T10	27	Cat5e	55.63 - 62.30	0.6000	0.6000
T10	28	7/8	55.63 - 62.30	0.6000	0.6000
T10	29	1 5/8	55.63 - 62.30	0.6000	0.6000
T10	30	1/2	55.63 - 62.30	0.6000	0.6000
T11	1	LDF12-50A (2-1/4 FOAM)	42.30 - 55.63	0.6000	0.6000
T11	2	LDF4.5-50 (5/8 FOAM)	42.30 - 55.63	0.6000	0.6000
T11	3	LDF7-50A (1-5/8 FOAM)	42.30 - 55.63	0.6000	0.6000
T11	4	LDF7-50A (1-5/8 FOAM)	42.30 - 55.63	0.6000	0.6000
T11	5	LDF7-50A (1-5/8 FOAM)	42.30 - 55.63	0.6000	0.6000
T11	6	LDF5-50A (7/8 FOAM)	42.30 - 55.63	0.6000	0.6000
T11	7	LDF5-50A (7/8 FOAM)	42.30 - 55.63	0.6000	0.6000
T11	8	LDF4-50A (1/2 FOAM)	42.30 - 55.63	0.6000	0.6000
T11	9	EW63	42.30 - 55.63	0.6000	0.6000
T11	10	EW90	42.30 - 55.63	0.6000	0.6000
T11	12	EW63	42.30 - 55.63	0.6000	0.6000
T11	14	LDF5-50A (7/8 FOAM)	42.30 - 55.63	0.6000	0.6000
T11	16	EW63	42.30 - 55.63	0.6000	0.6000
T11	17	LDF5-50A (7/8 FOAM)	42.30 - 55.63	0.6000	0.6000
T11	19	LDF5-50A (7/8 FOAM)	42.30 - 55.63	0.6000	0.6000
T11	21	LDF2-50A (3/8 FOAM)	42.30 - 55.63	0.6000	0.6000
T11	22	EW63	42.30 - 55.63	0.6000	0.6000
T11	24	3/8	42.30 - 55.63	0.6000	0.6000
T11	26	LDF5-50A (7/8 FOAM)	42.30 - 55.63	0.6000	0.6000
T11	27	Cat5e	42.30 - 55.63	0.6000	0.6000
T11	28	7/8	42.30 - 55.63	0.6000	0.6000
T11	29	1 5/8	42.30 - 55.63	0.6000	0.6000
T11	30	1/2	42.30 - 55.63	0.6000	0.6000
T12	1	LDF12-50A (2-1/4 FOAM)	35.63 - 42.30	0.6000	0.6000
T12	2	LDF4.5-50 (5/8 FOAM)	35.63 - 42.30	0.6000	0.6000
T12	3	LDF7-50A (1-5/8 FOAM)	35.63 - 42.30	0.6000	0.6000
T12	4	LDF7-50A (1-5/8 FOAM)	35.63 - 42.30	0.6000	0.6000
T12	5	LDF7-50A (1-5/8 FOAM)	35.63 - 42.30	0.6000	0.6000
T12	6	LDF5-50A (7/8 FOAM)	35.63 - 42.30	0.6000	0.6000
T12	7	LDF5-50A (7/8 FOAM)	35.63 - 42.30	0.6000	0.6000
T12	8	LDF4-50A (1/2 FOAM)	35.63 - 42.30	0.6000	0.6000
T12	9	EW63	35.63 - 42.30	0.6000	0.6000
T12	10	EW90	35.63 - 42.30	0.6000	0.6000
T12	12	EW63	35.63 - 42.30	0.6000	0.6000
T12	14	LDF5-50A (7/8 FOAM)	35.63 - 42.30	0.6000	0.6000
T12	16	EW63	35.63 - 42.30	0.6000	0.6000
T12	17	LDF5-50A (7/8 FOAM)	35.63 - 42.30	0.6000	0.6000
T12	19	LDF5-50A (7/8 FOAM)	35.63 - 42.30	0.6000	0.6000
T12	21	LDF2-50A (3/8 FOAM)	35.63 - 42.30	0.6000	0.6000
T12	22	EW63	35.63 - 42.30	0.6000	0.6000
T12	24	3/8	35.63 - 42.30	0.6000	0.6000
T12	26	LDF5-50A (7/8 FOAM)	35.63 - 42.30	0.6000	0.6000
T12	27	Cat5e	35.63 - 42.30	0.6000	0.6000
T12	28	7/8	35.63 - 42.30	0.6000	0.6000
T12	29	1 5/8	35.63 - 42.30	0.6000	0.6000
T12	30	1/2	35.63 - 42.30	0.6000	0.6000
T13	1	LDF12-50A (2-1/4 FOAM)	22.30 - 35.63	0.6000	0.6000
T13	2	LDF4.5-50 (5/8 FOAM)	22.30 - 35.63	0.6000	0.6000
T13	3	LDF7-50A (1-5/8 FOAM)	22.30 - 35.63	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T13	4	LDF7-50A (1-5/8 FOAM)	22.30 - 35.63	0.6000	0.6000
T13	5	LDF7-50A (1-5/8 FOAM)	22.30 - 35.63	0.6000	0.6000
T13	6	LDF5-50A (7/8 FOAM)	22.30 - 35.63	0.6000	0.6000
T13	7	LDF5-50A (7/8 FOAM)	22.30 - 35.63	0.6000	0.6000
T13	8	LDF4-50A (1/2 FOAM)	22.30 - 35.63	0.6000	0.6000
T13	9	EW63	22.30 - 35.63	0.6000	0.6000
T13	10	EW90	22.30 - 35.63	0.6000	0.6000
T13	12	EW63	22.30 - 35.63	0.6000	0.6000
T13	14	LDF5-50A (7/8 FOAM)	22.30 - 35.63	0.6000	0.6000
T13	16	EW63	22.30 - 35.63	0.6000	0.6000
T13	17	LDF5-50A (7/8 FOAM)	22.30 - 35.63	0.6000	0.6000
T13	19	LDF5-50A (7/8 FOAM)	22.30 - 35.63	0.6000	0.6000
T13	21	LDF2-50A (3/8 FOAM)	22.30 - 35.63	0.6000	0.6000
T13	22	EW63	22.30 - 35.63	0.6000	0.6000
T13	24	3/8	22.30 - 35.63	0.6000	0.6000
T13	26	LDF5-50A (7/8 FOAM)	22.30 - 35.63	0.6000	0.6000
T13	27	Cat5e	22.30 - 35.63	0.6000	0.6000
T13	28	7/8	22.30 - 35.63	0.6000	0.6000
T13	29	1 5/8	22.30 - 35.63	0.6000	0.6000
T13	30	1/2	22.30 - 35.63	0.6000	0.6000
T14	1	LDF12-50A (2-1/4 FOAM)	15.63 - 22.30	0.6000	0.6000
T14	2	LDF4.5-50 (5/8 FOAM)	15.63 - 22.30	0.6000	0.6000
T14	3	LDF7-50A (1-5/8 FOAM)	15.63 - 22.30	0.6000	0.6000
T14	4	LDF7-50A (1-5/8 FOAM)	15.63 - 22.30	0.6000	0.6000
T14	5	LDF7-50A (1-5/8 FOAM)	15.63 - 22.30	0.6000	0.6000
T14	6	LDF5-50A (7/8 FOAM)	15.63 - 22.30	0.6000	0.6000
T14	7	LDF5-50A (7/8 FOAM)	15.63 - 22.30	0.6000	0.6000
T14	8	LDF4-50A (1/2 FOAM)	15.63 - 22.30	0.6000	0.6000
T14	9	EW63	15.63 - 22.30	0.6000	0.6000
T14	10	EW90	15.63 - 22.30	0.6000	0.6000
T14	12	EW63	15.63 - 22.30	0.6000	0.6000
T14	14	LDF5-50A (7/8 FOAM)	15.63 - 22.30	0.6000	0.6000
T14	16	EW63	15.63 - 22.30	0.6000	0.6000
T14	17	LDF5-50A (7/8 FOAM)	15.63 - 22.30	0.6000	0.6000
T14	19	LDF5-50A (7/8 FOAM)	15.63 - 22.30	0.6000	0.6000
T14	21	LDF2-50A (3/8 FOAM)	15.63 - 22.30	0.6000	0.6000
T14	22	EW63	15.63 - 22.30	0.6000	0.6000
T14	24	3/8	15.63 - 22.30	0.6000	0.6000
T14	26	LDF5-50A (7/8 FOAM)	15.63 - 22.30	0.6000	0.6000
T14	27	Cat5e	15.63 - 22.30	0.6000	0.6000
T14	28	7/8	15.63 - 22.30	0.6000	0.6000
T14	29	1 5/8	15.63 - 22.30	0.6000	0.6000
T14	30	1/2	15.63 - 22.30	0.6000	0.6000
T15	1	LDF12-50A (2-1/4 FOAM)	8.30 - 15.63	0.6000	0.6000
T15	2	LDF4.5-50 (5/8 FOAM)	8.30 - 15.63	0.6000	0.6000
T15	3	LDF7-50A (1-5/8 FOAM)	8.30 - 15.63	0.6000	0.6000
T15	4	LDF7-50A (1-5/8 FOAM)	8.30 - 15.63	0.6000	0.6000
T15	5	LDF7-50A (1-5/8 FOAM)	8.30 - 15.63	0.6000	0.6000
T15	6	LDF5-50A (7/8 FOAM)	8.30 - 15.63	0.6000	0.6000
T15	7	LDF5-50A (7/8 FOAM)	8.30 - 15.63	0.6000	0.6000
T15	8	LDF4-50A (1/2 FOAM)	8.30 - 15.63	0.6000	0.6000
T15	9	EW63	8.30 - 15.63	0.6000	0.6000
T15	10	EW90	8.30 - 15.63	0.6000	0.6000
T15	12	EW63	8.30 - 15.63	0.6000	0.6000
T15	14	LDF5-50A (7/8 FOAM)	8.30 - 15.63	0.6000	0.6000
T15	16	EW63	8.30 - 15.63	0.6000	0.6000
T15	17	LDF5-50A (7/8 FOAM)	8.30 - 15.63	0.6000	0.6000
T15	19	LDF5-50A (7/8 FOAM)	8.30 - 15.63	0.6000	0.6000
T15	21	LDF2-50A (3/8 FOAM)	8.30 - 15.63	0.6000	0.6000
T15	22	EW63	8.30 - 15.63	0.6000	0.6000
T15	24	3/8	8.30 - 15.63	0.6000	0.6000
T15	26	LDF5-50A (7/8 FOAM)	8.30 - 15.63	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T15	27	Cat5e	8.30 - 15.63	0.6000	0.6000
T15	28	7/8	8.30 - 15.63	0.6000	0.6000
T15	29	1 5/8	8.30 - 15.63	0.6000	0.6000
T15	30	1/2	8.30 - 15.63	0.6000	0.6000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
AIR6449	A	From Leg	4.00	0.0000	140.00	No Ice	5.65	2.42	0.10
(T-Mobile)			-4.00			1/2" Ice	5.96	2.64	0.14
			0.00			1" Ice	6.26	2.87	0.18
						2" Ice	6.90	3.36	0.28
APXVAALL24-43	A	From Leg	0.00	0.0000	140.00	No Ice	20.24	8.89	0.15
(T-Mobile)			0.00			1/2" Ice	20.89	9.49	0.27
			0.00			1" Ice	21.54	10.09	0.39
						2" Ice	22.87	11.33	0.66
APX16DWV-16DWVS-E-A20	A	From Leg	4.00	0.0000	140.00	No Ice	6.46	2.15	0.04
			4.00			1/2" Ice	6.83	2.49	0.07
(T-Mobile)			0.00			1" Ice	7.21	2.84	0.11
						2" Ice	8.00	3.55	0.20
AIR6449	B	From Leg	4.00	0.0000	140.00	No Ice	5.65	2.42	0.10
(T-Mobile)			-4.00			1/2" Ice	5.96	2.64	0.14
			0.00			1" Ice	6.26	2.87	0.18
						2" Ice	6.90	3.36	0.28
APXVAALL24-43	B	From Leg	0.00	0.0000	140.00	No Ice	20.24	8.89	0.15
(T-Mobile)			0.00			1/2" Ice	20.89	9.49	0.27
			0.00			1" Ice	21.54	10.09	0.39
						2" Ice	22.87	11.33	0.66
APX16DWV-16DWVS-E-A20	B	From Leg	4.00	0.0000	140.00	No Ice	6.46	2.15	0.04
			4.00			1/2" Ice	6.83	2.49	0.07
(T-Mobile)			0.00			1" Ice	7.21	2.84	0.11
						2" Ice	8.00	3.55	0.20
AIR6449	C	From Leg	4.00	0.0000	140.00	No Ice	5.65	2.42	0.10
(T-Mobile)			-4.00			1/2" Ice	5.96	2.64	0.14
			0.00			1" Ice	6.26	2.87	0.18
						2" Ice	6.90	3.36	0.28
APXVAALL24-43	C	From Leg	0.00	0.0000	140.00	No Ice	20.24	8.89	0.15
(T-Mobile)			0.00			1/2" Ice	20.89	9.49	0.27
			0.00			1" Ice	21.54	10.09	0.39
						2" Ice	22.87	11.33	0.66
APX16DWV-16DWVS-E-A20	C	From Leg	4.00	0.0000	140.00	No Ice	6.46	2.15	0.04
			4.00			1/2" Ice	6.83	2.49	0.07
(T-Mobile)			0.00			1" Ice	7.21	2.84	0.11
						2" Ice	8.00	3.55	0.20
4449 B12,B71	A	From Leg	4.00	0.0000	140.00	No Ice	1.65	1.16	0.08
(T-Mobile)			0.00			1/2" Ice	1.81	1.29	0.10
			0.00			1" Ice	1.98	1.44	0.11
						2" Ice	2.34	1.75	0.16
4449 B12,B71	B	From Leg	4.00	0.0000	140.00	No Ice	1.65	1.16	0.08

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(T-Mobile)			0.00			1/2" Ice	1.81	1.29	0.10
			0.00			1" Ice	1.98	1.44	0.11
						2" Ice	2.34	1.75	0.16
4449 B12,B71	C	From Leg	4.00	0.0000	140.00	No Ice	1.65	1.16	0.08
(T-Mobile)			0.00			1/2" Ice	1.81	1.29	0.10
			0.00			1" Ice	1.98	1.44	0.11
						2" Ice	2.34	1.75	0.16
4460 B25+B66	A	From Leg	4.00	0.0000	140.00	No Ice	2.56	1.98	0.11
(T-Mobile)			0.00			1/2" Ice	2.76	2.16	0.13
			0.00			1" Ice	2.97	2.34	0.16
						2" Ice	3.41	2.74	0.23
4460 B25+B66	B	From Leg	4.00	0.0000	140.00	No Ice	2.56	1.98	0.11
(T-Mobile)			0.00			1/2" Ice	2.76	2.16	0.13
			0.00			1" Ice	2.97	2.34	0.16
						2" Ice	3.41	2.74	0.23
4460 B25+B66	C	From Leg	4.00	0.0000	140.00	No Ice	2.56	1.98	0.11
(T-Mobile)			0.00			1/2" Ice	2.76	2.16	0.13
			0.00			1" Ice	2.97	2.34	0.16
						2" Ice	3.41	2.74	0.23
SitePro VFA10-HD	A	From Leg	2.00	0.0000	140.00	No Ice	17.00	17.00	0.60
(T-Mobile)			0.00			1/2" Ice	21.00	21.00	0.75
			0.00			1" Ice	25.00	25.00	0.90
						2" Ice	33.00	33.00	1.20
SitePro VFA10-HD	B	From Leg	2.00	0.0000	140.00	No Ice	17.00	17.00	0.60
(T-Mobile)			0.00			1/2" Ice	21.00	21.00	0.75
			0.00			1" Ice	25.00	25.00	0.90
						2" Ice	33.00	33.00	1.20
SitePro VFA10-HD	C	From Leg	2.00	0.0000	140.00	No Ice	17.00	17.00	0.60
(T-Mobile)			0.00			1/2" Ice	21.00	21.00	0.75
			0.00			1" Ice	25.00	25.00	0.90
						2" Ice	33.00	33.00	1.20
80010966	A	From Leg	4.00	0.0000	163.30	No Ice	17.36	7.50	0.13
(AT&T)			-6.00			1/2" Ice	17.99	8.09	0.22
			0.00			1" Ice	18.63	8.69	0.32
						2" Ice	19.92	9.90	0.54
7770.00	A	From Leg	4.00	0.0000	163.30	No Ice	5.51	2.93	0.04
(AT&T)			-2.00			1/2" Ice	5.87	3.27	0.07
			0.00			1" Ice	6.23	3.63	0.11
						2" Ice	6.99	4.35	0.20
OPA-65R-LCUU-H8	A	From Leg	4.00	0.0000	163.30	No Ice	12.98	7.52	0.09
(AT&T)			2.00			1/2" Ice	13.56	8.09	0.16
			0.00			1" Ice	14.15	8.67	0.24
						2" Ice	15.35	9.85	0.43
80010966	A	From Leg	4.00	0.0000	163.30	No Ice	17.36	7.50	0.13
(AT&T)			6.00			1/2" Ice	17.99	8.09	0.22
			0.00			1" Ice	18.63	8.69	0.32
						2" Ice	19.92	9.90	0.54
80010965	B	From Leg	4.00	0.0000	163.30	No Ice	13.81	5.83	0.11
(AT&T)			-6.00			1/2" Ice	14.35	6.32	0.19
			0.00			1" Ice	14.89	6.82	0.27
						2" Ice	15.99	7.84	0.46
7770.00	B	From Leg	4.00	0.0000	163.30	No Ice	5.51	2.93	0.04
(AT&T)			-2.00			1/2" Ice	5.87	3.27	0.07
			0.00			1" Ice	6.23	3.63	0.11
						2" Ice	6.99	4.35	0.20
OPA-65R-LCUU-H6	B	From Leg	4.00	0.0000	163.30	No Ice	9.66	5.52	0.07
(AT&T)			2.00			1/2" Ice	10.13	5.97	0.13

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00			1" Ice	10.61	6.43	0.20
						2" Ice	11.58	7.38	0.35
80010965	B	From Leg	4.00	0.0000	163.30	No Ice	13.81	5.83	0.11
(AT&T)			6.00			1/2" Ice	14.35	6.32	0.19
			0.00			1" Ice	14.89	6.82	0.27
						2" Ice	15.99	7.84	0.46
80010966	C	From Leg	4.00	0.0000	163.30	No Ice	17.36	7.50	0.13
(AT&T)			-6.00			1/2" Ice	17.99	8.09	0.22
			0.00			1" Ice	18.63	8.69	0.32
						2" Ice	19.92	9.90	0.54
7770.00	C	From Leg	4.00	0.0000	163.30	No Ice	5.51	2.93	0.04
(AT&T)			-2.00			1/2" Ice	5.87	3.27	0.07
			0.00			1" Ice	6.23	3.63	0.11
						2" Ice	6.99	4.35	0.20
OPA-65R-LCUU-H8	C	From Leg	4.00	0.0000	163.30	No Ice	12.98	7.52	0.09
(AT&T)			2.00			1/2" Ice	13.56	8.09	0.16
			0.00			1" Ice	14.15	8.67	0.24
						2" Ice	15.35	9.85	0.43
80010966	C	From Leg	4.00	0.0000	163.30	No Ice	17.36	7.50	0.13
(AT&T)			6.00			1/2" Ice	17.99	8.09	0.22
			0.00			1" Ice	18.63	8.69	0.32
						2" Ice	19.92	9.90	0.54
TT08-19DB111-001 TMA	A	From Leg	4.00	0.0000	163.30	No Ice	0.79	0.64	0.02
(AT&T)			5.00			1/2" Ice	0.91	0.75	0.03
			0.00			1" Ice	1.04	0.87	0.04
						2" Ice	1.32	1.13	0.06
TT08-19DB111-001 TMA	B	From Leg	4.00	0.0000	163.30	No Ice	0.79	0.64	0.02
(AT&T)			5.00			1/2" Ice	0.91	0.75	0.03
			0.00			1" Ice	1.04	0.87	0.04
						2" Ice	1.32	1.13	0.06
TT08-19DB111-001 TMA	C	From Leg	4.00	0.0000	163.30	No Ice	0.79	0.64	0.02
(AT&T)			5.00			1/2" Ice	0.91	0.75	0.03
			0.00			1" Ice	1.04	0.87	0.04
						2" Ice	1.32	1.13	0.06
DC6-48-60-18-8F Surge	A	From Face	0.50	0.0000	163.30	No Ice	1.91	1.91	0.02
Arrestor			0.50			1/2" Ice	2.10	2.10	0.04
(AT&T)			0.00			1" Ice	2.29	2.29	0.06
						2" Ice	2.71	2.71	0.12
DC6-48-60-18-8F Surge	B	From Face	0.50	0.0000	163.30	No Ice	1.91	1.91	0.02
Arrestor			0.50			1/2" Ice	2.10	2.10	0.04
(AT&T)			0.00			1" Ice	2.29	2.29	0.06
						2" Ice	2.71	2.71	0.12
DC6-48-60-18-8F Surge	C	From Face	0.50	0.0000	163.30	No Ice	1.91	1.91	0.02
Arrestor			0.50			1/2" Ice	2.10	2.10	0.04
(AT&T)			0.00			1" Ice	2.29	2.29	0.06
						2" Ice	2.71	2.71	0.12
4478 B14	A	From Face	4.00	0.0000	163.30	No Ice	1.84	1.06	0.06
(AT&T)			-2.00			1/2" Ice	2.01	1.20	0.08
			0.00			1" Ice	2.19	1.34	0.09
						2" Ice	2.57	1.66	0.14
4478 B14	B	From Face	4.00	0.0000	163.30	No Ice	1.84	1.06	0.06
(AT&T)			-2.00			1/2" Ice	2.01	1.20	0.08
			0.00			1" Ice	2.19	1.34	0.09
						2" Ice	2.57	1.66	0.14
4478 B14	C	From Face	4.00	0.0000	163.30	No Ice	1.84	1.06	0.06
(AT&T)			-2.00			1/2" Ice	2.01	1.20	0.08
			0.00			1" Ice	2.19	1.34	0.09

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						2" Ice	2.57	1.66	0.14
4449 B5/B12	A	From Face	4.00	0.0000	163.30	No Ice	1.97	1.41	0.07
(AT&T)			-2.00			1/2" Ice	2.14	1.56	0.09
			0.00			1" Ice	2.33	1.73	0.11
						2" Ice	2.72	2.07	0.16
4449 B5/B12	B	From Face	4.00	0.0000	163.30	No Ice	1.97	1.41	0.07
(AT&T)			-2.00			1/2" Ice	2.14	1.56	0.09
			0.00			1" Ice	2.33	1.73	0.11
						2" Ice	2.72	2.07	0.16
4449 B5/B12	C	From Face	4.00	0.0000	163.30	No Ice	1.97	1.41	0.07
(AT&T)			-2.00			1/2" Ice	2.14	1.56	0.09
			0.00			1" Ice	2.33	1.73	0.11
						2" Ice	2.72	2.07	0.16
8843 B2/B66A	A	From Face	4.00	0.0000	163.30	No Ice	1.64	1.35	0.07
(AT&T)			-2.00			1/2" Ice	1.80	1.50	0.09
			0.00			1" Ice	1.97	1.65	0.11
						2" Ice	2.32	1.99	0.16
8843 B2/B66A	B	From Face	4.00	0.0000	163.30	No Ice	1.64	1.35	0.07
(AT&T)			-2.00			1/2" Ice	1.80	1.50	0.09
			0.00			1" Ice	1.97	1.65	0.11
						2" Ice	2.32	1.99	0.16
8843 B2/B66A	C	From Face	4.00	0.0000	163.30	No Ice	1.64	1.35	0.07
(AT&T)			-2.00			1/2" Ice	1.80	1.50	0.09
			0.00			1" Ice	1.97	1.65	0.11
						2" Ice	2.32	1.99	0.16
RRUS-32	A	From Face	4.00	0.0000	163.30	No Ice	3.31	2.42	0.08
(AT&T)			-2.00			1/2" Ice	3.56	2.64	0.10
			0.00			1" Ice	3.81	2.86	0.14
						2" Ice	4.33	3.32	0.21
RRUS-32	B	From Face	4.00	0.0000	163.30	No Ice	3.31	2.42	0.08
(AT&T)			-2.00			1/2" Ice	3.56	2.64	0.10
			0.00			1" Ice	3.81	2.86	0.14
						2" Ice	4.33	3.32	0.21
RRUS-32	C	From Face	4.00	0.0000	163.30	No Ice	3.31	2.42	0.08
(AT&T)			-2.00			1/2" Ice	3.56	2.64	0.10
			0.00			1" Ice	3.81	2.86	0.14
						2" Ice	4.33	3.32	0.21
RRUS-E2	A	From Face	4.00	0.0000	163.30	No Ice	3.15	1.29	0.06
(AT&T)			-2.00			1/2" Ice	3.36	1.44	0.08
			0.00			1" Ice	3.59	1.60	0.11
						2" Ice	4.07	1.95	0.17
RRUS-E2	B	From Face	4.00	0.0000	163.30	No Ice	3.15	1.29	0.06
(AT&T)			-2.00			1/2" Ice	3.36	1.44	0.08
			0.00			1" Ice	3.59	1.60	0.11
						2" Ice	4.07	1.95	0.17
RRUS-E2	C	From Face	4.00	0.0000	163.30	No Ice	3.15	1.29	0.06
(AT&T)			-2.00			1/2" Ice	3.36	1.44	0.08
			0.00			1" Ice	3.59	1.60	0.11
						2" Ice	4.07	1.95	0.17
Pirod 12' T-Frame Sector	A	From Leg	2.00	0.0000	163.30	No Ice	13.60	13.60	0.47
Mount (1)			0.00			1/2" Ice	18.40	18.40	0.60
(AT&T)			0.00			1" Ice	23.20	23.20	0.73
						2" Ice	32.80	32.80	1.00
Pirod 12' T-Frame Sector	B	From Leg	2.00	0.0000	163.30	No Ice	13.60	13.60	0.47
Mount (1)			0.00			1/2" Ice	18.40	18.40	0.60
(AT&T)			0.00			1" Ice	23.20	23.20	0.73
						2" Ice	32.80	32.80	1.00

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Pirod 12' T-Frame Sector Mount (1) (AT&T)	C	From Leg	2.00 0.00 0.00	0.0000	163.30	No Ice 1/2" Ice 1" Ice 2" Ice	13.60 18.40 23.20 32.80	13.60 18.40 23.20 32.80	0.47 0.60 0.73 1.00
LNX-6514DS (Verizon)	A	From Leg	4.00 -6.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.17 8.63 9.10 10.05	5.41 5.86 6.33 7.28	0.04 0.09 0.15 0.28
NHH-65B-R2B (Verizon - Proposed)	A	From Leg	4.00 1.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice 2" Ice	11.19 11.69 12.20 13.25	8.69 9.17 9.66 10.66	0.07 0.15 0.24 0.43
NHH-65B-R2B (Verizon - Proposed)	A	From Leg	4.00 3.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice 2" Ice	11.19 11.69 12.20 13.25	8.69 9.17 9.66 10.66	0.07 0.15 0.24 0.43
MT6407-77A (Verizon - Proposed)	A	From Leg	4.00 6.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.71 5.00 5.29 5.91	1.84 2.06 2.29 2.77	0.00 0.03 0.06 0.14
LNX-6514DS (Verizon)	B	From Leg	4.00 -6.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.17 8.63 9.10 10.05	5.41 5.86 6.33 7.28	0.04 0.09 0.15 0.28
NHH-65B-R2B (Verizon - Proposed)	B	From Leg	4.00 1.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice 2" Ice	11.19 11.69 12.20 13.25	8.69 9.17 9.66 10.66	0.07 0.15 0.24 0.43
NHH-65B-R2B (Verizon - Proposed)	B	From Leg	4.00 3.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice 2" Ice	11.19 11.69 12.20 13.25	8.69 9.17 9.66 10.66	0.07 0.15 0.24 0.43
MT6407-77A (Verizon - Proposed)	B	From Leg	4.00 6.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.71 5.00 5.29 5.91	1.84 2.06 2.29 2.77	0.00 0.03 0.06 0.14
LNX-6514DS (Verizon)	C	From Leg	4.00 -6.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.17 8.63 9.10 10.05	5.41 5.86 6.33 7.28	0.04 0.09 0.15 0.28
NHH-65B-R2B (Verizon - Proposed)	C	From Leg	4.00 1.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice 2" Ice	11.19 11.69 12.20 13.25	8.69 9.17 9.66 10.66	0.07 0.15 0.24 0.43
NHH-65B-R2B (Verizon - Proposed)	C	From Leg	4.00 3.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice 2" Ice	11.19 11.69 12.20 13.25	8.69 9.17 9.66 10.66	0.07 0.15 0.24 0.43
MT6407-77A (Verizon - Proposed)	C	From Leg	4.00 6.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.71 5.00 5.29 5.91	1.84 2.06 2.29 2.77	0.00 0.03 0.06 0.14
B2/B66A RRH (Verizon - Proposed)	A	From Leg	4.00 -4.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.54 2.75 2.97 3.43	1.61 1.79 1.98 2.37	0.06 0.08 0.10 0.16
B2/B66A RRH	B	From Leg	4.00	0.0000	155.00	No Ice	2.54	1.61	0.06

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(Verizon - Proposed)			-4.00			1/2" Ice	2.75	1.79	0.08
			0.00			1" Ice	2.97	1.98	0.10
						2" Ice	3.43	2.37	0.16
B2/B66A RRH	C	From Leg	4.00	0.0000	155.00	No Ice	2.54	1.61	0.06
(Verizon - Proposed)			-4.00			1/2" Ice	2.75	1.79	0.08
			0.00			1" Ice	2.97	1.98	0.10
						2" Ice	3.43	2.37	0.16
B5/B13 RRH	A	From Leg	4.00	0.0000	155.00	No Ice	1.87	1.02	0.07
(Verizon - Proposed)			-4.00			1/2" Ice	2.03	1.15	0.09
			0.00			1" Ice	2.21	1.29	0.11
						2" Ice	2.59	1.59	0.15
B5/B13 RRH	B	From Leg	4.00	0.0000	155.00	No Ice	1.87	1.02	0.07
(Verizon - Proposed)			-4.00			1/2" Ice	2.03	1.15	0.09
			0.00			1" Ice	2.21	1.29	0.11
						2" Ice	2.59	1.59	0.15
B5/B13 RRH	C	From Leg	4.00	0.0000	155.00	No Ice	1.87	1.02	0.07
(Verizon - Proposed)			-4.00			1/2" Ice	2.03	1.15	0.09
			0.00			1" Ice	2.21	1.29	0.11
						2" Ice	2.59	1.59	0.15
DB-T1-6Z-8AB-0Z	A	From Leg	4.00	0.0000	155.00	No Ice	4.80	2.00	0.04
(Verizon)			0.00			1/2" Ice	5.07	2.19	0.08
			0.00			1" Ice	5.35	2.39	0.12
						2" Ice	5.93	2.81	0.21
Pirod 12' T-Frame Sector	A	From Leg	2.00	0.0000	155.00	No Ice	13.60	13.60	0.47
Mount (1)			0.00			1/2" Ice	18.40	18.40	0.60
(Verizon)			0.00			1" Ice	23.20	23.20	0.73
						2" Ice	32.80	32.80	1.00
Pirod 12' T-Frame Sector	B	From Leg	2.00	0.0000	155.00	No Ice	13.60	13.60	0.47
Mount (1)			0.00			1/2" Ice	18.40	18.40	0.60
(Verizon)			0.00			1" Ice	23.20	23.20	0.73
						2" Ice	32.80	32.80	1.00
Pirod 12' T-Frame Sector	C	From Leg	2.00	0.0000	155.00	No Ice	13.60	13.60	0.47
Mount (1)			0.00			1/2" Ice	18.40	18.40	0.60
(Verizon)			0.00			1" Ice	23.20	23.20	0.73
						2" Ice	32.80	32.80	1.00
Andrew TFL-M2-20	A	From Leg	2.00	0.0000	155.00	No Ice	9.00	9.00	0.06
(Verizon - Proposed)			0.00			1/2" Ice	11.50	11.50	0.10
			0.00			1" Ice	14.00	14.00	0.14
						2" Ice	19.00	19.00	0.22
Andrew TFL-M2-20	B	From Leg	2.00	0.0000	155.00	No Ice	9.00	9.00	0.06
(Verizon - Proposed)			0.00			1/2" Ice	11.50	11.50	0.10
			0.00			1" Ice	14.00	14.00	0.14
						2" Ice	19.00	19.00	0.22
Andrew TFL-M2-20	C	From Leg	2.00	0.0000	155.00	No Ice	9.00	9.00	0.06
(Verizon - Proposed)			0.00			1/2" Ice	11.50	11.50	0.10
			0.00			1" Ice	14.00	14.00	0.14
						2" Ice	19.00	19.00	0.22
13'x2" Pipe	A	From Leg	2.00	0.0000	155.00	No Ice	3.09	3.09	0.05
(Verizon - Proposed)			0.00			1/2" Ice	4.42	4.42	0.07
			0.00			1" Ice	5.76	5.76	0.10
						2" Ice	8.50	8.50	0.19
13'x2" Pipe	B	From Leg	2.00	0.0000	155.00	No Ice	3.09	3.09	0.05
(Verizon - Proposed)			0.00			1/2" Ice	4.42	4.42	0.07
			0.00			1" Ice	5.76	5.76	0.10
						2" Ice	8.50	8.50	0.19
13'x2" Pipe	C	From Leg	2.00	0.0000	155.00	No Ice	3.09	3.09	0.05
(Verizon - Proposed)			0.00			1/2" Ice	4.42	4.42	0.07

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00			1" Ice	5.76	5.76	0.10
						2" Ice	8.50	8.50	0.19
6'x4" Pipe Mount	A	From Leg	1.00	0.0000	187.30	No Ice	1.66	1.66	0.05
			0.00			1/2" Ice	2.46	2.46	0.07
			2.00			1" Ice	2.83	2.83	0.09
						2" Ice	3.61	3.61	0.15
Light Beacon	A	From Leg	0.00	0.0000	187.30	No Ice	0.60	0.25	0.05
			0.00			1/2" Ice	0.70	0.31	0.06
			5.00			1" Ice	0.81	0.39	0.06
						2" Ice	1.06	0.55	0.09
13'x2" Pipe	A	From Face	0.00	0.0000	173.30	No Ice	3.09	3.09	0.05
			4.00			1/2" Ice	4.42	4.42	0.07
			6.50			1" Ice	5.76	5.76	0.10
						2" Ice	8.50	8.50	0.19
13'x2" Pipe	A	From Face	0.00	0.0000	173.30	No Ice	3.09	3.09	0.05
			-4.00			1/2" Ice	4.42	4.42	0.07
			6.50			1" Ice	5.76	5.76	0.10
						2" Ice	8.50	8.50	0.19
CO-41A	A	From Face	0.00	0.0000	187.30	No Ice	2.27	2.27	0.01
			0.00			1/2" Ice	3.71	3.71	0.03
			4.00			1" Ice	5.16	5.16	0.06
						2" Ice	8.12	8.12	0.14
13'x2" Pipe	B	From Face	0.00	0.0000	173.30	No Ice	3.09	3.09	0.05
			4.00			1/2" Ice	4.42	4.42	0.07
			6.50			1" Ice	5.76	5.76	0.10
						2" Ice	8.50	8.50	0.19
13'x2" Pipe	B	From Face	0.00	0.0000	173.30	No Ice	3.09	3.09	0.05
			-4.00			1/2" Ice	4.42	4.42	0.07
			6.50			1" Ice	5.76	5.76	0.10
						2" Ice	8.50	8.50	0.19
DS9A09F36D-N	C	From Face	0.00	0.0000	187.30	No Ice	5.76	5.76	0.05
			0.00			1/2" Ice	7.72	7.72	0.09
			10.00			1" Ice	9.69	9.69	0.15
						2" Ice	13.68	13.68	0.29
Tower Top Amplifier	C	From Face	0.00	0.0000	187.30	No Ice	2.67	1.03	0.04
			0.00			1/2" Ice	2.87	1.17	0.06
			0.00			1" Ice	3.08	1.32	0.08
						2" Ice	3.53	1.64	0.13
13'x2" Pipe	C	From Face	0.00	0.0000	173.30	No Ice	3.09	3.09	0.05
			4.00			1/2" Ice	4.42	4.42	0.07
			6.50			1" Ice	5.76	5.76	0.10
						2" Ice	8.50	8.50	0.19
13'x2" Pipe	C	From Face	0.00	0.0000	173.30	No Ice	3.09	3.09	0.05
			-4.00			1/2" Ice	4.42	4.42	0.07
			6.50			1" Ice	5.76	5.76	0.10
						2" Ice	8.50	8.50	0.19
ANT450F6	C	From Face	0.00	0.0000	187.30	No Ice	1.86	1.86	0.02
			0.00			1/2" Ice	2.67	2.67	0.04
			2.00			1" Ice	3.30	3.30	0.05
						2" Ice	4.28	4.28	0.11
20' 8 Bay Di-Pole	A	From Face	0.00	0.0000	187.30	No Ice	4.00	4.00	0.06
			0.00			1/2" Ice	6.00	6.00	0.10
			8.00			1" Ice	8.00	8.00	0.14
						2" Ice	12.00	12.00	0.23
DB411-B	C	From Leg	0.00	0.0000	183.30	No Ice	1.50	1.50	0.03
			0.00			1/2" Ice	2.70	2.70	0.03
			-5.00			1" Ice	3.90	3.90	0.04

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						2" Ice	6.30	6.30	0.06
20' Horz. 4x4x1/4"	A	From Face	0.00	0.0000	184.30	No Ice	8.00	0.13	0.24
			4.00			1/2" Ice	9.36	0.18	0.31
			6.50			1" Ice	10.73	0.24	0.40
						2" Ice	13.48	0.37	0.63
20' Horz. 4x4x1/4"	B	From Face	0.00	0.0000	184.30	No Ice	8.00	0.13	0.24
			4.00			1/2" Ice	9.36	0.18	0.31
			6.50			1" Ice	10.73	0.24	0.40
						2" Ice	13.48	0.37	0.63
20' Horz. 4x4x1/4"	C	From Face	0.00	0.0000	184.30	No Ice	8.00	0.13	0.24
			4.00			1/2" Ice	9.36	0.18	0.31
			6.50			1" Ice	10.73	0.24	0.40
						2" Ice	13.48	0.37	0.63
22' Horz. 4x4x1/4	A	From Face	0.00	0.0000	173.30	No Ice	8.80	0.13	0.27
			4.00			1/2" Ice	10.29	0.18	0.35
			6.50			1" Ice	11.79	0.24	0.44
						2" Ice	14.81	0.37	0.69
22' Horz. 4x4x1/4	B	From Face	0.00	0.0000	173.30	No Ice	8.80	0.13	0.27
			4.00			1/2" Ice	10.29	0.18	0.35
			6.50			1" Ice	11.79	0.24	0.44
						2" Ice	14.81	0.37	0.69
22' Horz. 4x4x1/4	C	From Face	0.00	0.0000	173.30	No Ice	8.80	0.13	0.27
			4.00			1/2" Ice	10.29	0.18	0.35
			6.50			1" Ice	11.79	0.24	0.44
						2" Ice	14.81	0.37	0.69
6'x4" Pipe Mount	A	From Leg	1.00	0.0000	185.30	No Ice	1.66	1.66	0.05
			0.00			1/2" Ice	2.46	2.46	0.07
			0.00			1" Ice	2.83	2.83	0.09
						2" Ice	3.61	3.61	0.15
8' x 2" Horz. Pipe	A	From Leg	0.50	0.0000	185.30	No Ice	1.90	0.05	0.03
			4.00			1/2" Ice	2.45	0.08	0.05
			0.00			1" Ice	3.01	0.11	0.07
						2" Ice	4.15	0.21	0.14
6'x4" Pipe Mount	B	From Leg	1.00	0.0000	185.30	No Ice	1.66	1.66	0.05
			0.00			1/2" Ice	2.46	2.46	0.07
			0.00			1" Ice	2.83	2.83	0.09
						2" Ice	3.61	3.61	0.15
8' x 2" Horz. Pipe	B	From Leg	0.50	0.0000	185.30	No Ice	1.90	0.05	0.03
			4.00			1/2" Ice	2.45	0.08	0.05
			0.00			1" Ice	3.01	0.11	0.07
						2" Ice	4.15	0.21	0.14
6'x4" Pipe Mount	B	From Leg	1.00	0.0000	174.30	No Ice	1.66	1.66	0.05
			0.00			1/2" Ice	2.46	2.46	0.07
			0.00			1" Ice	2.83	2.83	0.09
						2" Ice	3.61	3.61	0.15
8' x 2" Horz. Pipe	B	From Leg	0.50	0.0000	174.30	No Ice	1.90	0.05	0.03
			4.00			1/2" Ice	2.45	0.08	0.05
			0.00			1" Ice	3.01	0.11	0.07
						2" Ice	4.15	0.21	0.14
6'x4" Pipe Mount	A	From Leg	1.00	0.0000	179.30	No Ice	1.66	1.66	0.05
			0.00			1/2" Ice	2.46	2.46	0.07
			0.00			1" Ice	2.83	2.83	0.09
						2" Ice	3.61	3.61	0.15
8' x 2" Horz. Pipe	A	From Leg	0.50	0.0000	179.30	No Ice	1.90	0.05	0.03
			4.00			1/2" Ice	2.45	0.08	0.05
			0.00			1" Ice	3.01	0.11	0.07
						2" Ice	4.15	0.21	0.14

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
8' x 2" Horz. Pipe	A	From Leg	0.50 0.00 0.00	0.0000	167.30	No Ice 1/2" Ice 1" Ice 2" Ice	1.90 2.45 3.01 4.15	0.05 0.08 0.11 0.21	0.03 0.05 0.07 0.14
6' Standoff Arm	A	From Leg	3.00 0.00 0.00	0.0000	167.30	No Ice 1/2" Ice 1" Ice 2" Ice	2.40 2.83 3.26 4.15	0.13 0.18 0.24 0.37	0.05 0.07 0.10 0.17
ANT150F6	A	From Leg	6.00 0.00 10.00	0.0000	167.30	No Ice 1/2" Ice 1" Ice 2" Ice	5.87 8.03 10.21 14.63	5.87 8.03 10.21 14.63	0.05 0.09 0.14 0.30
6'x2" Pipe Mount	C	From Leg	0.50 0.00 0.00	0.0000	170.30	No Ice 1/2" Ice 1" Ice 2" Ice	1.20 1.80 2.17 2.93	1.20 1.80 2.17 2.93	0.02 0.03 0.04 0.08
DS2C03F36D-D	C	From Leg	4.00 -6.00 9.30	0.0000	185.30	No Ice 1/2" Ice 1" Ice 2" Ice	7.30 9.77 12.25 17.27	7.30 9.77 12.25 17.27	0.08 0.13 0.20 0.38
DS7C09P36U-D	C	From Leg	4.00 6.00 7.00	0.0000	185.30	No Ice 1/2" Ice 1" Ice 2" Ice	4.28 5.73 7.21 10.21	4.28 5.73 7.21 10.21	0.08 0.11 0.15 0.25
DS7C09P36U-D	C	From Leg	4.00 6.00 -7.00	0.0000	185.30	No Ice 1/2" Ice 1" Ice 2" Ice	4.28 5.73 7.21 10.21	4.28 5.73 7.21 10.21	0.08 0.11 0.15 0.25
DS7C09P36U-D	C	From Leg	4.00 -6.00 -7.00	0.0000	185.30	No Ice 1/2" Ice 1" Ice 2" Ice	4.28 5.73 7.21 10.21	4.28 5.73 7.21 10.21	0.08 0.11 0.15 0.25
SitePro VFA10-HD	C	None		0.0000	185.30	No Ice 1/2" Ice 1" Ice 2" Ice	17.00 21.00 25.00 33.00	17.00 21.00 25.00 33.00	0.60 0.75 0.90 1.20
6'x4" Pipe Mount	B	From Leg	1.00 0.00 0.00	0.0000	137.30	No Ice 1/2" Ice 1" Ice 2" Ice	1.69 2.46 2.83 3.61	1.69 2.46 2.83 3.61	0.05 0.07 0.09 0.15
6'x4" Pipe Mount	C	From Leg	1.00 0.00 0.00	0.0000	137.30	No Ice 1/2" Ice 1" Ice 2" Ice	1.69 2.46 2.83 3.61	1.69 2.46 2.83 3.61	0.05 0.07 0.09 0.15
6'x3" Pipe Mount	A	From Leg	0.50 0.00 0.00	0.0000	127.30	No Ice 1/2" Ice 1" Ice 2" Ice	1.77 2.13 2.50 3.27	1.77 2.13 2.50 3.27	0.03 0.05 0.07 0.11
4' x 2.875" Pipe Mount	A	From Leg	0.50 0.00 0.00	0.0000	127.30	No Ice 1/2" Ice 1" Ice 2" Ice	0.97 1.22 1.48 2.02	0.97 1.22 1.48 2.02	0.02 0.03 0.04 0.08
6' Standoff Arm	A	From Leg	3.00 0.00 0.00	0.0000	127.30	No Ice 1/2" Ice 1" Ice 2" Ice	2.40 2.83 3.26 4.15	0.13 0.18 0.24 0.37	0.05 0.07 0.10 0.17
531-70HD	A	From Leg	6.00	0.0000	127.30	No Ice	6.00	6.00	0.04

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00			1/2" Ice	6.90	6.90	0.05
			0.00			1" Ice	7.80	7.80	0.06
						2" Ice	9.60	9.60	0.08
6'x4" Pipe Mount	B	From Leg	1.00	0.0000	127.30	No Ice	1.70	1.70	0.05
			0.00			1/2" Ice	2.46	2.46	0.07
			0.00			1" Ice	2.83	2.83	0.09
						2" Ice	3.61	3.61	0.15
8' x 2" Horz. Pipe	B	From Leg	0.50	0.0000	127.30	No Ice	1.90	0.05	0.03
			4.00			1/2" Ice	2.45	0.08	0.05
			0.00			1" Ice	3.01	0.11	0.07
						2" Ice	4.15	0.21	0.14
6'x3" Pipe Mount	C	From Leg	0.50	0.0000	127.30	No Ice	1.77	1.77	0.03
			0.00			1/2" Ice	2.13	2.13	0.05
			0.00			1" Ice	2.50	2.50	0.07
						2" Ice	3.27	3.27	0.11
6' Standoff Arm	C	From Leg	3.00	0.0000	127.30	No Ice	2.40	0.13	0.05
			0.00			1/2" Ice	2.83	0.18	0.07
			0.00			1" Ice	3.26	0.24	0.10
						2" Ice	4.15	0.37	0.17
ANT150F6	C	From Leg	6.00	0.0000	127.30	No Ice	5.87	5.87	0.05
			0.00			1/2" Ice	8.03	8.03	0.09
			10.00			1" Ice	10.21	10.21	0.14
						2" Ice	14.63	14.63	0.30
6'x3" Pipe Mount	A	From Leg	0.50	0.0000	111.30	No Ice	1.77	1.77	0.03
			0.00			1/2" Ice	2.13	2.13	0.05
			0.00			1" Ice	2.50	2.50	0.07
						2" Ice	3.27	3.27	0.11
4' x 2.875" Pipe Mount	A	From Leg	6.00	0.0000	111.30	No Ice	0.97	0.97	0.02
			0.00			1/2" Ice	1.22	1.22	0.03
			0.00			1" Ice	1.48	1.48	0.04
						2" Ice	2.02	2.02	0.08
6' Standoff Arm	A	From Leg	3.00	0.0000	111.30	No Ice	2.40	0.13	0.05
			0.00			1/2" Ice	2.83	0.18	0.07
			0.00			1" Ice	3.26	0.24	0.10
						2" Ice	4.15	0.37	0.17
531-70HD	A	From Leg	6.00	0.0000	111.30	No Ice	6.00	6.00	0.04
			0.00			1/2" Ice	6.90	6.90	0.05
			2.00			1" Ice	7.80	7.80	0.06
						2" Ice	9.60	9.60	0.08
6'x3" Pipe Mount	B	From Leg	0.50	0.0000	110.30	No Ice	1.77	1.77	0.03
			0.00			1/2" Ice	2.13	2.13	0.05
			0.00			1" Ice	2.50	2.50	0.07
						2" Ice	3.27	3.27	0.11
4' x 2.875" Pipe Mount	B	From Leg	6.00	0.0000	110.30	No Ice	0.97	0.97	0.02
			0.00			1/2" Ice	1.22	1.22	0.03
			0.00			1" Ice	1.48	1.48	0.04
						2" Ice	2.02	2.02	0.08
6' Standoff Arm	B	From Leg	3.00	0.0000	110.30	No Ice	2.40	0.13	0.05
			0.00			1/2" Ice	2.83	0.18	0.07
			0.00			1" Ice	3.26	0.24	0.10
						2" Ice	4.15	0.37	0.17
CO-41A	B	From Leg	6.00	0.0000	110.30	No Ice	2.27	2.27	0.01
			0.00			1/2" Ice	3.71	3.71	0.03
			6.50			1" Ice	5.16	5.16	0.06
						2" Ice	8.12	8.12	0.14
Light Beacon	A	From Leg	0.50	0.0000	105.30	No Ice	0.60	0.25	0.05
			0.00			1/2" Ice	0.70	0.31	0.06

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00				1" Ice	0.81	0.39	0.06
							2" Ice	1.06	0.55	0.09
Light Beacon	B	From Leg	0.50		0.0000	105.30	No Ice	0.60	0.25	0.05
			0.00				1/2" Ice	0.70	0.31	0.06
			0.00				1" Ice	0.81	0.39	0.06
							2" Ice	1.06	0.55	0.09
Light Beacon	C	From Leg	0.50		0.0000	105.30	No Ice	0.60	0.25	0.05
			0.00				1/2" Ice	0.70	0.31	0.06
			0.00				1" Ice	0.81	0.39	0.06
							2" Ice	1.06	0.55	0.09
6'x4" Pipe Mount	B	From Leg	1.00		0.0000	102.30	No Ice	1.73	1.73	0.05
			0.00				1/2" Ice	2.46	2.46	0.07
			0.00				1" Ice	2.83	2.83	0.09
							2" Ice	3.61	3.61	0.15
8' x 2" Horz. Pipe	B	From Leg	0.50		0.0000	102.30	No Ice	1.90	0.05	0.03
			4.00				1/2" Ice	2.45	0.08	0.05
			0.00				1" Ice	3.01	0.11	0.07
							2" Ice	4.15	0.21	0.14
6'x4" Pipe Mount	B	From Leg	1.00		0.0000	100.30	No Ice	1.73	1.73	0.05
			0.00				1/2" Ice	2.46	2.46	0.07
			0.00				1" Ice	2.83	2.83	0.09
							2" Ice	3.61	3.61	0.15
6'x4" Pipe Mount	C	From Leg	1.00		0.0000	93.30	No Ice	1.74	1.74	0.05
			0.00				1/2" Ice	2.46	2.46	0.07
			0.00				1" Ice	2.83	2.83	0.09
							2" Ice	3.61	3.61	0.15
6'x3" Pipe Mount	A	From Leg	0.50		0.0000	87.30	No Ice	1.77	1.77	0.03
			0.00				1/2" Ice	2.13	2.13	0.05
			0.00				1" Ice	2.50	2.50	0.07
							2" Ice	3.27	3.27	0.11
4' x 2.875" Pipe Mount	A	From Leg	6.00		0.0000	87.30	No Ice	0.97	0.97	0.02
			0.00				1/2" Ice	1.22	1.22	0.03
			0.00				1" Ice	1.48	1.48	0.04
							2" Ice	2.02	2.02	0.08
6' Standoff Arm	A	From Leg	3.00		0.0000	87.30	No Ice	2.40	0.13	0.05
			0.00				1/2" Ice	2.83	0.18	0.07
			0.00				1" Ice	3.26	0.24	0.10
							2" Ice	4.15	0.37	0.17
531-70HD	A	From Leg	6.00		0.0000	87.30	No Ice	6.00	6.00	0.04
			0.00				1/2" Ice	6.90	6.90	0.05
			2.00				1" Ice	7.80	7.80	0.06
							2" Ice	9.60	9.60	0.08
6'x3" Pipe Mount	B	From Leg	0.50		0.0000	89.30	No Ice	1.77	1.77	0.03
			0.00				1/2" Ice	2.13	2.13	0.05
			0.00				1" Ice	2.50	2.50	0.07
							2" Ice	3.27	3.27	0.11
4' x 2.875" Pipe Mount	B	From Leg	3.00		0.0000	89.30	No Ice	0.97	0.97	0.02
			0.00				1/2" Ice	1.22	1.22	0.03
			0.00				1" Ice	1.48	1.48	0.04
							2" Ice	2.02	2.02	0.08
6' Standoff Arm	B	From Leg	3.00		0.0000	89.30	No Ice	2.40	0.13	0.05
			0.00				1/2" Ice	2.83	0.18	0.07
			0.00				1" Ice	3.26	0.24	0.10
							2" Ice	4.15	0.37	0.17
ANT150F2	B	From Leg	3.00		0.0000	89.30	No Ice	1.30	1.30	0.02
			0.00				1/2" Ice	1.60	1.60	0.02
			3.50				1" Ice	1.90	1.90	0.03

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						2" Ice	2.50	2.50	0.04
6'x3" Pipe Mount	B	From Leg	0.50	0.0000	68.30	No Ice	1.77	1.77	0.03
			0.00			1/2" Ice	2.13	2.13	0.05
			0.00			1" Ice	2.50	2.50	0.07
						2" Ice	3.27	3.27	0.11
4' x 2.875" Pipe Mount	B	From Leg	3.00	0.0000	68.30	No Ice	0.97	0.97	0.02
			0.00			1/2" Ice	1.22	1.22	0.03
			0.00			1" Ice	1.48	1.48	0.04
						2" Ice	2.02	2.02	0.08
6' Standoff Arm	B	From Leg	3.00	0.0000	68.30	No Ice	2.40	0.13	0.05
			0.00			1/2" Ice	2.83	0.18	0.07
			0.00			1" Ice	3.26	0.24	0.10
						2" Ice	4.15	0.37	0.17
2'x2' Panel	B	From Leg	3.00	0.0000	68.30	No Ice	4.80	0.72	0.02
			0.00			1/2" Ice	5.07	0.87	0.05
			0.00			1" Ice	5.35	1.03	0.07
						2" Ice	5.93	1.36	0.14
PR-900	C	From Leg	1.00	0.0000	170.30	No Ice	6.35	6.35	0.04
			0.00			1/2" Ice	11.43	11.43	0.05
			0.00			1" Ice	16.51	16.51	0.06
						2" Ice	26.67	26.67	0.08

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft^2	Weight K
8' Dish	A	Paraboloid w/o Radome	From Leg	1.00	0.0000		185.30	8.00	No Ice	50.27	0.10
				0.00					1/2" Ice	51.32	0.26
				0.00					1" Ice	52.37	0.49
									2" Ice	54.48	0.95
8' Dish	B	Paraboloid w/o Radome	From Leg	1.00	0.0000		185.30	8.00	No Ice	50.27	0.10
				0.00					1/2" Ice	51.32	0.26
				0.00					1" Ice	52.37	0.49
									2" Ice	54.48	0.95
8' Dish	B	Paraboloid w/o Radome	From Leg	1.00	0.0000		174.30	8.00	No Ice	50.27	0.10
				0.00					1/2" Ice	51.32	0.26
				0.00					1" Ice	52.37	0.49
									2" Ice	54.48	0.95
8' Dish	C	Paraboloid w/o Radome	From Leg	1.00	0.0000		174.30	8.00	No Ice	50.27	0.10
				0.00					1/2" Ice	51.32	0.26
				0.00					1" Ice	52.37	0.49
									2" Ice	54.48	0.95
4' Dish	A	Paraboloid w/Radome	From Leg	1.00	0.0000		179.30	4.00	No Ice	12.57	0.08
				0.00					1/2" Ice	13.10	0.14
				0.00					1" Ice	13.62	0.21
									2" Ice	14.68	0.34
6' Dish	B	Paraboloid w/o Radome	From Leg	1.00	0.0000		137.30	6.00	No Ice	28.27	0.08
				0.00					1/2" Ice	29.07	0.10

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft²	Weight K
				0.00					1" Ice	29.87	0.12
									2" Ice	31.47	0.16
6' Dish	C	Paraboloid w/o Radome	From Leg	1.00	0.0000		137.30	6.00	No Ice	28.27	0.08
				0.00					1/2" Ice	29.07	0.10
				0.00					1" Ice	29.87	0.12
									2" Ice	31.47	0.16
8' Dish	B	Paraboloid w/o Radome	From Leg	1.00	0.0000		127.30	8.00	No Ice	50.27	0.10
				0.00					1/2" Ice	51.32	0.26
				0.00					1" Ice	52.37	0.49
									2" Ice	54.48	0.95
8' Dish	B	Paraboloid w/o Radome	From Leg	1.00	0.0000		102.30	8.00	No Ice	50.27	0.10
				0.00					1/2" Ice	51.32	0.26
				0.00					1" Ice	52.37	0.49
									2" Ice	54.48	0.95
SC3-W100AB	A	Paraboloid w/o Radome	From Leg	1.00	0.0000		100.30	3.27	No Ice	8.40	0.04
				0.00					1/2" Ice	8.83	0.09
				0.00					1" Ice	9.27	0.13
									2" Ice	10.13	0.22
SC3-W100AB	A	Paraboloid w/o Radome	From Leg	1.00	0.0000		93.30	3.27	No Ice	8.40	0.04
				0.00					1/2" Ice	8.83	0.09
				0.00					1" Ice	9.27	0.13
									2" Ice	10.13	0.22

Tower Pressures - No Ice

$G_H = 0.850$

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg % 	C_AA_A In Face ft²	C_AA_A Out Face ft²
T1	184.80	1.178	53	96.514	A	18.465	5.530	5.530	23.05	0.000	0.000
187.30-182.30					B	18.465	5.530		23.05	7.796	0.000
					C	18.465	5.530		23.05	1.964	0.000
T2	172.30	1.154	52	411.055	A	28.995	22.120	22.120	43.28	0.000	0.000
182.30-162.30					B	28.995	22.120		43.28	52.133	0.000
					C	28.995	22.120		43.28	11.017	0.000
T3	152.30	1.114	51	451.055	A	39.270	22.120	22.120	36.03	15.840	0.000
162.30-142.30					B	39.270	22.120		36.03	57.781	0.000
					C	39.270	22.120		36.03	68.260	0.000
T4	132.30	1.071	50	491.055	A	42.340	22.120	22.120	34.32	47.520	0.000
142.30-122.30					B	42.340	22.120		34.32	69.891	0.000
					C	42.340	22.120		34.32	68.260	0.000
T5	112.30	1.022	48	534.393	A	45.148	28.798	28.798	38.94	47.520	0.000
122.30-102.30					B	45.148	28.798		38.94	82.857	0.000
					C	45.148	28.798		38.94	68.392	0.000
T6	98.97	0.985	47	187.113	A	14.658	9.604	9.604	39.58	15.848	0.000
102.30-95.63					B	14.658	9.604		39.58	28.712	0.000
					C	14.658	9.604		39.58	25.158	0.000
T7 95.63-82.30	88.97	0.956	46	387.276	A	35.903	19.194	19.194	34.84	31.672	0.000
					B	35.903	19.194		34.84	59.426	0.000
					C	35.903	19.194		34.84	50.279	0.000
T8 82.30-75.63	78.97	0.924	45	200.453	A	15.566	9.604	9.604	38.16	15.848	0.000
					B	15.566	9.604		38.16	30.599	0.000
					C	15.566	9.604		38.16	25.158	0.000

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T9 75.63-62.30	68.97	0.889	44	413.936	A	37.768	19.194	19.194	33.70	31.888	0.000
					B	37.768	19.194		33.70	61.153	0.000
					C	37.768	19.194		33.70	50.279	0.000
T10 62.30-55.63	58.97	0.85	42	214.976	A	16.388	11.970	11.970	42.21	16.088	0.000
					B	16.388	11.970		42.21	30.599	0.000
					C	16.388	11.970		42.21	25.158	0.000
T11 55.63-42.30	48.97	0.806	40	442.960	A	41.946	23.923	23.923	36.32	32.152	0.000
					B	41.946	23.923		36.32	61.153	0.000
					C	41.946	23.923		36.32	50.279	0.000
T12 42.30-35.63	38.97	0.755	38	228.316	A	17.315	11.970	11.970	40.87	16.088	0.000
					B	17.315	11.970		40.87	30.599	0.000
					C	17.315	11.970		40.87	25.158	0.000
T13 35.63-22.30	28.97	0.7	36	469.620	A	44.027	23.923	23.923	35.21	32.152	0.000
					B	44.027	23.923		35.21	61.153	0.000
					C	44.027	23.923		35.21	50.279	0.000
T14 22.30-15.63	18.97	0.7	36	242.769	A	18.160	14.197	14.197	43.88	16.088	0.000
					B	18.160	14.197		43.88	30.599	0.000
					C	18.160	14.197		43.88	25.158	0.000
T15 15.63-2.30	8.97	0.7	37	498.504	A	48.957	28.373	28.373	36.69	17.680	0.000
					B	48.957	28.373		36.69	33.627	0.000
					C	48.957	28.373		36.69	27.648	0.000

Tower Pressure - With Ice

$G_H = 0.850$

Section Elevation ft	z ft	K_Z	q_z psf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T1 187.30-182.30	184.80	1.178	8	2.2042	98.353	A	18.465	29.642	9.210	19.14	0.000	0.000
						B	18.465	29.642		19.14	29.455	0.000
						C	18.465	29.642		19.14	10.029	0.000
T2 182.30-162.30	172.30	1.154	8	2.1957	418.383	A	28.995	68.614	36.782	37.68	0.000	0.000
						B	28.995	68.614		37.68	191.463	0.000
						C	28.995	68.614		37.68	55.783	0.000
T3 162.30-142.30	152.30	1.114	8	2.1802	458.332	A	39.270	70.925	36.679	33.29	43.307	0.000
						B	39.270	70.925		33.29	205.507	0.000
						C	39.270	70.925		33.29	212.736	0.000
T4 142.30-122.30	132.30	1.071	7	2.1617	498.270	A	42.340	73.167	36.556	31.65	134.619	0.000
						B	42.340	73.167		31.65	235.974	0.000
						C	42.340	73.167		31.65	212.111	0.000
T5 122.30-102.30	112.30	1.022	7	2.1393	541.533	A	45.148	81.718	43.084	33.96	134.345	0.000
						B	45.148	81.718		33.96	274.180	0.000
						C	45.148	81.718		33.96	212.680	0.000
T6 102.30-95.63	98.97	0.985	7	2.1213	189.474	A	14.658	24.693	14.328	36.41	44.731	0.000
						B	14.658	24.693		36.41	97.519	0.000
						C	14.658	24.693		36.41	82.131	0.000
T7 95.63-82.30	88.97	0.956	7	2.1056	391.960	A	35.903	62.327	28.565	29.08	89.268	0.000
						B	35.903	62.327		29.08	207.850	0.000
						C	35.903	62.327		29.08	163.681	0.000
T8 82.30-75.63	78.97	0.924	7	2.0877	202.777	A	15.566	25.086	14.253	35.06	44.595	0.000
						B	15.566	25.086		35.06	108.553	0.000
						C	15.566	25.086		35.06	81.639	0.000
T9 75.63-62.30	68.97	0.889	6	2.0667	418.534	A	37.768	63.346	28.392	28.08	91.649	0.000
						B	37.768	63.346		28.08	215.818	0.000

