Robinson+Cole

KENNETH C. BALDWIN

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Direct (860) 275-8345

Also admitted in Massachusetts and New York

May 22, 2024

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**
Baltic Hanover Road (a/k/a 62 North Main Street), Sprague (Baltic), 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 on an existing tower and related equipment on the ground, near the base of the tower. The tower was approved by the Town of Sprague ("Town") in April of 2005. Cellco's shared use of the tower was approved by the Siting Council ("Council") in March of 2007 (EM-VER-133-070208). A copy of the Town's approval and the Council's shared use approvals are included in Attachment 1.

Cellco now intends to modify its facility by replacing nine (9) antennas and six (6) remote radio heads ("RRHs") with nine (9) new antennas and six (6) new RRHs on its existing antenna support structure and antenna mounts. A set of project plans showing Cellco's proposed facility modifications and the specifications for Cellco's 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 Sprague's Chief Elected Official and Land Use Officer and the tower owner. The Town of Sprague is the owner of the Property.

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

1. The proposed modifications will not result in an increase in the height of the existing tower. Cellco's new antennas and RRHs will be installed at the same height on the tower.

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. Included in Attachment 3 is a Calculated Radio Frequency Emissions Report demonstrating that the proposed modified facility will comply with the FCC safety standards. 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 Report ("SA") and Antenna Mount Analysis Report ("MA"), the existing tower, tower foundation, antenna supports 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:
Cheryl Blanchard, First Selectman
Joseph D. Smith, Zoning Enforcement Officer

ATTACHMENT 1

TOWN OF SPRAGUE

Planning and Zoning Commission
1 Main Street
Baltic, Connecticut 06330
860-822-3000 Ext. 223
Fax: 860-822-3016
landuse@ctsprague.org

April 20, 2005

Dennison Allen, First Selectman
Town of Sprague
1 Main Street
Baltic, CT 06330

Dear Mr. Allen:

At the regular meeting of the Sprague Planning and Zoning Commission held on April 13, 2005, your request for a communications tower and building for communications equipment to be located on the western side of the Baltic Reservoir as shown on your revised site plan was reviewed. Please be advised that the Commission voted to approve your application.

If you have any questions, please contact us.

Sincerely yours,

Richard Waterman *cjh*

Richard Waterman, Chairman

RW/cjh

Cc: Joseph Smith, ZEO

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
Internet: ct.gov/csc

Daniel F. Caruso
Chairman

March 6, 2007

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597

RE: **EM-VER-133-070208** - Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at Baltic-Hanover Road, Sprague, Connecticut.

Dear Attorney Baldwin:

At a public meeting held on February 27, 2007, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated February 8, 2007, including the placement of all necessary equipment and shelters within the tower compound. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies 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 six decibels, and increase the total radio frequencies 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 General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

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

Thank you for your attention and cooperation.

Very truly yours,

Daniel F. Caruso
Chairman

DFC/MP/laf

c: The Honorable Dennison L. Allen, First Selectman, Town of Sprague
Joseph Smith, Zoning Enforcement Officer, Town of Sprague

G:\EM\BAM-VERIZON\Sprague\dc022707.DOC

ATTACHMENT 2

verizon WIRELESS

BALTIC CT

62 NORTH MAIN STREET
BALTIC, CT 06330

FUZE PROJECT ID: 16272037

PSLC: 535817

VICINITY MAP N.T.S.

ENGINEER
DEWBERRY ENGINEERS INC.
99 SUMMER ST.
SUITE 700
BOSTON, MA 02110

PHONE # (617) 531-0800

CONTACT: BENJAMIN REVETTE, PE

CONSTRUCTION
VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

LAND OWNER
SPRAGUE TOWN OF
1 MAIN STREET
BALTIC, CT 06330

COORDINATES*:
LATITUDE: 41° 37' 27.01" (41.62417) N
LONGITUDE: 72° 04' 41.02" (72.07806) W
*PER RFDS

GROUND ELEVATION*:
348'±
PER GOOGLE EARTH

PROJECT INFORMATION

PMI ACCESSED AT:	HTTPS://PMI.VZWSMART.COM
SMART TOOL VENDOR PROJECT NUMBER:	10215773
VZW LOCATION CODE (PSLC):	535817
FUZE NUMBER:	16272037
PMI AND REQUIREMENTS ALSO IMBEDDED IN MOUNT ANALYSIS REPORT	
MOUNT MODIFICATION REQUIRED?	YES
VZW APPROVED SMART KIT VENDORS	
REFER TO MOUNT MODIFICATION DRAWINGS PAGE FOR VZW SMART KIT APPROVED VENDORS	
MOUNT MODIFICATION DRAWINGS:	PROJECT #21777306 (REV.1) DATED 12/19/2023

CONTRACTOR PMI REQUIREMENTS

THIS DOCUMENT WAS DEVELOPED TO REFLECT A SPECIFIC SITE AND ITS SITE CONDITIONS AND IS NOT TO BE USED FOR ANOTHER SITE OR WHEN OTHER CONDITIONS PERTAIN. REUSE OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.

A.D.A. COMPLIANCE:
FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.

- REMOVE (6) EXISTING ANTENNAS. RETAIN (6) SPARE ANTENNAS.
- ADD (6) NEW COMMSCOPE JAHH-65B-R3B ANTENNAS ON NEW BSAMNT-SBS-2-2 MOUNTS.
- INSTALL (3) MT6413-77A ANTENNA WITH INTEGRATED RRH ON EXISTING MOUNTING PIPE.
- REMOVE (6) EXISTING RRHS FROM TOWER AND ADD (3) NEW SAMSUNG B5/B13 RF4461d-13A AND (3) NEW SAMSUNG B2/B66A RF4439d-25A RRHS.
- INSTALL (3) NEW CBC78T-DS-43-2X DIPLEXERS.
- PLUMB ANTENNAS ACCORDING TO THE PLUMBING DIAGRAM.
- USE RF PORTS ON DUAL BAND RRHS TO COMMUNICATE WITH RETS VIA SMART BIAS-T BUILT INTO THE ANTENNA.
- CAP AND WEATHERPROOF UNUSED PORTS/CONNECTORS.

NOTE:
1. SCOPE OF WORK BASED ON ANTENNA REC FOR BALTIC CT DATED 07/27/23. VERIFY SCOPE OF WORK WITH FINAL RFDS PRIOR TO CONSTRUCTION.

SCOPE OF WORK

SHT. NO.	DESCRIPTION
T-1	TITLE SHEET
GN-1	GENERAL NOTES
C-1	SITE PLAN & ELEVATION
C-2	ANTENNA MOUNTING PLANS
C-3	CONSTRUCTION DETAILS
C-4	SMART TOOL SECTOR PLANS & ELEVATION DETAILS
C-5	FINAL EQUIPMENT CONFIGURATION

SHEET INDEX

verizon WIRELESS
VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

BALTIC CT

CONSTRUCTION DRAWINGS		
1	05/08/24	FOR SUBMITTAL
0	02/09/24	FOR SUBMITTAL

Dewberry
Dewberry Engineers Inc.
99 SUMMER ST.
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.0400
FAX: 617.695.3919

STATE OF CONNECTICUT
BENJAMIN REVETTE
28971
LICENSED
PROFESSIONAL ENGINEER

DRAWN BY:	05/10/2024 JG
REVIEWED BY:	COH
CHECKED BY:	BSR
PROJECT NUMBER:	50121487
JOB NUMBER:	50155501
SITE NUMBER	535817
SITE ADDRESS	62 NORTH MAIN STREET BALTIC, CT 06330
SHEET TITLE	TITLE SHEET
SHEET NUMBER	T-1

GENERAL CONSTRUCTION NOTES :

1. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, AND COMPLY WITH VERIZON WIRELESS SPECIFICATIONS.
2. CONTRACTOR SHALL CONTACT "DIG SAFE" (888–344–7233) FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
4. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
5. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
6. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
7. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
9. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
10. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING.
11. EACH CONTRACTOR SHALL COOPERATE WITH THE OWNER'S REPRESENTATIVE, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
12. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE–CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE VERIZON WIRELESS CONSTRUCTION MANAGER.
13. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
14. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR WILL NOTIFY ENGINEER, VERIZON WIRELESS PROJECT CONSTRUCTION MANAGER, AND LANDLORD IMMEDIATELY.
15. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
16. ALL ROOF WORK SHALL BE DONE BY A QUALIFIED AND EXPERIENCED ROOFING CONTRACTOR IN COORDINATION WITH ANY CONTRACTOR WARRANTING THE ROOF TO ENSURE THAT THE WARRANTY IS MAINTAINED.
17. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
18. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH LANDLORD AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
19. CONTRACTOR SHALL FURNISH VERIZON WIRELESS WITH THREE AS–BUILT SETS OF DRAWINGS UPON COMPLETION OF WORK.
20. ANTENNAS AND CABLES ARE TYPICALLY PROVIDED BY VERIZON WIRELESS. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH PROJECT MANAGER TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED BY VERIZON WIRELESS. ALL ITEMS NOT PROVIDED BY VERIZON WIRELESS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED BY VERIZON WIRELESS.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR WILL COORDINATE WITH VERIZON WIRELESS PROJECT MANAGER TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY VERIZON WIRELESS. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON WIRELESS MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
22. GENERAL CONTRACTOR SHALL HAVE A LICENSED HVAC CONTRACTOR START THE HVAC UNITS, SYNCHRONIZE THE THERMOSTATS, ADJUST ALL SETTINGS ON EACH UNIT ACCORDING TO VERIZON WIRELESS CONSTRUCTION MANAGER'S SPECIFICATIONS, AND THOROUGHLY TEST AND BALANCE EACH UNIT TO ENSURE PROPER OPERATION PRIOR TO TURNING THE SITE OVER TO OWNER.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON WIRELESS SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. UNLESS OTHERWISE NOTED VERIZON WIRELESS SHALL PROVIDE ALL REQUIRED RF MATERIAL FOR CONTRACTOR TO INSTALL, INCLUDING ANTENNAS, TMA'S, BIAS–T'S, COMBINERS, PDU, DC BLOCKS, SURGE ARRESTORS, GPS ANTENNA, GPS SURGE ARRESTOR, COAXIAL CABLE.
26. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL VERIFY ALL EQUIPMENT TO BE PROVIDED BY VERIZON WIRELESS FOR INSTALLATION BY CONTRACTOR.
27. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON WIRELESS SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
28. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
29. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
30. CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 48 HOURS IN ADVANCE PRIOR TO CONSTRUCTION START, MORE SPECIFICALLY BEFORE: SEALING ANY FLOOR, WALL OR ROOF PENETRATION, FINAL UTILITY CONNECTIONS, POURING CONCRETE, BACKFILLING UTILITY TRENCHES AND STRUCTURAL POST OR MOUNTING CONNECTIONS, FOR ENGINEERING REVIEW AND INSPECTION.
31. SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED D FIRE CODE APPROVED MATERIALS.
32. REPAIR ANY DAMAGE DURING CONSTRUCTION TO MATCH EXISTING PRE–CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE CONSTRUCTION MANAGER AND LANDLORD.
33. ALL DISRUPTIVE WORK AND WORK WITHIN TENANT SPACES TO BE COORDINATED WITH BUILDING REPRESENTATIVE.

CODE SPECIFICATIONS:

1. ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

   2022 CONNECTICUT STATE BUILDING CODE WITH THE FOLLOWING APPLICABLE CODES:
   2021 INTERNATIONAL RESIDENTIAL CODE (IRC)
   2021 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
   2021 INTERNATIONAL BUILDING CODE (IBC)
   2021 INTERNATIONAL MECHANICAL CODE (IMC)
   2020 NATIONAL ELECTRICAL CODE (NEC) (NFPA 70)
   2021 INTERNATIONAL PLUMBING CODE (IPC)
   2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)

   IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL.
2. ALL STRUCTURAL WORK TO BE DONE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL, 13TH EDITION (AISC 13TH ED.)
3. ALL CONCRETE WORK TO BE DONE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI 301) SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 318) AND BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
4. ALL REINFORCING STEEL WORK TO BE DONE IN ACCORDANCE WITH THE (ACI 315) MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES.

GROUNDING NOTES:

1. GROUNDING SHALL COMPLY WITH NEC ART. 250.
2. GROUNDING CONDUCTORS SHALL BE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR INDOOR USE.
3. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
4. ROUTE GROUNDING CONNECTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NOT BE BENT AT RIGHT ANGLE. ALWAYS MAKE 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY.
5. CONNECTIONS TO GROUNDING BAR SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
6. TEST COMPLETED GROUNDING SYSTEM AND RECORD RESISTANCE VALUES FOR PROJECT CLOSE–OUT DOCUMENTATION. GROUND RESISTANCE SHALL NOT EXCEED 5 OHMS.
7. GROUNDING CONDUCTORS BETWEEN MGB AND WATERMAIN SHALL BE #2/0. BONDING JUMPERS FROM METALLIC SURFACES SHALL BE #2 MINIMUM. ALL GROUND CONDUCTORS AND BONDING JUMPERS SHALL BE SOFT DRAWN ANNEALED, TINNED, BARE STRANDED COPPER WIRE. COAXIAL CABLES SHALL BE GROUNDED AT A MINIMUM OF TWO LOCATIONS USING VERIZON PROVIDED GROUNDING KITS. EXACT LOCATIONS SHALL BE FINALIZED IN THE FIELD BY THE CONSTRUCTION MANAGER.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
2. STRUCTURAL STEEL ROLLED SHAPES, PLATES, AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:

ASTM A-992, GRADE 50	ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE.
ASTM A-36	ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.
ASTM A-500, GRADE B	HSS SECTION (SQUARE, RECTANGULAR, ROUND)
ASTM A-325, TYPE SC OR N	ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS.
F1554, GRADE 36	ALL ANCHORS BOLTS, UNLESS NOTED OTHERWISE.
ASTM A-53, GRADE B	STEEL PIPE

3. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1 WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 14TH EDITION. WHERE WELD LENGTH IS NOT INDICATED, USE FULL LENGTH WELD. AT THE COMPLETION OF ALL WELDING, ALL DAMAGE TO GALVANIZED COATING SHALL BE REPAIRED.
4. BOLTED CONNECTIONS SHALL USE BEARING TYPE GALVANIZED ASTM A325 BOLTS (3/4" DIA.) SUPPLIED WITH A NUT AND WASHER UNDER TURNED END AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. NON–STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. GALVANIZED ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
7. USE PRECAUTIONS & PROCEDURES PER AWS D1.1 WHEN WELDING GALVANIZED METALS.
8. ALL EXISTING BEAM AND COLUMN DIMENSIONS SHALL BE FIELD VERIFY BY CONTRACTOR PRIOR TO FABRICATION. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THOSE SHOWN SHALL BE REPORTED TO DEWBERRY ENGINEER IMMEDIATELY.
9. CONNECTION DESIGN BY FABRICATOR WILL BE SUBJECT TO REVIEW AND APPROVAL BY ENGINEER.
10. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH SPECIFICATION ASTM A123/A123M–00 HOT–DIP GALVANIZED FINISH UNLESS OTHERWISE NOTED. GALVANIZING SHALL BE PERFORMED AFTER SHOP FABRICATION TO THE GREATEST EXTENT POSSIBLE. ALL DINGS, SCRAPES, MARS, AND WELDS IN THE GALVANIZED AREAS SHALL BE REPAIRED. REPAIR DAMAGED GALVANIZED COATINGS ON GALVANIZED ITEMS WITH GALVANIZED REPAIR PAINT ACCORDING TO ASTM A780 AND MANUFACTURER'S WRITTEN INSTRUCTIONS, PRIOR TO COMPLETION OF WORK. TOUCHUP ALL DAMAGED GALVANIZED STEEL WITH APPROVED COLD ZINC, "GALVANOX", "DRY GALV", "ZINC–IT", OR APPROVED EQUIVALENT, IN ACCORDANCE WITH MANUFACTURERS GUIDELINES. TOUCHUP DAMAGED NON GALVANIZED STEEL WITH SAME PAINT APPLIED IN SHOP OR FIELD.
11. ALL WELDED COMPONENTS TO BE SHOP WELDED PRIOR TO INSTALLATION. NO WELDING ACTIVITIES IS PERMITTED DURING INSTALLATION OF PROPOSED EQUIPMENTS AND/OR HARDWARE ON SITE.

verizon WIRELESS

VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

BALTIC CT

CONSTRUCTION DRAWINGS		
1	05/08/24	FOR SUBMITTAL
0	02/09/24	FOR SUBMITTAL

Dewberry®

Dewberry Engineers Inc.
99 SUMMER ST.
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310

28971 LICENSED PROFESSIONAL ENGINEER

DRAWN BY: 05/10/2024 JG

REVIEWED BY: CDH

CHECKED BY: BBR

PROJECT NUMBER: 50121467

JOB NUMBER: 50165501

SITE NUMBER

535817

SITE ADDRESS

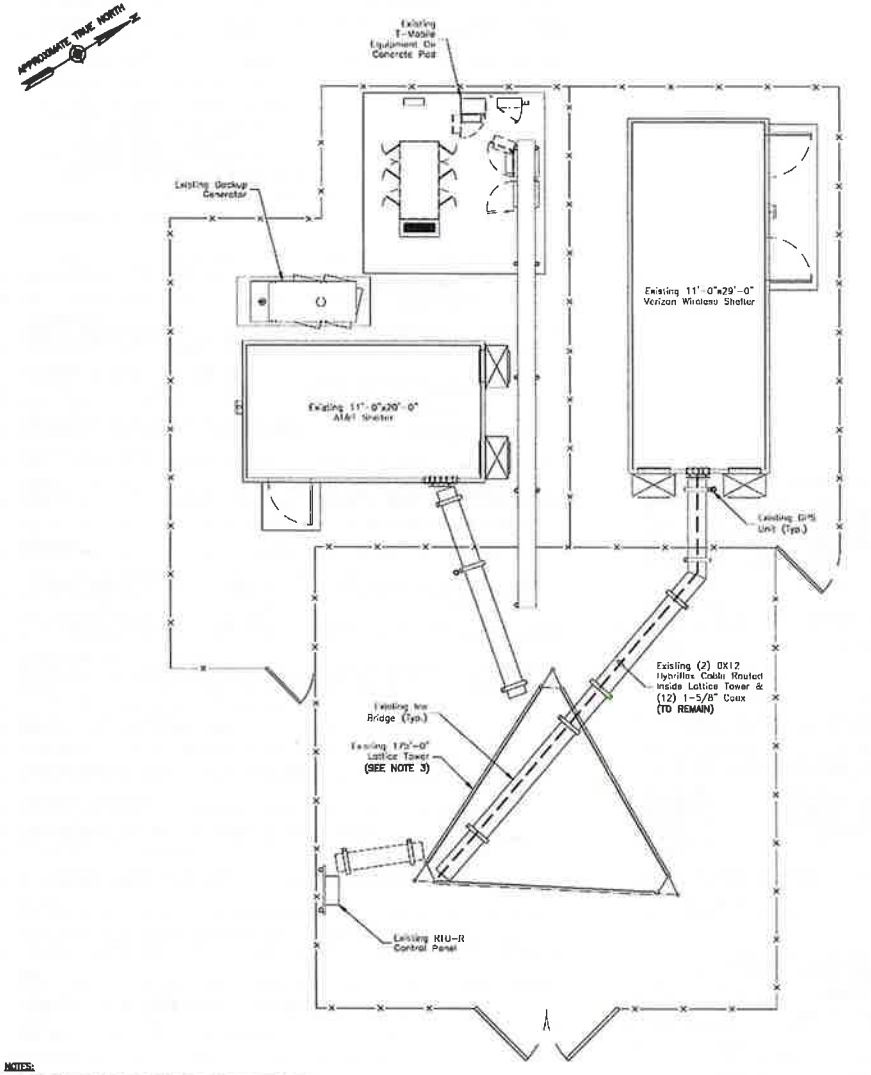
62 NORTH MAIN STREET
BALTC, CT 06330

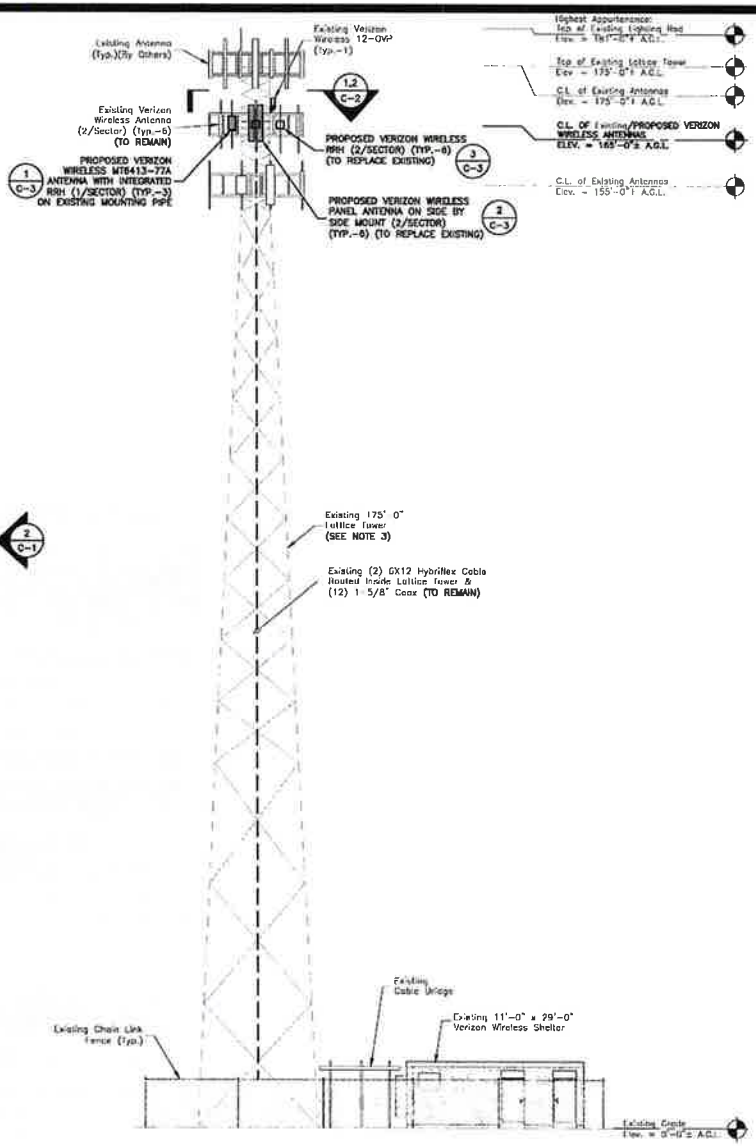
SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN–1





NOTES:

1. SOME EXISTING & FUTURE INFORMATION NOT SHOWN FOR CLARITY.
2. NORTH ARROW & ELEVATION SHOWN AS APPROXIMATE.
3. ALL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE TOWER STRUCTURAL ANALYSIS BY TOWER ENGINEERING PROFESSIONALS DATED 04/17/24.
4. ALL ANTENNAS & EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH MOUNT ANALYSIS BY COLLIERS ENGINEERING & DESIGN DATED 12/19/23 AND MOUNT MODIFICATION DRAWINGS BY COLLIERS ENGINEERING & DESIGN DATED 12/19/23.

SITE PLAN (1)
SCALE: 1"=10' FOR 11"x17"
1"=5' FOR 22"x34"
0' 5' 10'

ELEVATION (2)
SCALE: 1"=20' FOR 11"x17"
1"=10' FOR 22"x34"
0' 10' 20'

verizon WIRELESS

VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

BALTIC CT

CONSTRUCTION DRAWINGS		
1	05/08/24	FOR SUBMITTAL
0	02/09/24	FOR SUBMITTAL

Dewberry

Dewberry Engineers Inc.
99 SUMMER ST.
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3010

STATE OF CONNECTICUT
BENJAMIN WHITE
28971
LICENSED
PROFESSIONAL ENGINEER

DRAWN BY:	05/10/2024 JG
REVIEWED BY:	CDH
CHECKED BY:	BWR
PROJECT NUMBER:	50121487
JOB NUMBER:	50185501
SITE NUMBER	

535817

SITE ADDRESS

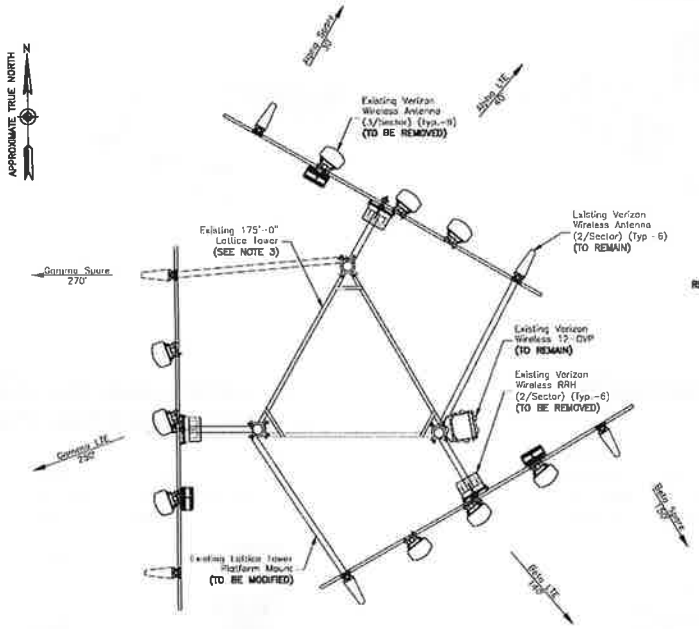
62 NORTH MAIN STREET
BALTIC, CT 06330

SHEET TITLE

SITE PLAN
& ELEVATION

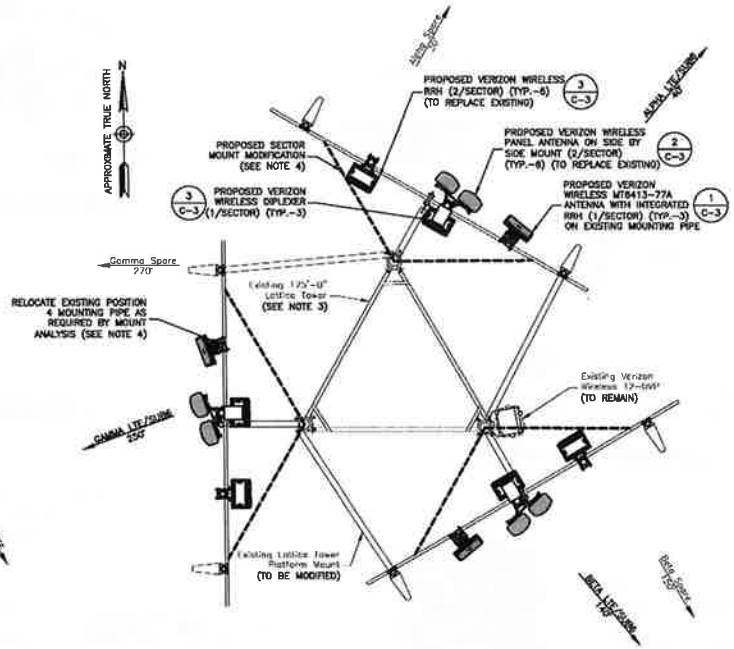
SHEET NUMBER

C-1



EXISTING ANTENNA MOUNT PLAN 1

SCALE: N.T.S.



PROPOSED ANTENNA MOUNT PLAN 2

SCALE: N.T.S.

NOTES:

1. SOME EXISTING & FUTURE INFORMATION NOT SHOWN FOR CLARITY.
2. NORTH ARROW & ELEVATION SHOWN AS APPROXIMATE.
3. ALL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE TOWER STRUCTURAL ANALYSIS BY TOWER ENGINEERING PROFESSIONALS DATED 04/17/24.
4. ALL ANTENNAS & EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH MOUNT ANALYSIS BY COLLIERS ENGINEERING & DESIGN DATED 12/19/23 AND MOUNT MODIFICATION DRAWINGS BY COLLIERS ENGINEERING & DESIGN DATED 12/19/23.

verizon WIRELESS

VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

BALTIC CT

CONSTRUCTION DRAWINGS		
1	05/08/24	FOR SUBMITTAL
0	02/09/24	FOR SUBMITTAL

Dewberry

Dewberry Engineers Inc.
99 SUMMER ST.
SUITE 700
BOSTON, MA 02110
PHONE: 617.695 3400
FAX: 617.695 3310

STATE OF CONNECTICUT
28971
LICENSED
PROFESSIONAL ENGINEER

DRAWN BY:	05/10/2024 JG
REVIEWED BY:	CDH
CHECKED BY:	BMR
PROJECT NUMBER:	50121487
JOB NUMBER:	50165501
SITE NUMBER	

535817

SITE ADDRESS

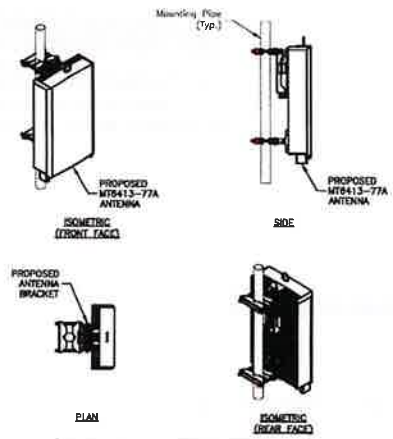
62 NORTH MAIN STREET
BALTIC, CT 06330

SHEET TITLE

ANTENNA MOUNTING PLANS

SHEET NUMBER

C-2



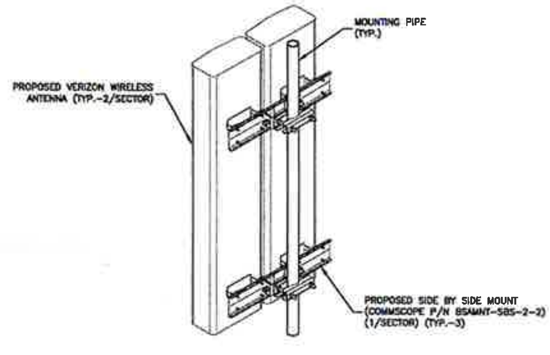
MODEL:	MT6413-77A
DIMENSIONS:	28.90"H X 15.75"W X 5.51"D
WEIGHT:	57.3 LBS

NOTE:

1. INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. USE APPROPRIATE MOUNTING HARDWARE FOR CONSTRUCTION TYPE.

MT6413-77A ANTENNA DETAILS (1)

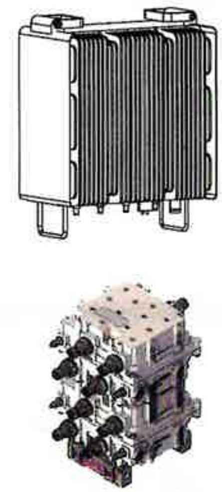
SCALE: N.T.S.



MANUFACTURER:	COMMSCOPE
PART NUMBER:	JAHH-65B-R3B
DIMENSIONS:	72.0"H X 13.6"W X 8.2"D
WEIGHT:	63.3 LBS

PANEL ANTENNA DETAIL (2)

SCALE: N.T.S.



PROPOSED LTE AWS/PCS	
MANUFACTURER:	SAMSUNG
MODEL:	AWS/PCS MACRO RADIO RF4439d-25A
DIMENSIONS:	14.9"H X 14.9"W X 10.0"D
WEIGHT:	74.7 LBS

PROPOSED LTE 700/850	
MANUFACTURER:	SAMSUNG
MODEL:	1900/AWS MACRO RADIO RF4461d-13A
DIMENSIONS:	14.9"H X 14.9"W X 10.2"D
WEIGHT:	79.1 LBS

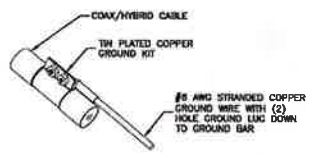
MANUFACTURER:	COMMSCOPE
MODEL:	CBC78T-DS-43-2X
DIMENSIONS:	6.38H X 6.63"W X 9.65"D
WEIGHT:	20.7 LBS

NOTE:

1. CONTRACTOR TO VERIFY WITH CONSTRUCTION MANAGER FOR FINAL MANUFACTURER SPECIFICATIONS PRIOR TO CONSTRUCTION.

EQUIPMENT DETAILS (3)

SCALE: N.T.S.

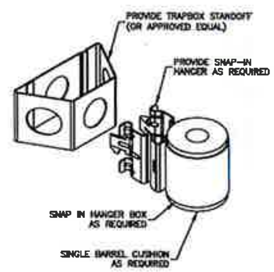


NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND. ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TIN PLATED COPPER WITH TWO-HOLE LUG, SIZE PER COAX DIAMETER.
3. WEATHER SEAL GROUND KIT PER CARRIER REQUIREMENTS.
4. COAX CABLE GROUND KIT LOCATION & QUANTITY SHALL BE PER CARRIER SPECIFICATIONS & STANDARDS.

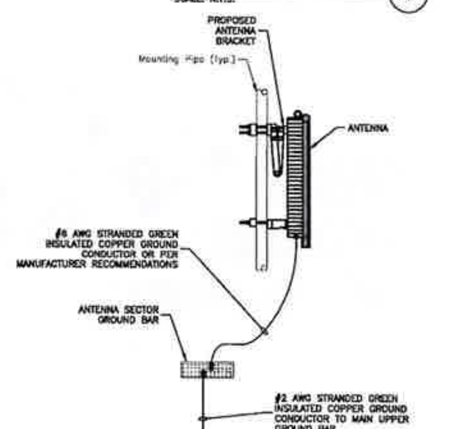
COAX/HYBRID GROUNDING DETAIL (4)

SCALE: N.T.S.



JUMPER MOUNT (5)

SCALE: N.T.S.



NOTES:

1. VERIFY EXISTING GROUNDING SYSTEM IS INSTALLED PER VERIZON WIRELESS STANDARDS.
2. BOND NEW EQUIPMENT INTO EXISTING GROUND SYSTEM IN ACCORDANCE WITH VERIZON WIRELESS STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.

TYPICAL ANTENNA GROUNDING DETAIL (6)

SCALE: N.T.S.