Section Elevation ft	z ft	K_Z	q_z psf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
						C	37.768	63.346		28.08	162.544	0.000
T10 62.30-55.63	58.97	0.85	6	2.0418	217.249	A	16.388	27.671	16.518	37.49	47.373	0.000
						B	16.388	27.671		37.49	107.322	0.000
						C	16.388	27.671		37.49	80.970	0.000
T11 55.63-42.30	48.97	0.806	6	2.0116	447.434	A	41.946	68.411	32.876	29.79	94.350	0.000
						B	41.946	68.411		29.79	212.861	0.000
						C	41.946	68.411		29.79	160.936	0.000
T12 42.30-35.63	38.97	0.755	6	1.9736	230.513	A	17.315	27.757	16.366	36.31	47.006	0.000
						B	17.315	27.757		36.31	105.490	0.000
						C	17.315	27.757		36.31	79.974	0.000
T13 35.63-22.30	28.97	0.7	5	1.9234	473.898	A	44.027	68.189	32.483	28.95	93.403	0.000
						B	44.027	68.189		28.95	208.130	0.000
						C	44.027	68.189		28.95	158.365	0.000
T14 22.30-15.63	18.97	0.7	5	1.8511	244.829	A	18.160	29.525	18.320	38.42	46.348	0.000
						B	18.160	29.525		38.42	102.203	0.000
						C	18.160	29.525		38.42	78.188	0.000
T15 15.63-2.30	8.97	0.7	5	1.7246	502.340	A	48.957	69.411	36.049	30.46	50.191	0.000
						B	48.957	69.411		30.46	108.593	0.000
						C	48.957	69.411		30.46	83.903	0.000

Tower Pressure - Service

G_H = 0.850

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T1	184.80	1.178	11	96.514	A	18.465	5.530	5.530	23.05	0.000	0.000
187.30-182.30					B	18.465	5.530		23.05	7.796	0.000
					C	18.465	5.530		23.05	1.964	0.000
T2	172.30	1.154	11	411.055	A	28.995	22.120	22.120	43.28	0.000	0.000
182.30-162.30					B	28.995	22.120		43.28	52.133	0.000
					C	28.995	22.120		43.28	11.017	0.000
T3	152.30	1.114	11	451.055	A	39.270	22.120	22.120	36.03	15.840	0.000
162.30-142.30					B	39.270	22.120		36.03	57.781	0.000
					C	39.270	22.120		36.03	68.260	0.000
T4	132.30	1.071	11	491.055	A	42.340	22.120	22.120	34.32	47.520	0.000
142.30-122.30					B	42.340	22.120		34.32	69.891	0.000
					C	42.340	22.120		34.32	68.260	0.000
T5	112.30	1.022	10	534.393	A	45.148	28.798	28.798	38.94	47.520	0.000
122.30-102.30					B	45.148	28.798		38.94	82.857	0.000
					C	45.148	28.798		38.94	68.392	0.000
T6	98.97	0.985	10	187.113	A	14.658	9.604	9.604	39.58	15.848	0.000
102.30-95.63					B	14.658	9.604		39.58	28.712	0.000
					C	14.658	9.604		39.58	25.158	0.000
T7 95.63-82.30	88.97	0.956	10	387.276	A	35.903	19.194	19.194	34.84	31.672	0.000
					B	35.903	19.194		34.84	59.426	0.000
					C	35.903	19.194		34.84	50.279	0.000
T8 82.30-75.63	78.97	0.924	10	200.453	A	15.566	9.604	9.604	38.16	15.848	0.000
					B	15.566	9.604		38.16	30.599	0.000
					C	15.566	9.604		38.16	25.158	0.000
T9 75.63-62.30	68.97	0.889	9	413.936	A	37.768	19.194	19.194	33.70	31.888	0.000
					B	37.768	19.194		33.70	61.153	0.000
					C	37.768	19.194		33.70	50.279	0.000

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T10	58.97	0.85	9	214.976	A	16.388	11.970	11.970	42.21	16.088	0.000
62.30-55.63					B	16.388	11.970		42.21	30.599	0.000
					C	16.388	11.970		42.21	25.158	0.000
T11	48.97	0.806	9	442.960	A	41.946	23.923	23.923	36.32	32.152	0.000
55.63-42.30					B	41.946	23.923		36.32	61.153	0.000
					C	41.946	23.923		36.32	50.279	0.000
T12	38.97	0.755	8	228.316	A	17.315	11.970	11.970	40.87	16.088	0.000
42.30-35.63					B	17.315	11.970		40.87	30.599	0.000
					C	17.315	11.970		40.87	25.158	0.000
T13	28.97	0.7	8	469.620	A	44.027	23.923	23.923	35.21	32.152	0.000
35.63-22.30					B	44.027	23.923		35.21	61.153	0.000
					C	44.027	23.923		35.21	50.279	0.000
T14	18.97	0.7	8	242.769	A	18.160	14.197	14.197	43.88	16.088	0.000
22.30-15.63					B	18.160	14.197		43.88	30.599	0.000
					C	18.160	14.197		43.88	25.158	0.000
T15 15.63-2.30	8.97	0.7	8	498.504	A	48.957	28.373	28.373	36.69	17.680	0.000
					B	48.957	28.373		36.69	33.627	0.000
					C	48.957	28.373		36.69	27.648	0.000

Tower Forces - No Ice - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T1	0.04	1.53	A	0.249	2.442	53	1	1	21.091	2.56	512.46	C
187.30-182.30			B	0.249	2.442		1	1	21.091			
			C	0.249	2.442		1	1	21.091			
T2	0.24	2.91	A	0.124	2.868	52	1	1	37.978	6.49	324.34	C
182.30-162.30			B	0.124	2.868		1	1	37.978			
			C	0.124	2.868		1	1	37.978			
T3	0.53	4.13	A	0.136	2.823	51	1	1	48.379	9.60	479.98	C
162.30-142.30			B	0.136	2.823		1	1	48.379			
			C	0.136	2.823		1	1	48.379			
T4	0.70	4.36	A	0.131	2.842	50	1	1	51.397	10.88	544.00	C
142.30-122.30			B	0.131	2.842		1	1	51.397			
			C	0.131	2.842		1	1	51.397			
T5	0.74	5.82	A	0.138	2.815	48	1	1	57.038	11.48	573.87	C
122.30-102.30			B	0.138	2.815		1	1	57.038			
			C	0.138	2.815		1	1	57.038			
T6	0.26	1.91	A	0.13	2.848	47	1	1	18.583	3.79	568.77	C
102.30-95.63			B	0.13	2.848		1	1	18.583			
			C	0.13	2.848		1	1	18.583			
T7	0.53	4.42	A	0.142	2.8	46	1	1	43.864	8.14	610.67	C
95.63-82.30			B	0.142	2.8		1	1	43.864			
			C	0.142	2.8		1	1	43.864			
T8	0.27	2.29	A	0.126	2.863	45	1	1	19.472	3.78	566.16	C
82.30-75.63			B	0.126	2.863		1	1	19.472			
			C	0.126	2.863		1	1	19.472			
T9	0.53	5.01	A	0.138	2.818	44	1	1	45.686	7.98	598.66	C
75.63-62.30			B	0.138	2.818		1	1	45.686			
			C	0.138	2.818		1	1	45.686			
T10	0.27	2.31	A	0.132	2.839	42	1	1	21.292	3.72	557.43	C
62.30-55.63			B	0.132	2.839		1	1	21.292			
			C	0.132	2.839		1	1	21.292			
T11	0.53	5.42	A	0.149	2.776	40	1	1	51.946	7.93	594.58	C
55.63-42.30			B	0.149	2.776		1	1	51.946			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
			C	0.149	2.776		1	1	51.946			
T12	0.27	2.68	A	0.128	2.853	38	1	1	22.199	3.47	519.94	C
42.30-35.63			B	0.128	2.853		1	1	22.199			
			C	0.128	2.853		1	1	22.199			
T13	0.53	6.80	A	0.145	2.791	36	1	1	53.979	7.23	542.70	C
35.63-22.30			B	0.145	2.791		1	1	53.979			
			C	0.145	2.791		1	1	53.979			
T14	0.27	3.51	A	0.133	2.834	36	1	1	23.987	3.43	514.63	C
22.30-15.63			B	0.133	2.834		1	1	23.987			
			C	0.133	2.834		1	1	23.987			
T15	0.29	7.62	A	0.155	2.753	37	1	1	60.911	6.72	504.42	C
15.63-2.30			B	0.155	2.753		1	1	60.911			
			C	0.155	2.753		1	1	60.911			
Sum Weight:	5.98	60.73						OTM	8583.52 kip-ft	97.20		

Tower Forces - No Ice - Wind 45 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T1	0.04	1.53	A	0.249	2.442	53	0.825	1	17.860	2.21	441.97	C
187.30-182.30			B	0.249	2.442		0.825	1	17.860			
			C	0.249	2.442		0.825	1	17.860			
T2	0.24	2.91	A	0.124	2.868	52	0.825	1	32.904	5.84	292.19	C
182.30-162.30			B	0.124	2.868		0.825	1	32.904			
			C	0.124	2.868		0.825	1	32.904			
T3	0.53	4.13	A	0.136	2.823	51	0.825	1	41.506	8.76	437.98	C
162.30-142.30			B	0.136	2.823		0.825	1	41.506			
			C	0.136	2.823		0.825	1	41.506			
T4	0.70	4.36	A	0.131	2.842	50	0.825	1	43.987	9.99	499.51	C
142.30-122.30			B	0.131	2.842		0.825	1	43.987			
			C	0.131	2.842		0.825	1	43.987			
T5	0.74	5.82	A	0.138	2.815	48	0.825	1	49.137	10.57	528.26	C
122.30-102.30			B	0.138	2.815		0.825	1	49.137			
			C	0.138	2.815		0.825	1	49.137			
T6	0.26	1.91	A	0.13	2.848	47	0.825	1	16.018	3.50	524.92	C
102.30-95.63			B	0.13	2.848		0.825	1	16.018			
			C	0.13	2.848		0.825	1	16.018			
T7	0.53	4.42	A	0.142	2.8	46	0.825	1	37.581	7.45	558.93	C
95.63-82.30			B	0.142	2.8		0.825	1	37.581			
			C	0.142	2.8		0.825	1	37.581			
T8	0.27	2.29	A	0.126	2.863	45	0.825	1	16.748	3.48	521.43	C
82.30-75.63			B	0.126	2.863		0.825	1	16.748			
			C	0.126	2.863		0.825	1	16.748			
T9	0.53	5.01	A	0.138	2.818	44	0.825	1	39.077	7.29	546.74	C
75.63-62.30			B	0.138	2.818		0.825	1	39.077			
			C	0.138	2.818		0.825	1	39.077			
T10	0.27	2.31	A	0.132	2.839	42	0.825	1	18.424	3.43	513.60	C
62.30-55.63			B	0.132	2.839		0.825	1	18.424			
			C	0.132	2.839		0.825	1	18.424			
T11	0.53	5.42	A	0.149	2.776	40	0.825	1	44.606	7.22	541.98	C
55.63-42.30			B	0.149	2.776		0.825	1	44.606			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
			C	0.149	2.776		0.825	1	44.606			
T12	0.27	2.68	A	0.128	2.853	38	0.825	1	19.169	3.19	477.71	C
42.30-35.63			B	0.128	2.853		0.825	1	19.169			
			C	0.128	2.853		0.825	1	19.169			
T13	0.53	6.80	A	0.145	2.791	36	0.825	1	46.274	6.58	493.42	C
35.63-22.30			B	0.145	2.791		0.825	1	46.274			
			C	0.145	2.791		0.825	1	46.274			
T14	0.27	3.51	A	0.133	2.834	36	0.825	1	20.809	3.15	472.91	C
22.30-15.63			B	0.133	2.834		0.825	1	20.809			
			C	0.133	2.834		0.825	1	20.809			
T15	0.29	7.62	A	0.155	2.753	37	0.825	1	52.344	5.99	449.10	C
15.63-2.30			B	0.155	2.753		0.825	1	52.344			
			C	0.155	2.753		0.825	1	52.344			
Sum Weight:	5.98	60.73						OTM	7824.12 kip-ft	88.64		

Tower Forces - No Ice - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
T1	0.04	1.53	A	0.249	2.442	53	0.8	1	17.398	2.16	431.89	C
187.30-182.30			B	0.249	2.442		0.8	1	17.398			
			C	0.249	2.442		0.8	1	17.398			
T2	0.24	2.91	A	0.124	2.868	52	0.8	1	32.179	5.75	287.59	C
182.30-162.30			B	0.124	2.868		0.8	1	32.179			
			C	0.124	2.868		0.8	1	32.179			
T3	0.53	4.13	A	0.136	2.823	51	0.8	1	40.525	8.64	431.98	C
162.30-142.30			B	0.136	2.823		0.8	1	40.525			
			C	0.136	2.823		0.8	1	40.525			
T4	0.70	4.36	A	0.131	2.842	50	0.8	1	42.929	9.86	493.15	C
142.30-122.30			B	0.131	2.842		0.8	1	42.929			
			C	0.131	2.842		0.8	1	42.929			
T5	0.74	5.82	A	0.138	2.815	48	0.8	1	48.008	10.43	521.74	C
122.30-102.30			B	0.138	2.815		0.8	1	48.008			
			C	0.138	2.815		0.8	1	48.008			
T6	0.26	1.91	A	0.13	2.848	47	0.8	1	15.651	3.46	518.65	C
102.30-95.63			B	0.13	2.848		0.8	1	15.651			
			C	0.13	2.848		0.8	1	15.651			
T7	0.53	4.42	A	0.142	2.8	46	0.8	1	36.684	7.35	551.54	C
95.63-82.30			B	0.142	2.8		0.8	1	36.684			
			C	0.142	2.8		0.8	1	36.684			
T8	0.27	2.29	A	0.126	2.863	45	0.8	1	16.359	3.44	515.04	C
82.30-75.63			B	0.126	2.863		0.8	1	16.359			
			C	0.126	2.863		0.8	1	16.359			
T9	0.53	5.01	A	0.138	2.818	44	0.8	1	38.132	7.19	539.32	C
75.63-62.30			B	0.138	2.818		0.8	1	38.132			
			C	0.138	2.818		0.8	1	38.132			
T10	0.27	2.31	A	0.132	2.839	42	0.8	1	18.015	3.38	507.34	C
62.30-55.63			B	0.132	2.839		0.8	1	18.015			
			C	0.132	2.839		0.8	1	18.015			
T11	0.53	5.42	A	0.149	2.776	40	0.8	1	43.557	7.12	534.46	C
55.63-42.30			B	0.149	2.776		0.8	1	43.557			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
			C	0.149	2.776		0.8	1	43.557			
T12	0.27	2.68	A	0.128	2.853	38	0.8	1	18.736	3.15	471.67	C
42.30-35.63			B	0.128	2.853		0.8	1	18.736			
			C	0.128	2.853		0.8	1	18.736			
T13	0.53	6.80	A	0.145	2.791	36	0.8	1	45.174	6.48	486.38	C
35.63-22.30			B	0.145	2.791		0.8	1	45.174			
			C	0.145	2.791		0.8	1	45.174			
T14	0.27	3.51	A	0.133	2.834	36	0.8	1	20.355	3.11	466.95	C
22.30-15.63			B	0.133	2.834		0.8	1	20.355			
			C	0.133	2.834		0.8	1	20.355			
T15	0.29	7.62	A	0.155	2.753	37	0.8	1	51.120	5.88	441.20	C
15.63-2.30			B	0.155	2.753		0.8	1	51.120			
			C	0.155	2.753		0.8	1	51.120			
Sum Weight:	5.98	60.73						OTM	7715.63 kip-ft	87.42		

Tower Forces - No Ice - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T1	0.04	1.53	A	0.249	2.442	53	0.85	1	18.322	2.26	452.04	C
187.30-182.30			B	0.249	2.442		0.85	1	18.322			
			C	0.249	2.442		0.85	1	18.322			
T2	0.24	2.91	A	0.124	2.868	52	0.85	1	33.629	5.94	296.78	C
182.30-162.30			B	0.124	2.868		0.85	1	33.629			
			C	0.124	2.868		0.85	1	33.629			
T3	0.53	4.13	A	0.136	2.823	51	0.85	1	42.488	8.88	443.98	C
162.30-142.30			B	0.136	2.823		0.85	1	42.488			
			C	0.136	2.823		0.85	1	42.488			
T4	0.70	4.36	A	0.131	2.842	50	0.85	1	45.046	10.12	505.86	C
142.30-122.30			B	0.131	2.842		0.85	1	45.046			
			C	0.131	2.842		0.85	1	45.046			
T5	0.74	5.82	A	0.138	2.815	48	0.85	1	50.266	10.70	534.77	C
122.30-102.30			B	0.138	2.815		0.85	1	50.266			
			C	0.138	2.815		0.85	1	50.266			
T6	0.26	1.91	A	0.13	2.848	47	0.85	1	16.384	3.54	531.18	C
102.30-95.63			B	0.13	2.848		0.85	1	16.384			
			C	0.13	2.848		0.85	1	16.384			
T7	0.53	4.42	A	0.142	2.8	46	0.85	1	38.479	7.55	566.32	C
95.63-82.30			B	0.142	2.8		0.85	1	38.479			
			C	0.142	2.8		0.85	1	38.479			
T8	0.27	2.29	A	0.126	2.863	45	0.85	1	17.137	3.52	527.82	C
82.30-75.63			B	0.126	2.863		0.85	1	17.137			
			C	0.126	2.863		0.85	1	17.137			
T9	0.53	5.01	A	0.138	2.818	44	0.85	1	40.021	7.39	554.15	C
75.63-62.30			B	0.138	2.818		0.85	1	40.021			
			C	0.138	2.818		0.85	1	40.021			
T10	0.27	2.31	A	0.132	2.839	42	0.85	1	18.834	3.47	519.86	C
62.30-55.63			B	0.132	2.839		0.85	1	18.834			
			C	0.132	2.839		0.85	1	18.834			
T11	0.53	5.42	A	0.149	2.776	40	0.85	1	45.655	7.32	549.49	C
55.63-42.30			B	0.149	2.776		0.85	1	45.655			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
			C	0.149	2.776		0.85	1	45.655			
T12	0.27	2.68	A	0.128	2.853	38	0.85	1	19.601	3.23	483.74	C
42.30-35.63			B	0.128	2.853		0.85	1	19.601			
			C	0.128	2.853		0.85	1	19.601			
T13	0.53	6.80	A	0.145	2.791	36	0.85	1	47.375	6.67	500.46	C
35.63-22.30			B	0.145	2.791		0.85	1	47.375			
			C	0.145	2.791		0.85	1	47.375			
T14	0.27	3.51	A	0.133	2.834	36	0.85	1	21.263	3.19	478.87	C
22.30-15.63			B	0.133	2.834		0.85	1	21.263			
			C	0.133	2.834		0.85	1	21.263			
T15	0.29	7.62	A	0.155	2.753	37	0.85	1	53.568	6.09	457.00	C
15.63-2.30			B	0.155	2.753		0.85	1	53.568			
			C	0.155	2.753		0.85	1	53.568			
Sum Weight:	5.98	60.73						OTM	7932.60 kip-ft	89.86		

Tower Forces - With Ice - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T1	0.59	5.51	A	0.489	1.915	8	1	1	38.597	0.62	124.34	C
187.30-182.30			B	0.489	1.915		1	1	38.597			
			C	0.489	1.915		1	1	38.597			
T2	3.77	9.99	A	0.233	2.489	8	1	1	68.867	2.09	104.48	C
182.30-162.30			B	0.233	2.489		1	1	68.867			
			C	0.233	2.489		1	1	68.867			
T3	7.50	12.69	A	0.24	2.467	8	1	1	80.600	3.05	152.35	C
162.30-142.30			B	0.24	2.467		1	1	80.600			
			C	0.24	2.467		1	1	80.600			
T4	9.53	13.36	A	0.232	2.493	7	1	1	84.834	3.51	175.39	C
142.30-122.30			B	0.232	2.493		1	1	84.834			
			C	0.232	2.493		1	1	84.834			
T5	10.10	15.56	A	0.234	2.486	7	1	1	92.652	3.66	182.95	C
122.30-102.30			B	0.234	2.486		1	1	92.652			
			C	0.234	2.486		1	1	92.652			
T6	3.61	4.96	A	0.208	2.571	7	1	1	28.878	1.24	185.47	C
102.30-95.63			B	0.208	2.571		1	1	28.878			
			C	0.208	2.571		1	1	28.878			
T7	7.32	12.29	A	0.251	2.436	7	1	1	72.373	2.63	196.96	C
95.63-82.30			B	0.251	2.436		1	1	72.373			
			C	0.251	2.436		1	1	72.373			
T8	3.69	5.42	A	0.2	2.594	7	1	1	29.979	1.24	185.50	C
82.30-75.63			B	0.2	2.594		1	1	29.979			
			C	0.2	2.594		1	1	29.979			
T9	7.34	13.44	A	0.242	2.463	6	1	1	74.699	2.56	192.19	C
75.63-62.30			B	0.242	2.463		1	1	74.699			
			C	0.242	2.463		1	1	74.699			
T10	3.65	5.61	A	0.203	2.587	6	1	1	32.298	1.19	179.11	C
62.30-55.63			B	0.203	2.587		1	1	32.298			
			C	0.203	2.587		1	1	32.298			
T11	7.17	14.55	A	0.247	2.448	6	1	1	81.911	2.45	183.79	C
55.63-42.30			B	0.247	2.448		1	1	81.911			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
			C	0.247	2.448		1	1	81.911			
T12	3.52	5.99	A	0.196	2.611	6	1	1	33.239	1.09	163.50	C
42.30-35.63			B	0.196	2.611		1	1	33.239			
			C	0.196	2.611		1	1	33.239			
T13	6.84	15.81	A	0.237	2.478	5	1	1	83.705	2.18	163.85	C
35.63-22.30			B	0.237	2.478		1	1	83.705			
			C	0.237	2.478		1	1	83.705			
T14	3.29	6.80	A	0.195	2.614	5	1	1	35.096	1.04	156.09	C
22.30-15.63			B	0.195	2.614		1	1	35.096			
			C	0.195	2.614		1	1	35.096			
T15	3.37	16.28	A	0.236	2.481	5	1	1	89.328	1.70	127.44	C
15.63-2.30			B	0.236	2.481		1	1	89.328			
			C	0.236	2.481		1	1	89.328			
Sum Weight:	81.29	158.27						OTM	2705.95 kip-ft	30.25		

Tower Forces - With Ice - Wind 45 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
T1	0.59	5.51	A	0.489	1.915	8	0.825	1	35.366	0.58	116.16	C
187.30-182.30			B	0.489	1.915		0.825	1	35.366			
			C	0.489	1.915		0.825	1	35.366			
T2	3.77	9.99	A	0.233	2.489	8	0.825	1	63.792	2.01	100.36	C
182.30-162.30			B	0.233	2.489		0.825	1	63.792			
			C	0.233	2.489		0.825	1	63.792			
T3	7.50	12.69	A	0.24	2.467	8	0.825	1	73.727	2.94	146.92	C
162.30-142.30			B	0.24	2.467		0.825	1	73.727			
			C	0.24	2.467		0.825	1	73.727			
T4	9.53	13.36	A	0.232	2.493	7	0.825	1	77.424	3.39	169.62	C
142.30-122.30			B	0.232	2.493		0.825	1	77.424			
			C	0.232	2.493		0.825	1	77.424			
T5	10.10	15.56	A	0.234	2.486	7	0.825	1	84.751	3.54	176.99	C
122.30-102.30			B	0.234	2.486		0.825	1	84.751			
			C	0.234	2.486		0.825	1	84.751			
T6	3.61	4.96	A	0.208	2.571	7	0.825	1	26.313	1.20	179.61	C
102.30-95.63			B	0.208	2.571		0.825	1	26.313			
			C	0.208	2.571		0.825	1	26.313			
T7	7.32	12.29	A	0.251	2.436	7	0.825	1	66.090	2.54	190.31	C
95.63-82.30			B	0.251	2.436		0.825	1	66.090			
			C	0.251	2.436		0.825	1	66.090			
T8	3.69	5.42	A	0.2	2.594	7	0.825	1	27.255	1.20	179.50	C
82.30-75.63			B	0.2	2.594		0.825	1	27.255			
			C	0.2	2.594		0.825	1	27.255			
T9	7.34	13.44	A	0.242	2.463	6	0.825	1	68.089	2.47	185.48	C
75.63-62.30			B	0.242	2.463		0.825	1	68.089			
			C	0.242	2.463		0.825	1	68.089			
T10	3.65	5.61	A	0.203	2.587	6	0.825	1	29.430	1.16	173.20	C
62.30-55.63			B	0.203	2.587		0.825	1	29.430			
			C	0.203	2.587		0.825	1	29.430			
T11	7.17	14.55	A	0.247	2.448	6	0.825	1	74.570	2.36	176.93	C
55.63-42.30			B	0.247	2.448		0.825	1	74.570			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
			C	0.247	2.448		0.825	1	74.570			
T12	3.52	5.99	A	0.196	2.611	6	0.825	1	30.209	1.05	157.78	C
42.30-35.63			B	0.196	2.611		0.825	1	30.209			
			C	0.196	2.611		0.825	1	30.209			
T13	6.84	15.81	A	0.237	2.478	5	0.825	1	76.001	2.10	157.38	C
35.63-22.30			B	0.237	2.478		0.825	1	76.001			
			C	0.237	2.478		0.825	1	76.001			
T14	3.29	6.80	A	0.195	2.614	5	0.825	1	31.918	1.00	150.40	C
22.30-15.63			B	0.195	2.614		0.825	1	31.918			
			C	0.195	2.614		0.825	1	31.918			
T15	3.37	16.28	A	0.236	2.481	5	0.825	1	80.760	1.60	120.06	C
15.63-2.30			B	0.236	2.481		0.825	1	80.760			
			C	0.236	2.481		0.825	1	80.760			
Sum Weight:	81.29	158.27						OTM	2608.07 kip-ft	29.13		

Tower Forces - With Ice - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T1	0.59	5.51	A	0.489	1.915	8	0.8	1	34.904	0.57	114.99	C
187.30-182.30			B	0.489	1.915		0.8	1	34.904			
			C	0.489	1.915		0.8	1	34.904			
T2	3.77	9.99	A	0.233	2.489	8	0.8	1	63.068	2.00	99.77	C
182.30-162.30			B	0.233	2.489		0.8	1	63.068			
			C	0.233	2.489		0.8	1	63.068			
T3	7.50	12.69	A	0.24	2.467	8	0.8	1	72.745	2.92	146.15	C
162.30-142.30			B	0.24	2.467		0.8	1	72.745			
			C	0.24	2.467		0.8	1	72.745			
T4	9.53	13.36	A	0.232	2.493	7	0.8	1	76.366	3.38	168.80	C
142.30-122.30			B	0.232	2.493		0.8	1	76.366			
			C	0.232	2.493		0.8	1	76.366			
T5	10.10	15.56	A	0.234	2.486	7	0.8	1	83.622	3.52	176.14	C
122.30-102.30			B	0.234	2.486		0.8	1	83.622			
			C	0.234	2.486		0.8	1	83.622			
T6	3.61	4.96	A	0.208	2.571	7	0.8	1	25.947	1.19	178.78	C
102.30-95.63			B	0.208	2.571		0.8	1	25.947			
			C	0.208	2.571		0.8	1	25.947			
T7	7.32	12.29	A	0.251	2.436	7	0.8	1	65.193	2.52	189.35	C
95.63-82.30			B	0.251	2.436		0.8	1	65.193			
			C	0.251	2.436		0.8	1	65.193			
T8	3.69	5.42	A	0.2	2.594	7	0.8	1	26.866	1.19	178.65	C
82.30-75.63			B	0.2	2.594		0.8	1	26.866			
			C	0.2	2.594		0.8	1	26.866			
T9	7.34	13.44	A	0.242	2.463	6	0.8	1	67.145	2.46	184.52	C
75.63-62.30			B	0.242	2.463		0.8	1	67.145			
			C	0.242	2.463		0.8	1	67.145			
T10	3.65	5.61	A	0.203	2.587	6	0.8	1	29.020	1.15	172.36	C
62.30-55.63			B	0.203	2.587		0.8	1	29.020			
			C	0.203	2.587		0.8	1	29.020			
T11	7.17	14.55	A	0.247	2.448	6	0.8	1	73.521	2.35	175.95	C
55.63-42.30			B	0.247	2.448		0.8	1	73.521			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
			C	0.247	2.448		0.8	1	73.521			
T12	3.52	5.99	A	0.196	2.611	6	0.8	1	29.776	1.05	156.97	C
42.30-35.63			B	0.196	2.611		0.8	1	29.776			
			C	0.196	2.611		0.8	1	29.776			
T13	6.84	15.81	A	0.237	2.478	5	0.8	1	74.900	2.09	156.46	C
35.63-22.30			B	0.237	2.478		0.8	1	74.900			
			C	0.237	2.478		0.8	1	74.900			
T14	3.29	6.80	A	0.195	2.614	5	0.8	1	31.464	1.00	149.59	C
22.30-15.63			B	0.195	2.614		0.8	1	31.464			
			C	0.195	2.614		0.8	1	31.464			
T15	3.37	16.28	A	0.236	2.481	5	0.8	1	79.536	1.59	119.01	C
15.63-2.30			B	0.236	2.481		0.8	1	79.536			
			C	0.236	2.481		0.8	1	79.536			
Sum Weight:	81.29	158.27						OTM	2594.09 kip-ft	28.97		

Tower Forces - With Ice - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
T1	0.59	5.51	A	0.489	1.915	8	0.85	1	35.827	0.59	117.33	C
187.30-182.30			B	0.489	1.915		0.85	1	35.827			
			C	0.489	1.915		0.85	1	35.827			
T2	3.77	9.99	A	0.233	2.489	8	0.85	1	64.517	2.02	100.95	C
182.30-162.30			B	0.233	2.489		0.85	1	64.517			
			C	0.233	2.489		0.85	1	64.517			
T3	7.50	12.69	A	0.24	2.467	8	0.85	1	74.709	2.95	147.70	C
162.30-142.30			B	0.24	2.467		0.85	1	74.709			
			C	0.24	2.467		0.85	1	74.709			
T4	9.53	13.36	A	0.232	2.493	7	0.85	1	78.483	3.41	170.44	C
142.30-122.30			B	0.232	2.493		0.85	1	78.483			
			C	0.232	2.493		0.85	1	78.483			
T5	10.10	15.56	A	0.234	2.486	7	0.85	1	85.879	3.56	177.84	C
122.30-102.30			B	0.234	2.486		0.85	1	85.879			
			C	0.234	2.486		0.85	1	85.879			
T6	3.61	4.96	A	0.208	2.571	7	0.85	1	26.679	1.20	180.45	C
102.30-95.63			B	0.208	2.571		0.85	1	26.679			
			C	0.208	2.571		0.85	1	26.679			
T7	7.32	12.29	A	0.251	2.436	7	0.85	1	66.988	2.55	191.26	C
95.63-82.30			B	0.251	2.436		0.85	1	66.988			
			C	0.251	2.436		0.85	1	66.988			
T8	3.69	5.42	A	0.2	2.594	7	0.85	1	27.644	1.20	180.36	C
82.30-75.63			B	0.2	2.594		0.85	1	27.644			
			C	0.2	2.594		0.85	1	27.644			
T9	7.34	13.44	A	0.242	2.463	6	0.85	1	69.033	2.49	186.44	C
75.63-62.30			B	0.242	2.463		0.85	1	69.033			
			C	0.242	2.463		0.85	1	69.033			
T10	3.65	5.61	A	0.203	2.587	6	0.85	1	29.840	1.16	174.05	C
62.30-55.63			B	0.203	2.587		0.85	1	29.840			
			C	0.203	2.587		0.85	1	29.840			
T11	7.17	14.55	A	0.247	2.448	6	0.85	1	75.619	2.37	177.91	C
55.63-42.30			B	0.247	2.448		0.85	1	75.619			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
			C	0.247	2.448		0.85	1	75.619			
T12	3.52	5.99	A	0.196	2.611	6	0.85	1	30.642	1.06	158.60	C
42.30-35.63			B	0.196	2.611		0.85	1	30.642			
			C	0.196	2.611		0.85	1	30.642			
T13	6.84	15.81	A	0.237	2.478	5	0.85	1	77.101	2.11	158.31	C
35.63-22.30			B	0.237	2.478		0.85	1	77.101			
			C	0.237	2.478		0.85	1	77.101			
T14	3.29	6.80	A	0.195	2.614	5	0.85	1	32.372	1.01	151.22	C
22.30-15.63			B	0.195	2.614		0.85	1	32.372			
			C	0.195	2.614		0.85	1	32.372			
T15	3.37	16.28	A	0.236	2.481	5	0.85	1	81.984	1.61	121.11	C
15.63-2.30			B	0.236	2.481		0.85	1	81.984			
			C	0.236	2.481		0.85	1	81.984			
Sum Weight:	81.29	158.27						OTM	2622.06 kip-ft	29.29		

Tower Forces - Service - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
T1	0.04	1.53	A	0.249	2.442	11	1	1	21.689	0.56	111.94	C
187.30-182.30			B	0.249	2.442		1	1	21.689			
			C	0.249	2.442		1	1	21.689			
T2	0.24	2.91	A	0.124	2.868	11	1	1	41.468	1.48	73.80	C
182.30-162.30			B	0.124	2.868		1	1	41.468			
			C	0.124	2.868		1	1	41.468			
T3	0.53	4.13	A	0.136	2.823	11	1	1	51.796	2.13	106.69	C
162.30-142.30			B	0.136	2.823		1	1	51.796			
			C	0.136	2.823		1	1	51.796			
T4	0.70	4.36	A	0.131	2.842	11	1	1	54.858	2.41	120.31	C
142.30-122.30			B	0.131	2.842		1	1	54.858			
			C	0.131	2.842		1	1	54.858			
T5	0.74	5.82	A	0.138	2.815	10	1	1	60.281	2.52	126.23	C
122.30-102.30			B	0.138	2.815		1	1	60.281			
			C	0.138	2.815		1	1	60.281			
T6	0.26	1.91	A	0.13	2.848	10	1	1	19.713	0.84	125.27	C
102.30-95.63			B	0.13	2.848		1	1	19.713			
			C	0.13	2.848		1	1	19.713			
T7	0.53	4.42	A	0.142	2.8	10	1	1	46.086	1.79	133.98	C
95.63-82.30			B	0.142	2.8		1	1	46.086			
			C	0.142	2.8		1	1	46.086			
T8	0.27	2.29	A	0.126	2.863	10	1	1	20.657	0.83	124.75	C
82.30-75.63			B	0.126	2.863		1	1	20.657			
			C	0.126	2.863		1	1	20.657			
T9	0.53	5.01	A	0.138	2.818	9	1	1	48.032	1.75	131.45	C
75.63-62.30			B	0.138	2.818		1	1	48.032			
			C	0.138	2.818		1	1	48.032			
T10	0.27	2.31	A	0.132	2.839	9	1	1	22.270	0.81	121.93	C
62.30-55.63			B	0.132	2.839		1	1	22.270			
			C	0.132	2.839		1	1	22.270			
T11	0.53	5.42	A	0.149	2.776	9	1	1	53.926	1.73	129.68	C
55.63-42.30			B	0.149	2.776		1	1	53.926			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
			C	0.149	2.776		1	1	53.926			
T12	0.27	2.68	A	0.128	2.853	8	1	1	23.318	0.76	114.08	C
42.30-35.63			B	0.128	2.853		1	1	23.318			
			C	0.128	2.853		1	1	23.318			
T13	0.53	6.80	A	0.145	2.791	8	1	1	56.282	1.58	118.74	C
35.63-22.30			B	0.145	2.791		1	1	56.282			
			C	0.145	2.791		1	1	56.282			
T14	0.27	3.51	A	0.133	2.834	8	1	1	24.815	0.75	111.94	C
22.30-15.63			B	0.133	2.834		1	1	24.815			
			C	0.133	2.834		1	1	24.815			
T15	0.29	7.62	A	0.155	2.753	8	1	1	62.432	1.46	109.54	C
15.63-2.30			B	0.155	2.753		1	1	62.432			
			C	0.155	2.753		1	1	62.432			
Sum Weight:	5.98	60.73						OTM	1898.84 kip-ft	21.40		

Tower Forces - Service - Wind 45 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
T1	0.04	1.53	A	0.249	2.442	11	0.825	1	18.457	0.48	96.92	C
187.30-182.30			B	0.249	2.442		0.825	1	18.457			
			C	0.249	2.442		0.825	1	18.457			
T2	0.24	2.91	A	0.124	2.868	11	0.825	1	36.394	1.34	66.95	C
182.30-162.30			B	0.124	2.868		0.825	1	36.394			
			C	0.124	2.868		0.825	1	36.394			
T3	0.53	4.13	A	0.136	2.823	11	0.825	1	44.924	1.95	97.75	C
162.30-142.30			B	0.136	2.823		0.825	1	44.924			
			C	0.136	2.823		0.825	1	44.924			
T4	0.70	4.36	A	0.131	2.842	11	0.825	1	47.448	2.22	110.83	C
142.30-122.30			B	0.131	2.842		0.825	1	47.448			
			C	0.131	2.842		0.825	1	47.448			
T5	0.74	5.82	A	0.138	2.815	10	0.825	1	52.380	2.33	116.52	C
122.30-102.30			B	0.138	2.815		0.825	1	52.380			
			C	0.138	2.815		0.825	1	52.380			
T6	0.26	1.91	A	0.13	2.848	10	0.825	1	17.147	0.77	115.93	C
102.30-95.63			B	0.13	2.848		0.825	1	17.147			
			C	0.13	2.848		0.825	1	17.147			
T7	0.53	4.42	A	0.142	2.8	10	0.825	1	39.803	1.64	122.96	C
95.63-82.30			B	0.142	2.8		0.825	1	39.803			
			C	0.142	2.8		0.825	1	39.803			
T8	0.27	2.29	A	0.126	2.863	10	0.825	1	17.933	0.77	115.22	C
82.30-75.63			B	0.126	2.863		0.825	1	17.933			
			C	0.126	2.863		0.825	1	17.933			
T9	0.53	5.01	A	0.138	2.818	9	0.825	1	41.423	1.60	120.39	C
75.63-62.30			B	0.138	2.818		0.825	1	41.423			
			C	0.138	2.818		0.825	1	41.423			
T10	0.27	2.31	A	0.132	2.839	9	0.825	1	19.402	0.75	112.59	C
62.30-55.63			B	0.132	2.839		0.825	1	19.402			
			C	0.132	2.839		0.825	1	19.402			
T11	0.53	5.42	A	0.149	2.776	9	0.825	1	46.586	1.58	118.47	C
55.63-42.30			B	0.149	2.776		0.825	1	46.586			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
			C	0.149	2.776		0.825	1	46.586			
T12	0.27	2.68	A	0.128	2.853	8	0.825	1	20.288	0.70	105.08	C
42.30-35.63			B	0.128	2.853		0.825	1	20.288			
			C	0.128	2.853		0.825	1	20.288			
T13	0.53	6.80	A	0.145	2.791	8	0.825	1	48.577	1.44	108.25	C
35.63-22.30			B	0.145	2.791		0.825	1	48.577			
			C	0.145	2.791		0.825	1	48.577			
T14	0.27	3.51	A	0.133	2.834	8	0.825	1	21.637	0.69	103.05	C
22.30-15.63			B	0.133	2.834		0.825	1	21.637			
			C	0.133	2.834		0.825	1	21.637			
T15	0.29	7.62	A	0.155	2.753	8	0.825	1	53.864	1.30	97.76	C
15.63-2.30			B	0.155	2.753		0.825	1	53.864			
			C	0.155	2.753		0.825	1	53.864			
Sum Weight:	5.98	60.73						OTM	1737.07 kip-ft	19.58		

Tower Forces - Service - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
T1	0.04	1.53	A	0.249	2.442	11	0.8	1	17.996	0.47	94.78	C
187.30-182.30			B	0.249	2.442		0.8	1	17.996			
			C	0.249	2.442		0.8	1	17.996			
T2	0.24	2.91	A	0.124	2.868	11	0.8	1	35.669	1.32	65.97	C
182.30-162.30			B	0.124	2.868		0.8	1	35.669			
			C	0.124	2.868		0.8	1	35.669			
T3	0.53	4.13	A	0.136	2.823	11	0.8	1	43.942	1.93	96.47	C
162.30-142.30			B	0.136	2.823		0.8	1	43.942			
			C	0.136	2.823		0.8	1	43.942			
T4	0.70	4.36	A	0.131	2.842	11	0.8	1	46.390	2.19	109.48	C
142.30-122.30			B	0.131	2.842		0.8	1	46.390			
			C	0.131	2.842		0.8	1	46.390			
T5	0.74	5.82	A	0.138	2.815	10	0.8	1	51.252	2.30	115.13	C
122.30-102.30			B	0.138	2.815		0.8	1	51.252			
			C	0.138	2.815		0.8	1	51.252			
T6	0.26	1.91	A	0.13	2.848	10	0.8	1	16.781	0.76	114.60	C
102.30-95.63			B	0.13	2.848		0.8	1	16.781			
			C	0.13	2.848		0.8	1	16.781			
T7	0.53	4.42	A	0.142	2.8	10	0.8	1	38.906	1.62	121.39	C
95.63-82.30			B	0.142	2.8		0.8	1	38.906			
			C	0.142	2.8		0.8	1	38.906			
T8	0.27	2.29	A	0.126	2.863	10	0.8	1	17.544	0.76	113.86	C
82.30-75.63			B	0.126	2.863		0.8	1	17.544			
			C	0.126	2.863		0.8	1	17.544			
T9	0.53	5.01	A	0.138	2.818	9	0.8	1	40.478	1.58	118.81	C
75.63-62.30			B	0.138	2.818		0.8	1	40.478			
			C	0.138	2.818		0.8	1	40.478			
T10	0.27	2.31	A	0.132	2.839	9	0.8	1	18.993	0.74	111.26	C
62.30-55.63			B	0.132	2.839		0.8	1	18.993			
			C	0.132	2.839		0.8	1	18.993			
T11	0.53	5.42	A	0.149	2.776	9	0.8	1	45.537	1.56	116.87	C
55.63-42.30			B	0.149	2.776		0.8	1	45.537			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
			C	0.149	2.776		0.8	1	45.537			
T12	0.27	2.68	A	0.128	2.853	8	0.8	1	19.855	0.69	103.80	C
42.30-35.63			B	0.128	2.853		0.8	1	19.855			
			C	0.128	2.853		0.8	1	19.855			
T13	0.53	6.80	A	0.145	2.791	8	0.8	1	47.477	1.42	106.75	C
35.63-22.30			B	0.145	2.791		0.8	1	47.477			
			C	0.145	2.791		0.8	1	47.477			
T14	0.27	3.51	A	0.133	2.834	8	0.8	1	21.183	0.68	101.78	C
22.30-15.63			B	0.133	2.834		0.8	1	21.183			
			C	0.133	2.834		0.8	1	21.183			
T15	0.29	7.62	A	0.155	2.753	8	0.8	1	52.640	1.28	96.07	C
15.63-2.30			B	0.155	2.753		0.8	1	52.640			
			C	0.155	2.753		0.8	1	52.640			
Sum Weight:	5.98	60.73						OTM	1713.96 kip-ft	19.32		

Tower Forces - Service - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
T1	0.04	1.53	A	0.249	2.442	11	0.85	1	18.919	0.50	99.07	C
187.30-182.30			B	0.249	2.442		0.85	1	18.919			
			C	0.249	2.442		0.85	1	18.919			
T2	0.24	2.91	A	0.124	2.868	11	0.85	1	37.119	1.36	67.93	C
182.30-162.30			B	0.124	2.868		0.85	1	37.119			
			C	0.124	2.868		0.85	1	37.119			
T3	0.53	4.13	A	0.136	2.823	11	0.85	1	45.906	1.98	99.02	C
162.30-142.30			B	0.136	2.823		0.85	1	45.906			
			C	0.136	2.823		0.85	1	45.906			
T4	0.70	4.36	A	0.131	2.842	11	0.85	1	48.507	2.24	112.19	C
142.30-122.30			B	0.131	2.842		0.85	1	48.507			
			C	0.131	2.842		0.85	1	48.507			
T5	0.74	5.82	A	0.138	2.815	10	0.85	1	53.509	2.36	117.90	C
122.30-102.30			B	0.138	2.815		0.85	1	53.509			
			C	0.138	2.815		0.85	1	53.509			
T6	0.26	1.91	A	0.13	2.848	10	0.85	1	17.514	0.78	117.26	C
102.30-95.63			B	0.13	2.848		0.85	1	17.514			
			C	0.13	2.848		0.85	1	17.514			
T7	0.53	4.42	A	0.142	2.8	10	0.85	1	40.701	1.66	124.53	C
95.63-82.30			B	0.142	2.8		0.85	1	40.701			
			C	0.142	2.8		0.85	1	40.701			
T8	0.27	2.29	A	0.126	2.863	10	0.85	1	18.322	0.78	116.58	C
82.30-75.63			B	0.126	2.863		0.85	1	18.322			
			C	0.126	2.863		0.85	1	18.322			
T9	0.53	5.01	A	0.138	2.818	9	0.85	1	42.367	1.63	121.97	C
75.63-62.30			B	0.138	2.818		0.85	1	42.367			
			C	0.138	2.818		0.85	1	42.367			
T10	0.27	2.31	A	0.132	2.839	9	0.85	1	19.812	0.76	113.92	C
62.30-55.63			B	0.132	2.839		0.85	1	19.812			
			C	0.132	2.839		0.85	1	19.812			
T11	0.53	5.42	A	0.149	2.776	9	0.85	1	47.635	1.60	120.07	C
55.63-42.30			B	0.149	2.776		0.85	1	47.635			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
			C	0.149	2.776		0.85	1	47.635			
T12	0.27	2.68	A	0.128	2.853	8	0.85	1	20.721	0.71	106.37	C
42.30-35.63			B	0.128	2.853		0.85	1	20.721			
			C	0.128	2.853		0.85	1	20.721			
T13	0.53	6.80	A	0.145	2.791	8	0.85	1	49.678	1.46	109.74	C
35.63-22.30			B	0.145	2.791		0.85	1	49.678			
			C	0.145	2.791		0.85	1	49.678			
T14	0.27	3.51	A	0.133	2.834	8	0.85	1	22.091	0.70	104.32	C
22.30-15.63			B	0.133	2.834		0.85	1	22.091			
			C	0.133	2.834		0.85	1	22.091			
T15	0.29	7.62	A	0.155	2.753	8	0.85	1	55.088	1.33	99.44	C
15.63-2.30			B	0.155	2.753		0.85	1	55.088			
			C	0.155	2.753		0.85	1	55.088			
Sum Weight:	5.98	60.73						OTM	1760.18 kip-ft	19.84		

Force Totals

Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Overturning Moments, M_x kip-ft	Sum of Overturning Moments, M_z kip-ft	Sum of Torques kip-ft
Leg Weight	19.42					
Bracing Weight	41.31					
Total Member Self-Weight	60.73			-14.56	24.07	
Total Weight	82.17			-14.56	24.07	
Wind 0 deg - No Ice		-8.54	-141.91	-15434.41	1187.46	-155.78
Wind 30 deg - No Ice		66.05	-109.58	-11784.34	-7213.26	-149.16
Wind 45 deg - No Ice		93.48	-87.51	-9391.81	-10231.25	-133.28
Wind 60 deg - No Ice		111.31	-63.04	-6867.91	-12109.58	-104.48
Wind 90 deg - No Ice		131.22	-2.04	-359.58	-14211.87	-38.31
Wind 120 deg - No Ice		122.98	70.66	7647.14	-13314.61	16.40
Wind 135 deg - No Ice		96.36	96.58	10484.04	-10408.35	47.91
Wind 150 deg - No Ice		63.99	114.91	12539.53	-6817.82	67.32
Wind 180 deg - No Ice		1.27	128.25	13983.76	-139.67	124.26
Wind 210 deg - No Ice		-61.65	112.02	12152.75	6562.14	153.56
Wind 225 deg - No Ice		-95.52	87.65	9439.98	10525.24	133.24
Wind 240 deg - No Ice		-126.84	63.03	6615.84	13903.26	139.39
Wind 270 deg - No Ice		-134.19	-7.88	-1141.85	14668.61	84.84
Wind 300 deg - No Ice		-116.10	-67.27	-7430.89	12805.33	-19.77
Wind 315 deg - No Ice		-98.79	-91.62	-9942.25	10994.51	-74.91
Wind 330 deg - No Ice		-73.92	-112.70	-12203.58	8326.21	-118.27
Member Ice	97.54					
Total Weight Ice	293.64			-173.81	240.94	
Wind 0 deg - Ice		-1.39	-40.72	-4495.18	430.69	-52.08
Wind 30 deg - Ice		19.64	-33.30	-3677.86	-1847.74	-63.60
Wind 45 deg - Ice		27.83	-26.89	-2998.65	-2720.20	-63.44
Wind 60 deg - Ice		33.61	-19.21	-2207.23	-3321.54	-58.35
Wind 90 deg - Ice		39.18	-0.30	-225.24	-3904.03	-38.50
Wind 120 deg - Ice		35.26	20.35	1983.20	-3495.15	-11.82
Wind 135 deg - Ice		28.22	28.30	2827.56	-2744.46	4.02
Wind 150 deg - Ice		19.36	34.19	3460.62	-1790.67	18.14
Wind 180 deg - Ice		0.23	38.83	3947.47	210.75	47.05
Wind 210 deg - Ice		-18.93	33.70	3394.83	2217.04	64.26

Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Overturning Moments, M_x kip-ft	Sum of Overturning Moments, M_z kip-ft	Sum of Torques kip-ft
Wind 225 deg - Ice		-28.15	26.93	2664.61	3241.01	63.39
Wind 240 deg - Ice		-35.84	19.07	1811.57	4059.25	63.90
Wind 270 deg - Ice		-39.66	-1.29	-358.21	4451.13	45.92
Wind 300 deg - Ice		-34.41	-19.94	-2304.11	3910.84	11.29
Wind 315 deg - Ice		-28.72	-27.59	-3092.23	3321.95	-8.28
Wind 330 deg - Ice		-20.95	-33.83	-3748.82	2506.60	-26.23
Total Weight	82.17			-14.56	24.07	
Wind 0 deg - Service		-1.82	-30.96	-3362.09	242.63	-33.01
Wind 30 deg - Service		14.44	-23.98	-2574.34	-1585.04	-31.59
Wind 45 deg - Service		20.43	-19.16	-2052.55	-2243.74	-28.23
Wind 60 deg - Service		24.35	-13.80	-1499.11	-2655.99	-22.12
Wind 90 deg - Service		28.69	-0.44	-74.54	-3114.04	-8.10
Wind 120 deg - Service		26.83	15.42	1669.20	-2912.68	3.46
Wind 135 deg - Service		21.04	21.09	2289.32	-2281.47	10.12
Wind 150 deg - Service		14.00	25.11	2739.31	-1500.81	14.22
Wind 180 deg - Service		0.27	28.05	3057.19	-40.07	26.29
Wind 210 deg - Service		-13.50	24.50	2656.92	1425.71	32.53
Wind 225 deg - Service		-20.87	19.19	2066.92	2285.73	28.22
Wind 240 deg - Service		-27.65	13.79	1449.52	3017.44	29.55
Wind 270 deg - Service		-29.32	-1.68	-241.18	3190.70	18.02
Wind 300 deg - Service		-25.37	-14.70	-1619.03	2783.56	-4.17
Wind 315 deg - Service		-21.56	-20.04	-2169.81	2385.69	-15.87
Wind 330 deg - Service		-16.11	-24.64	-2663.64	1801.48	-25.07

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 45 deg - No Ice
7	0.9 Dead+1.0 Wind 45 deg - No Ice
8	1.2 Dead+1.0 Wind 60 deg - No Ice
9	0.9 Dead+1.0 Wind 60 deg - No Ice
10	1.2 Dead+1.0 Wind 90 deg - No Ice
11	0.9 Dead+1.0 Wind 90 deg - No Ice
12	1.2 Dead+1.0 Wind 120 deg - No Ice
13	0.9 Dead+1.0 Wind 120 deg - No Ice
14	1.2 Dead+1.0 Wind 135 deg - No Ice
15	0.9 Dead+1.0 Wind 135 deg - No Ice
16	1.2 Dead+1.0 Wind 150 deg - No Ice
17	0.9 Dead+1.0 Wind 150 deg - No Ice
18	1.2 Dead+1.0 Wind 180 deg - No Ice
19	0.9 Dead+1.0 Wind 180 deg - No Ice
20	1.2 Dead+1.0 Wind 210 deg - No Ice
21	0.9 Dead+1.0 Wind 210 deg - No Ice
22	1.2 Dead+1.0 Wind 225 deg - No Ice
23	0.9 Dead+1.0 Wind 225 deg - No Ice
24	1.2 Dead+1.0 Wind 240 deg - No Ice
25	0.9 Dead+1.0 Wind 240 deg - No Ice
26	1.2 Dead+1.0 Wind 270 deg - No Ice
27	0.9 Dead+1.0 Wind 270 deg - No Ice
28	1.2 Dead+1.0 Wind 300 deg - No Ice

Comb. No.	Description
29	0.9 Dead+1.0 Wind 300 deg - No Ice
30	1.2 Dead+1.0 Wind 315 deg - No Ice
31	0.9 Dead+1.0 Wind 315 deg - No Ice
32	1.2 Dead+1.0 Wind 330 deg - No Ice
33	0.9 Dead+1.0 Wind 330 deg - No Ice
34	1.2 Dead+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 45 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
39	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
40	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
41	1.2 Dead+1.0 Wind 135 deg+1.0 Ice+1.0 Temp
42	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
43	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
44	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
45	1.2 Dead+1.0 Wind 225 deg+1.0 Ice+1.0 Temp
46	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
47	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
48	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
49	1.2 Dead+1.0 Wind 315 deg+1.0 Ice+1.0 Temp
50	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
51	Dead+Wind 0 deg - Service
52	Dead+Wind 30 deg - Service
53	Dead+Wind 45 deg - Service
54	Dead+Wind 60 deg - Service
55	Dead+Wind 90 deg - Service
56	Dead+Wind 120 deg - Service
57	Dead+Wind 135 deg - Service
58	Dead+Wind 150 deg - Service
59	Dead+Wind 180 deg - Service
60	Dead+Wind 210 deg - Service
61	Dead+Wind 225 deg - Service
62	Dead+Wind 240 deg - Service
63	Dead+Wind 270 deg - Service
64	Dead+Wind 300 deg - Service
65	Dead+Wind 315 deg - Service
66	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T1	187.3 - 182.3	Leg	Max Tension	29	0.51	0.00	0.00
			Max. Compression	46	-5.20	0.19	0.05
			Max. Mx	16	-0.15	2.34	0.70
			Max. My	12	-1.13	-0.98	2.86
			Max. Vy	28	1.49	-1.85	0.01
			Max. Vx	2	-1.52	-0.69	1.50
		Diagonal	Max Tension	18	2.20	0.00	0.00
			Max. Compression	12	-2.18	0.00	0.00
			Max. Mx	43	-0.73	0.30	-0.03
			Max. My	35	0.67	0.28	0.04
			Max. Vy	44	0.15	0.29	-0.03
			Max. Vx	35	0.01	0.00	0.00
		Top Girt	Max Tension	3	0.17	0.00	0.00
			Max. Compression	48	-0.87	0.00	0.00
			Max. Mx	34	-0.76	-1.60	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	46	-0.81	0.00	0.05
			Max. Vy	34	0.35	0.00	0.00
			Max. Vx	46	-0.01	0.00	0.00
T2	182.3 - 162.3	Leg	Max Tension	29	13.55	-1.45	0.06
			Max. Compression	35	-21.68	0.32	0.04
			Max. Mx	18	10.62	-2.61	-0.12
			Max. My	26	-7.36	-0.16	-2.40
			Max. Vy	18	2.58	-2.61	-0.12
			Max. Vx	26	2.56	-0.16	-2.40
		Diagonal	Max Tension	16	7.48	0.00	0.00
			Max. Compression	2	-8.16	0.00	0.00
			Max. Mx	40	1.07	0.44	0.05
			Max. My	46	0.25	0.40	-0.06
			Max. Vy	50	0.19	0.44	0.06
			Max. Vx	46	-0.01	0.00	0.00
T3	162.3 - 142.3	Leg	Max Tension	29	44.19	-1.45	-0.01
			Max. Compression	2	-59.23	1.56	0.31
			Max. Mx	8	21.75	3.31	0.31
			Max. My	10	-6.70	-0.16	-3.22
			Max. Vy	18	1.79	-1.45	-0.13
			Max. Vx	16	1.87	-0.03	-1.73
		Diagonal	Max Tension	4	14.53	0.00	0.00
			Max. Compression	14	-14.52	0.00	0.00
			Max. Mx	48	3.09	0.64	0.08
			Max. My	46	0.49	0.62	-0.09
			Max. Vy	48	0.26	0.64	0.08
			Max. Vx	46	-0.01	0.00	0.00
T4	142.3 - 122.3	Leg	Max Tension	29	88.06	-2.95	0.32
			Max. Compression	2	-111.36	0.82	-0.84
			Max. Mx	29	88.06	-2.95	0.32
			Max. My	30	-32.88	1.22	-2.67
			Max. Vy	8	-1.86	-1.75	-0.05
			Max. Vx	32	1.91	0.05	1.82
		Diagonal	Max Tension	26	19.82	0.00	0.00
			Max. Compression	10	-19.61	0.00	0.00
			Max. Mx	49	3.62	0.75	-0.09
			Max. My	50	-2.17	0.70	0.10
			Max. Vy	49	0.28	0.75	-0.09
			Max. Vx	50	0.01	0.00	0.00
T5	122.3 - 102.3	Leg	Max Tension	29	140.93	-1.16	0.02
			Max. Compression	2	-170.75	-0.57	0.14
			Max. Mx	2	-170.04	1.99	0.29
			Max. My	32	-27.45	-0.50	4.13
			Max. Vy	12	0.65	1.98	0.04
			Max. Vx	32	-0.88	-0.50	4.13
		Diagonal	Max Tension	20	22.51	0.00	0.00
			Max. Compression	20	-22.18	0.00	0.00
			Max. Mx	35	3.28	0.91	0.11
			Max. My	37	-4.94	0.82	0.13
			Max. Vy	50	0.32	0.90	-0.11
			Max. Vx	38	0.02	0.00	0.00
T6	102.3 - 95.63	Leg	Max Tension	29	171.46	-0.31	-0.03
			Max. Compression	2	-204.10	1.49	-0.04
			Max. Mx	35	-104.65	-1.61	-0.02
			Max. My	32	-30.72	-0.50	4.13
			Max. Vy	2	-1.25	-0.54	-3.44
			Max. Vx	32	1.64	-0.50	4.13
		Diagonal	Max Tension	26	25.36	0.00	0.00
			Max. Compression	2	-26.05	0.00	0.00
			Max. Mx	50	6.99	-1.15	0.00
			Max. My	46	2.14	0.00	0.04

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	50	0.31	0.00	0.00
			Max. Vx	46	0.01	0.00	0.00
T7	95.63 - 82.3	Leg	Max Tension	29	169.48	-1.25	-0.01
			Max. Compression	2	-203.80	-5.60	-0.11
			Max. Mx	2	-203.80	-5.60	-0.11
			Max. My	26	-32.51	-1.21	-3.19
			Max. Vy	2	1.86	5.26	0.02
			Max. Vx	24	0.97	1.21	-3.16
		Diagonal	Max Tension	21	31.45	0.42	0.01
			Max. Compression	2	-32.97	0.00	0.00
			Max. Mx	30	27.52	0.60	-0.02
			Max. My	44	-11.21	0.08	-0.13
			Max. Vy	48	0.19	0.33	-0.07
			Max. Vx	44	-0.02	0.00	0.00
		Horizontal	Max Tension	25	1.02	0.20	-0.01
			Max. Compression	6	-1.17	0.23	-0.01
			Max. Mx	48	0.04	0.74	-0.02
			Max. My	40	-0.24	0.72	-0.02
			Max. Vy	48	-0.26	0.74	-0.02
			Max. Vx	35	0.01	0.72	-0.02
		Redund Horz 1 Bracing	Max Tension	24	1.65	0.00	0.00
			Max. Compression	11	-1.45	0.00	0.00
			Max. Mx	46	0.22	-0.13	0.00
			Max. My	47	0.67	0.00	0.00
			Max. Vy	46	0.08	0.00	0.00
			Max. Vx	47	0.00	0.00	0.00
		Redund Diag 1 Bracing	Max Tension	10	1.28	0.00	0.00
			Max. Compression	25	-1.03	0.00	0.00
			Max. Mx	50	0.05	-0.17	0.00
			Max. My	46	0.42	0.00	0.01
			Max. Vy	50	0.07	0.00	0.00
			Max. Vx	46	-0.00	0.00	0.00
		Inner Bracing	Max Tension	1	0.00	0.00	0.00
			Max. Compression	48	-0.05	0.00	0.00
			Max. Mx	34	-0.04	-0.53	0.00
			Max. My	35	-0.04	0.00	-0.00
			Max. Vy	34	0.15	0.00	0.00
			Max. Vx	35	0.00	0.00	0.00
T8	82.3 - 75.63	Leg	Max Tension	29	228.55	3.95	-0.06
			Max. Compression	2	-269.25	3.47	0.17
			Max. Mx	2	-268.86	-5.60	-0.11
			Max. My	26	-40.02	-1.21	-3.19
			Max. Vy	2	-1.48	3.47	0.17
			Max. Vx	2	0.48	1.24	3.17
		Diagonal	Max Tension	20	27.52	0.00	0.00
			Max. Compression	21	-26.86	0.00	0.00
			Max. Mx	50	8.42	-1.30	0.00
			Max. My	46	2.35	0.00	0.04
			Max. Vy	50	0.32	0.00	0.00
			Max. Vx	46	-0.01	0.00	0.00
T9	75.63 - 62.3	Leg	Max Tension	29	226.95	-2.97	0.03
			Max. Compression	2	-269.22	-6.81	-0.16
			Max. Mx	2	-269.22	-6.81	-0.16
			Max. My	32	-40.55	-1.54	5.85
			Max. Vy	12	1.94	4.72	0.04
			Max. Vx	32	-1.50	-1.54	5.85
		Diagonal	Max Tension	21	33.72	0.00	0.00
			Max. Compression	20	-34.60	0.00	0.00
			Max. Mx	20	15.80	0.41	-0.03

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	44	-11.72	0.26	-0.11
			Max. Vy	49	0.21	0.39	-0.09
			Max. Vx	37	0.02	0.00	0.00
		Horizontal	Max Tension	3	1.43	0.21	-0.01
			Max. Compression	18	-1.52	0.26	-0.01
			Max. Mx	48	0.22	0.82	-0.02
			Max. My	40	-0.26	0.82	-0.02
			Max. Vy	48	-0.27	0.82	-0.02
			Max. Vx	35	0.01	0.81	-0.02
		Redund Horz 1 Bracing	Max Tension	28	1.97	0.00	0.00
			Max. Compression	3	-1.86	0.00	0.00
			Max. Mx	34	0.47	-0.15	0.00
			Max. My	46	0.72	0.00	0.00
			Max. Vy	34	-0.08	0.00	0.00
			Max. Vx	46	0.00	0.00	0.00
		Redund Diag 1 Bracing	Max Tension	2	1.46	0.00	0.00
			Max. Compression	29	-1.17	0.00	0.00
			Max. Mx	50	0.31	-0.19	0.00
			Max. My	46	0.69	0.00	0.01
			Max. Vy	50	0.08	0.00	0.00
			Max. Vx	46	0.00	0.00	0.00
		Inner Bracing	Max Tension	1	0.00	0.00	0.00
			Max. Compression	48	-0.05	0.00	0.00
			Max. Mx	34	-0.04	-0.60	0.00
			Max. My	35	-0.04	0.00	-0.00
			Max. Vy	34	-0.16	0.00	0.00
			Max. Vx	35	0.00	0.00	0.00
T10	62.3 - 55.63	Leg	Max Tension	29	284.35	4.52	0.03
			Max. Compression	2	-332.92	5.20	0.13
			Max. Mx	2	-332.55	-6.81	-0.16
			Max. My	32	-46.54	-1.54	5.85
			Max. Vy	2	-1.94	5.20	0.13
			Max. Vx	32	0.69	-1.54	5.85
		Diagonal	Max Tension	20	29.55	0.00	0.00
			Max. Compression	21	-29.19	0.00	0.00
			Max. Mx	50	8.87	-1.44	0.00
			Max. My	46	2.62	0.00	0.05
			Max. Vy	50	0.34	0.00	0.00
			Max. Vx	46	-0.01	0.00	0.00
T11	55.63 - 42.3	Leg	Max Tension	29	282.11	-4.46	0.03
			Max. Compression	2	-332.23	-10.60	-0.09
			Max. Mx	2	-332.23	-10.60	-0.09
			Max. My	32	-47.81	-2.08	5.42
			Max. Vy	2	3.08	9.03	-0.30
			Max. Vx	32	-1.57	-2.08	5.42
		Diagonal	Max Tension	21	36.20	0.34	0.02
			Max. Compression	20	-37.67	0.00	0.00
			Max. Mx	30	29.98	0.51	-0.03
			Max. My	35	-12.00	0.23	0.13
			Max. Vy	49	0.22	0.45	-0.09
			Max. Vx	35	0.02	0.00	0.00
		Horizontal	Max Tension	3	1.84	0.33	-0.01
			Max. Compression	18	-1.99	0.37	-0.01
			Max. Mx	48	0.44	1.10	-0.03
			Max. My	48	0.41	1.10	-0.03
			Max. Vy	48	-0.34	1.10	-0.03
			Max. Vx	35	0.01	1.07	-0.03
		Redund Horz 1 Bracing	Max Tension	28	2.73	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	3	-2.56	0.00	0.00
			Max. Mx	46	0.45	-0.18	0.00
			Max. My	47	1.33	0.00	0.01
			Max. Vy	39	0.09	0.00	0.00
			Max. Vx	47	0.00	0.00	0.00
		Redund Diag 1 Bracing	Max Tension	2	1.89	0.00	0.00
			Max. Compression	29	-1.60	0.00	0.00
			Max. Mx	50	-0.20	-0.22	0.00
			Max. My	46	0.39	0.00	0.01
			Max. Vy	50	0.09	0.00	0.00
			Max. Vx	46	-0.00	0.00	0.00
		Inner Bracing	Max Tension	1	0.00	0.00	0.00
			Max. Compression	36	-0.05	0.00	0.00
			Max. Mx	34	-0.05	-0.75	0.00
			Max. My	35	-0.05	0.00	-0.00
			Max. Vy	34	0.19	0.00	0.00
			Max. Vx	35	0.00	0.00	0.00
T12	42.3 - 35.63	Leg	Max Tension	29	341.43	7.58	0.04
			Max. Compression	2	-399.21	8.01	0.32
			Max. Mx	2	-398.72	-10.60	-0.09
			Max. My	32	-54.04	-2.08	5.42
			Max. Vy	2	-2.91	8.01	0.32
			Max. Vx	2	0.46	2.49	5.31
		Diagonal	Max Tension	20	31.28	0.00	0.00
			Max. Compression	21	-30.64	0.00	0.00
			Max. Mx	50	8.88	-1.58	0.00
			Max. My	46	2.03	0.00	0.05
			Max. Vy	50	0.35	0.00	0.00
			Max. Vx	46	-0.01	0.00	0.00
T13	35.63 - 22.3	Leg	Max Tension	29	339.01	-6.85	0.05
			Max. Compression	2	-398.70	-14.39	-0.39
			Max. Mx	2	-398.70	-14.39	-0.39
			Max. My	32	-55.69	-3.08	9.79
			Max. Vy	2	3.75	9.83	-0.35
			Max. Vx	32	-2.18	-3.08	9.79
		Diagonal	Max Tension	21	38.10	0.00	0.00
			Max. Compression	20	-39.57	0.00	0.00
			Max. Mx	28	32.22	0.60	0.04
			Max. My	46	-13.78	0.32	-0.14
			Max. Vy	49	0.26	0.54	-0.11
			Max. Vx	46	-0.02	0.00	0.00
		Horizontal	Max Tension	3	2.59	0.35	-0.01
			Max. Compression	30	-2.70	0.42	-0.01
			Max. Mx	48	0.64	1.26	-0.04
			Max. My	48	0.62	1.26	-0.04
			Max. Vy	48	-0.36	1.26	-0.04
			Max. Vx	46	0.01	1.24	-0.04
		Redund Horz 1 Bracing	Max Tension	28	3.58	0.00	0.00
			Max. Compression	3	-3.29	0.00	0.00
			Max. Mx	44	-0.80	-0.19	0.00
			Max. My	38	-0.39	0.00	0.01
			Max. Vy	44	0.09	0.00	0.00
			Max. Vx	38	-0.00	0.00	0.00
		Redund Diag 1 Bracing	Max Tension	2	2.38	0.00	0.00
			Max. Compression	29	-2.01	0.00	0.00
			Max. Mx	50	0.68	-0.23	0.00
			Max. My	46	1.35	0.00	0.01
			Max. Vy	50	0.09	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	46	0.00	0.00	0.00
		Inner Bracing	Max Tension	1	0.00	0.00	0.00
			Max. Compression	46	-0.05	0.00	0.00
			Max. Mx	34	-0.05	-0.82	0.00
			Max. My	35	-0.05	0.00	-0.00
			Max. Vy	34	0.19	0.00	0.00
			Max. Vx	35	0.00	0.00	0.00
T14	22.3 - 15.63	Leg	Max Tension	29	396.98	9.79	0.03
			Max. Compression	2	-465.38	10.05	0.21
			Max. Mx	2	-464.81	-14.39	-0.39
			Max. My	32	-61.67	-3.08	9.79
			Max. Vy	2	-3.80	10.05	0.21
			Max. Vx	32	0.94	-3.08	9.79
		Diagonal	Max Tension	20	32.91	0.00	0.00
			Max. Compression	21	-32.43	0.00	0.00
			Max. Mx	35	10.48	-1.92	0.00
			Max. My	45	1.44	0.00	0.06
			Max. Vy	35	0.41	0.00	0.00
			Max. Vx	45	0.01	0.00	0.00
T15	15.63 - 2.3	Leg	Max Tension	29	395.08	-8.33	0.05
			Max. Compression	2	-466.20	-0.00	0.00
			Max. Mx	2	-465.66	10.95	-0.59
			Max. My	32	-63.33	2.09	-5.22
			Max. Vy	2	1.79	10.95	-0.59
			Max. Vx	32	1.65	1.18	4.71
		Diagonal	Max Tension	21	39.61	0.00	0.00
			Max. Compression	20	-41.11	0.00	0.00
			Max. Mx	6	24.94	0.58	0.04
			Max. My	44	-13.78	0.40	-0.15
			Max. Vy	49	0.26	0.55	-0.11
			Max. Vx	44	-0.02	0.00	0.00
		Horizontal	Max Tension	3	2.52	0.41	-0.01
			Max. Compression	28	-2.67	0.47	-0.01
			Max. Mx	48	-0.31	1.16	-0.03
			Max. My	39	-1.29	1.13	-0.03
			Max. Vy	48	-0.34	1.16	-0.03
			Max. Vx	39	0.01	1.13	-0.03
		Redund Horz 1 Bracing	Max Tension	30	2.21	0.00	0.00
			Max. Compression	3	-2.24	0.00	0.00
			Max. Mx	44	0.37	-0.24	0.00
			Max. My	36	0.39	0.00	0.01
			Max. Vy	44	0.11	0.00	0.00
			Max. Vx	36	0.00	0.00	0.00
		Redund Diag 1 Bracing	Max Tension	2	1.77	0.00	0.00
			Max. Compression	31	-1.13	0.00	0.00
			Max. Mx	35	0.34	-0.28	0.00
			Max. My	46	0.85	0.00	0.01
			Max. Vy	35	-0.10	0.00	0.00
			Max. Vx	46	0.00	0.00	0.00
		Inner Bracing	Max Tension	1	0.00	0.00	0.00
			Max. Compression	47	-0.05	0.00	0.00
			Max. Mx	34	-0.05	-0.83	0.00
			Max. My	48	-0.05	0.00	0.00
			Max. Vy	34	-0.19	0.00	0.00
			Max. Vx	48	0.00	0.00	0.00

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Leg C	Max. Vert	24	508.06	69.63	-41.74
	Max. H_x	24	508.06	69.63	-41.74
	Max. H_z	7	-394.83	-54.92	38.10
	Min. Vert	9	-406.13	-58.47	35.52
	Min. H_x	9	-406.13	-58.47	35.52
	Min. H_z	24	508.06	69.63	-41.74
Leg B	Max. Vert	12	507.98	-70.64	-40.45
	Max. H_x	29	-433.63	62.51	35.75
	Max. H_z	31	-423.96	59.83	37.26
	Min. Vert	29	-433.63	62.51	35.75
	Min. H_x	12	507.98	-70.64	-40.45
	Min. H_z	14	473.96	-64.06	-40.75
Leg A	Max. Vert	2	510.75	-1.62	81.49
	Max. H_x	25	-179.77	16.65	-32.31
	Max. H_z	2	510.75	-1.62	81.49
	Min. Vert	19	-408.09	1.82	-68.60
	Min. H_x	10	44.21	-15.60	4.42
	Min. H_z	19	-408.09	1.82	-68.60

Tower Mast Reaction Summary

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	82.17	0.00	0.00	-14.56	24.08	-0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	98.61	-8.54	-141.91	-15312.65	1194.53	-155.84
0.9 Dead+1.0 Wind 0 deg - No Ice	73.96	-8.54	-141.91	-15302.02	1186.79	-155.82
1.2 Dead+1.0 Wind 30 deg - No Ice	98.61	66.05	-109.58	-11685.80	-7150.40	-149.29
0.9 Dead+1.0 Wind 30 deg - No Ice	73.96	66.05	-109.58	-11676.67	-7154.70	-149.25
1.2 Dead+1.0 Wind 45 deg - No Ice	98.61	93.48	-87.51	-9312.75	-10145.73	-133.38
0.9 Dead+1.0 Wind 45 deg - No Ice	73.96	93.48	-87.51	-9304.59	-10148.80	-133.36
1.2 Dead+1.0 Wind 60 deg - No Ice	98.61	111.31	-63.04	-6814.19	-12006.75	-104.57
0.9 Dead+1.0 Wind 60 deg - No Ice	73.96	111.31	-63.04	-6807.03	-12009.07	-104.55
1.2 Dead+1.0 Wind 90 deg - No Ice	98.61	131.22	-2.04	-363.24	-14090.78	-38.35
0.9 Dead+1.0 Wind 90 deg - No Ice	73.96	131.22	-2.04	-358.69	-14092.26	-38.34
1.2 Dead+1.0 Wind 120 deg - No Ice	98.61	122.98	70.66	7581.80	-13201.69	16.37
0.9 Dead+1.0 Wind 120 deg - No Ice	73.96	122.98	70.66	7583.08	-13203.54	16.37
1.2 Dead+1.0 Wind 135 deg - No Ice	98.61	96.36	96.58	10396.02	-10318.15	47.92
0.9 Dead+1.0 Wind 135 deg - No Ice	73.96	96.36	96.58	10396.15	-10321.18	47.91
1.2 Dead+1.0 Wind 150 deg -	98.61	63.99	114.91	12436.43	-6754.24	67.36

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
No Ice 0.9 Dead+1.0 Wind 150 deg - No Ice	73.96	63.99	114.91	12435.72	-6758.77	67.33
1.2 Dead+1.0 Wind 180 deg - No Ice	98.61	1.27	128.25	13867.78	-134.93	124.34
0.9 Dead+1.0 Wind 180 deg - No Ice	73.96	1.27	128.25	13866.48	-142.11	124.32
1.2 Dead+1.0 Wind 210 deg - No Ice	98.61	-61.65	112.02	12048.91	6508.02	153.69
0.9 Dead+1.0 Wind 210 deg - No Ice	73.96	-61.65	112.02	12048.35	6498.17	153.66
1.2 Dead+1.0 Wind 225 deg - No Ice	98.61	-95.52	87.65	9355.00	10450.04	133.34
0.9 Dead+1.0 Wind 225 deg - No Ice	73.96	-95.52	87.65	9355.55	10438.53	133.31
1.2 Dead+1.0 Wind 240 deg - No Ice	98.61	-126.84	63.03	6548.54	13801.10	139.48
0.9 Dead+1.0 Wind 240 deg - No Ice	73.96	-126.84	63.03	6550.26	13788.23	139.45
1.2 Dead+1.0 Wind 270 deg - No Ice	98.61	-134.19	-7.88	-1146.91	14557.93	84.88
0.9 Dead+1.0 Wind 270 deg - No Ice	73.96	-134.19	-7.88	-1142.01	14544.78	84.84
1.2 Dead+1.0 Wind 300 deg - No Ice	98.61	-116.10	-67.27	-7377.98	12713.39	-19.77
0.9 Dead+1.0 Wind 300 deg - No Ice	73.96	-116.10	-67.27	-7370.58	12700.95	-19.77
1.2 Dead+1.0 Wind 315 deg - No Ice	98.61	-98.79	-91.62	-9863.90	10920.11	-74.92
0.9 Dead+1.0 Wind 315 deg - No Ice	73.96	-98.79	-91.62	-9855.50	10908.39	-74.91
1.2 Dead+1.0 Wind 330 deg - No Ice	98.61	-73.92	-112.70	-12105.49	8275.20	-118.27
0.9 Dead+1.0 Wind 330 deg - No Ice	73.96	-73.92	-112.70	-12096.18	8264.55	-118.26
1.2 Dead+1.0 Ice+1.0 Temp	310.07	-0.00	0.00	-177.66	246.87	-0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	310.07	-1.39	-40.72	-4470.74	437.72	-52.24
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	310.07	19.64	-33.30	-3657.22	-1827.97	-63.82
1.2 Dead+1.0 Wind 45 deg+1.0 Ice+1.0 Temp	310.07	27.83	-26.89	-2982.51	-2694.93	-63.66
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	310.07	33.61	-19.21	-2197.31	-3291.78	-58.55
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	310.07	39.18	-0.30	-229.49	-3870.20	-38.64
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	310.07	35.26	20.35	1965.06	-3464.45	-11.86
1.2 Dead+1.0 Wind 135 deg+1.0 Ice+1.0 Temp	310.07	28.22	28.30	2803.89	-2718.53	4.04
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	310.07	19.36	34.19	3432.94	-1770.47	18.22
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	310.07	0.23	38.83	3916.23	216.62	47.22
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	310.07	-18.93	33.70	3366.81	2208.62	64.49
1.2 Dead+1.0 Wind 225 deg+1.0 Ice+1.0 Temp	310.07	-28.15	26.93	2640.79	3227.95	63.62
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	310.07	-35.84	19.07	1792.56	4041.13	64.11
1.2 Dead+1.0 Wind 270	310.07	-39.66	-1.29	-363.14	4429.68	46.05

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	310.07	-34.41	-19.94	-2294.68	3893.67	11.33
1.2 Dead+1.0 Wind 315 deg+1.0 Ice+1.0 Temp	310.07	-28.72	-27.59	-3076.55	3309.32	-8.29
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	310.07	-20.95	-33.83	-3728.54	2499.79	-26.29
Dead+Wind 0 deg - Service	82.17	-1.82	-30.96	-3347.62	272.31	-33.01
Dead+Wind 30 deg - Service	82.17	14.44	-23.98	-2565.06	-1542.64	-31.62
Dead+Wind 45 deg - Service	82.17	20.43	-19.16	-2047.69	-2196.29	-28.25
Dead+Wind 60 deg - Service	82.17	24.35	-13.80	-1499.84	-2604.64	-22.14
Dead+Wind 90 deg - Service	82.17	28.69	-0.44	-88.14	-3058.60	-8.10
Dead+Wind 120 deg - Service	82.17	26.83	15.42	1641.65	-2859.12	3.46
Dead+Wind 135 deg - Service	82.17	21.04	21.09	2256.62	-2233.01	10.12
Dead+Wind 150 deg - Service	82.17	14.00	25.11	2703.19	-1458.39	14.22
Dead+Wind 180 deg - Service	82.17	0.27	28.05	3018.18	-10.85	26.30
Dead+Wind 210 deg - Service	82.17	-13.50	24.50	2620.64	1441.79	32.56
Dead+Wind 225 deg - Service	82.17	-20.87	19.19	2034.94	2296.96	28.25
Dead+Wind 240 deg - Service	82.17	-27.65	13.79	1421.64	3022.65	29.57
Dead+Wind 270 deg - Service	82.17	-29.32	-1.68	-255.01	3193.98	18.02
Dead+Wind 300 deg - Service	82.17	-25.37	-14.70	-1619.96	2791.03	-4.18
Dead+Wind 315 deg - Service	82.17	-21.56	-20.04	-2165.08	2397.02	-15.88
Dead+Wind 330 deg - Service	82.17	-16.11	-24.64	-2654.52	1818.06	-25.06

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX K	PY K	PZ K	PX K	PY K	PZ K	% Error
1	0.00	-82.17	0.00	0.00	82.17	0.00	0.000%
2	-8.54	-98.61	-141.91	8.54	98.61	141.91	0.000%
3	-8.54	-73.96	-141.91	8.54	73.96	141.91	0.000%
4	66.05	-98.61	-109.58	-66.05	98.61	109.58	0.000%
5	66.05	-73.96	-109.58	-66.05	73.96	109.58	0.000%
6	93.48	-98.61	-87.51	-93.48	98.61	87.51	0.000%
7	93.48	-73.96	-87.51	-93.48	73.96	87.51	0.000%
8	111.31	-98.61	-63.04	-111.31	98.61	63.04	0.000%
9	111.31	-73.96	-63.04	-111.31	73.96	63.04	0.000%
10	131.22	-98.61	-2.04	-131.22	98.61	2.04	0.000%
11	131.22	-73.96	-2.04	-131.22	73.96	2.04	0.000%
12	122.98	-98.61	70.66	-122.98	98.61	-70.66	0.000%
13	122.98	-73.96	70.66	-122.98	73.96	-70.66	0.000%
14	96.36	-98.61	96.58	-96.36	98.61	-96.58	0.000%
15	96.36	-73.96	96.58	-96.36	73.96	-96.58	0.000%
16	63.99	-98.61	114.91	-63.99	98.61	-114.91	0.000%
17	63.99	-73.96	114.91	-63.99	73.96	-114.91	0.000%
18	1.27	-98.61	128.25	-1.27	98.61	-128.25	0.000%
19	1.27	-73.96	128.25	-1.27	73.96	-128.25	0.000%
20	-61.65	-98.61	112.02	61.65	98.61	-112.02	0.000%
21	-61.65	-73.96	112.02	61.65	73.96	-112.02	0.000%
22	-95.52	-98.61	87.65	95.52	98.61	-87.65	0.000%
23	-95.52	-73.96	87.65	95.52	73.96	-87.65	0.000%
24	-126.84	-98.61	63.03	126.84	98.61	-63.03	0.000%
25	-126.84	-73.96	63.03	126.84	73.96	-63.03	0.000%
26	-134.19	-98.61	-7.88	134.19	98.61	7.88	0.000%
27	-134.19	-73.96	-7.88	134.19	73.96	7.88	0.000%
28	-116.10	-98.61	-67.27	116.10	98.61	67.27	0.000%
29	-116.10	-73.96	-67.27	116.10	73.96	67.27	0.000%

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX K	PY K	PZ K	PX K	PY K	PZ K	% Error
30	-98.79	-98.61	-91.62	98.79	98.61	91.62	0.000%
31	-98.79	-73.96	-91.62	98.79	73.96	91.62	0.000%
32	-73.92	-98.61	-112.70	73.92	98.61	112.70	0.000%
33	-73.92	-73.96	-112.70	73.92	73.96	112.70	0.000%
34	0.00	-310.07	0.00	0.00	310.07	0.00	0.000%
35	-1.39	-310.07	-40.72	1.39	310.07	40.72	0.000%
36	19.64	-310.07	-33.30	-19.64	310.07	33.30	0.000%
37	27.83	-310.07	-26.89	-27.83	310.07	26.89	0.000%
38	33.61	-310.07	-19.21	-33.61	310.07	19.21	0.000%
39	39.18	-310.07	-0.30	-39.18	310.07	0.30	0.000%
40	35.26	-310.07	20.35	-35.26	310.07	-20.35	0.000%
41	28.22	-310.07	28.30	-28.22	310.07	-28.30	0.000%
42	19.36	-310.07	34.19	-19.36	310.07	-34.19	0.000%
43	0.23	-310.07	38.83	-0.23	310.07	-38.83	0.000%
44	-18.93	-310.07	33.70	18.93	310.07	-33.70	0.000%
45	-28.15	-310.07	26.93	28.15	310.07	-26.93	0.000%
46	-35.84	-310.07	19.07	35.84	310.07	-19.07	0.000%
47	-39.66	-310.07	-1.29	39.66	310.07	1.29	0.000%
48	-34.41	-310.07	-19.94	34.41	310.07	19.94	0.000%
49	-28.72	-310.07	-27.59	28.72	310.07	27.59	0.000%
50	-20.95	-310.07	-33.83	20.95	310.07	33.83	0.000%
51	-1.82	-82.17	-30.96	1.82	82.17	30.96	0.000%
52	14.44	-82.17	-23.98	-14.44	82.17	23.98	0.000%
53	20.43	-82.17	-19.16	-20.43	82.17	19.16	0.000%
54	24.35	-82.17	-13.80	-24.35	82.17	13.80	0.000%
55	28.69	-82.17	-0.44	-28.69	82.17	0.44	0.000%
56	26.83	-82.17	15.42	-26.83	82.17	-15.42	0.000%
57	21.04	-82.17	21.09	-21.04	82.17	-21.09	0.000%
58	14.00	-82.17	25.11	-14.00	82.17	-25.11	0.000%
59	0.27	-82.17	28.05	-0.27	82.17	-28.05	0.000%
60	-13.50	-82.17	24.50	13.50	82.17	-24.50	0.000%
61	-20.87	-82.17	19.19	20.87	82.17	-19.19	0.000%
62	-27.65	-82.17	13.79	27.65	82.17	-13.79	0.000%
63	-29.32	-82.17	-1.68	29.32	82.17	1.68	0.000%
64	-25.37	-82.17	-14.70	25.37	82.17	14.70	0.000%
65	-21.56	-82.17	-20.04	21.56	82.17	20.04	0.000%
66	-16.11	-82.17	-24.64	16.11	82.17	24.64	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	4	0.00000001	0.00000341
3	Yes	4	0.00000001	0.00000260
4	Yes	4	0.00000001	0.00000321
5	Yes	4	0.00000001	0.00000241
6	Yes	4	0.00000001	0.00000287
7	Yes	4	0.00000001	0.00000214
8	Yes	4	0.00000001	0.00000255
9	Yes	4	0.00000001	0.00000192
10	Yes	4	0.00000001	0.00000307
11	Yes	4	0.00000001	0.00000230
12	Yes	4	0.00000001	0.00000342
13	Yes	4	0.00000001	0.00000260
14	Yes	4	0.00000001	0.00000318

15	Yes	4	0.00000001	0.00000241
16	Yes	4	0.00000001	0.00000298
17	Yes	4	0.00000001	0.00000221
18	Yes	4	0.00000001	0.00000257
19	Yes	4	0.00000001	0.00000191
20	Yes	4	0.00000001	0.00000326
21	Yes	4	0.00000001	0.00000245
22	Yes	4	0.00000001	0.00000314
23	Yes	4	0.00000001	0.00000238
24	Yes	4	0.00000001	0.00000337
25	Yes	4	0.00000001	0.00000256
26	Yes	4	0.00000001	0.00000295
27	Yes	4	0.00000001	0.00000219
28	Yes	4	0.00000001	0.00000294
29	Yes	4	0.00000001	0.00000219
30	Yes	4	0.00000001	0.00000290
31	Yes	4	0.00000001	0.00000217
32	Yes	4	0.00000001	0.00000284
33	Yes	4	0.00000001	0.00000213
34	Yes	4	0.00000001	0.00000001
35	Yes	4	0.00000001	0.00000239
36	Yes	4	0.00000001	0.00000001
37	Yes	4	0.00000001	0.00000001
38	Yes	4	0.00000001	0.00000001
39	Yes	4	0.00000001	0.00000001
40	Yes	4	0.00000001	0.00000001
41	Yes	4	0.00000001	0.00000001
42	Yes	4	0.00000001	0.00000001
43	Yes	4	0.00000001	0.00000001
44	Yes	4	0.00000001	0.00000001
45	Yes	4	0.00000001	0.00000001
46	Yes	4	0.00000001	0.00000001
47	Yes	4	0.00000001	0.00000001
48	Yes	4	0.00000001	0.00000001
49	Yes	4	0.00000001	0.00000001
50	Yes	4	0.00000001	0.00000001
51	Yes	4	0.00000001	0.00000001
52	Yes	4	0.00000001	0.00000001
53	Yes	4	0.00000001	0.00000001
54	Yes	4	0.00000001	0.00000001
55	Yes	4	0.00000001	0.00000232
56	Yes	4	0.00000001	0.00000001
57	Yes	4	0.00000001	0.00000001
58	Yes	4	0.00000001	0.00000001
59	Yes	4	0.00000001	0.00000285
60	Yes	4	0.00000001	0.00000001
61	Yes	4	0.00000001	0.00000001
62	Yes	4	0.00000001	0.00000001
63	Yes	4	0.00000001	0.00000001
64	Yes	4	0.00000001	0.00000001
65	Yes	4	0.00000001	0.00000202
66	Yes	4	0.00000001	0.00000257

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	187.3 - 182.3	1.965	51	0.0764	0.0080
T2	182.3 - 162.3	1.883	51	0.0764	0.0079

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T3	162.3 - 142.3	1.550	51	0.0753	0.0075
T4	142.3 - 122.3	1.221	51	0.0705	0.0071
T5	122.3 - 102.3	0.911	51	0.0614	0.0061
T6	102.3 - 95.63	0.636	51	0.0522	0.0049
T7	95.63 - 82.3	0.558	51	0.0483	0.0047
T8	82.3 - 75.63	0.425	51	0.0404	0.0041
T9	75.63 - 62.3	0.360	51	0.0373	0.0038
T10	62.3 - 55.63	0.250	51	0.0310	0.0031
T11	55.63 - 42.3	0.199	51	0.0270	0.0027
T12	42.3 - 35.63	0.121	51	0.0191	0.0020
T13	35.63 - 22.3	0.085	51	0.0158	0.0016
T14	22.3 - 15.63	0.038	51	0.0091	0.0009
T15	15.63 - 2.3	0.019	56	0.0061	0.0006

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
187.30	6'x4" Pipe Mount	51	1.965	0.0764	0.0080	289930
185.30	8' Dish	51	1.932	0.0764	0.0079	289930
184.30	20' Horz. 4x4x1/4"	51	1.916	0.0764	0.0079	289930
183.30	DB411-B	51	1.900	0.0764	0.0079	289930
179.30	4' Dish	51	1.834	0.0764	0.0078	287533
174.30	8' Dish	51	1.751	0.0763	0.0077	488603
173.30	13'x2" Pipe	51	1.734	0.0762	0.0077	571524
170.30	6'x2" Pipe Mount	51	1.684	0.0760	0.0077	983718
167.30	8' x 2" Horz. Pipe	51	1.634	0.0758	0.0076	Inf
163.30	80010966	51	1.567	0.0754	0.0076	733281
155.00	LNX-6514DS	51	1.428	0.0741	0.0074	428389
140.00	AIR6449	51	1.184	0.0696	0.0070	260568
137.30	6' Dish	51	1.141	0.0685	0.0069	227177
127.30	8' Dish	51	0.986	0.0637	0.0064	152485
111.30	6'x3" Pipe Mount	51	0.754	0.0565	0.0054	100861
110.30	6'x3" Pipe Mount	51	0.740	0.0561	0.0053	98797
105.30	Light Beacon	51	0.674	0.0537	0.0051	88966
102.30	8' Dish	51	0.636	0.0522	0.0049	76500
100.30	SC3-W100AB	51	0.612	0.0511	0.0049	64208
93.30	SC3-W100AB	51	0.533	0.0469	0.0046	56451
89.30	6'x3" Pipe Mount	51	0.492	0.0444	0.0044	109233
87.30	6'x3" Pipe Mount	51	0.473	0.0432	0.0043	216398
68.30	6'x3" Pipe Mount	51	0.298	0.0340	0.0034	147367

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	187.3 - 182.3	8.988	2	0.3489	0.0380
T2	182.3 - 162.3	8.616	2	0.3490	0.0374
T3	162.3 - 142.3	7.091	2	0.3438	0.0358
T4	142.3 - 122.3	5.588	2	0.3225	0.0335

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T5	122.3 - 102.3	4.167	2	0.2806	0.0289
T6	102.3 - 95.63	2.913	2	0.2386	0.0234
T7	95.63 - 82.3	2.551	2	0.2208	0.0223
T8	82.3 - 75.63	1.943	2	0.1849	0.0193
T9	75.63 - 62.3	1.649	2	0.1706	0.0180
T10	62.3 - 55.63	1.145	2	0.1415	0.0145
T11	55.63 - 42.3	0.911	2	0.1235	0.0129
T12	42.3 - 35.63	0.556	2	0.0872	0.0093
T13	35.63 - 22.3	0.389	2	0.0723	0.0074
T14	22.3 - 15.63	0.174	2	0.0417	0.0045
T15	15.63 - 2.3	0.087	3	0.0279	0.0030

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
187.30	6'x4" Pipe Mount	2	8.988	0.3489	0.0380	64614
185.30	8' Dish	2	8.839	0.3490	0.0378	64614
184.30	20' Horz. 4x4x1/4"	2	8.765	0.3490	0.0377	64614
183.30	DB411-B	2	8.690	0.3490	0.0376	64614
179.30	4' Dish	2	8.390	0.3489	0.0371	64289
174.30	8' Dish	2	8.010	0.3482	0.0367	110974
173.30	13'x2" Pipe	2	7.934	0.3480	0.0366	129569
170.30	6'x2" Pipe Mount	2	7.704	0.3472	0.0364	226447
167.30	8' x 2" Horz. Pipe	2	7.474	0.3462	0.0362	715492
163.30	80010966	2	7.168	0.3443	0.0359	169550
155.00	LNX-6514DS	2	6.537	0.3386	0.0351	96759
140.00	AIR6449	2	5.419	0.3184	0.0331	57750
137.30	6' Dish	2	5.222	0.3131	0.0326	50106
127.30	8' Dish	2	4.510	0.2915	0.0303	33268
111.30	6'x3" Pipe Mount	2	3.450	0.2585	0.0256	22103
110.30	6'x3" Pipe Mount	2	3.388	0.2564	0.0253	21662
105.30	Light Beacon	2	3.086	0.2457	0.0240	19547
102.30	8' Dish	2	2.913	0.2386	0.0234	16778
100.30	SC3-W100AB	2	2.800	0.2335	0.0230	14035
93.30	SC3-W100AB	2	2.437	0.2143	0.0219	12271
89.30	6'x3" Pipe Mount	2	2.252	0.2030	0.0210	23820
87.30	6'x3" Pipe Mount	2	2.163	0.1976	0.0205	47489
68.30	6'x3" Pipe Mount	2	1.363	0.1554	0.0161	32433

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load / Allowable	Allowable Ratio	Criteria
T1	187.3	Leg	A325N	1.2500	6	0.29	87.22	0.003 ✔	1	Bolt Tension
		Diagonal	A325N	0.7500	1	2.20	12.62	0.174 ✔	1	Member Bearing
		Top Girt	A325N	0.7500	1	0.87	19.88	0.044 ✔	1	Bolt Shear

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load / Allowable	Allowable Ratio	Criteria
T2	182.3	Leg	A325N	1.2500	6	2.26	87.22	0.026 ✓	1	Bolt Tension
		Diagonal	A325N	0.7500	1	7.48	12.62	0.593 ✓	1	Member Bearing
T3	162.3	Leg	A325N	1.2500	6	7.36	87.22	0.084 ✓	1	Bolt Tension
		Diagonal	A325N	0.7500	1	14.53	15.77	0.922 ✓	1	Member Bearing
T4	142.3	Leg	A325N	1.2500	8	11.01	87.22	0.126 ✓	1	Bolt Tension
		Diagonal	A325N	0.6250	2	9.91	13.81	0.718 ✓	1	Bolt Shear
T5	122.3	Leg	A325N	1.5000	8	17.62	126.47	0.139 ✓	1	Bolt Tension
		Diagonal	A325N	0.7500	2	11.26	19.88	0.566 ✓	1	Bolt Shear
T6	102.3	Diagonal	A325N	1.0000	2	12.68	33.60	0.377 ✓	1	Member Bearing
T7	95.63	Leg	A325N	1.5000	8	21.14	126.47	0.167 ✓	1	Bolt Tension
		Diagonal	A325N	1.0000	2	16.49	35.34	0.466 ✓	1	Bolt Shear
		Horizontal	A325N	1.0000	2	1.77	28.00	0.063 ✓	1	Member Bearing
		Redund Horz 1 Bracing	A325N	1.0000	1	3.53	16.97	0.208 ✓	1	Member Bearing
		Redund Diag 1 Bracing	A325N	1.0000	1	2.39	16.97	0.141 ✓	1	Member Bearing
T8	82.3	Diagonal	A325N	0.8750	2	13.76	27.06	0.509 ✓	1	Bolt Shear
T9	75.63	Leg	A325N	1.5000	8	28.33	126.47	0.224 ✓	1	Bolt Tension
		Diagonal	A325N	0.8750	2	17.30	27.06	0.639 ✓	1	Bolt Shear
		Horizontal	A325N	0.8750	2	2.33	24.47	0.095 ✓	1	Member Bearing
		Redund Horz 1 Bracing	A325N	0.8750	1	4.67	14.79	0.316 ✓	1	Member Bearing
		Redund Diag 1 Bracing	A325N	0.8750	1	3.06	14.79	0.207 ✓	1	Member Bearing
T10	62.3	Diagonal	A325N	0.8750	2	14.78	27.06	0.546 ✓	1	Bolt Shear
T11	55.63	Leg	A325N	1.5000	8	35.21	126.47	0.278 ✓	1	Bolt Tension
		Diagonal	A325N	0.8750	2	18.83	27.06	0.696 ✓	1	Bolt Shear
		Horizontal	A325N	0.8750	2	2.88	24.47	0.118 ✓	1	Member Bearing
		Redund Horz 1 Bracing	A325N	0.8750	1	5.76	18.49	0.312 ✓	1	Member Bearing
		Redund Diag 1 Bracing	A325N	0.8750	1	3.67	18.49	0.199 ✓	1	Member Bearing
T12	42.3	Diagonal	A325N	1.0000	2	15.64	33.60	0.465 ✓	1	Member Bearing
T13	35.63	Leg	A325N	1.5000	8	42.32	126.47	0.335 ✓	1	Bolt Tension
		Diagonal	A325N	1.0000	2	19.78	35.34	0.560 ✓	1	Bolt Shear
		Horizontal	A325N	1.0000	2	3.46	28.00	0.123 ✓	1	Member Bearing
		Redund Horz 1 Bracing	A325N	1.0000	1	6.91	21.21	0.326 ✓	1	Member Bearing
		Redund Diag 1 Bracing	A325N	1.0000	1	4.30	21.21	0.203 ✓	1	Member Bearing
T14	22.3	Diagonal	A325N	1.0000	2	16.46	35.34	0.466 ✓	1	Bolt Shear
T15	15.63	Leg	F1554-105	1.7500	6	65.76	178.07	0.369 ✓	1	Bolt Tension
		Diagonal	A325N	1.0000	2	20.56	35.34	0.582 ✓	1	Bolt Shear
		Horizontal	A325N	1.0000	2	4.04	28.00	0.144 ✓	1	Member Bearing
		Redund Horz 1	A325N	1.0000	1	8.08	21.21	0.381 ✓	1	Member Bearing

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load / Allowable	Allowable Ratio	Criteria
		Bracing Redund Diag 1 Bracing	A325N	1.0000	1	4.93	21.21	0.232 ✔	1	Member Bearing

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	187.3 - 182.3	P6x.28	5.01	5.01	26.8 K=1.00	5.5813	-5.20	238.34	0.022 [1] ✔
T2	182.3 - 162.3	P6x.28	20.03	10.02	53.5 K=1.00	5.5813	-21.68	203.69	0.106 [1] ✔
T3	162.3 - 142.3	P6x.28	20.03	10.02	53.5 K=1.00	5.5813	-59.23	203.69	0.291 [1] ✔
T4	142.3 - 122.3	P6x.28	20.03	10.02	53.5 K=1.00	5.5813	-111.36	203.69	0.547 [1] ✔
T5	122.3 - 102.3	P8x.322	20.03	10.02	40.9 K=1.00	8.3993	-170.75	334.42	0.511 [1] ✔
T6	102.3 - 95.63	P8x.322	6.68	6.68	27.3 K=1.00	8.3993	-204.10	357.93	0.570 [1] ✔
T7	95.63 - 82.3	P8x.322	13.35	6.68	27.3 K=1.00	8.3993	-203.80	357.96	0.569 [1] ✔
T8	82.3 - 75.63	P8x.5	6.68	6.68	27.9 K=1.00	12.7627	-269.25	542.64	0.496 [1] ✔
T9	75.63 - 62.3	P8x.5	13.35	6.68	27.8 K=1.00	12.7627	-269.22	542.69	0.496 [1] ✔
T10	62.3 - 55.63	P10x.365	6.68	6.68	21.8 K=1.00	11.9083	-332.92	517.53	0.643 [1] ✔
T11	55.63 - 42.3	P10x.365	13.35	6.68	21.8 K=1.00	11.9083	-332.23	517.56	0.642 [1] ✔
T12	42.3 - 35.63	P10x.5	6.68	6.68	22.1 K=1.00	16.1007	-399.20	699.12	0.571 [1] ✔
T13	35.63 - 22.3	P10x.5	13.35	6.68	22.1 K=1.00	16.1007	-398.70	699.16	0.570 [1] ✔
T14	22.3 - 15.63	P12x.5	6.68	6.68	18.5 K=1.00	19.2423	-465.38	844.51	0.551 [1] ✔
T15	15.63 - 2.3	P12x.5	13.35	6.68	18.5 K=1.00	19.2423	-466.20	844.54	0.552 [1] ✔

[1] P_u / ϕP_n controls

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	187.3 - 182.3	L3 1/2x3 1/2x1/4	19.41	9.41	162.7 K=1.00	1.6900	-2.18	18.27	0.119 [1] ✔
T2	182.3 - 162.3	L4x4x1/4	22.81	11.24	169.7 K=1.00	1.9400	-8.16	19.29	0.423 [1] ✔
T3	162.3 - 142.3	L5x5x5/16	24.62	12.15	146.7 K=1.00	3.0300	-14.52	40.32	0.360 [1] ✔
T4	142.3 - 122.3	L5x5x5/16	26.46	13.01	148.2 K=0.94	3.0300	-19.61	39.46	0.497 [1] ✔
T5	122.3 - 102.3	L5x5x3/8	28.33	13.82	156.2 K=0.93	3.6100	-22.18	42.34	0.524 [1] ✔
T6	102.3 - 95.63	L6x6x3/8	15.06	14.07	133.5 K=0.94	4.3600	-26.05	70.03	0.372 [1] ✔
T7	95.63 - 82.3	L6x4x1/2	19.70	18.63	194.4 K=1.00	4.7500	-32.97	35.98	0.916 [1] ✔
T8	82.3 - 75.63	L6x6x3/8	15.96	15.05	139.5 K=0.92	4.3600	-26.86	64.12	0.419 [1] ✔
T9	75.63 - 62.3	L6x6x3/8	20.45	19.45	124.2 K=1.00	4.3600	-34.60	80.62	0.429 [1] ✔
T10	62.3 - 55.63	L6x6x3/8	16.88	15.87	144.6 K=0.90	4.3600	-29.19	59.68	0.489 [1] ✔
T11	55.63 - 42.3	L6x6x3/8	21.22	20.12	128.4 K=1.00	4.3600	-37.67	75.67	0.498 [1] ✔
T12	42.3 - 35.63	L6x6x3/8	17.80	16.73	150.0 K=0.89	4.3600	-30.64	55.49	0.552 [1] ✔
T13	35.63 - 22.3	L6x6x1/2	22.00	20.86	134.6 K=1.00	5.7500	-39.57	90.90	0.435 [1] ✔
T14	22.3 - 15.63	L6x6x1/2	18.73	17.58	156.1 K=0.87	5.7500	-32.43	67.51	0.480 [1] ✔
T15	15.63 - 2.3	L6x6x1/2	22.81	21.57	139.1 K=1.00	5.7500	-41.11	85.00	0.484 [1] ✔

[1] P_u / ϕP_n controls

Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T7	95.63 - 82.3	L4x4x5/16	27.67	13.18	181.0 K=0.91	2.4000	-3.53	20.97	0.169 [1] ✔
T9	75.63 - 62.3	L4x4x5/16	29.67	14.21	192.9 K=0.89	2.4000	-4.67	18.46	0.253 [1] ✔
T11	55.63 - 42.3	L5x5x5/16	31.67	15.13	167.7 K=0.92	3.0300	-5.76	30.82	0.187 [1] ✔
T13	35.63 - 22.3	L5x5x5/16	33.67	16.09	176.6 K=0.91	3.0300	-6.91	27.79	0.249 [1] ✔
T15	15.63 - 2.3	L5x5x5/16	35.67	17.01	185.1	3.0300	-8.08	25.32	0.319 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
					K=0.90				✔

[1] P_u / ϕP_n controls

Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	187.3 - 182.3	L5x5x5/16	18.50	17.68	213.4 K=1.00	3.0300	-0.87	19.04	0.046 [1] ✔
		KL/R > 200 (C) - 6							

[1] P_u / ϕP_n controls

Redundant Horizontal (1) Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T7	95.63 - 82.3	L3x3x1/4	6.92	6.22	126.2 K=1.00	1.4400	-3.53	25.89	0.136 [1] ✔
T9	75.63 - 62.3	L3x3x1/4	7.42	6.76	136.9 K=1.00	1.4400	-4.67	21.98	0.212 [1] ✔
T11	55.63 - 42.3	L3x3x5/16	7.92	7.17	146.0 K=1.00	1.7800	-5.76	23.90	0.241 [1] ✔
T13	35.63 - 22.3	L3x3x5/16	8.42	7.64	155.6 K=1.00	1.7800	-6.91	21.05	0.328 [1] ✔
T15	15.63 - 2.3	L4x3 1/2x5/16	8.92	8.05	132.4 K=1.00	2.2500	-8.08	36.76	0.220 [1] ✔

[1] P_u / ϕP_n controls

Redundant Diagonal (1) Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T7	95.63 - 82.3	L3x3x1/4	9.37	8.53	172.8 K=1.00	1.4400	-2.39	13.80	0.173 [1] ✔
T9	75.63 - 62.3	L3x3x1/4	9.73	8.93	181.1 K=1.00	1.4400	-3.06	12.57	0.244 [1] ✔
T11	55.63 - 42.3	L3x3x5/16	10.10	9.20	187.4 K=1.00	1.7800	-3.67	14.50	0.253 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T13	35.63 - 22.3	L3x3x5/16	10.48	9.56	194.9 K=1.00	1.7800	-4.30	13.42	0.321 [1]
T15	15.63 - 2.3	L4x3 1/2x5/16	10.87	9.86	162.1 K=1.00	2.2500	-4.93	24.50	0.201 [1]

[1] P_u / ϕP_n controls

Inner Bracing Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T7	95.63 - 82.3	L3x3x1/4	13.83	13.83	280.4 K=1.00	1.4400	-0.05	5.24	0.009 [1]
T9	75.63 - 62.3	KL/R > 250 (C) - 106 L3x3x1/4	14.83	14.83	300.7 K=1.00	1.4400	-0.05	4.56	0.010 [1]
T11	55.63 - 42.3	KL/R > 250 (C) - 142 L3 1/2x3 1/2x1/4	15.83	15.83	273.8 K=1.00	1.6900	-0.05	6.45	0.008 [1]
T13	35.63 - 22.3	KL/R > 250 (C) - 180 L3 1/2x3 1/2x1/4	16.83	16.83	291.1 K=1.00	1.6900	-0.05	5.71	0.009 [1]
T15	15.63 - 2.3	KL/R > 250 (C) - 215 L3 1/2x3 1/2x1/4	17.83	17.83	308.4 K=1.00	1.6900	-0.05	5.09	0.011 [1]
		KL/R > 250 (C) - 251							

[1] P_u / ϕP_n controls

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	187.3 - 182.3	P6x.28	5.01	5.01	26.8	5.5813	0.51	251.16	0.002 [1]
T2	182.3 - 162.3	P6x.28	20.03	10.02	53.5	5.5813	13.55	251.16	0.054 [1]
T3	162.3 - 142.3	P6x.28	20.03	10.02	53.5	5.5813	44.19	251.16	0.176 [1]
T4	142.3 - 122.3	P6x.28	20.03	10.02	53.5	5.5813	88.06	251.16	0.351 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T5	122.3 - 102.3	P8x.322	20.03	10.02	40.9	8.3993	140.93	377.97	0.373 [1]
T6	102.3 - 95.63	P8x.322	6.68	6.68	27.3	8.3993	171.46	377.97	0.454 [1]
T7	95.63 - 82.3	P8x.322	13.35	6.68	27.3	8.3993	169.48	377.97	0.448 [1]
T8	82.3 - 75.63	P8x.5	6.68	6.68	27.9	12.7627	228.56	574.32	0.398 [1]
T9	75.63 - 62.3	P8x.5	13.35	6.68	27.8	12.7627	226.95	574.32	0.395 [1]
T10	62.3 - 55.63	P10x.365	6.68	6.68	21.8	11.9083	284.35	535.87	0.531 [1]
T11	55.63 - 42.3	P10x.365	13.35	6.68	21.8	11.9083	282.11	535.87	0.526 [1]
T12	42.3 - 35.63	P10x.5	6.68	6.68	22.1	16.1007	341.43	724.53	0.471 [1]
T13	35.63 - 22.3	P10x.5	13.35	6.68	22.1	16.1007	339.01	724.53	0.468 [1]
T14	22.3 - 15.63	P12x.5	6.68	6.68	18.5	19.2423	396.98	865.90	0.458 [1]
T15	15.63 - 2.3	P12x.5	13.35	6.68	18.5	19.2423	395.08	865.90	0.456 [1]

[1] P_u / ϕP_n controls

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	187.3 - 182.3	L3 1/2x3 1/2x1/4	19.41	9.41	105.1	1.6900	2.20	54.76	0.040 [1]
T2	182.3 - 162.3	L4x4x1/4	22.81	11.24	109.2	1.9400	7.48	62.86	0.119 [1]
T3	162.3 - 142.3	L5x5x5/16	24.62	12.15	93.9	3.0300	14.53	98.17	0.148 [1]
T4	142.3 - 122.3	L5x5x5/16	26.46	13.01	100.9	3.0300	19.82	98.17	0.202 [1]
T5	122.3 - 102.3	L5x5x3/8	28.33	13.82	108.0	3.6100	22.51	116.96	0.192 [1]
T6	102.3 - 95.63	L6x6x3/8	15.06	14.07	93.6	4.3600	25.36	141.26	0.180 [1]
T7	95.63 - 82.3	L6x4x1/2	19.70	18.63	200.5	4.7500	31.45	153.90	0.204 [1]
T8	82.3 - 75.63	L6x6x3/8	15.96	15.05	99.4	4.3600	27.52	141.26	0.195 [1]
T9	75.63 - 62.3	L6x6x3/8	20.45	19.45	127.5	4.3600	33.72	141.26	0.239 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T10	62.3 - 55.63	L6x6x3/8	16.88	15.87	104.6	4.3600	29.55	141.26	0.209 [1] ✔
T11	55.63 - 42.3	L6x6x3/8	21.22	20.12	131.7	4.3600	36.20	141.26	0.256 [1] ✔
T12	42.3 - 35.63	L6x6x3/8	17.80	16.73	110.5	4.3600	31.28	141.26	0.221 [1] ✔
T13	35.63 - 22.3	L6x6x1/2	22.00	20.86	138.3	5.7500	38.10	186.30	0.205 [1] ✔
T14	22.3 - 15.63	L6x6x1/2	18.73	17.58	117.2	5.7500	32.91	186.30	0.177 [1] ✔
T15	15.63 - 2.3	L6x6x1/2	22.81	21.57	142.9	5.7500	39.61	186.30	0.213 [1] ✔

[1] P_u / ϕP_n controls

Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T7	95.63 - 82.3	L4x4x5/16	27.67	13.18	130.4	2.4000	3.53	77.76	0.045 [1] ✔
T9	75.63 - 62.3	L4x4x5/16	29.67	14.21	140.1	2.4000	4.67	77.76	0.060 [1] ✔
T11	55.63 - 42.3	L5x5x5/16	31.67	15.13	117.6	3.0300	5.76	98.17	0.059 [1] ✔
T13	35.63 - 22.3	L5x5x5/16	33.67	16.09	125.2	3.0300	6.91	98.17	0.070 [1] ✔
T15	15.63 - 2.3	L5x5x5/16	35.67	17.01	132.2	3.0300	8.08	98.17	0.082 [1] ✔

[1] P_u / ϕP_n controls

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	187.3 - 182.3	L5x5x5/16	18.50	17.68	137.2	3.0300	0.17	98.17	0.002 [1] ✔

[1] P_u / ϕP_n controls

Redundant Horizontal (1) Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T7	95.63 - 82.3	L3x3x1/4	6.92	6.22	84.6	0.8691	3.53	37.80	0.093 [1] ✔
T9	75.63 - 62.3	L3x3x1/4	7.42	6.76	91.1	0.8925	4.67	38.82	0.120 [1] ✔
T11	55.63 - 42.3	L3x3x5/16	7.92	7.17	97.2	1.1006	5.76	47.88	0.120 [1] ✔
T13	35.63 - 22.3	L3x3x5/16	8.42	7.64	103.7	1.0713	6.91	46.60	0.148 [1] ✔
T15	15.63 - 2.3	L4x3 1/2x5/16	8.92	8.05	94.5	1.4238	8.08	61.94	0.131 [1] ✔

[1] P_u / ϕP_n controls

Redundant Diagonal (1) Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T7	95.63 - 82.3	L3x3x1/4	9.37	8.53	114.3	0.8691	2.39	37.80	0.063 [1] ✔
T9	75.63 - 62.3	L3x3x1/4	9.73	8.93	119.2	0.8925	3.06	38.82	0.079 [1] ✔
T11	55.63 - 42.3	L3x3x5/16	10.10	9.20	123.7	1.1006	3.67	47.88	0.077 [1] ✔
T13	35.63 - 22.3	L3x3x5/16	10.48	9.56	128.8	1.0713	4.30	46.60	0.092 [1] ✔
T15	15.63 - 2.3	L4x3 1/2x5/16	10.87	9.86	114.9	1.4238	4.93	61.94	0.080 [1] ✔

[1] P_u / ϕP_n controls

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T1	187.3 - 182.3	Leg	P6x.28	1	-5.20	238.34	2.2	Pass
T2	182.3 - 162.3	Leg	P6x.28	15	-21.68	203.69	10.6	Pass
T3	162.3 - 142.3	Leg	P6x.28	30	-59.23	203.69	29.1	Pass
T4	142.3 - 122.3	Leg	P6x.28	45	-111.36	203.69	54.7	Pass
T5	122.3 - 102.3	Leg	P8x.322	60	-170.75	334.42	51.1	Pass
T6	102.3 - 95.63	Leg	P8x.322	75	-204.10	357.93	57.0	Pass
T7	95.63 - 82.3	Leg	P8x.322	87	-203.80	357.96	56.9	Pass
T8	82.3 - 75.63	Leg	P8x.5	111	-269.25	542.64	49.6	Pass
T9	75.63 - 62.3	Leg	P8x.5	123	-269.22	542.69	49.6	Pass
T10	62.3 - 55.63	Leg	P10x.365	147	-332.92	517.53	64.3	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T11	55.63 - 42.3	Leg	P10x.365	159	-332.23	517.56	64.2	Pass
T12	42.3 - 35.63	Leg	P10x.5	183	-399.20	699.12	57.1	Pass
T13	35.63 - 22.3	Leg	P10x.5	195	-398.70	699.16	57.0	Pass
T14	22.3 - 15.63	Leg	P12x.5	219	-465.38	844.51	55.1	Pass
T15	15.63 - 2.3	Leg	P12x.5	231	-466.20	844.54	55.2	Pass
T1	187.3 - 182.3	Diagonal	L3 1/2x3 1/2x1/4	8	-2.18	18.27	11.9	Pass
							17.4 (b)	
T2	182.3 - 162.3	Diagonal	L4x4x1/4	19	-8.16	19.29	42.3	Pass
							59.3 (b)	
T3	162.3 - 142.3	Diagonal	L5x5x5/16	33	-14.52	40.32	36.0	Pass
							92.2 (b)	
T4	142.3 - 122.3	Diagonal	L5x5x5/16	47	-19.61	39.46	49.7	Pass
							71.8 (b)	
T5	122.3 - 102.3	Diagonal	L5x5x3/8	66	-22.18	42.34	52.4	Pass
							56.6 (b)	
T6	102.3 - 95.63	Diagonal	L6x6x3/8	84	-26.05	70.03	37.2	Pass
							37.7 (b)	
T7	95.63 - 82.3	Diagonal	L6x4x1/2	100	-32.97	35.98	91.6	Pass
T8	82.3 - 75.63	Diagonal	L6x6x3/8	119	-26.86	64.12	41.9	Pass
							50.9 (b)	
T9	75.63 - 62.3	Diagonal	L6x6x3/8	139	-34.60	80.62	42.9	Pass
							63.9 (b)	
T10	62.3 - 55.63	Diagonal	L6x6x3/8	155	-29.19	59.68	48.9	Pass
							54.6 (b)	
T11	55.63 - 42.3	Diagonal	L6x6x3/8	175	-37.67	75.67	49.8	Pass
							69.6 (b)	
T12	42.3 - 35.63	Diagonal	L6x6x3/8	191	-30.64	55.49	55.2	Pass
T13	35.63 - 22.3	Diagonal	L6x6x1/2	211	-39.57	90.90	43.5	Pass
							56.0 (b)	
T14	22.3 - 15.63	Diagonal	L6x6x1/2	227	-32.43	67.51	48.0	Pass
T15	15.63 - 2.3	Diagonal	L6x6x1/2	247	-41.11	85.00	48.4	Pass
							58.2 (b)	
T7	95.63 - 82.3	Horizontal	L4x4x5/16	79	-3.53	20.97	16.9	Pass
T9	75.63 - 62.3	Horizontal	L4x4x5/16	115	-4.67	18.46	25.3	Pass
T11	55.63 - 42.3	Horizontal	L5x5x5/16	151	-5.76	30.82	18.7	Pass
T13	35.63 - 22.3	Horizontal	L5x5x5/16	187	-6.91	27.79	24.9	Pass
T15	15.63 - 2.3	Horizontal	L5x5x5/16	223	-8.08	25.32	31.9	Pass
T1	187.3 - 182.3	Top Girt	L5x5x5/16	6	-0.87	19.04	4.6	Pass
T7	95.63 - 82.3	Redund Horz 1 Bracing	L3x3x1/4	98	-3.53	25.89	13.6	Pass
							20.8 (b)	
T9	75.63 - 62.3	Redund Horz 1 Bracing	L3x3x1/4	137	-4.67	21.98	21.2	Pass
							31.6 (b)	
T11	55.63 - 42.3	Redund Horz 1 Bracing	L3x3x5/16	170	-5.76	23.90	24.1	Pass
							31.2 (b)	
T13	35.63 - 22.3	Redund Horz 1 Bracing	L3x3x5/16	206	-6.91	21.05	32.8	Pass
T15	15.63 - 2.3	Redund Horz 1 Bracing	L4x3 1/2x5/16	242	-8.08	36.76	22.0	Pass
							38.1 (b)	
T7	95.63 - 82.3	Redund Diag 1 Bracing	L3x3x1/4	99	-2.39	13.80	17.3	Pass
T9	75.63 - 62.3	Redund Diag 1 Bracing	L3x3x1/4	135	-3.06	12.57	24.4	Pass
T11	55.63 - 42.3	Redund Diag 1 Bracing	L3x3x5/16	171	-3.67	14.50	25.3	Pass
T13	35.63 - 22.3	Redund Diag 1 Bracing	L3x3x5/16	210	-4.30	13.42	32.1	Pass
T15	15.63 - 2.3	Redund Diag 1 Bracing	L4x3 1/2x5/16	243	-4.93	24.50	20.1	Pass
							23.2 (b)	
T7	95.63 - 82.3	Inner Bracing	L3x3x1/4	107	-0.04	5.24	1.1	Pass
T9	75.63 - 62.3	Inner Bracing	L3x3x1/4	143	-0.05	4.56	1.1	Pass
T11	55.63 - 42.3	Inner Bracing	L3 1/2x3 1/2x1/4	180	-0.05	6.45	1.1	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T13	35.63 - 22.3	Inner Bracing	L3 1/2x3 1/2x1/4	216	-0.05	5.71	1.1	Pass
T15	15.63 - 2.3	Inner Bracing	L3 1/2x3 1/2x1/4	251	-0.05	5.09	1.1	Pass
							Summary	
						Leg (T10)	64.3	Pass
						Diagonal (T3)	92.2	Pass
						Horizontal (T15)	31.9	Pass
						Top Girt (T1)	4.6	Pass
						Redund Horz 1 Bracing (T15)	38.1	Pass
						Redund Diag 1 Bracing (T13)	32.1	Pass
						Inner Bracing (T13)	1.1	Pass
						Bolt Checks	92.2	Pass
						RATING =	**92.2**	**Pass**

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Subject:	FOUNDATION ANALYSIS
Location:	Bloomfield, CT
Rev. 0: 7/8/21	Prepared by: T.J.L. Checked by: C.F.C. Job No. 21022.20

Pier and Mat Foundation Analysis:

Input Data:

Tower Data

Overturning Moment =	$OM := 15359 \cdot ft \cdot kips$	(User Input from tnxTower)	
Shear Force =	$S_t := 142 \cdot kip$	(User Input from tnxTower)	
Axial Force =	$WT_t := 99 \cdot kip$	(User Input from tnxTower)	
Max Compression Force =	$C_t := 511 \cdot kip$	(User Input from tnxTower)	
Max Uplift Force =	$U_t := 434 \cdot kip$	(User Input from tnxTower)	
Tower Height =	$H_t := 185 \cdot ft$	(User Input)	
Tower Width =	$W_t := 37 \cdot ft$	(User Input)	
Tower Position on Foundation (1=offset, 2=centered) =	$Pos_t := 1$	(User Input)	

Footing Data:

Overall Depth of Footing =	$D_f := 6.5 \cdot ft$	(User Input)	
Length of Pier =	$L_p := 5.5 \cdot ft$	(User Input)	
Extension of Pier Above Grade =	$L_{pag} := 0.5 \cdot ft$	(User Input)	
Diameter of Pier =	$d_p := 6.0 \cdot ft$	(User Input)	
Thickness of Footing =	$T_f := 1.5 \cdot ft$	(User Input)	
Width of Footing =	$W_f := 45.5 \cdot ft$	(User Input)	

Material Properties:

Concrete Compressive Strength =	$f_c := 4500 \cdot psi$	(User Input)	
Steel Reinforcment Yield Strength =	$f_y := 60000 \cdot psi$	(User Input)	
Internal Friction Angle of Soil =	$\Phi_s := 30 \cdot deg$	(User Input)	
Allowable Soil Bearing Capacity =	$q_s := 20000 \cdot psf$	(User Input)	
Unit Weight of Soil =	$\gamma_{soil} := 100 \cdot pcf$	(User Input)	
Unit Weight of Concrete =	$\gamma_{conc} := 150 \cdot pcf$	(User Input)	
Foundation Bouyancy =	$Bouyancy := 0$	(User Input)	(Yes=1 / No=0)
Depth to Neglect =	$n := 0 \cdot ft$	(User Input)	
Cohesion of Clay Type Soil =	$c := 0 \cdot ksf$	(User Input)	(Use 0 for Sandy Soil)
Seismic Zone Factor =	$Z := 2$	(User Input)	(UBC-1997 Fig 23-2)
Coefficient of Friction Between Concrete =	$\mu := 0.45$	(User Input)	

Pier Reinforcement:

Bar Size =	$BS_{pier} := 7$	(User Input)	
Bar Diameter =	$d_{bpier} := 0.875 \cdot in$	(User Input)	
Number of Bars =	$NB_{pier} := 34$	(User Input)	
Clear Cover of Reinforcement =	$Cvr_{pier} := 3 \cdot in$	(User Input)	
Reinforcement Location Factor =	$\alpha_{pier} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Coating Factor =	$\beta_{pier} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Concrete Strength Factor =	$\lambda_{pier} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Reinforcement Size Factor =	$\gamma_{pier} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Diameter of Tie =	$d_{Tie} := 0.5 \cdot in$	(User Input)	

Pad Reinforcement:

Bar Size =	$BS_{top} := 10$	(User Input)	(Top of Pad)
Bar Diameter =	$d_{btop} := 1.27 \cdot in$	(User Input)	(Top of Pad)
Number of Bars =	$NB_{top} := 75$	(User Input)	(Top of Pad)
Bar Size =	$BS_{bot} := 10$	(User Input)	(Bottom of Pad)
Bar Diameter =	$d_{bbot} := 1.27 \cdot in$	(User Input)	(Bottom of Pad)
Number of Bars =	$NB_{bot} := 75$	(User Input)	(Bottom of Pad)
Clear Cover of Reinforcement =	$Cvr_{pad} := 3.0 \cdot in$	(User Input)	
Reinforcement Location Factor =	$\alpha_{pad} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Coating Factor =	$\beta_{pad} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Concrete Strength Factor =	$\lambda_{pad} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Reinforcement Size Factor =	$\gamma_{pad} := 1.0$	(User Input)	(ACI-2008 12.2.4)

Calculated Factors:

Pier Reinforcement Bar Area = $A_{bpier} := \frac{\pi \cdot d_{bpier}^2}{4} = 0.601 \cdot in^2$

Pad Top Reinforcement Bar Area = $A_{btop} := \frac{\pi \cdot d_{btop}^2}{4} = 1.267 \cdot in^2$

Pad Bottom Reinforcement Bar Area = $A_{bbot} := \frac{\pi \cdot d_{bbot}^2}{4} = 1.267 \cdot in^2$

Coefficient of Lateral Soil Pressure = $K_p := \frac{1 + \sin(\Phi_s)}{1 - \sin(\Phi_s)} = 3$

Load Factor = $LF := 1$

Stability of Footing:

Adjusted Concrete Unit Weight = $\gamma_c := if(Bouyancy = 1, \gamma_{conc} - 62.4pcf, \gamma_{conc}) = 150 \cdot pcf$

Adjusted Soil Unit Weight = $\gamma_s := if(Bouyancy = 1, \gamma_{soil} - 62.4pcf, \gamma_{soil}) = 100 \cdot pcf$

Passive Pressure = $P_{pn} := K_p \cdot \gamma_s \cdot n + c \cdot 2 \cdot \sqrt{K_p} = 0 \cdot ksf$

$P_{pt} := K_p \cdot \gamma_s \cdot (D_f - T_f) + c \cdot 2 \cdot \sqrt{K_p} = 1.5 \cdot ksf$

$P_{top} := if[n < (D_f - T_f), P_{pt}, P_{pn}] = 1.5 \cdot ksf$

$P_{bot} := K_p \cdot \gamma_s \cdot D_f + c \cdot 2 \cdot \sqrt{K_p} = 1.95 \cdot ksf$

$P_{ave} := \frac{P_{top} + P_{bot}}{2} = 1.725 \cdot ksf$

$T_p := if[n < (D_f - T_f), T_f, (D_f - n)] = 1.5 \cdot ft$

$A_p := W_f \cdot T_p = 68.25 \cdot ft^2$

Ultimate Shear = $S_u := P_{ave} \cdot A_p = 117.731 \cdot kip$

Weight of Concrete = $WT_c := \left[\left(W_f^2 \cdot T_f\right) + (3) \cdot \left(\frac{d_p^2 \cdot \pi}{4} L_p\right)\right] \cdot \gamma_c = 535.785 \cdot kip$

Weight of Soil Above Footing = $WT_{s1} := \left[\left[W_f^2 - (3) \cdot \left(\frac{d_p^2 \cdot \pi}{4}\right)\right] \cdot \left(|L_p - L_{pag} - n|\right)\right] \cdot \gamma_s = 992.71 \cdot kip$

Tower Offset = $X_{t1} := \left[\frac{W_f}{2} - \frac{(W_t \cdot \cos(30 \cdot deg))}{2}\right]$ $X_{t2} := \frac{W_f}{2} - \frac{(W_t \cdot \cos(30 \cdot deg))}{3}$

$X_t := if(Pos_t = 1, X_{t1}, X_{t2}) = 6.729$

$X_{off1} := \frac{W_f}{2} - \left[\frac{(W_t \cdot \cos(30 \cdot deg))}{3} + X_t\right] = 5.34$ $X_{off2} := 0$

$X_{off} := if(Pos_t = 1, X_{off1}, X_{off2})$ $X_{off} = 5.34 \cdot ft$

Total Weight = $WT_{tot} := 0.9WT_c + 0.75WT_{s1} = 1226.7 \cdot kip$

Resisting Moment = $M_r := (WT_{tot}) \cdot \frac{W_f}{2} + 0.9WT_t \cdot \left(\frac{W_f}{2} - X_{off}\right) + 0.75\left(S_u \cdot \frac{T_p}{3}\right) = 29504 \cdot kip \cdot ft$

Overturning Moment = $M_{ot} := OM + S_t \cdot (L_p + T_f) = 16353 \cdot kip \cdot ft$

Factor of Safety Actual = $FS := \frac{M_r}{M_{ot}} = 1.8$

Factor of Safety Required = $FS_{req} := 1$ $OverTurning\_Moment\_Check := if(FS \geq FS_{req}, "Okay", "No Good")$

OverTurning_Moment_Check = "Okay"

Shear Capacity in Pier:

Shear Resistance of Pier = $S_p := \frac{P_{ave} \cdot A_p + \mu \cdot WT_{tot}}{FS_{req}} = 669.765 \cdot kips$

$Shear\_Check := if(S_p > S_t, "Okay", "No Good")$

Shear_Check = "Okay"

Bearing Pressure Caused by Footing:

Total Load = $Load_{tot} := WT_c + WT_{s1} + WT_t = 1627 \cdot kip$

Area of the Mat = $A_{mat} := W_f^2 = 2.07 \times 10^3$

Section Modulus of Mat = $S := \frac{W_f^3}{6} = 1.57 \times 10^4 \cdot ft^3$

Maximum Pressure in Mat = $P_{max} := \frac{Load_{tot}}{A_{mat}} + \frac{M_{ot}}{S} = 1.828 \cdot ksf$

$Max\_Pressure\_Check := if(P_{max} < 0.75q_s, "Okay", "No Good")$

Max_Pressure_Check = "Okay"

Minimum Pressure in Mat = $P_{min} := \frac{Load_{tot}}{A_{mat}} - \frac{M_{ot}}{S} = -0.255 \cdot ksf$

$Min\_Pressure\_Check := if[(P_{min} \geq 0) \cdot (P_{min} < 0.75q_s), "Okay", "No Good"]$

Min_Pressure_Check = "No Good"

Distance to Resultant of Pressure Distribution = $X_p := \frac{P_{max}}{\frac{P_{max} - P_{min}}{W_f}} \cdot \frac{1}{3} = 13.307$

Distance to Kern = $X_k := \frac{W_f}{6} = 7.583$

Since Resultant Force is Not in Kern, Area to which Pressure is Applied Must be Reduced.