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51 ALDER STREET
MEDWAY, MA 02053

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CONSTRUCTION DRAWINGS		
1	05/08/24	FOR SUBMITTAL
0	02/09/24	FOR SUBMITTAL

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99 SUMMER ST.
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310

STATE OF CONNECTICUT
28971
LICENSED
PROFESSIONAL ENGINEER

DRAWN BY:	05/10/2024 JC
REVIEWED BY:	CDH
CHECKED BY:	[redacted]
PROJECT NUMBER:	50121487
JOB NUMBER:	50183501

SITE NUMBER

535817

SITE ADDRESS

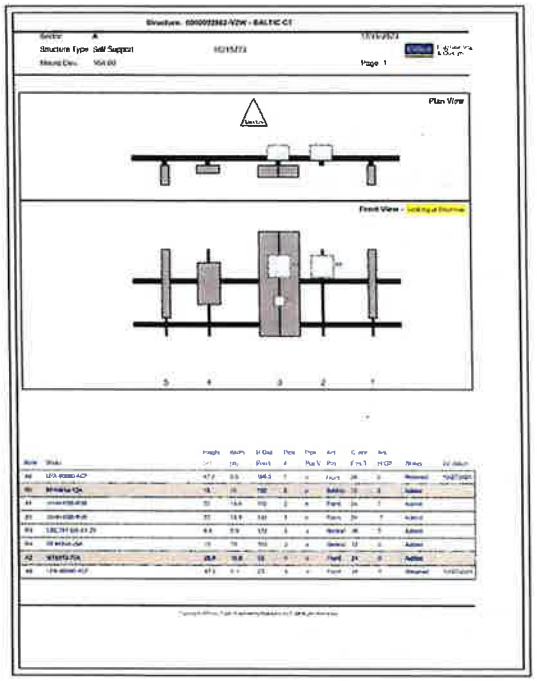
62 NORTH MAIN STREET
BALTIC, CT 06330

SHEET TITLE

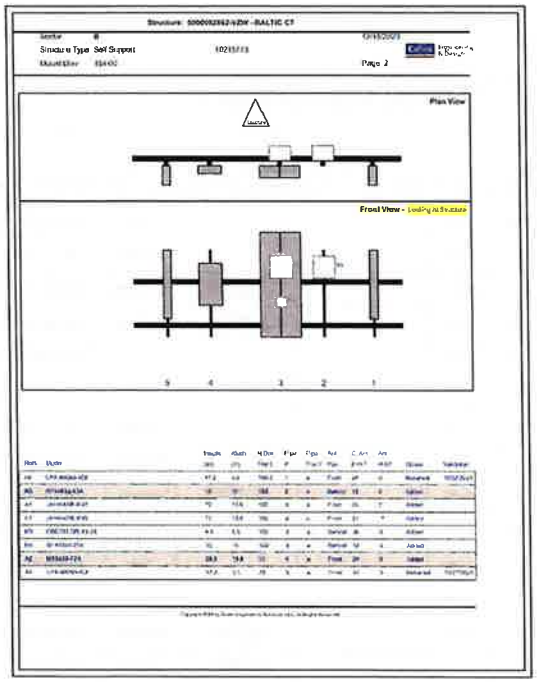
CONSTRUCTION DETAILS

SHEET NUMBER

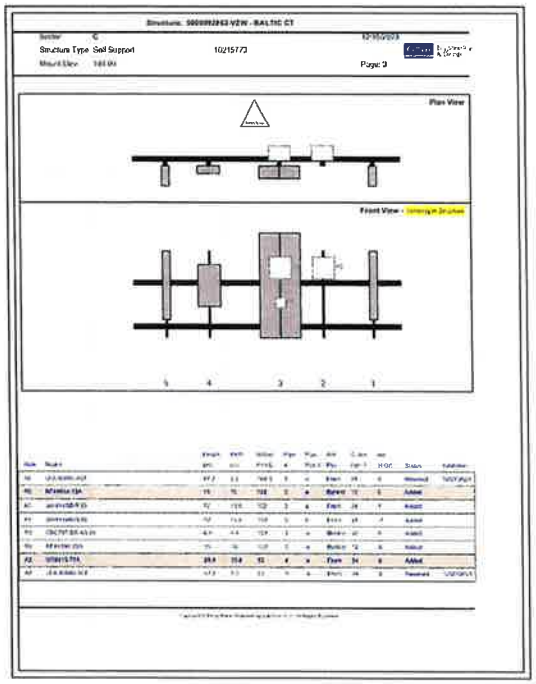
C-3



ALPHA SECTOR (1)
SCALE: N.T.S.



BETA SECTOR (2)
SCALE: N.T.S.



GAMMA SECTOR (3)
SCALE: N.T.S.

NOTE:

1. SECTOR PLANS AND ELEVATIONS TAKEN FROM MOUNT ANALYSIS: SMART TOOL # 10215773, COLLIERS ENGINEERING & DESIGN PROJECT # 21777308 (REV.1), FUZE #16096543 BY MASER CONSULTING P.A. DATED 12/19/23.

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VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

BALTIC CT

CONSTRUCTION DRAWINGS

1	05/08/24	FOR SUBMITTAL
0	02/09/24	FOR SUBMITTAL

Dewberry

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STATE OF CONNECTICUT
BENJAMIN WHITE
28971
LICENSED
PROFESSIONAL ENGINEER

DRAWN BY: 05/10/2024 JG
REVIEWED BY: CDH
CHECKED BY: BBW
PROJECT NUMBER: 50121487
JOB NUMBER: 50155501
SITE NUMBER
535817
SITE ADDRESS
62 NORTH MAIN STREET
BALTIC, CT 06330
SHEET TITLE
SMART TOOL SECTOR PLANS & ELEVATION DETAILS
SHEET NUMBER
C-4

FINAL EQUIPMENT CONFIGURATION

SECTOR	POSITION	TECHNOLOGY	ANTENNA MODEL	VENDOR	RRH (QTY./MODEL)	DIPLEXER (QTY./MODEL)	CENTERLINE	AZIMUTH	OVP	HYBRID CABLE TYPE	FEED LINE LENGTH*
ALPHA	A1	SPARE	(E) LPA-80080-4CF	ANTEL	-	-	185'-0"	30°	(1) (E) 12-OVP (TO REMAIN)	(2) (E) 6X12 HYBRIFLEX CABLE TO REMAIN	215'±
	A2	LTE	(P) JAHH-65B-R3B	COMMSCOPE	(1) (P) B2/B66A RF4439d-25A	(1) (P) C8C78T-DS-43-2X	185'-0"	40°			
	A3	LTE	(P) JAHH-65B-R3B	COMMSCOPE	(1) (P) B5/B13 RF4461d-13A		185'-0"	40°			
	A4	5G	(P) MT6413-77A	SAMSUNG	-	-	185'-0"	40°			
	A5	SPARE	(E) LPA-80080-4CF	ANTEL	-	-	185'-0"	30°			
BETA	B1	SPARE	(E) LPA-80080-4CF	ANTEL	-	-	185'-0"	150°			
	B2	LTE	(P) JAHH-65B-R3B	COMMSCOPE	(1) (P) B2/B66A RF4439d-25A	(1) (P) C8C78T-DS-43-2X	185'-0"	140°			
	B3	LTE	(P) JAHH-65B-R3B	COMMSCOPE	(1) (P) B5/B13 RF4461d-13A		185'-0"	140°			
	B4	5G	(P) MT6413-77A	SAMSUNG	-	-	185'-0"	140°			
	B5	SPARE	(E) LPA-80080-4CF	ANTEL	-	-	185'-0"	150°			
GAMMA	G1	SPARE	(E) LPA-80080-4CF	ANTEL	-	-	185'-0"	270°			
	G2	LTE	(P) JAHH-65B-R3B	COMMSCOPE	(1) (P) B2/B66A RF4439d-25A	(1) (P) C8C78T-DS-43-2X	185'-0"	250°			
	G3	LTE	(P) JAHH-65B-R3B	COMMSCOPE	(1) (P) B5/B13 RF4461d-13A		185'-0"	250°			
	G4	5G	(P) MT6413-77A	SAMSUNG	-	-	185'-0"	250°			
	G5	SPARE	(E) LPA-80080-4CF	ANTEL	-	-	185'-0"	270°			

*CONTRACTOR TO FIELD VERIFY HYBRID CABLE LENGTHS PRIOR TO CONSTRUCTION. LENGTH IS ESTIMATED FROM THE BASE EQUIPMENT OVP TO SECTOR OVP WITH 15% BUFFER.

(E) = Existing
(P) = PROPOSED

FINAL EQUIPMENT CONFIGURATION (1)
SCALE: N.T.S.

verizon WIRELESS

VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

BALTIC CT

CONSTRUCTION DRAWINGS

1	05/08/24	FOR SUBMITTAL
0	02/09/24	FOR SUBMITTAL

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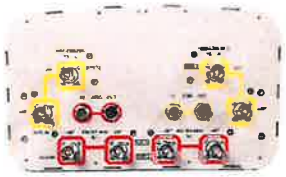
STATE OF CONNECTICUT
BENJAMIN HARRIS WHITE
28971
LICENSED
PROFESSIONAL ENGINEER

DRAWN BY: 05/10/2024 JG
REVIEWED BY: CDH
CHECKED BY: BBR
PROJECT NUMBER: 50121487
JOB NUMBER: 50185501
SITE NUMBER
535817
SITE ADDRESS
62 NORTH MAIN STREET
BALTIC, CT 06330
SHEET TITLE
FINAL EQUIPMENT CONFIGURATION
SHEET NUMBER
C-5

JAHH-65B-R3B



8-port sector antenna, 2x 698–787, 2x 824–894 and 4x 1695–2360 MHz, 65° HPBW, 3x RET and low bands have diplexers. Internal SBT's on first LB(Port 1) and first HB(Port 5).

- Internal SBT on low and high band allow remote RET control from the radio over the RF jumper cable
- One RET for 700MHz, one RET for 850MHz, and one RET for both high bands to ensure same tilt level for 4x Rx or 4x MIMO
- Internal filter on low band and interleaved dipole technology providing for attractive, low wind load mechanical package
- Separate RS-485 RET input/output for low and high band

General Specifications

Antenna Type	Sector
Band	Multiband
Color	Light gray
Effective Projective Area (EPA), frontal	0.28 m^2 | 3.014 ft^2
Effective Projective Area (EPA), lateral	0.24 m^2 | 2.583 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	Aluminum | Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	4
RF Connector Quantity, low band	4
RF Connector Quantity, total	8

Remote Electrical Tilt (RET) Information, General

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

Dimensions

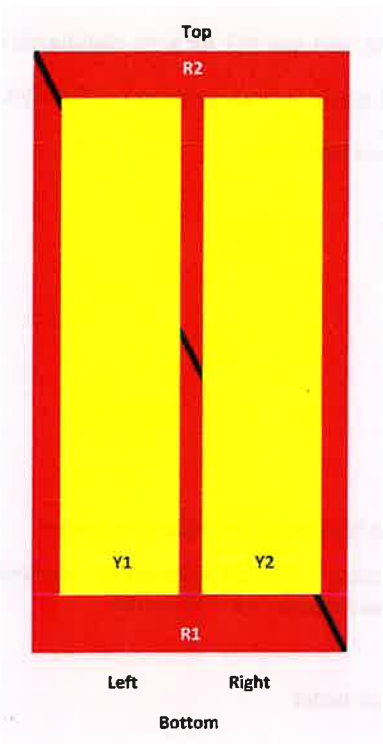
Width	350 mm | 13.78 in

JAHH-65B-R3B

Length	1828 mm | 71.969 in
Depth	208 mm | 8.189 in

Array Layout

JAHH-65A-R3B JAHH-65B-R3B JAHH-65C-R3B



Array	Freq (MHz)	Conns	RET (SKET)	AISG RET UID
R1	698-798	1-2	1	AXXXXXXXXXXXXXX1
R2	824-894	3-4	2	AXXXXXXXXXXXXXX2
Y1	1695-2360	5-6	3	AXXXXXXXXXXXXXX3
Y2	1695-2360	7-8		

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 – 787 MHz | 824 – 894 MHz
Polarization	±45°

Remote Electrical Tilt (RET) Information, Electrical

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

JAHH-65B-R3B

Power Consumption, normal conditions, maximum	13 W
Input Voltage	10–30 Vdc
Internal Bias Tee	Port 1 | Port 5
Internal RET	High band (1) | Low band (2)

Electrical Specifications

Frequency Band, MHz	**698–787**	**824–894**	**1695–1880**	**1850–1990**	**1920–2200**	**2300–2360**
Gain, dBi	14.5	15.8	18	18.4	18.5	18.8
Beamwidth, Horizontal, degrees	67	65	63	63	65	68
Beamwidth, Vertical, degrees	12.4	10.5	5.7	5.2	4.9	4.4
Beam Tilt, degrees	2–14	2–14	0–10	0–10	0–10	0–10
USLS (First Lobe), dB	18	18	20	20	21	23
Front-to-Back Ratio at 180°, dB	32	34	31	35	36	38
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	200	200	300	300	300	250

Electrical Specifications, BASTA

Frequency Band, MHz	**698–787**	**824–894**	**1695–1880**	**1850–1990**	**1920–2200**	**2300–2360**
Gain by all Beam Tilts, average, dBi	14.3	14.9	17.6	18.1	18.2	18.5
Gain by all Beam Tilts Tolerance, dB	±0.3	±0.5	±0.6	±0.4	±0.5	±0.6
Gain by Beam Tilt, average, dBi	2 ° | 14.3 8 ° | 14.3 14 ° | 14.3	2 ° | 15.0 8 ° | 14.9 14 ° | 15.4	0 ° | 17.2 5 ° | 17.6 10 ° | 17.6	0 ° | 17.6 5 ° | 18.2 10 ° | 18.2	0 ° | 17.7 5 ° | 18.3 10 ° | 18.3	0 ° | 17.9 5 ° | 18.7 10 ° | 18.7
Beamwidth, Horizontal Tolerance, degrees	±1.2	±1.4	±4	±2.4	±2.9	±2.7
Beamwidth, Vertical Tolerance, degrees	±0.9	±0.5	±0.3	±0.2	±0.3	±0.1
USLS, beampeak to 20° above beampeak, dB	18	17	17	18	19	18
Front-to-Back Total Power at 180° ± 30°, dB	25	24	26	29	27	29
CPR at Boresight, dB	22	23	20	21	21	24

JAHH-65B-R3B

CPR at Sector, dB	11	12	11	11	11	8

Mechanical Specifications

Wind Loading at Velocity, frontal	301.0 N @ 150 km/h | 67.7 lbf @ 150 km/h
Wind Loading at Velocity, lateral	254.0 N @ 150 km/h | 57.1 lbf @ 150 km/h
Wind Loading at Velocity, maximum	143.4 lbf @ 150 km/h | 638.0 N @ 150 km/h
Wind Speed, maximum	241 km/h | 149.75 mph

Packaging and Weights

Width, packed	456 mm | 17.953 in
Depth, packed	357 mm | 14.055 in
Length, packed	1975 mm | 77.756 in
Net Weight, without mounting kit	29.2 kg | 64.375 lb
Weight, gross	42.5 kg | 93.696 lb

Regulatory Compliance/Certifications

Agency	**Classification**
CHINA-ROHS	Above maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant/Exempted

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

700/850 4T4R Macro 320W ORU - New Filter (RF4461d-13A)

SAMSUNG

Specifications

Item	Specification	
Air Interface	LTE, NR(HW resource ready)	
Band	Band13 (700MHz)	Band5 (850MHz)
Frequency	DL: 746~756MHz UL: 777~787MHz	DL: 869~894MHz UL: 824~849MHz
IBW	10MHz	25MHz
OBW	10MHz	25MHz
Carrier Bandwidth	LTE/NR 5*/10MHz	LTE 5/10MHz NR 5/10/15/20MHz
# of carriers	2C*	3C
Total # of carriers	4C + B13 (SDL) 1C	
RF Chain	4T4R/2T4R/2T2R/1T2R 2T2R+2T2R bi-sector	
RF Output Power	Total : 320W 4 x 40W or 2 x 60W	4 x 40W or 2 x 60W
Spectrum Analyzer	TX/RX Support	
RX Sensitivity	Typ. -104.5dBm @1Rx (25RBs 5MHz)	
Modulation	256QAM support, (1024QAM with 1~2dB power back-off)	
Input Power	-48VDC (-38VDC to -57VDC)	
Power Consumption	1,165 Watt @ 100% RF load, room temperature	
Size (WHD)	380 x 380 x 260 mm (14.96 x 14.96 x 10.23 inch)	
Volume	37.5 L	
Weight (W/o Solar Shield & finger guard)	35.9 kg (79.1 lb)	
Operating Temperature	-40°C (-40°F) ~ 55°C (131°F) (Without solar load)	
Cooling	Natural convection	
Unwanted Emission	3GPP 36.104 FCC 47 CFR 27.53 c), f) -	3GPP 36.104 FCC 47 CFR 22.917 -69 dBm/100 kHz per path @ 896 ~901MHz
CPRI Cascade	Not supported	
Optic Interface	20km, 2 ports (9.8Gbps x 2), SFP+, single mode, Duplex (Option: Bi-d)	
RET & TMA Interface	AISG 3.0	
Bias-T	4 ports (2 ports per band)	
Mounting Options	Pole, wall	
NB-IoT	2GB+2IB or 4IB	2SA~2G8 or 2GB+2IB or 4GB
PIM Cancellation	Support	
# of antenna port	4	
External Alarm	4	
Fronthaul Interface	Opt. 8 CPRI / Opt. 7-2x selectable (not simultaneous support)	
CPRI compression	Not Support	

* 5MHz supporting in B13(700MHz) depends on 3GPP std. and UE capability. External filters in interferer and victim sides for Mexican boarder to support 5MHz service need to be considered
** Finger guard is not needed.

C-band 64T64R

SAMSUNG

Gen 2

Gen 2 : Higher conducted power radio with reduced size/volume/weight vs Gen 1 and also SOC embedded for flexibility to support new features

※ Preliminary Design: External appearance and mechanical design can be subject to change

Gen 2. 64T64R C-band MMU Dimensions	
Size (WxHxD)	**400 x 734 x 140 mm (15.75 x 28.90 x 5.51 inch)**
Weight	**26kg (57.3 lb)**

Item	Gen 2 64T64R (MT6413-77A)
Air Technology	NR n77/TDD
Frequency	3700 – 3980 MHz
IBW	200 MHz
OBW	200 MHz
Carrier Bandwidth	20(HW ready)/40/60/80/100 MHz
# of Carriers	2 carriers
Layer	DL : 16L, UL : 16RX (8L)
RF Chain	64T64R
Antenna Configuration	4V16H with 192 AE
EIRP	80.5 dBm @320W (55 dBm + 25.5 dBi)
Conductive Power	320W
Spectrum Analyzer	TX/RX support
RX Sensitivity	Typical -97.8dBm @(1Rx, 18.36MHz with 30kHz,51RBs)
Modulation	DL 256QAM support, (DL 1024QAM with 1~2dB power back-off)
Function Split	DL/UL option 7-2x
Input Power	-48 VDC (-38 VDC to -57 VDC)
Power Consumption	1,287W (100% load, room temp.)
Size (WHD)	**400 x 734 x 140 mm (15.75 x 28.90 x 5.51 inch)**
Volume	**41.1L**
Weight	**26kg (57.3 lb)**
Operating Temperature	-40℃ - 55℃ (w/o solar load)
Cooling	Natural convection
Unwanted Emission	3GPP 38.104 FCC 47 CFR 27.53 : < -13dBm/MHz < -40 dBm/MHz @ above 4 GHz <-50 dBm /MHz @ 4,040 ~ 4,050 MHz, <-60 dBm /MHz @ above 4,050 MHz
Optic Interface	15km, 4 ports (25Gbps x 4), SFP28, single mode, Bi-di (Option: Duplex)
Mounting Options	Pole, wall
NB-IoT	Not support
External Alarm	4RX
Fronthaul Interface	eCPRI

SAMSUNG

AWS/PCS MACRO RADIO

DUAL-BAND AND HIGH POWER FOR MACRO COVERAGE

Samsung's future proof dual-band radio is designed to help effectively increase the coverage areas in wireless networks. This AWS/PCS 4T4R dual-band radio has 4Tx/4Rx to 2Tx/2Rx RF chains options and a total output power of 320W, making it ideal for macro sites.

Model Code RF4439d-25A

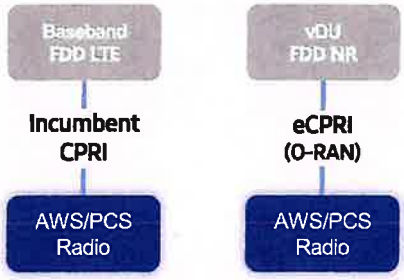
Homepage
samsungnetworks.com

Youtube
www.youtube.com/samsung5g

Points of Differentiation

Continuous Migration

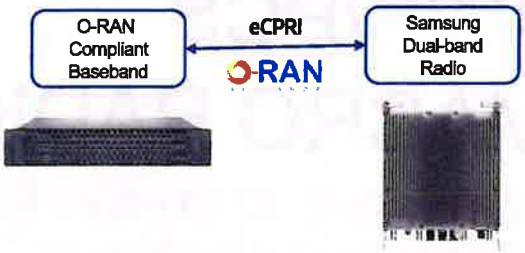
Samsung's AWS/PCS macro radio can support each incumbent CPRI interface as well as advanced eCPRI interfaces. This feature provides installable options for both legacy LTE networks and added NR networks.



O-RAN Compliant

A standardized O-RAN radio can help in implementing cost-effective networks, which are capable of sending more data without compromising additional investments.

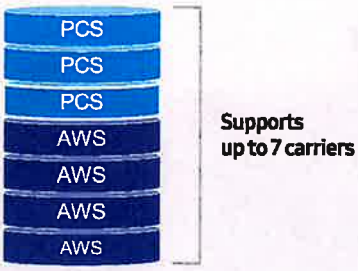
Samsung's state-of-the-art O-RAN technology will help accelerate the effort toward constructing a solid O-RAN ecosystem.



Optimum Spectrum Utilization

The number of required carriers varies according to site (region). Supporting many carriers is essential for using all frequencies that the operator has available.

The new AWS/PCS dual-band radio can support up to 3 carriers in the PCS (1.9GHz) band and 4 carriers in the AWS (2.1GHz) band, respectively.



Brand New Features in a Compact Size

Samsung's AWS/PCS macro radio offers several features, such as dual connectivity for baseband for both CDU and vDU, O-RAN capability, more carriers and an enlarged PCS spectrum, combined into an incumbent radio volume of 36.8L.

- **2 FH connectivity**
- **O-RAN capability**
- **More carriers and spectrum**

Same as an incumbent radio volume

Technical Specifications

Item	Specification
Tech	LTE / NR
Brand	B25(PCS), B66(AWS)
Frequency Band	DL: 1930 – 1995MHz, UL: 1850 – 1915MHz DL: 2110 – 2200MHz, UL: 1710 – 1780MHz
RF Power	(B25) 4 × 40W or 2 × 60W (B66) 4 × 60W or 2 × 80W
IBW/OBW	(B25) 65MHz / 30MHz (B66) DL 90MHz, UL 70MHz / 60MHz
Installation	Pole, Wall
Size/ Weight	14.96 x 14.96 x 10.04inch (36.8L) / 74.7lb

ATTACHMENT 3

C Squared Systems, LLC
65 Dartmouth Drive
Auburn, NH 03032
(603) 644-2800
support@csquaredsystems.com

Calculated Radio Frequency Emissions Report

verizon

Baltic CT

62 North Main Street, Baltic, CT

May 7, 2024

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1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed modification of Verizon's antenna arrays mounted at 165' on an existing lattice tower located at 62 North Main Street in Baltic, CT. The coordinates of the tower are 41° 37' 27.01" N, 72° 04' 41.02" W.

Verizon is proposing the following:

1) Remove nine (9) existing antennas and retain six (6) existing SPARE antennas.
2) Add nine (9) antennas, three (3) per sector, to support its commercial LTE and 5G network.

This report considers the planned antenna configuration for Verizon[1] and the existing antennas for T-Mobile[2] and AT&T[3] to derive the resulting % MPE of its proposed installation.

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm^2). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment C of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure, and they must be able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals. Attachment C contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population/uncontrolled exposure and for occupational/controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

---

[1] As referenced to Verizon's Radio Frequency Design Sheet updated 07/27/2023.

[2] As referenced to T-Mobile's Request for Tower Share at 147 Baltic Hanover Road, Sprague/Baltic, CT 06330, dated August 27th, 2021.

[3] Height references (AT&T) - Verizon Wireless' "Structural Analysis Report", Baltic Hanover Road, Baltic, New London County, CT 06330, dated April 17th, 2024 & AT&T's Notice of Exempt Modification – Antenna Swap – March 12, 2018

3. RF Exposure Prediction Methods

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{Power Density} = \left(\frac{\text{GRF}^2 \times 1.64 \times \text{ERP}}{4\pi \times R^2}\right) \text{X Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial Distance = $\sqrt{(H^2 + V^2)}$

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

Off Beam Loss is determined by the selected antenna patterns

Ground reflection factor (GRF) of 1.6

These calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. The calculations assume even terrain in the area of study and do not take into account actual terrain elevations which could attenuate the signal. As a result, the predicted signal levels reported below are much higher than the actual signal levels will be from the final installations.

4. Antenna Inventory

Table 1 below outlines Verizon's proposed antenna configuration for the site. The associated data sheets and antenna patterns for these specific antenna models are included in Attachments C.

Operator	Sector / Call Sign	TX Freq (MHz)	Power at Antenna (Watts)	Ant Gain (dBi)	Power EIRP (Watts)	Antenna Model	Beam Width	Mech. Tilt	Length (ft)	Antenna Centerline Height (ft)
Verizon	Alpha / 40°	700	160	14.5	4509	JAHH-65B-R3B	67	0	8	165
		850	160	15.8	6083		65			
		1900	160	18.4	11069		63			
		2100	240	18.5	16991		65			
		3700	320	25.5	113540	MT6413-77A	-	0	3.42	160.1
	Beta / 140°	700	160	14.9	4509	JAHH-65B-R3B	65	0	8	165
		850	160	15	6083		60			
		1900	160	17.9	11069		69			
		2100	240	18.4	16991		64			
		3700	320	25.5	113540	MT6413-77A	-	0	3.42	160.1
	Gamma / 250°	700	160	14.9	4509	JAHH-65B-R3B	65	0	8	165
		850	160	15	6083		60			
		1900	160	17.9	11069		69			
		2100	240	18.4	16991		64			
		3700	320	25.5	113540	MT6413-77A	-	0	3.42	160.1

Table 1: Proposed Antenna Inventory[4][5]

[4] Antenna heights are in reference to Verizon's Radio Frequency Design Sheet updated 09/21/2023.

[5] Transmit power assumes 0 dB of cable loss.

5. Calculation Results

The calculated power density results are shown in Figure 1 below. For completeness, the calculations for this analysis range from 0 feet horizontal distance (directly below the antennas) to a value of 3,000 feet horizontal distance from the site. In addition to the other worst-case scenario considerations that were previously mentioned, the power density calculations to each horizontal distance point away from the antennas was completed using a local maximum off beam antenna gain (within ± 5 degrees of the true mathematical angle) to incorporate a realistic worst-case scenario.

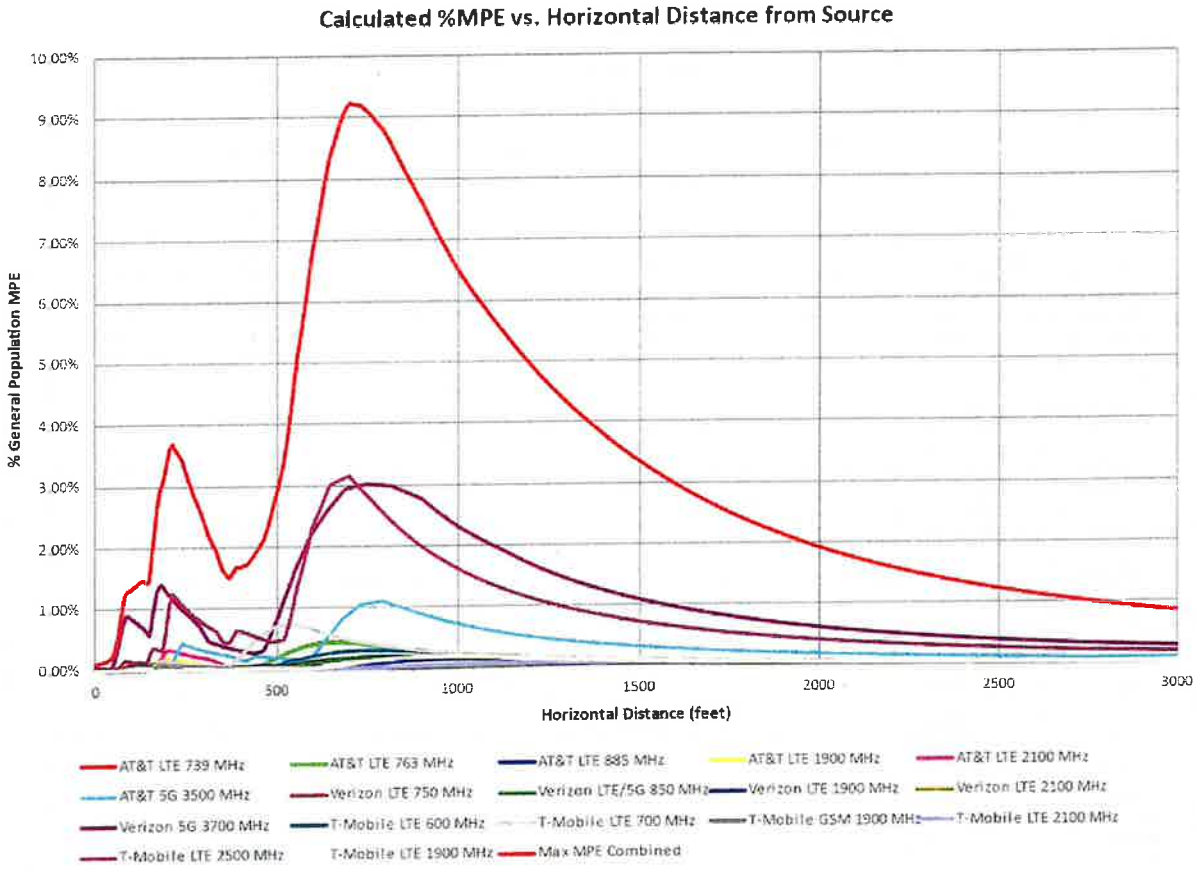


Figure 1: Graph of General Population % MPE vs. Distance

The highest percent of MPE (9.23% of the General Population limit) is calculated to occur at a horizontal distance of 701 feet from the antennas. Please note that the percent of MPE calculations close to the site take into account off beam loss, which is determined from the vertical pattern of the antennas used. Therefore, RF power density levels may increase as the distance from the site increases. At distances of approximately 1500 feet and beyond, one would now be in the main beam of the antenna pattern and off beam loss is no longer considered. Beyond this point, RF levels become calculated solely on distance from the site and the percent of MPE decreases significantly as distance from the site increases.

Table 2 below lists percent of MPE values as well as the associated parameters that were included in the calculations. The highest percent of MPE value was calculated to occur at a horizontal distance of 701 feet from the site (reference Figure 1).

As stated in Section 3, all calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. In addition, a six foot height offset was considered in this analysis to account for average human height. As a result, the predicted signal levels are significantly higher than the actual signal levels will be from the final configuration. The results presented in Figure 1 and Table 2 assume level ground elevation from the base of the tower out to the horizontal distances calculated.

Carrier	Number of Transmitters	Power out of Base Station Per Transmitter (Watts)	Antenna Height (Feet)	Distance to the Base of Antennas (Feet)	Power Density (mW/cm^2)	Limit (mW/cm^2)	% MPE
AT&T 5G 3500 MHz	1	108.0	175.0	701	0.009085	1.000	0.91%
AT&T LTE 1900 MHz	1	160.0	175.0	701	0.000133	1.000	0.01%
AT&T LTE 2100 MHz	1	240.0	175.0	701	0.000196	1.000	0.02%
AT&T LTE 739 MHz	1	160.0	175.0	701	0.002155	0.493	0.44%
AT&T LTE 763 MHz	1	160.0	175.0	701	0.002155	0.509	0.42%
AT&T LTE 885 MHz	1	160.0	175.0	701	0.000253	0.590	0.04%
T-Mobile GSM 1900 MHz	1	120.0	155.0	701	0.000378	1.000	0.04%
T-Mobile LTE 1900 MHz	1	160.0	155.0	701	0.000860	1.000	0.09%
T-Mobile LTE 2100 MHz	1	120.0	155.0	701	0.000019	1.000	0.00%
T-Mobile LTE 2500 MHz	1	240.0	155.0	701	0.031520	1.000	3.15%
T-Mobile LTE 600 MHz	1	140.0	155.0	701	0.001168	0.400	0.29%
T-Mobile LTE 700 MHz	1	160.0	155.0	701	0.002262	0.467	0.48%
Verizon 5G 3700 MHz	1	320.0	165.0	701	0.029550	1.000	2.96%
Verizon LTE 1900 MHz	1	160.0	165.0	701	0.000135	1.000	0.01%
Verizon LTE 2100 MHz	1	240.0	165.0	701	0.000150	1.000	0.02%
Verizon LTE 750 MHz	1	160.0	165.0	701	0.000885	0.500	0.18%
Verizon LTE/5G 850 MHz	1	160.0	165.0	701	0.000974	0.567	0.17%
						Total	9.23%

Table 2: Maximum Percent of General Population Exposure Values[6,7,8]

[6] Frequencies listed are representative of the operating band and are not the specific operating frequency.

[7] The total % MPE listed is a summation of each unrounded contribution. Therefore, summing each rounded value may not reflect the total value listed in the table.

[8] In the case where antenna pattern data was unavailable from the manufacturer, generic antenna pattern was used based on the frequency, bandwidth and gain of the antenna.

6. Conclusion

The above analysis verifies that RF exposure levels from the site with Verizon's proposed antenna configuration will be well below the maximum permissible levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Using the conservative calculation methods and parameters detailed above, the maximum cumulative percent of MPE in consideration of all transmitters is calculated to be **9.23 %** of the FCC limit (General Population/Uncontrolled). This maximum cumulative percent of MPE value is calculated to occur 701 feet away from the site.

7. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.