Eccentricity = $e := \frac{M_{ot}}{Load_{tot}} = 10.048$

Adjusted Soil Pressure = $P_a := \frac{2 \cdot Load_{tot}}{3 \cdot W_f \cdot \left(\frac{W_f}{2} - e\right)} = 1.877 \cdot ksf$

$q_{adj} := if(P_{min} < 0, P_a, P_{max}) = 1.877 \cdot ksf$

$Pressure\_Check := if(q_{adj} < 0.75q_s, "Okay", "No Good")$

Pressure_Check = "Okay"

Concrete Bearing Capacity:

Strength Reduction Factor = $\Phi_c := 0.65$ (ACI-2008 9.3.2.2)

Bearing Strength Between Pier and Pad = $P_b := \Phi_c \cdot 0.85 \cdot f_c \cdot \frac{\pi \cdot d_p^2}{4} = 1.012 \times 10^4 \cdot kips$ (ACI-2008 10.14)

$Bearing\_Check := if\left(P_b > LF \cdot C_t, "Okay", "No Good"\right)$

Bearing_Check = "Okay"

Shear Strength of Concrete:

Beam Shear: (Critical section located at a distance d from the face of Pier) (ACI 11.3.1.1)

$\phi_c := 0.85$ (ACI 9.3.2.5)

$d := T_f - Cvr_{pad} - d_{bbot} = 13.73 \cdot in$

$FL := LF \cdot \frac{C_t}{W_f^2} = 0.247 \cdot ksf$

$V_{req} := FL \cdot \left(X_t - .5 \cdot d_p - d\right) \cdot W_f = 29.024 \cdot kips$

$V_{Avail} := \phi_c \cdot 2 \cdot \sqrt{f_c \cdot psi} \cdot W_f \cdot d = 855 \cdot kip$ (ACI-2008 11.2.1.1)

$Beam\_Shear\_Check := if\left(V_{req} < V_{Avail}, "Okay", "No Good"\right)$

Beam_Shear_Check = "Okay"

Punching Shear: (Critical Section Located at a distance of d/2 from the face of pier) (ACI 11.11.1.2)

Critical Perimeter of Punching Shear = $b_o := \left(d_p + d\right) \cdot \pi = 22.4$

Area Included Inside Perimeter = $A_{bo} := \frac{\pi \cdot \left(d_p + d\right)^2}{4} = 40.1$

Required Shear Strength = $V_{req} := FL \cdot \left(W_f^2 - A_{bo}\right) = 501 \cdot kips$

Available Shear Strength = $V_{Avail} := \phi_c \cdot 4 \cdot \sqrt{f_c \cdot psi} \cdot b_o \cdot d = 843.4 \cdot kip$ (ACI-2008 11.11.2.1)

$Punching\_Shear\_Check := if\left(V_{req} < V_{Avail}, "Okay", "No Good"\right)$

Punching_Shear_Check = "Okay"

Steel Reinforcement in Pad:

Required Reinforcement for Bending:

Strength Reduction Factor = $\phi_m := .90$ (ACI-2008 9.3.2.1)

Maximum Moment in Pad = $M_{max} := 1500 \cdot kip \cdot ft$ (User Input)

Design Moment = $M_n := \frac{LF \cdot M_{max}}{\phi_m} = 1.667 \times 10^3 \cdot kips \cdot ft$

$$\beta := \begin{cases} 0.85 & \text{if } 2500 \cdot psi \le f_c \le 4000 \cdot psi \\ 0.65 & \text{if } f_c > 8000 \cdot psi \\ \left[0.85 - \left[\frac{\left(\frac{f_c}{psi} - 4000\right)}{1000}\right] \cdot 0.5\right] & \text{otherwise} \end{cases} = 0.6$$

(ACI-200810.2.7.3)

$b_{eff} := W_t \cdot \cos(30 \cdot deg) + d_p = 456.515 \cdot in$

$A_s := \frac{M_n}{(f_y \cdot d)} = 24.278 \cdot in^2$

$a := \frac{A_s \cdot f_y}{\beta \cdot f_c \cdot b_{eff}} = 1.182 \cdot in$

$A_s := \frac{M_n}{f_y \cdot \left(d - \frac{a}{2}\right)} = 25.37 \cdot in^2$

$\rho := \frac{A_s}{b_{eff} d} = 0.04857 \cdot in$

Required Reinforcement for Temperature and Shrinkage:

$$\rho_{sh} := \begin{cases} .0018 & \text{if } f_y \geq 60000 \cdot psi \\ .0020 & \text{otherwise} \end{cases} = 0.0018$$ (ACI-2008 7.12.2.1)

Check Bottom Bars:

$$As := if\left(\rho \geq \rho_{sh}, A_s, \rho_{sh} \cdot \frac{b_{eff}}{2} \cdot d\right) = 25.4 \cdot in^2$$

$$As_{prov} := A_{bbot} \cdot NB_{bot} = 95 \cdot in^2$$

$$Pad\_Reinforcement\_Bot := if\left(As_{prov} > As, "Okay", "No\ Good"\right)$$

Pad_Reinforcement_Bot = "Okay"

Check top Bars:

$$As := if\left(\rho \geq \rho_{sh}, A_s, \rho_{sh} \cdot \frac{b_{eff}}{2} \cdot d\right) = 25.4 \cdot in^2$$

$$As_{prov} := A_{btop} \cdot NB_{top} = 95 \cdot in^2$$

$$Pad\_Reinforcement\_Top := if\left(As_{prov} > As, "Okay", "No\ Good"\right)$$

Pad_Reinforcement_Top = "Okay"

Developement Length Pad Reinforcement:

Bar Spacing =

$$B_{sPad} := \frac{W_f - 2 \cdot Cvr_{pad} - NB_{bot} \cdot d_{bbot}}{NB_{bot} - 1} = 6.01 \cdot in$$

Spacing or Cover Dimension =

$$c := if\left(Cvr_{pad} < \frac{B_{sPad}}{2}, Cvr_{pad}, \frac{B_{sPad}}{2}\right) = 3 \cdot in$$

Transverse Reinforcement Index =

$$k_{tr} := 0$$ (ACI-2008 12.2.3)

$$L_{dbt} := \frac{3 \cdot f_y \alpha_{pad} \cdot \beta_{pad} \cdot \gamma_{pad} \cdot \lambda_{pad}}{40 \cdot \sqrt{f_c \cdot psi} \cdot \frac{c + k_{tr}}{d_{bbot}}} \cdot d_{bbot} = 36.1 \cdot in$$

Minimum Development Length =

$$L_{dbmin} := 12 \cdot in$$ (ACI-2008 12.2.1)

$$L_{dbtCheck} := if\left(L_{dbt} \geq L_{dbmin}, "Use\ L.dbt", "Use\ L.dbmin"\right) = "Use\ L.dbt"$$

Available Length in Pad =

$$L_{Pad} := \frac{W_f}{2} - \frac{W_t}{2} - Cvr_{pad} = 48 \cdot in$$

$$Lpad\_Check := if\left(L_{Pad} > L_{dbt}, "Okay", "No\ Good"\right)$$

Lpad_Check = "Okay"

Steel Reinforcement in Pier:

Area of Pier = $A_p := \frac{\pi \cdot d_p^2}{4} = 4071.5 \cdot in^2$

$A_{smin} := 0.01 \cdot 0.5 \cdot A_p = 20.36 \cdot in^2$ (ACI-2008 10.8.4 & 10.9.1)

$A_{sprov} := NB_{pier} \cdot A_{bpier} = 20.44 \cdot in^2$

$Steel\_Area\_Check := if(A_{sprov} > A_{smin}, "Okay", "No Good")$

Steel_Area_Check = "Okay"

Bar Spacing In Pier = $B_{sPier} := \frac{d_p \cdot \pi}{NB_{pier}} - d_{bpier} = 5.778 \cdot in$

Diameter of Reinforcement Cage = $Diam_{cage} := d_p - 2 \cdot Cvr_{pier} = 66 \cdot in$

Maximum Moment in Pier = $M_p := S_t \cdot (L_p) \cdot LF = 9372 \cdot in \cdot kips$

Pier Check evaluated from outside program and results are listed below;

$(D \;\; N \;\; n \;\; P_u \;\; M_{xu}) := \left(d_p \cdot 12 \;\; NB_{pier} \;\; BS_{pier} \;\; \frac{C_t \cdot 1.333}{kips} \;\; \frac{M_p}{in \cdot kips}\right)$

$(D \;\; N \;\; n \;\; P_u \;\; M_{xu}) = (72 \;\; 34 \;\; 7 \;\; 681.163 \;\; 9.372 \times 10^3)$

$(\phi P_n \;\; \phi M_{xn} \;\; f_{sp} \;\; \rho) := (0 \;\; 0 \;\; 0 \;\; 0)$

$(\phi P_n \;\; \phi M_{xn} \;\; f_{sp} \;\; \rho) := \phi P'_n(D, N, n, P_u, M_{xu})^T$

$(\phi P_n \;\; \phi M_{xn} \;\; f_{sp} \;\; \rho) = (4.739 \times 10^3 \;\; 6.521 \times 10^4 \;\; -49.799 \;\; 5.01 \times 10^{-3})$

$Axial\_Load\_Check := if(\phi P_n \geq P_u, "Okay", "No Good")$

Axial_Load_Check = "Okay"

$Bending\_Check := if(\phi M_{xn} \geq M_{xu}, "Okay", "No Good")$

Bending_Check = "Okay"

Development Length Pier Reinforcement:

Available Length in Foundation:

$L_{pier} := L_p - Cvr_{pier} = 63 \cdot in$

$L_{pad} := T_f - Cvr_{pad} = 15 \cdot in$

Tension: (ACI-2008 12.2.3)

Spacing or Cover Dimension =

$c := if\left(Cvr_{pier} < \frac{B_{sPier}}{2}, Cvr_{pier}, \frac{B_{sPier}}{2}\right) = 2.889 \cdot in$

Transverse Reinforcement = $k_{tr} := 0$ (ACI-2008 12.2.3)

$L_{dbt} := \frac{3 \cdot f_y \alpha_{pier} \cdot \beta_{pier} \cdot \gamma_{pier} \cdot \lambda_{pier}}{40 \cdot \sqrt{f_c \cdot psi} \cdot \left(\frac{c + k_{tr}}{d_{bpier}}\right)} \cdot d_{bpier} = 17.78 \cdot in$

Minimum Development Length = $L_{dh} := \frac{1200 \cdot d_{bpier}}{\sqrt{\frac{f_c}{psi}}} \cdot .7 = 10.957 \cdot in$ (ACI 12.2.1)

Pier reinforcement bars are standard 90 degree hooks and therefore developement in the pad is computed as follows:

$L_{db} := \max\left(L_{dbt}, L_{dbmin}\right) = 17.778 \cdot in$

$L_{tension\_Check} := if\left(L_{pier} + L_{pad} > L_{dbt}, "Okay", "No Good"\right)$

$L_{tension\_Check} = "Okay"$

Compression: (ACI-2008 12.3.2)

$L_{dbc1} := \frac{.02 \cdot d_{bpier} \cdot f_y}{\sqrt{f_c \cdot psi}} = 15.652 \cdot in$

$L_{dbmin} := 0.0003 \cdot \frac{in^2}{lb} \cdot \left(d_{bpier} \cdot f_y\right) = 15.75 \cdot in$

$L_{dbc} := if\left(L_{dbc1} \geq L_{dbmin}, L_{dbc1}, L_{dbmin}\right) = 15.75 \cdot in$

$L_{compression\_Check} := if\left(L_{pier} + L_{pad} > L_{dbc}, "Okay", "No Good"\right)$

$L_{compression\_Check} = "Okay"$

verizon fuze | RFDS

NORTH EAST > North East > New England > New England West > TARIFFVILLE CT RELO - Talcott Mtn

Brauer, Mark - mark.brauer2@verizonwireless.com - 1/15/2021 14:37:1

Project Details

Carrier Aggregation:	false
MPT Id:	
eCIP-0:	false
Project Name:	5G L-Sub6 - Carrier Add
FUZE Project ID:	16272423
Designed Sector Carrier 4G:	15
Designed Sector Carrier 5G:	N/A
Additional Sector Carrier 4G:	N/A
Additional Sector Carrier 5G:	N/A
SiteTraker Project Id:	
FP Solution Type & Tech Type:	MODIFICATION;4G_850,5G_L-Sub6-Prep,5G_Radio Swap
Suffix:	

Location Information

Site ID:	1702601
E-NodeB ID:	068718
PSLC:	470975
Switch Name:	Windsor 1
Tower Owner:	
Tower Type:	Other
Site Type:	MACRO
Street Address:	Talcott Mtn
City:	Bloomfileld
State:	CT
Zip Code:	06002
County:	Hartford
Latitude:	41.89284028 / 41° 53' 34.225" N
Longitude:	-72.76550472 / 72° 45' 55.817" W

RFDS Project Scope:

Sub 6 add
Samsung RRH upgrade
850 add
Update 01/15/2021 - per Andrew Leone
Added: (1) LI 12x24 Hybrid cable - (1) 12 OVP
Removed: (2) 6x12 Hybrids - (2) 6 OVP

Antenna Summary

Added

700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	L-Sub	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity
LTE	LTE	LTE	LTE								COMMSCOPE	NHH-65B-R2B	155	158	20(1) 180(2) 270(3)	true	true	PHYSICAL	6
										5G	TBD	nL-Sub6 Antenna	155	157.1	20(0001) 180(0002) 270(0003)	false	false	PHYSICAL	3

Removed

700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	L-Sub	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity
		LTE	LTE								ANDREW	HBXX-6517DS-A2M	155	158.1	20(01) 180(02) 270(03)	true	true	PHYSICAL	6
LTE											ANDREW	LNX-6514DS-A1M	155	158	20(01) 180(02) 270(03)	true	false	PHYSICAL	3

Retained

700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	L-Sub	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity
	CDMA										ANDREW	LNX-6514DS-A1M	155	158	20(D1) 180(D2) 270(D3)	true	false	PHYSICAL	3

Added: 9 | Removed: 9 | Retained: 3

Equipment Summary

Added

Equipment Type	Location	700	850	1900	AWS	AWS3	28 GH:	31 GHz	39 GH:	CBRS	LAA	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity
Mount	Tower												Commscope	BASMNT-SBS-1-2			PHYSICAL	3
RRU	Tower			LTE	LTE								Samsung	B2/B66A RRH-BR049 (RFV01U-D1A)			PHYSICAL	3
RRU	Tower	LTE	LTE										Samsung	B5/B13 RRH-BR04C (RFV01U-D2A)			PHYSICAL	3
RRU	Tower											5G	Samsung	VZS01			PHYSICAL	3
OVP Box	Tower													12 OVP			PHYSICAL	1
Hybrid Cable	Tower													12x24 LI			PHYSICAL	1

Removed

Equipment Type	Location	700	850	1900	AWS	AWS3	28 GH:	31 GHz	39 GH:	CBRS	LAA	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity
RRU	Tower	LTE											Nokia	UHBB B13 RRH 2x40			PHYSICAL	3
RRU	Tower				LTE								Nokia	UHFA B25 RRH 4x30			PHYSICAL	3
RRU	Tower			LTE									Nokia	UHID B4 RRH 2x40			PHYSICAL	3
OVP Box	Tower													6 OVP			PHYSICAL	2
Hybrid Cable	Tower													6x12			PHYSICAL	2

Retained

Equipment Type	Location	700	850	1900	AWS	AWS3	28 GH:	31 GHz	39 GH:	CBRS	LAA	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity
Coaxial Cables	Tower																PHYSICAL	6

Service Info

nL-Sub6				5GLS		
Sector				**0001**	**0002**	**0003**
Azimuth				20	180	270
Cell / ENode B ID						
Antenna Model				nL-Sub6 Antenna	nL-Sub6 Antenna	nL-Sub6 Antenna
Antenna Make				TBD	TBD	TBD
Antenna Centerline(Ft)				155	155	155
Mechanical Down-Tilt(Deg.)				0	0	0
Electrical Down-Tilt				3	3	3
Tip Height				157.1	157.1	157.1
Regulatory Power				0	0	0
TMA Make						
TMA Model						
RRU Make				Samsung	Samsung	Samsung
RRU Model				VZS01	VZS01	VZS01
Number of Tx, Rx Lines				4,4	4,4	4,4
Position						
Transmitter Id				9038980	9038981	9038982
Source				ATOLL_API	ATOLL_API	ATOLL_API

700 MHz LTE		0000		5GLS		
Sector	**01**	**02**	**03**	**01**	**02**	**03**
Azimuth	20	180	270	20	180	270
Cell / ENode B ID	068718	068718	068718	068718	068718	068718
Antenna Model	LNX-6514DS-A1M	LNX-6514DS-A1M	LNX-6514DS-A1M	NHH-65B-R2B	NHH-65B-R2B	NHH-65B-R2B
Antenna Make	ANDREW	ANDREW	ANDREW	COMMSCOPE	COMMSCOPE	COMMSCOPE
Antenna Centerline(Ft)	155	155	155	155	155	155
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	10	10	10	10	10	10
Tip Height	158	158	158	158	158	158
Regulatory Power	88.89	88.89	88.89	76.52	76.52	76.52
TMA Make						
TMA Model						
RRU Make	Nokia	Nokia	Nokia	Samsung	Samsung	Samsung
RRU Model	UHBB B13 RRH 2x40	UHBB B13 RRH 2x40	UHBB B13 RRH 2x40	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)
Number of Tx, Rx Lines	2,2	2,2	2,2	4,4	4,4	4,4
Position						
Transmitter Id	1960067	1960079	1960255	9038938	9038944	9038956
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

850 MHz LTE				5GLS		
Sector				**01**	**02**	**03**
Azimuth				20	180	270
Cell / ENode B ID				068718	068718	068718
Antenna Model				NHH-65B-R2B	NHH-65B-R2B	NHH-65B-R2B
Antenna Make				COMMSCOPE	COMMSCOPE	COMMSCOPE
Antenna Centerline(Ft)				155	155	155
Mechanical Down-Tilt(Deg.)				0	0	0
Electrical Down-Tilt				10	10	10
Tip Height				158	158	158
Regulatory Power				310.54	310.54	310.54
TMA Make						
TMA Model						
RRU Make				Samsung	Samsung	Samsung
RRU Model				B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)
Number of Tx, Rx Lines				4,4	4,4	4,4
Position						
Transmitter Id				9282465	9282466	9282467
Source				ATOLL_API	ATOLL_API	ATOLL_API

850 MHz CDMA		0000			5GLS	
Sector	**D1**	**D2**	**D3**	**D1**	**D2**	**D3**
Azimuth	20	180	270	20	180	270
Cell / ENode B ID						
Antenna Model	LNX-6514DS-A1M	LNX-6514DS-A1M	LNX-6514DS-A1M	LNX-6514DS-A1M	LNX-6514DS-A1M	LNX-6514DS-A1M
Antenna Make	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW
Antenna Centerline(Ft)	155	155	155	155	155	155
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	4	6	4	4	6	4
Tip Height	158	158	158	158	158	158
Regulatory Power	441.88	436.42	441.88	441.88	436.42	441.88
TMA Make						
TMA Model						
RRU Make						
RRU Model						
Number of Tx, Rx Lines						
Position						
Transmitter Id						
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

1900 MHz LTE		0000			5GLS	
Sector	**01**	**02**	**03**	**01**	**02**	**03**
Azimuth	20	180	270	20	180	270
Cell / ENode B ID	068718	068718	068718	068718	068718	068718
Antenna Model	HBXX-6517DS-A2M	HBXX-6517DS-A2M	HBXX-6517DS-A2M	NHH-65B-R2B	NHH-65B-R2B	NHH-65B-R2B
Antenna Make	ANDREW	ANDREW	ANDREW	COMMSCOPE	COMMSCOPE	COMMSCOPE
Antenna Centerline(Ft)	155	155	155	155	155	155
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	3	4	5	4	4	4
Tip Height	158.1	158.1	158.1	158	158	158
Regulatory Power	257.67	252.15	237.39	272.75	272.75	272.75
TMA Make						
TMA Model						
RRU Make	Nokia	Nokia	Nokia	Samsung	Samsung	Samsung
RRU Model	UHID B4 RRH 2x40	UHID B4 RRH 2x40	UHID B4 RRH 2x40	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)
Number of Tx, Rx Lines	2,2	2,2	2,2	4,4	4,4	4,4
Position						
Transmitter Id	4731487	4731488	4731489	9038923	9038927	9038931
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

2100 MHz LTE		0000			5GLS	
Sector	**01**	**02**	**03**	**01**	**02**	**03**
Azimuth	20	180	270	20	180	270
Cell / ENode B ID	068718	068718	068718	068718	068718	068718
Antenna Model	HBXX-6517DS-A2M	HBXX-6517DS-A2M	HBXX-6517DS-A2M	NHH-65B-R2B	NHH-65B-R2B	NHH-65B-R2B
Antenna Make	ANDREW	ANDREW	ANDREW	COMMSCOPE	COMMSCOPE	COMMSCOPE
Antenna Centerline(Ft)	155	155	155	155	155	155
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	4	4	3	4	4	4
Tip Height	158.1	158.1	158.1	158	158	158
Regulatory Power	148.3	148.3	148.57	152.31	152.31	152.31
TMA Make						
TMA Model						
RRU Make	Nokia	Nokia	Nokia	Samsung	Samsung	Samsung
RRU Model	UHFA B25 RRH 4x30	UHFA B25 RRH 4x30	UHFA B25 RRH 4x30	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)
Number of Tx, Rx Lines	2,2	2,2	2,2	4,4	4,4	4,4
Position						
Transmitter Id	1960069	1960249	1960008	9038941	9038951	9038935
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

Service Comments

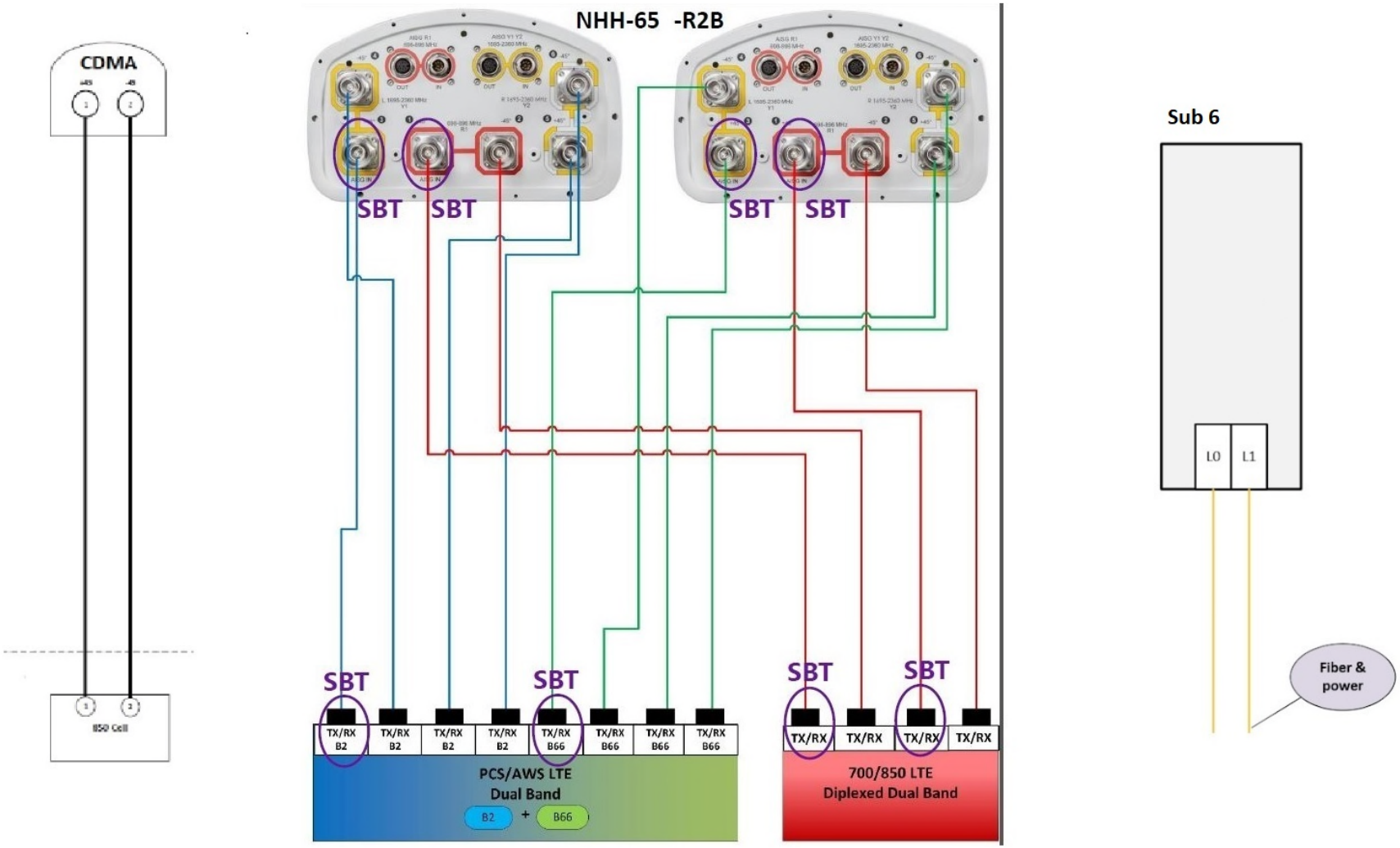
Callsigns Per Antenna

Sector	Antenna Ma	Antenna Mo	Ant CL Height AGL	Tip Height	Azimuth (TI	Electrical Tilt	Mechanical Tilt	Gain	Beamwidth	Regulatory Power	Callsigns						
											700	850	1900	2100	28 GHz	31 GHz	39 GHz
02	COMMSCO	NHH-65B-R2B	155	158	180	10	0	12.643	61	310.54		KNKA404					
03	COMMSCO	NHH-65B-R2B	155	158	270	4	0	15.95	65	272.75			KNLH251 WPOJ730				
01	COMMSCO	NHH-65B-R2B	155	158	20	4	0	15.95	65	272.75			KNLH251 WPOJ730				
03	COMMSCO	NHH-65B-R2B	155	158	270	4	0	16.43	62.5	152.31				WQGA906 WQGB276			
D2	ANDREW	LNX-6514DS-A1M	155	158	180	6	0	13.699	63.25	306.83		KNKA404					
01	COMMSCO	NHH-65B-R2B	155	158	20	10	0	12.643	61	310.54		KNKA404					
02	COMMSCO	NHH-65B-R2B	155	158	180	4	0	16.43	62.5	152.31				WQGA906 WQGB276			
D1	ANDREW	LNX-6514DS-A1M	155	158	20	4	0	13.753	63	310.67		KNKA404					
01	COMMSCO	NHH-65B-R2B	155	158	20	4	0	16.43	62.5	152.31				WQGA906 WQGB276			
01	COMMSCO	NHH-65B-R2B	155	158	20	10	0	12.58	65.75	76.52	WQJQ689						
D1	ANDREW	LNX-6514DS-A1M	155	158	20	4	0	13.753	63	441.88		KNKA404					
D3	ANDREW	LNX-6514DS-A1M	155	158	270	4	0	13.753	63	441.88		KNKA404					
03	COMMSCO	NHH-65B-R2B	155	158	270	10	0	12.58	65.75	76.52	WQJQ689						
03	COMMSCO	NHH-65B-R2B	155	158	270	10	0	12.643	61	310.54		KNKA404					
02	COMMSCO	NHH-65B-R2B	155	158	180	4	0	15.95	65	272.75			KNLH251 WPOJ730				
D3	ANDREW	LNX-6514DS-A1M	155	158	270	4	0	13.753	63	310.67		KNKA404					
02	COMMSCO	NHH-65B-R2B	155	158	180	10	0	12.58	65.75	76.52	WQJQ689						
D2	ANDREW	LNX-6514DS-A1M	155	158	180	6	0	13.699	63.25	436.42		KNKA404					

Callsigns

Callsign	Market	Radio Code	Market Number	Block	State	County	Licensee Name	Wholly Owned	Total MHZ	Freq Range 1	Freq Range 2	Freq Range 3	Freq Range 4	Regulatory Power	Threshold (W)	POPs/Sq Mi	Status	Action	Approved for Insvc
WQJQ689	*Northeast*	*WU*	*REA001*	*C*	*CT*	*Hartford*	Cellco Partnership	*Yes*	*22.000*	*746.000-757.000*	*776.000-787.000*	*.000-.000*	*.000-.000*	*76.52*	*1000*	*1216.19*	*Active*	*added*	*Yes*
KNKA404	*Hartford-New Britain-Bristol, CT*	*CL*	*CMA032*	*A*	*CT*	*Hartford*	Cellco Partnership	*Yes*	*25.000*	*824.000-835.000*	*869.000-880.000*	*845.000-846.500*	*890.000-891.500*	*441.88*	*500*	*1216.19*	*Active*	*added*	*Yes*
WPOJ730	*Hartford, CT*	*CW*	*BTA184*	*C*	*CT*	*Hartford*	Cellco Partnership	*Yes*	*15.000*	*1895.000-1902.500*	*1975.000 1982.500*	*.000-.000*	*.000-.000*	*272.75*	*1640*	*1216.19*	*Active*	*added*	*Yes*
KNLH251	*Hartford, CT*	*CW*	*BTA184*	*F*	*CT*	*Hartford*	Cellco Partnership	*Yes*	*10.000*	*1890.000-1895.000*	*1970.000 1975.000*	*.000-.000*	*.000-.000*	*272.75*	*1640*	*1216.19*	*Active*	*added*	*Yes*
WQGB276	*Hartford-New Britain-Bristol, CT*	*AW*	*CMA032*	*A*	*CT*	*Hartford*	Cellco Partnership	*Yes*	*20.000*	*1710.000 1720.000*	*2110.000 2120.000*	*.000-.000*	*.000-.000*	*152.31*	*1640*	*1216.19*	*Active*	*added*	*Yes*
WQGA906	*New York-No. New Jer.-Long Island, NY-NJ-CT-PA-MA-*	*AW*	*BEA010*	*B*	*CT*	*Hartford*	Cellco Partnership	*Yes*	*20.000*	*1720.000 1730.000*	*2120.000-2130.000*	*.000-.000*	*.000-.000*	*152.31*	*1640*	*1216.19*	*Active*	*added*	*Yes*
WPOH943	Hartford, CT	LD	BTA184	A	CT	Hartford	Cellco Partnership	Yes	300.000	29100.000-29250.000	31075.000-31225.000	.000-.000	.000-.000			1216.19	Active		No
WPLM398	Hartford, CT	LD	BTA184	B	CT	Hartford	Cellco Partnership	Yes	150.000	31000.000-31075.000	31225.000-31300.000	.000-.000	.000-.000			1216.19	Active		No
WRBA708	Hartford, CT	UU	BTA184	L1	CT	Hartford	Cellco Partnership	Yes	325.000	27500.000-27600.000	27700.000-27925.000	.000-.000	.000-.000			1216.19	Active		Yes
WRBA709	Hartford, CT	UU	BTA184	L2	CT	Hartford	Cellco Partnership	Yes	325.000	27925.000-28050.000	28150.000-28350.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD609	New York, NY	UU	PEA001	M1	CT	Hartford	Straight Path um, LLC	Yes	100.000	37600.000-37700.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD610	New York, NY	UU	PEA001	M10	CT	Hartford	Straight Path um, LLC	Yes	100.000	38500.000-38600.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD611	New York, NY	UU	PEA001	M2	CT	Hartford	Straight Path um, LLC	Yes	100.000	37700.000-37800.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD612	New York, NY	UU	PEA001	M3	CT	Hartford	Straight Path um, LLC	Yes	100.000	37800.000-37900.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes

WRHD613	New York, NY	UU	PEA001	M4	CT	Hartford	Straight Path um, LLC	Yes	100.000	37900.000-38000.00	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD614	New York, NY	UU	PEA001	M5	CT	Hartford	Straight Path um, LLC	Yes	100.000	38000.000-38100.00	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD615	New York, NY	UU	PEA001	M6	CT	Hartford	Straight Path um, LLC	Yes	100.000	38100.000-38200.00	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD616	New York, NY	UU	PEA001	M7	CT	Hartford	Straight Path um, LLC	Yes	100.000	38200.000-38300.00	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD617	New York, NY	UU	PEA001	M8	CT	Hartford	Straight Path um, LLC	Yes	100.000	38300.000-38400.00	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD618	New York, NY	UU	PEA001	M9	CT	Hartford	Straight Path um, LLC	Yes	100.000	38400.000-38500.00	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD619	New York, NY	UU	PEA001	N1	CT	Hartford	Straight Path um, LLC	Yes	100.000	38600.000-38700.00	.000-.000	.000-.000	.000-.000			1216.19	Active		No
WRDG500	New York, NY	UU	PEA001	S2	CT	Hartford	Cellco Partnership	Yes	400.000	37800.000-38200.00	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes


CDMA
850 Cell
NHH-65 -R2B
SBT
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TX/RX B2
TX/RX B2
TX/RX B2
TX/RX B2
TX/RX B66
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TX/RX B66
TX/RX
TX/RX
TX/RX
TX/RX
PCS/AWS LTE
Dual Band
B2
+
B66
700/850 LTE
Diplexed Dual Band
Sub 6
L0
L1
Fiber &
power

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

Post-Mod Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10074259
Maser Consulting Connecticut Project #: 21777054A

June 30, 2021

Site Information	*Site ID:*	*470975-VZW/TARIFFVILLE CT RELO -Talcott Mtn*
	Site Name:	*TARIFFVILLE CT RELO - Talcott Mtn*
	Carrier Name:	*Verizon Wireless*
	Address:	*Talcott Mtn* *Bloomfield, Connecticut 06002* *Hartford County*
	Latitude:	*41.892840°*
	Longitude:	*-72.765505°*
Structure Information	*Tower Type:*	*Self Support*
	Mount Type:	*13.00-Ft Sector Frame*

FUZE ID # 16272423

Analysis Results

Sector Frame: **70.0% Pass**

******Contractor PMI Requirements*:**
Included at the end of this MA report
Available & Submitted via portal at https://pmi.vzwsmart.com
Contractor - Please Review Specific Site PMI Requirements Upon Award
Requirements also Noted on Mount Modification Drawings
Requirements may also be Noted on A & E drawings

Report Prepared By: Lauren Luzier

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: 1702601, dated January 15, 2021*
Mount Mapping Report	*RKS Design & Engineering, LLC., Site ID: VZW:470975, dated April 14, 2021*
Previous Mount Analysis Report	*Maser Consulting Connecticut Project #: 21777054A, dated May 28, 2021*
Mount Modification Drawings	*Maser Consulting Connecticut Project #: 21777054A, dated July 1, 2021*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust),	116 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.50 in
	Risk Category:	II
	Exposure Category:	B
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.985
Seismic Parameters:	S_S:	0.175
	S_1:	0.054
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Live Load, Lv:	250 lbs.
	Maintenance Live Load, Lm:	500 lbs.
Analysis Software:	RISA-3D (V17)	

Final Loading Configuration:

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
			Commscope		Added
			Samsung		
			Samsung		
			Samsung		
			Raycap		
			Commscope		Retained

The recent mount mapping did not report existing OVP units. However, it is acceptable to install up to any three (3) of the OVP model numbers listed below as required at any location other than the mount face without affecting the structural capacity of the mount. If OVP units are installed on the mount face, a mount re-analysis may be required.

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

Standard Conditions:

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

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

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

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

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

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

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

6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Maser Consulting 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 Maser Consulting.

Analysis Results:

Component	Utilization %	Pass/Fail
Face Horizontals		Pass
Antenna Pipe		Pass
Tower Connection Plate		Pass
Standoff Plate 1		Pass
Standoff Horizontals		Pass
Standoff Plate 2		Pass
Inner Bracing		Pass
Mast Pipe		Pass
Dual Mount Pipe		Pass
Tie-Back Support		
Mount Connection		Pass

Structure Rating – *(Controlling Utilization of all Components)*	**70.0%**

Recommendation:

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

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

Attachments:

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


04/14/2021 14:20


04/14/2021 14:58

V4.0 Updated on 3-31-2021

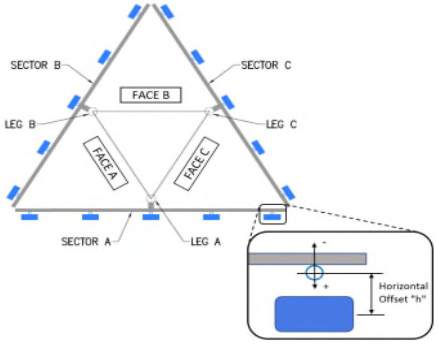
PAUL J. FORD & COMPANY

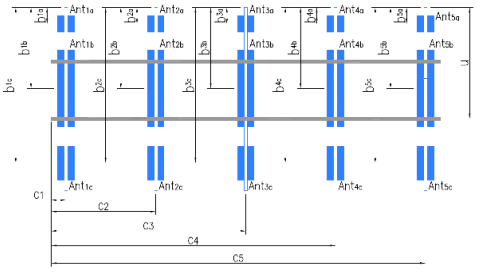
Antenna Mount Mapping Form (PATENT PENDING)

FCC # 1295813

Tower Owner:	UNKNOWN	**Mapping Date:**	4/14/2021
Site Name:	VZW:TARIFFVILLE CT RELO - Talcott Mtn	**Tower Type:**	Self Support
Site Number or ID:	VZW:470975	**Tower Height (Ft.):**	UNKNOWN
Mapping Contractor:	RKS Design & Engineering, LLC	**Mount Elevation (Ft.):**	149.5

Please insert the sketches of the antenna mount from the "Sketches" tab with dimensions and members here.





Antenna Layout (Looking Out From Tower)

Mount Pipe Configuration and Geometries [Unit = Inches]

Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	Pipe 2.375"Ø X 0.15" X 84" Long	60.50	10.00	C1	Pipe 2.375"Ø X 0.15" X 84" Long	60.50	10.00
A2	Pipe 2.375"Ø X 0.15" X 84" Long	59.50	59.50	C2	Pipe 2.375"Ø X 0.15" X 84" Long	59.50	59.50
A3	Pipe 2.375"Ø X 0.15" X 84" Long	59.50	107.00	C3	Pipe 2.375"Ø X 0.15" X 84" Long	59.50	107.00
A4	Pipe 2.375"Ø X 0.15" X 84" Long	60.50	147.00	C4	Pipe 2.375"Ø X 0.15" X 84" Long	60.50	147.00
A5				C5			
A6				C6			
B1	Pipe 2.375"Ø X 0.15" X 84" Long	60.50	10.00	D1			
B2	Pipe 2.375"Ø X 0.15" X 84" Long	59.50	59.50	D2			
B3	Pipe 2.375"Ø X 0.15" X 84" Long	59.50	107.00	D3			
B4	Pipe 2.375"Ø X 0.15" X 84" Long	60.50	147.00	D4			
B5				D5			
B6				D6			

Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :	17.50
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :	8
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :	7
Please enter additional infomation or comments below.	

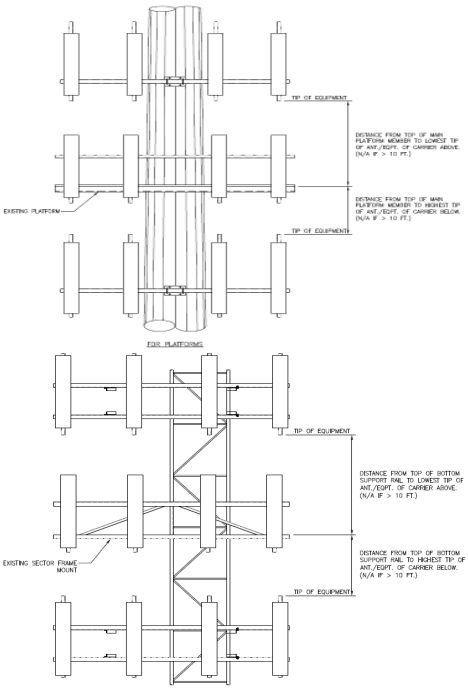
Tower Face Width at Mount Elev. (ft.):		Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	6.625
For T-Arms/Platforms on monopoles, report the weld size from the main standoff to the plate bolting into the collar mount.			

	Enter antenna model. If not labeled, 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	Antenna Center-line (Ft.)	Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photo Numbers
Sector A										
Ant_{1a}	9442 RRH2x40-AWS	10.60	6.70	24.40		149.333	45.00	-7.25		13,97
Ant_{1b}	HBXX-6517DS-A2M	12.00	6.50	75.00		150.333	33.00	8.25	40.00	13,97
Ant_{1c}										
Ant_{2a}	UNKNOWN RRU	17.00	10.00	16.50		149.521	41.75	-9.00		13,101
Ant_{2b}	LNX-6514DS-A1M	11.90	7.10	72.70		150.188	33.75	7.50	40.00	13,101
Ant_{2c}										
Ant_{3a}	B25 RRH 4x30	12.00	7.20	21.20		149.833	38.00	-7.50		13,103
Ant_{3b}	HBXX-6517DS-A2M	12.00	6.50	75.00		150.25	33.00	8.25	40.00	13,103
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	LNX-6514DS-A1M	11.90	7.10	72.70		150.271	33.75	7.50	40.00	13,103
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

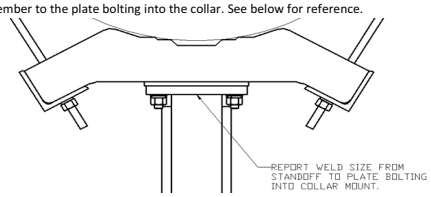
Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector	
Sector A:	30.00	Deg	Leg A:	70.00	Deg
Sector B:	190.00	Deg	Leg B:	190.00	Deg
Sector C:	270.00	Deg	Leg C:	310.00	Deg
Sector D:		Deg	Leg D:		Deg

Climbing Facility Information			
Location:	190.00	Deg	On Leg B
Climbing Facility	Corrosion Type:		N/A
	Access:		Climbing path was unobstructed.
	Condition:		Good condition.

Please insert a photo of the mount centerline measurement here.



For T-Arms/Platforms on monopoles, record the weld size from the main standoff member to the plate bolting into the collar. See below for reference.



Sector B										
Ant_{1a}	9442 RRH2x40-AWS	10.60	6.70	24.40		149.333	45.00	-7.25		20,109
Ant_{1b}	HBXX-6517DS-A2M	12.00	6.50	75.00		150.333	33.00	8.25	190.00	20,109
Ant_{1c}										
Ant_{2a}	UNKNOWN RRU	17.00	10.00	16.50		149.521	41.75	-9.00		20,109
Ant_{2b}	LNX-6514DS-A1M	11.90	7.10	72.70		150.188	33.75	7.50	190.00	20,109
Ant_{2c}										
Ant_{3a}	B25 RRH 4x30	12.00	7.20	21.20		149.833	38.00	-7.50		20,112
Ant_{3b}	HBXX-6517DS-A2M	12.00	6.50	75.00		150.25	33.00	8.25	190.00	20,112
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	LNX-6514DS-A1M	11.90	7.10	72.70		150.271	33.75	7.50	190.00	20,113
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector C										
Ant_{1a}	9442 RRH2x40-AWS	10.60	6.70	24.40		149.333	45.00	-7.25		27,133
Ant_{1b}	HBXX-6517DS-A2M	12.00	6.50	75.00		150.333	33.00	8.25	280.00	27,133
Ant_{1c}										
Ant_{2a}	UNKNOWN RRU	17.00	10.00	16.50		149.521	41.75	-9.00		27,135
Ant_{2b}	LNX-6514DS-A1M	11.90	7.10	72.70		150.188	33.75	7.50	280.00	27,136
Ant_{2c}										
Ant_{3a}	B25 RRH 4x30	12.00	7.20	21.20		149.833	38.00	-7.50		27,138
Ant_{3b}	HBXX-6517DS-A2M	12.00	6.50	75.00		150.25	33.00	8.25	280.00	27,138
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	LNX-6514DS-A1M	11.90	7.10	72.70		150.271	33.75	7.50	280.00	27,138
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower	(2)UNKNOWN COVP	15.70	10.20	25.60						137
Ant on Tower										
Sector D										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}										
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Observed Safety and Structural Issues During the Mount Mapping		
Issue #	Description of Issue	Photo #
1	COAX TOTAL(8): (2)1.5"Ø HYBRID,(6)FH 1-5/8	51
2		
3		
4		
5		
6		
7		
8		

Observed Obstructions to Tower Lighting System				
If the tower lighting system is being obstructed by the carrier's equipment (for example: a light nested by the antennas), please provide photos and fill in the information below.				Photo #
Description of Obstruction:				
Type of Light:		Photo #		Additional Comments:
Lighting Technology:		Photo #		
Elevation (AGL) at base of light (Ft.):		Photo #		
Is a service loop available?		Photo #		
Is beacon installed on an extension?		Photo #		

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.

V4.0 Updated on 3-31-2021

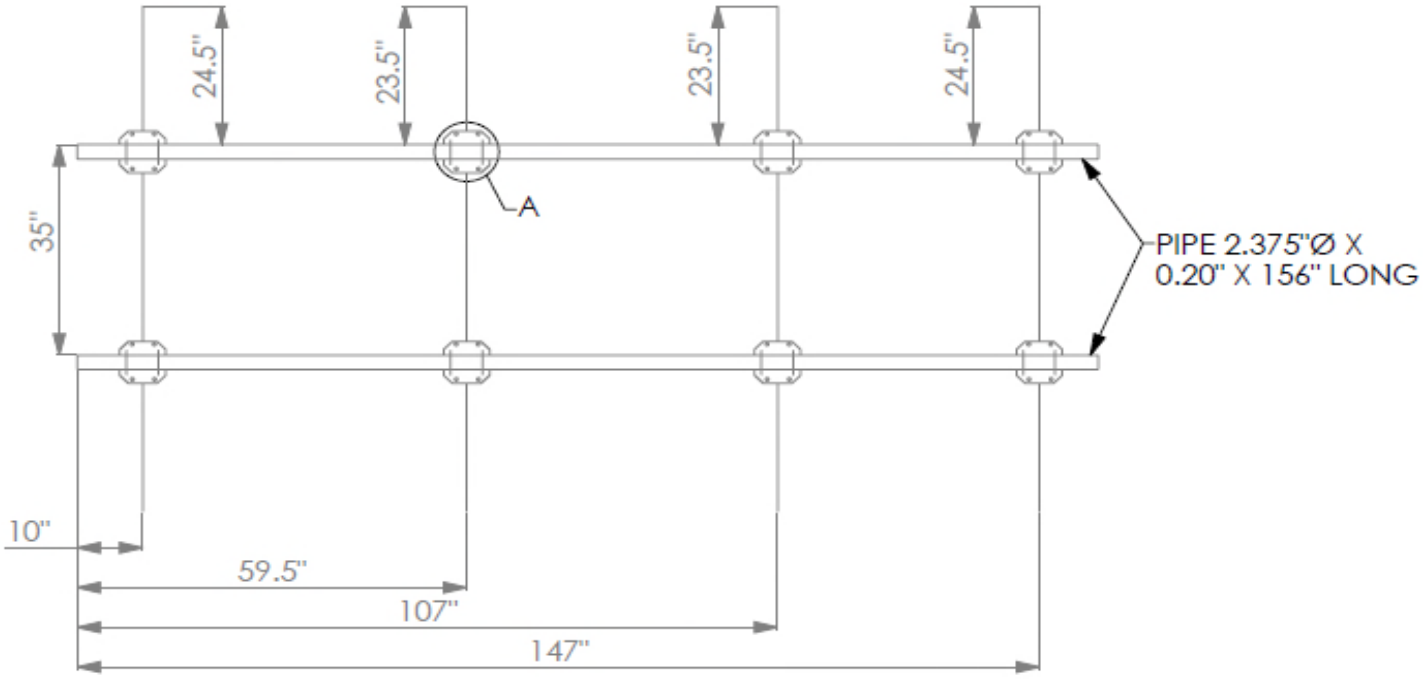
PAUL J. FORD & COMPANY

Antenna Mount Mapping Form (PATENT PENDING)

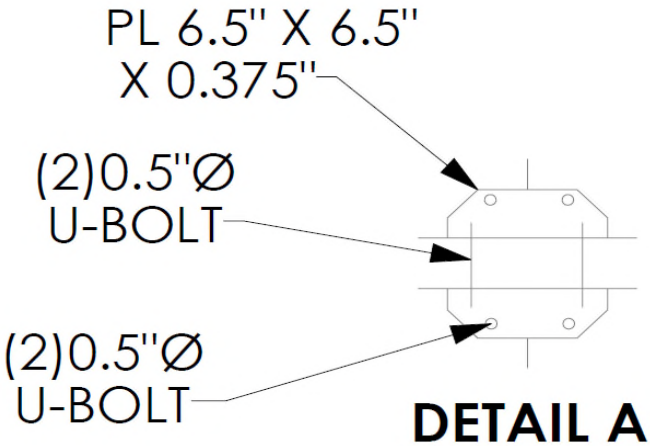
FCC #
1295813

Tower Owner:	UNKNOWN	**Mapping Date:**	4/14/2021
Site Name:	VZW:TARIFFVILLE CT RELO - Talcott Mtn	**Tower Type:**	Self Support
Site Number or ID:	VZW:470975	**Tower Height (Ft.):**	UNKNOWN
Mapping Contractor:	RKS Design & Engineering, LLC	**Mount Elevation (Ft.):**	149.5

Please Insert Sketches of the Antenna Mount

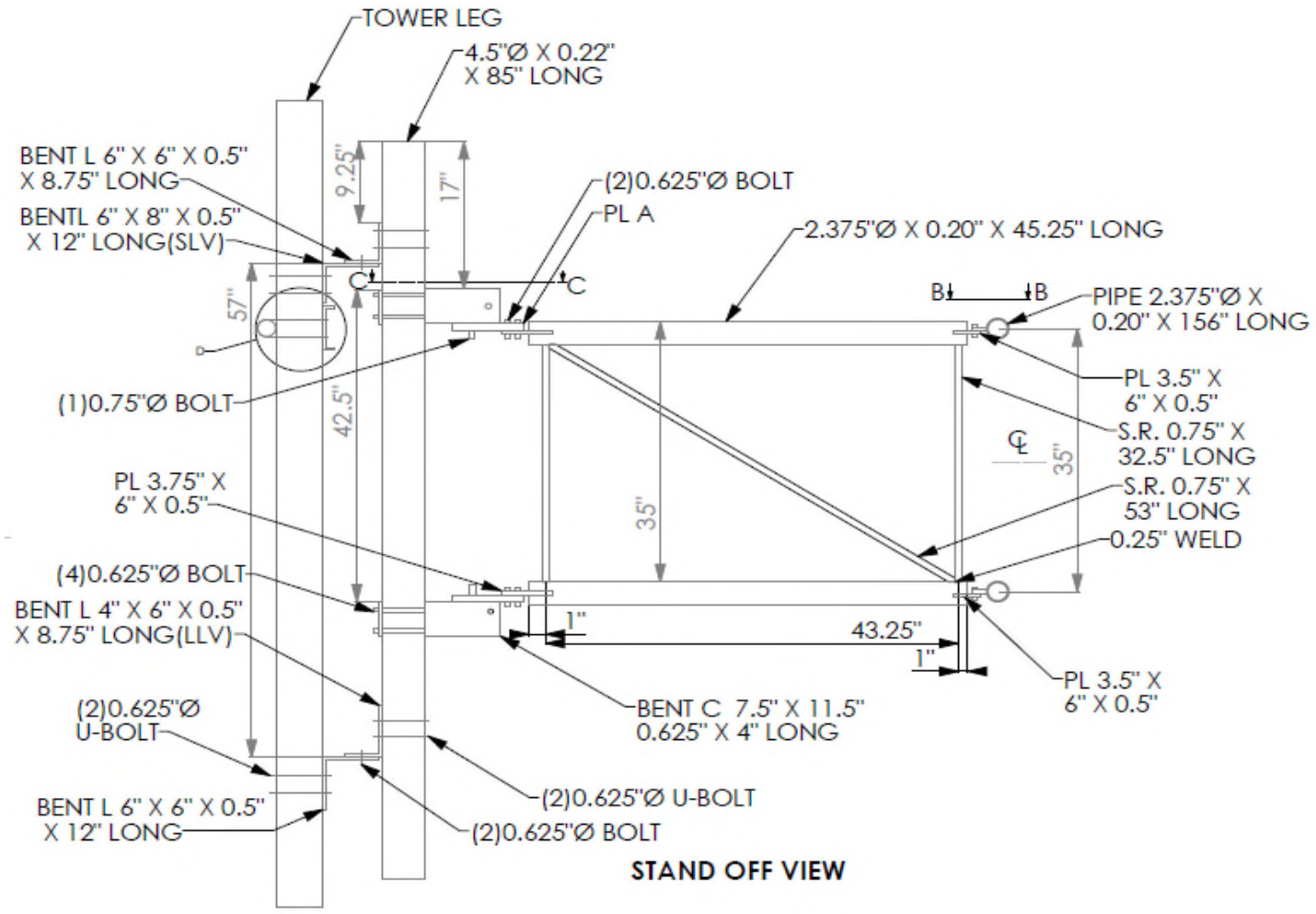


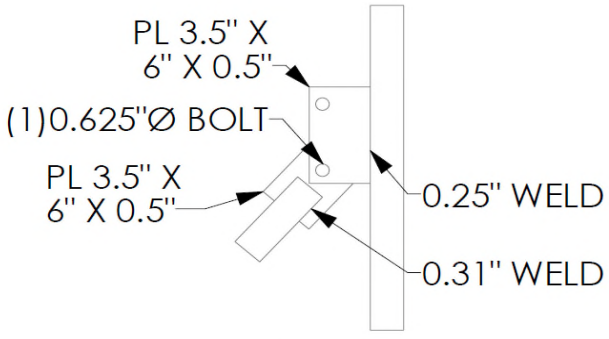
SECTOR A,B & C



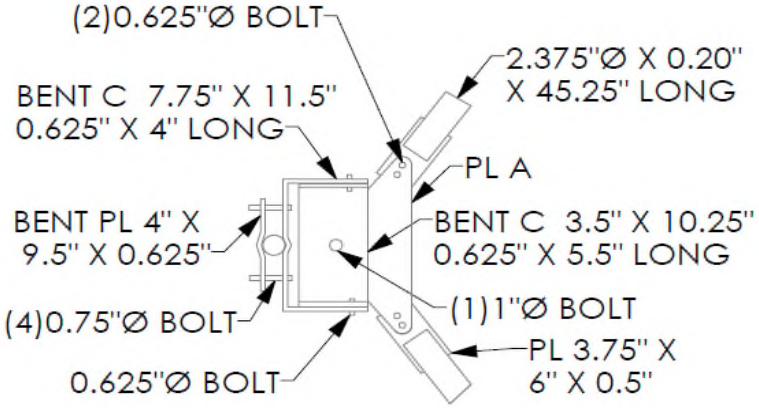
DETAIL A

Please Insert Sketches of the Antenna Mount, cont'd



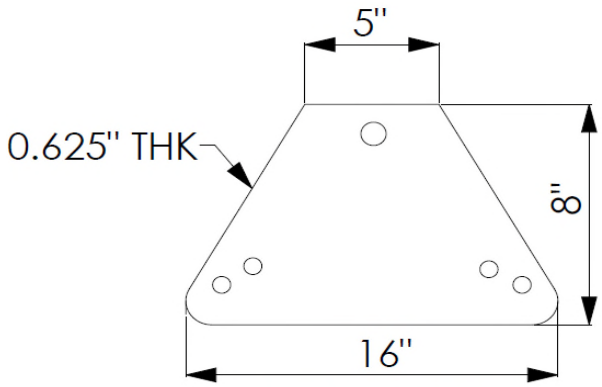


SECTION B-B

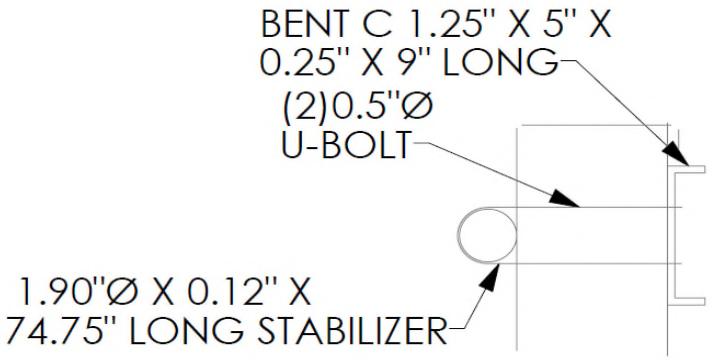


SECTION C-C

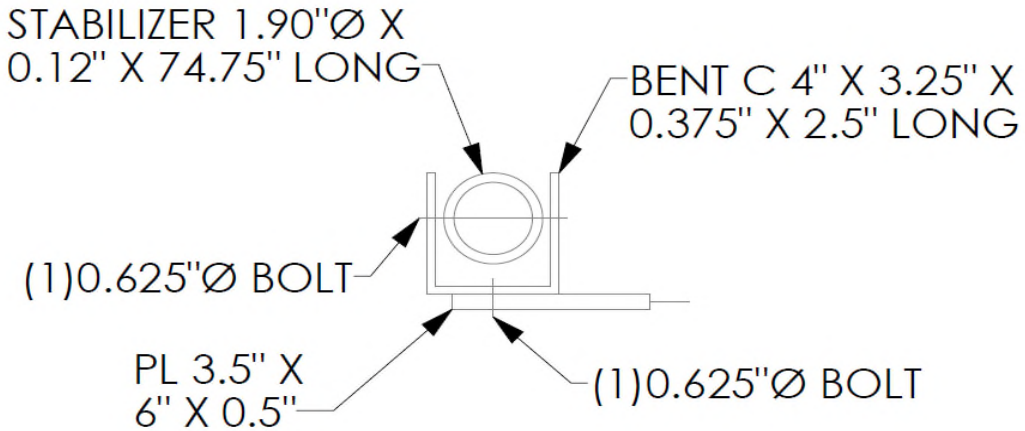
Please Insert Sketches of the Antenna Mount, cont'd



PL A DETAIL

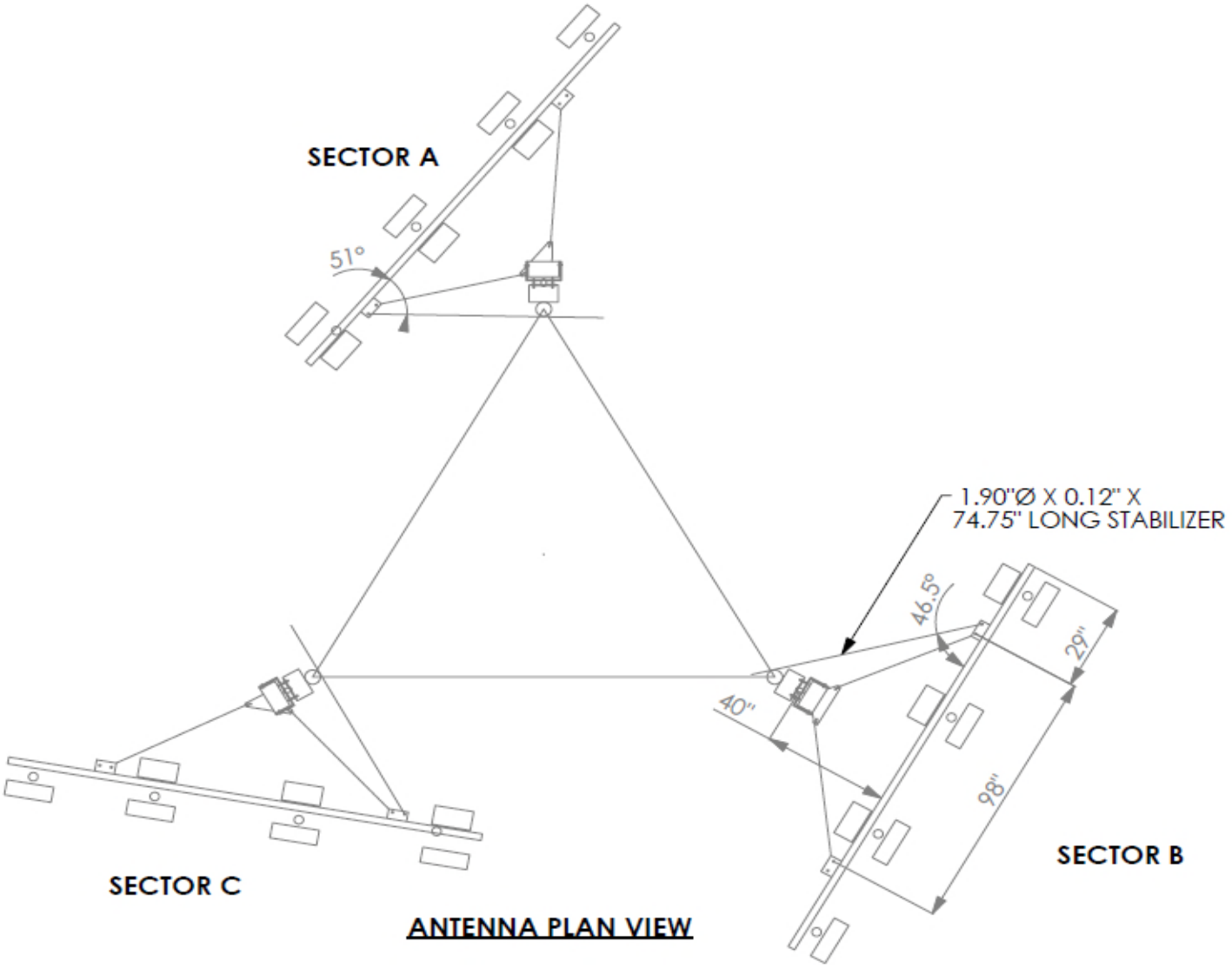


DETAIL D
STABILIZER CONNECTION
ON TOWER LEG

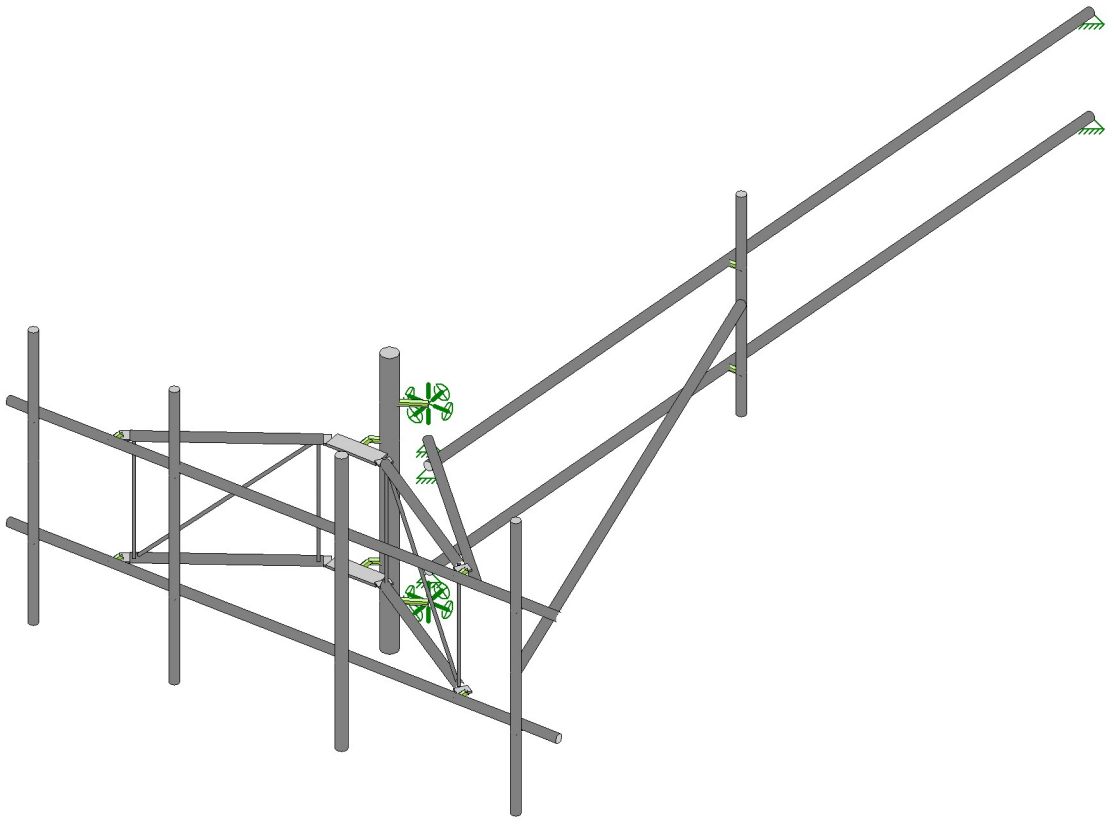


CONNECTION DETAIL
FROM STABILIZER TO MOUNT

Please Insert Sketches of the Antenna Mount, cont'd

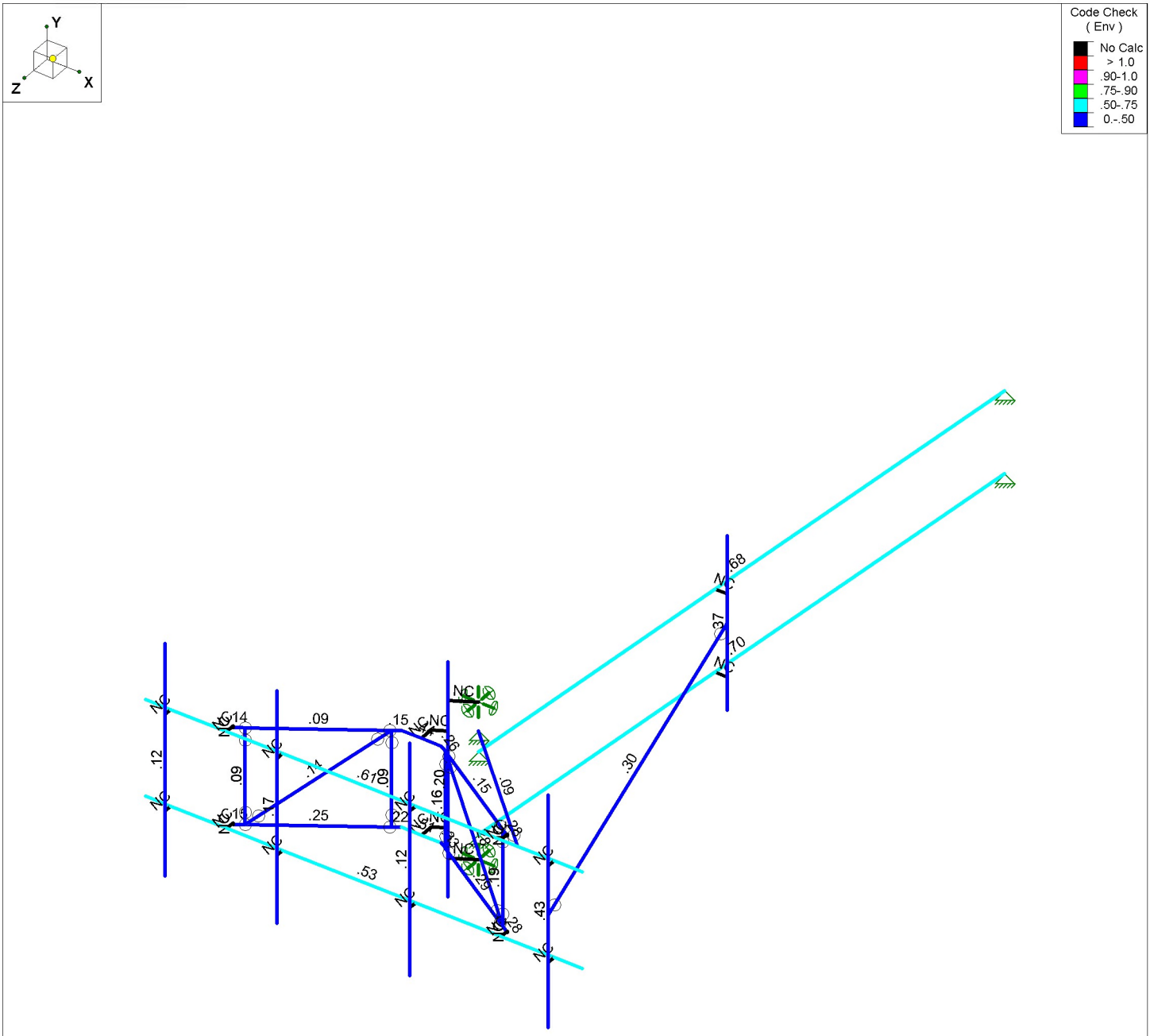


ANTENNA PLAN VIEW



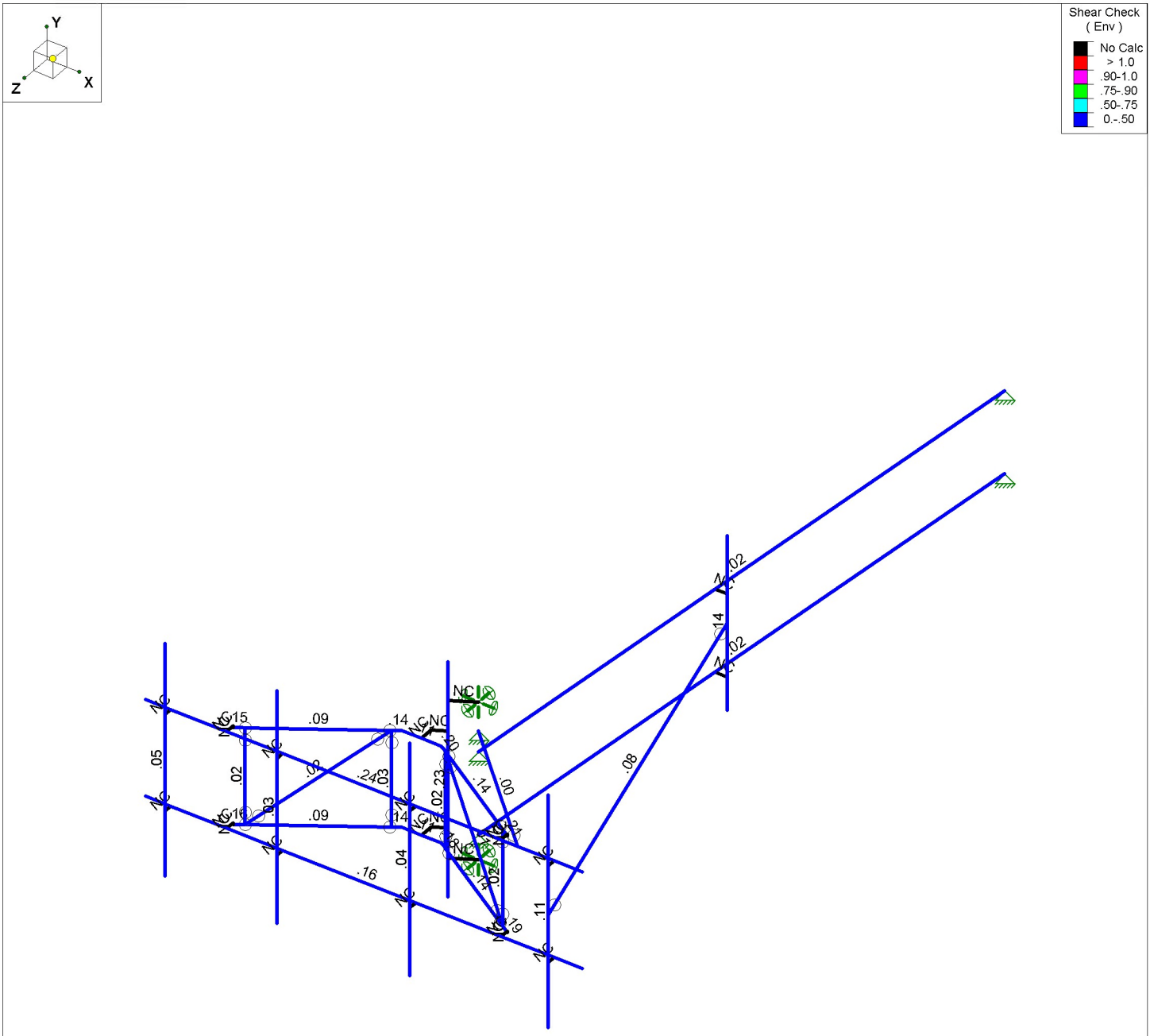
Envelope Only Solution

		SK - 1
		June 30, 2021 at 3:45 PM
		470975-VZW_MT_LOT_A_H.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

		SK - 2
		June 30, 2021 at 3:46 PM
		470975-VZW_MT_LOT_A_H.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

		SK - 3
		June 30, 2021 at 3:46 PM
		470975-VZW_MT_LOT_A_H.r3d

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Antenna D	None					33			
2	Antenna Di	None					33			
3	Antenna Wo (0 Deg)	None					33			
4	Antenna Wo (30 Deg)	None					33			
5	Antenna Wo (60 Deg)	None					33			
6	Antenna Wo (90 Deg)	None					33			
7	Antenna Wo (120 Deg)	None					33			
8	Antenna Wo (150 Deg)	None					33			
9	Antenna Wo (180 Deg)	None					33			
10	Antenna Wo (210 Deg)	None					33			
11	Antenna Wo (240 Deg)	None					33			
12	Antenna Wo (270 Deg)	None					33			
13	Antenna Wo (300 Deg)	None					33			
14	Antenna Wo (330 Deg)	None					33			
15	Antenna Wi (0 Deg)	None					33			
16	Antenna Wi (30 Deg)	None					33			
17	Antenna Wi (60 Deg)	None					33			
18	Antenna Wi (90 Deg)	None					33			
19	Antenna Wi (120 Deg)	None					33			
20	Antenna Wi (150 Deg)	None					33			
21	Antenna Wi (180 Deg)	None					33			
22	Antenna Wi (210 Deg)	None					33			
23	Antenna Wi (240 Deg)	None					33			
24	Antenna Wi (270 Deg)	None					33			
25	Antenna Wi (300 Deg)	None					33			
26	Antenna Wi (330 Deg)	None					33			
27	Antenna Wm (0 Deg)	None					33			
28	Antenna Wm (30 Deg)	None					33			
29	Antenna Wm (60 Deg)	None					33			
30	Antenna Wm (90 Deg)	None					33			
31	Antenna Wm (120 Deg)	None					33			
32	Antenna Wm (150 Deg)	None					33			
33	Antenna Wm (180 Deg)	None					33			
34	Antenna Wm (210 Deg)	None					33			
35	Antenna Wm (240 Deg)	None					33			
36	Antenna Wm (270 Deg)	None					33			
37	Antenna Wm (300 Deg)	None					33			
38	Antenna Wm (330 Deg)	None					33			
39	Structure D	None		-1						
40	Structure Di	None						32		
41	Structure Wo (0 Deg)	None						64		
42	Structure Wo (30 Deg)	None						64		
43	Structure Wo (60 Deg)	None						64		
44	Structure Wo (90 Deg)	None						64		
45	Structure Wo (120 D...	None						64		
46	Structure Wo (150 D...	None						64		
47	Structure Wo (180 D...	None						64		
48	Structure Wo (210 D...	None						64		
49	Structure Wo (240 D...	None						64		
50	Structure Wo (270 D...	None						64		
51	Structure Wo (300 D...	None						64		
52	Structure Wo (330 D...	None						64		
53	Structure Wi (0 Deg)	None						64		

Basic Load Cases (Continued)

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

Load Combinations

	Description	S...	PDelta	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.2D+1.0Wo (0 ...	Yes	Y		1	1.2	39	1.2	3	1	41	1														
2	1.2D+1.0Wo (30...	Yes	Y		1	1.2	39	1.2	4	1	42	1														
3	1.2D+1.0Wo (60...	Yes	Y		1	1.2	39	1.2	5	1	43	1														
4	1.2D+1.0Wo (90...	Yes	Y		1	1.2	39	1.2	6	1	44	1														
5	1.2D+1.0Wo (12...	Yes	Y		1	1.2	39	1.2	7	1	45	1														
6	1.2D+1.0Wo (15...	Yes	Y		1	1.2	39	1.2	8	1	46	1														
7	1.2D+1.0Wo (18...	Yes	Y		1	1.2	39	1.2	9	1	47	1														
8	1.2D+1.0Wo (21...	Yes	Y		1	1.2	39	1.2	10	1	48	1														
9	1.2D+1.0Wo (24...	Yes	Y		1	1.2	39	1.2	11	1	49	1														
10	1.2D+1.0Wo (27...	Yes	Y		1	1.2	39	1.2	12	1	50	1														
11	1.2D+1.0Wo (30...	Yes	Y		1	1.2	39	1.2	13	1	51	1														
12	1.2D+1.0Wo (33...	Yes	Y		1	1.2	39	1.2	14	1	52	1														
13	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1										
14	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1										
15	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1										
16	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1										
17	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1										
18	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1										
19	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1										
20	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1										
21	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1										
22	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1										
23	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1										
24	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1										
25	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1												

Load Combinations (Continued)

	Description	S...	PDelta	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
26	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1										
27	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1										
28	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1										
29	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1										
30	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1										
31	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1										
32	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1										
33	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1										
34	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1										
35	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1										
36	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1										
37	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1										
38	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1										
39	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1										
40	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1										
41	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1										
42	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1										
43	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1										
44	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1										
45	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1										
46	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1										
47	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1										
48	1.2D + 1.5Lm2 ...	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	Seismic Mass		Y		1	1	39	1																
53	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX		SY	1	SZ	-1										
54	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	-.866										
55	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	-.5										
56	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	1	SY	1	SZ											
57	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	.5										
58	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	.866										
59	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX		SY	1	SZ	1										
60	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	.866										
61	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	.5										
62	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-1	SY	1	SZ											
63	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	-.5										
64	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	-.866										

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N2	-6.5	0.104167	3.395833	0	
2	N3	6.5	0.104167	3.395833	0	
3	N5	-6.5	3.020833	3.395833	0	
4	N6	6.5	3.020833	3.395833	0	
5	N11	5.666667	0.104167	3.395833	0	
6	N12	5.666667	3.020833	3.395833	0	
7	N19	5.666667	0.104167	3.645833	0	
8	N20	5.666667	3.020833	3.645833	0	
9	N25	5.666667	5.145833	3.645833	0	
10	N29	5.666667	-1.854167	3.645833	0	
11	N31	-4.083333	0.104167	3.395833	0	
12	N32	-4.083333	3.020833	3.395833	0	
13	N33	4.083333	0.104167	3.395833	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
14	N34	4.083333	3.020833	3.395833	0	
15	N43	-4.083333	2.979167	3.11875	0	
16	N44	4.083333	2.979167	3.11875	0	
17	N45	-4.083333	0.0625	3.11875	0	
18	N46	4.083333	0.0625	3.11875	0	
19	N70A	-4.083333	0.104167	3.11875	0	
20	N71A	4.083333	0.104167	3.11875	0	
21	N72A	-4.083333	3.020833	3.11875	0	
22	N73	4.083333	3.020833	3.11875	0	
23	N51	-3.907938	2.979167	3.006326	0	
24	N53B	-3.907938	0.0625	3.006326	0	
25	N55A	3.907938	0.0625	3.006326	0	
26	N57A	3.907938	2.979167	3.006326	0	
27	N61	-3.83778	0.0625	2.961356	0	
28	N63	3.83778	2.979167	2.961356	0	
29	N65A	3.83778	0.0625	2.961356	0	
30	N75	-0.803441	2.979167	1.016412	0	
31	N77	-0.803441	0.0625	1.016412	0	
32	N79	0.803441	0.0625	1.016412	0	
33	N81	0.803441	2.979167	1.016412	0	
34	N80A	-3.83778	2.979167	2.961356	0	
35	N51A	-0.733283	2.979167	0.971442	0	
36	N53A	-0.733283	0.0625	0.971442	0	
37	N55	0.733283	0.0625	0.971442	0	
38	N57	0.733283	2.979167	0.971442	0	
39	N59	-0.592967	2.979167	0.881503	0	
40	N63A	0.592967	2.979167	0.881503	0	
41	N65	0.592967	0.0625	0.881503	0	
42	N57B	-0.592967	0.0625	0.881503	0	
43	N51B	0	2.979167	0.881503	0	
44	N52	0	0.0625	0.881503	0	
45	N47	0.360844	2.979167	0.256503	0	
46	N48	0.360844	0.0625	0.256503	0	
47	N49	0.360844	5.0625	0.256503	0	
48	N50	0.360844	-2.020833	0.256503	0	
49	N51C	0.360844	3.895833	0.256503	0	
50	N52A	0.360844	-0.854167	0.256503	0	
51	N53	1.010363	3.895833	-0.118497	0	
52	N54	1.010363	-0.854167	-0.118497	0	
53	N53C	1.541667	0.104167	3.395833	0	
54	N54A	1.541667	3.020833	3.395833	0	
55	N55B	1.541667	0.104167	3.645833	0	
56	N56	1.541667	3.020833	3.645833	0	
57	N57C	1.541667	5.0625	3.645833	0	
58	N58	1.541667	-1.9375	3.645833	0	
59	N59A	-2.416667	0.104167	3.395833	0	
60	N60	-2.416667	3.020833	3.395833	0	
61	N61A	-2.416667	0.104167	3.645833	0	
62	N62	-2.416667	3.020833	3.645833	0	
63	N63B	-2.416667	5.0625	3.645833	0	
64	N64	-2.416667	-1.9375	3.645833	0	
65	N65B	-5.75	0.104167	3.395833	0	
66	N66	-5.75	3.020833	3.395833	0	
67	N67	-5.75	0.104167	3.645833	0	
68	N68	-5.75	3.020833	3.645833	0	
69	N69	-5.75	5.145833	3.645833	0	
70	N70	-5.75	-1.854167	3.645833	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
71	N71	4.583333	3.020833	3.395833	0	
72	N73A	0	2.979167	0.464836	0	
73	N74	0	0.0625	0.464836	0	
74	N77A	3.25	3.020833	3.395833	0	
75	N102	-5.75	2.020833	3.645833	0	
76	N103	5.666667	1.520833	3.645833	0	
77	N79A	1.010363	3.020833	-0.118497	0	
78	N81A	3.010363	2.395833	-20.118497	0	
79	N80	1.010363	2.395833	-0.118497	0	
80	N81B	1.010363	-0.104167	-0.118497	0	
81	N82	3.010363	-0.104167	-20.118497	0	
82	N83	1.910363	2.395833	-9.118497	0	
83	N84	1.910363	-0.104167	-9.118497	0	
84	N85	2.260363	2.395833	-9.118497	0	
85	N86	2.260363	-0.104167	-9.118497	0	
86	N87	2.260363	-1.104167	-9.118497	0	
87	N88	2.260363	4.145833	-9.118497	0	
88	N89	2.260363	1.520833	-9.118497	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design L...	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Antenna Pipe	PIPE_2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Face Horizontals	PIPE_2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
3	Standoff Horizontals	PIPE_2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
4	Tie-back	PIPE_1.5	Beam	Pipe	A53 Gr. B	Typical	.749	.293	.293	.586
5	Inner Bracing	SR 0.75	Column	BAR	A36 Gr.36	Typical	.442	.016	.016	.031
6	Standoff Plate 1	PL1/2X3 1/2	Beam	RECT	A36 Gr.36	Typical	1.75	.036	1.786	.133
7	Standoff Plate 2	PL1/2X3 3/4	Beam	RECT	A36 Gr.36	Typical	1.875	.039	2.197	.143
8	Tower Connection ...	PL5/8X5	Beam	RECT	A36 Gr.36	Typical	3.125	.102	6.51	.375
9	Mast Pipe	PIPE_4.0	Column	Pipe	A53 Gr. B	Typical	2.96	6.82	6.82	13.6
10	V bracing	L2.5x2.5x4	Column	Single A...	A36 Gr.36	Typical	1.19	.692	.692	.026
11	New Mount Pipe	PIPE_2.5	Column	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89
12	Tie Back Support	PIPE_2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
13	Tie Back Vertical S...	PIPE_2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
2	A53 Gr. B 50ksi	29000	11154	.3	.65	.49	50	1.5	60	1.2
3	A53 Gr. B	29000	11154	.3	.65	.49	35	1.5	60	1.2
4	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
5	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
6	A500 Gr. B 42	29000	11154	.3	.65	.49	42	1.4	58	1.3
7	A500 Gr. B 46	29000	11154	.3	.65	.49	46	1.4	58	1.3
8	A500 Gr.42	29000	11154	.3	.65	.49	42	1.4	58	1.3
9	A500 Gr.46	29000	11154	.3	.65	.49	46	1.4	58	1.3
10	A500 Gr. C	29000	11154	.3	.65	.49	50	1.5	62	1.2

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N2	N3			Face Horizont...	Beam	Pipe	A53 Gr. B	Typical
2	M2	N5	N6			Face Horizont...	Beam	Pipe	A53 Gr. B	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
3	M8	N12	N20			RIGID	None	None	RIGID	Typical
4	M9	N11	N19			RIGID	None	None	RIGID	Typical
5	MP1A	N25	N29			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
6	M18	N34	N73			RIGID	None	None	RIGID	Typical
7	M19	N33	N71A			RIGID	None	None	RIGID	Typical
8	M20	N32	N72A			RIGID	None	None	RIGID	Typical
9	M21	N31	N70A			RIGID	None	None	RIGID	Typical
10	M26	N63A	N59		90	Tower Connec...	Beam	RECT	A36 Gr.36	Typical
11	M27	N65	N57B		90	Tower Connec...	Beam	RECT	A36 Gr.36	Typical
12	M28	N44	N57A		90	Standoff Plate 1	Beam	RECT	A36 Gr.36	Typical
13	M29	N57A	N57			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
14	M30	N57	N63A		90	Standoff Plate 2	Beam	RECT	A36 Gr.36	Typical
15	M31	N55A	N55			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
16	M32	N46	N55A		90	Standoff Plate 1	Beam	RECT	A36 Gr.36	Typical
17	M33	N55	N65		90	Standoff Plate 2	Beam	RECT	A36 Gr.36	Typical
18	M34	N63	N65A			Inner Bracing	Column	BAR	A36 Gr.36	Typical
19	M35	N81	N79			Inner Bracing	Column	BAR	A36 Gr.36	Typical
20	M36	N81	N65A			Inner Bracing	Column	BAR	A36 Gr.36	Typical
21	M37	N43	N51		90	Standoff Plate 1	Beam	RECT	A36 Gr.36	Typical
22	M38	N51	N51A			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
23	M39	N51A	N59		90	Standoff Plate 2	Beam	RECT	A36 Gr.36	Typical
24	M41	N45	N53B		90	Standoff Plate 1	Beam	RECT	A36 Gr.36	Typical
25	M42	N53A	N57B		90	Standoff Plate 2	Beam	RECT	A36 Gr.36	Typical
26	M43	N80A	N61			Inner Bracing	Column	BAR	A36 Gr.36	Typical
27	M44	N75	N77			Inner Bracing	Column	BAR	A36 Gr.36	Typical
28	M45	N75	N61			Inner Bracing	Column	BAR	A36 Gr.36	Typical
29	M46	N72A	N43			RIGID	None	None	RIGID	Typical
30	M47	N73	N44			RIGID	None	None	RIGID	Typical
31	M48	N46	N71A			RIGID	None	None	RIGID	Typical
32	M49	N45	N70A			RIGID	None	None	RIGID	Typical
33	M39B	N53B	N53A			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
34	M35A	N51B	N73A			RIGID	None	None	RIGID	Typical
35	M36A	N52	N74			RIGID	None	None	RIGID	Typical
36	M37A	N49	N50			Mast Pipe	Column	Pipe	A53 Gr. B	Typical
37	M38A	N51C	N53			RIGID	None	None	RIGID	Typical
38	M39A	N52A	N54			RIGID	None	None	RIGID	Typical
39	M39C	N54A	N56			RIGID	None	None	RIGID	Typical
40	M40	N53C	N55B			RIGID	None	None	RIGID	Typical
41	MP2A	N57C	N58			New Mount Pipe	Column	Pipe	A53 Gr. B	Typical
42	M42A	N60	N62			RIGID	None	None	RIGID	Typical
43	M43A	N59A	N61A			RIGID	None	None	RIGID	Typical
44	MP3A	N63B	N64			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
45	M45A	N66	N68			RIGID	None	None	RIGID	Typical
46	M46A	N65B	N67			RIGID	None	None	RIGID	Typical
47	MP4A	N69	N70			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
48	M49A	N73A	N47			RIGID	None	None	RIGID	Typical
49	M50	N74	N48			RIGID	None	None	RIGID	Typical
50	M65	N103	N89			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
51	M51	N71	N79A			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
52	M52	N80	N81A			Tie Back Supp...	Column	Pipe	A53 Gr. B	Typical
53	M53	N81B	N82			Tie Back Supp...	Column	Pipe	A53 Gr. B	Typical
54	M54	N84	N86			RIGID	None	None	RIGID	Typical
55	M55	N83	N85			RIGID	None	None	RIGID	Typical
56	M56	N88	N87			Tie Back Verti...	Column	Pipe	A53 Gr. B	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes				None
2	M2						Yes	Default			None
3	M8						Yes	** NA **			None
4	M9						Yes	** NA **			None
5	MP1A						Yes	** NA **			None
6	M18						Yes	** NA **			None
7	M19						Yes	** NA **			None
8	M20						Yes	** NA **			None
9	M21						Yes	** NA **			None
10	M26						Yes	Default			None
11	M27						Yes				None
12	M28	BenPIN					Yes				None
13	M29						Yes				None
14	M30		OOOOOO				Yes	Default			None
15	M31						Yes				None
16	M32	BenPIN					Yes				None
17	M33		OOOOOO				Yes	Default			None
18	M34	BenPIN	BenPIN				Yes	** NA **			None
19	M35	BenPIN	BenPIN				Yes	** NA **			None
20	M36	BenPIN	BenPIN	1.3	1.3		Yes	** NA **			None
21	M37	BenPIN					Yes				None
22	M38						Yes				None
23	M39		OOOOOO				Yes	Default			None
24	M41	BenPIN					Yes				None
25	M42		OOOOOO				Yes	Default			None
26	M43	BenPIN	BenPIN				Yes	** NA **			None
27	M44	BenPIN	BenPIN				Yes	** NA **			None
28	M45	BenPIN	BenPIN	1.3	1.3		Yes	** NA **			None
29	M46						Yes	** NA **			None
30	M47						Yes	** NA **			None
31	M48						Yes	** NA **			None
32	M49						Yes	** NA **			None
33	M39B						Yes				None
34	M35A						Yes	** NA **			None
35	M36A						Yes	** NA **			None
36	M37A						Yes	** NA **			None
37	M38A						Yes	** NA **			None
38	M39A						Yes	** NA **			None
39	M39C						Yes	** NA **			None
40	M40						Yes	** NA **			None
41	MP2A						Yes	** NA **			None
42	M42A						Yes	** NA **			None
43	M43A						Yes	** NA **			None
44	MP3A						Yes	** NA **			None
45	M45A						Yes	** NA **			None
46	M46A						Yes	** NA **			None
47	MP4A						Yes	** NA **			None
48	M49A						Yes	** NA **			None
49	M50						Yes	** NA **			None
50	M65	BenPIN	BenPIN				Yes	** NA **			None
51	M51	BenPIN					Yes	** NA **			None
52	M52						Yes	** NA **			None
53	M53						Yes	** NA **			None
54	M54						Yes	** NA **			None
55	M55						Yes	** NA **			None
56	M56						Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-21.85	1
2	MP2A	My	-.011	1
3	MP2A	Mz	.013	1
4	MP2A	Y	-21.85	5
5	MP2A	My	-.011	5
6	MP2A	Mz	.013	5
7	MP2A	Y	-21.85	1
8	MP2A	My	-.011	1
9	MP2A	Mz	-.013	1
10	MP2A	Y	-21.85	5
11	MP2A	My	-.011	5
12	MP2A	Mz	-.013	5
13	MP1A	Y	-43.55	2
14	MP1A	My	-.022	2
15	MP1A	Mz	0	2
16	MP1A	Y	-43.55	4
17	MP1A	My	-.022	4
18	MP1A	Mz	0	4
19	MP1A	Y	-84.4	3.5
20	MP1A	My	.042	3.5
21	MP1A	Mz	0	3.5
22	MP2A	Y	-70.3	3.5
23	MP2A	My	.035	3.5
24	MP2A	Mz	0	3.5
25	M29	Y	-32	.5
26	M29	My	0	.5
27	M29	Mz	0	.5
28	MP4A	Y	-22.95	1
29	MP4A	My	-.011	1
30	MP4A	Mz	0	1
31	MP4A	Y	-22.95	5
32	MP4A	My	-.011	5
33	MP4A	Mz	0	5

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-96.986	1
2	MP2A	My	-.048	1
3	MP2A	Mz	.057	1
4	MP2A	Y	-96.986	5
5	MP2A	My	-.048	5
6	MP2A	Mz	.057	5
7	MP2A	Y	-96.986	1
8	MP2A	My	-.048	1
9	MP2A	Mz	-.057	1
10	MP2A	Y	-96.986	5
11	MP2A	My	-.048	5
12	MP2A	Mz	-.057	5
13	MP1A	Y	-57.259	2
14	MP1A	My	-.029	2
15	MP1A	Mz	0	2
16	MP1A	Y	-57.259	4
17	MP1A	My	-.029	4
18	MP1A	Mz	0	4
19	MP1A	Y	-72.795	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	MP1A	My	.036	3.5
21	MP1A	Mz	0	3.5
22	MP2A	Y	-65.733	3.5
23	MP2A	My	.033	3.5
24	MP2A	Mz	0	3.5
25	M29	Y	-121.491	.5
26	M29	My	0	.5
27	M29	Mz	0	.5
28	MP4A	Y	-107.6	1
29	MP4A	My	-.054	1
30	MP4A	Mz	0	1
31	MP4A	Y	-107.6	5
32	MP4A	My	-.054	5
33	MP4A	Mz	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	1
2	MP2A	Z	-131.265	1
3	MP2A	Mx	-.077	1
4	MP2A	X	0	5
5	MP2A	Z	-131.265	5
6	MP2A	Mx	-.077	5
7	MP2A	X	0	1
8	MP2A	Z	-131.265	1
9	MP2A	Mx	.077	1
10	MP2A	X	0	5
11	MP2A	Z	-131.265	5
12	MP2A	Mx	.077	5
13	MP1A	X	0	2
14	MP1A	Z	-76.355	2
15	MP1A	Mx	0	2
16	MP1A	X	0	4
17	MP1A	Z	-76.355	4
18	MP1A	Mx	0	4
19	MP1A	X	0	3.5
20	MP1A	Z	-60.759	3.5
21	MP1A	Mx	0	3.5
22	MP2A	X	0	3.5
23	MP2A	Z	-60.759	3.5
24	MP2A	Mx	0	3.5
25	M29	X	0	.5
26	M29	Z	-118.272	.5
27	M29	Mx	0	.5
28	MP4A	X	0	1
29	MP4A	Z	-149.947	1
30	MP4A	Mx	0	1
31	MP4A	X	0	5
32	MP4A	Z	-149.947	5
33	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	60.072	1
2	MP2A	Z	-104.047	1
3	MP2A	Mx	-.091	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP2A	X	60.072	5
5	MP2A	Z	-104.047	5
6	MP2A	Mx	-.091	5
7	MP2A	X	60.072	1
8	MP2A	Z	-104.047	1
9	MP2A	Mx	.031	1
10	MP2A	X	60.072	5
11	MP2A	Z	-104.047	5
12	MP2A	Mx	.031	5
13	MP1A	X	32.37	2
14	MP1A	Z	-56.066	2
15	MP1A	Mx	-.016	2
16	MP1A	X	32.37	4
17	MP1A	Z	-56.066	4
18	MP1A	Mx	-.016	4
19	MP1A	X	27.861	3.5
20	MP1A	Z	-48.257	3.5
21	MP1A	Mx	.014	3.5
22	MP2A	X	26.897	3.5
23	MP2A	Z	-46.586	3.5
24	MP2A	Mx	.013	3.5
25	M29	X	49.356	.5
26	M29	Z	-85.487	.5
27	M29	Mx	0	.5
28	MP4A	X	68.699	1
29	MP4A	Z	-118.99	1
30	MP4A	Mx	-.034	1
31	MP4A	X	68.699	5
32	MP4A	Z	-118.99	5
33	MP4A	Mx	-.034	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	84.784	1
2	MP2A	Z	-48.95	1
3	MP2A	Mx	-.071	1
4	MP2A	X	84.784	5
5	MP2A	Z	-48.95	5
6	MP2A	Mx	-.071	5
7	MP2A	X	84.784	1
8	MP2A	Z	-48.95	1
9	MP2A	Mx	-.014	1
10	MP2A	X	84.784	5
11	MP2A	Z	-48.95	5
12	MP2A	Mx	-.014	5
13	MP1A	X	35.947	2
14	MP1A	Z	-20.754	2
15	MP1A	Mx	-.018	2
16	MP1A	X	35.947	4
17	MP1A	Z	-20.754	4
18	MP1A	Mx	-.018	4
19	MP1A	X	39.534	3.5
20	MP1A	Z	-22.825	3.5
21	MP1A	Mx	.02	3.5
22	MP2A	X	34.522	3.5
23	MP2A	Z	-19.931	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
24	MP2A	Mx	.017	3.5
25	M29	X	71.677	.5
26	M29	Z	-41.383	.5
27	M29	Mx	0	.5
28	MP4A	X	97.255	1
29	MP4A	Z	-56.15	1
30	MP4A	Mx	-.049	1
31	MP4A	X	97.255	5
32	MP4A	Z	-56.15	5
33	MP4A	Mx	-.049	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	86.779	1
2	MP2A	Z	0	1
3	MP2A	Mx	-.043	1
4	MP2A	X	86.779	5
5	MP2A	Z	0	5
6	MP2A	Mx	-.043	5
7	MP2A	X	86.779	1
8	MP2A	Z	0	1
9	MP2A	Mx	-.043	1
10	MP2A	X	86.779	5
11	MP2A	Z	0	5
12	MP2A	Mx	-.043	5
13	MP1A	X	29.893	2
14	MP1A	Z	0	2
15	MP1A	Mx	-.015	2
16	MP1A	X	29.893	4
17	MP1A	Z	0	4
18	MP1A	Mx	-.015	4
19	MP1A	X	40.614	3.5
20	MP1A	Z	0	3.5
21	MP1A	Mx	.02	3.5
22	MP2A	X	32.897	3.5
23	MP2A	Z	0	3.5
24	MP2A	Mx	.016	3.5
25	M29	X	86.38	.5
26	M29	Z	0	.5
27	M29	Mx	0	.5
28	MP4A	X	99.751	1
29	MP4A	Z	0	1
30	MP4A	Mx	-.05	1
31	MP4A	X	99.751	5
32	MP4A	Z	0	5
33	MP4A	Mx	-.05	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	84.784	1
2	MP2A	Z	48.95	1
3	MP2A	Mx	-.014	1
4	MP2A	X	84.784	5
5	MP2A	Z	48.95	5
6	MP2A	Mx	-.014	5
7	MP2A	X	84.784	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
8	MP2A	Z	48.95	1
9	MP2A	Mx	-.071	1
10	MP2A	X	84.784	5
11	MP2A	Z	48.95	5
12	MP2A	Mx	-.071	5
13	MP1A	X	35.947	2
14	MP1A	Z	20.754	2
15	MP1A	Mx	-.018	2
16	MP1A	X	35.947	4
17	MP1A	Z	20.754	4
18	MP1A	Mx	-.018	4
19	MP1A	X	39.534	3.5
20	MP1A	Z	22.825	3.5
21	MP1A	Mx	.02	3.5
22	MP2A	X	34.522	3.5
23	MP2A	Z	19.931	3.5
24	MP2A	Mx	.017	3.5
25	M29	X	91.747	.5
26	M29	Z	52.97	.5
27	M29	Mx	0	.5
28	MP4A	X	97.255	1
29	MP4A	Z	56.15	1
30	MP4A	Mx	-.049	1
31	MP4A	X	97.255	5
32	MP4A	Z	56.15	5
33	MP4A	Mx	-.049	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	60.072	1
2	MP2A	Z	104.047	1
3	MP2A	Mx	.031	1
4	MP2A	X	60.072	5
5	MP2A	Z	104.047	5
6	MP2A	Mx	.031	5
7	MP2A	X	60.072	1
8	MP2A	Z	104.047	1
9	MP2A	Mx	-.091	1
10	MP2A	X	60.072	5
11	MP2A	Z	104.047	5
12	MP2A	Mx	-.091	5
13	MP1A	X	32.37	2
14	MP1A	Z	56.066	2
15	MP1A	Mx	-.016	2
16	MP1A	X	32.37	4
17	MP1A	Z	56.066	4
18	MP1A	Mx	-.016	4
19	MP1A	X	27.861	3.5
20	MP1A	Z	48.257	3.5
21	MP1A	Mx	.014	3.5
22	MP2A	X	26.897	3.5
23	MP2A	Z	46.586	3.5
24	MP2A	Mx	.013	3.5
25	M29	X	60.943	.5
26	M29	Z	105.557	.5
27	M29	Mx	0	.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
28	MP4A	X	68.699	1
29	MP4A	Z	118.99	1
30	MP4A	Mx	-.034	1
31	MP4A	X	68.699	5
32	MP4A	Z	118.99	5
33	MP4A	Mx	-.034	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	1
2	MP2A	Z	131.265	1
3	MP2A	Mx	.077	1
4	MP2A	X	0	5
5	MP2A	Z	131.265	5
6	MP2A	Mx	.077	5
7	MP2A	X	0	1
8	MP2A	Z	131.265	1
9	MP2A	Mx	-.077	1
10	MP2A	X	0	5
11	MP2A	Z	131.265	5
12	MP2A	Mx	-.077	5
13	MP1A	X	0	2
14	MP1A	Z	76.355	2
15	MP1A	Mx	0	2
16	MP1A	X	0	4
17	MP1A	Z	76.355	4
18	MP1A	Mx	0	4
19	MP1A	X	0	3.5
20	MP1A	Z	60.759	3.5
21	MP1A	Mx	0	3.5
22	MP2A	X	0	3.5
23	MP2A	Z	60.759	3.5
24	MP2A	Mx	0	3.5
25	M29	X	0	.5
26	M29	Z	118.272	.5
27	M29	Mx	0	.5
28	MP4A	X	0	1
29	MP4A	Z	149.947	1
30	MP4A	Mx	0	1
31	MP4A	X	0	5
32	MP4A	Z	149.947	5
33	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-60.072	1
2	MP2A	Z	104.047	1
3	MP2A	Mx	.091	1
4	MP2A	X	-60.072	5
5	MP2A	Z	104.047	5
6	MP2A	Mx	.091	5
7	MP2A	X	-60.072	1
8	MP2A	Z	104.047	1
9	MP2A	Mx	-.031	1
10	MP2A	X	-60.072	5
11	MP2A	Z	104.047	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
12	MP2A	Mx	-.031	5
13	MP1A	X	-32.37	2
14	MP1A	Z	56.066	2
15	MP1A	Mx	.016	2
16	MP1A	X	-32.37	4
17	MP1A	Z	56.066	4
18	MP1A	Mx	.016	4
19	MP1A	X	-27.861	3.5
20	MP1A	Z	48.257	3.5
21	MP1A	Mx	-.014	3.5
22	MP2A	X	-26.897	3.5
23	MP2A	Z	46.586	3.5
24	MP2A	Mx	-.013	3.5
25	M29	X	-49.356	.5
26	M29	Z	85.487	.5
27	M29	Mx	0	.5
28	MP4A	X	-68.699	1
29	MP4A	Z	118.99	1
30	MP4A	Mx	.034	1
31	MP4A	X	-68.699	5
32	MP4A	Z	118.99	5
33	MP4A	Mx	.034	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-84.784	1
2	MP2A	Z	48.95	1
3	MP2A	Mx	.071	1
4	MP2A	X	-84.784	5
5	MP2A	Z	48.95	5
6	MP2A	Mx	.071	5
7	MP2A	X	-84.784	1
8	MP2A	Z	48.95	1
9	MP2A	Mx	.014	1
10	MP2A	X	-84.784	5
11	MP2A	Z	48.95	5
12	MP2A	Mx	.014	5
13	MP1A	X	-35.947	2
14	MP1A	Z	20.754	2
15	MP1A	Mx	.018	2
16	MP1A	X	-35.947	4
17	MP1A	Z	20.754	4
18	MP1A	Mx	.018	4
19	MP1A	X	-39.534	3.5
20	MP1A	Z	22.825	3.5
21	MP1A	Mx	-.02	3.5
22	MP2A	X	-34.522	3.5
23	MP2A	Z	19.931	3.5
24	MP2A	Mx	-.017	3.5
25	M29	X	-71.677	.5
26	M29	Z	41.383	.5
27	M29	Mx	0	.5
28	MP4A	X	-97.255	1
29	MP4A	Z	56.15	1
30	MP4A	Mx	.049	1
31	MP4A	X	-97.255	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
32	MP4A	Z	56.15	5
33	MP4A	Mx	.049	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-86.779	1
2	MP2A	Z	0	1
3	MP2A	Mx	.043	1
4	MP2A	X	-86.779	5
5	MP2A	Z	0	5
6	MP2A	Mx	.043	5
7	MP2A	X	-86.779	1
8	MP2A	Z	0	1
9	MP2A	Mx	.043	1
10	MP2A	X	-86.779	5
11	MP2A	Z	0	5
12	MP2A	Mx	.043	5
13	MP1A	X	-29.893	2
14	MP1A	Z	0	2
15	MP1A	Mx	.015	2
16	MP1A	X	-29.893	4
17	MP1A	Z	0	4
18	MP1A	Mx	.015	4
19	MP1A	X	-40.614	3.5
20	MP1A	Z	0	3.5
21	MP1A	Mx	-.02	3.5
22	MP2A	X	-32.897	3.5
23	MP2A	Z	0	3.5
24	MP2A	Mx	-.016	3.5
25	M29	X	-86.38	.5
26	M29	Z	0	.5
27	M29	Mx	0	.5
28	MP4A	X	-99.751	1
29	MP4A	Z	0	1
30	MP4A	Mx	.05	1
31	MP4A	X	-99.751	5
32	MP4A	Z	0	5
33	MP4A	Mx	.05	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-84.784	1
2	MP2A	Z	-48.95	1
3	MP2A	Mx	.014	1
4	MP2A	X	-84.784	5
5	MP2A	Z	-48.95	5
6	MP2A	Mx	.014	5
7	MP2A	X	-84.784	1
8	MP2A	Z	-48.95	1
9	MP2A	Mx	.071	1
10	MP2A	X	-84.784	5
11	MP2A	Z	-48.95	5
12	MP2A	Mx	.071	5
13	MP1A	X	-35.947	2
14	MP1A	Z	-20.754	2
15	MP1A	Mx	.018	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
16	MP1A	X	-35.947	4
17	MP1A	Z	-20.754	4
18	MP1A	Mx	.018	4
19	MP1A	X	-39.534	3.5
20	MP1A	Z	-22.825	3.5
21	MP1A	Mx	-.02	3.5
22	MP2A	X	-34.522	3.5
23	MP2A	Z	-19.931	3.5
24	MP2A	Mx	-.017	3.5
25	M29	X	-91.747	.5
26	M29	Z	-52.97	.5
27	M29	Mx	0	.5
28	MP4A	X	-97.255	1
29	MP4A	Z	-56.15	1
30	MP4A	Mx	.049	1
31	MP4A	X	-97.255	5
32	MP4A	Z	-56.15	5
33	MP4A	Mx	.049	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-60.072	1
2	MP2A	Z	-104.047	1
3	MP2A	Mx	-.031	1
4	MP2A	X	-60.072	5
5	MP2A	Z	-104.047	5
6	MP2A	Mx	-.031	5
7	MP2A	X	-60.072	1
8	MP2A	Z	-104.047	1
9	MP2A	Mx	.091	1
10	MP2A	X	-60.072	5
11	MP2A	Z	-104.047	5
12	MP2A	Mx	.091	5
13	MP1A	X	-32.37	2
14	MP1A	Z	-56.066	2
15	MP1A	Mx	.016	2
16	MP1A	X	-32.37	4
17	MP1A	Z	-56.066	4
18	MP1A	Mx	.016	4
19	MP1A	X	-27.861	3.5
20	MP1A	Z	-48.257	3.5
21	MP1A	Mx	-.014	3.5
22	MP2A	X	-26.897	3.5
23	MP2A	Z	-46.586	3.5
24	MP2A	Mx	-.013	3.5
25	M29	X	-60.943	.5
26	M29	Z	-105.557	.5
27	M29	Mx	0	.5
28	MP4A	X	-68.699	1
29	MP4A	Z	-118.99	1
30	MP4A	Mx	.034	1
31	MP4A	X	-68.699	5
32	MP4A	Z	-118.99	5
33	MP4A	Mx	.034	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	1
2	MP2A	Z	-28.301	1
3	MP2A	Mx	-.017	1
4	MP2A	X	0	5
5	MP2A	Z	-28.301	5
6	MP2A	Mx	-.017	5
7	MP2A	X	0	1
8	MP2A	Z	-28.301	1
9	MP2A	Mx	.017	1
10	MP2A	X	0	5
11	MP2A	Z	-28.301	5
12	MP2A	Mx	.017	5
13	MP1A	X	0	2
14	MP1A	Z	-17.025	2
15	MP1A	Mx	0	2
16	MP1A	X	0	4
17	MP1A	Z	-17.025	4
18	MP1A	Mx	0	4
19	MP1A	X	0	3.5
20	MP1A	Z	-14.761	3.5
21	MP1A	Mx	0	3.5
22	MP2A	X	0	3.5
23	MP2A	Z	-14.761	3.5
24	MP2A	Mx	0	3.5
25	M29	X	0	.5
26	M29	Z	-26.785	.5
27	M29	Mx	0	.5
28	MP4A	X	0	1
29	MP4A	Z	-32.166	1
30	MP4A	Mx	0	1
31	MP4A	X	0	5
32	MP4A	Z	-32.166	5
33	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	13.102	1
2	MP2A	Z	-22.693	1
3	MP2A	Mx	-.02	1
4	MP2A	X	13.102	5
5	MP2A	Z	-22.693	5
6	MP2A	Mx	-.02	5
7	MP2A	X	13.102	1
8	MP2A	Z	-22.693	1
9	MP2A	Mx	.007	1
10	MP2A	X	13.102	5
11	MP2A	Z	-22.693	5
12	MP2A	Mx	.007	5
13	MP1A	X	7.331	2
14	MP1A	Z	-12.697	2
15	MP1A	Mx	-.004	2
16	MP1A	X	7.331	4
17	MP1A	Z	-12.697	4
18	MP1A	Mx	-.004	4
19	MP1A	X	6.845	3.5
20	MP1A	Z	-11.856	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
21	MP1A	Mx	.003	3.5
22	MP2A	X	6.641	3.5
23	MP2A	Z	-11.503	3.5
24	MP2A	Mx	.003	3.5
25	M29	X	11.418	.5
26	M29	Z	-19.776	.5
27	M29	Mx	0	.5
28	MP4A	X	14.895	1
29	MP4A	Z	-25.799	1
30	MP4A	Mx	-.007	1
31	MP4A	X	14.895	5
32	MP4A	Z	-25.799	5
33	MP4A	Mx	-.007	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	19.06	1
2	MP2A	Z	-11.004	1
3	MP2A	Mx	-.016	1
4	MP2A	X	19.06	5
5	MP2A	Z	-11.004	5
6	MP2A	Mx	-.016	5
7	MP2A	X	19.06	1
8	MP2A	Z	-11.004	1
9	MP2A	Mx	-.003	1
10	MP2A	X	19.06	5
11	MP2A	Z	-11.004	5
12	MP2A	Mx	-.003	5
13	MP1A	X	8.604	2
14	MP1A	Z	-4.968	2
15	MP1A	Mx	-.004	2
16	MP1A	X	8.604	4
17	MP1A	Z	-4.968	4
18	MP1A	Mx	-.004	4
19	MP1A	X	9.999	3.5
20	MP1A	Z	-5.773	3.5
21	MP1A	Mx	.005	3.5
22	MP2A	X	8.941	3.5
23	MP2A	Z	-5.162	3.5
24	MP2A	Mx	.004	3.5
25	M29	X	16.988	.5
26	M29	Z	-9.808	.5
27	M29	Mx	0	.5
28	MP4A	X	21.682	1
29	MP4A	Z	-12.518	1
30	MP4A	Mx	-.011	1
31	MP4A	X	21.682	5
32	MP4A	Z	-12.518	5
33	MP4A	Mx	-.011	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	19.911	1
2	MP2A	Z	0	1
3	MP2A	Mx	-.01	1
4	MP2A	X	19.911	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
5	MP2A	Z	0	5
6	MP2A	Mx	-.01	5
7	MP2A	X	19.911	1
8	MP2A	Z	0	1
9	MP2A	Mx	-.01	1
10	MP2A	X	19.911	5
11	MP2A	Z	0	5
12	MP2A	Mx	-.01	5
13	MP1A	X	7.572	2
14	MP1A	Z	0	2
15	MP1A	Mx	-.004	2
16	MP1A	X	7.572	4
17	MP1A	Z	0	4
18	MP1A	Mx	-.004	4
19	MP1A	X	10.475	3.5
20	MP1A	Z	0	3.5
21	MP1A	Mx	.005	3.5
22	MP2A	X	8.846	3.5
23	MP2A	Z	0	3.5
24	MP2A	Mx	.004	3.5
25	M29	X	20.346	.5
26	M29	Z	0	.5
27	M29	Mx	0	.5
28	MP4A	X	22.66	1
29	MP4A	Z	0	1
30	MP4A	Mx	-.011	1
31	MP4A	X	22.66	5
32	MP4A	Z	0	5
33	MP4A	Mx	-.011	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	19.06	1
2	MP2A	Z	11.004	1
3	MP2A	Mx	-.003	1
4	MP2A	X	19.06	5
5	MP2A	Z	11.004	5
6	MP2A	Mx	-.003	5
7	MP2A	X	19.06	1
8	MP2A	Z	11.004	1
9	MP2A	Mx	-.016	1
10	MP2A	X	19.06	5
11	MP2A	Z	11.004	5
12	MP2A	Mx	-.016	5
13	MP1A	X	8.604	2
14	MP1A	Z	4.968	2
15	MP1A	Mx	-.004	2
16	MP1A	X	8.604	4
17	MP1A	Z	4.968	4
18	MP1A	Mx	-.004	4
19	MP1A	X	9.999	3.5
20	MP1A	Z	5.773	3.5
21	MP1A	Mx	.005	3.5
22	MP2A	X	8.941	3.5
23	MP2A	Z	5.162	3.5
24	MP2A	Mx	.004	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	M29	X	21.04	.5
26	M29	Z	12.147	.5
27	M29	Mx	0	.5
28	MP4A	X	21.682	1
29	MP4A	Z	12.518	1
30	MP4A	Mx	-.011	1
31	MP4A	X	21.682	5
32	MP4A	Z	12.518	5
33	MP4A	Mx	-.011	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	13.102	1
2	MP2A	Z	22.693	1
3	MP2A	Mx	.007	1
4	MP2A	X	13.102	5
5	MP2A	Z	22.693	5
6	MP2A	Mx	.007	5
7	MP2A	X	13.102	1
8	MP2A	Z	22.693	1
9	MP2A	Mx	-.02	1
10	MP2A	X	13.102	5
11	MP2A	Z	22.693	5
12	MP2A	Mx	-.02	5
13	MP1A	X	7.331	2
14	MP1A	Z	12.697	2
15	MP1A	Mx	-.004	2
16	MP1A	X	7.331	4
17	MP1A	Z	12.697	4
18	MP1A	Mx	-.004	4
19	MP1A	X	6.845	3.5
20	MP1A	Z	11.856	3.5
21	MP1A	Mx	.003	3.5
22	MP2A	X	6.641	3.5
23	MP2A	Z	11.503	3.5
24	MP2A	Mx	.003	3.5
25	M29	X	13.757	.5
26	M29	Z	23.828	.5
27	M29	Mx	0	.5
28	MP4A	X	14.895	1
29	MP4A	Z	25.799	1
30	MP4A	Mx	-.007	1
31	MP4A	X	14.895	5
32	MP4A	Z	25.799	5
33	MP4A	Mx	-.007	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	1
2	MP2A	Z	28.301	1
3	MP2A	Mx	.017	1
4	MP2A	X	0	5
5	MP2A	Z	28.301	5
6	MP2A	Mx	.017	5
7	MP2A	X	0	1
8	MP2A	Z	28.301	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
9	MP2A	Mx	-.017	1
10	MP2A	X	0	5
11	MP2A	Z	28.301	5
12	MP2A	Mx	-.017	5
13	MP1A	X	0	2
14	MP1A	Z	17.025	2
15	MP1A	Mx	0	2
16	MP1A	X	0	4
17	MP1A	Z	17.025	4
18	MP1A	Mx	0	4
19	MP1A	X	0	3.5
20	MP1A	Z	14.761	3.5
21	MP1A	Mx	0	3.5
22	MP2A	X	0	3.5
23	MP2A	Z	14.761	3.5
24	MP2A	Mx	0	3.5
25	M29	X	0	.5
26	M29	Z	26.785	.5
27	M29	Mx	0	.5
28	MP4A	X	0	1
29	MP4A	Z	32.166	1
30	MP4A	Mx	0	1
31	MP4A	X	0	5
32	MP4A	Z	32.166	5
33	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-13.102	1
2	MP2A	Z	22.693	1
3	MP2A	Mx	.02	1
4	MP2A	X	-13.102	5
5	MP2A	Z	22.693	5
6	MP2A	Mx	.02	5
7	MP2A	X	-13.102	1
8	MP2A	Z	22.693	1
9	MP2A	Mx	-.007	1
10	MP2A	X	-13.102	5
11	MP2A	Z	22.693	5
12	MP2A	Mx	-.007	5
13	MP1A	X	-7.331	2
14	MP1A	Z	12.697	2
15	MP1A	Mx	.004	2
16	MP1A	X	-7.331	4
17	MP1A	Z	12.697	4
18	MP1A	Mx	.004	4
19	MP1A	X	-6.845	3.5
20	MP1A	Z	11.856	3.5
21	MP1A	Mx	-.003	3.5
22	MP2A	X	-6.641	3.5
23	MP2A	Z	11.503	3.5
24	MP2A	Mx	-.003	3.5
25	M29	X	-11.418	.5
26	M29	Z	19.776	.5
27	M29	Mx	0	.5
28	MP4A	X	-14.895	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP4A	Z	25.799	1
30	MP4A	Mx	.007	1
31	MP4A	X	-14.895	5
32	MP4A	Z	25.799	5
33	MP4A	Mx	.007	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-19.06	1
2	MP2A	Z	11.004	1
3	MP2A	Mx	.016	1
4	MP2A	X	-19.06	5
5	MP2A	Z	11.004	5
6	MP2A	Mx	.016	5
7	MP2A	X	-19.06	1
8	MP2A	Z	11.004	1
9	MP2A	Mx	.003	1
10	MP2A	X	-19.06	5
11	MP2A	Z	11.004	5
12	MP2A	Mx	.003	5
13	MP1A	X	-8.604	2
14	MP1A	Z	4.968	2
15	MP1A	Mx	.004	2
16	MP1A	X	-8.604	4
17	MP1A	Z	4.968	4
18	MP1A	Mx	.004	4
19	MP1A	X	-9.999	3.5
20	MP1A	Z	5.773	3.5
21	MP1A	Mx	-.005	3.5
22	MP2A	X	-8.941	3.5
23	MP2A	Z	5.162	3.5
24	MP2A	Mx	-.004	3.5
25	M29	X	-16.988	.5
26	M29	Z	9.808	.5
27	M29	Mx	0	.5
28	MP4A	X	-21.682	1
29	MP4A	Z	12.518	1
30	MP4A	Mx	.011	1
31	MP4A	X	-21.682	5
32	MP4A	Z	12.518	5
33	MP4A	Mx	.011	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-19.911	1
2	MP2A	Z	0	1
3	MP2A	Mx	.01	1
4	MP2A	X	-19.911	5
5	MP2A	Z	0	5
6	MP2A	Mx	.01	5
7	MP2A	X	-19.911	1
8	MP2A	Z	0	1
9	MP2A	Mx	.01	1
10	MP2A	X	-19.911	5
11	MP2A	Z	0	5
12	MP2A	Mx	.01	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP1A	X	-7.572	2
14	MP1A	Z	0	2
15	MP1A	Mx	.004	2
16	MP1A	X	-7.572	4
17	MP1A	Z	0	4
18	MP1A	Mx	.004	4
19	MP1A	X	-10.475	3.5
20	MP1A	Z	0	3.5
21	MP1A	Mx	-.005	3.5
22	MP2A	X	-8.846	3.5
23	MP2A	Z	0	3.5
24	MP2A	Mx	-.004	3.5
25	M29	X	-20.346	.5
26	M29	Z	0	.5
27	M29	Mx	0	.5
28	MP4A	X	-22.66	1
29	MP4A	Z	0	1
30	MP4A	Mx	.011	1
31	MP4A	X	-22.66	5
32	MP4A	Z	0	5
33	MP4A	Mx	.011	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-19.06	1
2	MP2A	Z	-11.004	1
3	MP2A	Mx	.003	1
4	MP2A	X	-19.06	5
5	MP2A	Z	-11.004	5
6	MP2A	Mx	.003	5
7	MP2A	X	-19.06	1
8	MP2A	Z	-11.004	1
9	MP2A	Mx	.016	1
10	MP2A	X	-19.06	5
11	MP2A	Z	-11.004	5
12	MP2A	Mx	.016	5
13	MP1A	X	-8.604	2
14	MP1A	Z	-4.968	2
15	MP1A	Mx	.004	2
16	MP1A	X	-8.604	4
17	MP1A	Z	-4.968	4
18	MP1A	Mx	.004	4
19	MP1A	X	-9.999	3.5
20	MP1A	Z	-5.773	3.5
21	MP1A	Mx	-.005	3.5
22	MP2A	X	-8.941	3.5
23	MP2A	Z	-5.162	3.5
24	MP2A	Mx	-.004	3.5
25	M29	X	-21.04	.5
26	M29	Z	-12.147	.5
27	M29	Mx	0	.5
28	MP4A	X	-21.682	1
29	MP4A	Z	-12.518	1
30	MP4A	Mx	.011	1
31	MP4A	X	-21.682	5
32	MP4A	Z	-12.518	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
33	MP4A	Mx	.011	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-13.102	1
2	MP2A	Z	-22.693	1
3	MP2A	Mx	-.007	1
4	MP2A	X	-13.102	5
5	MP2A	Z	-22.693	5
6	MP2A	Mx	-.007	5
7	MP2A	X	-13.102	1
8	MP2A	Z	-22.693	1
9	MP2A	Mx	.02	1
10	MP2A	X	-13.102	5
11	MP2A	Z	-22.693	5
12	MP2A	Mx	.02	5
13	MP1A	X	-7.331	2
14	MP1A	Z	-12.697	2
15	MP1A	Mx	.004	2
16	MP1A	X	-7.331	4
17	MP1A	Z	-12.697	4
18	MP1A	Mx	.004	4
19	MP1A	X	-6.845	3.5
20	MP1A	Z	-11.856	3.5
21	MP1A	Mx	-.003	3.5
22	MP2A	X	-6.641	3.5
23	MP2A	Z	-11.503	3.5
24	MP2A	Mx	-.003	3.5
25	M29	X	-13.757	.5
26	M29	Z	-23.828	.5
27	M29	Mx	0	.5
28	MP4A	X	-14.895	1
29	MP4A	Z	-25.799	1
30	MP4A	Mx	.007	1
31	MP4A	X	-14.895	5
32	MP4A	Z	-25.799	5
33	MP4A	Mx	.007	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	1
2	MP2A	Z	-8.78	1
3	MP2A	Mx	-.005	1
4	MP2A	X	0	5
5	MP2A	Z	-8.78	5
6	MP2A	Mx	-.005	5
7	MP2A	X	0	1
8	MP2A	Z	-8.78	1
9	MP2A	Mx	.005	1
10	MP2A	X	0	5
11	MP2A	Z	-8.78	5
12	MP2A	Mx	.005	5
13	MP1A	X	0	2
14	MP1A	Z	-5.107	2
15	MP1A	Mx	0	2
16	MP1A	X	0	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP1A	Z	-5.107	4
18	MP1A	Mx	0	4
19	MP1A	X	0	3.5
20	MP1A	Z	-4.064	3.5
21	MP1A	Mx	0	3.5
22	MP2A	X	0	3.5
23	MP2A	Z	-4.064	3.5
24	MP2A	Mx	0	3.5
25	M29	X	0	.5
26	M29	Z	-7.911	.5
27	M29	Mx	0	.5
28	MP4A	X	0	1
29	MP4A	Z	-10.029	1
30	MP4A	Mx	0	1
31	MP4A	X	0	5
32	MP4A	Z	-10.029	5
33	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	4.018	1
2	MP2A	Z	-6.959	1
3	MP2A	Mx	-.006	1
4	MP2A	X	4.018	5
5	MP2A	Z	-6.959	5
6	MP2A	Mx	-.006	5
7	MP2A	X	4.018	1
8	MP2A	Z	-6.959	1
9	MP2A	Mx	.002	1
10	MP2A	X	4.018	5
11	MP2A	Z	-6.959	5
12	MP2A	Mx	.002	5
13	MP1A	X	2.165	2
14	MP1A	Z	-3.75	2
15	MP1A	Mx	-.001	2
16	MP1A	X	2.165	4
17	MP1A	Z	-3.75	4
18	MP1A	Mx	-.001	4
19	MP1A	X	1.863	3.5
20	MP1A	Z	-3.228	3.5
21	MP1A	Mx	.000932	3.5
22	MP2A	X	1.799	3.5
23	MP2A	Z	-3.116	3.5
24	MP2A	Mx	.0009	3.5
25	M29	X	3.301	.5
26	M29	Z	-5.718	.5
27	M29	Mx	0	.5
28	MP4A	X	4.595	1
29	MP4A	Z	-7.959	1
30	MP4A	Mx	-.002	1
31	MP4A	X	4.595	5
32	MP4A	Z	-7.959	5
33	MP4A	Mx	-.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	5.671	1
2	MP2A	Z	-3.274	1
3	MP2A	Mx	-.005	1
4	MP2A	X	5.671	5
5	MP2A	Z	-3.274	5
6	MP2A	Mx	-.005	5
7	MP2A	X	5.671	1
8	MP2A	Z	-3.274	1
9	MP2A	Mx	-.000926	1
10	MP2A	X	5.671	5
11	MP2A	Z	-3.274	5
12	MP2A	Mx	-.000926	5
13	MP1A	X	2.404	2
14	MP1A	Z	-1.388	2
15	MP1A	Mx	-.001	2
16	MP1A	X	2.404	4
17	MP1A	Z	-1.388	4
18	MP1A	Mx	-.001	4
19	MP1A	X	2.644	3.5
20	MP1A	Z	-1.527	3.5
21	MP1A	Mx	.001	3.5
22	MP2A	X	2.309	3.5
23	MP2A	Z	-1.333	3.5
24	MP2A	Mx	.001	3.5
25	M29	X	4.794	.5
26	M29	Z	-2.768	.5
27	M29	Mx	0	.5
28	MP4A	X	6.505	1
29	MP4A	Z	-3.756	1
30	MP4A	Mx	-.003	1
31	MP4A	X	6.505	5
32	MP4A	Z	-3.756	5
33	MP4A	Mx	-.003	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	5.804	1
2	MP2A	Z	0	1
3	MP2A	Mx	-.003	1
4	MP2A	X	5.804	5
5	MP2A	Z	0	5
6	MP2A	Mx	-.003	5
7	MP2A	X	5.804	1
8	MP2A	Z	0	1
9	MP2A	Mx	-.003	1
10	MP2A	X	5.804	5
11	MP2A	Z	0	5
12	MP2A	Mx	-.003	5
13	MP1A	X	1.999	2
14	MP1A	Z	0	2
15	MP1A	Mx	-.001	2
16	MP1A	X	1.999	4
17	MP1A	Z	0	4
18	MP1A	Mx	-.001	4
19	MP1A	X	2.716	3.5
20	MP1A	Z	0	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
21	MP1A	Mx	.001	3.5
22	MP2A	X	2.2	3.5
23	MP2A	Z	0	3.5
24	MP2A	Mx	.001	3.5
25	M29	X	5.778	.5
26	M29	Z	0	.5
27	M29	Mx	0	.5
28	MP4A	X	6.672	1
29	MP4A	Z	0	1
30	MP4A	Mx	-.003	1
31	MP4A	X	6.672	5
32	MP4A	Z	0	5
33	MP4A	Mx	-.003	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	5.671	1
2	MP2A	Z	3.274	1
3	MP2A	Mx	-.000926	1
4	MP2A	X	5.671	5
5	MP2A	Z	3.274	5
6	MP2A	Mx	-.000926	5
7	MP2A	X	5.671	1
8	MP2A	Z	3.274	1
9	MP2A	Mx	-.005	1
10	MP2A	X	5.671	5
11	MP2A	Z	3.274	5
12	MP2A	Mx	-.005	5
13	MP1A	X	2.404	2
14	MP1A	Z	1.388	2
15	MP1A	Mx	-.001	2
16	MP1A	X	2.404	4
17	MP1A	Z	1.388	4
18	MP1A	Mx	-.001	4
19	MP1A	X	2.644	3.5
20	MP1A	Z	1.527	3.5
21	MP1A	Mx	.001	3.5
22	MP2A	X	2.309	3.5
23	MP2A	Z	1.333	3.5
24	MP2A	Mx	.001	3.5
25	M29	X	6.136	.5
26	M29	Z	3.543	.5
27	M29	Mx	0	.5
28	MP4A	X	6.505	1
29	MP4A	Z	3.756	1
30	MP4A	Mx	-.003	1
31	MP4A	X	6.505	5
32	MP4A	Z	3.756	5
33	MP4A	Mx	-.003	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	4.018	1
2	MP2A	Z	6.959	1
3	MP2A	Mx	.002	1
4	MP2A	X	4.018	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
5	MP2A	Z	6.959	5
6	MP2A	Mx	.002	5
7	MP2A	X	4.018	1
8	MP2A	Z	6.959	1
9	MP2A	Mx	-.006	1
10	MP2A	X	4.018	5
11	MP2A	Z	6.959	5
12	MP2A	Mx	-.006	5
13	MP1A	X	2.165	2
14	MP1A	Z	3.75	2
15	MP1A	Mx	-.001	2
16	MP1A	X	2.165	4
17	MP1A	Z	3.75	4
18	MP1A	Mx	-.001	4
19	MP1A	X	1.863	3.5
20	MP1A	Z	3.228	3.5
21	MP1A	Mx	.000932	3.5
22	MP2A	X	1.799	3.5
23	MP2A	Z	3.116	3.5
24	MP2A	Mx	.0009	3.5
25	M29	X	4.076	.5
26	M29	Z	7.06	.5
27	M29	Mx	0	.5
28	MP4A	X	4.595	1
29	MP4A	Z	7.959	1
30	MP4A	Mx	-.002	1
31	MP4A	X	4.595	5
32	MP4A	Z	7.959	5
33	MP4A	Mx	-.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	1
2	MP2A	Z	8.78	1
3	MP2A	Mx	.005	1
4	MP2A	X	0	5
5	MP2A	Z	8.78	5
6	MP2A	Mx	.005	5
7	MP2A	X	0	1
8	MP2A	Z	8.78	1
9	MP2A	Mx	-.005	1
10	MP2A	X	0	5
11	MP2A	Z	8.78	5
12	MP2A	Mx	-.005	5
13	MP1A	X	0	2
14	MP1A	Z	5.107	2
15	MP1A	Mx	0	2
16	MP1A	X	0	4
17	MP1A	Z	5.107	4
18	MP1A	Mx	0	4
19	MP1A	X	0	3.5
20	MP1A	Z	4.064	3.5
21	MP1A	Mx	0	3.5
22	MP2A	X	0	3.5
23	MP2A	Z	4.064	3.5
24	MP2A	Mx	0	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	M29	X	0	.5
26	M29	Z	7.911	.5
27	M29	Mx	0	.5
28	MP4A	X	0	1
29	MP4A	Z	10.029	1
30	MP4A	Mx	0	1
31	MP4A	X	0	5
32	MP4A	Z	10.029	5
33	MP4A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-4.018	1
2	MP2A	Z	6.959	1
3	MP2A	Mx	.006	1
4	MP2A	X	-4.018	5
5	MP2A	Z	6.959	5
6	MP2A	Mx	.006	5
7	MP2A	X	-4.018	1
8	MP2A	Z	6.959	1
9	MP2A	Mx	-.002	1
10	MP2A	X	-4.018	5
11	MP2A	Z	6.959	5
12	MP2A	Mx	-.002	5
13	MP1A	X	-2.165	2
14	MP1A	Z	3.75	2
15	MP1A	Mx	.001	2
16	MP1A	X	-2.165	4
17	MP1A	Z	3.75	4
18	MP1A	Mx	.001	4
19	MP1A	X	-1.863	3.5
20	MP1A	Z	3.228	3.5
21	MP1A	Mx	-.000932	3.5
22	MP2A	X	-1.799	3.5
23	MP2A	Z	3.116	3.5
24	MP2A	Mx	-.0009	3.5
25	M29	X	-3.301	.5
26	M29	Z	5.718	.5
27	M29	Mx	0	.5
28	MP4A	X	-4.595	1
29	MP4A	Z	7.959	1
30	MP4A	Mx	.002	1
31	MP4A	X	-4.595	5
32	MP4A	Z	7.959	5
33	MP4A	Mx	.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-5.671	1
2	MP2A	Z	3.274	1
3	MP2A	Mx	.005	1
4	MP2A	X	-5.671	5
5	MP2A	Z	3.274	5
6	MP2A	Mx	.005	5
7	MP2A	X	-5.671	1
8	MP2A	Z	3.274	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
9	MP2A	Mx	.000926	1
10	MP2A	X	-5.671	5
11	MP2A	Z	3.274	5
12	MP2A	Mx	.000926	5
13	MP1A	X	-2.404	2
14	MP1A	Z	1.388	2
15	MP1A	Mx	.001	2
16	MP1A	X	-2.404	4
17	MP1A	Z	1.388	4
18	MP1A	Mx	.001	4
19	MP1A	X	-2.644	3.5
20	MP1A	Z	1.527	3.5
21	MP1A	Mx	-.001	3.5
22	MP2A	X	-2.309	3.5
23	MP2A	Z	1.333	3.5
24	MP2A	Mx	-.001	3.5
25	M29	X	-4.794	.5
26	M29	Z	2.768	.5
27	M29	Mx	0	.5
28	MP4A	X	-6.505	1
29	MP4A	Z	3.756	1
30	MP4A	Mx	.003	1
31	MP4A	X	-6.505	5
32	MP4A	Z	3.756	5
33	MP4A	Mx	.003	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-5.804	1
2	MP2A	Z	0	1
3	MP2A	Mx	.003	1
4	MP2A	X	-5.804	5
5	MP2A	Z	0	5
6	MP2A	Mx	.003	5
7	MP2A	X	-5.804	1
8	MP2A	Z	0	1
9	MP2A	Mx	.003	1
10	MP2A	X	-5.804	5
11	MP2A	Z	0	5
12	MP2A	Mx	.003	5
13	MP1A	X	-1.999	2
14	MP1A	Z	0	2
15	MP1A	Mx	.001	2
16	MP1A	X	-1.999	4
17	MP1A	Z	0	4
18	MP1A	Mx	.001	4
19	MP1A	X	-2.716	3.5
20	MP1A	Z	0	3.5
21	MP1A	Mx	-.001	3.5
22	MP2A	X	-2.2	3.5
23	MP2A	Z	0	3.5
24	MP2A	Mx	-.001	3.5
25	M29	X	-5.778	.5
26	M29	Z	0	.5
27	M29	Mx	0	.5
28	MP4A	X	-6.672	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP4A	Z	0	1
30	MP4A	Mx	.003	1
31	MP4A	X	-6.672	5
32	MP4A	Z	0	5
33	MP4A	Mx	.003	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-5.671	1
2	MP2A	Z	-3.274	1
3	MP2A	Mx	.000926	1
4	MP2A	X	-5.671	5
5	MP2A	Z	-3.274	5
6	MP2A	Mx	.000926	5
7	MP2A	X	-5.671	1
8	MP2A	Z	-3.274	1
9	MP2A	Mx	.005	1
10	MP2A	X	-5.671	5
11	MP2A	Z	-3.274	5
12	MP2A	Mx	.005	5
13	MP1A	X	-2.404	2
14	MP1A	Z	-1.388	2
15	MP1A	Mx	.001	2
16	MP1A	X	-2.404	4
17	MP1A	Z	-1.388	4
18	MP1A	Mx	.001	4
19	MP1A	X	-2.644	3.5
20	MP1A	Z	-1.527	3.5
21	MP1A	Mx	-.001	3.5
22	MP2A	X	-2.309	3.5
23	MP2A	Z	-1.333	3.5
24	MP2A	Mx	-.001	3.5
25	M29	X	-6.136	.5
26	M29	Z	-3.543	.5
27	M29	Mx	0	.5
28	MP4A	X	-6.505	1
29	MP4A	Z	-3.756	1
30	MP4A	Mx	.003	1
31	MP4A	X	-6.505	5
32	MP4A	Z	-3.756	5
33	MP4A	Mx	.003	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-4.018	1
2	MP2A	Z	-6.959	1
3	MP2A	Mx	-.002	1
4	MP2A	X	-4.018	5
5	MP2A	Z	-6.959	5
6	MP2A	Mx	-.002	5
7	MP2A	X	-4.018	1
8	MP2A	Z	-6.959	1
9	MP2A	Mx	.006	1
10	MP2A	X	-4.018	5
11	MP2A	Z	-6.959	5
12	MP2A	Mx	.006	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP1A	X	-2.165	2
14	MP1A	Z	-3.75	2
15	MP1A	Mx	.001	2
16	MP1A	X	-2.165	4
17	MP1A	Z	-3.75	4
18	MP1A	Mx	.001	4
19	MP1A	X	-1.863	3.5
20	MP1A	Z	-3.228	3.5
21	MP1A	Mx	-.000932	3.5
22	MP2A	X	-1.799	3.5
23	MP2A	Z	-3.116	3.5
24	MP2A	Mx	-.0009	3.5
25	M29	X	-4.076	.5
26	M29	Z	-7.06	.5
27	M29	Mx	0	.5
28	MP4A	X	-4.595	1
29	MP4A	Z	-7.959	1
30	MP4A	Mx	.002	1
31	MP4A	X	-4.595	5
32	MP4A	Z	-7.959	5
33	MP4A	Mx	.002	5