Reviewed/Approved By: Martin Lavin
Senior RF Engineer
C Squared Systems, LLC

May 7, 2024
Date

Attachment A: References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

IEEE C95.1-2019, IEEE Standard Safety Levels With Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz IEEE-SA Standards Board

IEEE C95.3-2021, IEEE Recommended Practice for Measurements and Computations of Electric, Magnetic, and Electromagnetic Fields with Respect to Human Exposure to Such Fields, 0 Hz-300 GHz IEEE-SA Standards Board

Verizon Wireless' Radio Frequency Design Sheet - 07/27/2023

T-Mobile's Request for Tower Share at 147 Baltic Hanover Road, Sprague/Baltic, CT 06330, dated August 27th, 2021

Verizon Wireless' "Structural Analysis Report", Baltic Hanover Road, Baltic, New London County, CT 06330, dated April 17th, 2024

AT&T's Notice of Exempt Modification – Antenna Swap – March 12, 2018

Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure[9]

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

(B) Limits for General Population/Uncontrolled Exposure[10]

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

f = frequency in MHz * Plane-wave equivalent power density

Table 3: FCC Limits for Maximum Permissible Exposure

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

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

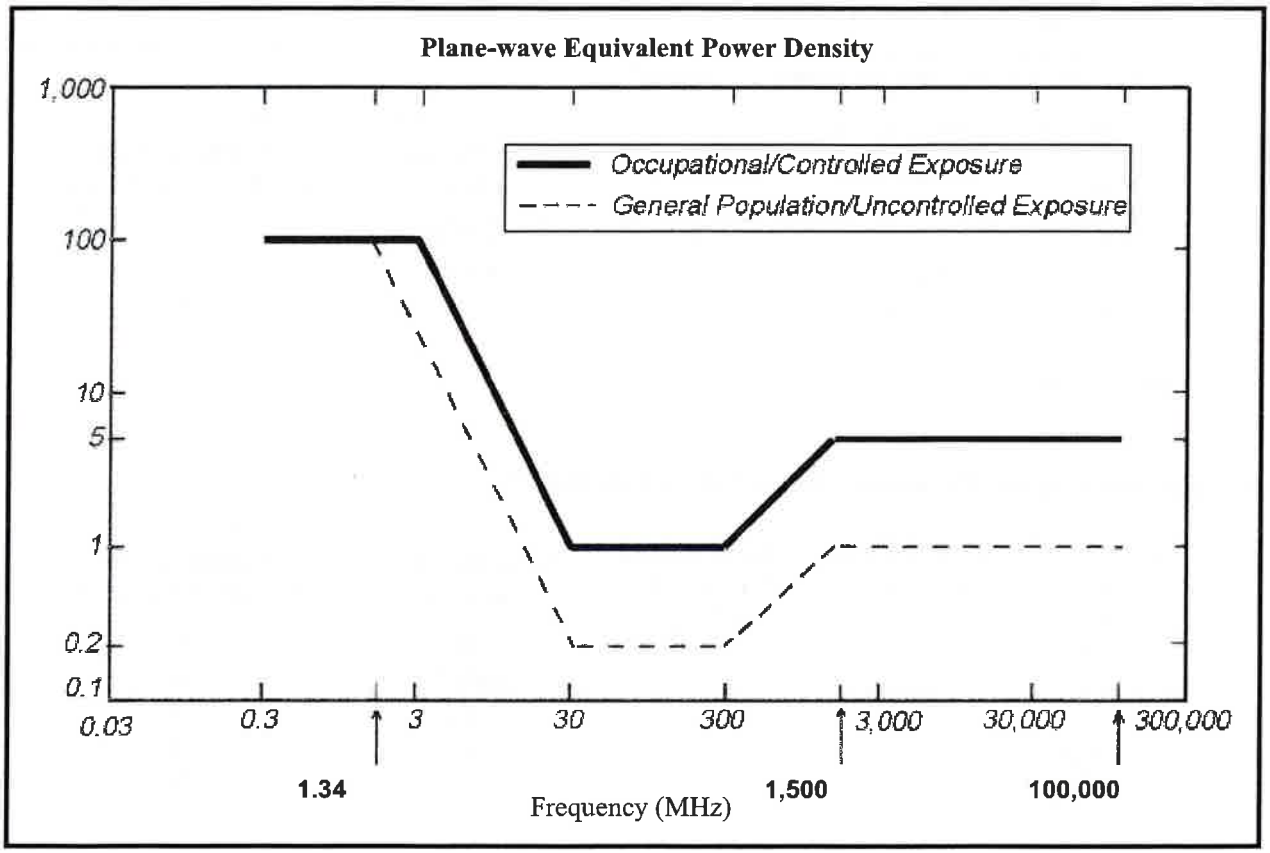
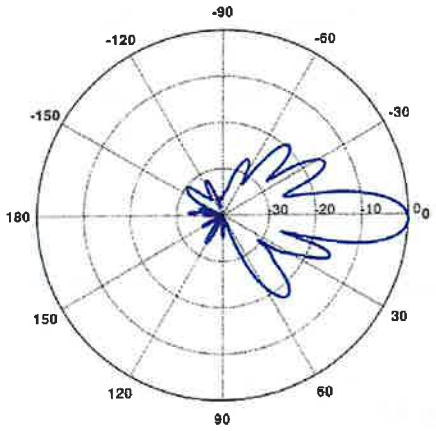


Figure 2: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: Verizon Antenna Model Data Sheets and Electrical Patterns

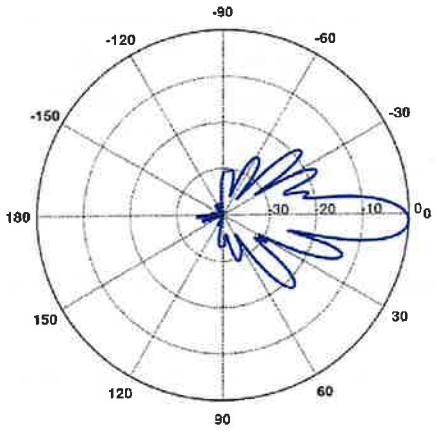
750 MHz

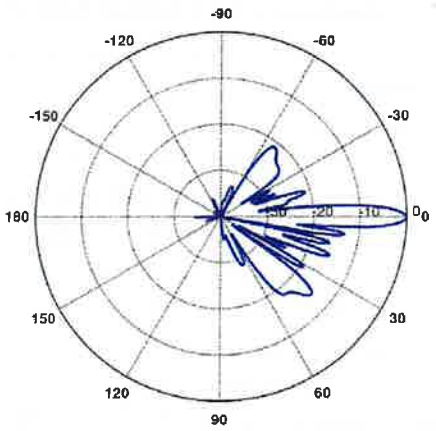
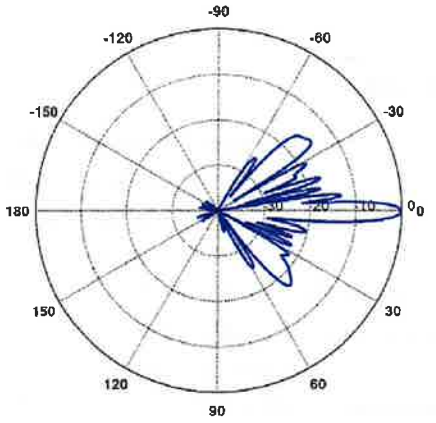
Manufacturer:	COMMSCOPE
Model #:	JAHH-65B-R3B
Frequency Band:	698-787 MHz
Gain:	14.5 dBi
Vertical Beamwidth:	12.4°
Horizontal Beamwidth:	67°
Polarization:	±45°
Dimensions (L x W x D):	71.96" x 13.78" x 8.2"



850 MHz

Manufacturer:	COMMSCOPE
Model #:	JAHH-65B-R3B
Frequency Band:	824-894 MHz
Gain:	15.8 dBi
Vertical Beamwidth:	5.7°
Horizontal Beamwidth:	65°
Polarization:	±45°
Dimensions (L x W x D):	71.96" x 13.78" x 8.2"



1900 MHz Manufacturer: COMMSCOPE Model #: JAHH-65B-R3B Frequency Band: 1850-1990 MHz Gain: 18.4 dBi Vertical Beamwidth: 5.2° Horizontal Beamwidth: 63° Polarization: ±45° Dimensions (L x W x D): 71.96" x 13.78" x 8.2"	
2100 MHz Manufacturer: COMMSCOPE Model #: JAHH-65B-R3B Frequency Band: 1920-2200 MHz Gain: 18.5 dBi Vertical Beamwidth: 4.9° Horizontal Beamwidth: 65° Polarization: ±45° Dimensions (L x W x D): 71.96" x 13.78" x 8.2"	

ATTACHMENT 4

April 17, 2024

Tracy Crittendon
SWI Funds Tower Holdings, LLC
57 E. Washington Street
Chagrin Falls, OH 44022
(440) 903-9949

Tower Engineering Professionals
326 Tryon Road
Raleigh, NC 27603
(919) 661-6351
Structures@tepgroup.net

Subject: **Structural Analysis Report**

Carrier Designation:	***Verizon Wireless* Reconfiguration**	
	Site Number:	N/A
	Site Name:	Baltic
Engineering Firm Designation:	**TEP Project Number:**	310043.946766
Site Data:	**Baltic Hanover Road, Baltic, New London County, CT 06330** **Latitude *41° 37' 26.40*, Longitude *-72° 04' 41.60"*** **175 ± Foot - Self-Support Tower**	

Dear Tracy Crittendon,

Tower Engineering Professionals is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above-mentioned tower.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the stress level for the tower and foundation structure, under the following load case, to be:

LC1: Existing Loading **Sufficient Capacity - 54.5%**
Note: See Table 1 for the existing loading
*Percent capacity based on design reaction comparison as allowed in TIA-222-H, Section 15

Structure Capacity	Foundation Capacity*
36.0%	54.5%

The analysis has been performed in accordance with the ANSI/TIA-222-H Structural Standard for Antenna Supporting Structures and Antennas – Addendum 2 and the 2022 Connecticut State Building Code.

All modifications and equipment proposed in this report shall be installed in accordance with the appurtenances listed in Table 1 for the determined available structural capacity to be effective.

We at Tower Engineering Professionals appreciate the opportunity of providing our continuing professional services to you and *SWI Funds Tower Holdings, LLC*. If you have any questions or need further assistance on this or any other projects please give us a call.

Structural analysis prepared by: ABM / JHJ

Respectfully submitted by:

Aaron T. Rucker, P.E.

04/17/2024

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1) INTRODUCTION

The tower is a 175 ± Foot Self-Support Tower designed by Valmont in October of 2006. The tower was originally designed for a basic wind speed of 110 mph with no ice and 50 mph with 0.75-inch ice thickness under service loads using Structure Class II, Exposure Category B, and Topographic Category 1 per TIA-222-G. All information provided to TEP was assumed to be accurate and complete.

2) ANALYSIS CRITERIA

TIA-222 Revision:	ANSI/TIA-222-H
Type of Analysis:	Comprehensive
Risk Category:	II
Wind Speed:	123 mph (Ultimate)
Exposure Category:	B
Topographic Procedure:	Method 1 (Kzt = 1.0)
Ice Thickness:	1.00 in
Wind Speed with Ice:	50 mph
Seismic Design Category:	B
Seismic Ss:	0.191
Seismic S1:	0.054
Service Wind Speed:	60 mph

Table 1 - Existing, Proposed, and Reserved Antenna and Cable Information

Existing/ Proposed/ Reserved	Mount Level (ft)	Ant CL (ft)	Qty	Antenna Model	Mount Type	Qty Coax	Coax Size	Coax Location	Owner/ Tenant
Existing	175.0	175.0	1	KMW AM-X-CD-17-65-00T-RET	(3) Sector Mounts	12 1 2	1-5/8 1-5/8 Fiber 1-1/4 Power	AB Face	AT&T
			3	CCI Antenna TPA-65R-LCUUUU-H8					
			3	Powerwave 7770					
			2	Commscope SBNH-1D6565C					
			1	Raycap DC6-48-60-18-8F					
			3	Ericsson RRUS 11					
			3	Ericsson RRUS 32 B2					
			3	Ericsson RRUS 4478 B14					
			6	Generic TMA's					
Proposed	***165.0***	***165.0***	***6***	***Commscope JAHH-65B-R3B***	***(3) Commscope BSAMNT-SBS-2-2***	-	-	-	***Verizon***
			3	***Samsung MT6413-77A***					
			3	***Samsung RF44439d-25A***					
			3	***Samsung RF4461d-13A***					
			3	***Commscope CBC78T-DS-43-2X***					
			1	***Commscope RCMDC-6627-PF-48***					
Existing	165.0	165.0	6	Antel LPA-80080-4CF	(3) Sector Mounts	12 2	1-5/8 6X12	BC Face	Verizon

Existing/ Proposed/ Reserved	Mount Level (ft)	Ant CL (ft)	Qty	Antenna Model	Mount Type	Qty Coax	Coax Size	Coax Location	Owner/ Tenant
To Be Removed	*165.0*	*165.0*	*3*	*Commscope HBXX-6517DS-A2M*	-	*2*	*1-5/8*	*BC Face*	*Verizon*
			3	*Commscope LNX-6514DS-A1M*					
			3	*Commscope HBXX-9014DS-VTM*					
			3	*Ericsson RRH2X60-700U*					
			3	*Ericsson RRH2X60-AWS*					
			2	*RFS DB-T1-6Z-8AB-OZ*					
			3	*Ericsson RRH2X60 PCS*					
Existing	155.0	155.0	3	RFS APX16DWV_16DWV-S-E-A20	(3) Sector Mounts	3	6x24 Hybrid	BC Face	T-Mobile
			3	RFS APXVAALL24_43-U-NA20					
			3	Ericsson AIR6449 B1					
			3	Ericsson 4460 B25/B66					
			3	Ericsson 4480 B71/B85					

3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

Document	Remarks	Source
Tower and Foundation Design	Valmont Structures, dated October 23, 2006 Eng. File No. A-122359-1	SWI
Previous Structural Analysis	Tower Engineering Professionals, Inc. dated March 17, 2022 TEP No. 310043.668100	TEP
Correspondence	Correspondence with regard to the existing loading configuration.	SWI

3.1) Analysis Method

tnxTower (version 8.2.4.3), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

3.2) Analysis Assumptions

1) The tower and foundation were built and maintained in accordance with the manufacturer's specification.
2) The configuration of existing antennas, transmission cables, mounts and other appurtenances are as specified in the tower mapping report by TEP.
3) Unless specified by the client or tower mapping, the location of the existing and proposed coax is assumed by TEP and listed in Table 1.
4) All tower components are in sufficient condition to carry their full design capacity.
5) Serviceability with respect to antenna twist, tilt, roll, or lateral translation, is not checked and is left to the carrier or tower owner to ensure conformance.
6) All antenna mounts and mounting hardware are structurally sufficient to carry the full design capacity requirements of appurtenance wind area and weight as provided by the original manufacturer specifications. It is the carrier's responsibility to ensure compliance to the structural limitations of the existing and/or proposed antenna mounts. TEP did not perform a site visit to verify the size, condition or capacity of the antenna mounts and did not analyze antennas supporting mounts as part of this structural analysis report.

This analysis may be affected if any assumptions are not valid or have been made in error. Tower Engineering Professionals should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 3 - Section Capacity (Summary)[2]

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (k)	ϕP_{allow} (k)	% Capacity	Pass / Fail
T1	175 - 165	Leg	2	3	-10146.00	119937.30	8.5	Pass
T2	165 - 150	Leg	2 1/4	43	-45439.30	156737.69	29.0	Pass
T3	150 - 140	Leg	Pirod 195555 (1.5)	103	-55585.50	226016.69	24.6	Pass
T4	140 - 120	Leg	Pirod 195557	112	-93911.20	316774.50	29.6	Pass
T5	120 - 100	Leg	Pirod 195559	127	-124259.00	420939.72	29.5	Pass
T6	100 - 80	Leg	Pirod 195559	142	-151400.00	420939.72	36.0	Pass
T7	80 - 60	Leg	Pirod 195560	157	-178067.00	539084.69	33.0	Pass
T8	60 - 40	Leg	Pirod 139283	172	-192813.00	643802.25	29.9	Pass
T9	40 - 20	Leg	Pirod 139283	181	-222034.00	643802.25	34.5	Pass
T10	20 - 0	Leg	Pirod 139284	190	-241841.00	779092.62	31.0	Pass
T1	175 - 165	Diagonal	7/8	12	-2222.81	8332.31	26.7	Pass
T2	165 - 150	Diagonal	1	55	-5083.40	14157.99	35.9	Pass
T3	150 - 140	Diagonal	L3x3x5/16	109	-7546.00	42954.24	17.6 35.2 (b)	Pass
T4	140 - 120	Diagonal	L3x3x5/16	118	-5500.90	38227.66	14.4 31.3 (b)	Pass
T5	120 - 100	Diagonal	L3x3x5/16	133	-5119.75	31750.42	16.1 21.6 (b)	Pass
T6	100 - 80	Diagonal	L3x3x5/16	148	-5195.81	25325.47	20.5 21.3 (b)	Pass
T7	80 - 60	Diagonal	L3x3x5/16	166	-5626.03	22603.14	24.9	Pass
T8	60 - 40	Diagonal	2L3 1/2x3 1/2x5/16x3/4	175	-9562.82	71854.75	13.3 15.9 (b)	Pass
T9	40 - 20	Diagonal	2L3 1/2x3 1/2x5/16x3/4	185	-7955.06	64556.52	12.3 16.7 (b)	Pass
T10	20 - 0	Diagonal	2L3 1/2x3 1/2x5/16x3/4	193	-10654.80	57992.76	18.4	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (k)	øP$_{allow}$ (k)	% Capacity	Pass / Fail
T1	175 - 165	Horizontal	7/8	34	-261.48	4140.75	6.3	Pass
T2	165 - 150	Horizontal	7/8	58	-854.88	4176.68	20.5	Pass
T1	175 - 165	Top Girt	1	4	-825.30	7063.94	11.7	Pass
T2	165 - 150	Top Girt	1 1/4	47	-1469.60	17395.56	8.4	Pass
T1	175 - 165	Bottom Girt	1	8	-857.08	7063.94	12.1	Pass
T2	165 - 150	Bottom Girt	1 1/4	50	-1213.23	17395.56	7.0	Pass
							Summary	
						Leg (T6)	36.0	Pass
						Diagonal (T2)	35.9	Pass
						Horizontal (T2)	20.5	Pass
						Top Girt (T1)	11.7	Pass
						Bottom Girt (T1)	12.1	Pass
						Bolt Checks	35.2	Pass
						RATING =	**36.0**	**Pass**

Table 4 - Tower Component Stresses vs. Capacity

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1,2	Anchor Rods	-	18.5	Pass
1,2	Base Foundation (Design Reaction Comparison)	-	54.5	Pass

Structure Rating (max from all components)^2 =	54.5%

Notes:
1) See additional documentation in "Appendix B - Additional Calculations" for calculations supporting the % capacity listed.
2) Rating per TIA-222-H, Section 15.5

Table 5 - Dish Twist/Sway Results for 60 mph Service Wind Speed

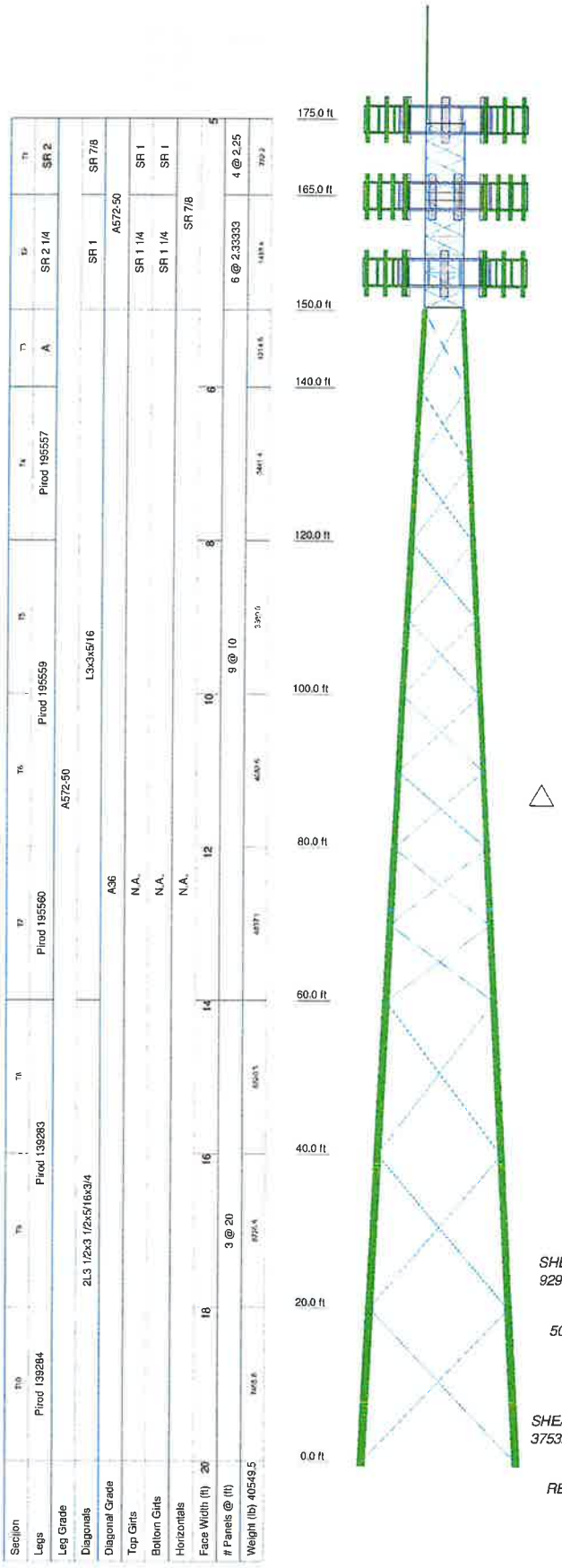
Elevation (ft)	Dish Model	Beam Deflection		
		Deflection (in)	Tilt (deg)	Twist (deg)
-	-	-	-	-

4.1) Recommendations

1) If the load differs from that described in Table 1 of this report or the provisions of this analysis are found to be invalid, another structural analysis should be performed.
2) The tower has sufficient capacity to carry the existing and proposed loading. No modifications are required at this time.

APPENDIX A

TNX TOWER OUTPUT



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
1/2" x 15' Lightning Rod	175	MT6413-77A w/ Mount Pipe	165
AM-X-CD-17-65-00T-RET w/ Mount Pipe	175	RF4439d 25A	165
SBNH-1D6565C w/ Mount Pipe	175	RF4439d 25A	165
SBNH-1D6565C w/ Mount Pipe	175	RF4439d 25A	165
TPA-65R-LCUUUU-H8 w/ Mount Pipe	175	RF4461d-13A	165
TPA-65R-LCUUUU-H8 w/ Mount Pipe	175	RF4461d-13A	165
TPA-65R-LCUUUU-H8 w/ Mount Pipe	175	RF4461d-13A	165
7770.00 w/ Mount Pipe	175	CBC78T-DS-43-2X	165
7770.00 w/ Mount Pipe	175	CBC78T-DS-43-2X	165
7770.00 w/ Mount Pipe	175	CBC78T-DS-43-2X	165
DC6-48-60-18-8F	175	RCMDC-6627-PF-48	165
RRUS 11	175	Sector Mount [SM 505-3]	165
RRUS 11	175	APX16DWV-16DWV-S-E-A20 w/ Mount Pipe	155
RRUS 11	175	APX16DWV-16DWV-S-E-A20 w/ Mount Pipe	155
RRUS 32 B2	175	APX16DWV-16DWV-S-E-A20 w/ Mount Pipe	155
RRUS 32 B2	175	APXVAALL24_43-U-NA20 w/ mount pipe	155
RRUS 32 B2	175	APXVAALL24_43-U-NA20 w/ mount pipe	155
RRUS 4478 B14	175	APXVAALL24_43-U-NA20 w/ mount pipe	155
RRUS 4478 B14	175	AIR 6449 B41 w/ Mount Pipe	155
RRUS 4478 B14	175	AIR 6449 B41 w/ Mount Pipe	155
(2) 12" x 8" x 3" TMA	175	AIR 6449 B41 w/ Mount Pipe	155
(2) 12" x 8" x 3" TMA	175	RADIO 4460 B2/B25 B66_TMO	155
(2) 12" x 8" x 3" TMA	175	RADIO 4460 B2/B25 B66_TMO	155
Sector Mount [SM 505-3]	175	RADIO 4460 B2/B25 B66_TMO	155
(2) LPA-80080/4CF w/ Mount Pipe	165	RADIO 4480 B71_TMO	155
(2) LPA-80080/4CF w/ Mount Pipe	165	RADIO 4480 B71_TMO	155
(2) LPA-80080/4CF w/ Mount Pipe	165	RADIO 4480 B71_TMO	155
(2) JAHH-65B-R3B w/ Mount Pipe	165	Sector Mount [SM 505-3]	155
(2) JAHH-65B-R3B w/ Mount Pipe	165		
(2) JAHH-65B-R3B w/ Mount Pipe	165		
MT6413-77A w/ Mount Pipe	165		
MT6413-77A w/ Mount Pipe	165		

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	Pirod 195555 (1.5)		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in New London County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 123 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 36%

ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE:
DOWN: 256345 lb
SHEAR: 26177 lb

UPLIFT: -212298 lb
SHEAR: 21940 lb

AXIAL 111148 lb
SHEAR 9293 lb *MOMENT 1012294 lb-ft*
TORQUE 4316 lb-ft
50 mph WIND - 1.0000 in ICE

AXIAL 67301 lb
SHEAR 37532 lb *MOMENT 4076956 lb-ft*
TORQUE 19164 lb-ft
REACTIONS - 123 mph WIND

Tower Engineering Professionals
326 Tryon Road
Raleigh, NC 27603
Phone: (919) 661-6351
FAX: (919) 661-6350

Job:	*Baltic*
Project:	*TEP No. 310043.946766*
Client:	SWI Funds Tower Holdings, LLC
Drawn by:	ABM
App'd:	
Code:	TIA-222-H
Date:	04/17/24
Scale:	NTS
Path:	
Dwg No.	E-1

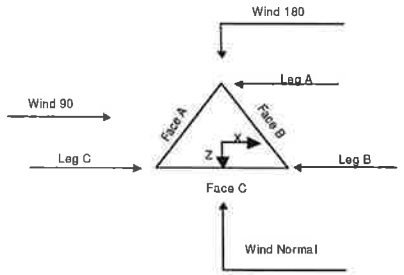
Tower Input Data

The main tower is a 3x free standing tower with an overall height of 175.00 ft above the ground line.
The base of the tower is set at an elevation of 0.00 ft above the ground line.
The face width of the tower is 5.00 ft at the top and 20.00 ft at the base.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

Tower is located in New London County, Connecticut.
Tower base elevation above sea level: 342.94 ft.
Basic wind speed of 123 mph.
Risk Category II.
Exposure Category B.
Simplified Topographic Factor Procedure for wind speed-up calculations is used.
Topographic Category: 1.
Crest Height: 0.00 ft.
Nominal ice thickness of 1.0000 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.
Pressures are calculated at each section.
Stress ratio used in tower member design is 1.
Tower analysis based on target reliabilities in accordance with Annex S.
Load Modification Factors used: $K_{es}(F_w) = 0.95$, $K_{es}(I_i) = 0.85$.
Maximum demand-capacity ratio is: 1.05.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

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



Triangular Tower

Tower Section Geometry

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	ft			ft		ft
T1	175.00-165.00			5.00	1	10.00
T2	165.00-150.00			5.00	1	15.00
T3	150.00-140.00			5.00	1	10.00
T4	140.00-120.00			6.00	1	20.00
T5	120.00-100.00			8.00	1	20.00
T6	100.00-80.00			10.00	1	20.00
T7	80.00-60.00			12.00	1	20.00
T8	60.00-40.00			14.00	1	20.00
T9	40.00-20.00			16.00	1	20.00
T10	20.00-0.00			18.00	1	20.00

Tower Section Geometry *(cont'd)*

Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset	Bottom Girt Offset
	ft	ft				in	in
T1	175.00-165.00	2.25	X Brace	No	Yes	6.0000	6.0000
T2	165.00-150.00	2.33	X Brace	No	Yes	6.0000	6.0000
T3	150.00-140.00	10.00	X Brace	No	Yes	0.0000	0.0000
T4	140.00-120.00	10.00	X Brace	No	No	0.0000	0.0000
T5	120.00-100.00	10.00	X Brace	No	No	0.0000	0.0000

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
T6	100.00-80.00	10.00	X Brace	No	No	0.0000	0.0000
T7	80.00-60.00	10.00	X Brace	No	No	0.0000	0.0000
T8	60.00-40.00	20.00	X Brace	No	No	0.0000	0.0000
T9	40.00-20.00	20.00	X Brace	No	No	0.0000	0.0000
T10	20.00-0.00	20.00	X Brace	No	No	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 175.00-165.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	7/8	A572-50 (50 ksi)
T2 165.00-150.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T3 150.00-140.00	Truss Leg	Pirod 195555 (1.5)	A572-50 (50 ksi)	Equal Angle	L3x3x5/16	A36 (36 ksi)
T4 140.00-120.00	Truss Leg	Pirod 195557	A572-50 (50 ksi)	Equal Angle	L3x3x5/16	A36 (36 ksi)
T5 120.00-100.00	Truss Leg	Pirod 195559	A572-50 (50 ksi)	Equal Angle	L3x3x5/16	A36 (36 ksi)
T6 100.00-80.00	Truss Leg	Pirod 195559	A572-50 (50 ksi)	Equal Angle	L3x3x5/16	A36 (36 ksi)
T7 80.00-60.00	Truss Leg	Pirod 195560	A572-50 (50 ksi)	Equal Angle	L3x3x5/16	A36 (36 ksi)
T8 60.00-40.00	Truss Leg	Pirod 139283	A572-50 (50 ksi)	Double Equal Angle	2L3 1/2x3 1/2x5/16x3/4	A36 (36 ksi)
T9 40.00-20.00	Truss Leg	Pirod 139283	A572-50 (50 ksi)	Double Equal Angle	2L3 1/2x3 1/2x5/16x3/4	A36 (36 ksi)
T10 20.00-0.00	Truss Leg	Pirod 139284	A572-50 (50 ksi)	Double Equal Angle	2L3 1/2x3 1/2x5/16x3/4	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 175.00-165.00	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T2 165.00-150.00	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	1 1/4	A572-50 (50 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
T1 175.00-165.00	None	Flat Bar		A36 (36 ksi)	Solid Round	7/8	A572-50 (50 ksi)
T2 165.00-150.00	None	Flat Bar		A36 (36 ksi)	Solid Round	7/8	A572-50 (50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Gusset Area (per face) ft²	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 175.00-165.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T2 165.00-150.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T3 150.00-140.00	0.00	0.5000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T4 140.00-120.00	0.00	0.5000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T5 120.00-100.00	0.00	0.5000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T6 100.00-80.00	0.00	0.5000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T7 80.00-60.00	0.00	0.5000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T8 60.00-40.00	0.00	0.7500	A36 (36 ksi)	1	1	1	Third-Pt	36.0000	36.0000
T9 40.00-20.00	0.00	0.7500	A36 (36 ksi)	1	1	1	Third-Pt	36.0000	36.0000
T10 20.00-0.00	0.00	0.7500	A36 (36 ksi)	1	1	1	Third-Pt	36.0000	36.0000

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 175.00-165.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T2 165.00-150.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T3 150.00-140.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T4 140.00-120.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T5 120.00-100.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1

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
T6 100.00-80.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T7 80.00-60.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T8 60.00-40.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T9 40.00-20.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T10 20.00-0.00	Yes	Yes	1	1 1	1 1	1 1	1 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	Truss-Leg K Factors: Truss-Legs Used As Leg Members: Leg Panels	X Brace Diagonals	Z Brace Diagonals	Truss-Legs Used As Inner Members: Leg Panels	X Brace Diagonals	Z Brace Diagonals
T3 150.00-140.00	1	0.5	0.85	1	0.5	0.85
T4 140.00-120.00	1	0.5	0.85	1	0.5	0.85
T5 120.00-100.00	1	0.5	0.85	1	0.5	0.85
T6 100.00-80.00	1	0.5	0.85	1	0.5	0.85
T7 80.00-60.00	1	0.5	0.85	1	0.5	0.85
T8 60.00-40.00	1	0.5	0.85	1	0.5	0.85
T9 40.00-20.00	1	0.5	0.85	1	0.5	0.85
T10 20.00-0.00	1	0.5	0.85	1	0.5	0.85

Tower Section Geometry (cont'd)

Tower Elevation ft	Leg Net Width Deduct in	U	Diagonal Net Width Deduct in	U	Top Girt Net Width Deduct in	U	Bottom Girt Net Width Deduct in	U	Mid Girt Net Width Deduct in	U	Long Horizontal Net Width Deduct in	U	Short Horizontal Net Width Deduct in	U
T1 175.00-165.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	0.75

Tower Elevation ft	Leg Net Width Deduct in	U	Diagonal Net Width Deduct in	U	Top Girt Net Width Deduct in	U	Bottom Girt Net Width Deduct in	U	Mid Girt Net Width Deduct in	U	Long Horizontal Net Width Deduct in	U	Short Horizontal Net Width Deduct in	U
T2 165.00-150.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	0.75
T3 150.00-140.00	0.0000	1	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 140.00-120.00	0.0000	1	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 120.00-100.00	0.0000	1	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 100.00-80.00	0.0000	1	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 80.00-60.00	0.0000	1	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 60.00-40.00	0.0000	1	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 40.00-20.00	0.0000	1	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 20.00-0.00	0.0000	1	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 Elevation ft	Redundant Horizontal Net Width Deduct in	U	Redundant Diagonal Net Width Deduct in	U	Redundant Sub-Diagonal Net Width Deduct in	U	Redundant Sub-Horizontal Net Width Deduct in	U	Redundant Vertical Net Width Deduct in	U	Redundant Hip Net Width Deduct in	U	Redundant Hip Diagonal Net Width Deduct in	U
T1 175.00-165.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T2 165.00-150.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T3 150.00-140.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T4 140.00-120.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)

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
T5 120.00-100.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T6 100.00-80.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T7 80.00-60.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T8 60.00-40.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T9 40.00-20.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T10 20.00-0.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		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.
T1 175.00-165.00	Flange	0.7500 A325N	5	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T2 165.00-150.00	Flange	1.0000 A325N	6	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T3 150.00-140.00	Flange	1.0000 A325N	6	1.0000 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T4 140.00-120.00	Flange	1.0000 A325N	6	1.0000 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T5 120.00-100.00	Flange	1.2500 A325N	6	1.2500 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T6 100.00-80.00	Flange	1.2500 A325N	6	1.2500 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T7 80.00-60.00	Flange	1.2500 A325N	6	1.2500 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T8 60.00-40.00	Flange	1.2500 A325N	12	1.0000 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T9 40.00-20.00	Flange	1.2500 A325N	12	1.0000 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T10 20.00-0.00	Flange	1.2500 A687	0	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
175													
LDF7-50A(1-5/8)	B	No	No	Ar (CaAa)	175.00 - 0.00	0.0000	0	12	6	0.5000	1.9800		0.82
1 5/8" Feedline	B	No	No	Ar (CaAa)	175.00 - 0.00	0.0000	0.05	1	1	0.5000	1.9800		0.82
1 1/4" Coax	B	No	No	Ar (CaAa)	175.00 - 0.00	0.0000	0.08	2	2	0.5000	1.2500		0.38
Feed Line Ladder	B	No	No	Af (CaAa)	175.00 - 0.00	0.0000	0	1	1	3.0000	3.0000		4.00
165													
LDF7-50A(1-5/8)	C	No	No	Ar (CaAa)	165.00 - 0.00	0.0000	0	12	6	0.5000	1.9800		0.82
MLC HYBRID 6x12 6AWGx6(1-1/2)	C	No	No	Ar (CaAa)	165.00 - 0.00	0.0000	0.05	2	2	0.5000	1.5300		0.59
Feed Line Ladder	C	No	No	Af (CaAa)	165.00 - 0.00	0.0000	0	1	1	3.0000	3.0000		4.00
155													
1 5/8"	C	No	No	Ar (CaAa)	155.00 -	0.0000	0.08	3	3	1.6250	1.6250		1.40

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
Hybriflex ****					0.00								

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	C_AA_A ft^2/ft	Weight plf
****								

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 lb
T1	175.00-165.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	33.240	0.000	154.17
		C	0.000	0.000	0.000	0.000	0.00
T2	165.00-150.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	49.860	0.000	231.25
		C	0.000	0.000	50.167	0.000	246.30
T3	150.00-140.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	33.240	0.000	154.17
		C	0.000	0.000	36.695	0.000	192.28
T4	140.00-120.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	66.480	0.000	308.34
		C	0.000	0.000	73.390	0.000	384.56
T5	120.00-100.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	66.480	0.000	308.34
		C	0.000	0.000	73.390	0.000	384.56
T6	100.00-80.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	66.480	0.000	308.34
		C	0.000	0.000	73.390	0.000	384.56
T7	80.00-60.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	66.480	0.000	308.34
		C	0.000	0.000	73.390	0.000	384.56
T8	60.00-40.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	66.480	0.000	308.34
		C	0.000	0.000	73.390	0.000	384.56
T9	40.00-20.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	66.480	0.000	308.34
		C	0.000	0.000	73.390	0.000	384.56
T10	20.00-0.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	66.480	0.000	308.34
		C	0.000	0.000	73.390	0.000	384.56

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 lb
T1	175.00-165.00	A	1.001	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	40.459	0.000	551.87
		C		0.000	0.000	0.000	0.000	0.00
T2	165.00-150.00	A	0.994	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	60.566	0.000	823.90
		C		0.000	0.000	62.494	0.000	848.42
T3	150.00-140.00	A	0.986	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	40.290	0.000	546.47
		C		0.000	0.000	50.514	0.000	661.80
T4	140.00-120.00	A	0.975	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	80.351	0.000	1085.66
		C		0.000	0.000	100.774	0.000	1315.20
T5	120.00-100.00	A	0.959	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	80.006	0.000	1074.71
		C		0.000	0.000	100.390	0.000	1302.57
T6	100.00-80.00	A	0.940	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	79.598	0.000	1061.86
		C		0.000	0.000	99.938	0.000	1287.75
T7	80.00-60.00	A	0.916	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	79.100	0.000	1046.24
		C		0.000	0.000	99.384	0.000	1269.71
T8	60.00-40.00	A	0.886	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	78.452	0.000	1026.09
		C		0.000	0.000	98.665	0.000	1246.42
T9	40.00-20.00	A	0.842	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	77.509	0.000	997.10
		C		0.000	0.000	97.620	0.000	1212.86
T10	20.00-0.00	A	0.754	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	75.641	0.000	940.75
		C		0.000	0.000	89.026	0.000	1108.98

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
T1	175.00-165.00	7.3765	-4.6148	5.6984	-3.3195
T2	165.00-150.00	3.9776	0.3555	3.4208	0.9357
T3	150.00-140.00	2.8268	0.6006	1.8338	0.8649
T4	140.00-120.00	3.3165	0.7158	2.5826	1.2425
T5	120.00-100.00	3.9242	0.8583	3.1544	1.6819
T6	100.00-80.00	4.5208	0.9989	4.0946	1.9961
T7	80.00-60.00	4.9710	1.1029	4.5801	2.2226
T8	60.00-40.00	5.5263	1.2208	5.0744	2.4318
T9	40.00-20.00	6.0757	1.3477	5.5806	2.6116
T10	20.00-0.00	6.5214	1.4489	6.3253	2.7479

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T1	2	LDF7-50A(1-5/8)	165.00 - 175.00	0.6000	0.5737
T1	3	1 5/8" Feedline	165.00 - 175.00	0.6000	0.5737
T1	4	1 1/4" Coax	165.00 - 175.00	0.6000	0.5737
T1	5	Feed Line Ladder	165.00 - 175.00	0.6000	0.5737
T2	2	LDF7-50A(1-5/8)	150.00 - 165.00	0.6000	0.5666
T2	3	1 5/8" Feedline	150.00 - 165.00	0.6000	0.5666
T2	4	1 1/4" Coax	150.00 - 165.00	0.6000	0.5666
T2	5	Feed Line Ladder	150.00 - 165.00	0.6000	0.5666
T2	7	LDF7-50A(1-5/8)	150.00 - 165.00	0.6000	0.5666
T2	8	MLC HYBRID 6x12 6AWGx6(1-1/2)	150.00 - 165.00	0.6000	0.5666
T2	9	Feed Line Ladder	150.00 - 165.00	0.6000	0.5666
T2	11	1 5/8" Hybriflex	150.00 - 155.00	0.6000	0.5666
T3	2	LDF7-50A(1-5/8)	140.00 - 150.00	0.6000	0.4010
T3	3	1 5/8" Feedline	140.00 - 150.00	0.6000	0.4010
T3	4	1 1/4" Coax	140.00 - 150.00	0.6000	0.4010
T3	5	Feed Line Ladder	140.00 - 150.00	0.6000	0.4010
T3	7	LDF7-50A(1-5/8)	140.00 - 150.00	0.6000	0.4010
T3	8	MLC HYBRID 6x12 6AWGx6(1-1/2)	140.00 - 150.00	0.6000	0.4010
T3	9	Feed Line Ladder	140.00 - 150.00	0.6000	0.4010
T3	11	1 5/8" Hybriflex	140.00 - 150.00	0.6000	0.4010
T4	2	LDF7-50A(1-5/8)	120.00 - 140.00	0.6000	0.4952
T4	3	1 5/8" Feedline	120.00 - 140.00	0.6000	0.4952
T4	4	1 1/4" Coax	120.00 - 140.00	0.6000	0.4952
T4	5	Feed Line Ladder	120.00 - 140.00	0.6000	0.4952
T4	7	LDF7-50A(1-5/8)	120.00 - 140.00	0.6000	0.4952
T4	8	MLC HYBRID 6x12 6AWGx6(1-1/2)	120.00 - 140.00	0.6000	0.4952
T4	9	Feed Line Ladder	120.00 - 140.00	0.6000	0.4952
T4	11	1 5/8" Hybriflex	120.00 - 140.00	0.6000	0.4952
T5	2	LDF7-50A(1-5/8)	100.00 - 120.00	0.6000	0.5791
T5	3	1 5/8" Feedline	100.00 - 120.00	0.6000	0.5791
T5	4	1 1/4" Coax	100.00 -	0.6000	0.5791

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
			120.00		
T5	5	Feed Line Ladder	100.00 - 120.00	0.6000	0.5791
T5	7	LDF7-50A(1-5/8)	100.00 - 120.00	0.6000	0.5791
T5	8	MLC HYBRID 6x12 6AWGx6(1-1/2)	100.00 - 120.00	0.6000	0.5791
T5	9	Feed Line Ladder	100.00 - 120.00	0.6000	0.5791
T5	11	1 5/8" Hybriflex	100.00 - 120.00	0.6000	0.5791
T6	2	LDF7-50A(1-5/8)	80.00 - 100.00	0.6000	0.6000
T6	3	1 5/8" Feedline	80.00 - 100.00	0.6000	0.6000
T6	4	1 1/4" Coax	80.00 - 100.00	0.6000	0.6000
T6	5	Feed Line Ladder	80.00 - 100.00	0.6000	0.6000
T6	7	LDF7-50A(1-5/8)	80.00 - 100.00	0.6000	0.6000
T6	8	MLC HYBRID 6x12 6AWGx6(1-1/2)	80.00 - 100.00	0.6000	0.6000
T6	9	Feed Line Ladder	80.00 - 100.00	0.6000	0.6000
T6	11	1 5/8" Hybriflex	80.00 - 100.00	0.6000	0.6000
T7	2	LDF7-50A(1-5/8)	60.00 - 80.00	0.6000	0.6000
T7	3	1 5/8" Feedline	60.00 - 80.00	0.6000	0.6000
T7	4	1 1/4" Coax	60.00 - 80.00	0.6000	0.6000
T7	5	Feed Line Ladder	60.00 - 80.00	0.6000	0.6000
T7	7	LDF7-50A(1-5/8)	60.00 - 80.00	0.6000	0.6000
T7	8	MLC HYBRID 6x12 6AWGx6(1-1/2)	60.00 - 80.00	0.6000	0.6000
T7	9	Feed Line Ladder	60.00 - 80.00	0.6000	0.6000
T7	11	1 5/8" Hybriflex	60.00 - 80.00	0.6000	0.6000
T8	2	LDF7-50A(1-5/8)	40.00 - 60.00	0.6000	0.6000
T8	3	1 5/8" Feedline	40.00 - 60.00	0.6000	0.6000
T8	4	1 1/4" Coax	40.00 - 60.00	0.6000	0.6000
T8	5	Feed Line Ladder	40.00 - 60.00	0.6000	0.6000
T8	7	LDF7-50A(1-5/8)	40.00 - 60.00	0.6000	0.6000
T8	8	MLC HYBRID 6x12 6AWGx6(1-1/2)	40.00 - 60.00	0.6000	0.6000
T8	9	Feed Line Ladder	40.00 - 60.00	0.6000	0.6000
T8	11	1 5/8" Hybriflex	40.00 - 60.00	0.6000	0.6000
T9	2	LDF7-50A(1-5/8)	20.00 - 40.00	0.6000	0.6000
T9	3	1 5/8" Feedline	20.00 - 40.00	0.6000	0.6000
T9	4	1 1/4" Coax	20.00 - 40.00	0.6000	0.6000
T9	5	Feed Line Ladder	20.00 - 40.00	0.6000	0.6000
T9	7	LDF7-50A(1-5/8)	20.00 - 40.00	0.6000	0.6000
T9	8	MLC HYBRID 6x12 6AWGx6(1-1/2)	20.00 - 40.00	0.6000	0.6000
T9	9	Feed Line Ladder	20.00 - 40.00	0.6000	0.6000
T9	11	1 5/8" Hybriflex	20.00 - 40.00	0.6000	0.6000
T10	2	LDF7-50A(1-5/8)	0.00 - 20.00	0.6000	0.6000
T10	3	1 5/8" Feedline	0.00 - 20.00	0.6000	0.6000
T10	4	1 1/4" Coax	0.00 - 20.00	0.6000	0.6000
T10	5	Feed Line Ladder	0.00 - 20.00	0.6000	0.6000
T10	7	LDF7-50A(1-5/8)	0.00 - 20.00	0.6000	0.6000
T10	8	MLC HYBRID 6x12 6AWGx6(1-1/2)	0.00 - 20.00	0.6000	0.6000
T10	9	Feed Line Ladder	0.00 - 20.00	0.6000	0.6000
T10	11	1 5/8" Hybriflex	0.00 - 20.00	0.6000	0.6000

Discrete Tower Loads

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 lb
1/2" x 15' Lightning Rod	C	From Leg	0.00	0.00	0.0000	175.00	No Ice	0.75	0.75	9.89
			0.00				1/2" Ice	2.26	2.26	19.11
			7.50				1" Ice	3.79	3.79	37.70
175										
AM-X-CD-17-65-00T-RET w/ Mount Pipe	A	From Leg	4.00	0.00	0.0000	175.00	No Ice	11.31	8.70	88.70
			0.00				1/2" Ice	11.93	10.11	171.19
			0.00				1" Ice	12.55	11.38	263.33
SBNH-1D6565C w/ Mount Pipe	B	From Leg	4.00	0.00	0.0000	175.00	No Ice	11.68	9.84	93.77
			0.00				1/2" Ice	12.40	11.37	183.43
			0.00				1" Ice	13.14	12.91	283.05
SBNH-1D6565C w/ Mount Pipe	C	From Leg	4.00	0.00	0.0000	175.00	No Ice	11.68	9.84	93.77
			0.00				1/2" Ice	12.40	11.37	183.43
			0.00				1" Ice	13.14	12.91	283.05
TPA-65R-LCUUUU-H8 w/ Mount Pipe	A	From Leg	4.00	0.00	0.0000	175.00	No Ice	13.54	10.96	114.45
			0.00				1/2" Ice	14.24	12.49	217.61
			0.00				1" Ice	14.95	14.04	330.97
TPA-65R-LCUUUU-H8 w/ Mount Pipe	B	From Leg	4.00	0.00	0.0000	175.00	No Ice	13.54	10.96	114.45
			0.00				1/2" Ice	14.24	12.49	217.61
			0.00				1" Ice	14.95	14.04	330.97
TPA-65R-LCUUUU-H8 w/ Mount Pipe	C	From Leg	4.00	0.00	0.0000	175.00	No Ice	13.54	10.96	114.45
			0.00				1/2" Ice	14.24	12.49	217.61
			0.00				1" Ice	14.95	14.04	330.97
7770.00 w/ Mount Pipe	A	From Leg	4.00	0.00	0.0000	175.00	No Ice	5.84	4.35	56.90
			0.00				1/2" Ice	6.32	5.20	105.42
			0.00				1" Ice	6.77	5.92	160.42
7770.00 w/ Mount Pipe	B	From Leg	4.00	0.00	0.0000	175.00	No Ice	5.84	4.35	56.90
			0.00				1/2" Ice	6.32	5.20	105.42
			0.00				1" Ice	6.77	5.92	160.42
7770.00 w/ Mount Pipe	C	From Leg	4.00	0.00	0.0000	175.00	No Ice	5.84	4.35	56.90
			0.00				1/2" Ice	6.32	5.20	105.42
			0.00				1" Ice	6.77	5.92	160.42
DC6-48-60-18-8F	A	From Leg	4.00	0.00	0.0000	175.00	No Ice	1.21	1.21	32.80
			0.00				1/2" Ice	1.89	1.89	54.76
			0.00				1" Ice	2.11	2.11	79.58
RRUS 11	A	From Leg	4.00	0.00	0.0000	175.00	No Ice	2.79	1.19	50.70
			0.00				1/2" Ice	3.00	1.34	71.57
			0.00				1" Ice	3.21	1.50	95.48
RRUS 11	B	From Leg	4.00	0.00	0.0000	175.00	No Ice	2.79	1.19	50.70
			0.00				1/2" Ice	3.00	1.34	71.57
			0.00				1" Ice	3.21	1.50	95.48
RRUS 11	C	From Leg	4.00	0.00	0.0000	175.00	No Ice	2.79	1.19	50.70
			0.00				1/2" Ice	3.00	1.34	71.57
			0.00				1" Ice	3.21	1.50	95.48
RRUS 32 B2	A	From Leg	4.00	0.00	0.0000	175.00	No Ice	2.73	1.67	52.90
			0.00				1/2" Ice	2.95	1.86	73.96
			0.00				1" Ice	3.18	2.05	98.21
RRUS 32 B2	B	From Leg	4.00	0.00	0.0000	175.00	No Ice	2.73	1.67	52.90
			0.00				1/2" Ice	2.95	1.86	73.96
			0.00				1" Ice	3.18	2.05	98.21
RRUS 32 B2	C	From Leg	4.00	0.00	0.0000	175.00	No Ice	2.73	1.67	52.90
			0.00				1/2" Ice	2.95	1.86	73.96
			0.00				1" Ice	3.18	2.05	98.21

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 lb
RRUS 4478 B14	A	From Leg	4.00	0.00	0.0000	175.00	No Ice	1.84	1.06	59.90
			0.00				1/2" Ice	2.01	1.20	75.78
			0.00				1" Ice	2.19	1.34	94.29
RRUS 4478 B14	B	From Leg	4.00	0.00	0.0000	175.00	No Ice	1.84	1.06	59.90
			0.00				1/2" Ice	2.01	1.20	75.78
			0.00				1" Ice	2.19	1.34	94.29
RRUS 4478 B14	C	From Leg	4.00	0.00	0.0000	175.00	No Ice	1.84	1.06	59.90
			0.00				1/2" Ice	2.01	1.20	75.78
			0.00				1" Ice	2.19	1.34	94.29
(2) 12" x 8" x 3" TMA	A	From Leg	4.00	0.00	0.0000	175.00	No Ice	0.80	0.32	8.00
			0.00				1/2" Ice	0.91	0.40	13.83
			0.00				1" Ice	1.04	0.49	21.35
(2) 12" x 8" x 3" TMA	B	From Leg	4.00	0.00	0.0000	175.00	No Ice	0.80	0.32	8.00
			0.00				1/2" Ice	0.91	0.40	13.83
			0.00				1" Ice	1.04	0.49	21.35
(2) 12" x 8" x 3" TMA	C	From Leg	4.00	0.00	0.0000	175.00	No Ice	0.80	0.32	8.00
			0.00				1/2" Ice	0.91	0.40	13.83
			0.00				1" Ice	1.04	0.49	21.35
Sector Mount [SM 505-3]	C	None			0.0000	175.00	No Ice	34.86	34.86	1725.30
							1/2" Ice	49.79	49.79	2316.90
							1" Ice	64.72	64.72	2908.50
165										
(2) LPA-80080/4CF w/ Mount Pipe	A	From Leg	4.00	0.00	0.0000	165.00	No Ice	3.11	6.82	33.90
			0.00				1/2" Ice	3.58	7.65	82.91
			0.00				1" Ice	4.02	8.35	138.07
(2) LPA-80080/4CF w/ Mount Pipe	B	From Leg	4.00	0.00	0.0000	165.00	No Ice	3.11	6.82	33.90
			0.00				1/2" Ice	3.58	7.65	82.91
			0.00				1" Ice	4.02	8.35	138.07
(2) LPA-80080/4CF w/ Mount Pipe	C	From Leg	4.00	0.00	0.0000	165.00	No Ice	3.11	6.82	33.90
			0.00				1/2" Ice	3.58	7.65	82.91
			0.00				1" Ice	4.02	8.35	138.07
(2) JAHH-65B-R3B w/ Mount Pipe	A	From Leg	4.00	0.00	0.0000	165.00	No Ice	9.23	7.53	84.33
			0.00				1/2" Ice	9.74	8.60	159.59
			0.00				1" Ice	10.25	9.46	242.93
(2) JAHH-65B-R3B w/ Mount Pipe	B	From Leg	4.00	0.00	0.0000	165.00	No Ice	9.23	7.53	84.33
			0.00				1/2" Ice	9.74	8.60	159.59
			0.00				1" Ice	10.25	9.46	242.93
(2) JAHH-65B-R3B w/ Mount Pipe	C	From Leg	4.00	0.00	0.0000	165.00	No Ice	9.23	7.53	84.33
			0.00				1/2" Ice	9.74	8.60	159.59
			0.00				1" Ice	10.25	9.46	242.93
MT6413-77A w/ Mount Pipe	A	From Leg	4.00	0.00	0.0000	165.00	No Ice	4.00	2.15	69.74
			0.00				1/2" Ice	4.31	2.55	103.26
			0.00				1" Ice	4.63	2.97	141.37
MT6413-77A w/ Mount Pipe	B	From Leg	4.00	0.00	0.0000	165.00	No Ice	4.00	2.15	69.74
			0.00				1/2" Ice	4.31	2.55	103.26
			0.00				1" Ice	4.63	2.97	141.37
MT6413-77A w/ Mount Pipe	C	From Leg	4.00	0.00	0.0000	165.00	No Ice	4.00	2.15	69.74
			0.00				1/2" Ice	4.31	2.55	103.26
			0.00				1" Ice	4.63	2.97	141.37
RF4439d 25A	A	From Leg	4.00	0.00	0.0000	165.00	No Ice	2.33	1.56	74.70
			0.00				1/2" Ice	2.52	1.72	96.13
			0.00				1" Ice	2.71	1.89	120.59
RF4439d 25A	B	From Leg	4.00	0.00	0.0000	165.00	No Ice	2.33	1.56	74.70
			0.00				1/2" Ice	2.52	1.72	96.13
			0.00				1" Ice	2.71	1.89	120.59
RF4439d 25A	C	From Leg	4.00	0.00	0.0000	165.00	No Ice	2.33	1.56	74.70
			0.00				1/2" Ice	2.52	1.72	96.13

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 lb
			0.00				1" Ice	2.71	1.89	120.59
RF4461d-13A	A	From Leg	4.00		0.0000	165.00	No Ice	1.87	1.28	79.10
			0.00				1/2" Ice	2.03	1.42	97.61
			0.00				1" Ice	2.21	1.57	118.91
RF4461d-13A	B	From Leg	4.00		0.0000	165.00	No Ice	1.87	1.28	79.10
			0.00				1/2" Ice	2.03	1.42	97.61
			0.00				1" Ice	2.21	1.57	118.91
RF4461d-13A	C	From Leg	4.00		0.0000	165.00	No Ice	1.87	1.28	79.10
			0.00				1/2" Ice	2.03	1.42	97.61
			0.00				1" Ice	2.21	1.57	118.91
CBC78T-DS-43-2X	A	From Leg	4.00		0.0000	165.00	No Ice	0.37	0.51	20.70
			0.00				1/2" Ice	0.45	0.60	27.04
			0.00				1" Ice	0.53	0.70	35.07
CBC78T-DS-43-2X	B	From Leg	4.00		0.0000	165.00	No Ice	0.37	0.51	20.70
			0.00				1/2" Ice	0.45	0.60	27.04
			0.00				1" Ice	0.53	0.70	35.07
CBC78T-DS-43-2X	C	From Leg	4.00		0.0000	165.00	No Ice	0.37	0.51	20.70
			0.00				1/2" Ice	0.45	0.60	27.04
			0.00				1" Ice	0.53	0.70	35.07
RCMDC-6627-PF-48	A	From Leg	4.00		0.0000	165.00	No Ice	4.06	3.10	32.00
			0.00				1/2" Ice	4.32	3.34	68.49
			0.00				1" Ice	4.58	3.58	108.97
Sector Mount [SM 505-3]	C	None			0.0000	165.00	No Ice	34.86	34.86	1725.30
							1/2" Ice	49.79	49.79	2316.90
							1" Ice	64.72	64.72	2908.50
155										
APX16DWV-16DWV-S-E-A 20 w/ Mount Pipe	A	From Leg	4.00		0.0000	155.00	No Ice	6.91	3.57	62.60
			0.00				1/2" Ice	7.39	4.41	112.02
			0.00				1" Ice	7.86	5.13	168.01
APX16DWV-16DWV-S-E-A 20 w/ Mount Pipe	B	From Leg	4.00		0.0000	155.00	No Ice	6.91	3.57	62.60
			0.00				1/2" Ice	7.39	4.41	112.02
			0.00				1" Ice	7.86	5.13	168.01
APX16DWV-16DWV-S-E-A 20 w/ Mount Pipe	C	From Leg	4.00		0.0000	155.00	No Ice	6.91	3.57	62.60
			0.00				1/2" Ice	7.39	4.41	112.02
			0.00				1" Ice	7.86	5.13	168.01
APXVAALL24_43-U-NA20 w/ mount pipe	A	From Leg	4.00		0.0000	155.00	No Ice	20.24	11.03	169.12
			0.00				1/2" Ice	20.89	12.46	305.80
			0.00				1" Ice	21.55	13.56	454.11
APXVAALL24_43-U-NA20 w/ mount pipe	B	From Leg	4.00		0.0000	155.00	No Ice	20.24	11.03	169.12
			0.00				1/2" Ice	20.89	12.46	305.80
			0.00				1" Ice	21.55	13.56	454.11
APXVAALL24_43-U-NA20 w/ mount pipe	C	From Leg	4.00		0.0000	155.00	No Ice	20.24	11.03	169.12
			0.00				1/2" Ice	20.89	12.46	305.80
			0.00				1" Ice	21.55	13.56	454.11
AIR 6449 B41 w/ Mount Pipe	A	From Leg	4.00		0.0000	155.00	No Ice	5.87	3.27	128.35
			0.00				1/2" Ice	6.23	3.73	177.30
			0.00				1" Ice	6.61	4.20	231.70
AIR 6449 B41 w/ Mount Pipe	B	From Leg	4.00		0.0000	155.00	No Ice	5.87	3.27	128.35
			0.00				1/2" Ice	6.23	3.73	177.30
			0.00				1" Ice	6.61	4.20	231.70
AIR 6449 B41 w/ Mount Pipe	C	From Leg	4.00		0.0000	155.00	No Ice	5.87	3.27	128.35
			0.00				1/2" Ice	6.23	3.73	177.30
			0.00				1" Ice	6.61	4.20	231.70
RADIO 4460 B2/B25 B66_TMO	A	From Leg	4.00		0.0000	155.00	No Ice	2.14	1.69	109.00
			0.00				1/2" Ice	2.32	1.85	131.16
			0.00				1" Ice	2.51	2.02	156.36
RADIO 4460 B2/B25	B	From Leg	4.00		0.0000	155.00	No Ice	2.14	1.69	109.00

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 lb
B66_TMO			0.00				1/2" Ice	2.32	1.85	131.16
			0.00				1" Ice	2.51	2.02	156.36
RADIO 4460 B2/B25 B66_TMO	C	From Leg	4.00		0.0000	155.00	No Ice	2.14	1.69	109.00
			0.00				1/2" Ice	2.32	1.85	131.16
			0.00				1" Ice	2.51	2.02	156.36
RADIO 4480 B71_TMO	A	From Leg	4.00		0.0000	155.00	No Ice	2.85	1.38	92.60
			0.00				1/2" Ice	3.06	1.54	114.30
			0.00				1" Ice	3.28	1.71	139.11
RADIO 4480 B71_TMO	B	From Leg	4.00		0.0000	155.00	No Ice	2.85	1.38	92.60
			0.00				1/2" Ice	3.06	1.54	114.30
			0.00				1" Ice	3.28	1.71	139.11
RADIO 4480 B71_TMO	C	From Leg	4.00		0.0000	155.00	No Ice	2.85	1.38	92.60
			0.00				1/2" Ice	3.06	1.54	114.30
			0.00				1" Ice	3.28	1.71	139.11
Sector Mount [SM 505-3]	C	None			0.0000	155.00	No Ice	34.86	34.86	1725.30
							1/2" Ice	49.79	49.79	2316.90
							1" Ice	64.72	64.72	2908.50
****										

Truss-Leg Properties

Section Designation	Area in^2	Area Ice in^2	Self Weight lb	Ice Weight lb	Equiv. Diameter in	Equiv. Diameter Ice in	Leg Area in^2
Pirod 195555 (1.5)	2266.6558	5682.3110	532.37	486.68	7.8703	19.7304	5.3014
Pirod 195557	2426.7400	5746.7268	849.74	454.88	8.4262	19.9539	7.2158
Pirod 195559	2558.7223	5807.2381	998.86	457.58	8.8845	20.1640	9.4248
Pirod 195559	2558.7223	5793.6889	998.86	444.20	8.8845	20.1170	9.4248
Pirod 195560	2763.6675	5849.0993	1212.86	458.92	9.5961	20.3094	11.9282
Pirod 139283	3240.2856	6452.5969	1492.90	539.17	11.2510	22.4049	14.7262
Pirod 139283	3240.2856	6222.0050	1492.90	501.54	11.2510	21.6042	14.7262
Pirod 139284	3371.0057	5988.1937	1700.86	441.15	11.7049	20.7923	17.8187

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 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice

Comb. No.	Description
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
T1	175 - 165	Leg	Max Tension	7	9071.75	786.42	-465.73
			Max. Compression	2	-11733.26	4.36	-30.69
			Max. Mx	20	-8892.53	-860.00	77.52
			Max. My	2	-11725.20	-16.12	-891.45
			Max. Vy	8	1656.12	32.30	-10.46
			Max. Vx	2	-1722.83	4.36	-30.69
		Diagonal	Max Tension	25	2177.00	0.00	0.00
			Max. Compression	12	-2222.81	0.00	0.00
			Max. Mx	29	436.93	-4.23	-0.03
			Max. My	12	-2220.04	-1.83	-0.17
			Max. Vy	29	7.48	-4.23	-0.03
			Max. Vx	12	0.06	-2.38	-0.17
		Horizontal	Max Tension	14	322.19	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
			Max. Compression	3	-261.48	0.00	0.00
			Max. Mx	26	73.59	14.85	0.00
			Max. Vy	26	-11.88	0.00	0.00
		Top Girt	Max Tension	2	844.75	0.00	0.00
			Max. Compression	15	-825.30	0.00	0.00
			Max. Mx	26	21.44	17.67	0.00
			Max. Vy	26	-14.14	0.00	0.00
		Bottom Girt	Max Tension	6	910.95	0.00	0.00
			Max. Compression	19	-857.08	0.00	0.00
			Max. Mx	26	58.82	17.67	0.00
			Max. Vy	26	-14.14	0.00	0.00
T2	165 - 150	Leg	Max Tension	7	40882.23	-412.41	-243.36
			Max. Compression	18	-49356.22	2041.82	-1164.45
			Max. Mx	6	39665.96	-2069.01	1179.63
			Max. My	14	38791.51	-51.09	-2358.91
			Max. Vy	6	4973.56	-2069.01	1179.63
			Max. Vx	14	5682.38	-51.09	-2358.91
		Diagonal	Max Tension	13	4943.52	0.00	0.00
			Max. Compression	24	-5083.40	0.00	0.00
			Max. Mx	27	878.72	-5.65	0.00
			Max. My	24	3855.20	-3.31	0.44
			Max. Vy	27	9.08	-5.65	0.00
			Max. Vx	24	0.16	-3.07	0.44
		Horizontal	Max Tension	6	671.85	0.00	0.00
			Max. Compression	19	-536.74	0.00	0.00
			Max. Mx	26	211.64	14.76	0.00
			Max. Vy	26	-11.81	0.00	0.00
		Top Girt	Max Tension	18	1537.37	0.00	0.00
			Max. Compression	7	-1469.60	0.00	0.00
			Max. Mx	26	74.61	24.17	0.00
			Max. Vy	26	-19.34	0.00	0.00
		Bottom Girt	Max Tension	6	1450.71	0.00	0.00
			Max. Compression	19	-1213.23	0.00	0.00
			Max. Mx	26	251.80	24.17	0.00
			Max. Vy	26	-19.34	0.00	0.00
T3	150 - 140	Leg	Max Tension	7	47736.81	-2377.67	-12.84
			Max. Compression	18	-55585.48	2269.04	12.73
			Max. Mx	6	46375.58	-2866.94	-19.16
			Max. My	4	-4797.57	-302.59	-5140.49
			Max. Vy	22	157.06	-2792.34	-16.87
			Max. Vx	4	514.40	-302.59	-5140.49
		Diagonal	Max Tension	15	6731.93	97.57	18.95
			Max. Compression	2	-7546.00	0.00	0.00
			Max. Mx	6	6342.63	101.14	14.60
			Max. My	12	-6439.51	-70.28	26.02
			Max. Vy	4	-27.19	94.00	15.14
			Max. Vx	12	-5.56	0.00	0.00
T4	140 - 120	Leg	Max Tension	7	82113.77	-3685.28	-24.56
			Max. Compression	18	-93911.23	3314.13	11.97
			Max. Mx	18	-93408.95	3978.61	13.78
			Max. My	4	-6106.85	-302.59	-5140.49
			Max. Vy	18	-269.30	3978.61	13.78
			Max. Vx	4	-361.25	-302.59	-5140.49
		Diagonal	Max Tension	2	5982.14	0.00	0.00
			Max. Compression	25	-5644.07	0.00	0.00
			Max. Mx	18	5571.27	114.22	10.59
			Max. My	4	5780.89	94.96	-13.30
			Max. Vy	29	35.02	53.81	7.85
			Max. Vx	4	2.99	0.00	0.00
T5	120 - 100	Leg	Max Tension	7	108502.62	-3709.51	-21.00
			Max. Compression	18	-124259.35	3665.41	8.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
			Max. Mx	18	-123666.47	3781.77	8.62
			Max. My	4	-7556.00	-114.38	-3719.57
			Max. Vy	3	-149.64	3748.07	-12.00
			Max. Vx	4	-166.03	-114.38	-3719.57
		Diagonal	Max Tension	24	5077.31	0.00	0.00
			Max. Compression	2	-5119.75	0.00	0.00
			Max. Mx	18	4338.30	90.40	7.62
			Max. My	34	-745.85	52.22	9.78
			Max. Vy	29	42.60	66.85	8.73
			Max. Vx	34	-2.75	0.00	0.00
T6	100 - 80	Leg	Max Tension	7	131550.33	-3541.96	-21.01
			Max. Compression	18	-151400.46	3227.27	3.32
			Max. Mx	6	118192.81	-3717.70	-23.34
			Max. My	16	-11432.49	-207.70	4237.95
			Max. Vy	22	-143.76	-3555.74	-1.55
			Max. Vx	16	-180.96	14.00	3985.73
		Diagonal	Max Tension	24	5011.62	0.00	0.00
			Max. Compression	2	-5195.81	0.00	0.00
			Max. Mx	18	4132.37	95.52	9.03
			Max. My	28	1142.05	83.32	-11.99
			Max. Vy	33	50.25	84.39	-11.06
			Max. Vx	28	3.03	0.00	0.00
T7	80 - 60	Leg	Max Tension	7	153349.86	-3589.20	8.61
			Max. Compression	18	-178066.67	5859.01	132.87
			Max. Mx	6	149562.09	-6555.38	-163.99
			Max. My	16	-13904.18	-410.41	8190.71
			Max. Vy	6	435.89	-6555.38	-163.99
			Max. Vx	16	-888.80	-410.41	8190.71
		Diagonal	Max Tension	18	5113.02	0.00	0.00
			Max. Compression	18	-5626.03	0.00	0.00
			Max. Mx	33	539.43	105.07	12.15
			Max. My	29	-1385.00	81.96	-15.03
			Max. Vy	33	57.70	105.07	12.15
			Max. Vx	29	3.38	0.00	0.00
T8	60 - 40	Leg	Max Tension	7	165398.85	-6450.13	-160.10
			Max. Compression	18	-192812.79	8736.63	57.24
			Max. Mx	18	-192812.79	8736.63	57.24
			Max. My	16	-15652.68	92.79	8670.47
			Max. Vy	37	536.78	-7392.51	11.10
			Max. Vx	16	-313.19	92.79	8670.47
		Diagonal	Max Tension	7	8348.41	0.00	0.00
			Max. Compression	18	-9562.82	0.00	0.00
			Max. Mx	33	2493.56	-348.32	-53.93
			Max. My	18	-9240.42	-109.56	-73.45
			Max. Vy	33	-131.74	-348.32	-53.93
			Max. Vx	29	-10.27	0.00	0.00
T9	40 - 20	Leg	Max Tension	7	186630.21	-8415.71	-92.72
			Max. Compression	18	-222033.72	7627.32	58.75
			Max. Mx	6	180647.71	-9247.02	-131.18
			Max. My	16	-19795.15	-903.37	14023.28
			Max. Vy	37	-721.55	-7392.51	11.10
			Max. Vx	16	-521.60	-903.37	14023.28
		Diagonal	Max Tension	18	8770.67	0.00	0.00
			Max. Compression	7	-7955.06	0.00	0.00
			Max. Mx	33	-329.40	-451.78	-65.01
			Max. My	34	-3151.13	-119.56	-66.80
			Max. Vy	33	-149.03	-451.78	-65.01
			Max. Vx	34	10.02	0.00	0.00
T10	20 - 0	Leg	Max Tension	7	202003.68	-9017.08	-122.12
			Max. Compression	18	-241840.68	0.00	-0.04
			Max. Mx	6	197269.20	-9247.02	-131.18