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M9	Y	-500	0

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M40	Y	-500	0

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-250	%50

Member Point Loads (BLC 80 : Lv2)

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

Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Y	-8.826	-8.826	0	%100
2	M2	Y	-8.826	-8.826	0	%100
3	MP1A	Y	-8.826	-8.826	0	%100
4	M26	Y	-10.252	-10.252	0	%100
5	M27	Y	-10.252	-10.252	0	%100
6	M28	Y	-10.252	-10.252	0	%100
7	M29	Y	-8.826	-8.826	0	%100
8	M30	Y	-10.252	-10.252	0	%100
9	M31	Y	-8.826	-8.826	0	%100
10	M32	Y	-10.252	-10.252	0	%100
11	M33	Y	-10.252	-10.252	0	%100
12	M34	Y	-5.35	-5.35	0	%100
13	M35	Y	-5.35	-5.35	0	%100

Member Distributed Loads (BLC 40 : Structure Di) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
14	M36	Y	-5.35	-5.35	0	%100
15	M37	Y	-10.252	-10.252	0	%100
16	M38	Y	-8.826	-8.826	0	%100
17	M39	Y	-10.252	-10.252	0	%100
18	M41	Y	-10.252	-10.252	0	%100
19	M42	Y	-10.252	-10.252	0	%100
20	M43	Y	-5.35	-5.35	0	%100
21	M44	Y	-5.35	-5.35	0	%100
22	M45	Y	-5.35	-5.35	0	%100
23	M39B	Y	-8.826	-8.826	0	%100
24	M37A	Y	-13.372	-13.372	0	%100
25	MP2A	Y	-9.896	-9.896	0	%100
26	MP3A	Y	-8.826	-8.826	0	%100
27	MP4A	Y	-8.826	-8.826	0	%100
28	M65	Y	-8.826	-8.826	0	%100
29	M51	Y	-8.826	-8.826	0	%100
30	M52	Y	-8.826	-8.826	0	%100
31	M53	Y	-8.826	-8.826	0	%100
32	M56	Y	-8.826	-8.826	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	-7.717	-7.717	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-7.717	-7.717	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	-7.717	-7.717	0	%100
7	M26	X	0	0	0	%100
8	M26	Z	-1.76	-1.76	0	%100
9	M27	X	0	0	0	%100
10	M27	Z	-1.76	-1.76	0	%100
11	M28	X	0	0	0	%100
12	M28	Z	-1.151	-1.151	0	%100
13	M29	X	0	0	0	%100
14	M29	Z	-4.867	-4.867	0	%100
15	M30	X	0	0	0	%100
16	M30	Z	-1.151	-1.151	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	-4.867	-4.867	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	-1.151	-1.151	0	%100
21	M33	X	0	0	0	%100
22	M33	Z	-1.151	-1.151	0	%100
23	M34	X	0	0	0	%100
24	M34	Z	-2.437	-2.437	0	%100
25	M35	X	0	0	0	%100
26	M35	Z	-2.437	-2.437	0	%100
27	M36	X	0	0	0	%100
28	M36	Z	-2.008	-2.008	0	%100
29	M37	X	0	0	0	%100
30	M37	Z	-1.151	-1.151	0	%100
31	M38	X	0	0	0	%100
32	M38	Z	-4.867	-4.867	0	%100
33	M39	X	0	0	0	%100
34	M39	Z	-1.151	-1.151	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
35	M41	X	0	0	0	%100
36	M41	Z	-1.151	-1.151	0	%100
37	M42	X	0	0	0	%100
38	M42	Z	-1.151	-1.151	0	%100
39	M43	X	0	0	0	%100
40	M43	Z	-2.437	-2.437	0	%100
41	M44	X	0	0	0	%100
42	M44	Z	-2.437	-2.437	0	%100
43	M45	X	0	0	0	%100
44	M45	Z	-2.008	-2.008	0	%100
45	M39B	X	0	0	0	%100
46	M39B	Z	-4.867	-4.867	0	%100
47	M37A	X	0	0	0	%100
48	M37A	Z	-11.343	-11.343	0	%100
49	MP2A	X	0	0	0	%100
50	MP2A	Z	-9.341	-9.341	0	%100
51	MP3A	X	0	0	0	%100
52	MP3A	Z	-7.717	-7.717	0	%100
53	MP4A	X	0	0	0	%100
54	MP4A	Z	-7.717	-7.717	0	%100
55	M65	X	0	0	0	%100
56	M65	Z	-.513	-.513	0	%100
57	M51	X	0	0	0	%100
58	M51	Z	-3.922	-3.922	0	%100
59	M52	X	0	0	0	%100
60	M52	Z	-.076	-.076	0	%100
61	M53	X	0	0	0	%100
62	M53	Z	-.076	-.076	0	%100
63	M56	X	0	0	0	%100
64	M56	Z	-7.717	-7.717	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	2.894	2.894	0	%100
2	M1	Z	-5.012	-5.012	0	%100
3	M2	X	2.894	2.894	0	%100
4	M2	Z	-5.012	-5.012	0	%100
5	MP1A	X	3.858	3.858	0	%100
6	MP1A	Z	-6.683	-6.683	0	%100
7	M26	X	.66	.66	0	%100
8	M26	Z	-1.143	-1.143	0	%100
9	M27	X	.66	.66	0	%100
10	M27	Z	-1.143	-1.143	0	%100
11	M28	X	.811	.811	0	%100
12	M28	Z	-1.404	-1.404	0	%100
13	M29	X	3.426	3.426	0	%100
14	M29	Z	-5.934	-5.934	0	%100
15	M30	X	.811	.811	0	%100
16	M30	Z	-1.404	-1.404	0	%100
17	M31	X	3.426	3.426	0	%100
18	M31	Z	-5.934	-5.934	0	%100
19	M32	X	.811	.811	0	%100
20	M32	Z	-1.404	-1.404	0	%100
21	M33	X	.811	.811	0	%100
22	M33	Z	-1.404	-1.404	0	%100
23	M34	X	1.218	1.218	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
24	M34	Z	-2.11	-2.11	0	%100
25	M35	X	1.218	1.218	0	%100
26	M35	Z	-2.11	-2.11	0	%100
27	M36	X	1.217	1.217	0	%100
28	M36	Z	-2.108	-2.108	0	%100
29	M37	X	.171	.171	0	%100
30	M37	Z	-.297	-.297	0	%100
31	M38	X	.724	.724	0	%100
32	M38	Z	-1.254	-1.254	0	%100
33	M39	X	.171	.171	0	%100
34	M39	Z	-.297	-.297	0	%100
35	M41	X	.171	.171	0	%100
36	M41	Z	-.297	-.297	0	%100
37	M42	X	.171	.171	0	%100
38	M42	Z	-.297	-.297	0	%100
39	M43	X	1.218	1.218	0	%100
40	M43	Z	-2.11	-2.11	0	%100
41	M44	X	1.218	1.218	0	%100
42	M44	Z	-2.11	-2.11	0	%100
43	M45	X	.637	.637	0	%100
44	M45	Z	-1.104	-1.104	0	%100
45	M39B	X	.724	.724	0	%100
46	M39B	Z	-1.254	-1.254	0	%100
47	M37A	X	5.671	5.671	0	%100
48	M37A	Z	-9.823	-9.823	0	%100
49	MP2A	X	4.671	4.671	0	%100
50	MP2A	Z	-8.09	-8.09	0	%100
51	MP3A	X	3.858	3.858	0	%100
52	MP3A	Z	-6.683	-6.683	0	%100
53	MP4A	X	3.858	3.858	0	%100
54	MP4A	Z	-6.683	-6.683	0	%100
55	M65	X	1.925	1.925	0	%100
56	M65	Z	-3.335	-3.335	0	%100
57	M51	X	3.616	3.616	0	%100
58	M51	Z	-6.262	-6.262	0	%100
59	M52	X	.653	.653	0	%100
60	M52	Z	-1.131	-1.131	0	%100
61	M53	X	.653	.653	0	%100
62	M53	Z	-1.131	-1.131	0	%100
63	M56	X	3.858	3.858	0	%100
64	M56	Z	-6.683	-6.683	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.671	1.671	0	%100
2	M1	Z	-.965	-.965	0	%100
3	M2	X	1.671	1.671	0	%100
4	M2	Z	-.965	-.965	0	%100
5	MP1A	X	6.683	6.683	0	%100
6	MP1A	Z	-3.858	-3.858	0	%100
7	M26	X	.381	.381	0	%100
8	M26	Z	-.22	-.22	0	%100
9	M27	X	.381	.381	0	%100
10	M27	Z	-.22	-.22	0	%100
11	M28	X	1.11	1.11	0	%100
12	M28	Z	-.641	-.641	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
13	M29	X	4.692	4.692	0	%100
14	M29	Z	-2.709	-2.709	0	%100
15	M30	X	1.11	1.11	0	%100
16	M30	Z	-.641	-.641	0	%100
17	M31	X	4.692	4.692	0	%100
18	M31	Z	-2.709	-2.709	0	%100
19	M32	X	1.11	1.11	0	%100
20	M32	Z	-.641	-.641	0	%100
21	M33	X	1.11	1.11	0	%100
22	M33	Z	-.641	-.641	0	%100
23	M34	X	2.11	2.11	0	%100
24	M34	Z	-1.218	-1.218	0	%100
25	M35	X	2.11	2.11	0	%100
26	M35	Z	-1.218	-1.218	0	%100
27	M36	X	1.841	1.841	0	%100
28	M36	Z	-1.063	-1.063	0	%100
29	M37	X	.003	.003	0	%100
30	M37	Z	-.002	-.002	0	%100
31	M38	X	.013	.013	0	%100
32	M38	Z	-.007	-.007	0	%100
33	M39	X	.003	.003	0	%100
34	M39	Z	-.002	-.002	0	%100
35	M41	X	.003	.003	0	%100
36	M41	Z	-.002	-.002	0	%100
37	M42	X	.003	.003	0	%100
38	M42	Z	-.002	-.002	0	%100
39	M43	X	2.11	2.11	0	%100
40	M43	Z	-1.218	-1.218	0	%100
41	M44	X	2.11	2.11	0	%100
42	M44	Z	-1.218	-1.218	0	%100
43	M45	X	.838	.838	0	%100
44	M45	Z	-.484	-.484	0	%100
45	M39B	X	.013	.013	0	%100
46	M39B	Z	-.007	-.007	0	%100
47	M37A	X	9.823	9.823	0	%100
48	M37A	Z	-5.671	-5.671	0	%100
49	MP2A	X	8.09	8.09	0	%100
50	MP2A	Z	-4.671	-4.671	0	%100
51	MP3A	X	6.683	6.683	0	%100
52	MP3A	Z	-3.858	-3.858	0	%100
53	MP4A	X	6.683	6.683	0	%100
54	MP4A	Z	-3.858	-3.858	0	%100
55	M65	X	6.232	6.232	0	%100
56	M65	Z	-3.598	-3.598	0	%100
57	M51	X	6.207	6.207	0	%100
58	M51	Z	-3.584	-3.584	0	%100
59	M52	X	4.406	4.406	0	%100
60	M52	Z	-2.544	-2.544	0	%100
61	M53	X	4.406	4.406	0	%100
62	M53	Z	-2.544	-2.544	0	%100
63	M56	X	6.683	6.683	0	%100
64	M56	Z	-3.858	-3.858	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	MP1A	X	7.717	7.717	0	%100
6	MP1A	Z	0	0	0	%100
7	M26	X	0	0	0	%100
8	M26	Z	0	0	0	%100
9	M27	X	0	0	0	%100
10	M27	Z	0	0	0	%100
11	M28	X	.473	.473	0	%100
12	M28	Z	0	0	0	%100
13	M29	X	2	2	0	%100
14	M29	Z	0	0	0	%100
15	M30	X	.473	.473	0	%100
16	M30	Z	0	0	0	%100
17	M31	X	2	2	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	.473	.473	0	%100
20	M32	Z	0	0	0	%100
21	M33	X	.473	.473	0	%100
22	M33	Z	0	0	0	%100
23	M34	X	2.437	2.437	0	%100
24	M34	Z	0	0	0	%100
25	M35	X	2.437	2.437	0	%100
26	M35	Z	0	0	0	%100
27	M36	X	1.393	1.393	0	%100
28	M36	Z	0	0	0	%100
29	M37	X	.473	.473	0	%100
30	M37	Z	0	0	0	%100
31	M38	X	2	2	0	%100
32	M38	Z	0	0	0	%100
33	M39	X	.473	.473	0	%100
34	M39	Z	0	0	0	%100
35	M41	X	.473	.473	0	%100
36	M41	Z	0	0	0	%100
37	M42	X	.473	.473	0	%100
38	M42	Z	0	0	0	%100
39	M43	X	2.437	2.437	0	%100
40	M43	Z	0	0	0	%100
41	M44	X	2.437	2.437	0	%100
42	M44	Z	0	0	0	%100
43	M45	X	1.393	1.393	0	%100
44	M45	Z	0	0	0	%100
45	M39B	X	2	2	0	%100
46	M39B	Z	0	0	0	%100
47	M37A	X	11.343	11.343	0	%100
48	M37A	Z	0	0	0	%100
49	MP2A	X	9.341	9.341	0	%100
50	MP2A	Z	0	0	0	%100
51	MP3A	X	7.717	7.717	0	%100
52	MP3A	Z	0	0	0	%100
53	MP4A	X	7.717	7.717	0	%100
54	MP4A	Z	0	0	0	%100
55	M65	X	7.204	7.204	0	%100
56	M65	Z	0	0	0	%100
57	M51	X	3.794	3.794	0	%100
58	M51	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
59	M52	X	7.64	7.64	0	%100
60	M52	Z	0	0	0	%100
61	M53	X	7.64	7.64	0	%100
62	M53	Z	0	0	0	%100
63	M56	X	7.717	7.717	0	%100
64	M56	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.671	1.671	0	%100
2	M1	Z	.965	.965	0	%100
3	M2	X	1.671	1.671	0	%100
4	M2	Z	.965	.965	0	%100
5	MP1A	X	6.683	6.683	0	%100
6	MP1A	Z	3.858	3.858	0	%100
7	M26	X	.381	.381	0	%100
8	M26	Z	.22	.22	0	%100
9	M27	X	.381	.381	0	%100
10	M27	Z	.22	.22	0	%100
11	M28	X	.003	.003	0	%100
12	M28	Z	.002	.002	0	%100
13	M29	X	.013	.013	0	%100
14	M29	Z	.007	.007	0	%100
15	M30	X	.003	.003	0	%100
16	M30	Z	.002	.002	0	%100
17	M31	X	.013	.013	0	%100
18	M31	Z	.007	.007	0	%100
19	M32	X	.003	.003	0	%100
20	M32	Z	.002	.002	0	%100
21	M33	X	.003	.003	0	%100
22	M33	Z	.002	.002	0	%100
23	M34	X	2.11	2.11	0	%100
24	M34	Z	1.218	1.218	0	%100
25	M35	X	2.11	2.11	0	%100
26	M35	Z	1.218	1.218	0	%100
27	M36	X	.838	.838	0	%100
28	M36	Z	.484	.484	0	%100
29	M37	X	1.11	1.11	0	%100
30	M37	Z	.641	.641	0	%100
31	M38	X	4.692	4.692	0	%100
32	M38	Z	2.709	2.709	0	%100
33	M39	X	1.11	1.11	0	%100
34	M39	Z	.641	.641	0	%100
35	M41	X	1.11	1.11	0	%100
36	M41	Z	.641	.641	0	%100
37	M42	X	1.11	1.11	0	%100
38	M42	Z	.641	.641	0	%100
39	M43	X	2.11	2.11	0	%100
40	M43	Z	1.218	1.218	0	%100
41	M44	X	2.11	2.11	0	%100
42	M44	Z	1.218	1.218	0	%100
43	M45	X	1.841	1.841	0	%100
44	M45	Z	1.063	1.063	0	%100
45	M39B	X	4.692	4.692	0	%100
46	M39B	Z	2.709	2.709	0	%100
47	M37A	X	9.823	9.823	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
48	M37A	Z	5.671	5.671	0	%100
49	MP2A	X	8.09	8.09	0	%100
50	MP2A	Z	4.671	4.671	0	%100
51	MP3A	X	6.683	6.683	0	%100
52	MP3A	Z	3.858	3.858	0	%100
53	MP4A	X	6.683	6.683	0	%100
54	MP4A	Z	3.858	3.858	0	%100
55	M65	X	3.348	3.348	0	%100
56	M65	Z	1.933	1.933	0	%100
57	M51	X	.42	.42	0	%100
58	M51	Z	.243	.243	0	%100
59	M52	X	5.552	5.552	0	%100
60	M52	Z	3.205	3.205	0	%100
61	M53	X	5.552	5.552	0	%100
62	M53	Z	3.205	3.205	0	%100
63	M56	X	6.683	6.683	0	%100
64	M56	Z	3.858	3.858	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	2.894	2.894	0	%100
2	M1	Z	5.012	5.012	0	%100
3	M2	X	2.894	2.894	0	%100
4	M2	Z	5.012	5.012	0	%100
5	MP1A	X	3.858	3.858	0	%100
6	MP1A	Z	6.683	6.683	0	%100
7	M26	X	.66	.66	0	%100
8	M26	Z	1.143	1.143	0	%100
9	M27	X	.66	.66	0	%100
10	M27	Z	1.143	1.143	0	%100
11	M28	X	.171	.171	0	%100
12	M28	Z	.297	.297	0	%100
13	M29	X	.724	.724	0	%100
14	M29	Z	1.254	1.254	0	%100
15	M30	X	.171	.171	0	%100
16	M30	Z	.297	.297	0	%100
17	M31	X	.724	.724	0	%100
18	M31	Z	1.254	1.254	0	%100
19	M32	X	.171	.171	0	%100
20	M32	Z	.297	.297	0	%100
21	M33	X	.171	.171	0	%100
22	M33	Z	.297	.297	0	%100
23	M34	X	1.218	1.218	0	%100
24	M34	Z	2.11	2.11	0	%100
25	M35	X	1.218	1.218	0	%100
26	M35	Z	2.11	2.11	0	%100
27	M36	X	.637	.637	0	%100
28	M36	Z	1.104	1.104	0	%100
29	M37	X	.811	.811	0	%100
30	M37	Z	1.404	1.404	0	%100
31	M38	X	3.426	3.426	0	%100
32	M38	Z	5.934	5.934	0	%100
33	M39	X	.811	.811	0	%100
34	M39	Z	1.404	1.404	0	%100
35	M41	X	.811	.811	0	%100
36	M41	Z	1.404	1.404	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
37	M42	X	.811	.811	0	%100
38	M42	Z	1.404	1.404	0	%100
39	M43	X	1.218	1.218	0	%100
40	M43	Z	2.11	2.11	0	%100
41	M44	X	1.218	1.218	0	%100
42	M44	Z	2.11	2.11	0	%100
43	M45	X	1.217	1.217	0	%100
44	M45	Z	2.108	2.108	0	%100
45	M39B	X	3.426	3.426	0	%100
46	M39B	Z	5.934	5.934	0	%100
47	M37A	X	5.671	5.671	0	%100
48	M37A	Z	9.823	9.823	0	%100
49	MP2A	X	4.671	4.671	0	%100
50	MP2A	Z	8.09	8.09	0	%100
51	MP3A	X	3.858	3.858	0	%100
52	MP3A	Z	6.683	6.683	0	%100
53	MP4A	X	3.858	3.858	0	%100
54	MP4A	Z	6.683	6.683	0	%100
55	M65	X	.26	.26	0	%100
56	M65	Z	.451	.451	0	%100
57	M51	X	.275	.275	0	%100
58	M51	Z	.476	.476	0	%100
59	M52	X	1.315	1.315	0	%100
60	M52	Z	2.277	2.277	0	%100
61	M53	X	1.315	1.315	0	%100
62	M53	Z	2.277	2.277	0	%100
63	M56	X	3.858	3.858	0	%100
64	M56	Z	6.683	6.683	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	7.717	7.717	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	7.717	7.717	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	7.717	7.717	0	%100
7	M26	X	0	0	0	%100
8	M26	Z	1.76	1.76	0	%100
9	M27	X	0	0	0	%100
10	M27	Z	1.76	1.76	0	%100
11	M28	X	0	0	0	%100
12	M28	Z	1.151	1.151	0	%100
13	M29	X	0	0	0	%100
14	M29	Z	4.867	4.867	0	%100
15	M30	X	0	0	0	%100
16	M30	Z	1.151	1.151	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	4.867	4.867	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	1.151	1.151	0	%100
21	M33	X	0	0	0	%100
22	M33	Z	1.151	1.151	0	%100
23	M34	X	0	0	0	%100
24	M34	Z	2.437	2.437	0	%100
25	M35	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
26	M35	Z	2.437	2.437	0	%100
27	M36	X	0	0	0	%100
28	M36	Z	2.008	2.008	0	%100
29	M37	X	0	0	0	%100
30	M37	Z	1.151	1.151	0	%100
31	M38	X	0	0	0	%100
32	M38	Z	4.867	4.867	0	%100
33	M39	X	0	0	0	%100
34	M39	Z	1.151	1.151	0	%100
35	M41	X	0	0	0	%100
36	M41	Z	1.151	1.151	0	%100
37	M42	X	0	0	0	%100
38	M42	Z	1.151	1.151	0	%100
39	M43	X	0	0	0	%100
40	M43	Z	2.437	2.437	0	%100
41	M44	X	0	0	0	%100
42	M44	Z	2.437	2.437	0	%100
43	M45	X	0	0	0	%100
44	M45	Z	2.008	2.008	0	%100
45	M39B	X	0	0	0	%100
46	M39B	Z	4.867	4.867	0	%100
47	M37A	X	0	0	0	%100
48	M37A	Z	11.343	11.343	0	%100
49	MP2A	X	0	0	0	%100
50	MP2A	Z	9.341	9.341	0	%100
51	MP3A	X	0	0	0	%100
52	MP3A	Z	7.717	7.717	0	%100
53	MP4A	X	0	0	0	%100
54	MP4A	Z	7.717	7.717	0	%100
55	M65	X	0	0	0	%100
56	M65	Z	.513	.513	0	%100
57	M51	X	0	0	0	%100
58	M51	Z	3.922	3.922	0	%100
59	M52	X	0	0	0	%100
60	M52	Z	.076	.076	0	%100
61	M53	X	0	0	0	%100
62	M53	Z	.076	.076	0	%100
63	M56	X	0	0	0	%100
64	M56	Z	7.717	7.717	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-2.894	-2.894	0	%100
2	M1	Z	5.012	5.012	0	%100
3	M2	X	-2.894	-2.894	0	%100
4	M2	Z	5.012	5.012	0	%100
5	MP1A	X	-3.858	-3.858	0	%100
6	MP1A	Z	6.683	6.683	0	%100
7	M26	X	-.66	-.66	0	%100
8	M26	Z	1.143	1.143	0	%100
9	M27	X	-.66	-.66	0	%100
10	M27	Z	1.143	1.143	0	%100
11	M28	X	-.811	-.811	0	%100
12	M28	Z	1.404	1.404	0	%100
13	M29	X	-3.426	-3.426	0	%100
14	M29	Z	5.934	5.934	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
15	M30	X	-.811	-.811	0	%100
16	M30	Z	1.404	1.404	0	%100
17	M31	X	-3.426	-3.426	0	%100
18	M31	Z	5.934	5.934	0	%100
19	M32	X	-.811	-.811	0	%100
20	M32	Z	1.404	1.404	0	%100
21	M33	X	-.811	-.811	0	%100
22	M33	Z	1.404	1.404	0	%100
23	M34	X	-1.218	-1.218	0	%100
24	M34	Z	2.11	2.11	0	%100
25	M35	X	-1.218	-1.218	0	%100
26	M35	Z	2.11	2.11	0	%100
27	M36	X	-1.217	-1.217	0	%100
28	M36	Z	2.108	2.108	0	%100
29	M37	X	-.171	-.171	0	%100
30	M37	Z	.297	.297	0	%100
31	M38	X	-.724	-.724	0	%100
32	M38	Z	1.254	1.254	0	%100
33	M39	X	-.171	-.171	0	%100
34	M39	Z	.297	.297	0	%100
35	M41	X	-.171	-.171	0	%100
36	M41	Z	.297	.297	0	%100
37	M42	X	-.171	-.171	0	%100
38	M42	Z	.297	.297	0	%100
39	M43	X	-1.218	-1.218	0	%100
40	M43	Z	2.11	2.11	0	%100
41	M44	X	-1.218	-1.218	0	%100
42	M44	Z	2.11	2.11	0	%100
43	M45	X	-.637	-.637	0	%100
44	M45	Z	1.104	1.104	0	%100
45	M39B	X	-.724	-.724	0	%100
46	M39B	Z	1.254	1.254	0	%100
47	M37A	X	-5.671	-5.671	0	%100
48	M37A	Z	9.823	9.823	0	%100
49	MP2A	X	-4.671	-4.671	0	%100
50	MP2A	Z	8.09	8.09	0	%100
51	MP3A	X	-3.858	-3.858	0	%100
52	MP3A	Z	6.683	6.683	0	%100
53	MP4A	X	-3.858	-3.858	0	%100
54	MP4A	Z	6.683	6.683	0	%100
55	M65	X	-1.925	-1.925	0	%100
56	M65	Z	3.335	3.335	0	%100
57	M51	X	-3.616	-3.616	0	%100
58	M51	Z	6.262	6.262	0	%100
59	M52	X	-.653	-.653	0	%100
60	M52	Z	1.131	1.131	0	%100
61	M53	X	-.653	-.653	0	%100
62	M53	Z	1.131	1.131	0	%100
63	M56	X	-3.858	-3.858	0	%100
64	M56	Z	6.683	6.683	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.671	-1.671	0	%100
2	M1	Z	.965	.965	0	%100
3	M2	X	-1.671	-1.671	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
4	M2	Z	.965	.965	0	%100
5	MP1A	X	-6.683	-6.683	0	%100
6	MP1A	Z	3.858	3.858	0	%100
7	M26	X	-.381	-.381	0	%100
8	M26	Z	.22	.22	0	%100
9	M27	X	-.381	-.381	0	%100
10	M27	Z	.22	.22	0	%100
11	M28	X	-1.11	-1.11	0	%100
12	M28	Z	.641	.641	0	%100
13	M29	X	-4.692	-4.692	0	%100
14	M29	Z	2.709	2.709	0	%100
15	M30	X	-1.11	-1.11	0	%100
16	M30	Z	.641	.641	0	%100
17	M31	X	-4.692	-4.692	0	%100
18	M31	Z	2.709	2.709	0	%100
19	M32	X	-1.11	-1.11	0	%100
20	M32	Z	.641	.641	0	%100
21	M33	X	-1.11	-1.11	0	%100
22	M33	Z	.641	.641	0	%100
23	M34	X	-2.11	-2.11	0	%100
24	M34	Z	1.218	1.218	0	%100
25	M35	X	-2.11	-2.11	0	%100
26	M35	Z	1.218	1.218	0	%100
27	M36	X	-1.841	-1.841	0	%100
28	M36	Z	1.063	1.063	0	%100
29	M37	X	-.003	-.003	0	%100
30	M37	Z	.002	.002	0	%100
31	M38	X	-.013	-.013	0	%100
32	M38	Z	.007	.007	0	%100
33	M39	X	-.003	-.003	0	%100
34	M39	Z	.002	.002	0	%100
35	M41	X	-.003	-.003	0	%100
36	M41	Z	.002	.002	0	%100
37	M42	X	-.003	-.003	0	%100
38	M42	Z	.002	.002	0	%100
39	M43	X	-2.11	-2.11	0	%100
40	M43	Z	1.218	1.218	0	%100
41	M44	X	-2.11	-2.11	0	%100
42	M44	Z	1.218	1.218	0	%100
43	M45	X	-.838	-.838	0	%100
44	M45	Z	.484	.484	0	%100
45	M39B	X	-.013	-.013	0	%100
46	M39B	Z	.007	.007	0	%100
47	M37A	X	-9.823	-9.823	0	%100
48	M37A	Z	5.671	5.671	0	%100
49	MP2A	X	-8.09	-8.09	0	%100
50	MP2A	Z	4.671	4.671	0	%100
51	MP3A	X	-6.683	-6.683	0	%100
52	MP3A	Z	3.858	3.858	0	%100
53	MP4A	X	-6.683	-6.683	0	%100
54	MP4A	Z	3.858	3.858	0	%100
55	M65	X	-6.232	-6.232	0	%100
56	M65	Z	3.598	3.598	0	%100
57	M51	X	-6.207	-6.207	0	%100
58	M51	Z	3.584	3.584	0	%100
59	M52	X	-4.406	-4.406	0	%100
60	M52	Z	2.544	2.544	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
61	M53	X	-4.406	-4.406	0	%100
62	M53	Z	2.544	2.544	0	%100
63	M56	X	-6.683	-6.683	0	%100
64	M56	Z	3.858	3.858	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	MP1A	X	-7.717	-7.717	0	%100
6	MP1A	Z	0	0	0	%100
7	M26	X	0	0	0	%100
8	M26	Z	0	0	0	%100
9	M27	X	0	0	0	%100
10	M27	Z	0	0	0	%100
11	M28	X	-.473	-.473	0	%100
12	M28	Z	0	0	0	%100
13	M29	X	-2	-2	0	%100
14	M29	Z	0	0	0	%100
15	M30	X	-.473	-.473	0	%100
16	M30	Z	0	0	0	%100
17	M31	X	-2	-2	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	-.473	-.473	0	%100
20	M32	Z	0	0	0	%100
21	M33	X	-.473	-.473	0	%100
22	M33	Z	0	0	0	%100
23	M34	X	-2.437	-2.437	0	%100
24	M34	Z	0	0	0	%100
25	M35	X	-2.437	-2.437	0	%100
26	M35	Z	0	0	0	%100
27	M36	X	-1.393	-1.393	0	%100
28	M36	Z	0	0	0	%100
29	M37	X	-.473	-.473	0	%100
30	M37	Z	0	0	0	%100
31	M38	X	-2	-2	0	%100
32	M38	Z	0	0	0	%100
33	M39	X	-.473	-.473	0	%100
34	M39	Z	0	0	0	%100
35	M41	X	-.473	-.473	0	%100
36	M41	Z	0	0	0	%100
37	M42	X	-.473	-.473	0	%100
38	M42	Z	0	0	0	%100
39	M43	X	-2.437	-2.437	0	%100
40	M43	Z	0	0	0	%100
41	M44	X	-2.437	-2.437	0	%100
42	M44	Z	0	0	0	%100
43	M45	X	-1.393	-1.393	0	%100
44	M45	Z	0	0	0	%100
45	M39B	X	-2	-2	0	%100
46	M39B	Z	0	0	0	%100
47	M37A	X	-11.343	-11.343	0	%100
48	M37A	Z	0	0	0	%100
49	MP2A	X	-9.341	-9.341	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
50	MP2A	Z	0	0	0	%100
51	MP3A	X	-7.717	-7.717	0	%100
52	MP3A	Z	0	0	0	%100
53	MP4A	X	-7.717	-7.717	0	%100
54	MP4A	Z	0	0	0	%100
55	M65	X	-7.204	-7.204	0	%100
56	M65	Z	0	0	0	%100
57	M51	X	-3.794	-3.794	0	%100
58	M51	Z	0	0	0	%100
59	M52	X	-7.64	-7.64	0	%100
60	M52	Z	0	0	0	%100
61	M53	X	-7.64	-7.64	0	%100
62	M53	Z	0	0	0	%100
63	M56	X	-7.717	-7.717	0	%100
64	M56	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.671	-1.671	0	%100
2	M1	Z	-.965	-.965	0	%100
3	M2	X	-1.671	-1.671	0	%100
4	M2	Z	-.965	-.965	0	%100
5	MP1A	X	-6.683	-6.683	0	%100
6	MP1A	Z	-3.858	-3.858	0	%100
7	M26	X	-.381	-.381	0	%100
8	M26	Z	-.22	-.22	0	%100
9	M27	X	-.381	-.381	0	%100
10	M27	Z	-.22	-.22	0	%100
11	M28	X	-.003	-.003	0	%100
12	M28	Z	-.002	-.002	0	%100
13	M29	X	-.013	-.013	0	%100
14	M29	Z	-.007	-.007	0	%100
15	M30	X	-.003	-.003	0	%100
16	M30	Z	-.002	-.002	0	%100
17	M31	X	-.013	-.013	0	%100
18	M31	Z	-.007	-.007	0	%100
19	M32	X	-.003	-.003	0	%100
20	M32	Z	-.002	-.002	0	%100
21	M33	X	-.003	-.003	0	%100
22	M33	Z	-.002	-.002	0	%100
23	M34	X	-2.11	-2.11	0	%100
24	M34	Z	-1.218	-1.218	0	%100
25	M35	X	-2.11	-2.11	0	%100
26	M35	Z	-1.218	-1.218	0	%100
27	M36	X	-.838	-.838	0	%100
28	M36	Z	-.484	-.484	0	%100
29	M37	X	-1.11	-1.11	0	%100
30	M37	Z	-.641	-.641	0	%100
31	M38	X	-4.692	-4.692	0	%100
32	M38	Z	-2.709	-2.709	0	%100
33	M39	X	-1.11	-1.11	0	%100
34	M39	Z	-.641	-.641	0	%100
35	M41	X	-1.11	-1.11	0	%100
36	M41	Z	-.641	-.641	0	%100
37	M42	X	-1.11	-1.11	0	%100
38	M42	Z	-.641	-.641	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
39	M43	X	-2.11	-2.11	0	%100
40	M43	Z	-1.218	-1.218	0	%100
41	M44	X	-2.11	-2.11	0	%100
42	M44	Z	-1.218	-1.218	0	%100
43	M45	X	-1.841	-1.841	0	%100
44	M45	Z	-1.063	-1.063	0	%100
45	M39B	X	-4.692	-4.692	0	%100
46	M39B	Z	-2.709	-2.709	0	%100
47	M37A	X	-9.823	-9.823	0	%100
48	M37A	Z	-5.671	-5.671	0	%100
49	MP2A	X	-8.09	-8.09	0	%100
50	MP2A	Z	-4.671	-4.671	0	%100
51	MP3A	X	-6.683	-6.683	0	%100
52	MP3A	Z	-3.858	-3.858	0	%100
53	MP4A	X	-6.683	-6.683	0	%100
54	MP4A	Z	-3.858	-3.858	0	%100
55	M65	X	-3.348	-3.348	0	%100
56	M65	Z	-1.933	-1.933	0	%100
57	M51	X	-.42	-.42	0	%100
58	M51	Z	-.243	-.243	0	%100
59	M52	X	-5.552	-5.552	0	%100
60	M52	Z	-3.205	-3.205	0	%100
61	M53	X	-5.552	-5.552	0	%100
62	M53	Z	-3.205	-3.205	0	%100
63	M56	X	-6.683	-6.683	0	%100
64	M56	Z	-3.858	-3.858	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-2.894	-2.894	0	%100
2	M1	Z	-5.012	-5.012	0	%100
3	M2	X	-2.894	-2.894	0	%100
4	M2	Z	-5.012	-5.012	0	%100
5	MP1A	X	-3.858	-3.858	0	%100
6	MP1A	Z	-6.683	-6.683	0	%100
7	M26	X	-.66	-.66	0	%100
8	M26	Z	-1.143	-1.143	0	%100
9	M27	X	-.66	-.66	0	%100
10	M27	Z	-1.143	-1.143	0	%100
11	M28	X	-.171	-.171	0	%100
12	M28	Z	-.297	-.297	0	%100
13	M29	X	-.724	-.724	0	%100
14	M29	Z	-1.254	-1.254	0	%100
15	M30	X	-.171	-.171	0	%100
16	M30	Z	-.297	-.297	0	%100
17	M31	X	-.724	-.724	0	%100
18	M31	Z	-1.254	-1.254	0	%100
19	M32	X	-.171	-.171	0	%100
20	M32	Z	-.297	-.297	0	%100
21	M33	X	-.171	-.171	0	%100
22	M33	Z	-.297	-.297	0	%100
23	M34	X	-1.218	-1.218	0	%100
24	M34	Z	-2.11	-2.11	0	%100
25	M35	X	-1.218	-1.218	0	%100
26	M35	Z	-2.11	-2.11	0	%100
27	M36	X	-.637	-.637	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
28	M36	Z	-1.104	-1.104	0	%100
29	M37	X	-.811	-.811	0	%100
30	M37	Z	-1.404	-1.404	0	%100
31	M38	X	-3.426	-3.426	0	%100
32	M38	Z	-5.934	-5.934	0	%100
33	M39	X	-.811	-.811	0	%100
34	M39	Z	-1.404	-1.404	0	%100
35	M41	X	-.811	-.811	0	%100
36	M41	Z	-1.404	-1.404	0	%100
37	M42	X	-.811	-.811	0	%100
38	M42	Z	-1.404	-1.404	0	%100
39	M43	X	-1.218	-1.218	0	%100
40	M43	Z	-2.11	-2.11	0	%100
41	M44	X	-1.218	-1.218	0	%100
42	M44	Z	-2.11	-2.11	0	%100
43	M45	X	-1.217	-1.217	0	%100
44	M45	Z	-2.108	-2.108	0	%100
45	M39B	X	-3.426	-3.426	0	%100
46	M39B	Z	-5.934	-5.934	0	%100
47	M37A	X	-5.671	-5.671	0	%100
48	M37A	Z	-9.823	-9.823	0	%100
49	MP2A	X	-4.671	-4.671	0	%100
50	MP2A	Z	-8.09	-8.09	0	%100
51	MP3A	X	-3.858	-3.858	0	%100
52	MP3A	Z	-6.683	-6.683	0	%100
53	MP4A	X	-3.858	-3.858	0	%100
54	MP4A	Z	-6.683	-6.683	0	%100
55	M65	X	-.26	-.26	0	%100
56	M65	Z	-.451	-.451	0	%100
57	M51	X	-.275	-.275	0	%100
58	M51	Z	-.476	-.476	0	%100
59	M52	X	-1.315	-1.315	0	%100
60	M52	Z	-2.277	-2.277	0	%100
61	M53	X	-1.315	-1.315	0	%100
62	M53	Z	-2.277	-2.277	0	%100
63	M56	X	-3.858	-3.858	0	%100
64	M56	Z	-6.683	-6.683	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	-3.548	-3.548	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-3.548	-3.548	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	-3.508	-3.508	0	%100
7	M26	X	0	0	0	%100
8	M26	Z	-1.621	-1.621	0	%100
9	M27	X	0	0	0	%100
10	M27	Z	-1.621	-1.621	0	%100
11	M28	X	0	0	0	%100
12	M28	Z	-1.088	-1.088	0	%100
13	M29	X	0	0	0	%100
14	M29	Z	-2.067	-2.067	0	%100
15	M30	X	0	0	0	%100
16	M30	Z	-1.088	-1.088	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
17	M31	X	0	0	0	%100
18	M31	Z	-2.067	-2.067	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	-1.088	-1.088	0	%100
21	M33	X	0	0	0	%100
22	M33	Z	-1.088	-1.088	0	%100
23	M34	X	0	0	0	%100
24	M34	Z	-1.979	-1.979	0	%100
25	M35	X	0	0	0	%100
26	M35	Z	-1.979	-1.979	0	%100
27	M36	X	0	0	0	%100
28	M36	Z	-1.821	-1.821	0	%100
29	M37	X	0	0	0	%100
30	M37	Z	-1.088	-1.088	0	%100
31	M38	X	0	0	0	%100
32	M38	Z	-2.067	-2.067	0	%100
33	M39	X	0	0	0	%100
34	M39	Z	-1.088	-1.088	0	%100
35	M41	X	0	0	0	%100
36	M41	Z	-1.088	-1.088	0	%100
37	M42	X	0	0	0	%100
38	M42	Z	-1.088	-1.088	0	%100
39	M43	X	0	0	0	%100
40	M43	Z	-1.979	-1.979	0	%100
41	M44	X	0	0	0	%100
42	M44	Z	-1.979	-1.979	0	%100
43	M45	X	0	0	0	%100
44	M45	Z	-1.821	-1.821	0	%100
45	M39B	X	0	0	0	%100
46	M39B	Z	-2.067	-2.067	0	%100
47	M37A	X	0	0	0	%100
48	M37A	Z	-4.495	-4.495	0	%100
49	MP2A	X	0	0	0	%100
50	MP2A	Z	-3.81	-3.81	0	%100
51	MP3A	X	0	0	0	%100
52	MP3A	Z	-3.508	-3.508	0	%100
53	MP4A	X	0	0	0	%100
54	MP4A	Z	-3.508	-3.508	0	%100
55	M65	X	0	0	0	%100
56	M65	Z	-.236	-.236	0	%100
57	M51	X	0	0	0	%100
58	M51	Z	-1.647	-1.647	0	%100
59	M52	X	0	0	0	%100
60	M52	Z	-.035	-.035	0	%100
61	M53	X	0	0	0	%100
62	M53	Z	-.035	-.035	0	%100
63	M56	X	0	0	0	%100
64	M56	Z	-3.273	-3.273	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.33	1.33	0	%100
2	M1	Z	-2.304	-2.304	0	%100
3	M2	X	1.33	1.33	0	%100
4	M2	Z	-2.304	-2.304	0	%100
5	MP1A	X	1.754	1.754	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
6	MP1A	Z	-3.038	-3.038	0	%100
7	M26	X	.608	.608	0	%100
8	M26	Z	-1.053	-1.053	0	%100
9	M27	X	.608	.608	0	%100
10	M27	Z	-1.053	-1.053	0	%100
11	M28	X	.766	.766	0	%100
12	M28	Z	-1.326	-1.326	0	%100
13	M29	X	1.455	1.455	0	%100
14	M29	Z	-2.521	-2.521	0	%100
15	M30	X	.766	.766	0	%100
16	M30	Z	-1.326	-1.326	0	%100
17	M31	X	1.455	1.455	0	%100
18	M31	Z	-2.521	-2.521	0	%100
19	M32	X	.766	.766	0	%100
20	M32	Z	-1.326	-1.326	0	%100
21	M33	X	.766	.766	0	%100
22	M33	Z	-1.326	-1.326	0	%100
23	M34	X	.99	.99	0	%100
24	M34	Z	-1.714	-1.714	0	%100
25	M35	X	.99	.99	0	%100
26	M35	Z	-1.714	-1.714	0	%100
27	M36	X	1.104	1.104	0	%100
28	M36	Z	-1.911	-1.911	0	%100
29	M37	X	.162	.162	0	%100
30	M37	Z	-.28	-.28	0	%100
31	M38	X	.308	.308	0	%100
32	M38	Z	-.533	-.533	0	%100
33	M39	X	.162	.162	0	%100
34	M39	Z	-.28	-.28	0	%100
35	M41	X	.162	.162	0	%100
36	M41	Z	-.28	-.28	0	%100
37	M42	X	.162	.162	0	%100
38	M42	Z	-.28	-.28	0	%100
39	M43	X	.99	.99	0	%100
40	M43	Z	-1.714	-1.714	0	%100
41	M44	X	.99	.99	0	%100
42	M44	Z	-1.714	-1.714	0	%100
43	M45	X	.578	.578	0	%100
44	M45	Z	-1.001	-1.001	0	%100
45	M39B	X	.308	.308	0	%100
46	M39B	Z	-.533	-.533	0	%100
47	M37A	X	2.247	2.247	0	%100
48	M37A	Z	-3.892	-3.892	0	%100
49	MP2A	X	1.905	1.905	0	%100
50	MP2A	Z	-3.299	-3.299	0	%100
51	MP3A	X	1.754	1.754	0	%100
52	MP3A	Z	-3.038	-3.038	0	%100
53	MP4A	X	1.754	1.754	0	%100
54	MP4A	Z	-3.038	-3.038	0	%100
55	M65	X	.885	.885	0	%100
56	M65	Z	-1.533	-1.533	0	%100
57	M51	X	1.519	1.519	0	%100
58	M51	Z	-2.63	-2.63	0	%100
59	M52	X	.3	.3	0	%100
60	M52	Z	-.52	-.52	0	%100
61	M53	X	.3	.3	0	%100
62	M53	Z	-.52	-.52	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
63	M56	X	1.637	1.637	0	%100
64	M56	Z	-2.835	-2.835	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.768	.768	0	%100
2	M1	Z	-.443	-.443	0	%100
3	M2	X	.768	.768	0	%100
4	M2	Z	-.443	-.443	0	%100
5	MP1A	X	3.038	3.038	0	%100
6	MP1A	Z	-1.754	-1.754	0	%100
7	M26	X	.351	.351	0	%100
8	M26	Z	-.203	-.203	0	%100
9	M27	X	.351	.351	0	%100
10	M27	Z	-.203	-.203	0	%100
11	M28	X	1.049	1.049	0	%100
12	M28	Z	-.606	-.606	0	%100
13	M29	X	1.993	1.993	0	%100
14	M29	Z	-1.151	-1.151	0	%100
15	M30	X	1.049	1.049	0	%100
16	M30	Z	-.606	-.606	0	%100
17	M31	X	1.993	1.993	0	%100
18	M31	Z	-1.151	-1.151	0	%100
19	M32	X	1.049	1.049	0	%100
20	M32	Z	-.606	-.606	0	%100
21	M33	X	1.049	1.049	0	%100
22	M33	Z	-.606	-.606	0	%100
23	M34	X	1.714	1.714	0	%100
24	M34	Z	-.99	-.99	0	%100
25	M35	X	1.714	1.714	0	%100
26	M35	Z	-.99	-.99	0	%100
27	M36	X	1.67	1.67	0	%100
28	M36	Z	-.964	-.964	0	%100
29	M37	X	.003	.003	0	%100
30	M37	Z	-.002	-.002	0	%100
31	M38	X	.005	.005	0	%100
32	M38	Z	-.003	-.003	0	%100
33	M39	X	.003	.003	0	%100
34	M39	Z	-.002	-.002	0	%100
35	M41	X	.003	.003	0	%100
36	M41	Z	-.002	-.002	0	%100
37	M42	X	.003	.003	0	%100
38	M42	Z	-.002	-.002	0	%100
39	M43	X	1.714	1.714	0	%100
40	M43	Z	-.99	-.99	0	%100
41	M44	X	1.714	1.714	0	%100
42	M44	Z	-.99	-.99	0	%100
43	M45	X	.76	.76	0	%100
44	M45	Z	-.439	-.439	0	%100
45	M39B	X	.005	.005	0	%100
46	M39B	Z	-.003	-.003	0	%100
47	M37A	X	3.892	3.892	0	%100
48	M37A	Z	-2.247	-2.247	0	%100
49	MP2A	X	3.299	3.299	0	%100
50	MP2A	Z	-1.905	-1.905	0	%100
51	MP3A	X	3.038	3.038	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
52	MP3A	Z	-1.754	-1.754	0	%100
53	MP4A	X	3.038	3.038	0	%100
54	MP4A	Z	-1.754	-1.754	0	%100
55	M65	X	2.865	2.865	0	%100
56	M65	Z	-1.654	-1.654	0	%100
57	M51	X	2.607	2.607	0	%100
58	M51	Z	-1.505	-1.505	0	%100
59	M52	X	2.026	2.026	0	%100
60	M52	Z	-1.169	-1.169	0	%100
61	M53	X	2.026	2.026	0	%100
62	M53	Z	-1.169	-1.169	0	%100
63	M56	X	2.835	2.835	0	%100
64	M56	Z	-1.637	-1.637	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	MP1A	X	3.508	3.508	0	%100
6	MP1A	Z	0	0	0	%100
7	M26	X	0	0	0	%100
8	M26	Z	0	0	0	%100
9	M27	X	0	0	0	%100
10	M27	Z	0	0	0	%100
11	M28	X	.447	.447	0	%100
12	M28	Z	0	0	0	%100
13	M29	X	.849	.849	0	%100
14	M29	Z	0	0	0	%100
15	M30	X	.447	.447	0	%100
16	M30	Z	0	0	0	%100
17	M31	X	.849	.849	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	.447	.447	0	%100
20	M32	Z	0	0	0	%100
21	M33	X	.447	.447	0	%100
22	M33	Z	0	0	0	%100
23	M34	X	1.979	1.979	0	%100
24	M34	Z	0	0	0	%100
25	M35	X	1.979	1.979	0	%100
26	M35	Z	0	0	0	%100
27	M36	X	1.263	1.263	0	%100
28	M36	Z	0	0	0	%100
29	M37	X	.447	.447	0	%100
30	M37	Z	0	0	0	%100
31	M38	X	.849	.849	0	%100
32	M38	Z	0	0	0	%100
33	M39	X	.447	.447	0	%100
34	M39	Z	0	0	0	%100
35	M41	X	.447	.447	0	%100
36	M41	Z	0	0	0	%100
37	M42	X	.447	.447	0	%100
38	M42	Z	0	0	0	%100
39	M43	X	1.979	1.979	0	%100
40	M43	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
41	M44	X	1.979	1.979	0	%100
42	M44	Z	0	0	0	%100
43	M45	X	1.263	1.263	0	%100
44	M45	Z	0	0	0	%100
45	M39B	X	.849	.849	0	%100
46	M39B	Z	0	0	0	%100
47	M37A	X	4.495	4.495	0	%100
48	M37A	Z	0	0	0	%100
49	MP2A	X	3.81	3.81	0	%100
50	MP2A	Z	0	0	0	%100
51	MP3A	X	3.508	3.508	0	%100
52	MP3A	Z	0	0	0	%100
53	MP4A	X	3.508	3.508	0	%100
54	MP4A	Z	0	0	0	%100
55	M65	X	3.312	3.312	0	%100
56	M65	Z	0	0	0	%100
57	M51	X	1.594	1.594	0	%100
58	M51	Z	0	0	0	%100
59	M52	X	3.513	3.513	0	%100
60	M52	Z	0	0	0	%100
61	M53	X	3.513	3.513	0	%100
62	M53	Z	0	0	0	%100
63	M56	X	3.273	3.273	0	%100
64	M56	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.768	.768	0	%100
2	M1	Z	.443	.443	0	%100
3	M2	X	.768	.768	0	%100
4	M2	Z	.443	.443	0	%100
5	MP1A	X	3.038	3.038	0	%100
6	MP1A	Z	1.754	1.754	0	%100
7	M26	X	.351	.351	0	%100
8	M26	Z	.203	.203	0	%100
9	M27	X	.351	.351	0	%100
10	M27	Z	.203	.203	0	%100
11	M28	X	.003	.003	0	%100
12	M28	Z	.002	.002	0	%100
13	M29	X	.005	.005	0	%100
14	M29	Z	.003	.003	0	%100
15	M30	X	.003	.003	0	%100
16	M30	Z	.002	.002	0	%100
17	M31	X	.005	.005	0	%100
18	M31	Z	.003	.003	0	%100
19	M32	X	.003	.003	0	%100
20	M32	Z	.002	.002	0	%100
21	M33	X	.003	.003	0	%100
22	M33	Z	.002	.002	0	%100
23	M34	X	1.714	1.714	0	%100
24	M34	Z	.99	.99	0	%100
25	M35	X	1.714	1.714	0	%100
26	M35	Z	.99	.99	0	%100
27	M36	X	.76	.76	0	%100
28	M36	Z	.439	.439	0	%100
29	M37	X	1.049	1.049	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
30	M37	Z	.606	.606	0	%100
31	M38	X	1.993	1.993	0	%100
32	M38	Z	1.151	1.151	0	%100
33	M39	X	1.049	1.049	0	%100
34	M39	Z	.606	.606	0	%100
35	M41	X	1.049	1.049	0	%100
36	M41	Z	.606	.606	0	%100
37	M42	X	1.049	1.049	0	%100
38	M42	Z	.606	.606	0	%100
39	M43	X	1.714	1.714	0	%100
40	M43	Z	.99	.99	0	%100
41	M44	X	1.714	1.714	0	%100
42	M44	Z	.99	.99	0	%100
43	M45	X	1.67	1.67	0	%100
44	M45	Z	.964	.964	0	%100
45	M39B	X	1.993	1.993	0	%100
46	M39B	Z	1.151	1.151	0	%100
47	M37A	X	3.892	3.892	0	%100
48	M37A	Z	2.247	2.247	0	%100
49	MP2A	X	3.299	3.299	0	%100
50	MP2A	Z	1.905	1.905	0	%100
51	MP3A	X	3.038	3.038	0	%100
52	MP3A	Z	1.754	1.754	0	%100
53	MP4A	X	3.038	3.038	0	%100
54	MP4A	Z	1.754	1.754	0	%100
55	M65	X	1.539	1.539	0	%100
56	M65	Z	.889	.889	0	%100
57	M51	X	.177	.177	0	%100
58	M51	Z	.102	.102	0	%100
59	M52	X	2.552	2.552	0	%100
60	M52	Z	1.474	1.474	0	%100
61	M53	X	2.552	2.552	0	%100
62	M53	Z	1.474	1.474	0	%100
63	M56	X	2.835	2.835	0	%100
64	M56	Z	1.637	1.637	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.33	1.33	0	%100
2	M1	Z	2.304	2.304	0	%100
3	M2	X	1.33	1.33	0	%100
4	M2	Z	2.304	2.304	0	%100
5	MP1A	X	1.754	1.754	0	%100
6	MP1A	Z	3.038	3.038	0	%100
7	M26	X	.608	.608	0	%100
8	M26	Z	1.053	1.053	0	%100
9	M27	X	.608	.608	0	%100
10	M27	Z	1.053	1.053	0	%100
11	M28	X	.162	.162	0	%100
12	M28	Z	.28	.28	0	%100
13	M29	X	.308	.308	0	%100
14	M29	Z	.533	.533	0	%100
15	M30	X	.162	.162	0	%100
16	M30	Z	.28	.28	0	%100
17	M31	X	.308	.308	0	%100
18	M31	Z	.533	.533	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
19	M32	X	.162	.162	0	%100
20	M32	Z	.28	.28	0	%100
21	M33	X	.162	.162	0	%100
22	M33	Z	.28	.28	0	%100
23	M34	X	.99	.99	0	%100
24	M34	Z	1.714	1.714	0	%100
25	M35	X	.99	.99	0	%100
26	M35	Z	1.714	1.714	0	%100
27	M36	X	.578	.578	0	%100
28	M36	Z	1.001	1.001	0	%100
29	M37	X	.766	.766	0	%100
30	M37	Z	1.326	1.326	0	%100
31	M38	X	1.455	1.455	0	%100
32	M38	Z	2.521	2.521	0	%100
33	M39	X	.766	.766	0	%100
34	M39	Z	1.326	1.326	0	%100
35	M41	X	.766	.766	0	%100
36	M41	Z	1.326	1.326	0	%100
37	M42	X	.766	.766	0	%100
38	M42	Z	1.326	1.326	0	%100
39	M43	X	.99	.99	0	%100
40	M43	Z	1.714	1.714	0	%100
41	M44	X	.99	.99	0	%100
42	M44	Z	1.714	1.714	0	%100
43	M45	X	1.104	1.104	0	%100
44	M45	Z	1.911	1.911	0	%100
45	M39B	X	1.455	1.455	0	%100
46	M39B	Z	2.521	2.521	0	%100
47	M37A	X	2.247	2.247	0	%100
48	M37A	Z	3.892	3.892	0	%100
49	MP2A	X	1.905	1.905	0	%100
50	MP2A	Z	3.299	3.299	0	%100
51	MP3A	X	1.754	1.754	0	%100
52	MP3A	Z	3.038	3.038	0	%100
53	MP4A	X	1.754	1.754	0	%100
54	MP4A	Z	3.038	3.038	0	%100
55	M65	X	.12	.12	0	%100
56	M65	Z	.207	.207	0	%100
57	M51	X	.115	.115	0	%100
58	M51	Z	.2	.2	0	%100
59	M52	X	.604	.604	0	%100
60	M52	Z	1.047	1.047	0	%100
61	M53	X	.604	.604	0	%100
62	M53	Z	1.047	1.047	0	%100
63	M56	X	1.637	1.637	0	%100
64	M56	Z	2.835	2.835	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	3.548	3.548	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	3.548	3.548	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	3.508	3.508	0	%100
7	M26	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
8	M26	Z	1.621	1.621	0	%100
9	M27	X	0	0	0	%100
10	M27	Z	1.621	1.621	0	%100
11	M28	X	0	0	0	%100
12	M28	Z	1.088	1.088	0	%100
13	M29	X	0	0	0	%100
14	M29	Z	2.067	2.067	0	%100
15	M30	X	0	0	0	%100
16	M30	Z	1.088	1.088	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	2.067	2.067	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	1.088	1.088	0	%100
21	M33	X	0	0	0	%100
22	M33	Z	1.088	1.088	0	%100
23	M34	X	0	0	0	%100
24	M34	Z	1.979	1.979	0	%100
25	M35	X	0	0	0	%100
26	M35	Z	1.979	1.979	0	%100
27	M36	X	0	0	0	%100
28	M36	Z	1.821	1.821	0	%100
29	M37	X	0	0	0	%100
30	M37	Z	1.088	1.088	0	%100
31	M38	X	0	0	0	%100
32	M38	Z	2.067	2.067	0	%100
33	M39	X	0	0	0	%100
34	M39	Z	1.088	1.088	0	%100
35	M41	X	0	0	0	%100
36	M41	Z	1.088	1.088	0	%100
37	M42	X	0	0	0	%100
38	M42	Z	1.088	1.088	0	%100
39	M43	X	0	0	0	%100
40	M43	Z	1.979	1.979	0	%100
41	M44	X	0	0	0	%100
42	M44	Z	1.979	1.979	0	%100
43	M45	X	0	0	0	%100