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
			Max. My	16	-19868.39	-903.37	14023.28
			Max. Vy	6	-733.78	-9247.02	-131.18
			Max. Vx	16	965.17	-903.37	14023.28
		Diagonal	Max Tension	7	9349.62	0.00	0.00
			Max. Compression	18	-10654.76	0.00	0.00
			Max. Mx	34	3712.94	-412.02	-86.32
			Max. My	16	7551.23	-391.73	-120.78
			Max. Vy	34	-152.85	-412.02	-86.32
			Max. Vx	16	12.46	0.00	0.00

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Leg C	Max. Vert	18	256345.14	22858.82	-12755.68
	Max. H_x	18	256345.14	22858.82	-12755.68
	Max. H_z	7	-212298.06	-19176.69	10659.87
	Min. Vert	7	-212298.06	-19176.69	10659.87
	Min. H_x	7	-212298.06	-19176.69	10659.87
	Min. H_z	18	256345.14	22858.82	-12755.68
Leg B	Max. Vert	10	243521.64	-21367.15	-12273.71
	Max. H_x	23	-197920.66	17663.97	10141.45
	Max. H_z	23	-197920.66	17663.97	10141.45
	Min. Vert	23	-197920.66	17663.97	10141.45
	Min. H_x	10	243521.64	-21367.15	-12273.71
	Min. H_z	10	243521.64	-21367.15	-12273.71
Leg A	Max. Vert	2	255759.01	319.28	26192.11
	Max. H_x	20	21995.99	610.81	2004.31
	Max. H_z	2	255759.01	319.28	26192.11
	Min. Vert	15	-212084.19	-298.24	-21964.04
	Min. H_x	9	16496.99	-589.77	1503.23
	Min. H_z	15	-212084.19	-298.24	-21964.04

Tower Mast Reaction Summary

Load Combination	Vertical lb	Shear$_x$ lb	Shear$_z$ lb	Overturning Moment, M_x lb-ft	Overturning Moment, M_z lb-ft	Torque lb-ft
Dead Only	56084.46	0.00	0.00	6318.99	-7399.52	0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	67301.35	0.00	-37496.66	-4041311.48	-8879.42	10652.46
0.9 Dead+1.0 Wind 0 deg - No Ice	50476.02	0.00	-37496.66	-4043207.17	-6659.57	10652.46
1.2 Dead+1.0 Wind 30 deg - No Ice	67301.35	18749.38	-32513.05	-3522919.36	-2043474.94	19163.54
0.9 Dead+1.0 Wind 30 deg - No Ice	50476.02	18749.38	-32513.05	-3524815.06	-2041255.09	19163.54
1.2 Dead+1.0 Wind 60 deg - No Ice	67301.35	31365.49	-18130.90	-1978027.79	-3441578.49	12700.13
0.9 Dead+1.0 Wind 60 deg - No Ice	50476.02	31365.49	-18130.90	-1979923.49	-3439358.64	12700.13
1.2 Dead+1.0 Wind 90 deg - No	67301.35	34393.09	0.00	7582.78	-3801213.78	1125.77

Load Combination	Vertical	Shear$_x$	Shear$_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
Ice						
0.9 Dead+1.0 Wind 90 deg - No Ice	50476.02	34393.09	0.00	5687.09	-3798993.93	1125.77
1.2 Dead+1.0 Wind 120 deg - No Ice	67301.35	30262.29	17493.97	1919324.79	-3313634.37	1730.44
0.9 Dead+1.0 Wind 120 deg - No Ice	50476.02	30262.29	17493.97	1917429.09	-3311414.52	1730.44
1.2 Dead+1.0 Wind 150 deg - No Ice	67301.35	17441.17	30247.16	3320806.56	-1918029.22	919.83
0.9 Dead+1.0 Wind 150 deg - No Ice	50476.02	17441.17	30247.16	3318910.86	-1915809.36	919.83
1.2 Dead+1.0 Wind 180 deg - No Ice	67301.35	0.00	36293.87	3966725.06	-8879.42	-10652.46
0.9 Dead+1.0 Wind 180 deg - No Ice	50476.02	0.00	36293.87	3964829.36	-6659.57	-10652.46
1.2 Dead+1.0 Wind 210 deg - No Ice	67301.35	-18749.38	32513.05	3538084.93	2025716.10	-19163.54
0.9 Dead+1.0 Wind 210 deg - No Ice	50476.02	-18749.38	32513.05	3536189.23	2027935.95	-19163.54
1.2 Dead+1.0 Wind 240 deg - No Ice	67301.35	-32407.14	18732.30	2038069.35	3501547.15	-12700.13
0.9 Dead+1.0 Wind 240 deg - No Ice	50476.02	-32407.14	18732.30	2036173.66	3503767.00	-12700.13
1.2 Dead+1.0 Wind 270 deg - No Ice	67301.35	-34393.09	0.00	7582.78	3783454.94	-1125.77
0.9 Dead+1.0 Wind 270 deg - No Ice	50476.02	-34393.09	0.00	5687.09	3785674.79	-1125.77
1.2 Dead+1.0 Wind 300 deg - No Ice	67301.35	-29220.64	-16892.58	-1859283.22	3218148.03	-1730.44
0.9 Dead+1.0 Wind 300 deg - No Ice	50476.02	-29220.64	-16892.58	-1861178.92	3220367.88	-1730.44
1.2 Dead+1.0 Wind 330 deg - No Ice	67301.35	-17441.17	-30247.16	-3305640.99	1900270.37	-919.83
0.9 Dead+1.0 Wind 330 deg - No Ice	50476.02	-17441.17	-30247.16	-3307536.69	1902490.23	-919.83
1.2 Dead+1.0 Ice+1.0 Temp	111148.29	0.00	0.00	21659.95	-26240.65	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	111148.29	0.00	-9292.70	-980476.49	-26240.65	2367.30
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	111148.29	4626.05	-8019.72	-846687.17	-526876.89	4316.42
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	111148.29	7745.96	-4476.27	-467295.34	-871916.34	3055.55
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	111148.29	8633.05	0.00	21659.95	-974519.12	802.76
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	111148.29	7510.84	4340.52	496268.18	-847066.50	408.54
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	111148.29	4408.58	7643.05	854900.90	-506608.33	65.69
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	111148.29	0.00	9129.24	1011953.39	-26240.65	-2367.30
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	111148.29	-4626.05	8019.72	890007.07	474395.59	-4316.42
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	111148.29	-7887.52	4558.00	516536.74	829691.37	-3055.55
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	111148.29	-8633.05	0.00	21659.95	922037.82	-802.76
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	111148.29	-7369.28	-4258.79	-447026.78	784328.86	-408.54
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	111148.29	-4408.58	-7643.05	-811581.00	454127.03	-65.69
Dead+Wind 0 deg - Service	56084.46	0.00	-9393.28	-1008049.15	-7399.52	2668.20

Load Combination	Vertical	Shear$_x$	Shear$_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
Dead+Wind 30 deg - Service	56084.46	4696.90	-8144.83	-878175.29	-517125.53	4795.88
Dead+Wind 60 deg - Service	56084.46	7857.39	-4541.99	-491137.40	-867396.33	3175.90
Dead+Wind 90 deg - Service	56084.46	8615.90	0.00	6318.99	-957505.18	272.66
Dead+Wind 120 deg - Service	56084.46	7581.07	4382.45	485272.96	-835349.20	426.23
Dead+Wind 150 deg - Service	56084.46	4369.23	7577.28	836389.92	-485704.20	226.24
Dead+Wind 180 deg - Service	56084.46	-0.00	9092.00	998206.27	-7399.52	-2668.20
Dead+Wind 210 deg - Service	56084.46	-4696.90	8144.83	890813.26	502326.49	-4795.88
Dead+Wind 240 deg - Service	56084.46	-8118.30	4692.62	515015.80	872066.28	-3173.90
Dead+Wind 270 deg - Service	56084.46	-8615.90	0.00	6318.99	942706.14	-272.66
Dead+Wind 300 deg - Service	56084.46	-7320.16	-4231.81	-461394.56	801081.18	-426.23
Dead+Wind 330 deg - Service	56084.46	-4369.23	-7577.28	-823751.95	470905.16	-226.24

Solution Summary

Load Comb.	Sum of Applied Forces PX lb	PY lb	PZ lb	Sum of Reactions PX lb	PY lb	PZ lb	% Error
1	0.00	-56084.46	0.00	-0.00	56084.46	-0.00	0.000%
2	-0.00	-67301.35	-37496.66	-0.00	67301.35	37496.66	0.000%
3	-0.00	-50476.02	-37496.66	-0.00	50476.02	37496.66	0.000%
4	18749.38	-67301.35	-32513.04	-18749.38	67301.35	32513.05	0.000%
5	18749.38	-50476.02	-32513.04	-18749.38	50476.02	32513.05	0.000%
6	31365.48	-67301.35	-18130.90	-31365.49	67301.35	18130.90	0.000%
7	31365.48	-50476.02	-18130.90	-31365.49	50476.02	18130.90	0.000%
8	34393.09	-67301.35	0.00	-34393.09	67301.35	-0.00	0.000%
9	34393.09	-50476.02	0.00	-34393.09	50476.02	-0.00	0.000%
10	30262.29	-67301.35	17493.97	-30262.29	67301.35	-17493.97	0.000%
11	30262.29	-50476.02	17493.97	-30262.29	50476.02	-17493.97	0.000%
12	17441.17	-67301.35	30247.16	-17441.17	67301.35	-30247.16	0.000%
13	17441.17	-50476.02	30247.16	-17441.17	50476.02	-30247.16	0.000%
14	0.00	-67301.35	36293.86	-0.00	67301.35	-36293.87	0.000%
15	0.00	-50476.02	36293.86	-0.00	50476.02	-36293.87	0.000%
16	-18749.38	-67301.35	32513.04	18749.38	67301.35	-32513.05	0.000%
17	-18749.38	-50476.02	32513.04	18749.38	50476.02	-32513.05	0.000%
18	-32407.13	-67301.35	18732.30	32407.14	67301.35	-18732.30	0.000%
19	-32407.13	-50476.02	18732.30	32407.14	50476.02	-18732.30	0.000%
20	-34393.09	-67301.35	0.00	34393.09	67301.35	-0.00	0.000%
21	-34393.09	-50476.02	0.00	34393.09	50476.02	-0.00	0.000%
22	-29220.64	-67301.35	-16892.58	29220.64	67301.35	16892.58	0.000%
23	-29220.64	-50476.02	-16892.58	29220.64	50476.02	16892.58	0.000%
24	-17441.17	-67301.35	-30247.16	17441.17	67301.35	30247.16	0.000%
25	-17441.17	-50476.02	-30247.16	17441.17	50476.02	30247.16	0.000%
26	0.00	-111148.29	0.00	-0.00	111148.29	-0.00	0.000%
27	-0.00	-111148.29	-9292.70	-0.00	111148.29	9292.70	0.000%
28	4626.05	-111148.29	-8019.72	-4626.05	111148.29	8019.72	0.000%
29	7745.96	-111148.29	-4476.27	-7745.96	111148.29	4476.27	0.000%
30	8633.05	-111148.29	0.00	-8633.05	111148.29	-0.00	0.000%
31	7510.84	-111148.29	4340.52	-7510.84	111148.29	-4340.52	0.000%
32	4408.58	-111148.29	7643.05	-4408.58	111148.29	-7643.05	0.000%
33	0.00	-111148.29	9129.24	-0.00	111148.29	-9129.24	0.000%
34	-4626.05	-111148.29	8019.72	4626.05	111148.29	-8019.72	0.000%
35	-7887.52	-111148.29	4558.00	7887.52	111148.29	-4558.00	0.000%
36	-8633.05	-111148.29	0.00	8633.05	111148.29	-0.00	0.000%
37	-7369.28	-111148.29	-4258.79	7369.28	111148.29	4258.79	0.000%
38	-4408.58	-111148.29	-7643.05	4408.58	111148.29	7643.05	0.000%
39	0.00	-56084.46	-9393.28	-0.00	56084.46	9393.28	0.000%
40	4696.90	-56084.46	-8144.83	-4696.90	56084.46	8144.83	0.000%
41	7857.39	-56084.46	-4541.99	-7857.39	56084.46	4541.99	0.000%

Load Comb.	Sum of Applied Forces PX lb	PY lb	PZ lb	Sum of Reactions PX lb	PY lb	PZ lb	% Error
42	8615.90	-56084.46	0.00	-8615.90	56084.46	-0.00	0.000%
43	7581.07	-56084.46	4382.45	-7581.07	56084.46	-4382.45	0.000%
44	4369.22	-56084.46	7577.28	-4369.23	56084.46	-7577.28	0.000%
45	-0.00	-56084.46	9092.00	0.00	56084.46	-9092.00	0.000%
46	-4696.90	-56084.46	8144.83	4696.90	56084.46	-8144.83	0.000%
47	-8118.30	-56084.46	4692.62	8118.30	56084.46	-4692.62	0.000%
48	-8615.90	-56084.46	0.00	8615.90	56084.46	-0.00	0.000%
49	-7320.16	-56084.46	-4231.81	7320.16	56084.46	4231.81	0.000%
50	-4369.22	-56084.46	-7577.28	4369.23	56084.46	7577.28	0.000%

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	175 - 165	2.766	40	0.1605	0.0125
T2	165 - 150	2.412	46	0.1577	0.0122
T3	150 - 140	1.910	46	0.1406	0.0109
T4	140 - 120	1.622	46	0.1257	0.0096
T5	120 - 100	1.137	46	0.0995	0.0075
T6	100 - 80	0.754	46	0.0780	0.0056
T7	80 - 60	0.462	46	0.0560	0.0039
T8	60 - 40	0.250	46	0.0387	0.0023
T9	40 - 20	0.107	46	0.0248	0.0014
T10	20 - 0	0.025	46	0.0110	0.0007

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
175.00	1/2" x 15' Lightning Rod	40	2.766	0.1605	0.0125	247104
165.00	(2) LPA-80080/4CF w/ Mount Pipe	46	2.412	0.1577	0.0122	109732
155.00	APX16DWV-16DWV-S-E-A20 w/ Mount Pipe	46	2.070	0.1476	0.0114	34981

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	175 - 165	11.037	4	0.6390	0.0504
T2	165 - 150	9.624	16	0.6282	0.0490
T3	150 - 140	7.622	16	0.5605	0.0437
T4	140 - 120	6.469	16	0.5017	0.0386
T5	120 - 100	4.535	16	0.3970	0.0299
T6	100 - 80	3.006	16	0.3109	0.0224
T7	80 - 60	1.841	16	0.2233	0.0156

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T8	60 - 40	0.996	16	0.1542	0.0093
T9	40 - 20	0.428	16	0.0990	0.0058
T10	20 - 0	0.101	16	0.0437	0.0027

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
175.00	1/2" x 15' Lightning Rod	4	11.037	0.6390	0.0504	63253
165.00	(2) LPA-80080/4CF w/ Mount Pipe	16	9.624	0.6282	0.0490	28039
155.00	APX16DWV-16DWV-S-E-A20 w/ Mount Pipe	16	8.260	0.5882	0.0459	8850

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt lb	Allowable Load per Bolt lb	Ratio Load / Allowable	Allowable Ratio	Criteria
T1	175	Leg	A325N	0.7500	5	1814.35	30101.40	0.060	1.05	Bolt Tension
T2	165	Leg	A325N	1.0000	6	6813.70	54517.00	0.125	1.05	Bolt Tension
T3	150	Leg	A325N	1.0000	6	7956.13	54517.00	0.146	1.05	Bolt Tension
		Diagonal	A325N	1.0000	1	6731.93	18205.10	0.370	1.05	Member Block Shear
T4	140	Leg	A325N	1.0000	6	13685.60	54517.00	0.251	1.05	Bolt Tension
		Diagonal	A325N	1.0000	1	5982.14	18205.10	0.329	1.05	Member Block Shear
T5	120	Leg	A325N	1.2500	6	18083.80	87219.80	0.207	1.05	Bolt Tension
		Diagonal	A325N	1.2500	1	5077.31	22435.50	0.226	1.05	Member Block Shear
T6	100	Leg	A325N	1.2500	6	21925.10	87219.80	0.251	1.05	Bolt Tension
		Diagonal	A325N	1.2500	1	5011.62	22435.50	0.223	1.05	Member Block Shear
T7	80	Leg	A325N	1.2500	6	25558.30	87219.80	0.293	1.05	Bolt Tension
		Diagonal	A325N	1.2500	1	5413.02	22435.50	0.241	1.05	Member Block Shear
T8	60	Leg	A325N	1.2500	12	13783.20	87219.80	0.158	1.05	Bolt Tension
		Diagonal	A325N	1.0000	1	8348.41	50003.90	0.167	1.05	Member Block Shear
T9	40	Leg	A325N	1.2500	12	15552.50	87219.80	0.178	1.05	Bolt Tension
		Diagonal	A325N	1.0000	1	8770.67	50003.90	0.175	1.05	Member Block Shear
T10	20	Diagonal	A325N	1.0000	1	9349.62	50003.90	0.187	1.05	Member Block Shear

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	lb	lb	
T1	175 - 165	2	10.00	2.25	54.0 K=1.00	3.1416	-10146.00	114226.00	0.089 [1]
T2	165 - 150	2 1/4	15.00	2.33	49.8 K=1.00	3.9761	-45439.30	149274.00	0.304 [1]
T3	150 - 140	Pirod 195555 (1.5)	10.02	10.02	37.5 K=1.00	5.3014	-55585.50	215254.00	0.258 [1]
T4	140 - 120	Pirod 195557	20.03	10.02	31.7 K=1.00	7.2158	-93911.20	301690.00	0.311 [1]
T5	120 - 100	Pirod 195559	20.03	10.02	27.8 K=1.00	9.4248	-124259.00	400895.00	0.310 [1]
T6	100 - 80	Pirod 195559	20.03	10.02	27.8 K=1.00	9.4248	-151400.00	400895.00	0.378 [1]
T7	80 - 60	Pirod 195560	20.03	10.02	24.7 K=1.00	11.9282	-178067.00	513414.00	0.347 [1]
T8	60 - 40	Pirod 139283	20.03	20.03	32.6 K=1.00	14.7262	-192813.00	613145.00	0.314 [1]
T9	40 - 20	Pirod 139283	20.03	20.03	32.6 K=1.00	14.7262	-222034.00	613145.00	0.362 [1]
T10	20 - 0	Pirod 139284	20.03	20.03	32.6 K=1.00	17.8187	-241841.00	741993.00	0.326 [1]

[1] P_u / ϕP_n controls

Truss-Leg Diagonal Data

Section No.	Elevation	Diagonal Size	L_d	Kl/r	ϕP_n	A	V_u	ϕV_n	Stress Ratio
	ft		ft		lb	in^2	lb	lb	
T3	150 - 140	0.4375	1.46	136.4	238565.00	0.1503	515.91	2053.89	0.252
T4	140 - 120	0.5	1.44	117.3	324713.00	0.1963	366.73	3654.72	0.101
T5	120 - 100	0.5	1.43	116.3	424115.00	0.1963	169.36	3717.97	0.046
T6	100 - 80	0.5	1.43	116.3	424115.00	0.1963	182.45	3717.97	0.050
T7	80 - 60	0.625	1.41	92.3	536771.00	0.3068	894.86	8400.79	0.107
T8	60 - 40	0.75	1.76	95.6	662680.00	0.4418	536.78	13816.30	0.039
T9	40 - 20	0.75	1.76	95.6	662680.00	0.4418	721.55	13816.30	0.052
T10	20 - 0	0.75	1.74	94.8	801842.00	0.4418	970.55	13976.80	0.070

Diagonal Design Data (Compression)

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	lb	lb	
T1	175 - 165	7/8	5.48	2.65	130.8 K=0.90	0.6013	-2222.81	7935.53	0.280 [1]
T2	165 - 150	1	5.52	2.66	114.7 K=0.90	0.7854	-5083.40	13483.80	0.377 [1]
T3	150 - 140	L3x3x5/16	11.42	5.00	107.2 K=1.04	1.7800	-7516.00	40908.80	0.184 [1]

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	lb	lb	
T4	140 - 120	L3x3x5/16	12.50	5.65	117.2 K=1.01	1.7800	-5500.90	36407.30	0.151 [1]
T5	120 - 100	L3x3x5/16	13.80	6.31	129.8 K=1.00	1.7800	-5119.75	30238.50	0.169 [1]
T6	100 - 80	L3x3x5/16	15.24	7.06	145.3 K=1.00	1.7800	-5195.81	24119.50	0.215 [1]
T7	80 - 60	L3x3x5/16	16.01	7.47	153.8 K=1.00	1.7800	-5626.03	21526.80	0.261 [1]
T8	60 - 40	2L3 1/2x3 1/2x5/16x3/4	25.01	11.90	132.2 K=1.00	4.1800	-9562.82	68433.10	0.140 [1]
T9	40 - 20	2L3 1/2x3 1/2x5/16x3/4	26.26	12.55	139.5 K=1.00	4.1800	-7955.06	61482.40	0.129 [1]
T10	20 - 0	2L3 1/2x3 1/2x5/16x3/4	27.59	13.25	147.2 K=1.00	4.1800	-10654.80	55231.20	0.193 [1]

[1] P_u / ϕP_n controls

Horizontal Design Data (Compression)

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	lb	lb	
T1	175 - 165	7/8	5.00	4.83	185.6 K=0.70	0.6013	-261.48	3943.57	0.066 [1]
T2	165 - 150	7/8	5.00	4.81	184.8 K=0.70	0.6013	-854.88	3977.79	0.215 [1]

[1] P_u / ϕP_n controls

Top Girt Design Data (Compression)

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	lb	lb	
T1	175 - 165	1	5.00	4.83	162.4 K=0.70	0.7854	-825.30	6727.56	0.123 [1]
T2	165 - 150	1 1/4	5.00	4.81	129.4 K=0.70	1.2272	-1469.60	16567.20	0.089 [1]

[1] P_u / ϕP_n controls

Bottom Girt Design Data (Compression)

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	lb	lb	
T1	175 - 165	1	5.00	4.83	162.4	0.7854	-857.08	6727.56	0.127 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T2	165 - 150	1 1/4	5.00	4.81	K=0.70 129.4 K=0.70	1.2272	-1213.23	16567.20	0.073 [1]

[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 lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	175 - 165	2	10.00	0.50	12.0	3.1416	9071.75	141372.00	0.064 [1]
T2	165 - 150	2 1/4	15.00	0.50	10.7	3.9761	40882.20	178924.00	0.228 [1]
T3	150 - 140	Pirod 195555 (1.5)	10.02	10.02	37.5	5.3014	47736.80	238565.00	0.200 [1]
T4	140 - 120	Pirod 195557	20.03	10.02	31.7	7.2158	82113.80	324713.00	0.253 [1]
T5	120 - 100	Pirod 195559	20.03	10.02	27.8	9.4248	108503.00	424115.00	0.256 [1]
T6	100 - 80	Pirod 195559	20.03	10.02	27.8	9.4248	131550.00	424115.00	0.310 [1]
T7	80 - 60	Pirod 195560	20.03	10.02	24.7	11.9282	153350.00	536771.00	0.286 [1]
T8	60 - 40	Pirod 139283	20.03	20.03	32.6	14.7262	165399.00	662680.00	0.250 [1]
T9	40 - 20	Pirod 139283	20.03	20.03	32.6	14.7262	186630.00	662680.00	0.282 [1]
T10	20 - 0	Pirod 139284	20.03	20.03	32.6	17.8187	202004.00	801842.00	0.252 [1]

[1] P_u / ϕP_n controls

Truss-Leg Diagonal Data

Section No.	Elevation ft	Diagonal Size	L_d ft	Kl/r	ϕP_n lb	A in^2	V_u lb	ϕV_n lb	Stress Ratio
T3	150 - 140	0.4375	1.46	136.1	238565.00	0.1503	515.91	2053.89	0.252
T4	140 - 120	0.5	1.44	117.3	324713.00	0.1963	366.73	3654.72	0.101
T5	120 - 100	0.5	1.43	116.3	424115.00	0.1963	169.36	3717.97	0.046
T6	100 - 80	0.5	1.43	116.3	424115.00	0.1963	182.45	3717.97	0.050
T7	80 - 60	0.625	1.41	92.3	536771.00	0.3068	894.86	8400.79	0.107
T8	60 - 40	0.75	1.76	95.6	662680.00	0.4418	536.78	13816.30	0.039
T9	40 - 20	0.75	1.76	95.6	662680.00	0.4418	721.55	13816.30	0.052
T10	20 - 0	0.75	1.74	94.8	801842.00	0.4418	970.55	13976.80	0.070

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	175 - 165	7/8	5.48	2.65	145.4	0.6013	2177.00	27059.40	0.080 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T2	165 - 150	1	5.52	2.66	127.5	0.7854	4943.52	35342.90	0.140 [1]
T3	150 - 140	L3x3x5/16	11.42	5.00	67.9	1.0713	6731.93	46602.80	0.144 [1]
T4	140 - 120	L3x3x5/16	11.93	5.40	73.1	1.0713	5982.14	46602.80	0.128 [1]
T5	120 - 100	L3x3x5/16	13.13	5.99	81.4	1.0127	5077.31	44053.90	0.115 [1]
T6	100 - 80	L3x3x5/16	15.24	7.06	95.3	1.0127	5011.62	44053.90	0.114 [1]
T7	80 - 60	L3x3x5/16	16.80	7.86	105.8	1.0127	5413.02	44053.90	0.123 [1]
T8	60 - 40	2L3 1/2x3 1/2x5/16x3/4	25.01	11.90	134.3	2.6077	8348.41	113433.00	0.074 [1]
T9	40 - 20	2L3 1/2x3 1/2x5/16x3/4	26.26	12.55	141.6	2.6077	8770.67	113433.00	0.077 [1]
T10	20 - 0	2L3 1/2x3 1/2x5/16x3/4	27.59	13.25	149.3	2.6077	9349.62	113433.00	0.082 [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 lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	175 - 165	7/8	5.00	4.83	265.1	0.6013	322.19	27059.40	0.012 [1]
T2	165 - 150	7/8	5.00	4.81	264.0	0.6013	854.88	27059.40	0.032 [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 lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	175 - 165	1	5.00	4.83	232.0	0.7854	844.74	35342.90	0.024 [1]
T2	165 - 150	1 1/4	5.00	4.81	184.8	1.2272	1537.37	55223.30	0.028 [1]

[1] P_u / ϕP_n controls

Bottom Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	175 - 165	1	5.00	4.83	232.0	0.7854	910.95	35342.90	0.026 [1]
T2	165 - 150	1 1/4	5.00	4.81	184.8	1.2272	1450.71	55223.30	0.026 [1]

[1] P_u / ϕP_n controls

tnxTower	Job	Page
	Baltic	29 of 29
Tower Engineering Professionals 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Project TEP No. 310043.946766	Date 10:31:14 04/17/24
	Client SWI Funds Tower Holdings, LLC	Designed by ABM

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
T1	175 - 165	Leg	2	3	-10146.00	119937.30	8.5	Pass
T2	165 - 150	Leg	2 1/4	43	-45439.30	156737.69	29.0	Pass
T3	150 - 140	Leg	Pirod 195555 (1.5)	103	-55585.50	226016.69	24.6	Pass
T4	140 - 120	Leg	Pirod 195557	112	-93911.20	316774.50	29.6	Pass
T5	120 - 100	Leg	Pirod 195559	127	-124259.00	420939.72	29.5	Pass
T6	100 - 80	Leg	Pirod 195559	142	-151400.00	420939.72	36.0	Pass
T7	80 - 60	Leg	Pirod 195560	157	-178067.00	539084.69	33.0	Pass
T8	60 - 40	Leg	Pirod 139283	172	-192813.00	643802.25	29.9	Pass
T9	40 - 20	Leg	Pirod 139283	181	-222034.00	643802.25	34.5	Pass
T10	20 - 0	Leg	Pirod 139284	190	-241811.00	779092.62	31.0	Pass
T1	175 - 165	Diagonal	7/8	12	-2222.81	8332.31	26.7	Pass
T2	165 - 150	Diagonal	1	55	-5083.40	14157.99	35.9	Pass
T3	150 - 140	Diagonal	L3x3x5/16	109	-7546.00	42954.24	17.6 35.2 (b)	Pass
T4	140 - 120	Diagonal	L3x3x5/16	118	-5500.90	38227.66	14.4 31.3 (b)	Pass
T5	120 - 100	Diagonal	L3x3x5/16	133	-5119.75	31750.42	16.1 21.6 (b)	Pass
T6	100 - 80	Diagonal	L3x3x5/16	148	-5195.81	25325.47	20.5 21.3 (b)	Pass
T7	80 - 60	Diagonal	L3x3x5/16	166	-5626.03	22603.14	24.9	Pass
T8	60 - 40	Diagonal	2L3 1/2x3 1/2x5/16x3/4	175	-9562.82	71854.75	13.3 15.9 (b)	Pass
T9	40 - 20	Diagonal	2L3 1/2x3 1/2x5/16x3/4	185	-7955.06	64556.52	12.3 16.7 (b)	Pass
T10	20 - 0	Diagonal	2L3 1/2x3 1/2x5/16x3/4	193	-10654.80	57992.76	18.4	Pass
T1	175 - 165	Horizontal	7/8	34	-261.48	4140.75	6.3	Pass
T2	165 - 150	Horizontal	7/8	58	-854.88	4176.68	20.5	Pass
T1	175 - 165	Top Girt	1	4	-825.30	7063.94	11.7	Pass
T2	165 - 150	Top Girt	1 1/4	47	-1469.60	17395.56	8.4	Pass
T1	175 - 165	Bottom Girt	1	8	-857.08	7063.94	12.1	Pass
T2	165 - 150	Bottom Girt	1 1/4	50	-1213.23	17395.56	7.0	Pass
							Summary	
							Leg (T6) 36.0	Pass
							Diagonal (T2) 35.9	Pass
							Horizontal (T2) 20.5	Pass
							Top Girt (T1) 11.7	Pass
							Bottom Girt (T1) 12.1	Pass
							Bolt Checks 35.2	Pass
							RATING = 36.0	**Pass**

Program Version 8.2.4.3

APPENDIX B

ADDITIONAL CALCULATIONS

Self Support Anchor Rod Capacity

Site Info	
Site #	NA
Site Name	Baltic
TEP #	310043.946766

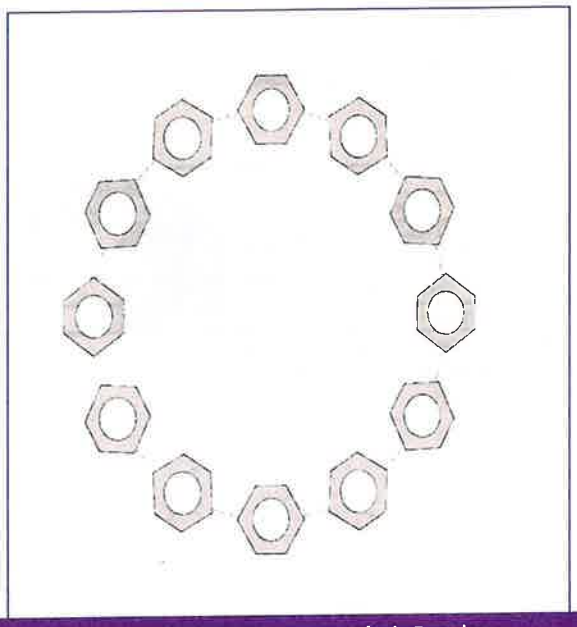
Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	Yes
l_{ar} (in)	0

Applied Loads		
	Comp.	Uplift
Axial Force (kips)	256.34	212.29
Shear Force (kips)	26.17	21.94

**TIA-222-H Section 15.5 Applied*

Considered Eccentricity	
Leg Mod Eccentricity (in)	0.000
Anchor Rod N.A Shift (in)	0.000
Total Eccentricity (in)	0.000

**Anchor Rod Eccentricity Applied*



Connection Properties

Anchor Rod Data

(12) 1-1/4" ø bolts (A687 N; Fy=105 ksi, Fu=125 ksi)

l_{ar} (in): 0

Analysis Results

Anchor Rod Summary *(units of kips, kip-in)*

Pu_t = 17.69	ϕPn_t = 90.84	**Stress Rating**
Vu = 1.83	ϕVn = 57.52	**18.5%**
Mu = n/a	ϕMn = n/a	**Pass**

TOWER ENGINEERING PROFESSIONALS

Baltic

TEP #: 310043.946766

Analysis: ABM 4/17/2024

Check: JHJ 4/17/2024

Design Reaction Comparison Tool

Code Revisions: TIA-222-H

Tower Type: Self Support

Self-Support					
Reactions	Design	Design*1.35	Analysis	Capacity	Pass / Fail
Total Moment (kips.ft)	7691.8	-	4076.95	50.5%	Pass
Total Shear (kips)	65.6	-	37.53	54.5%	Pass
Uplift/ Leg (kips)	422.3	-	212.29	47.9%	Pass
Compression/ Leg (kips)	465.9	-	256.34	52.4%	Pass

Note 1: Design reactions are factored loads.