44	M45	Z	1.821	1.821	0	%100
45	M39B	X	0	0	0	%100
46	M39B	Z	2.067	2.067	0	%100
47	M37A	X	0	0	0	%100
48	M37A	Z	4.495	4.495	0	%100
49	MP2A	X	0	0	0	%100
50	MP2A	Z	3.81	3.81	0	%100
51	MP3A	X	0	0	0	%100
52	MP3A	Z	3.508	3.508	0	%100
53	MP4A	X	0	0	0	%100
54	MP4A	Z	3.508	3.508	0	%100
55	M65	X	0	0	0	%100
56	M65	Z	.236	.236	0	%100
57	M51	X	0	0	0	%100
58	M51	Z	1.647	1.647	0	%100
59	M52	X	0	0	0	%100
60	M52	Z	.035	.035	0	%100
61	M53	X	0	0	0	%100
62	M53	Z	.035	.035	0	%100
63	M56	X	0	0	0	%100
64	M56	Z	3.273	3.273	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.33	-1.33	0	%100
2	M1	Z	2.304	2.304	0	%100
3	M2	X	-1.33	-1.33	0	%100
4	M2	Z	2.304	2.304	0	%100
5	MP1A	X	-1.754	-1.754	0	%100
6	MP1A	Z	3.038	3.038	0	%100
7	M26	X	-.608	-.608	0	%100
8	M26	Z	1.053	1.053	0	%100
9	M27	X	-.608	-.608	0	%100
10	M27	Z	1.053	1.053	0	%100
11	M28	X	-.766	-.766	0	%100
12	M28	Z	1.326	1.326	0	%100
13	M29	X	-1.455	-1.455	0	%100
14	M29	Z	2.521	2.521	0	%100
15	M30	X	-.766	-.766	0	%100
16	M30	Z	1.326	1.326	0	%100
17	M31	X	-1.455	-1.455	0	%100
18	M31	Z	2.521	2.521	0	%100
19	M32	X	-.766	-.766	0	%100
20	M32	Z	1.326	1.326	0	%100
21	M33	X	-.766	-.766	0	%100
22	M33	Z	1.326	1.326	0	%100
23	M34	X	-.99	-.99	0	%100
24	M34	Z	1.714	1.714	0	%100
25	M35	X	-.99	-.99	0	%100
26	M35	Z	1.714	1.714	0	%100
27	M36	X	-1.104	-1.104	0	%100
28	M36	Z	1.911	1.911	0	%100
29	M37	X	-.162	-.162	0	%100
30	M37	Z	.28	.28	0	%100
31	M38	X	-.308	-.308	0	%100
32	M38	Z	.533	.533	0	%100
33	M39	X	-.162	-.162	0	%100
34	M39	Z	.28	.28	0	%100
35	M41	X	-.162	-.162	0	%100
36	M41	Z	.28	.28	0	%100
37	M42	X	-.162	-.162	0	%100
38	M42	Z	.28	.28	0	%100
39	M43	X	-.99	-.99	0	%100
40	M43	Z	1.714	1.714	0	%100
41	M44	X	-.99	-.99	0	%100
42	M44	Z	1.714	1.714	0	%100
43	M45	X	-.578	-.578	0	%100
44	M45	Z	1.001	1.001	0	%100
45	M39B	X	-.308	-.308	0	%100
46	M39B	Z	.533	.533	0	%100
47	M37A	X	-2.247	-2.247	0	%100
48	M37A	Z	3.892	3.892	0	%100
49	MP2A	X	-1.905	-1.905	0	%100
50	MP2A	Z	3.299	3.299	0	%100
51	MP3A	X	-1.754	-1.754	0	%100
52	MP3A	Z	3.038	3.038	0	%100
53	MP4A	X	-1.754	-1.754	0	%100
54	MP4A	Z	3.038	3.038	0	%100
55	M65	X	-.885	-.885	0	%100
56	M65	Z	1.533	1.533	0	%100
57	M51	X	-1.519	-1.519	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
58	M51	Z	2.63	2.63	0	%100
59	M52	X	-.3	-.3	0	%100
60	M52	Z	.52	.52	0	%100
61	M53	X	-.3	-.3	0	%100
62	M53	Z	.52	.52	0	%100
63	M56	X	-1.637	-1.637	0	%100
64	M56	Z	2.835	2.835	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.768	-.768	0	%100
2	M1	Z	.443	.443	0	%100
3	M2	X	-.768	-.768	0	%100
4	M2	Z	.443	.443	0	%100
5	MP1A	X	-3.038	-3.038	0	%100
6	MP1A	Z	1.754	1.754	0	%100
7	M26	X	-.351	-.351	0	%100
8	M26	Z	.203	.203	0	%100
9	M27	X	-.351	-.351	0	%100
10	M27	Z	.203	.203	0	%100
11	M28	X	-1.049	-1.049	0	%100
12	M28	Z	.606	.606	0	%100
13	M29	X	-1.993	-1.993	0	%100
14	M29	Z	1.151	1.151	0	%100
15	M30	X	-1.049	-1.049	0	%100
16	M30	Z	.606	.606	0	%100
17	M31	X	-1.993	-1.993	0	%100
18	M31	Z	1.151	1.151	0	%100
19	M32	X	-1.049	-1.049	0	%100
20	M32	Z	.606	.606	0	%100
21	M33	X	-1.049	-1.049	0	%100
22	M33	Z	.606	.606	0	%100
23	M34	X	-1.714	-1.714	0	%100
24	M34	Z	.99	.99	0	%100
25	M35	X	-1.714	-1.714	0	%100
26	M35	Z	.99	.99	0	%100
27	M36	X	-1.67	-1.67	0	%100
28	M36	Z	.964	.964	0	%100
29	M37	X	-.003	-.003	0	%100
30	M37	Z	.002	.002	0	%100
31	M38	X	-.005	-.005	0	%100
32	M38	Z	.003	.003	0	%100
33	M39	X	-.003	-.003	0	%100
34	M39	Z	.002	.002	0	%100
35	M41	X	-.003	-.003	0	%100
36	M41	Z	.002	.002	0	%100
37	M42	X	-.003	-.003	0	%100
38	M42	Z	.002	.002	0	%100
39	M43	X	-1.714	-1.714	0	%100
40	M43	Z	.99	.99	0	%100
41	M44	X	-1.714	-1.714	0	%100
42	M44	Z	.99	.99	0	%100
43	M45	X	-.76	-.76	0	%100
44	M45	Z	.439	.439	0	%100
45	M39B	X	-.005	-.005	0	%100
46	M39B	Z	.003	.003	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
47	M37A	X	-3.892	-3.892	0	%100
48	M37A	Z	2.247	2.247	0	%100
49	MP2A	X	-3.299	-3.299	0	%100
50	MP2A	Z	1.905	1.905	0	%100
51	MP3A	X	-3.038	-3.038	0	%100
52	MP3A	Z	1.754	1.754	0	%100
53	MP4A	X	-3.038	-3.038	0	%100
54	MP4A	Z	1.754	1.754	0	%100
55	M65	X	-2.865	-2.865	0	%100
56	M65	Z	1.654	1.654	0	%100
57	M51	X	-2.607	-2.607	0	%100
58	M51	Z	1.505	1.505	0	%100
59	M52	X	-2.026	-2.026	0	%100
60	M52	Z	1.169	1.169	0	%100
61	M53	X	-2.026	-2.026	0	%100
62	M53	Z	1.169	1.169	0	%100
63	M56	X	-2.835	-2.835	0	%100
64	M56	Z	1.637	1.637	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	MP1A	X	-3.508	-3.508	0	%100
6	MP1A	Z	0	0	0	%100
7	M26	X	0	0	0	%100
8	M26	Z	0	0	0	%100
9	M27	X	0	0	0	%100
10	M27	Z	0	0	0	%100
11	M28	X	-.447	-.447	0	%100
12	M28	Z	0	0	0	%100
13	M29	X	-.849	-.849	0	%100
14	M29	Z	0	0	0	%100
15	M30	X	-.447	-.447	0	%100
16	M30	Z	0	0	0	%100
17	M31	X	-.849	-.849	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	-.447	-.447	0	%100
20	M32	Z	0	0	0	%100
21	M33	X	-.447	-.447	0	%100
22	M33	Z	0	0	0	%100
23	M34	X	-1.979	-1.979	0	%100
24	M34	Z	0	0	0	%100
25	M35	X	-1.979	-1.979	0	%100
26	M35	Z	0	0	0	%100
27	M36	X	-1.263	-1.263	0	%100
28	M36	Z	0	0	0	%100
29	M37	X	-.447	-.447	0	%100
30	M37	Z	0	0	0	%100
31	M38	X	-.849	-.849	0	%100
32	M38	Z	0	0	0	%100
33	M39	X	-.447	-.447	0	%100
34	M39	Z	0	0	0	%100
35	M41	X	-.447	-.447	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
36	M41	Z	0	0	0	%100
37	M42	X	-.447	-.447	0	%100
38	M42	Z	0	0	0	%100
39	M43	X	-1.979	-1.979	0	%100
40	M43	Z	0	0	0	%100
41	M44	X	-1.979	-1.979	0	%100
42	M44	Z	0	0	0	%100
43	M45	X	-1.263	-1.263	0	%100
44	M45	Z	0	0	0	%100
45	M39B	X	-.849	-.849	0	%100
46	M39B	Z	0	0	0	%100
47	M37A	X	-4.495	-4.495	0	%100
48	M37A	Z	0	0	0	%100
49	MP2A	X	-3.81	-3.81	0	%100
50	MP2A	Z	0	0	0	%100
51	MP3A	X	-3.508	-3.508	0	%100
52	MP3A	Z	0	0	0	%100
53	MP4A	X	-3.508	-3.508	0	%100
54	MP4A	Z	0	0	0	%100
55	M65	X	-3.312	-3.312	0	%100
56	M65	Z	0	0	0	%100
57	M51	X	-1.594	-1.594	0	%100
58	M51	Z	0	0	0	%100
59	M52	X	-3.513	-3.513	0	%100
60	M52	Z	0	0	0	%100
61	M53	X	-3.513	-3.513	0	%100
62	M53	Z	0	0	0	%100
63	M56	X	-3.273	-3.273	0	%100
64	M56	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.768	-.768	0	%100
2	M1	Z	-.443	-.443	0	%100
3	M2	X	-.768	-.768	0	%100
4	M2	Z	-.443	-.443	0	%100
5	MP1A	X	-3.038	-3.038	0	%100
6	MP1A	Z	-1.754	-1.754	0	%100
7	M26	X	-.351	-.351	0	%100
8	M26	Z	-.203	-.203	0	%100
9	M27	X	-.351	-.351	0	%100
10	M27	Z	-.203	-.203	0	%100
11	M28	X	-.003	-.003	0	%100
12	M28	Z	-.002	-.002	0	%100
13	M29	X	-.005	-.005	0	%100
14	M29	Z	-.003	-.003	0	%100
15	M30	X	-.003	-.003	0	%100
16	M30	Z	-.002	-.002	0	%100
17	M31	X	-.005	-.005	0	%100
18	M31	Z	-.003	-.003	0	%100
19	M32	X	-.003	-.003	0	%100
20	M32	Z	-.002	-.002	0	%100
21	M33	X	-.003	-.003	0	%100
22	M33	Z	-.002	-.002	0	%100
23	M34	X	-1.714	-1.714	0	%100
24	M34	Z	-.99	-.99	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
25	M35	X	-1.714	-1.714	0	%100
26	M35	Z	-.99	-.99	0	%100
27	M36	X	-.76	-.76	0	%100
28	M36	Z	-.439	-.439	0	%100
29	M37	X	-1.049	-1.049	0	%100
30	M37	Z	-.606	-.606	0	%100
31	M38	X	-1.993	-1.993	0	%100
32	M38	Z	-1.151	-1.151	0	%100
33	M39	X	-1.049	-1.049	0	%100
34	M39	Z	-.606	-.606	0	%100
35	M41	X	-1.049	-1.049	0	%100
36	M41	Z	-.606	-.606	0	%100
37	M42	X	-1.049	-1.049	0	%100
38	M42	Z	-.606	-.606	0	%100
39	M43	X	-1.714	-1.714	0	%100
40	M43	Z	-.99	-.99	0	%100
41	M44	X	-1.714	-1.714	0	%100
42	M44	Z	-.99	-.99	0	%100
43	M45	X	-1.67	-1.67	0	%100
44	M45	Z	-.964	-.964	0	%100
45	M39B	X	-1.993	-1.993	0	%100
46	M39B	Z	-1.151	-1.151	0	%100
47	M37A	X	-3.892	-3.892	0	%100
48	M37A	Z	-2.247	-2.247	0	%100
49	MP2A	X	-3.299	-3.299	0	%100
50	MP2A	Z	-1.905	-1.905	0	%100
51	MP3A	X	-3.038	-3.038	0	%100
52	MP3A	Z	-1.754	-1.754	0	%100
53	MP4A	X	-3.038	-3.038	0	%100
54	MP4A	Z	-1.754	-1.754	0	%100
55	M65	X	-1.539	-1.539	0	%100
56	M65	Z	-.889	-.889	0	%100
57	M51	X	-.177	-.177	0	%100
58	M51	Z	-.102	-.102	0	%100
59	M52	X	-2.552	-2.552	0	%100
60	M52	Z	-1.474	-1.474	0	%100
61	M53	X	-2.552	-2.552	0	%100
62	M53	Z	-1.474	-1.474	0	%100
63	M56	X	-2.835	-2.835	0	%100
64	M56	Z	-1.637	-1.637	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.33	-1.33	0	%100
2	M1	Z	-2.304	-2.304	0	%100
3	M2	X	-1.33	-1.33	0	%100
4	M2	Z	-2.304	-2.304	0	%100
5	MP1A	X	-1.754	-1.754	0	%100
6	MP1A	Z	-3.038	-3.038	0	%100
7	M26	X	-.608	-.608	0	%100
8	M26	Z	-1.053	-1.053	0	%100
9	M27	X	-.608	-.608	0	%100
10	M27	Z	-1.053	-1.053	0	%100
11	M28	X	-.162	-.162	0	%100
12	M28	Z	-.28	-.28	0	%100
13	M29	X	-.308	-.308	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
14	M29	Z	-.533	-.533	0	%100
15	M30	X	-.162	-.162	0	%100
16	M30	Z	-.28	-.28	0	%100
17	M31	X	-.308	-.308	0	%100
18	M31	Z	-.533	-.533	0	%100
19	M32	X	-.162	-.162	0	%100
20	M32	Z	-.28	-.28	0	%100
21	M33	X	-.162	-.162	0	%100
22	M33	Z	-.28	-.28	0	%100
23	M34	X	-.99	-.99	0	%100
24	M34	Z	-1.714	-1.714	0	%100
25	M35	X	-.99	-.99	0	%100
26	M35	Z	-1.714	-1.714	0	%100
27	M36	X	-.578	-.578	0	%100
28	M36	Z	-1.001	-1.001	0	%100
29	M37	X	-.766	-.766	0	%100
30	M37	Z	-1.326	-1.326	0	%100
31	M38	X	-1.455	-1.455	0	%100
32	M38	Z	-2.521	-2.521	0	%100
33	M39	X	-.766	-.766	0	%100
34	M39	Z	-1.326	-1.326	0	%100
35	M41	X	-.766	-.766	0	%100
36	M41	Z	-1.326	-1.326	0	%100
37	M42	X	-.766	-.766	0	%100
38	M42	Z	-1.326	-1.326	0	%100
39	M43	X	-.99	-.99	0	%100
40	M43	Z	-1.714	-1.714	0	%100
41	M44	X	-.99	-.99	0	%100
42	M44	Z	-1.714	-1.714	0	%100
43	M45	X	-1.104	-1.104	0	%100
44	M45	Z	-1.911	-1.911	0	%100
45	M39B	X	-1.455	-1.455	0	%100
46	M39B	Z	-2.521	-2.521	0	%100
47	M37A	X	-2.247	-2.247	0	%100
48	M37A	Z	-3.892	-3.892	0	%100
49	MP2A	X	-1.905	-1.905	0	%100
50	MP2A	Z	-3.299	-3.299	0	%100
51	MP3A	X	-1.754	-1.754	0	%100
52	MP3A	Z	-3.038	-3.038	0	%100
53	MP4A	X	-1.754	-1.754	0	%100
54	MP4A	Z	-3.038	-3.038	0	%100
55	M65	X	-.12	-.12	0	%100
56	M65	Z	-.207	-.207	0	%100
57	M51	X	-.115	-.115	0	%100
58	M51	Z	-.2	-.2	0	%100
59	M52	X	-.604	-.604	0	%100
60	M52	Z	-1.047	-1.047	0	%100
61	M53	X	-.604	-.604	0	%100
62	M53	Z	-1.047	-1.047	0	%100
63	M56	X	-1.637	-1.637	0	%100
64	M56	Z	-2.835	-2.835	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	-.516	-.516	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
3	M2	X	0	0	0	%100
4	M2	Z	-.516	-.516	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	-.516	-.516	0	%100
7	M26	X	0	0	0	%100
8	M26	Z	-.118	-.118	0	%100
9	M27	X	0	0	0	%100
10	M27	Z	-.118	-.118	0	%100
11	M28	X	0	0	0	%100
12	M28	Z	-.077	-.077	0	%100
13	M29	X	0	0	0	%100
14	M29	Z	-.326	-.326	0	%100
15	M30	X	0	0	0	%100
16	M30	Z	-.077	-.077	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	-.326	-.326	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	-.077	-.077	0	%100
21	M33	X	0	0	0	%100
22	M33	Z	-.077	-.077	0	%100
23	M34	X	0	0	0	%100
24	M34	Z	-.163	-.163	0	%100
25	M35	X	0	0	0	%100
26	M35	Z	-.163	-.163	0	%100
27	M36	X	0	0	0	%100
28	M36	Z	-.134	-.134	0	%100
29	M37	X	0	0	0	%100
30	M37	Z	-.077	-.077	0	%100
31	M38	X	0	0	0	%100
32	M38	Z	-.326	-.326	0	%100
33	M39	X	0	0	0	%100
34	M39	Z	-.077	-.077	0	%100
35	M41	X	0	0	0	%100
36	M41	Z	-.077	-.077	0	%100
37	M42	X	0	0	0	%100
38	M42	Z	-.077	-.077	0	%100
39	M43	X	0	0	0	%100
40	M43	Z	-.163	-.163	0	%100
41	M44	X	0	0	0	%100
42	M44	Z	-.163	-.163	0	%100
43	M45	X	0	0	0	%100
44	M45	Z	-.134	-.134	0	%100
45	M39B	X	0	0	0	%100
46	M39B	Z	-.326	-.326	0	%100
47	M37A	X	0	0	0	%100
48	M37A	Z	-.759	-.759	0	%100
49	MP2A	X	0	0	0	%100
50	MP2A	Z	-.625	-.625	0	%100
51	MP3A	X	0	0	0	%100
52	MP3A	Z	-.516	-.516	0	%100
53	MP4A	X	0	0	0	%100
54	MP4A	Z	-.516	-.516	0	%100
55	M65	X	0	0	0	%100
56	M65	Z	-.034	-.034	0	%100
57	M51	X	0	0	0	%100
58	M51	Z	-.262	-.262	0	%100
59	M52	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
60	M52	Z	-.005	-.005	0	%100
61	M53	X	0	0	0	%100
62	M53	Z	-.005	-.005	0	%100
63	M56	X	0	0	0	%100
64	M56	Z	-.516	-.516	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.194	.194	0	%100
2	M1	Z	-.335	-.335	0	%100
3	M2	X	.194	.194	0	%100
4	M2	Z	-.335	-.335	0	%100
5	MP1A	X	.258	.258	0	%100
6	MP1A	Z	-.447	-.447	0	%100
7	M26	X	.044	.044	0	%100
8	M26	Z	-.076	-.076	0	%100
9	M27	X	.044	.044	0	%100
10	M27	Z	-.076	-.076	0	%100
11	M28	X	.054	.054	0	%100
12	M28	Z	-.094	-.094	0	%100
13	M29	X	.229	.229	0	%100
14	M29	Z	-.397	-.397	0	%100
15	M30	X	.054	.054	0	%100
16	M30	Z	-.094	-.094	0	%100
17	M31	X	.229	.229	0	%100
18	M31	Z	-.397	-.397	0	%100
19	M32	X	.054	.054	0	%100
20	M32	Z	-.094	-.094	0	%100
21	M33	X	.054	.054	0	%100
22	M33	Z	-.094	-.094	0	%100
23	M34	X	.081	.081	0	%100
24	M34	Z	-.141	-.141	0	%100
25	M35	X	.081	.081	0	%100
26	M35	Z	-.141	-.141	0	%100
27	M36	X	.081	.081	0	%100
28	M36	Z	-.141	-.141	0	%100
29	M37	X	.011	.011	0	%100
30	M37	Z	-.02	-.02	0	%100
31	M38	X	.048	.048	0	%100
32	M38	Z	-.084	-.084	0	%100
33	M39	X	.011	.011	0	%100
34	M39	Z	-.02	-.02	0	%100
35	M41	X	.011	.011	0	%100
36	M41	Z	-.02	-.02	0	%100
37	M42	X	.011	.011	0	%100
38	M42	Z	-.02	-.02	0	%100
39	M43	X	.081	.081	0	%100
40	M43	Z	-.141	-.141	0	%100
41	M44	X	.081	.081	0	%100
42	M44	Z	-.141	-.141	0	%100
43	M45	X	.043	.043	0	%100
44	M45	Z	-.074	-.074	0	%100
45	M39B	X	.048	.048	0	%100
46	M39B	Z	-.084	-.084	0	%100
47	M37A	X	.379	.379	0	%100
48	M37A	Z	-.657	-.657	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
49	MP2A	X	.312	.312	0	%100
50	MP2A	Z	-.541	-.541	0	%100
51	MP3A	X	.258	.258	0	%100
52	MP3A	Z	-.447	-.447	0	%100
53	MP4A	X	.258	.258	0	%100
54	MP4A	Z	-.447	-.447	0	%100
55	M65	X	.129	.129	0	%100
56	M65	Z	-.223	-.223	0	%100
57	M51	X	.242	.242	0	%100
58	M51	Z	-.419	-.419	0	%100
59	M52	X	.044	.044	0	%100
60	M52	Z	-.076	-.076	0	%100
61	M53	X	.044	.044	0	%100
62	M53	Z	-.076	-.076	0	%100
63	M56	X	.258	.258	0	%100
64	M56	Z	-.447	-.447	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.112	.112	0	%100
2	M1	Z	-.065	-.065	0	%100
3	M2	X	.112	.112	0	%100
4	M2	Z	-.065	-.065	0	%100
5	MP1A	X	.447	.447	0	%100
6	MP1A	Z	-.258	-.258	0	%100
7	M26	X	.025	.025	0	%100
8	M26	Z	-.015	-.015	0	%100
9	M27	X	.025	.025	0	%100
10	M27	Z	-.015	-.015	0	%100
11	M28	X	.074	.074	0	%100
12	M28	Z	-.043	-.043	0	%100
13	M29	X	.314	.314	0	%100
14	M29	Z	-.181	-.181	0	%100
15	M30	X	.074	.074	0	%100
16	M30	Z	-.043	-.043	0	%100
17	M31	X	.314	.314	0	%100
18	M31	Z	-.181	-.181	0	%100
19	M32	X	.074	.074	0	%100
20	M32	Z	-.043	-.043	0	%100
21	M33	X	.074	.074	0	%100
22	M33	Z	-.043	-.043	0	%100
23	M34	X	.141	.141	0	%100
24	M34	Z	-.081	-.081	0	%100
25	M35	X	.141	.141	0	%100
26	M35	Z	-.081	-.081	0	%100
27	M36	X	.123	.123	0	%100
28	M36	Z	-.071	-.071	0	%100
29	M37	X	.000203	.000203	0	%100
30	M37	Z	-.000117	-.000117	0	%100
31	M38	X	.000856	.000856	0	%100
32	M38	Z	-.000494	-.000494	0	%100
33	M39	X	.000203	.000203	0	%100
34	M39	Z	-.000117	-.000117	0	%100
35	M41	X	.000203	.000203	0	%100
36	M41	Z	-.000117	-.000117	0	%100
37	M42	X	.000203	.000203	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
38	M42	Z	-.000117	-.000117	0	%100
39	M43	X	.141	.141	0	%100
40	M43	Z	-.081	-.081	0	%100
41	M44	X	.141	.141	0	%100
42	M44	Z	-.081	-.081	0	%100
43	M45	X	.056	.056	0	%100
44	M45	Z	-.032	-.032	0	%100
45	M39B	X	.000856	.000856	0	%100
46	M39B	Z	-.000494	-.000494	0	%100
47	M37A	X	.657	.657	0	%100
48	M37A	Z	-.379	-.379	0	%100
49	MP2A	X	.541	.541	0	%100
50	MP2A	Z	-.312	-.312	0	%100
51	MP3A	X	.447	.447	0	%100
52	MP3A	Z	-.258	-.258	0	%100
53	MP4A	X	.447	.447	0	%100
54	MP4A	Z	-.258	-.258	0	%100
55	M65	X	.417	.417	0	%100
56	M65	Z	-.241	-.241	0	%100
57	M51	X	.415	.415	0	%100
58	M51	Z	-.24	-.24	0	%100
59	M52	X	.295	.295	0	%100
60	M52	Z	-.17	-.17	0	%100
61	M53	X	.295	.295	0	%100
62	M53	Z	-.17	-.17	0	%100
63	M56	X	.447	.447	0	%100
64	M56	Z	-.258	-.258	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	MP1A	X	.516	.516	0	%100
6	MP1A	Z	0	0	0	%100
7	M26	X	0	0	0	%100
8	M26	Z	0	0	0	%100
9	M27	X	0	0	0	%100
10	M27	Z	0	0	0	%100
11	M28	X	.032	.032	0	%100
12	M28	Z	0	0	0	%100
13	M29	X	.134	.134	0	%100
14	M29	Z	0	0	0	%100
15	M30	X	.032	.032	0	%100
16	M30	Z	0	0	0	%100
17	M31	X	.134	.134	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	.032	.032	0	%100
20	M32	Z	0	0	0	%100
21	M33	X	.032	.032	0	%100
22	M33	Z	0	0	0	%100
23	M34	X	.163	.163	0	%100
24	M34	Z	0	0	0	%100
25	M35	X	.163	.163	0	%100
26	M35	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
27	M36	X	.093	.093	0	%100
28	M36	Z	0	0	0	%100
29	M37	X	.032	.032	0	%100
30	M37	Z	0	0	0	%100
31	M38	X	.134	.134	0	%100
32	M38	Z	0	0	0	%100
33	M39	X	.032	.032	0	%100
34	M39	Z	0	0	0	%100
35	M41	X	.032	.032	0	%100
36	M41	Z	0	0	0	%100
37	M42	X	.032	.032	0	%100
38	M42	Z	0	0	0	%100
39	M43	X	.163	.163	0	%100
40	M43	Z	0	0	0	%100
41	M44	X	.163	.163	0	%100
42	M44	Z	0	0	0	%100
43	M45	X	.093	.093	0	%100
44	M45	Z	0	0	0	%100
45	M39B	X	.134	.134	0	%100
46	M39B	Z	0	0	0	%100
47	M37A	X	.759	.759	0	%100
48	M37A	Z	0	0	0	%100
49	MP2A	X	.625	.625	0	%100
50	MP2A	Z	0	0	0	%100
51	MP3A	X	.516	.516	0	%100
52	MP3A	Z	0	0	0	%100
53	MP4A	X	.516	.516	0	%100
54	MP4A	Z	0	0	0	%100
55	M65	X	.482	.482	0	%100
56	M65	Z	0	0	0	%100
57	M51	X	.254	.254	0	%100
58	M51	Z	0	0	0	%100
59	M52	X	.511	.511	0	%100
60	M52	Z	0	0	0	%100
61	M53	X	.511	.511	0	%100
62	M53	Z	0	0	0	%100
63	M56	X	.516	.516	0	%100
64	M56	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.112	.112	0	%100
2	M1	Z	.065	.065	0	%100
3	M2	X	.112	.112	0	%100
4	M2	Z	.065	.065	0	%100
5	MP1A	X	.447	.447	0	%100
6	MP1A	Z	.258	.258	0	%100
7	M26	X	.025	.025	0	%100
8	M26	Z	.015	.015	0	%100
9	M27	X	.025	.025	0	%100
10	M27	Z	.015	.015	0	%100
11	M28	X	.000203	.000203	0	%100
12	M28	Z	.000117	.000117	0	%100
13	M29	X	.000856	.000856	0	%100
14	M29	Z	.000494	.000494	0	%100
15	M30	X	.000203	.000203	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
16	M30	Z	.000117	.000117	0	%100
17	M31	X	.000856	.000856	0	%100
18	M31	Z	.000494	.000494	0	%100
19	M32	X	.000203	.000203	0	%100
20	M32	Z	.000117	.000117	0	%100
21	M33	X	.000203	.000203	0	%100
22	M33	Z	.000117	.000117	0	%100
23	M34	X	.141	.141	0	%100
24	M34	Z	.081	.081	0	%100
25	M35	X	.141	.141	0	%100
26	M35	Z	.081	.081	0	%100
27	M36	X	.056	.056	0	%100
28	M36	Z	.032	.032	0	%100
29	M37	X	.074	.074	0	%100
30	M37	Z	.043	.043	0	%100
31	M38	X	.314	.314	0	%100
32	M38	Z	.181	.181	0	%100
33	M39	X	.074	.074	0	%100
34	M39	Z	.043	.043	0	%100
35	M41	X	.074	.074	0	%100
36	M41	Z	.043	.043	0	%100
37	M42	X	.074	.074	0	%100
38	M42	Z	.043	.043	0	%100
39	M43	X	.141	.141	0	%100
40	M43	Z	.081	.081	0	%100
41	M44	X	.141	.141	0	%100
42	M44	Z	.081	.081	0	%100
43	M45	X	.123	.123	0	%100
44	M45	Z	.071	.071	0	%100
45	M39B	X	.314	.314	0	%100
46	M39B	Z	.181	.181	0	%100
47	M37A	X	.657	.657	0	%100
48	M37A	Z	.379	.379	0	%100
49	MP2A	X	.541	.541	0	%100
50	MP2A	Z	.312	.312	0	%100
51	MP3A	X	.447	.447	0	%100
52	MP3A	Z	.258	.258	0	%100
53	MP4A	X	.447	.447	0	%100
54	MP4A	Z	.258	.258	0	%100
55	M65	X	.224	.224	0	%100
56	M65	Z	.129	.129	0	%100
57	M51	X	.028	.028	0	%100
58	M51	Z	.016	.016	0	%100
59	M52	X	.371	.371	0	%100
60	M52	Z	.214	.214	0	%100
61	M53	X	.371	.371	0	%100
62	M53	Z	.214	.214	0	%100
63	M56	X	.447	.447	0	%100
64	M56	Z	.258	.258	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.194	.194	0	%100
2	M1	Z	.335	.335	0	%100
3	M2	X	.194	.194	0	%100
4	M2	Z	.335	.335	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
5	MP1A	X	.258	.258	0	%100
6	MP1A	Z	.447	.447	0	%100
7	M26	X	.044	.044	0	%100
8	M26	Z	.076	.076	0	%100
9	M27	X	.044	.044	0	%100
10	M27	Z	.076	.076	0	%100
11	M28	X	.011	.011	0	%100
12	M28	Z	.02	.02	0	%100
13	M29	X	.048	.048	0	%100
14	M29	Z	.084	.084	0	%100
15	M30	X	.011	.011	0	%100
16	M30	Z	.02	.02	0	%100
17	M31	X	.048	.048	0	%100
18	M31	Z	.084	.084	0	%100
19	M32	X	.011	.011	0	%100
20	M32	Z	.02	.02	0	%100
21	M33	X	.011	.011	0	%100
22	M33	Z	.02	.02	0	%100
23	M34	X	.081	.081	0	%100
24	M34	Z	.141	.141	0	%100
25	M35	X	.081	.081	0	%100
26	M35	Z	.141	.141	0	%100
27	M36	X	.043	.043	0	%100
28	M36	Z	.074	.074	0	%100
29	M37	X	.054	.054	0	%100
30	M37	Z	.094	.094	0	%100
31	M38	X	.229	.229	0	%100
32	M38	Z	.397	.397	0	%100
33	M39	X	.054	.054	0	%100
34	M39	Z	.094	.094	0	%100
35	M41	X	.054	.054	0	%100
36	M41	Z	.094	.094	0	%100
37	M42	X	.054	.054	0	%100
38	M42	Z	.094	.094	0	%100
39	M43	X	.081	.081	0	%100
40	M43	Z	.141	.141	0	%100
41	M44	X	.081	.081	0	%100
42	M44	Z	.141	.141	0	%100
43	M45	X	.081	.081	0	%100
44	M45	Z	.141	.141	0	%100
45	M39B	X	.229	.229	0	%100
46	M39B	Z	.397	.397	0	%100
47	M37A	X	.379	.379	0	%100
48	M37A	Z	.657	.657	0	%100
49	MP2A	X	.312	.312	0	%100
50	MP2A	Z	.541	.541	0	%100
51	MP3A	X	.258	.258	0	%100
52	MP3A	Z	.447	.447	0	%100
53	MP4A	X	.258	.258	0	%100
54	MP4A	Z	.447	.447	0	%100
55	M65	X	.017	.017	0	%100
56	M65	Z	.03	.03	0	%100
57	M51	X	.018	.018	0	%100
58	M51	Z	.032	.032	0	%100
59	M52	X	.088	.088	0	%100
60	M52	Z	.152	.152	0	%100
61	M53	X	.088	.088	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
62	M53	Z	.152	.152	0	%100
63	M56	X	.258	.258	0	%100
64	M56	Z	.447	.447	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	.516	.516	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	.516	.516	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	.516	.516	0	%100
7	M26	X	0	0	0	%100
8	M26	Z	.118	.118	0	%100
9	M27	X	0	0	0	%100
10	M27	Z	.118	.118	0	%100
11	M28	X	0	0	0	%100
12	M28	Z	.077	.077	0	%100
13	M29	X	0	0	0	%100
14	M29	Z	.326	.326	0	%100
15	M30	X	0	0	0	%100
16	M30	Z	.077	.077	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	.326	.326	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	.077	.077	0	%100
21	M33	X	0	0	0	%100
22	M33	Z	.077	.077	0	%100
23	M34	X	0	0	0	%100
24	M34	Z	.163	.163	0	%100
25	M35	X	0	0	0	%100
26	M35	Z	.163	.163	0	%100
27	M36	X	0	0	0	%100
28	M36	Z	.134	.134	0	%100
29	M37	X	0	0	0	%100
30	M37	Z	.077	.077	0	%100
31	M38	X	0	0	0	%100
32	M38	Z	.326	.326	0	%100
33	M39	X	0	0	0	%100
34	M39	Z	.077	.077	0	%100
35	M41	X	0	0	0	%100
36	M41	Z	.077	.077	0	%100
37	M42	X	0	0	0	%100
38	M42	Z	.077	.077	0	%100
39	M43	X	0	0	0	%100
40	M43	Z	.163	.163	0	%100
41	M44	X	0	0	0	%100
42	M44	Z	.163	.163	0	%100
43	M45	X	0	0	0	%100
44	M45	Z	.134	.134	0	%100
45	M39B	X	0	0	0	%100
46	M39B	Z	.326	.326	0	%100
47	M37A	X	0	0	0	%100
48	M37A	Z	.759	.759	0	%100
49	MP2A	X	0	0	0	%100
50	MP2A	Z	.625	.625	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
51	MP3A	X	0	0	0	%100
52	MP3A	Z	.516	.516	0	%100
53	MP4A	X	0	0	0	%100
54	MP4A	Z	.516	.516	0	%100
55	M65	X	0	0	0	%100
56	M65	Z	.034	.034	0	%100
57	M51	X	0	0	0	%100
58	M51	Z	.262	.262	0	%100
59	M52	X	0	0	0	%100
60	M52	Z	.005	.005	0	%100
61	M53	X	0	0	0	%100
62	M53	Z	.005	.005	0	%100
63	M56	X	0	0	0	%100
64	M56	Z	.516	.516	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.194	-.194	0	%100
2	M1	Z	.335	.335	0	%100
3	M2	X	-.194	-.194	0	%100
4	M2	Z	.335	.335	0	%100
5	MP1A	X	-.258	-.258	0	%100
6	MP1A	Z	.447	.447	0	%100
7	M26	X	-.044	-.044	0	%100
8	M26	Z	.076	.076	0	%100
9	M27	X	-.044	-.044	0	%100
10	M27	Z	.076	.076	0	%100
11	M28	X	-.054	-.054	0	%100
12	M28	Z	.094	.094	0	%100
13	M29	X	-.229	-.229	0	%100
14	M29	Z	.397	.397	0	%100
15	M30	X	-.054	-.054	0	%100
16	M30	Z	.094	.094	0	%100
17	M31	X	-.229	-.229	0	%100
18	M31	Z	.397	.397	0	%100
19	M32	X	-.054	-.054	0	%100
20	M32	Z	.094	.094	0	%100
21	M33	X	-.054	-.054	0	%100
22	M33	Z	.094	.094	0	%100
23	M34	X	-.081	-.081	0	%100
24	M34	Z	.141	.141	0	%100
25	M35	X	-.081	-.081	0	%100
26	M35	Z	.141	.141	0	%100
27	M36	X	-.081	-.081	0	%100
28	M36	Z	.141	.141	0	%100
29	M37	X	-.011	-.011	0	%100
30	M37	Z	.02	.02	0	%100
31	M38	X	-.048	-.048	0	%100
32	M38	Z	.084	.084	0	%100
33	M39	X	-.011	-.011	0	%100
34	M39	Z	.02	.02	0	%100
35	M41	X	-.011	-.011	0	%100
36	M41	Z	.02	.02	0	%100
37	M42	X	-.011	-.011	0	%100
38	M42	Z	.02	.02	0	%100
39	M43	X	-.081	-.081	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
40	M43	Z	.141	.141	0	%100
41	M44	X	-.081	-.081	0	%100
42	M44	Z	.141	.141	0	%100
43	M45	X	-.043	-.043	0	%100
44	M45	Z	.074	.074	0	%100
45	M39B	X	-.048	-.048	0	%100
46	M39B	Z	.084	.084	0	%100
47	M37A	X	-.379	-.379	0	%100
48	M37A	Z	.657	.657	0	%100
49	MP2A	X	-.312	-.312	0	%100
50	MP2A	Z	.541	.541	0	%100
51	MP3A	X	-.258	-.258	0	%100
52	MP3A	Z	.447	.447	0	%100
53	MP4A	X	-.258	-.258	0	%100
54	MP4A	Z	.447	.447	0	%100
55	M65	X	-.129	-.129	0	%100
56	M65	Z	.223	.223	0	%100
57	M51	X	-.242	-.242	0	%100
58	M51	Z	.419	.419	0	%100
59	M52	X	-.044	-.044	0	%100
60	M52	Z	.076	.076	0	%100
61	M53	X	-.044	-.044	0	%100
62	M53	Z	.076	.076	0	%100
63	M56	X	-.258	-.258	0	%100
64	M56	Z	.447	.447	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.112	-.112	0	%100
2	M1	Z	.065	.065	0	%100
3	M2	X	-.112	-.112	0	%100
4	M2	Z	.065	.065	0	%100
5	MP1A	X	-.447	-.447	0	%100
6	MP1A	Z	.258	.258	0	%100
7	M26	X	-.025	-.025	0	%100
8	M26	Z	.015	.015	0	%100
9	M27	X	-.025	-.025	0	%100
10	M27	Z	.015	.015	0	%100
11	M28	X	-.074	-.074	0	%100
12	M28	Z	.043	.043	0	%100
13	M29	X	-.314	-.314	0	%100
14	M29	Z	.181	.181	0	%100
15	M30	X	-.074	-.074	0	%100
16	M30	Z	.043	.043	0	%100
17	M31	X	-.314	-.314	0	%100
18	M31	Z	.181	.181	0	%100
19	M32	X	-.074	-.074	0	%100
20	M32	Z	.043	.043	0	%100
21	M33	X	-.074	-.074	0	%100
22	M33	Z	.043	.043	0	%100
23	M34	X	-.141	-.141	0	%100
24	M34	Z	.081	.081	0	%100
25	M35	X	-.141	-.141	0	%100
26	M35	Z	.081	.081	0	%100
27	M36	X	-.123	-.123	0	%100
28	M36	Z	.071	.071	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
29	M37	X	-.000203	-.000203	0	%100
30	M37	Z	.000117	.000117	0	%100
31	M38	X	-.000856	-.000856	0	%100
32	M38	Z	.000494	.000494	0	%100
33	M39	X	-.000203	-.000203	0	%100
34	M39	Z	.000117	.000117	0	%100
35	M41	X	-.000203	-.000203	0	%100
36	M41	Z	.000117	.000117	0	%100
37	M42	X	-.000203	-.000203	0	%100
38	M42	Z	.000117	.000117	0	%100
39	M43	X	-.141	-.141	0	%100
40	M43	Z	.081	.081	0	%100
41	M44	X	-.141	-.141	0	%100
42	M44	Z	.081	.081	0	%100
43	M45	X	-.056	-.056	0	%100
44	M45	Z	.032	.032	0	%100
45	M39B	X	-.000856	-.000856	0	%100
46	M39B	Z	.000494	.000494	0	%100
47	M37A	X	-.657	-.657	0	%100
48	M37A	Z	.379	.379	0	%100
49	MP2A	X	-.541	-.541	0	%100
50	MP2A	Z	.312	.312	0	%100
51	MP3A	X	-.447	-.447	0	%100
52	MP3A	Z	.258	.258	0	%100
53	MP4A	X	-.447	-.447	0	%100
54	MP4A	Z	.258	.258	0	%100
55	M65	X	-.417	-.417	0	%100
56	M65	Z	.241	.241	0	%100
57	M51	X	-.415	-.415	0	%100
58	M51	Z	.24	.24	0	%100
59	M52	X	-.295	-.295	0	%100
60	M52	Z	.17	.17	0	%100
61	M53	X	-.295	-.295	0	%100
62	M53	Z	.17	.17	0	%100
63	M56	X	-.447	-.447	0	%100
64	M56	Z	.258	.258	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	MP1A	X	-.516	-.516	0	%100
6	MP1A	Z	0	0	0	%100
7	M26	X	0	0	0	%100
8	M26	Z	0	0	0	%100
9	M27	X	0	0	0	%100
10	M27	Z	0	0	0	%100
11	M28	X	-.032	-.032	0	%100
12	M28	Z	0	0	0	%100
13	M29	X	-.134	-.134	0	%100
14	M29	Z	0	0	0	%100
15	M30	X	-.032	-.032	0	%100
16	M30	Z	0	0	0	%100
17	M31	X	-.134	-.134	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
18	M31	Z	0	0	0	%100
19	M32	X	-.032	-.032	0	%100
20	M32	Z	0	0	0	%100
21	M33	X	-.032	-.032	0	%100
22	M33	Z	0	0	0	%100
23	M34	X	-.163	-.163	0	%100
24	M34	Z	0	0	0	%100
25	M35	X	-.163	-.163	0	%100
26	M35	Z	0	0	0	%100
27	M36	X	-.093	-.093	0	%100
28	M36	Z	0	0	0	%100
29	M37	X	-.032	-.032	0	%100
30	M37	Z	0	0	0	%100
31	M38	X	-.134	-.134	0	%100
32	M38	Z	0	0	0	%100
33	M39	X	-.032	-.032	0	%100
34	M39	Z	0	0	0	%100
35	M41	X	-.032	-.032	0	%100
36	M41	Z	0	0	0	%100
37	M42	X	-.032	-.032	0	%100
38	M42	Z	0	0	0	%100
39	M43	X	-.163	-.163	0	%100
40	M43	Z	0	0	0	%100
41	M44	X	-.163	-.163	0	%100
42	M44	Z	0	0	0	%100
43	M45	X	-.093	-.093	0	%100
44	M45	Z	0	0	0	%100
45	M39B	X	-.134	-.134	0	%100
46	M39B	Z	0	0	0	%100
47	M37A	X	-.759	-.759	0	%100
48	M37A	Z	0	0	0	%100
49	MP2A	X	-.625	-.625	0	%100
50	MP2A	Z	0	0	0	%100
51	MP3A	X	-.516	-.516	0	%100
52	MP3A	Z	0	0	0	%100
53	MP4A	X	-.516	-.516	0	%100
54	MP4A	Z	0	0	0	%100
55	M65	X	-.482	-.482	0	%100
56	M65	Z	0	0	0	%100
57	M51	X	-.254	-.254	0	%100
58	M51	Z	0	0	0	%100
59	M52	X	-.511	-.511	0	%100
60	M52	Z	0	0	0	%100
61	M53	X	-.511	-.511	0	%100
62	M53	Z	0	0	0	%100
63	M56	X	-.516	-.516	0	%100
64	M56	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.112	-.112	0	%100
2	M1	Z	-.065	-.065	0	%100
3	M2	X	-.112	-.112	0	%100
4	M2	Z	-.065	-.065	0	%100
5	MP1A	X	-.447	-.447	0	%100
6	MP1A	Z	-.258	-.258	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
7	M26	X	-.025	-.025	0	%100
8	M26	Z	-.015	-.015	0	%100
9	M27	X	-.025	-.025	0	%100
10	M27	Z	-.015	-.015	0	%100
11	M28	X	-.000203	-.000203	0	%100
12	M28	Z	-.000117	-.000117	0	%100
13	M29	X	-.000856	-.000856	0	%100
14	M29	Z	-.000494	-.000494	0	%100
15	M30	X	-.000203	-.000203	0	%100
16	M30	Z	-.000117	-.000117	0	%100
17	M31	X	-.000856	-.000856	0	%100
18	M31	Z	-.000494	-.000494	0	%100
19	M32	X	-.000203	-.000203	0	%100
20	M32	Z	-.000117	-.000117	0	%100
21	M33	X	-.000203	-.000203	0	%100
22	M33	Z	-.000117	-.000117	0	%100
23	M34	X	-.141	-.141	0	%100
24	M34	Z	-.081	-.081	0	%100
25	M35	X	-.141	-.141	0	%100
26	M35	Z	-.081	-.081	0	%100
27	M36	X	-.056	-.056	0	%100
28	M36	Z	-.032	-.032	0	%100
29	M37	X	-.074	-.074	0	%100
30	M37	Z	-.043	-.043	0	%100
31	M38	X	-.314	-.314	0	%100
32	M38	Z	-.181	-.181	0	%100
33	M39	X	-.074	-.074	0	%100
34	M39	Z	-.043	-.043	0	%100
35	M41	X	-.074	-.074	0	%100
36	M41	Z	-.043	-.043	0	%100
37	M42	X	-.074	-.074	0	%100
38	M42	Z	-.043	-.043	0	%100
39	M43	X	-.141	-.141	0	%100
40	M43	Z	-.081	-.081	0	%100
41	M44	X	-.141	-.141	0	%100
42	M44	Z	-.081	-.081	0	%100
43	M45	X	-.123	-.123	0	%100
44	M45	Z	-.071	-.071	0	%100
45	M39B	X	-.314	-.314	0	%100
46	M39B	Z	-.181	-.181	0	%100
47	M37A	X	-.657	-.657	0	%100
48	M37A	Z	-.379	-.379	0	%100
49	MP2A	X	-.541	-.541	0	%100
50	MP2A	Z	-.312	-.312	0	%100
51	MP3A	X	-.447	-.447	0	%100
52	MP3A	Z	-.258	-.258	0	%100
53	MP4A	X	-.447	-.447	0	%100
54	MP4A	Z	-.258	-.258	0	%100
55	M65	X	-.224	-.224	0	%100
56	M65	Z	-.129	-.129	0	%100
57	M51	X	-.028	-.028	0	%100
58	M51	Z	-.016	-.016	0	%100
59	M52	X	-.371	-.371	0	%100
60	M52	Z	-.214	-.214	0	%100
61	M53	X	-.371	-.371	0	%100
62	M53	Z	-.214	-.214	0	%100
63	M56	X	-.447	-.447	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
64	M56	Z	-.258	-.258	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.194	-.194	0	%100
2	M1	Z	-.335	-.335	0	%100
3	M2	X	-.194	-.194	0	%100
4	M2	Z	-.335	-.335	0	%100
5	MP1A	X	-.258	-.258	0	%100
6	MP1A	Z	-.447	-.447	0	%100
7	M26	X	-.044	-.044	0	%100
8	M26	Z	-.076	-.076	0	%100
9	M27	X	-.044	-.044	0	%100
10	M27	Z	-.076	-.076	0	%100
11	M28	X	-.011	-.011	0	%100
12	M28	Z	-.02	-.02	0	%100
13	M29	X	-.048	-.048	0	%100
14	M29	Z	-.084	-.084	0	%100
15	M30	X	-.011	-.011	0	%100
16	M30	Z	-.02	-.02	0	%100
17	M31	X	-.048	-.048	0	%100
18	M31	Z	-.084	-.084	0	%100
19	M32	X	-.011	-.011	0	%100
20	M32	Z	-.02	-.02	0	%100
21	M33	X	-.011	-.011	0	%100
22	M33	Z	-.02	-.02	0	%100
23	M34	X	-.081	-.081	0	%100
24	M34	Z	-.141	-.141	0	%100
25	M35	X	-.081	-.081	0	%100
26	M35	Z	-.141	-.141	0	%100
27	M36	X	-.043	-.043	0	%100
28	M36	Z	-.074	-.074	0	%100
29	M37	X	-.054	-.054	0	%100
30	M37	Z	-.094	-.094	0	%100
31	M38	X	-.229	-.229	0	%100
32	M38	Z	-.397	-.397	0	%100
33	M39	X	-.054	-.054	0	%100
34	M39	Z	-.094	-.094	0	%100
35	M41	X	-.054	-.054	0	%100
36	M41	Z	-.094	-.094	0	%100
37	M42	X	-.054	-.054	0	%100
38	M42	Z	-.094	-.094	0	%100
39	M43	X	-.081	-.081	0	%100
40	M43	Z	-.141	-.141	0	%100
41	M44	X	-.081	-.081	0	%100
42	M44	Z	-.141	-.141	0	%100
43	M45	X	-.081	-.081	0	%100
44	M45	Z	-.141	-.141	0	%100
45	M39B	X	-.229	-.229	0	%100
46	M39B	Z	-.397	-.397	0	%100
47	M37A	X	-.379	-.379	0	%100
48	M37A	Z	-.657	-.657	0	%100
49	MP2A	X	-.312	-.312	0	%100
50	MP2A	Z	-.541	-.541	0	%100
51	MP3A	X	-.258	-.258	0	%100
52	MP3A	Z	-.447	-.447	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
53	MP4A	X	-.258	-.258	0	%100
54	MP4A	Z	-.447	-.447	0	%100
55	M65	X	-.017	-.017	0	%100
56	M65	Z	-.03	-.03	0	%100
57	M51	X	-.018	-.018	0	%100
58	M51	Z	-.032	-.032	0	%100
59	M52	X	-.088	-.088	0	%100
60	M52	Z	-.152	-.152	0	%100
61	M53	X	-.088	-.088	0	%100
62	M53	Z	-.152	-.152	0	%100
63	M56	X	-.258	-.258	0	%100
64	M56	Z	-.447	-.447	0	%100

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	L...	Dir	LC	phi*Pnc...	phi*Pnt ...	phi*Mn ...	phi*Mn ...	Cb	Eqn
1	M53	PIPE_2.0	.700	9.003	24	.020	0		18	2434.801	32130	1.872	1.872	1...	H1-1b
2	M52	PIPE_2.0	.683	9.003	18	.021	0		16	2434.801	32130	1.872	1.872	1...	H1-1b
3	M2	PIPE_2.0	.612	10.9...	6	.243	1...		6	5820.472	32130	1.872	1.872	3...	H1-1a
4	M1	PIPE_2.0	.531	10.6...	11	.163	1...		35	5820.472	32130	1.872	1.872	2...	H1-1b
5	M27	PL5/8X5	.510	.593	24	.109	....	y	24	72970.6...	101250	1.318	10.547	1...	H1-1b
6	M26	PL5/8X5	.440	.593	21	.108	0	y	23	72970.6...	101250	1.318	10.547	1...	H1-1b
7	MP1A	PIPE_2.0	.427	3.646	5	.105	5...		11	17855.0...	32130	1.872	1.872	2...	H1-1b
8	M56	PIPE_2.0	.366	2.625	11	.144	2...		5	23088.1...	32130	1.872	1.872	1...	H1-1b
9	M33	PL1/2X3 3/4	.334	0	13	.177	....	y	15	60139.0...	60750	.633	4.746	1...	H1-1b
10	M65	PIPE_2.0	.301	6.468	4	.081	1...		11	5636.016	32130	1.872	1.872	1...	H1-1a
11	M31	PIPE_2.0	.286	3.692	13	.138	3...		15	27093.79	32130	1.872	1.872	2...	H1-1b
12	M36	SR_0.75	.284	2.21	13	.013	0		6	2545.66	14313.8...	.179	.179	1...	H1-1a
13	M32	PL1/2X3 1/2	.283	.208	23	.192	....	y	15	55811.5...	56700	.591	4.134	1...	H1-1b
14	M28	PL1/2X3 1/2	.282	.208	17	.210	....	y	23	55811.5...	56700	.591	4.134	1...	H1-1b
15	M30	PL1/2X3 3/4	.261	0	20	.195	....	y	23	60139.0...	60750	.633	4.746	1...	H1-1b
16	M39B	PIPE_2.0	.248	3.692	23	.088	3...		24	27093.79	32130	1.872	1.872	1...	H1-1b
17	M42	PL1/2X3 3/4	.222	0	24	.139	0	y	24	60139.0...	60750	.633	4.746	1...	H1-1b
18	M37A	PIPE_4.0	.196	5.017	24	.228	5...		24	79414.5...	93240	10.631	10.631	2...	H1-1b
19	M34	SR_0.75	.187	2.917	17	.022	0		12	5826.497	14313.8...	.179	.179	1...	H1-1b*
20	MP3A	PIPE_2.0	.168	4.958	47	.032	2...		38	17855.0...	32130	1.872	1.872	4...	H1-1b
21	M35	SR_0.75	.163	2.917	13	.023	0		24	5826.497	14313.8...	.179	.179	1	H1-1b*
22	M41	PL1/2X3 1/2	.153	.208	22	.156	0	y	24	55811.5...	56700	.591	4.134	1...	H1-1b
23	M29	PIPE_2.0	.153	3.771	8	.144	3...		23	27093.79	32130	1.872	1.872	1...	H1-1b
24	M39	PL1/2X3 3/4	.149	0	21	.142	....	y	19	60139.0...	60750	.633	4.746	1...	H1-1b
25	M45	SR_0.75	.142	2.21	13	.017	0		24	2545.66	14313.8...	.179	.179	1...	H1-1b
26	M37	PL1/2X3 1/2	.137	.208	24	.151	0	y	19	55811.5...	56700	.591	4.134	1...	H1-1b
27	MP4A	PIPE_2.0	.120	2.188	20	.055	5...		5	17855.0...	32130	1.872	1.872	4...	H1-1b
28	MP2A	PIPE_2.5	.117	2.042	19	.043	3...		18	33961.6...	50715	3.596	3.596	4...	H1-1b
29	M38	PIPE_2.0	.092	3.692	20	.091	3...		20	27093.79	32130	1.872	1.872	1...	H1-1b
30	M51	PIPE_2.0	.091	5.012	12	.003	5...		20	23775.2...	32130	1.872	1.872	1...	H1-1b*
31	M44	SR_0.75	.088	2.917	24	.028	0		24	5826.497	14313.8...	.179	.179	1...	H1-1b*
32	M43	SR_0.75	.085	2.917	24	.021	0		12	5826.497	14313.8...	.179	.179	1...	H1-1b*

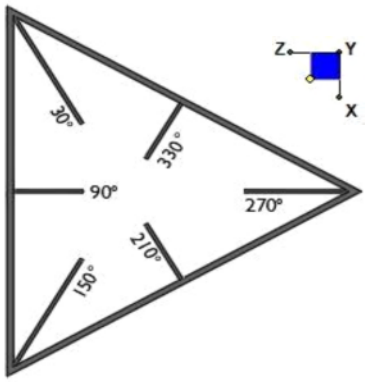
Client:	Verizon Wireless	Date:	6/30/2021
Site Name:	TARIFFVILLE CT RELO - Talcott Mtn		
Project No.	21777054A		
Title:	Antenna Mount Analysis	Page:	1

Version 3.1

I. Mount-to-Tower Connection Check

RISA Model Data

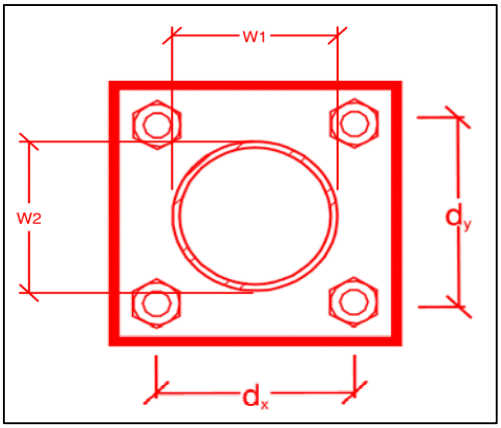
Nodes *(labeled per RISA)*	Orientation *(per graphic of typical platform)*



TYPICAL PLATFORM

Tower Connection Bolt Checks

Any moment resistance?:	yes
Bolt Quantity per Reaction:	
d_x (in) *(Delta X of typ. bolt config. sketch)*	
d_y (in) *(Delta Y of typ. bolt config. sketch)*	
Bolt Type:	U-Bolt
Bolt Diameter (in):	
Required Tensile Strength (kips):	
Required Shear Strength (kips):	
Tensile Strength / bolt (kips):	
Shear Strength / bolt (kips):	
Tensile Capacity Overall:	
Shear Capacity Overall:	



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

Mount Desktop Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor Mount Modification

Purpose – to provide MASER CONSULTING the proper documentation in order to complete the required Mount Desktop review of the Post Modification Inspection Report.