Note 2: Rating per TIA-222-H, Section 15.5

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

Post-Modification Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10215773
Colliers Engineering & Design Project #: 21777306 (Rev. 1)

December 19, 2023

Site Information	*Site ID:*	*5000092862-VZW / BALTIC CT*
	Site Name:	*BALTIC CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*62 N. Main St* *Baltic, Connecticut 06330* *New London County*
	Latitude:	*41.624167°*
	Longitude:	*-72.078056°*
Structure Information	*Tower Type:*	*Self Support*
	Mount Type:	*15.50-Ft T-Frame*

FUZE ID # 16272037

Analysis Results

T-Frame: **67.5% Pass w/ Modifications***

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

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

Report Prepared By: Andy Hanes

12/19/2023

Executive Summary:

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

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

Sources of Information:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	*Verizon RFDS, Site ID: 323414, dated July 28, 2023*
Mount Mapping Report	*RKS Design & Engineering, LLC, Site ID: VZW: 17-02-0010, dated October 27, 2021*
Previous Mount Analysis	*Colliers Engineering & Design, Project #: 21777306 (Rev 1), dated November 29, 2023*
Mount Modification Drawings	*Colliers Engineering & Design, Project #: 21777306 (Rev. 1), dated December 19, 2023*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H 2022 Connecticut State Building Code (CSBC), Effective October 1, 2022	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	125 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.00 in
	Risk Category:	II
	Exposure Category:	C
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.988
Seismic Parameters:	S_S:	0.191 g
	S_1:	0.054 g
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Load, Lv:	250 lbs.
	Maintenance Load, Lm:	500 lbs.
Analysis Software:	RISA-3D (V17)	

Final Loading Configuration:

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
164.00	165.00	6	Commscope	JAHH-65B-R3B	Added
		3	Samsung	MT6413-77A	
		3	Commscope	CBC78T-DS-43-2X	
		3	Samsung	RF4439d-25A	
		3	Samsung	RF4461d-13A	
		6	Amphenol Antel	LPA-80080-4CF	Retained
		1	Raycap	RRFDC-6627-PF-48*	

* Equipment is flush mounted directly to the Self Support tower. It is not mounted on the T-Frame mounts and is not included in this mount analysis.

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

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

Standard Conditions:

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

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

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

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

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

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

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

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

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

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

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

Analysis Results:

Component	Utilization %	Pass/Fail
Connection Check	13.8 %	Pass
Face Horizontal	67.5 %	Pass
Mount Pipe	31.3 %	Pass
Mount Pipe 2	40.9 %	Pass
Standoff Arm	23.3 %	Pass
Standoff Vertical	4.9 %	Pass
Mast Pipe	13.2 %	Pass
End Bar	46.2 %	Pass
Tieback	9.1 %	Pass
Proposed Stabilizer	18.6 %	Pass

Structure Rating – *(Controlling Utilization of all Components)*	67.5%

Mount Connection Envelope Reactions:

Connection Description	Elev. AGL (Ft)	Node Label	Envelope Wind Reactions				Envelope Wind + Ice Reactions			
			Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)	Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)
Top Mount to Tower Connection	165.5	N71	436	1226	0.108	0.000	559	658	0.153	0.000
Bottom Mount to Tower Connection	162.3	N72	508	482	0.136	0.000	560	526	0.154	0.000
Top V-Bracing Connection	168.5	N82	1521	1715	0.004	0.000	942	784	0.002	0.000
Bottom V-Bracing Connection	160.3	N85	1026	1498	0.003	0.000	698	743	0.002	0.000

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

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

Ice Thickness (In)	Mount Pipes Excluded		Mount Pipes Included	
	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)
0	19.1	8.9	24.9	14.6
0.5	25.3	11.6	33.5	19.9
1	31.2	14.1	41.9	24.7

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

Requirements:

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

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

Attachments:

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

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Mount Modification

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

MDG #: 5000092862 SMART Project #: 10215773 Fuze Project ID: 16272037

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

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

Base Requirements:

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

Photo Requirements:

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

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

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

Material Certification:

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

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

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

OR

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

Antenna & Equipment Placement and Geometry Confirmation:

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

OR

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

Comments:

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

☐ Yes ☐ No

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

Issue:

N/A

Response:

Special Instruction Confirmation:

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

Comments:

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

☐ Yes ☐ No

Contractor certifies no new damage created during the current installation:

☐ Yes ☐ No

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

☐ Safety Climb in Good Condition ☐ Safety Climb Damaged

Comments:

Certifying Individual:

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

Structure: 5000092862-VZW - BALTIC CT

Sector: **A**

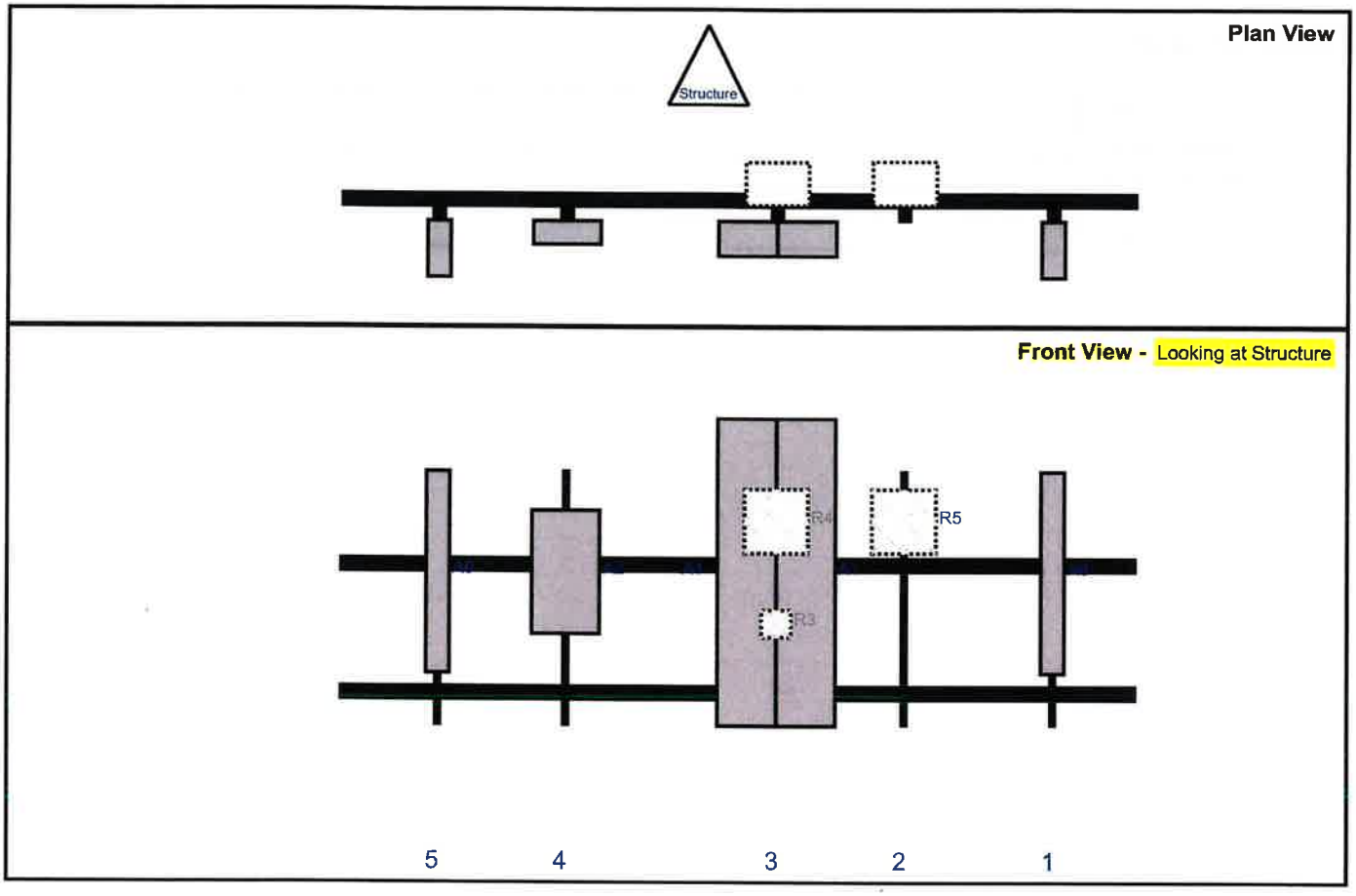
Structure Type: Self Support

Mount Elev: 164.00

10215773

12/15/2023

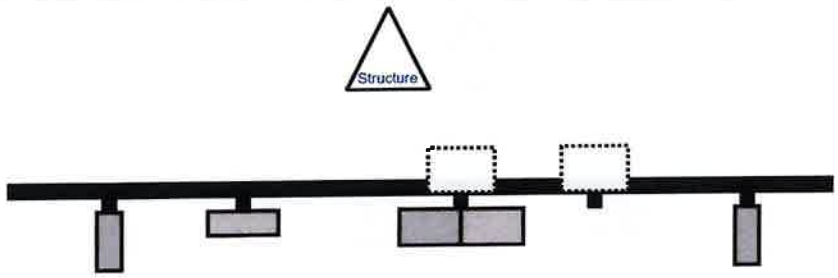
Colliers Engineering & Design



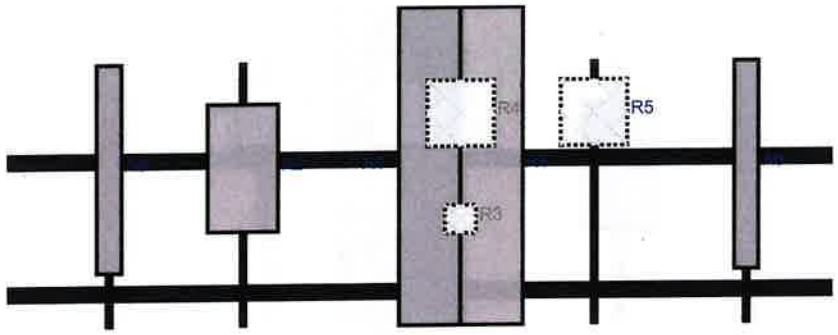
Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A6	LPA-80080-4CF	47.2	5.5	166.5	1	a	Front	24	0	Retained	10/27/2021
R5	**RF4461d-13A**	**15**	**15**	**132**	**2**	**a**	**Behind**	**12**	**0**	**Added**	
A1	JAHH-65B-R3B	72	13.8	102	3	a	Front	24	7	Added	
A1	JAHH-65B-R3B	72	13.8	102	3	b	Front	24	-7	Added	
R3	CBC78T-DS-43-2X	6.4	6.9	102	3	a	Behind	36	0	Added	
R4	RF4439d-25A	15	15	102	3	a	Behind	12	0	Added	
A2	**MT6413-77A**	**28.9**	**15.8**	**53**	**4**	**a**	**Front**	**24**	**0**	**Added**	
A6	LPA-80080-4CF	47.2	5.5	23	5	a	Front	24	0	Retained	10/27/2021

Colliers Engineering & Design

Plan View



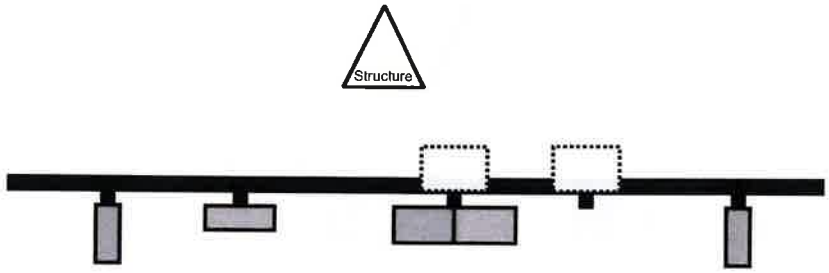
Front View - Looking at Structure



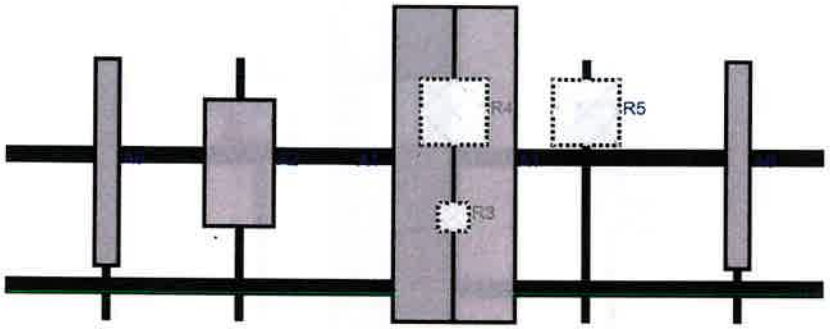
5 4 3 2 1

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
A6	LPA-80080-4CF	47.2	5.5	166.5	1	a	Front	24	0	Retained	10/27/2021
R5	RF4461d-13A	15	15	132	2	a	Behind	12	0	Added	
A1	JAHH-65B-R3B	72	13.8	102	3	a	Front	24	7	Added	
A1	JAHH-65B-R3B	72	13.8	102	3	b	Front	24	-7	Added	
R3	CBC78T-DS-43-2X	6.4	6.9	102	3	a	Behind	36	0	Added	
R4	RF4439d-25A	15	15	102	3	a	Behind	12	0	Added	
A2	MT6413-77A	28.9	15.8	53	4	a	Front	24	0	Added	
A6	LPA-80080-4CF	47.2	5.5	23	5	a	Front	24	0	Retained	10/27/2021

Plan View

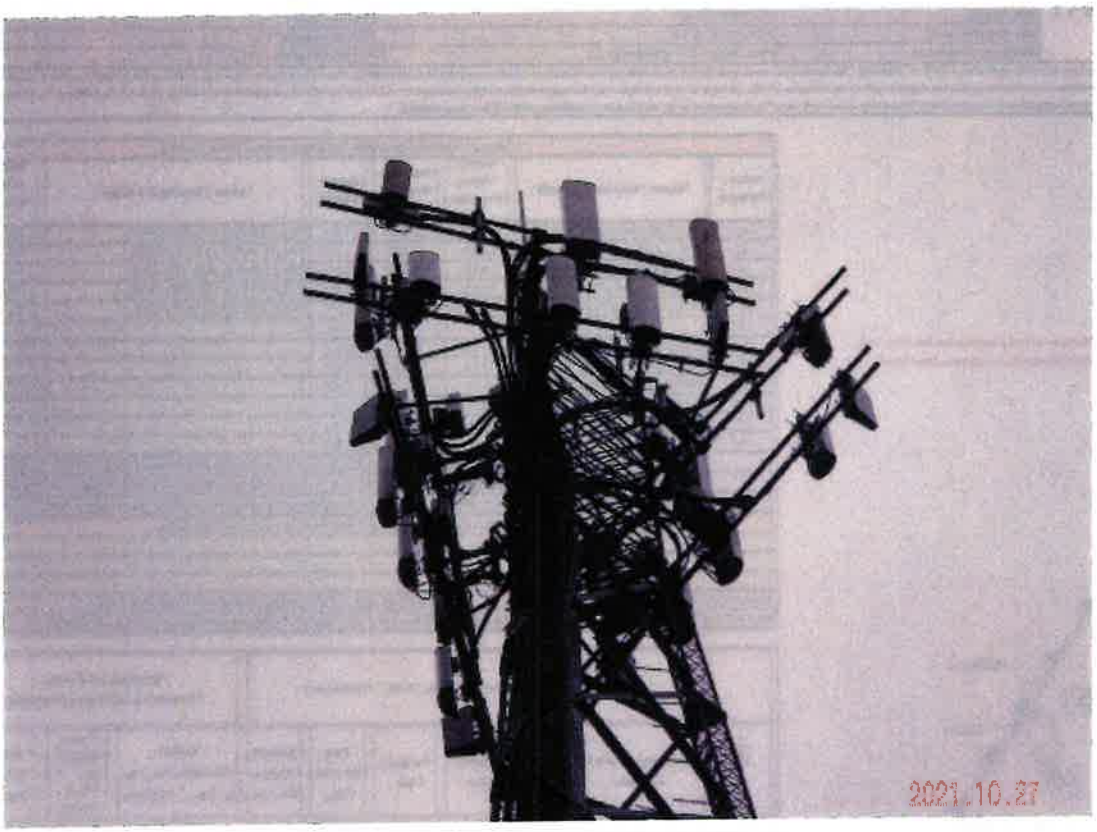


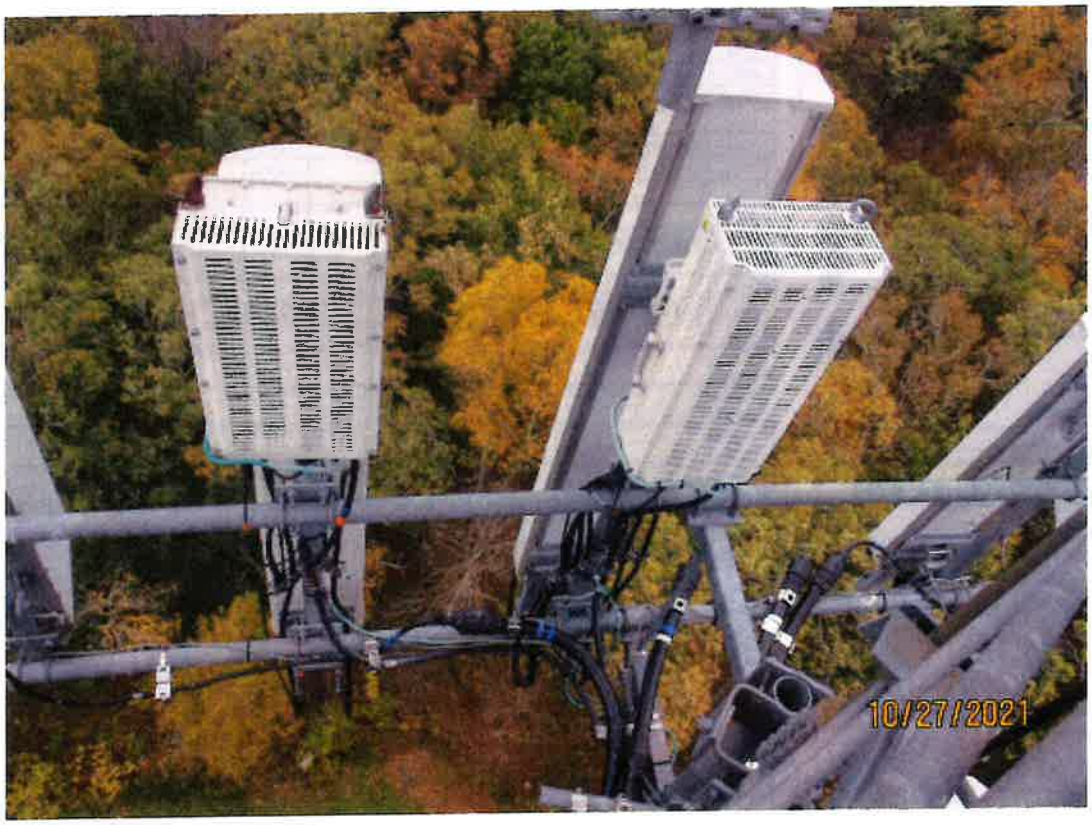
Front View - Looking at Structure



5 4 3 2 1

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
A6	LPA-80080-4CF	47.2	5.5	166.5	1	a	Front	24	0	Retained	10/27/2021
R5	RF4461d-13A	15	15	132	2	a	Behind	12	0	Added	
A1	JAHH-65B-R3B	72	13.8	102	3	a	Front	24	7	Added	
A1	JAHH-65B-R3B	72	13.8	102	3	b	Front	24	-7	Added	
R3	CBC78T-DS-43-2X	6.4	6.9	102	3	a	Behind	36	0	Added	
R4	RF4439d-25A	15	15	102	3	a	Behind	12	0	Added	
A2	MT6413-77A	28.9	15.8	53	4	a	Front	24	0	Added	
A6	LPA-80080-4CF	47.2	5.5	23	5	a	Front	24	0	Retained	10/27/2021


2021.10.27


10/27/2021

V4.0 Updated on 3-31-2021

Antenna Mount Mapping Form (PATENT PENDING)

MASER CONSULTING P.A.

Tower Owner:	UNKNOWN	**Mapping Date:**	10/27/2021
Site Name:	VZW:BALTIC CT	**Tower Type:**	Self Support
Site Number or ID:	VZW:17-02-0010	**Tower Height (Ft.):**	UNKNOWN
Mapping Contractor:	RKS Design & Engineering, LLC	**Mount Elevation (Ft.):**	161.25

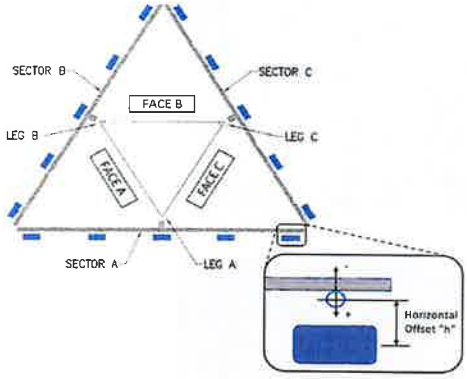
FCC #: UNKNOWN

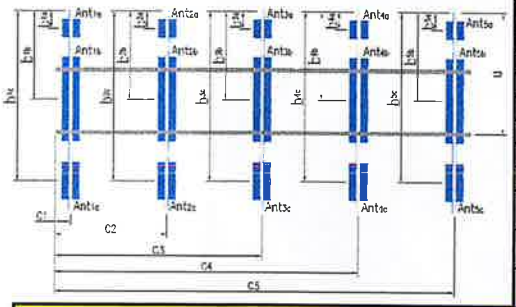
Please insert the sketches of the antenna mount from the "Sketches" tab with dimensions and members here.

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 2.38"Øx0.16"x60" LONG	52.25	19.50	C1	PIPE 2.38"Øx0.16"x60" LONG	52.25	19.50
A2	PIPE 2.39"Øx0.28"x72" LONG	62.25	54.00	C2	PIPE 2.39"Øx0.28"x72" LONG	62.25	54.00
A3	PIPE 2.39"Øx0.28"x72" LONG	59.75	84.00	C3	PIPE 2.39"Øx0.28"x72" LONG	59.75	84.00
A4	PIPE 2.38"Øx0.16"x60" LONG	50.25	143.00	C4	PIPE 2.38"Øx0.16"x60" LONG	50.25	143.00
A5	PIPE 2.38"Øx0.16"x60" LONG	52.25	163.00	C5	PIPE 2.38"Øx0.16"x60" LONG	52.25	163.00
A6				C6			
B1	PIPE 2.38"Øx0.16"x60" LONG	52.25	19.50	D1			
B2	PIPE 2.39"Øx0.28"x72" LONG	62.25	54.00	D2			
B3	PIPE 2.39"Øx0.28"x72" LONG	59.75	84.00	D3			
B4	PIPE 2.38"Øx0.16"x60" LONG	50.25	143.00	D4			
B5	PIPE 2.38"Øx0.16"x60" LONG	52.25	163.00	D5			
B6				D6			

Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :	12.00
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :	6
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :	
Please enter additional infomation or comments below.	
Tower Face Width at Mount Elev. (ft.):	Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):
For T-Arms/Platforms on monopoles, report the weld size from the main standoff to the plate bolting into the collar mount.	





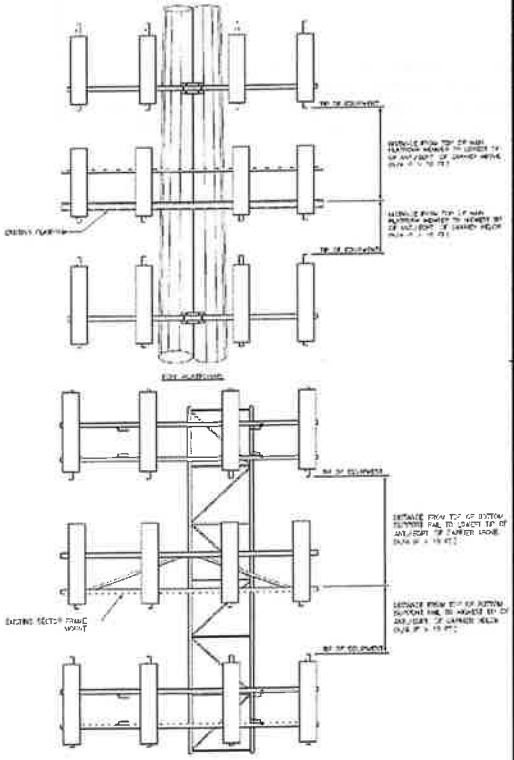
Antenna Layout (Looking Out From Tower)

Ants. Items	Enter antenna model. If not labeled, enter "Unknown". Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Mounting Locations [Units are inches and degrees] Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}..." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photos of antennas Photo Numbers
	Sector A									
Ant_{1a}										
Ant_{1b}	LPA 80080/4CF E-DIN	5.50	13.20	47.20		162.396	26.50	9.25	60.00	165
Ant_{1c}										
Ant_{2a}	B13 RRH4x30	12.00	9.00	21.60		164.792	7.75	-8.00		165
Ant_{2b}	LNX-6514DS-A1M	11.90	7.10	72.70		162.292	37.75	8.00	60.00	165
Ant_{2c}										
Ant_{3a}	B66a RRH 4x45	11.80	7.20	25.80		164.5	8.75	-7.00		167
Ant_{3b}	HBXX-6517DS-A2M	12.00	6.50	75.00		162.813	29.00	8.50	60.00	167
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	HBXX-9014DS-A2M	12.00	6.50	50.90		162.042	28.75	6.50	60.00	167
Ant_{4c}										
Ant_{5a}										
Ant_{5b}	LPA 80080/4CF E-DIN	5.50	13.20	47.20		162.396	26.50	9.25	60.00	167
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

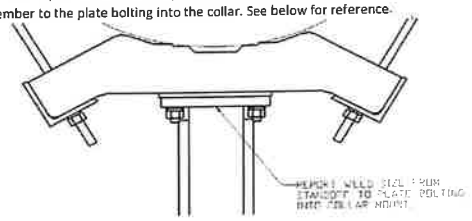
Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector	
Sector A:	60.00	Deg	Leg A:	60.00	Deg
Sector B:	180.00	Deg	Leg B:	180.00	Deg
Sector C:	300.00	Deg	Leg C:	300.00	Deg
Sector D:		Deg	Leg D:		Deg

Climbing Facility Information			
Location:	300.00	Deg	On Leg C
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}										
Ant_{1b}	LPA 80080/4CF E-DIN	5.50	13.20	47.20		162.396	26.50	9.25	180.00	169
Ant_{1c}										
Ant_{2a}	B13 RRH4x30	12.00	9.00	21.60		164.792	7.75	-8.00		170
Ant_{2b}	LNX-6514DS-A1M	11.90	7.10	72.70		162.292	37.75	8.00	180.00	170
Ant_{2c}										
Ant_{3a}	B66a RRH 4x45	11.80	7.20	25.80		164.5	8.75	-7.00		170
Ant_{3b}	HBXX-6517DS-A2M	12.00	6.50	75.00		162.813	29.00	8.50	180.00	170
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	HBXX-9014DS-A2M	12.00	6.50	50.90		162.042	28.75	6.50	180.00	171
Ant_{4c}										
Ant_{5a}										
Ant_{5b}	LPA 80080/4CF E-DIN	5.50	13.20	47.20		162.396	26.50	9.25	180.00	171
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower	RRFDC-6627-PF-48	17.34	10.25	25.66				7.75		356
Ant on Tower										
Sector C										
Ant_{1a}										
Ant_{1b}	LPA 80080/4CF E-DIN	5.50	13.20	47.20		162.396	26.50	9.25	320.00	173
Ant_{1c}										
Ant_{2a}	B13 RRH4x30	12.00	9.00	21.60		164.792	7.75	-8.00		173
Ant_{2b}	LNX-6514DS-A1M	11.90	7.10	72.70		162.292	37.75	8.00	300.00	173
Ant_{2c}										
Ant_{3a}	B66a RRH 4x45	11.80	7.20	25.80		164.5	8.75	-7.00		174
Ant_{3b}	HBXX-6517DS-A2M	12.00	6.50	75.00		162.813	29.00	8.50	300.00	174
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	HBXX-9014DS-A2M	12.00	6.50	50.90		162.042	28.75	6.50	300.00	175
Ant_{4c}										
Ant_{5a}										
Ant_{5b}	LPA 80080/4CF E-DIN	5.50	13.20	47.20		162.396	26.50	9.25	300.00	175
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
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 (14): (6) FH 1-5/8, (6) FH 1-5/8 CUT, (2) 1.56"Ø HYBRID	
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

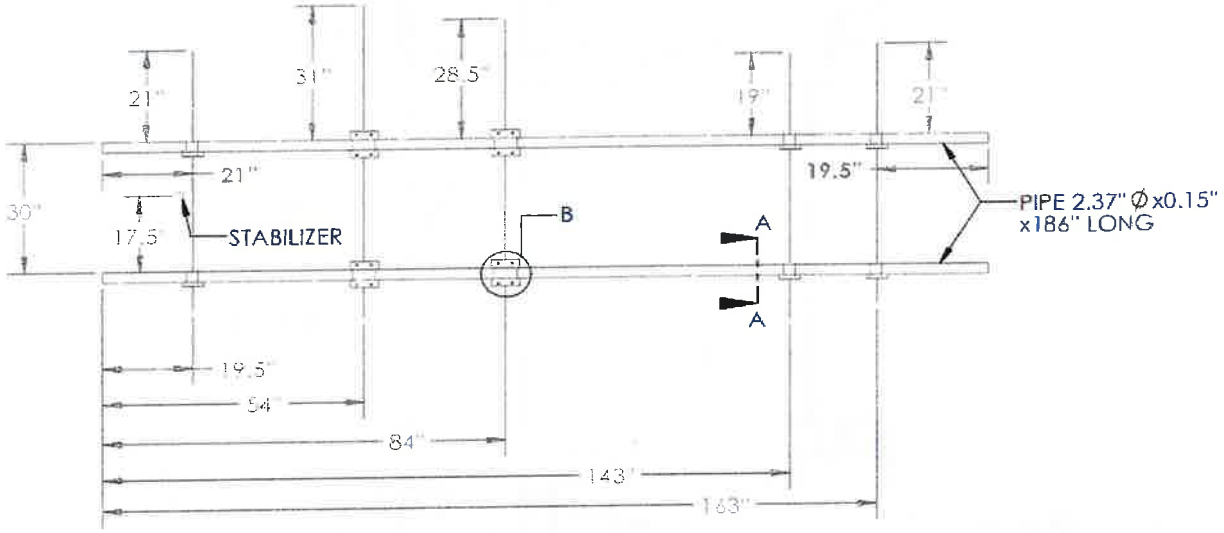
MASER CONSULTING P.A.