Contractor is responsible for making certain the photos provided as noted below provide confirmation that the modification was completed in accordance with the modification drawings.

Contractor shall relay any data that can impact the performance of the mount or the mount modification, this includes safety issues.

Base Requirements:

Any special photos outside of the standard requirements will be indicated on the drawings

Provide "as built drawings" showing contractor's name, preparer's signature, and date. Any deviations from the drawings (proposed modification) must be shown.

Notation that all hardware was properly installed, and the existing hardware was inspected for any issues.

Verification that loading is as communicated in the modification drawings. NOTE If loading is different than what is conveyed in the modification drawing contact MASER CONSULTING immediately.

Each photo should be time and date stamped

Photos should be high resolution and submitted in a Zip File and should be organized in the file structure as depicted in Schedule A attached.

Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope.

The photos in the file structure should be uploaded **to** https://pmi.vzwsmart.com as depicted on the drawings

Photo Requirements:

Base and "During Installation Photos"

- Base pictures include
  - Photo of Gate Signs showing the tower owner, site name, and number
  - Photo of carrier shelter showing the carrier site name and number if available
  - Photos of the galvanizing compound and/or paint used (if applicable), clearly showing the label and name
- "During Installation Photos if provided - must be placed only in this folder

Photos taken at ground level

- Overall tower structure before and after installation of the modifications
- Photos of the appropriate mount before and after installation of the modifications; if the mounts are at different rad elevations, pictures must be provided for all elevations that the modifications were installed

- *Photos taken at Mount Elevation*
    - Photos showing each individual sector before and also after installation of modifications. Each entire sector must be in one photo to show in the inter-connection of members.
        - These photos should also certify that the placement and geometry of the equipment on the mount is as depicted on the sketch and table in the mount analysis
    - Close-up photos of each installed modification per the modification drawings; pictures should also include connection hardware (U-bolts, bolts, nuts, all-threaded rods, etc.)
    - Photos showing the measurements of the installed modification member sizes (i.e. lengths, widths, depths, diameters, thicknesses)
    - Photos showing the elevation or distances of the installed modifications from the appropriate reference locations shown in the modification drawings
    - Photos showing the installed modifications onto the tower with tape drop measurements (if applicable) (i.e. ring/collar mounts, tie-backs, V-bracing kits, etc.); if the existing mount elevation needs to be changed according to the modification drawings, a tape drop measurement shall be provided before the elevation change
    - Photos showing the safety climb wire rope above and below the mount prior to modification.
    - Photos showing the climbing facility and safety climb if present.

Material Certification:

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

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

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

Certifying Individual: Company _____

Name _____

Signature _____

Antenna & equipment placement and Geometry Confirmation:

- The contractor must certify that the antenna & equipment placement and geometry is in accordance with the antenna placement diagrams as included in this mount analysis.

☐ The contractor certifies that the photos support and the equipment on the mount is as depicted on the antenna placement diagrams as included in this mount analysis.

☐ The contractor notes that the equipment on the mount is not in accordance with the antenna placement diagrams and has accordingly marked up the diagrams or provided a diagram outlining the differences.

Certifying Individual: Company _____

Name _____

Signature _____

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

Issue:

Response:

Schedule A Photo & Document File Structure

- VzW Site Number / Name
  - Base & During Installation Photos
  - Pre-Installation Photos
    - Alpha
    - Beta
    - Gamma
    - Ground Level
    - Tape Drop
  - Post-Installation Photos
    - Alpha
    - Beta
    - Gamma
    - Ground Level
    - Tape Drop
    - Photos of climbing facility and safety climb If Present
  - Certifications Submission of this document including certifications
  - Specific Required Additional Photos

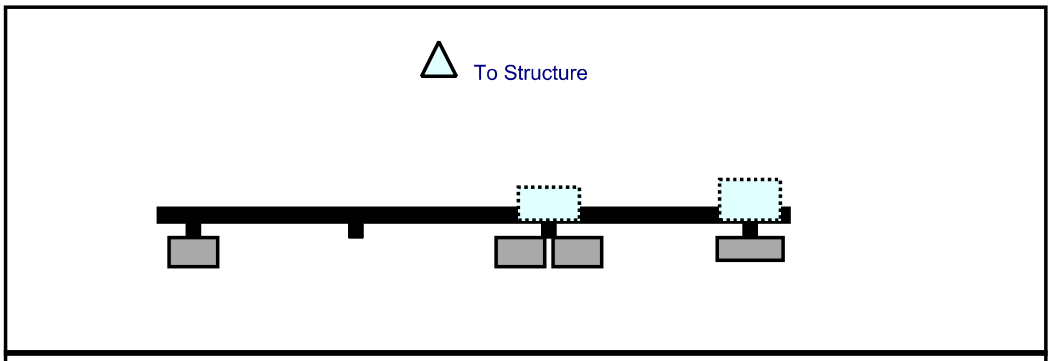
Structure: 470975-VZW - TARIFFVILLE CT RELO - Talcott Mtn

Sector: **A** 6/28/2021

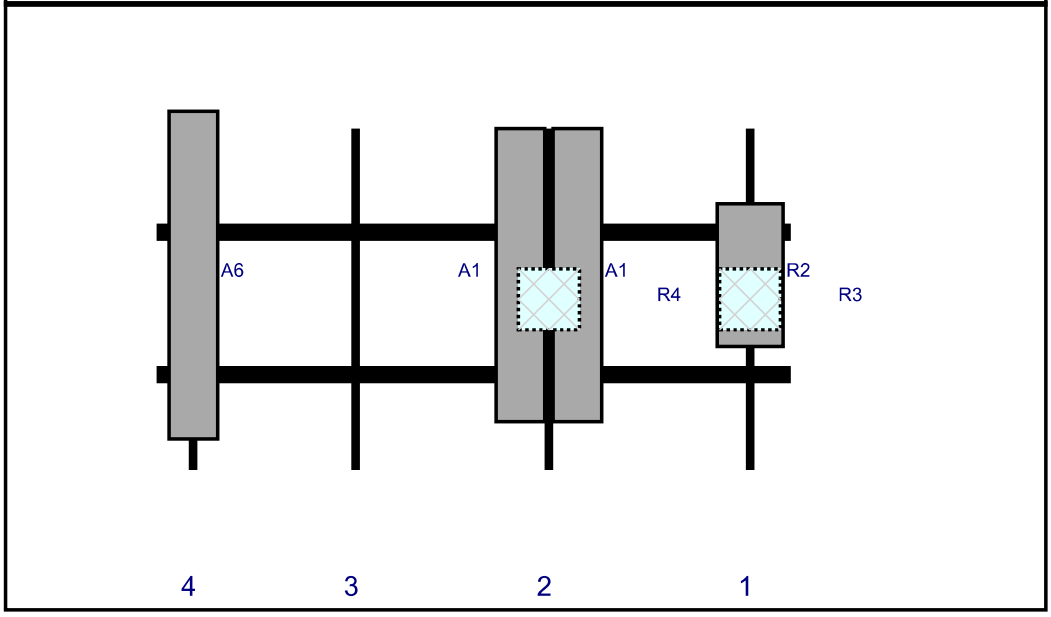
Structure Type: Self Support 10037982

Mount Elev: 155.00 Page: 1

Plan View

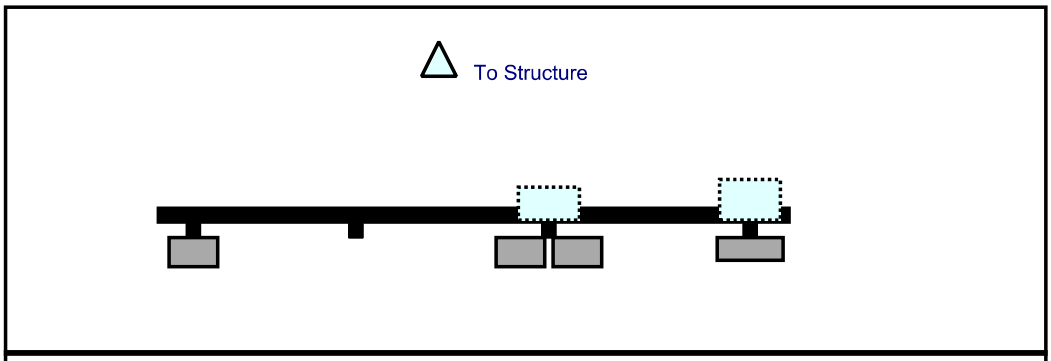


Front View
Looking at Structure

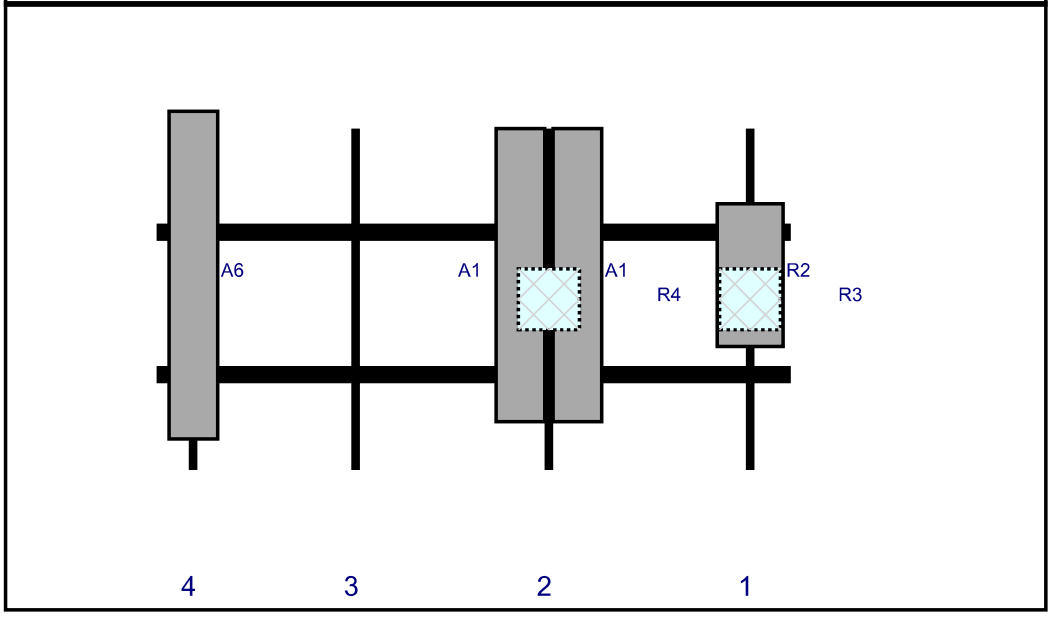


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
R2	MT6407-77A	35.1	16.1	146	1	a	Front	36	0	Added	
R3	B2/B66A RRH-BR049	15	15	146	1	a	Behind	42	0	Added	
A1	NHH-65B-R2B	72	11.9	96.5	2	a	Front	36	7	Added	
A1	NHH-65B-R2B	72	11.9	96.5	2	b	Front	36	-7	Added	
R4	B5/B13 RRH-BR04C	15	15	96.5	2	a	Behind	42	0	Added	
A6	LNX-6514DS-A1M	80.6	11.9	9	4	a	Front	36	0	Retained	04/14/2021

Plan View



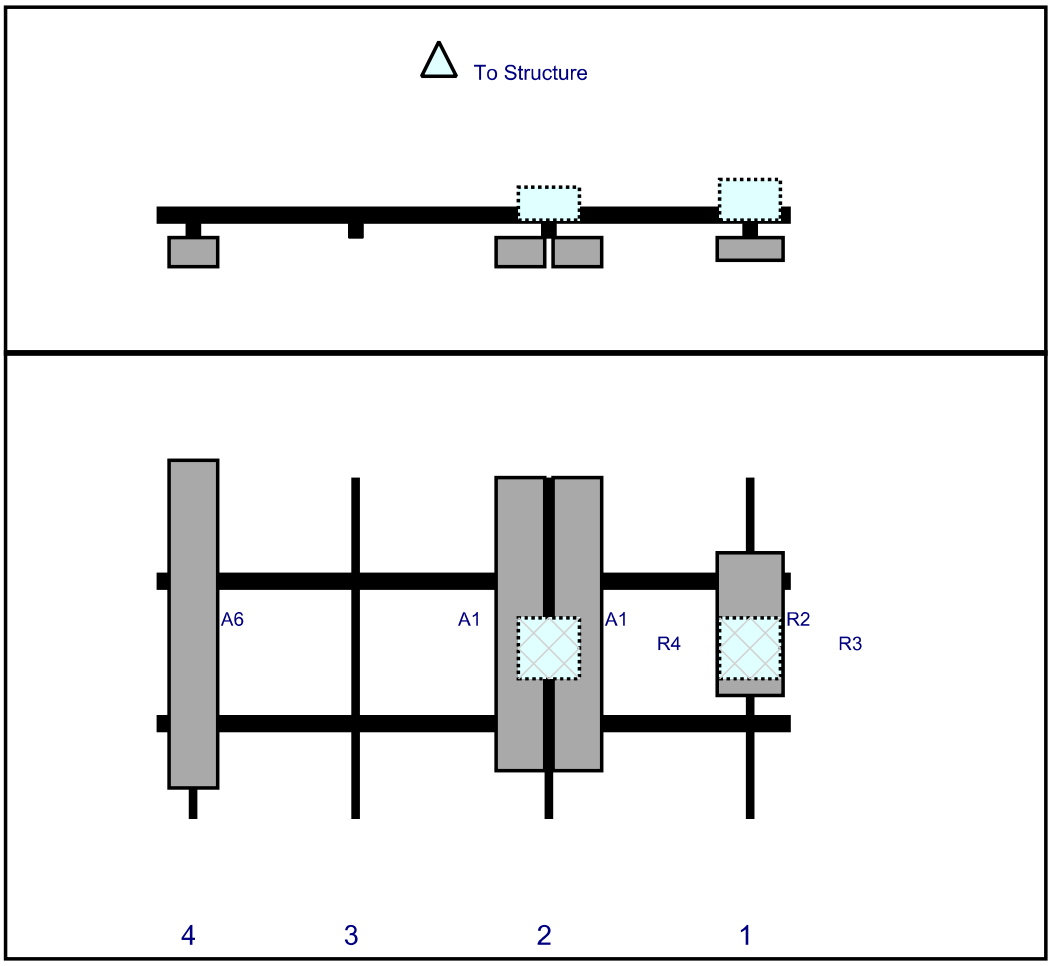
Front View
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
R2	MT6407-77A	35.1	16.1	146	1	a	Front	36	0	Added	
R3	B2/B66A RRH-BR049	15	15	146	1	a	Behind	42	0	Added	
A1	NHH-65B-R2B	72	11.9	96.5	2	a	Front	36	7	Added	
A1	NHH-65B-R2B	72	11.9	96.5	2	b	Front	36	-7	Added	
R4	B5/B13 RRH-BR04C	15	15	96.5	2	a	Behind	42	0	Added	
A6	LNX-6514DS-A1M	80.6	11.9	9	4	a	Front	36	0	Retained	04/14/2021

Plan View

Front View
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
R2	MT6407-77A	35.1	16.1	146	1	a	Front	36	0	Added	
R3	B2/B66A RRH-BR049	15	15	146	1	a	Behind	42	0	Added	
A1	NHH-65B-R2B	72	11.9	96.5	2	a	Front	36	7	Added	
A1	NHH-65B-R2B	72	11.9	96.5	2	b	Front	36	-7	Added	
R4	B5/B13 RRH-BR04C	15	15	96.5	2	a	Behind	42	0	Added	
A6	LNX-6514DS-A1M	80.6	11.9	9	4	a	Front	36	0	Retained	04/14/2021

Maser Consulting Connecticut

Subject	*TIA-222-H Usage*	
Site Information	*Site ID:*	*470975-VZW / TARIFFVILLE CT RELO - Talcott Mtn*
	Site Name:	*TARIFFVILLE CT RELO - Talcott Mtn*
	Carrier Name:	*Verizon Wireless*
	Address:	*Talcott Mtn* *Bloomfield, Connecticut 06002* *Hartford County*
	Latitude:	*41.89284028°*
	Longitude:	*-72.76550472°*
Structure Information	*Tower Type:*	*Self Support*
	Mount Type:	*13.00-Ft Sector Mount*

To Whom It May Concern,

We respectfully submit the above referenced Antenna Mount Structural Analysis report in conformance with ANSI/TIA-222-H, Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures.

The 2015 International Building Code states that, in Section 3108, telecommunication towers shall be designed and constructed in accordance with the provisions of TIA-222. TIA-222-H is the latest revision of the TIA-222 Standard, effective as of January 01, 2018.

As with all ANSI standards and engineering best practice is to apply the most current revision of the standard. This ensures the engineer is applying all updates. As an example, the TIA-222-H Standard includes updates to bring it in line with the latest AISC and ACI standards and it also incorporates the latest wind speed maps by ASCE 7 based on updated studies of the wind data.

The TIA-222-H standard clarifies these specific requirements for the antenna mount analysis such as modeling methods, seismic analysis, 30-degree increment wind directions and maintenance loading. Therefore, it is our opinion that TIA-222-H is the most appropriate standard for antenna mount structural analysis and is acceptable for use at this site to ensure the engineer is taking into account the most current engineering standard available.

Sincerely,

Derek Hartzell, P.E.
Technical Specialist

PROJECT NOTES

1. SEE MODIFICATION NOTES
2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITY COMPANIES OR OTHER PUBLIC/GOVERNING AUTHORITIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
4. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE AS A RESULT OF CONSTRUCTION OF THIS FACILITY AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
6. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION DRAWINGS.
8. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THESE DRAWINGS MUST BE VERIFIED. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
9. SINCE THE CELL SITE MAY BE ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE REQUIRED TO BE WORN TO ALERT OF ANY POTENTIALLY DANGEROUS EXPOSURE LEVELS.
10. NO NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY AS TO CAUSE A NUISANCE.
11. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (NO HANDICAP ACCESS IS REQUIRED).

verizon

MOUNT MODIFICATION DRAWINGS
EXISTING 13.00' SECTOR FRAME

SITE NAME: TARIFFVILLE CT RELO - TALCOTT MTN
SITE NUMBER: 470975

TALCOTT MTN
BLOOMFIELD, CT 06002
HARTFORD COUNTY

PROJECT INFORMATION

SITE INFORMATION

LATITUDE:	41.89284028° N
LONGITUDE:	72.76550472° W
JURISDICTION:	HARTFORD COUNTY

APPLICANT/LESSEE

COMPANY:	VERIZON WIRELESS

CLIENT REPRESENTATIVE

COMPANY:	VERIZON WIRELESS
ADDRESS:	118 FLANDERS ROAD, THIRD FLOOR
CITY, STATE, ZIP:	WESTBOROUGH, MA 01581
CONTACT:	ANDREW CANDIELLO
EMAIL:	ANDREW.CANDIELLO@VERIZONWIRELESS.COM

PROJECT MANAGER

COMPANY:	MASER CONSULTING CONNECTICUT
CONTACT:	PETER ALBANO
PHONE:	856-797-0412
E-MAIL:	PETER.ALBANO@COLLIERSENGINEERING.COM

SHEET INDEX

SHEET	DESCRIPTION
T-1	TITLE SHEET
S-1	BILL OF MATERIALS
S-2	MODIFICATION NOTES
S-3	MODIFICATION NOTES
S-4	MODIFICATION DETAILS
S-5	MODIFICATION DETAILS
S-6	MODIFICATION DETAILS
S-7	MOUNT PHOTOS
	SPECIFICATION SHEETS

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION:	HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #:	10074259
VZW LOCATION CODE (PSLC):	470975
FUZE ID:	16272423

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

REFERENCED DOCUMENTS

FAILING MOUNT ANALYSIS REPORT

SMART TOOL PROJECT #:	10037982
MASER CONSULTING PROJECT #:	21777054A
ANALYSIS DATE:	5/28/2021

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Know what's below. Call before you dig.
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

SCALE: AS SHOWN | JOB NUMBER: 21777054A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
0	7/1/2021	ISSUED FOR CONSTRUCTION	DEH	DH

Derek R. Hartzell
LICENSED PROFESSIONAL ENGINEER
MASER CONSULTING CONNECTICUT
CT C.O.A. No. PEC.0031
Digitally signed by Derek R. Hartzell
Date: 2021.07.01 10:38:30-04'00'

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:
TARIFFVILLE CT RELO - TALCOTT MTN
470975
TALCOTT MTN
BLOOMFIELD, CT 06002
HARTFORD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE: TITLE SHEET

SHEET NUMBER: T-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES
6	VZWSMART	VZWSMART-MSK1	CROSSOVER PLATE	

OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES
3	-	-	84" LONG, P2.5 STD	GALVANIZED
3	-	-	168" LONG, P2.0 STD	GALVANIZED
6	SITE PRO 1	PUCK	ADJUSTABLE CLAMP PLATE	OR EOR APPROVED EQUAL, CONTACT MASER CONSULTING FOR APPROVAL OF SUBSTITUTION
3	COMMSCOPE	TFL-M2S-20	TOWER FACE MOUNT	

NOTE: 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

NOTE: WHEN SPECIFIED, VZWSMART KITS SHALL BE REQUIRED AND WILL BE VERIFIED DURING THE DESKTOP PMI

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MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE: BILL OF MATERIALS

SHEET NUMBER: S-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.

DESIGN LOADS

WIND LOADS

a. BASIC WIND SPEED (3 SECOND GUST), V = 116 MPH

b. EXPOSURE CATEGORY B

c. TOPOGRAPHIC CATEGORY 1

d. MEAN BASE ELEVATION (AMSL) = 419.43'

ICE LOADS

a. ICE WIND SPEED (3 SECOND GUST), V = 50 MPH

b. ICE THICKNESS = 1.50 IN

SEISMIC LOADS

a. SEISMIC DESIGN CATEGORY B

b. SHORT TERM MCER GROUND MOTION, S_S = .175

c. LONG TERM MCER GROUND MOTION, S_1 = .054

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@COLLIERSENGINEERING.COM
   b. PROVIDE MASER CONSULTING PROJECT # AND MASER CONSULTING 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 (ZINGA OR ZINC COTE), 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.

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SCALE:	JOB NUMBER:
AS SHOWN	21777054A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
0	7/1/2021	ISSUED FOR CONSTRUCTION	DEH	DH

STATE OF CONNECTICUT DEREK R. HARTZELL LICENSED PROFESSIONAL ENGINEER 32708
Derek Hartzell
MASER CONSULTING CONNECTICUT C.T. C.O.A. # PEC.0000131
Digitally signed by Derek R. Hartzell
Date: 2021.07.01 10:38:33-04'00'

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SITE NAME:
TARIFFVILLE CT RELO - TALCOTT MTN
470975
TALCOTT MTN
BLOOMFIELD, CT 06002
HARTFORD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE:
MODIFICATION NOTES

SHEET NUMBER:
S-2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

MODIFICATION INSPECTION NOTES

MI CHECKLIST	
CONSTRUCTION/ INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY EOR)	REPORT ITEM
	PRE-CONSTRUCTION
X	MI CHECKLIST DRAWING
X	EOR APPROVED SHOP DRAWINGS
NA	FABRICATION INSPECTION
NA	FABRICATOR CERTIFIED WELD INSPECTION
X	MATERIAL TEST REPORT (MTR)
NA	FABRICATOR NDE INSPECTION
X	PACKING SLIPS
ADDITIONAL TESTING AND INSPECTIONS:	
	CONSTRUCTION
X	CONSTRUCTION INSPECTIONS
NA	CONTRACTOR'S CERTIFIED WELD INSPECTION AND NDE REPORTS
X	ON SITE COLD GALVANIZING VERIFICATION
X	GC AS-BUILT DOCUMENTS
ADDITIONAL TESTING AND INSPECTIONS:	
	POST-CONSTRUCTION
X	MI INSPECTOR REDLINE OR RECORD DRAWING(S)
X	VZW PMI DOCUMENTS
X	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTE: X DENOTES A DOCUMENT REQUIRED FOR THE MI REPORT
NA DENOTES A DOCUMENT THAT IS NOT REQUIRED FOR THE MI REPORT

THE MODIFICATION INSPECTION (MI) IS A VISUAL INSPECTION OF MODIFICATIONS AND A REVIEW OF CONSTRUCTION INSPECTIONS AND OTHER REPORTS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE MODIFICATION DRAWINGS, AS DESIGNED BY THE ENGINEER OF RECORD (EOR).

THE MI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN ITSELF, NOR DOES THE MI INSPECTOR TAKE OWNERSHIP OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.

TO ENSURE THAT THE REQUIREMENTS OF THE MI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE MI INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PURCHASE ORDER (PO) IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY.

MI INSPECTOR

THE MI INSPECTOR IS REQUIRED TO CONTACT THE GC AS SOON AS RECEIVING A PO FOR THE MI TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE MI CHECKLIST
- WORK WITH THE GC TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS

THE MI INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GC INSPECTION AND TEST REPORTS, REVIEWING THE DOCUMENTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE MI REPORT TO EOR.

GENERAL CONTRACTOR

THE GC IS REQUIRED TO CONTACT THE MI INSPECTOR AS SOON AS RECEIVING A PO FOR THE MODIFICATION INSTALLATION OR TURNKEY PROJECT TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE MI CHECKLIST
- WORK WITH THE MI INSPECTOR TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE MI INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS
- BETTER UNDERSTAND ALL INSPECTION AND TESTING REQUIREMENTS

THE GC SHALL PERFORM AND RECORD THE TEST AND INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MI CHECKLIST.

RECOMMENDATIONS

THE FOLLOWING RECOMMENDATIONS AND SUGGESTIONS ARE OFFERED TO ENHANCE THE EFFICIENCY AND EFFECTIVENESS OF DELIVERING AN MI REPORT:

- IT IS SUGGESTED THAT THE GC PROVIDE A MINIMUM OF 5 BUSINESS DAYS NOTICE, PREFERABLY 10, TO THE MI INSPECTOR AS TO WHEN THE SITE WILL BE READY FOR THE MI TO BE CONDUCTED.
- THE GC AND MI INSPECTOR COORDINATE CLOSELY THROUGHOUT THE ENTIRE PROJECT.
- WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE SIMULTANEOUSLY FOR ANY GUY WIRE TENSIONING OR RE-TENSIONING OPERATIONS.
- IT MAY BE BENEFICIAL TO INSTALL ALL MODIFICATIONS PRIOR TO CONDUCTING THE FOUNDATION INSPECTIONS TO ALLOW THE FOUNDATION AND MI INSPECTION(S) TO COMMENCE WITH ONE SITE VISIT.
- WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE DURING THE MI TO HAVE ANY DEFICIENCES CORRECTED DURING THE INITIAL MI. THEREFORE, THE GC MAY CHOOSE TO COORDINATE THE MI CAREFULLY TO ENSURE ALL CONSTRUCTION FACILITIES ARE AT THEIR DISPOSAL WHEN THE MI INSPECTOR IS ON SITE.

CORRECTION OF FAILING MI'S

IF THE MODIFICATION INSTALLATION WOULD FAIL THE MI ("FAILED MI"), THE GC SHALL WORK WITH THE OWNER TO COORDINATE A REMEDIATION PLAN:

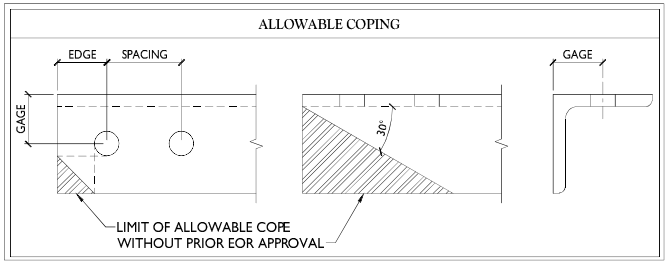
- CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENT MI.

REQUIRED PHOTOS

BETWEEN THE GC AND THE MI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE MI REPORT:

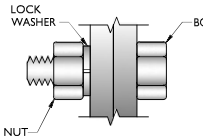
- PRE-CONSTRUCTION GENERAL SITE CONDITION
- PHOTOGRAPHS DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTION AND INSPECTION
  - RAW MATERIALS
  - PHOTOS OF ALL CRITICAL DETAILS
  - FOUNDATION MODIFICATIONS
  - WELD PREPARATION
  - BOLT INSTALLATION
  - FINAL INSTALLED CONDITION
  - SURFACE COATING REPAIR
- POST CONSTRUCTION PHOTOGRAPHS
  - FINAL INFIELD CONDITION

PHOTOS OF ELEVATED MODIFICATIONS TAKEN ONLY FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.



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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SCALE: AS SHOWN | JOB NUMBER: 21777054A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
0	7/1/2021	ISSUED FOR CONSTRUCTION	DEH	DH

DEREK R. HARTZELL
LICENSED PROFESSIONAL ENGINEER
327 CONSULTING CIRCLE, YORKTOWN, VIRGINIA 23693
CT C.O.A. NO. PEC.0031

Digitally signed by Derek R. Hartzell
Date: 2021.07.01 10:38:33-04'00'

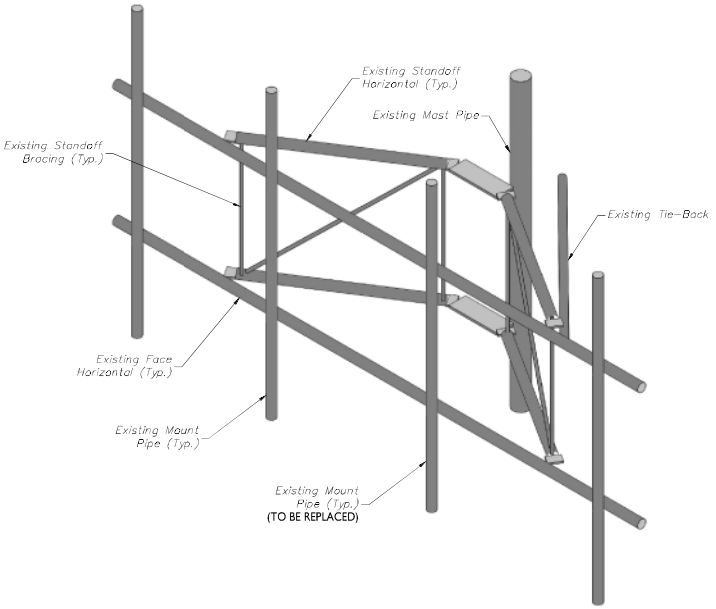
SITE NAME:
TARIFFVILLE CT RELO - TALCOTT MTN
470975
TALCOTT MTN
BLOOMFIELD, CT 06002
HARTFORD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

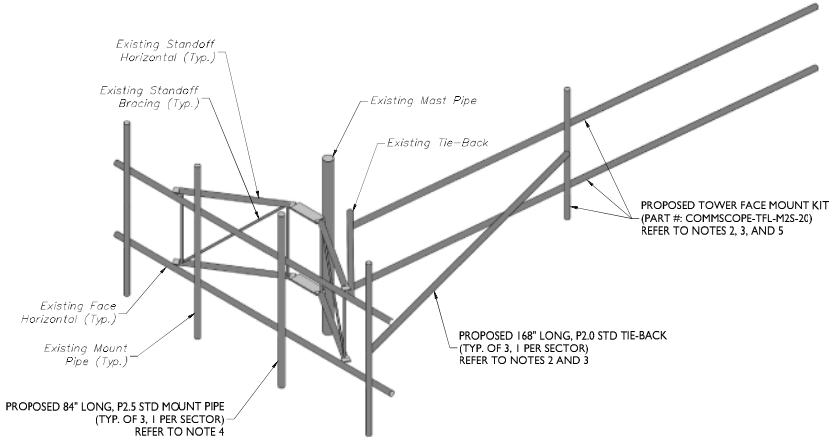
SHEET TITLE: MODIFICATION NOTES

SHEET NUMBER: S-3

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



1 EXISTING SECTOR FRAME ISOMETRIC VIEW (TYP. ALL SECTORS)
SCALE : N.T.S.



2 PROPOSED SECTOR FRAME ISOMETRIC VIEW (TYP. ALL SECTORS)
SCALE : N.T.S.

STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY RKS DESIGN & ENGINEERING, LLC. ON 4/14/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (154'-6") ARE IN GOOD CONDITION. MASER DOES NOT WARRANT THIS INFORMATION.
2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.

MODIFICATION NOTES:

1. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
2. CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET S-2.
3. CONNECT NEW TIE BACK TO MOUNT PIPE WITH ADJUSTABLE CLAMP PLATE (PART#: SITE PRO 1 - PUCK). CONNECT OTHER END TO TOWER FACE MOUNT KIT (PART #: COMMSCOPE-TFL-M2S-20) WITH ADJUSTABLE CLAMP PLATE (PART#: SITE PRO 1 - PUCK). PROPOSED TIE-BACK SHALL EXTEND NO MORE THAN 12" BEYOND THE MAST PIPE. CONTRACTOR SHALL TRIM AS REQUIRED AND PROTECT CUT END WITH TWO COATS OF ZINGA OR ZINC COTE.
4. CONNECT NEW MOUNT PIPE TO EXISTING HORIZONTAL WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).
5. CONTRACTOR TO VERIFY LENGTH OF HORIZONTAL NEEDED PRIOR TO INSTALLATION

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JOB NUMBER : 21777054A

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0	7/1/2021	ISSUED FOR CONSTRUCTION	DEH	DH

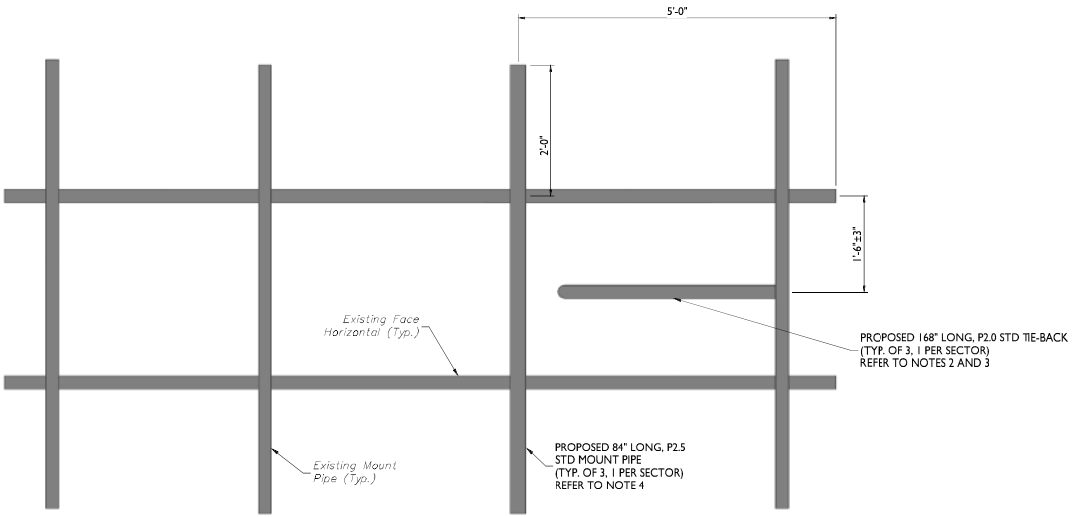
Derek Hartzell
LICENSED PROFESSIONAL ENGINEER
MASER CONSULTING CONNECTICUT
CT C.O.A. NO. PEC.0031
Digitally signed by Derek R. Hartzell
Date: 2021.07.01 10:38:54-04'00'

SITE NAME:
TARIFFVILLE CT RELO - TALCOTT MTN
470975
TALCOTT MTN
BLOOMFIELD, CT 06002
HARTFORD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE :
MODIFICATION DETAILS

SHEET NUMBER :
S-4



1 PROPOSED FRONT ELEVATION (TYP. ALL SECTORS)

SCALE : N.T.S.

MODIFICATION NOTES:

1. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
2. CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET S-2.
3. CONNECT NEW TIE BACK TO MOUNT PIPE WITH ADJUSTABLE CLAMP PLATE (PART#: SITE PRO 1 - PUCK). CONNECT OTHER END TO TOWER FACE MOUNT KIT (PART #: COMMSCOPE-TFL-M2S-20) WITH ADJUSTABLE CLAMP PLATE (PART#: SITE PRO 1 - PUCK). PROPOSED TIE-BACK SHALL EXTEND NO MORE THAN 12" BEYOND THE MAST PIPE. CONTRACTOR SHALL TRIM AS REQUIRED AND PROTECT CUT END WITH TWO COATS OF ZINGA OR ZINC COTE.
4. CONNECT NEW MOUNT PIPE TO EXISTING HORIZONTAL WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).
5. CONTRACTOR TO VERIFY LENGTH OF HORIZONTAL NEEDED PRIOR TO INSTALLATION

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Derek Hartzell
LICENSED PROFESSIONAL ENGINEER
MASER CONSULTING CONNECTICUT
CT LICENSE NO. 30131
Digitally signed by Derek R. Hartzell
Date: 2021.07.01 10:38:54-04'00'

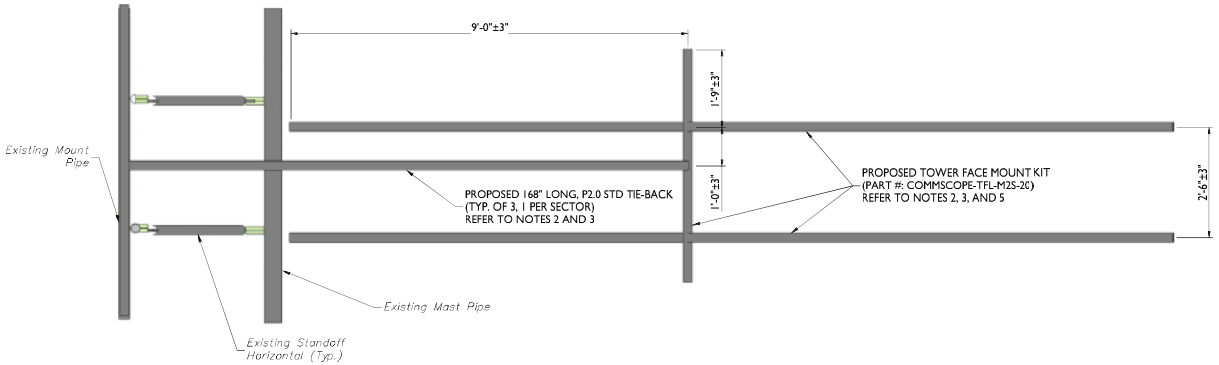
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF THE RESPONSIBLE LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SITE NAME:
TARIFFVILLE CT RELO - TALCOTT MTN
470975
TALCOTT MTN
BLOOMFIELD, CT 06002
HARTFORD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE: MODIFICATION DETAILS

SHEET NUMBER: S-5



1 PROPOSED SIDE ELEVATION (TYP. ALL SECTORS)

SCALE : N.T.S.

MODIFICATION NOTES:

1. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
2. CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET S-2.
3. CONNECT NEW TIE BACK TO MOUNT PIPE WITH ADJUSTABLE CLAMP PLATE (PART#: SITE PRO 1 - PUCK). CONNECT OTHER END TO TOWER FACE MOUNT KIT (PART #: COMMSCOPE-TFL-M2S-20) WITH ADJUSTABLE CLAMP PLATE (PART#: SITE PRO 1 - PUCK). PROPOSED TIE-BACK SHALL EXTEND NO MORE THAN 12" BEYOND THE MAST PIPE. CONTRACTOR SHALL TRIM AS REQUIRED AND PROTECT CUT END WITH TWO COATS OF ZINGA OR ZINC COTE.
4. CONNECT NEW MOUNT PIPE TO EXISTING HORIZONTAL WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).
5. CONTRACTOR TO VERIFY LENGTH OF HORIZONTAL NEEDED PRIOR TO INSTALLATION

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Derek Hartzell
LICENSED PROFESSIONAL ENGINEER
MASER CONSULTING CONNECTICUT
CT C.O.A. No. PEC.0031
Digitally signed by Derek R. Hartzell
Date: 2021.07.01 10:38:54-04'00'

SITE NAME:
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TALCOTT MTN
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Fax: 856.722.1120

SHEET TITLE: MODIFICATION DETAILS

SHEET NUMBER: S-6

MOUNT PHOTO 1

MOUNT PHOTO 2

MOUNT PHOTO 3

MOUNT PHOTO 4

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SCALE:	JOB NUMBER:
AS SHOWN	21777054A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
0	7/1/2021	ISSUED FOR CONSTRUCTION	DEH	DH

Derek Hartzell
LICENSED PROFESSIONAL ENGINEER
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CT C.O.A. NO. PEC.0031
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TALCOTT MTN
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HARTFORD COUNTY

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2000 Midlantic Drive
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Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE:
MOUNT PHOTOS

SHEET NUMBER:
S-7

TFL-M SERIES

REVISIONS				
REV.	ZONE	DESCRIPTION	BY	DATE
A		INITIAL RELEASE	MSM	09/23/10
B		REVISED TABLE ON PAGE TWO	DRR	01/18/11

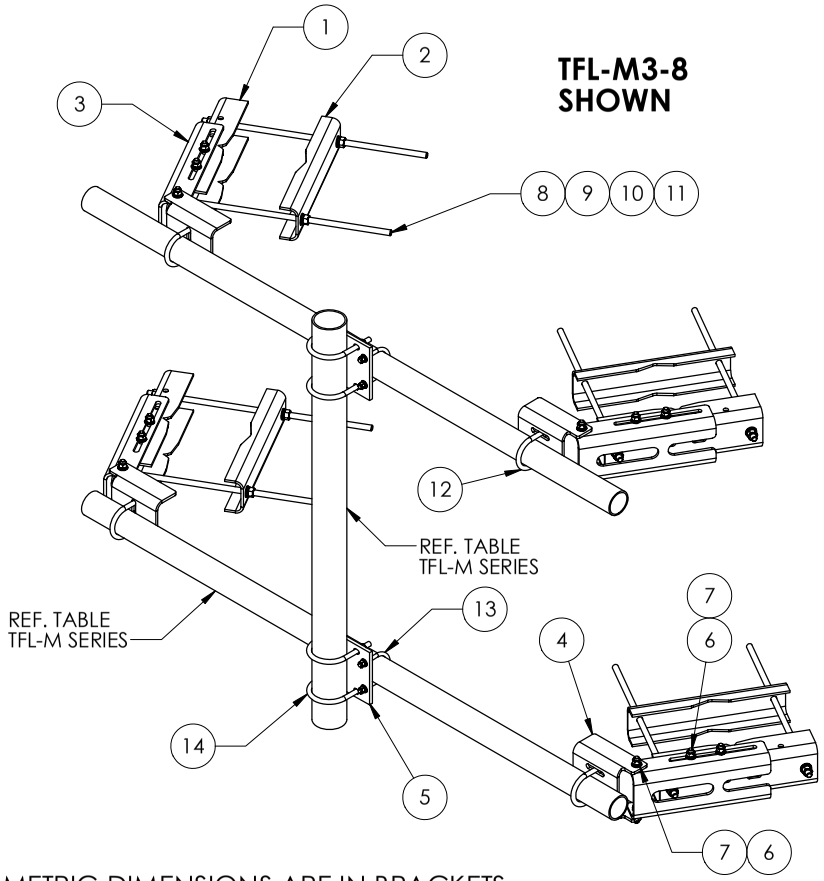
PART NO.	DESCRIPTION	MT-653-63	TFLMHK2	TFLMHK3	TFLMHK4	MT54796	MT-547-174	MT-547	MT-651-96	MT-537-170	MT-538	MT-654-96	MTC9872.05	WEIGHT
TFL-M2-8	Tower Face Mount, 2.38" OD X 8' Pipe	1	1	-	-	-	-	-	2	-	-	-	-	468.70 LBS
TFL-M2-14	Tower Face Mount, 2.38" OD X 14' Pipe	1	1	-	-	-	-	-	-	2	-	-	-	516.36 LBS
TFL-M2-20	Tower Face Mount, 2.38" OD X 20' Pipe	1	1	-	-	-	-	-	-	-	2	-	-	564.02 LBS
TFL-M3-8	Tower Face Mount, 3.5" OD X 8' Pipe	1	-	1	-	2	-	-	-	-	-	-	-	541.68 LBS
TFL-M3-14	Tower Face Mount, 3.5" OD X 14' Pipe	1	-	1	-	-	2	-	-	-	-	-	-	640.52 LBS
TFL-M3-20	Tower Face Mount, 3.5" OD X 20' Pipe	1	-	1	-	-	-	2	-	-	-	-	-	693.74 LBS
TFL-M4-8	Tower Face Mount, 4.5" OD X 8' Pipe	1	-	-	1	-	-	-	-	-	-	2	-	603.06 LBS
TFL-M4-14	Tower Face Mount, 4.5" OD X 14' Pipe	1	-	-	1	-	-	-	-	-	-	-	2	687.38 LBS

TFLMHK2 - Hardware Kit for 2.38" OD Pipe

ITEM	PART NO.	DESCRIPTION	QTY.	WEIGHT
1	SMU201601	Large Saddle Mount, 16" Tower Leg	4	22.42 LBS
2	SMU201602	CLAMP PLATE	4	15.48 LBS
3	MTC9872.01	Channel Adapter	4	20.93 LBS
4	MTC9872.02	CHANNEL PIVOT BRACKET	4	12.43 LBS
5	XP2040.01	CROSSOVER PLATE 2-3/8" O.D. TO 4-1/2" O.D.	2	7.13 LBS
6	GB-0520A	5/8" X 2" GALV BOLT KIT (A325)	24	0.05 LBS
7	GWF-05	5/8" GALV FLAT WASHER	24	0.09 LBS
8	MT38430B7	3/4" X 30" GALV Threaded Rod, Grade B7	8	3.76 LBS
9	GWF-06	3/4" GALV FLAT WASHER	16	0.04 LBS
10	GWL-06	3/4" GALV LOCK WASHER	16	0.00 LBS
11	GN-06	3/4" GALV HEX NUT	16	0.01 LBS
12	GUB52440	5/8" X 2-1/2" X 4" GALV U-BOLT	4	0.91 LBS
13	GUB-4240	1/2" X 2-1/2" X 4" GALV U-BOLT	4	0.91 LBS
14	GUB-5456	5/8" X 4-5/8" X 6½" GALV U-BOLT	4	0.91 LBS

TFLMHK3 - Hardware Kit for 3.5" OD Pipe

ITEM	PART NO.	DESCRIPTION	QTY.	WEIGHT
1	SMU201601	Large Saddle Mount, 16" Tower Leg	4	22.42 LBS
2	SMU201602	CLAMP PLATE	4	15.48 LBS
3	MTC9872.01	Channel Adapter	4	20.93 LBS
4	MTC9872.02	CHANNEL PIVOT BRACKET	4	12.43 LBS
5	XP3040.01	CROSSOVER PLATE ∅3.5" O.D. TO ∅4.5" O.D.	2	11.01 LBS
6	GB-0520A	5/8" X 2" GALV BOLT KIT (A325)	24	0.05 LBS
7	GWF-05	5/8" GALV FLAT WASHER	24	0.09 LBS
8	MT38430B7	3/4" X 30" GALV Threaded Rod, Grade B7	8	3.76 LBS
9	GWF-06	3/4" GALV FLAT WASHER	16	0.04 LBS
10	GWL-06	3/4" GALV LOCK WASHER	16	0.00 LBS
11	GN-06	3/4" GALV HEX NUT	16	0.01 LBS
12	GUB-53560	5/8" X 3-5/8" X 6" GALV U-BOLT	4	0.91 LBS
13	GUB-4355	1/2" X 3-5/8" X 5" GALV U-BOLT KIT	4	0.71 LBS
14	GUB-5456	5/8" X 4-5/8" X 6-1/2" GALV U-BOLT	4	1.52 LBS

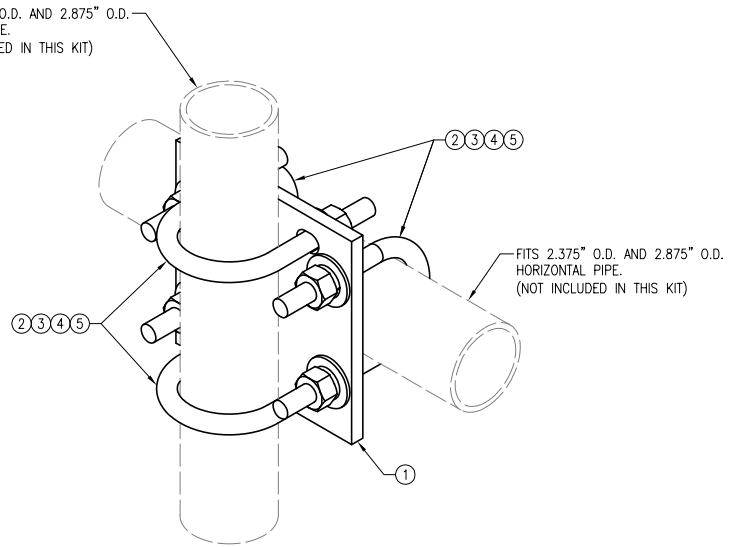


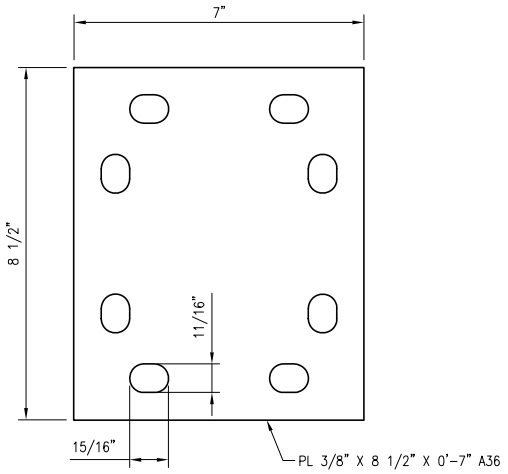
NOTES:
1. ALL METRIC DIMENSIONS ARE IN BRACKETS.
2. UP TO 5% ADDITIONAL HARDWARE INCLUDED.
3. ANTENNAS MUST BE POSITIONED EQUALLY SPACED VERTICALLY BETWEEN SPAN OF FACE MOUNTS.
4. SEE SHEET 4 FOR TFLMHK4 - ∅4.50" O.D. PIPE KIT.
5. ADDITIONAL TFL-M SERIES TABLE SHEET 2.

ALL DIMENSIONS ARE IN INCHES U.O.S.
TOLERANCES UNLESS OTHERWISE SPECIFIED:
.X = ± .12 ANGLES ±2°
.XX = ± .06 FRACTIONS ±1/32
.XXX= ± .03
REMOVE BURRS AND BREAK EDGES .005

DO NOT SCALE THIS PRINT

DRAWN BY: MSM	SHEET: 1 of 6	PART NUMBER: TFL-M SERIES	
CHECKED BY: TP	SCALE: NTS	DESCRIPTION: FACE MOUNT SERIES DRAWING	
DATE: 04/28/10	MATERIAL: A36, A500	DRAWING TYPE: ASSEMBLY DRAWING	
REVISION: B	FINISH: GALV A123	ANDREW®	WESTCHESTER, IL. 60154 U.S.A.
	WEIGHT: SEE CHART		





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

DRAWN BY: H.R	CHECKED BY: HMA

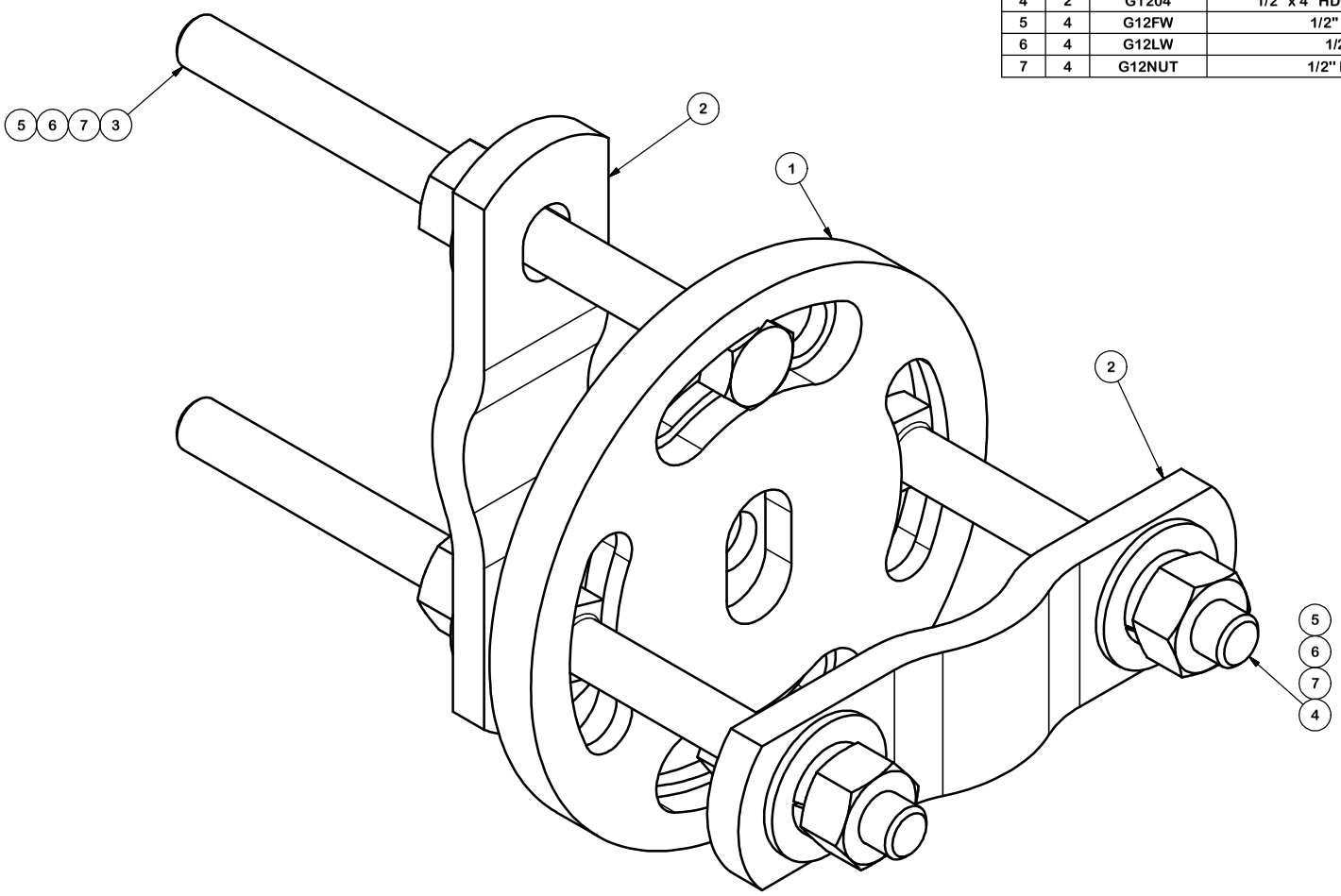
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:

VZWSMART-MSK1
CROSSOVER PLATE

SHEET NUMBER:	REV #:
VZWSMART-MSK1	0

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



TOLERANCE NOTES

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

DESCRIPTION: ADJUSTABLE CLAMP PLATE TIE-BACK ASSEMBLY

SITE PRO 1 — A valmont COMPANY

Engineering Support Team: 1-888-753-7446

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

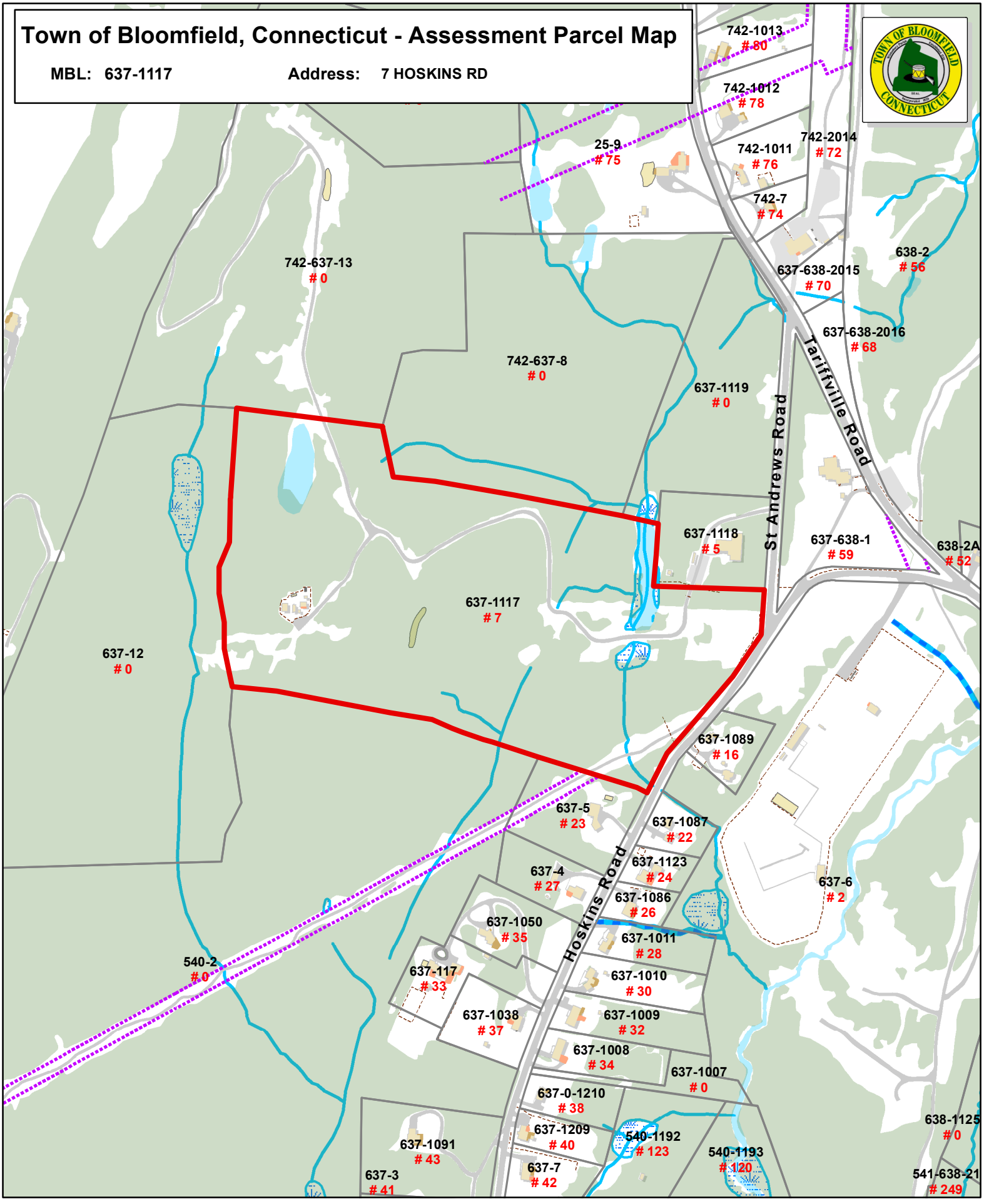
CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
	CEK 8/30/2010		PUCK

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	01	CUSTOMER	BMC 9/1/2010	PUCK

ATTACHMENT 5

Town of Bloomfield, Connecticut - Assessment Parcel Map

MBL: 637-1117 **Address:** 7 HOSKINS RD



Approximate Scale:

1 inch = 450 feet

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

Map Produced October 2019

Parcels labeled by Unique ID

Town of Bloomfield, CT

Property Listing Report

Map Block Lot	637-1117	Building #	1	PID	8110	Account	R93240

Property Information

Property Location	7 HOSKINS RD
Owner	CONN LIGHT & POWER CO
Co-Owner	ATTN: PROPERTY TAX DEPT
Mailing Address	P O BOX 270 HARTFORD CT 06141
Land Use	201 Comm Land
Land Class	C
Zoning Code	R-80
Census Tract	0000

Site Index	4
Acreage	38.33
Utilities	
Lot Setting/Desc	
Fire District	C
Book / Page	0292/0097

Photo

Sketch

Primary Construction Details

Year Built	1962
Building Desc.	Vacant with OutBldg
Building Style	UNKNOWN
Building Grade	
Stories	
Occupancy	
Exterior Walls	
Exterior Walls 2	NA
Roof Style	
Roof Cover	
Interior Walls	
Interior Walls 2	NA
Interior Floors 1	
Interior Floors 2	

Heating Fuel	
Heating Type	
AC Type	
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Total Rooms	0
Bath Style	NA
Kitchen Style	NA
Bsmt Fin Area	0
Rec Rm Area	0
Bsmt Gar	0
Fireplaces	0

(*Industrial / Commercial Details)

Building Use	Vacant
Building Condition	A
Sprinkler %	NA
Heat / AC	NA
Frame Type	NA
Baths / Plumbing	NA
Ceiling / Wall	NA
Rooms / Prtns	NA
Wall Height	NA
First Floor Use	NA
Foundation	POURED CONC.

Report Created On 10/26/2021

Town of Bloomfield, CT

Property Listing Report

Map Block Lot	637-1117	Building #	1	PID	8110	Account	R93240

Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	0	0
Extras	0	0
Improvements		
Outbuildings	883200	618240
Land	540800	300830
Total	1424000	919070

Outbuilding and Extra Features

Type	Description
Cell Shed	480 S.F.
Cell Shed	120 S.F.
Cell Tower	4 UNITS

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area		0

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
CONN LIGHT & POWER CO	0292/0097	1900-01-01	0

Report Created On 10/26/2021

ATTACHMENT 6

UNITED STATES POSTAL SERVICE®

TARIFFVILLE RELO

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here ***Postmark with Date of Receipt.***
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103		3	OLD STATE HOUSE STATION 06103 OCT 26 2021 USPS neopost 10/26/2021 US POSTAGE $002.99 ZIP 06103 041L1220997
	Postmaster, per *(name of receiving employee)*	10	

USPS® Tracking Number Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Stanley D. Hawthorne, Town Manager Town of Bloomfield 800 Bloomfield Avenue Bloomfield, CT 06002				
2.	Jose Giner, Director of Planning and Zoning Town of Bloomfield 800 Bloomfield Avenue Bloomfield, CT 06002				
3.	Connecticut Light and Power Company Attn: Property Tax Department P.O. Box 270 Hartford, CT 06141				
4.					
5.					
6.					