Antenna Mount Mapping Form (PATENT PENDING)

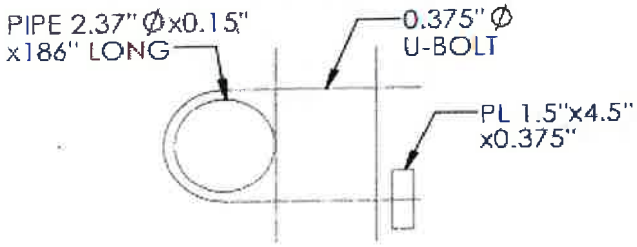
FCC #: UNKNOWN

Tower Owner:	UNKNOWN	Mapping Date:	10/27/2021
Site Name:	VZW:BALTIC CT	Tower Type:	Self Support
Site Number or ID:	VZW:17-02-0010	Tower Height (Ft.):	UNKNOWN
Mapping Contractor:	RKS Design & Engineering, LLC	Mount Elevation (Ft.):	161.25

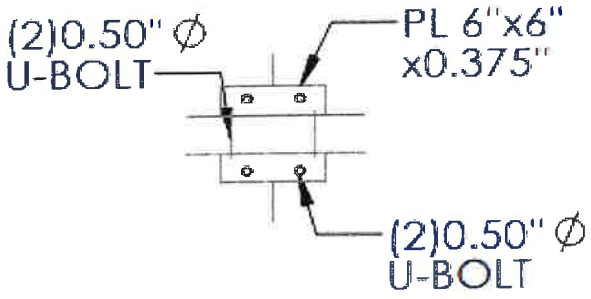
Please Insert Sketches of the Antenna Mount



SECTOR VIEW A,B & C

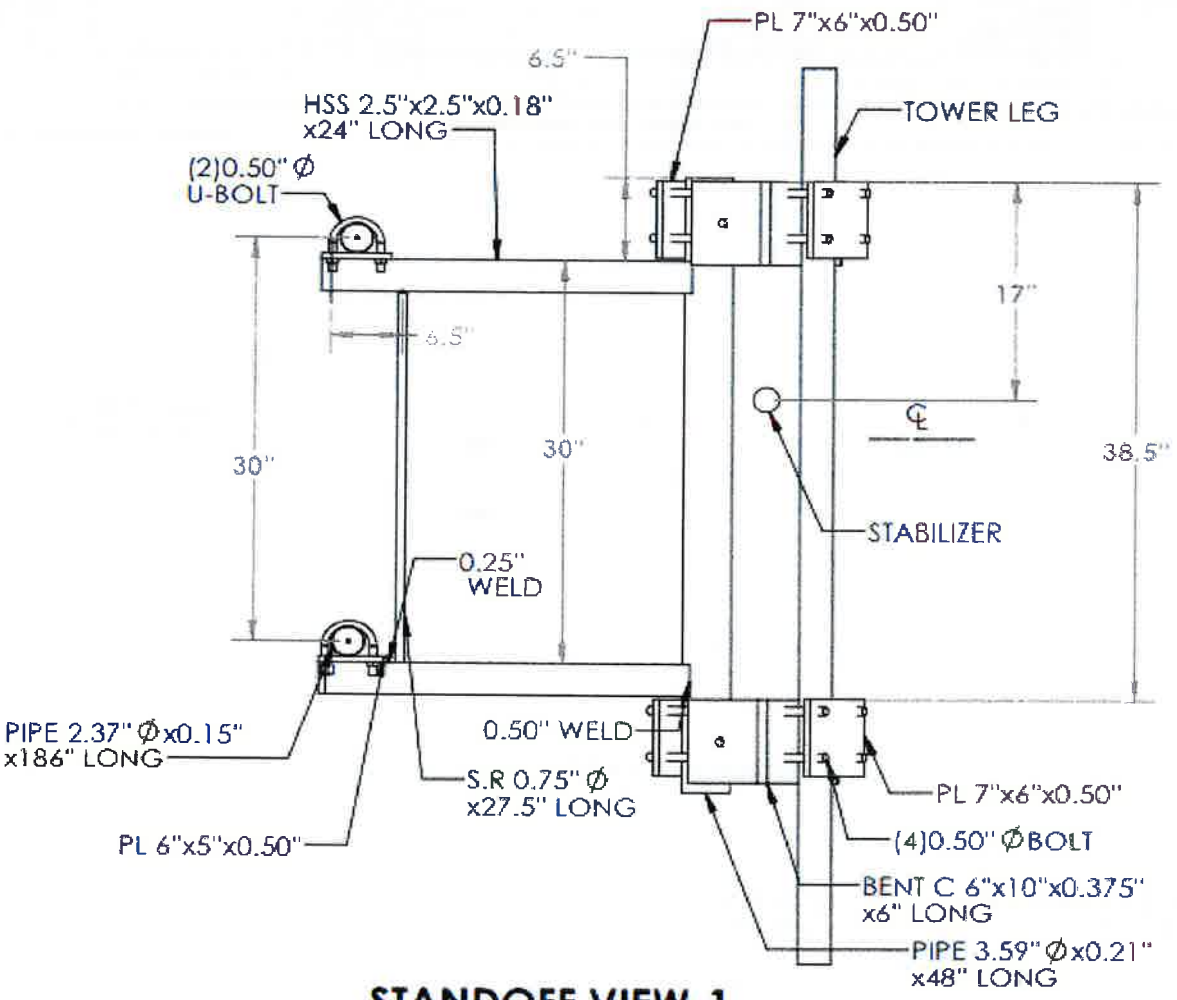


SECTION A-A



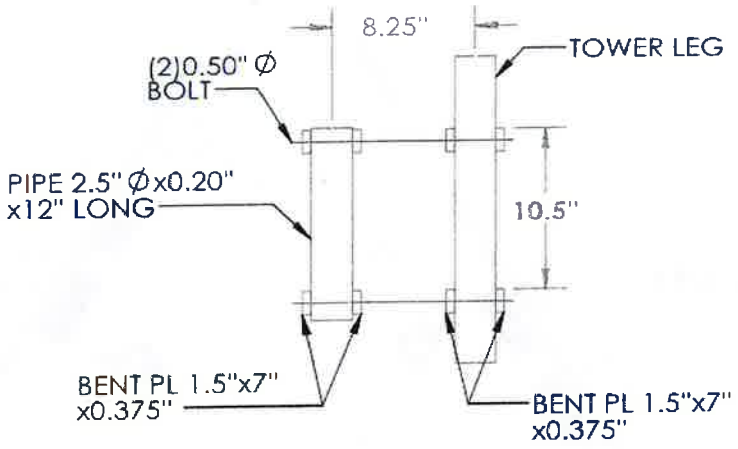
DETAIL B

Please Insert Sketches of the Antenna Mount, cont'd

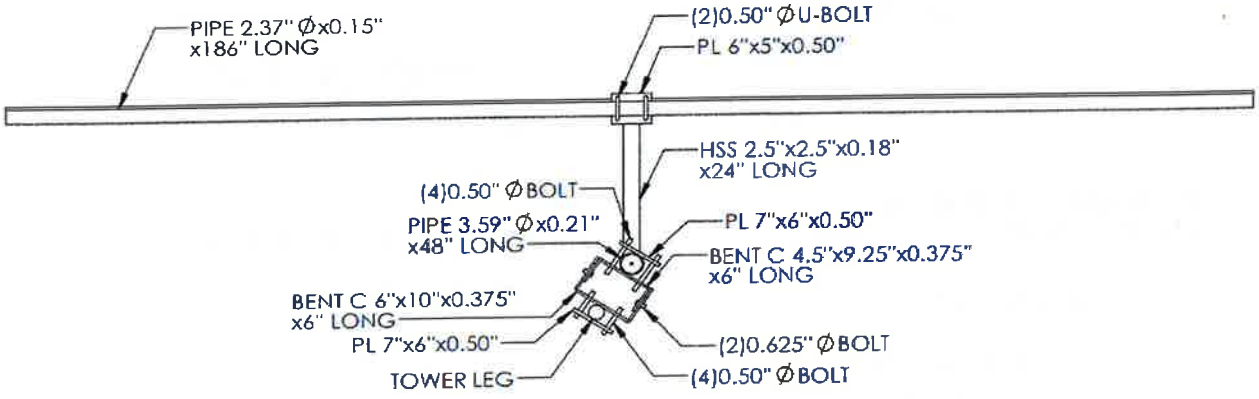


STANDOFF VIEW-1

Please Insert Sketches of the Antenna Mount, cont'd

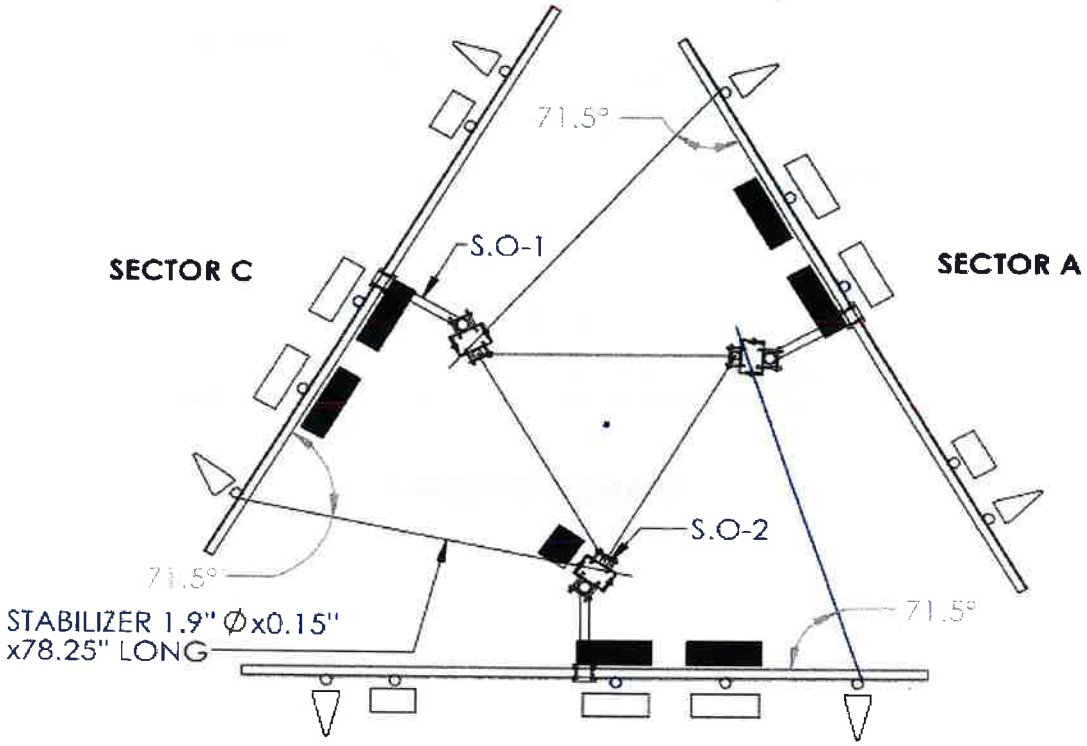


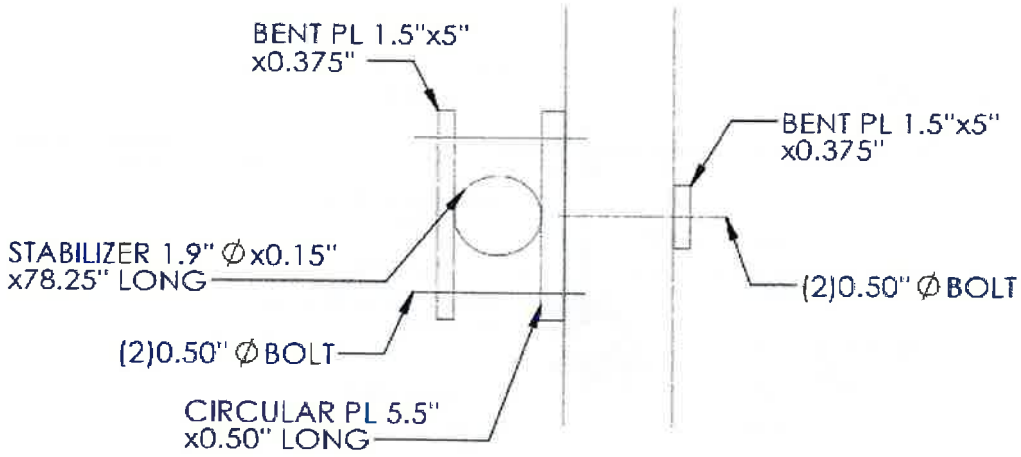
STANDOFF VIEW-2



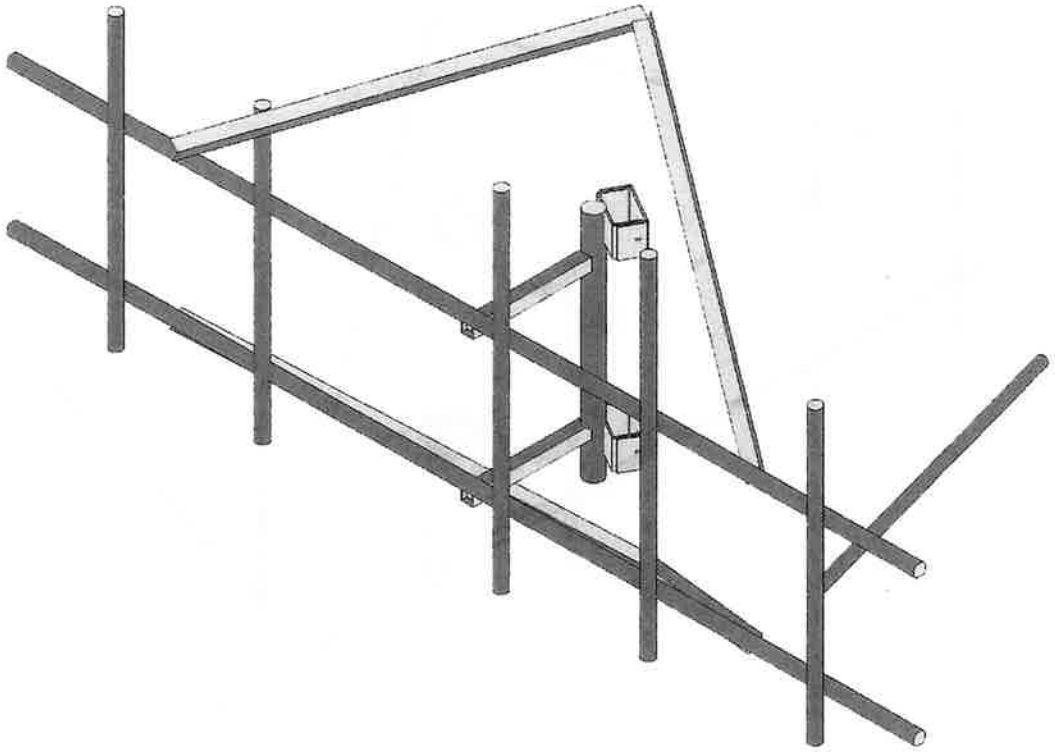
MOUNT PLAN VIEW

Please Insert Sketches of the Antenna Mount, cont'd



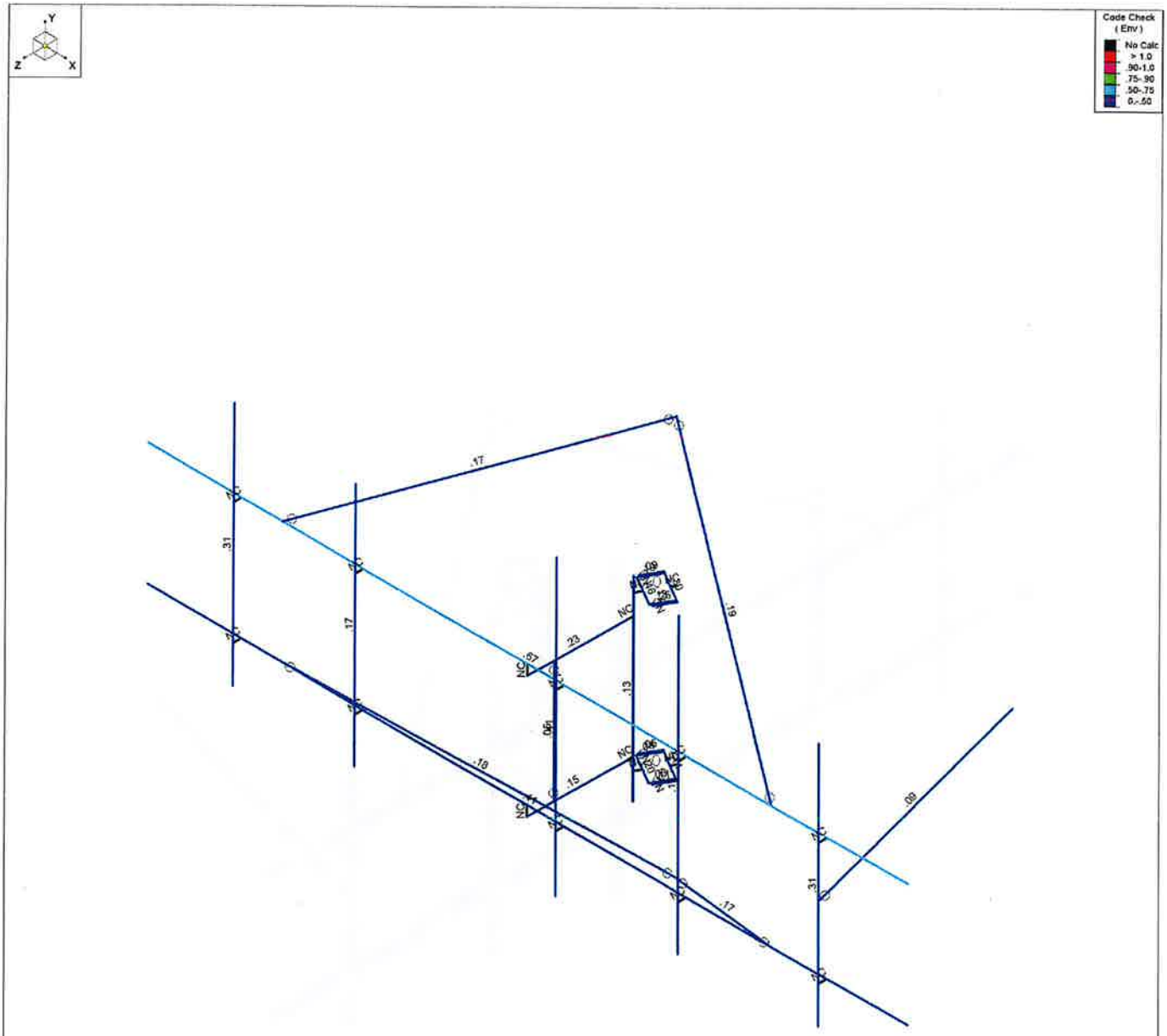


STABILIZER CONNECTION ON MOUNT AND TOWER LEG



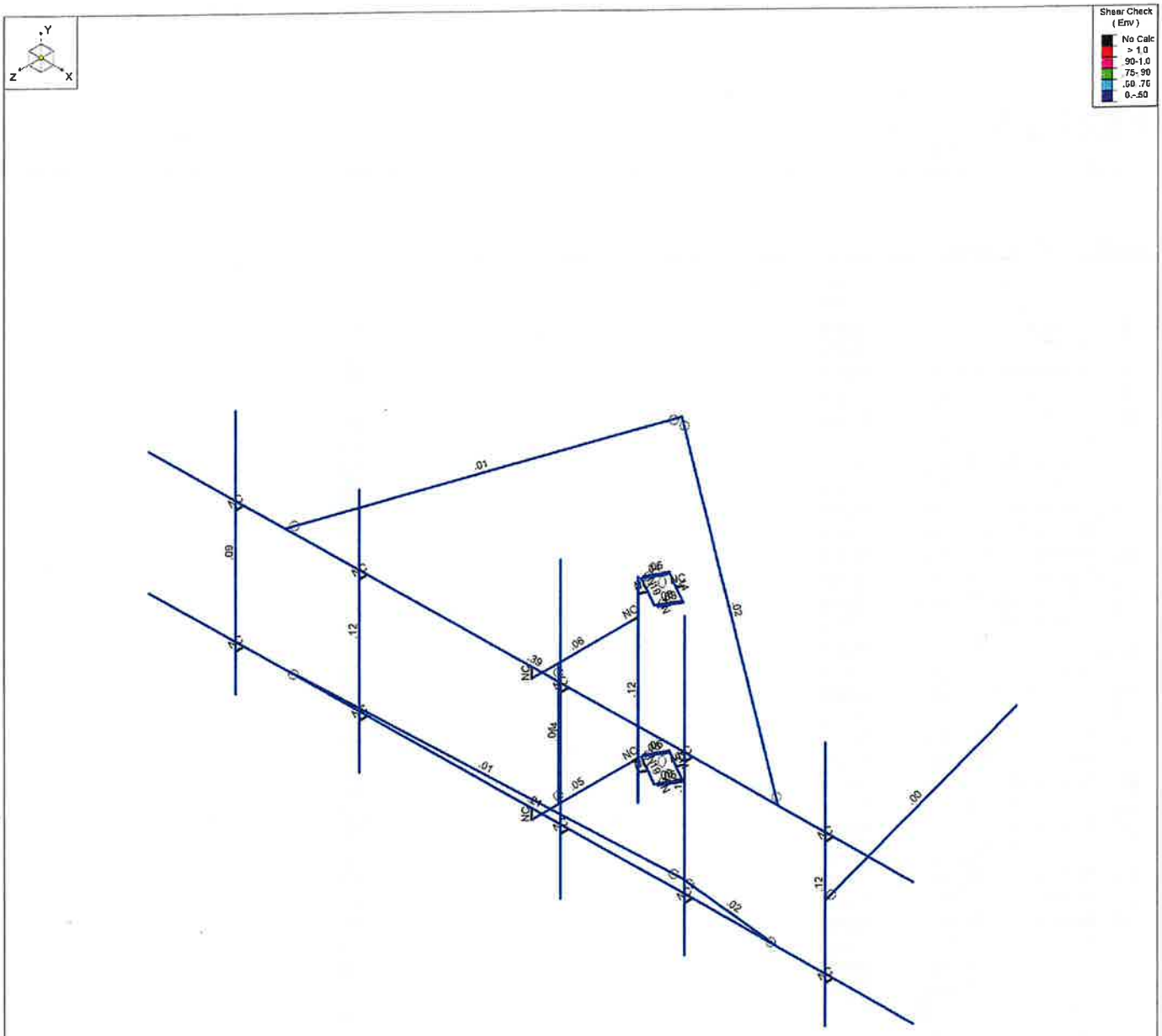
Envelope Only Solution

		SK - 1
		Dec 15, 2023 at 10:41 AM
		5000092862-VZW_MT_LOT_A_H.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

		SK - 2
		Dec 15, 2023 at 10:41 AM
		5000092862-VZW_MT_LOT_A_H.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

		SK - 3
		Dec 15, 2023 at 10:41 AM
		5000092862-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					39			
2	Antenna Di	None					39			
3	Antenna Wo (0 Deg)	None					39			
4	Antenna Wo (30 Deg)	None					39			
5	Antenna Wo (60 Deg)	None					39			
6	Antenna Wo (90 Deg)	None					39			
7	Antenna Wo (120 Deg)	None					39			
8	Antenna Wo (150 Deg)	None					39			
9	Antenna Wo (180 Deg)	None					39			
10	Antenna Wo (210 Deg)	None					39			
11	Antenna Wo (240 Deg)	None					39			
12	Antenna Wo (270 Deg)	None					39			
13	Antenna Wo (300 Deg)	None					39			
14	Antenna Wo (330 Deg)	None					39			
15	Antenna Wi (0 Deg)	None					39			
16	Antenna Wi (30 Deg)	None					39			
17	Antenna Wi (60 Deg)	None					39			
18	Antenna Wi (90 Deg)	None					39			
19	Antenna Wi (120 Deg)	None					39			
20	Antenna Wi (150 Deg)	None					39			
21	Antenna Wi (180 Deg)	None					39			
22	Antenna Wi (210 Deg)	None					39			
23	Antenna Wi (240 Deg)	None					39			
24	Antenna Wi (270 Deg)	None					39			
25	Antenna Wi (300 Deg)	None					39			
26	Antenna Wi (330 Deg)	None					39			
27	Antenna Wm (0 Deg)	None					39			
28	Antenna Wm (30 Deg)	None					39			
29	Antenna Wm (60 Deg)	None					39			
30	Antenna Wm (90 Deg)	None					39			
31	Antenna Wm (120 Deg)	None					39			
32	Antenna Wm (150 Deg)	None					39			
33	Antenna Wm (180 Deg)	None					39			
34	Antenna Wm (210 Deg)	None					39			
35	Antenna Wm (240 Deg)	None					39			
36	Antenna Wm (270 Deg)	None					39			
37	Antenna Wm (300 Deg)	None					39			
38	Antenna Wm (330 Deg)	None					39			
39	Structure D	None		-1						
40	Structure Di	None						28		
41	Structure Wo (0 Deg)	None						56		
42	Structure Wo (30 Deg)	None						56		
43	Structure Wo (60 Deg)	None						56		
44	Structure Wo (90 Deg)	None						56		
45	Structure Wo (120 D...	None						56		
46	Structure Wo (150 D...	None						56		
47	Structure Wo (180 D...	None						56		
48	Structure Wo (210 D...	None						56		
49	Structure Wo (240 D...	None						56		
50	Structure Wo (270 D...	None						56		
51	Structure Wo (300 D...	None						56		
52	Structure Wo (330 D...	None						56		
53	Structure Wi (0 Deg)	None						56		

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						56		
55	Structure Wi (60 Deg)	None						56		
56	Structure Wi (90 Deg)	None						56		
57	Structure Wi (120 De..	None						56		
58	Structure Wi (150 De..	None						56		
59	Structure Wi (180 De..	None						56		
60	Structure Wi (210 De..	None						56		
61	Structure Wi (240 De..	None						56		
62	Structure Wi (270 De..	None						56		
63	Structure Wi (300 De..	None						56		
64	Structure Wi (330 De..	None						56		
65	Structure Wm (0 Deg)	None						56		
66	Structure Wm (30 De..	None						56		
67	Structure Wm (60 De..	None						56		
68	Structure Wm (90 De..	None						56		
69	Structure Wm (120 D..	None						56		
70	Structure Wm (150 D..	None						56		
71	Structure Wm (180 D..	None						56		
72	Structure Wm (210 D..	None						56		
73	Structure Wm (240 D..	None						56		
74	Structure Wm (270 D..	None						56		
75	Structure Wm (300 D..	None						56		
76	Structure Wm (330 D..	None						56		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			
81	Antenna Ev	None					39			
82	Antenna Eh (0 Deg)	None					26			
83	Antenna Eh (90 Deg)	None					26			
84	Structure Ev	ELY		-.041						
85	Structure Eh (0 Deg)	ELZ			-.102					
86	Structure Eh (90 Deg)	ELX	.102							

Load Combinations

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

Load Combinations (Continued)

	Description	Sol..	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
20	1.2D + 1.0Di + 1.0Wi (210 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1										
21	1.2D + 1.0Di + 1.0Wi (240 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1										
22	1.2D + 1.0Di + 1.0Wi (270 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1										
23	1.2D + 1.0Di + 1.0Wi (300 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1										
24	1.2D + 1.0Di + 1.0Wi (330 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1										
25	1.2D + 1.5Lm1 + 1.0Wm (0 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1												
26	1.2D + 1.5Lm1 + 1.0Wm (30 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1												
27	1.2D + 1.5Lm1 + 1.0Wm (60 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1												
28	1.2D + 1.5Lm1 + 1.0Wm (90 Deg)	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1												
29	1.2D + 1.5Lm1 + 1.0Wm (120 D..	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1												
30	1.2D + 1.5Lm1 + 1.0Wm (150 D..	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1												
31	1.2D + 1.5Lm1 + 1.0Wm (180 D..	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1												
32	1.2D + 1.5Lm1 + 1.0Wm (210 D..	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1												
33	1.2D + 1.5Lm1 + 1.0Wm (240 D..	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1												
34	1.2D + 1.5Lm1 + 1.0Wm (270 D..	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1												
35	1.2D + 1.5Lm1 + 1.0Wm (300 D..	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1												
36	1.2D + 1.5Lm1 + 1.0Wm (330 D..	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1												
37	1.2D + 1.5Lm2 + 1.0Wm (0 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1												
38	1.2D + 1.5Lm2 + 1.0Wm (30 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1												
39	1.2D + 1.5Lm2 + 1.0Wm (60 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1												
40	1.2D + 1.5Lm2 + 1.0Wm (90 Deg)	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1												
41	1.2D + 1.5Lm2 + 1.0Wm (120 D..	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1												
42	1.2D + 1.5Lm2 + 1.0Wm (150 D..	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1												
43	1.2D + 1.5Lm2 + 1.0Wm (180 D..	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1												
44	1.2D + 1.5Lm2 + 1.0Wm (210 D..	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1												
45	1.2D + 1.5Lm2 + 1.0Wm (240 D..	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1												
46	1.2D + 1.5Lm2 + 1.0Wm (270 D..	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1												
47	1.2D + 1.5Lm2 + 1.0Wm (300 D..	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1												
48	1.2D + 1.5Lm2 + 1.0Wm (330 D..	Yes	Y		1	1.2	39	1.2	78	1.5	38	1	76	1												
49	1.2D + 1.5Lv1	Yes	Y		1	1.2	39	1.2	79	1.5																
50	1.2D + 1.5Lv2	Yes	Y		1	1.2	39	1.2	80	1.5																
51	1.4D	Yes	Y		1	1.4	39	1.4																		
52	1.2D + 1.0Ev + 1.0Eh (0 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	1	83		E...	1	E...							
53	1.2D + 1.0Ev + 1.0Eh (30 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.866	83	.5	E...	.866	E...	.5						
54	1.2D + 1.0Ev + 1.0Eh (60 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.5	83	.866	E...	.5	E...	.866						
55	1.2D + 1.0Ev + 1.0Eh (90 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82		83	1	E...		E...	1						
56	1.2D + 1.0Ev + 1.0Eh (120 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.5	83	.866	E...	-.5	E...	.866						
57	1.2D + 1.0Ev + 1.0Eh (150 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.8...	83	.5	E...	-.8...	E...	.5						
58	1.2D + 1.0Ev + 1.0Eh (180 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-1	83		E...	-1	E...							
59	1.2D + 1.0Ev + 1.0Eh (210 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.8...	83	-.5	E...	-.8...	E...	-.5						
60	1.2D + 1.0Ev + 1.0Eh (240 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.5	83	-.8...	E...	-.5	E...	-.8...						
61	1.2D + 1.0Ev + 1.0Eh (270 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82		83	-1	E...		E...	-1						
62	1.2D + 1.0Ev + 1.0Eh (300 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.5	83	-.8...	E...	.5	E...	-.8...						
63	1.2D + 1.0Ev + 1.0Eh (330 Deg)	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.866	83	-.5	E...	.866	E...	-.5						
64	0.9D - 1.0Ev + 1.0Eh (0 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	1	83		E...	1	E...							
65	0.9D - 1.0Ev + 1.0Eh (30 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.866	83	.5	E...	.866	E...	.5						
66	0.9D - 1.0Ev + 1.0Eh (60 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.5	83	.866	E...	.5	E...	.866						
67	0.9D - 1.0Ev + 1.0Eh (90 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82		83	1	E...		E...	1						
68	0.9D - 1.0Ev + 1.0Eh (120 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.5	83	.866	E...	-.5	E...	.866						
69	0.9D - 1.0Ev + 1.0Eh (150 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.8...	83	.5	E...	-.8...	E...	.5						
70	0.9D - 1.0Ev + 1.0Eh (180 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-1	83		E...	-1	E...							
71	0.9D - 1.0Ev + 1.0Eh (210 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.8...	83	-.5	E...	-.8...	E...	-.5						
72	0.9D - 1.0Ev + 1.0Eh (240 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.5	83	-.8...	E...	-.5	E...	-.8...						
73	0.9D - 1.0Ev + 1.0Eh (270 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82		83	-1	E...		E...	-1						
74	0.9D - 1.0Ev + 1.0Eh (300 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.5	83	-.8...	E...	.5	E...	-.8...						
75	0.9D - 1.0Ev + 1.0Eh (330 Deg)	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.866	83	-.5	E...	.866	E...	-.5						

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Face Horizontal	PIPE_2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Mount Pipe	PIPE_2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
3	Standoff Arm	HSS2.5X2.5X3	Beam	SquareTube	A500 Gr. B 46	Typical	1.54	1.35	1.35	2.25
4	Standoff Vertical	SR_0.75	Beam	BAR	A36 Gr.36	Typical	.442	.016	.016	.031
5	Mast Pipe	PIPE_3.0	Beam	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
6	End Bar	PL3/8x6	Beam	BAR	A36 Gr.36	Typical	2.25	.026	6.75	.101
7	Tieback	PIPE_1.5	Beam	Pipe	A53 Gr. B	Typical	.749	.293	.293	.586
8	Proposed Stabilizer	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical	1.19	.692	.692	.026
9	Mount Pipe 2	PIPE_2.0X	Beam	Pipe	A53 Gr. B	Typical	1.4	.827	.827	1.65

Hot Rolled Steel Properties

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

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N2			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
2	M2	N3	N4			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
3	M3	N6	N14			RIGID	None	None	RIGID	Typical
4	M4	N5	N13			RIGID	None	None	RIGID	Typical
5	M5	N8	N16			RIGID	None	None	RIGID	Typical
6	M6	N7	N15			RIGID	None	None	RIGID	Typical
7	M7	N10	N18			RIGID	None	None	RIGID	Typical
8	M8	N9	N17			RIGID	None	None	RIGID	Typical
9	M9	N12	N20			RIGID	None	None	RIGID	Typical
10	M10	N11	N19			RIGID	None	None	RIGID	Typical
11	MP1A	N26	N30			Mount Pipe	Beam	Pipe	A53 Gr. B	Typical
12	MP2A	N25	N29			Mount Pipe 2	Beam	Pipe	A53 Gr. B	Typical
13	MP3A	N24	N28			Mount Pipe 2	Beam	Pipe	A53 Gr. B	Typical
14	MP5A	N23	N27			Mount Pipe	Beam	Pipe	A53 Gr. B	Typical
15	M15	N22	N32			RIGID	None	None	RIGID	Typical
16	M16	N21	N31			RIGID	None	None	RIGID	Typical
17	RCP	N32	N34			Standoff Arm	Beam	SquareTube	A500 Gr. ...	Typical
18	M18	N31	N33			Standoff Arm	Beam	SquareTube	A500 Gr. ...	Typical
19	M19	N36	N35			Standoff Vertical	Beam	BAR	A36 Gr.36	Typical
20	M20	N34	N37			RIGID	None	None	RIGID	Typical
21	M21	N33	N39			RIGID	None	None	RIGID	Typical
22	M22	N39A	N40			Mast Pipe	Beam	Pipe	A53 Gr. B	Typical
23	M23	N41	N43			RIGID	None	None	RIGID	Typical
24	M24	N42	N44			RIGID	None	None	RIGID	Typical
25	M25	N47	N45			End Bar	Beam	BAR	A36 Gr.36	Typical
26	M26	N48	N46			End Bar	Beam	BAR	A36 Gr.36	Typical
27	M27	N47	N51			End Bar	Beam	BAR	A36 Gr.36	Typical
28	M28	N45	N49			End Bar	Beam	BAR	A36 Gr.36	Typical
29	M29	N48	N52			End Bar	Beam	BAR	A36 Gr.36	Typical
30	M30	N46	N50			End Bar	Beam	BAR	A36 Gr.36	Typical
31	M31	N55	N57			RIGID	None	None	RIGID	Typical
32	M32	N53	N59			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
33	M33	N56	N58			RIGID	None	None	RIGID	Typical
34	M34	N54	N60			RIGID	None	None	RIGID	Typical
35	M35	N62	N66			End Bar	Beam	BAR	A36 Gr.36	Typical
36	M36	N64	N68			End Bar	Beam	BAR	A36 Gr.36	Typical
37	M37	N61	N65			End Bar	Beam	BAR	A36 Gr.36	Typical
38	M38	N63	N67			End Bar	Beam	BAR	A36 Gr.36	Typical
39	M39	N67	N65			End Bar	Beam	BAR	A36 Gr.36	Typical
40	M40	N68	N66			End Bar	Beam	BAR	A36 Gr.36	Typical
41	M41	N69	N71			RIGID	None	None	RIGID	Typical
42	M42	N70	N72			RIGID	None	None	RIGID	Typical
43	M44	N76	N78			RIGID	None	None	RIGID	Typical
44	M45	N75	N77			RIGID	None	None	RIGID	Typical
45	MP4A	N79	N80			Mount Pipe	Beam	Pipe	A53 Gr. B	Typical
46	M46A	N81	N80A			Tieback	Beam	Pipe	A53 Gr. B	Typical
47	M47	N83	N82			Proposed Stab..	Beam	Single Angle	A36 Gr.36	Typical
48	M48	N84	N82		270	Proposed Stab..	Beam	Single Angle	A36 Gr.36	Typical
49	M49	N86	N85			Proposed Stab..	Beam	Single Angle	A36 Gr.36	Typical
50	M50	N87	N85		270	Proposed Stab..	Beam	Single Angle	A36 Gr.36	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes				None
2	M2						Yes	Default			None
3	M3						Yes	** NA **			None
4	M4						Yes	** NA **			None
5	M5						Yes	** NA **			None
6	M6						Yes	** NA **			None
7	M7						Yes	** NA **			None
8	M8						Yes	** NA **			None
9	M9						Yes	** NA **			None
10	M10						Yes	** NA **			None
11	MP1A						Yes				None
12	MP2A						Yes				None
13	MP3A						Yes				None
14	MP5A						Yes				None
15	M15						Yes	** NA **			None
16	M16						Yes	** NA **			None
17	RCP						Yes				None
18	M18						Yes				None
19	M19	BenPIN	BenPIN				Yes	Default			None
20	M20						Yes	** NA **			None
21	M21						Yes	** NA **			None
22	M22						Yes				None
23	M23						Yes	** NA **			None
24	M24						Yes	** NA **			None
25	M25						Yes				None
26	M26						Yes				None
27	M27						Yes				None
28	M28						Yes	Default			None
29	M29						Yes				None
30	M30						Yes				None
31	M31		OOOXOO				Yes	** NA **			None
32	M32		OOOXOO				Yes	** NA **			None
33	M33		OOOXOO				Yes	** NA **			None
34	M34		OOOXOO				Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
35	M35						Yes				None
36	M36						Yes				None
37	M37						Yes				None
38	M38						Yes				None
39	M39						Yes				None
40	M40						Yes				None
41	M41						Yes	** NA **			None
42	M42						Yes	** NA **			None
43	M44						Yes	** NA **			None
44	M45						Yes	** NA **			None
45	MP4A						Yes				None
46	M46A	BenPIN					Yes	Default			None
47	M47	BenPIN	BenPIN				Yes				None
48	M48	BenPIN	BenPIN				Yes				None
49	M49	BenPIN	BenPIN				Yes				None
50	M50	BenPIN	BenPIN				Yes				None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	Y	-31.65	3
2	MP3A	My	-.021	3
3	MP3A	Mz	.018	3
4	MP3A	Y	-31.65	45
5	MP3A	My	-.021	45
6	MP3A	Mz	.018	45
7	MP3A	Y	-31.65	3
8	MP3A	My	-.021	3
9	MP3A	Mz	-.018	3
10	MP3A	Y	-31.65	45
11	MP3A	My	-.021	45
12	MP3A	Mz	-.018	45
13	MP4A	Y	-28.65	12
14	MP4A	My	-.019	12
15	MP4A	Mz	0	12
16	MP4A	Y	-28.65	36
17	MP4A	My	-.019	36
18	MP4A	Mz	0	36
19	MP3A	Y	-10.4	36
20	MP3A	My	.003	36
21	MP3A	Mz	0	36
22	MP3A	Y	-74.7	12
23	MP3A	My	.037	12
24	MP3A	Mz	0	12
25	MP2A	Y	-79.1	12
26	MP2A	My	.04	12
27	MP2A	Mz	0	12
28	MP1A	Y	-6	9
29	MP1A	My	-.005	9
30	MP1A	Mz	.000803	9
31	MP1A	Y	-6	39
32	MP1A	My	-.005	39
33	MP1A	Mz	.000803	39
34	MP5A	Y	-6	9
35	MP5A	My	-.005	9
36	MP5A	Mz	.000803	9

Member Point Loads (BLC 1 : Antenna D) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
37	MP5A	Y	-6	39
38	MP5A	My	-.005	39
39	MP5A	Mz	.000803	39

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	Y	-71.317	3
2	MP3A	My	-.048	3
3	MP3A	Mz	.042	3
4	MP3A	Y	-71.317	45
5	MP3A	My	-.048	45
6	MP3A	Mz	.042	45
7	MP3A	Y	-71.317	3
8	MP3A	My	-.048	3
9	MP3A	Mz	-.042	3
10	MP3A	Y	-71.317	45
11	MP3A	My	-.048	45
12	MP3A	Mz	-.042	45
13	MP4A	Y	-30.376	12
14	MP4A	My	-.02	12
15	MP4A	Mz	0	12
16	MP4A	Y	-30.376	36
17	MP4A	My	-.02	36
18	MP4A	Mz	0	36
19	MP3A	Y	-10.985	36
20	MP3A	My	.003	36
21	MP3A	Mz	0	36
22	MP3A	Y	-45.809	12
23	MP3A	My	.023	12
24	MP3A	Mz	0	12
25	MP2A	Y	-46.293	12
26	MP2A	My	.023	12
27	MP2A	Mz	0	12
28	MP1A	Y	-41.101	9
29	MP1A	My	-.031	9
30	MP1A	Mz	.006	9
31	MP1A	Y	-41.101	39
32	MP1A	My	-.031	39
33	MP1A	Mz	.006	39
34	MP5A	Y	-41.101	9
35	MP5A	My	-.031	9
36	MP5A	Mz	.006	9
37	MP5A	Y	-41.101	39
38	MP5A	My	-.031	39
39	MP5A	Mz	.006	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	0	3
2	MP3A	Z	-216.501	3
3	MP3A	Mx	-.126	3
4	MP3A	X	0	45
5	MP3A	Z	-216.501	45
6	MP3A	Mx	-.126	45
7	MP3A	X	0	3
8	MP3A	Z	-216.501	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
9	MP3A	Mx	.126	3
10	MP3A	X	0	45
11	MP3A	Z	-216.501	45
12	MP3A	Mx	.126	45
13	MP4A	X	0	12
14	MP4A	Z	-90.07	12
15	MP4A	Mx	0	12
16	MP4A	X	0	36
17	MP4A	Z	-90.07	36
18	MP4A	Mx	0	36
19	MP3A	X	0	36
20	MP3A	Z	-17.586	36
21	MP3A	Mx	0	36
22	MP3A	X	0	12
23	MP3A	Z	-73.672	12
24	MP3A	Mx	0	12
25	MP2A	X	0	12
26	MP2A	Z	-88.882	12
27	MP2A	Mx	0	12
28	MP1A	X	0	9
29	MP1A	Z	-64.026	9
30	MP1A	Mx	-.009	9
31	MP1A	X	0	39
32	MP1A	Z	-64.026	39
33	MP1A	Mx	-.009	39
34	MP5A	X	0	9
35	MP5A	Z	-64.026	9
36	MP5A	Mx	-.009	9
37	MP5A	X	0	39
38	MP5A	Z	-64.026	39
39	MP5A	Mx	-.009	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	98.962	3
2	MP3A	Z	-171.407	3
3	MP3A	Mx	-.166	3
4	MP3A	X	98.962	45
5	MP3A	Z	-171.407	45
6	MP3A	Mx	-.166	45
7	MP3A	X	98.962	3
8	MP3A	Z	-171.407	3
9	MP3A	Mx	.034	3
10	MP3A	X	98.962	45
11	MP3A	Z	-171.407	45
12	MP3A	Mx	.034	45
13	MP4A	X	38.113	12
14	MP4A	Z	-66.013	12
15	MP4A	Mx	-.025	12
16	MP4A	X	38.113	36
17	MP4A	Z	-66.013	36
18	MP4A	Mx	-.025	36
19	MP3A	X	8.116	36
20	MP3A	Z	-14.057	36
21	MP3A	Mx	.002	36
22	MP3A	X	33.806	12

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
23	MP3A	Z	-58.554	12
24	MP3A	Mx	.017	12
25	MP2A	X	40.906	12
26	MP2A	Z	-70.851	12
27	MP2A	Mx	.02	12
28	MP1A	X	44.706	9
29	MP1A	Z	-77.433	9
30	MP1A	Mx	-.044	9
31	MP1A	X	44.706	39
32	MP1A	Z	-77.433	39
33	MP1A	Mx	-.044	39
34	MP5A	X	44.706	9
35	MP5A	Z	-77.433	9
36	MP5A	Mx	-.044	9
37	MP5A	X	44.706	39
38	MP5A	Z	-77.433	39
39	MP5A	Mx	-.044	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	139.232	3
2	MP3A	Z	-80.386	3
3	MP3A	Mx	-.14	3
4	MP3A	X	139.232	45
5	MP3A	Z	-80.386	45
6	MP3A	Mx	-.14	45
7	MP3A	X	139.232	3
8	MP3A	Z	-80.386	3
9	MP3A	Mx	-.046	3
10	MP3A	X	139.232	45
11	MP3A	Z	-80.386	45
12	MP3A	Mx	-.046	45
13	MP4A	X	42.033	12
14	MP4A	Z	-24.268	12
15	MP4A	Mx	-.028	12
16	MP4A	X	42.033	36
17	MP4A	Z	-24.268	36
18	MP4A	Mx	-.028	36
19	MP3A	X	11.711	36
20	MP3A	Z	-6.761	36
21	MP3A	Mx	.003	36
22	MP3A	X	48.057	12
23	MP3A	Z	-27.746	12
24	MP3A	Mx	.024	12
25	MP2A	X	58.605	12
26	MP2A	Z	-33.836	12
27	MP2A	Mx	.029	12
28	MP1A	X	104.401	9
29	MP1A	Z	-60.276	9
30	MP1A	Mx	-.087	9
31	MP1A	X	104.401	39
32	MP1A	Z	-60.276	39
33	MP1A	Mx	-.087	39
34	MP5A	X	104.401	9
35	MP5A	Z	-60.276	9
36	MP5A	Mx	-.087	9

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
37	MP5A	X	104.401	39
38	MP5A	Z	-60.276	39
39	MP5A	Mx	-.087	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	142.195	3
2	MP3A	Z	0	3
3	MP3A	Mx	-.095	3
4	MP3A	X	142.195	45
5	MP3A	Z	0	45
6	MP3A	Mx	-.095	45
7	MP3A	X	142.195	3
8	MP3A	Z	0	3
9	MP3A	Mx	-.095	3
10	MP3A	X	142.195	45
11	MP3A	Z	0	45
12	MP3A	Mx	-.095	45
13	MP4A	X	34.69	12
14	MP4A	Z	0	12
15	MP4A	Mx	-.023	12
16	MP4A	X	34.69	36
17	MP4A	Z	0	36
18	MP4A	Mx	-.023	36
19	MP3A	X	12.168	36
20	MP3A	Z	0	36
21	MP3A	Mx	.003	36
22	MP3A	X	49.432	12
23	MP3A	Z	0	12
24	MP3A	Mx	.025	12
25	MP2A	X	60.601	12
26	MP2A	Z	0	12
27	MP2A	Mx	.03	12
28	MP1A	X	126.306	9
29	MP1A	Z	0	9
30	MP1A	Mx	-.096	9
31	MP1A	X	126.306	39
32	MP1A	Z	0	39
33	MP1A	Mx	-.096	39
34	MP5A	X	126.306	9
35	MP5A	Z	0	9
36	MP5A	Mx	-.096	9
37	MP5A	X	126.306	39
38	MP5A	Z	0	39
39	MP5A	Mx	-.096	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	139.232	3
2	MP3A	Z	80.386	3
3	MP3A	Mx	-.046	3
4	MP3A	X	139.232	45
5	MP3A	Z	80.386	45
6	MP3A	Mx	-.046	45
7	MP3A	X	139.232	3
8	MP3A	Z	80.386	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
9	MP3A	Mx	-.14	3
10	MP3A	X	139.232	45
11	MP3A	Z	80.386	45
12	MP3A	Mx	-.14	45
13	MP4A	X	42.033	12
14	MP4A	Z	24.268	12
15	MP4A	Mx	-.028	12
16	MP4A	X	42.033	36
17	MP4A	Z	24.268	36
18	MP4A	Mx	-.028	36
19	MP3A	X	11.711	36
20	MP3A	Z	6.761	36
21	MP3A	Mx	.003	36
22	MP3A	X	48.057	12
23	MP3A	Z	27.746	12
24	MP3A	Mx	.024	12
25	MP2A	X	58.605	12
26	MP2A	Z	33.836	12
27	MP2A	Mx	.029	12
28	MP1A	X	87.4	9
29	MP1A	Z	50.46	9
30	MP1A	Mx	-.06	9
31	MP1A	X	87.4	39
32	MP1A	Z	50.46	39
33	MP1A	Mx	-.06	39
34	MP5A	X	87.4	9
35	MP5A	Z	50.46	9
36	MP5A	Mx	-.06	9
37	MP5A	X	87.4	39
38	MP5A	Z	50.46	39
39	MP5A	Mx	-.06	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	98.962	3
2	MP3A	Z	171.407	3
3	MP3A	Mx	.034	3
4	MP3A	X	98.962	45
5	MP3A	Z	171.407	45
6	MP3A	Mx	.034	45
7	MP3A	X	98.962	3
8	MP3A	Z	171.407	3
9	MP3A	Mx	-.166	3
10	MP3A	X	98.962	45
11	MP3A	Z	171.407	45
12	MP3A	Mx	-.166	45
13	MP4A	X	38.113	12
14	MP4A	Z	66.013	12
15	MP4A	Mx	-.025	12
16	MP4A	X	38.113	36
17	MP4A	Z	66.013	36
18	MP4A	Mx	-.025	36
19	MP3A	X	8.116	36
20	MP3A	Z	14.057	36
21	MP3A	Mx	.002	36
22	MP3A	X	33.806	12

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
23	MP3A	Z	58.554	12
24	MP3A	Mx	.017	12
25	MP2A	X	40.906	12
26	MP2A	Z	70.851	12
27	MP2A	Mx	.02	12
28	MP1A	X	34.89	9
29	MP1A	Z	60.431	9
30	MP1A	Mx	-.018	9
31	MP1A	X	34.89	39
32	MP1A	Z	60.431	39
33	MP1A	Mx	-.018	39
34	MP5A	X	34.89	9
35	MP5A	Z	60.431	9
36	MP5A	Mx	-.018	9
37	MP5A	X	34.89	39
38	MP5A	Z	60.431	39
39	MP5A	Mx	-.018	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	0	3
2	MP3A	Z	216.501	3
3	MP3A	Mx	.126	3
4	MP3A	X	0	45
5	MP3A	Z	216.501	45
6	MP3A	Mx	.126	45
7	MP3A	X	0	3
8	MP3A	Z	216.501	3
9	MP3A	Mx	-.126	3
10	MP3A	X	0	45
11	MP3A	Z	216.501	45
12	MP3A	Mx	-.126	45
13	MP4A	X	0	12
14	MP4A	Z	90.07	12
15	MP4A	Mx	0	12
16	MP4A	X	0	36
17	MP4A	Z	90.07	36
18	MP4A	Mx	0	36
19	MP3A	X	0	36
20	MP3A	Z	17.586	36
21	MP3A	Mx	0	36
22	MP3A	X	0	12
23	MP3A	Z	73.672	12
24	MP3A	Mx	0	12
25	MP2A	X	0	12
26	MP2A	Z	88.882	12
27	MP2A	Mx	0	12
28	MP1A	X	0	9
29	MP1A	Z	64.026	9
30	MP1A	Mx	.009	9
31	MP1A	X	0	39
32	MP1A	Z	64.026	39
33	MP1A	Mx	.009	39
34	MP5A	X	0	9
35	MP5A	Z	64.026	9
36	MP5A	Mx	.009	9

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
37	MP5A	X	0	39
38	MP5A	Z	64.026	39
39	MP5A	Mx	.009	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-98.962	3
2	MP3A	Z	171.407	3
3	MP3A	Mx	.166	3
4	MP3A	X	-98.962	45
5	MP3A	Z	171.407	45
6	MP3A	Mx	.166	45
7	MP3A	X	-98.962	3
8	MP3A	Z	171.407	3
9	MP3A	Mx	-.034	3
10	MP3A	X	-98.962	45
11	MP3A	Z	171.407	45
12	MP3A	Mx	-.034	45
13	MP4A	X	-38.113	12
14	MP4A	Z	66.013	12
15	MP4A	Mx	.025	12
16	MP4A	X	-38.113	36
17	MP4A	Z	66.013	36
18	MP4A	Mx	.025	36
19	MP3A	X	-8.116	36
20	MP3A	Z	14.057	36
21	MP3A	Mx	-.002	36
22	MP3A	X	-33.806	12
23	MP3A	Z	58.554	12
24	MP3A	Mx	-.017	12
25	MP2A	X	-40.906	12
26	MP2A	Z	70.851	12
27	MP2A	Mx	-.02	12
28	MP1A	X	-44.706	9
29	MP1A	Z	77.433	9
30	MP1A	Mx	.044	9
31	MP1A	X	-44.706	39
32	MP1A	Z	77.433	39
33	MP1A	Mx	.044	39
34	MP5A	X	-44.706	9
35	MP5A	Z	77.433	9
36	MP5A	Mx	.044	9
37	MP5A	X	-44.706	39
38	MP5A	Z	77.433	39
39	MP5A	Mx	.044	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-139.232	3
2	MP3A	Z	80.386	3
3	MP3A	Mx	.14	3
4	MP3A	X	-139.232	45
5	MP3A	Z	80.386	45
6	MP3A	Mx	.14	45
7	MP3A	X	-139.232	3
8	MP3A	Z	80.386	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
9	MP3A	Mx	.046	3
10	MP3A	X	-139.232	45
11	MP3A	Z	80.386	45
12	MP3A	Mx	.046	45
13	MP4A	X	-42.033	12
14	MP4A	Z	24.268	12
15	MP4A	Mx	.028	12
16	MP4A	X	-42.033	36
17	MP4A	Z	24.268	36
18	MP4A	Mx	.028	36
19	MP3A	X	-11.711	36
20	MP3A	Z	6.761	36
21	MP3A	Mx	-.003	36
22	MP3A	X	-48.057	12
23	MP3A	Z	27.746	12
24	MP3A	Mx	-.024	12
25	MP2A	X	-58.605	12
26	MP2A	Z	33.836	12
27	MP2A	Mx	-.029	12
28	MP1A	X	-104.401	9
29	MP1A	Z	60.276	9
30	MP1A	Mx	.087	9
31	MP1A	X	-104.401	39
32	MP1A	Z	60.276	39
33	MP1A	Mx	.087	39
34	MP5A	X	-104.401	9
35	MP5A	Z	60.276	9
36	MP5A	Mx	.087	9
37	MP5A	X	-104.401	39
38	MP5A	Z	60.276	39
39	MP5A	Mx	.087	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-142.195	3
2	MP3A	Z	0	3
3	MP3A	Mx	.095	3
4	MP3A	X	-142.195	45
5	MP3A	Z	0	45
6	MP3A	Mx	.095	45
7	MP3A	X	-142.195	3
8	MP3A	Z	0	3
9	MP3A	Mx	.095	3
10	MP3A	X	-142.195	45
11	MP3A	Z	0	45
12	MP3A	Mx	.095	45
13	MP4A	X	-34.69	12
14	MP4A	Z	0	12
15	MP4A	Mx	.023	12
16	MP4A	X	-34.69	36
17	MP4A	Z	0	36
18	MP4A	Mx	.023	36
19	MP3A	X	-12.168	36
20	MP3A	Z	0	36
21	MP3A	Mx	-.003	36
22	MP3A	X	-49.432	12

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
23	MP3A	Z	0	12
24	MP3A	Mx	-.025	12
25	MP2A	X	-60.601	12
26	MP2A	Z	0	12
27	MP2A	Mx	-.03	12
28	MP1A	X	-126.306	9
29	MP1A	Z	0	9
30	MP1A	Mx	.096	9
31	MP1A	X	-126.306	39
32	MP1A	Z	0	39
33	MP1A	Mx	.096	39
34	MP5A	X	-126.306	9
35	MP5A	Z	0	9
36	MP5A	Mx	.096	9
37	MP5A	X	-126.306	39
38	MP5A	Z	0	39
39	MP5A	Mx	.096	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-139.232	3
2	MP3A	Z	-80.386	3
3	MP3A	Mx	.046	3
4	MP3A	X	-139.232	45
5	MP3A	Z	-80.386	45
6	MP3A	Mx	.046	45
7	MP3A	X	-139.232	3
8	MP3A	Z	-80.386	3
9	MP3A	Mx	.14	3
10	MP3A	X	-139.232	45
11	MP3A	Z	-80.386	45
12	MP3A	Mx	.14	45
13	MP4A	X	-42.033	12
14	MP4A	Z	-24.268	12
15	MP4A	Mx	.028	12
16	MP4A	X	-42.033	36
17	MP4A	Z	-24.268	36
18	MP4A	Mx	.028	36
19	MP3A	X	-11.711	36
20	MP3A	Z	-6.761	36
21	MP3A	Mx	-.003	36
22	MP3A	X	-48.057	12
23	MP3A	Z	-27.746	12
24	MP3A	Mx	-.024	12
25	MP2A	X	-58.605	12
26	MP2A	Z	-33.836	12
27	MP2A	Mx	-.029	12
28	MP1A	X	-87.4	9
29	MP1A	Z	-50.46	9
30	MP1A	Mx	.06	9
31	MP1A	X	-87.4	39
32	MP1A	Z	-50.46	39
33	MP1A	Mx	.06	39
34	MP5A	X	-87.4	9
35	MP5A	Z	-50.46	9
36	MP5A	Mx	.06	9

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
37	MP5A	X	-87.4	39
38	MP5A	Z	-50.46	39
39	MP5A	Mx	.06	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-98.962	3
2	MP3A	Z	-171.407	3
3	MP3A	Mx	-.034	3
4	MP3A	X	-98.962	45
5	MP3A	Z	-171.407	45
6	MP3A	Mx	-.034	45
7	MP3A	X	-98.962	3
8	MP3A	Z	-171.407	3
9	MP3A	Mx	.166	3
10	MP3A	X	-98.962	45
11	MP3A	Z	-171.407	45
12	MP3A	Mx	.166	45
13	MP4A	X	-38.113	12
14	MP4A	Z	-66.013	12
15	MP4A	Mx	.025	12
16	MP4A	X	-38.113	36
17	MP4A	Z	-66.013	36
18	MP4A	Mx	.025	36
19	MP3A	X	-8.116	36
20	MP3A	Z	-14.057	36
21	MP3A	Mx	-.002	36
22	MP3A	X	-33.806	12
23	MP3A	Z	-58.554	12
24	MP3A	Mx	-.017	12
25	MP2A	X	-40.906	12
26	MP2A	Z	-70.851	12
27	MP2A	Mx	-.02	12
28	MP1A	X	-34.89	9
29	MP1A	Z	-60.431	9
30	MP1A	Mx	.018	9
31	MP1A	X	-34.89	39
32	MP1A	Z	-60.431	39
33	MP1A	Mx	.018	39
34	MP5A	X	-34.89	9
35	MP5A	Z	-60.431	9
36	MP5A	Mx	.018	9
37	MP5A	X	-34.89	39
38	MP5A	Z	-60.431	39
39	MP5A	Mx	.018	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	0	3
2	MP3A	Z	-38.021	3
3	MP3A	Mx	-.022	3
4	MP3A	X	0	45
5	MP3A	Z	-38.021	45
6	MP3A	Mx	-.022	45
7	MP3A	X	0	3
8	MP3A	Z	-38.021	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
9	MP3A	Mx	.022	3
10	MP3A	X	0	45
11	MP3A	Z	-38.021	45
12	MP3A	Mx	.022	45
13	MP4A	X	0	12
14	MP4A	Z	-16.512	12
15	MP4A	Mx	0	12
16	MP4A	X	0	36
17	MP4A	Z	-16.512	36
18	MP4A	Mx	0	36
19	MP3A	X	0	36
20	MP3A	Z	-4.158	36
21	MP3A	Mx	0	36
22	MP3A	X	0	12
23	MP3A	Z	-17.069	12
24	MP3A	Mx	0	12
25	MP2A	X	0	12
26	MP2A	Z	-17.069	12
27	MP2A	Mx	0	12
28	MP1A	X	0	9
29	MP1A	Z	-12.398	9
30	MP1A	Mx	-.002	9
31	MP1A	X	0	39
32	MP1A	Z	-12.398	39
33	MP1A	Mx	-.002	39
34	MP5A	X	0	9
35	MP5A	Z	-12.398	9
36	MP5A	Mx	-.002	9
37	MP5A	X	0	39
38	MP5A	Z	-12.398	39
39	MP5A	Mx	-.002	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	17.502	3
2	MP3A	Z	-30.314	3
3	MP3A	Mx	-.029	3
4	MP3A	X	17.502	45
5	MP3A	Z	-30.314	45
6	MP3A	Mx	-.029	45
7	MP3A	X	17.502	3
8	MP3A	Z	-30.314	3
9	MP3A	Mx	.006	3
10	MP3A	X	17.502	45
11	MP3A	Z	-30.314	45
12	MP3A	Mx	.006	45
13	MP4A	X	7.065	12
14	MP4A	Z	-12.237	12
15	MP4A	Mx	-.005	12
16	MP4A	X	7.065	36
17	MP4A	Z	-12.237	36
18	MP4A	Mx	-.005	36
19	MP3A	X	1.95	36
20	MP3A	Z	-3.377	36
21	MP3A	Mx	.000488	36
22	MP3A	X	7.886	12

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
23	MP3A	Z	-13.659	12
24	MP3A	Mx	.004	12
25	MP2A	X	7.912	12
26	MP2A	Z	-13.704	12
27	MP2A	Mx	.004	12
28	MP1A	X	8.298	9
29	MP1A	Z	-14.373	9
30	MP1A	Mx	-.008	9
31	MP1A	X	8.298	39
32	MP1A	Z	-14.373	39
33	MP1A	Mx	-.008	39
34	MP5A	X	8.298	9
35	MP5A	Z	-14.373	9
36	MP5A	Mx	-.008	9
37	MP5A	X	8.298	39
38	MP5A	Z	-14.373	39
39	MP5A	Mx	-.008	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	25.089	3
2	MP3A	Z	-14.485	3
3	MP3A	Mx	-.025	3
4	MP3A	X	25.089	45
5	MP3A	Z	-14.485	45
6	MP3A	Mx	-.025	45
7	MP3A	X	25.089	3
8	MP3A	Z	-14.485	3
9	MP3A	Mx	-.008	3
10	MP3A	X	25.089	45
11	MP3A	Z	-14.485	45
12	MP3A	Mx	-.008	45
13	MP4A	X	8.111	12
14	MP4A	Z	-4.683	12
15	MP4A	Mx	-.005	12
16	MP4A	X	8.111	36
17	MP4A	Z	-4.683	36
18	MP4A	Mx	-.005	36
19	MP3A	X	2.929	36
20	MP3A	Z	-1.691	36
21	MP3A	Mx	.000732	36
22	MP3A	X	11.413	12
23	MP3A	Z	-6.589	12
24	MP3A	Mx	.006	12
25	MP2A	X	11.547	12
26	MP2A	Z	-6.667	12
27	MP2A	Mx	.006	12
28	MP1A	X	18.833	9
29	MP1A	Z	-10.873	9
30	MP1A	Mx	-.016	9
31	MP1A	X	18.833	39
32	MP1A	Z	-10.873	39
33	MP1A	Mx	-.016	39
34	MP5A	X	18.833	9
35	MP5A	Z	-10.873	9
36	MP5A	Mx	-.016	9

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
37	MP5A	X	18.833	39
38	MP5A	Z	-10.873	39
39	MP5A	Mx	-.016	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	25.953	3
2	MP3A	Z	0	3
3	MP3A	Mx	-.017	3
4	MP3A	X	25.953	45
5	MP3A	Z	0	45
6	MP3A	Mx	-.017	45
7	MP3A	X	25.953	3
8	MP3A	Z	0	3
9	MP3A	Mx	-.017	3
10	MP3A	X	25.953	45
11	MP3A	Z	0	45
12	MP3A	Mx	-.017	45
13	MP4A	X	6.984	12
14	MP4A	Z	0	12
15	MP4A	Mx	-.005	12
16	MP4A	X	6.984	36
17	MP4A	Z	0	36
18	MP4A	Mx	-.005	36
19	MP3A	X	3.124	36
20	MP3A	Z	0	36
21	MP3A	Mx	.000781	36
22	MP3A	X	11.881	12
23	MP3A	Z	0	12
24	MP3A	Mx	.006	12
25	MP2A	X	12.089	12
26	MP2A	Z	0	12
27	MP2A	Mx	.006	12
28	MP1A	X	22.698	9
29	MP1A	Z	0	9
30	MP1A	Mx	-.017	9
31	MP1A	X	22.698	39
32	MP1A	Z	0	39
33	MP1A	Mx	-.017	39
34	MP5A	X	22.698	9
35	MP5A	Z	0	9
36	MP5A	Mx	-.017	9
37	MP5A	X	22.698	39
38	MP5A	Z	0	39
39	MP5A	Mx	-.017	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	25.089	3
2	MP3A	Z	14.485	3
3	MP3A	Mx	-.008	3
4	MP3A	X	25.089	45
5	MP3A	Z	14.485	45
6	MP3A	Mx	-.008	45
7	MP3A	X	25.089	3
8	MP3A	Z	14.485	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
9	MP3A	Mx	-.025	3
10	MP3A	X	25.089	45
11	MP3A	Z	14.485	45
12	MP3A	Mx	-.025	45
13	MP4A	X	8.111	12
14	MP4A	Z	4.683	12
15	MP4A	Mx	-.005	12
16	MP4A	X	8.111	36
17	MP4A	Z	4.683	36
18	MP4A	Mx	-.005	36
19	MP3A	X	2.929	36
20	MP3A	Z	1.691	36
21	MP3A	Mx	.000732	36
22	MP3A	X	11.413	12
23	MP3A	Z	6.589	12
24	MP3A	Mx	.006	12
25	MP2A	X	11.547	12
26	MP2A	Z	6.667	12
27	MP2A	Mx	.006	12
28	MP1A	X	16.021	9
29	MP1A	Z	9.25	9
30	MP1A	Mx	-.011	9
31	MP1A	X	16.021	39
32	MP1A	Z	9.25	39
33	MP1A	Mx	-.011	39
34	MP5A	X	16.021	9
35	MP5A	Z	9.25	9
36	MP5A	Mx	-.011	9
37	MP5A	X	16.021	39
38	MP5A	Z	9.25	39
39	MP5A	Mx	-.011	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	17.502	3
2	MP3A	Z	30.314	3
3	MP3A	Mx	.006	3
4	MP3A	X	17.502	45
5	MP3A	Z	30.314	45
6	MP3A	Mx	.006	45
7	MP3A	X	17.502	3
8	MP3A	Z	30.314	3
9	MP3A	Mx	-.029	3
10	MP3A	X	17.502	45
11	MP3A	Z	30.314	45
12	MP3A	Mx	-.029	45
13	MP4A	X	7.065	12
14	MP4A	Z	12.237	12
15	MP4A	Mx	-.005	12
16	MP4A	X	7.065	36
17	MP4A	Z	12.237	36
18	MP4A	Mx	-.005	36
19	MP3A	X	1.95	36
20	MP3A	Z	3.377	36
21	MP3A	Mx	.000488	36
22	MP3A	X	7.886	12

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
23	MP3A	Z	13.659	12
24	MP3A	Mx	.004	12
25	MP2A	X	7.912	12
26	MP2A	Z	13.704	12
27	MP2A	Mx	.004	12
28	MP1A	X	6.675	9
29	MP1A	Z	11.561	9
30	MP1A	Mx	-.004	9
31	MP1A	X	6.675	39
32	MP1A	Z	11.561	39
33	MP1A	Mx	-.004	39
34	MP5A	X	6.675	9
35	MP5A	Z	11.561	9
36	MP5A	Mx	-.004	9
37	MP5A	X	6.675	39
38	MP5A	Z	11.561	39
39	MP5A	Mx	-.004	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	0	3
2	MP3A	Z	38.021	3
3	MP3A	Mx	.022	3
4	MP3A	X	0	45
5	MP3A	Z	38.021	45
6	MP3A	Mx	.022	45
7	MP3A	X	0	3
8	MP3A	Z	38.021	3
9	MP3A	Mx	-.022	3
10	MP3A	X	0	45
11	MP3A	Z	38.021	45
12	MP3A	Mx	-.022	45
13	MP4A	X	0	12
14	MP4A	Z	16.512	12
15	MP4A	Mx	0	12
16	MP4A	X	0	36
17	MP4A	Z	16.512	36
18	MP4A	Mx	0	36
19	MP3A	X	0	36
20	MP3A	Z	4.158	36
21	MP3A	Mx	0	36
22	MP3A	X	0	12
23	MP3A	Z	17.069	12
24	MP3A	Mx	0	12
25	MP2A	X	0	12
26	MP2A	Z	17.069	12
27	MP2A	Mx	0	12
28	MP1A	X	0	9
29	MP1A	Z	12.398	9
30	MP1A	Mx	.002	9
31	MP1A	X	0	39
32	MP1A	Z	12.398	39
33	MP1A	Mx	.002	39
34	MP5A	X	0	9
35	MP5A	Z	12.398	9
36	MP5A	Mx	.002	9

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
37	MP5A	X	0	39
38	MP5A	Z	12.398	39
39	MP5A	Mx	.002	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-17.502	3
2	MP3A	Z	30.314	3
3	MP3A	Mx	.029	3
4	MP3A	X	-17.502	45
5	MP3A	Z	30.314	45
6	MP3A	Mx	.029	45
7	MP3A	X	-17.502	3
8	MP3A	Z	30.314	3
9	MP3A	Mx	-.006	3
10	MP3A	X	-17.502	45
11	MP3A	Z	30.314	45
12	MP3A	Mx	-.006	45
13	MP4A	X	-7.065	12
14	MP4A	Z	12.237	12
15	MP4A	Mx	.005	12
16	MP4A	X	-7.065	36
17	MP4A	Z	12.237	36
18	MP4A	Mx	.005	36
19	MP3A	X	-1.95	36
20	MP3A	Z	3.377	36
21	MP3A	Mx	-.000488	36
22	MP3A	X	-7.886	12
23	MP3A	Z	13.659	12
24	MP3A	Mx	-.004	12
25	MP2A	X	-7.912	12
26	MP2A	Z	13.704	12
27	MP2A	Mx	-.004	12
28	MP1A	X	-8.298	9
29	MP1A	Z	14.373	9
30	MP1A	Mx	.008	9
31	MP1A	X	-8.298	39
32	MP1A	Z	14.373	39
33	MP1A	Mx	.008	39
34	MP5A	X	-8.298	9
35	MP5A	Z	14.373	9
36	MP5A	Mx	.008	9
37	MP5A	X	-8.298	39
38	MP5A	Z	14.373	39
39	MP5A	Mx	.008	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-25.089	3
2	MP3A	Z	14.485	3
3	MP3A	Mx	.025	3
4	MP3A	X	-25.089	45
5	MP3A	Z	14.485	45
6	MP3A	Mx	.025	45
7	MP3A	X	-25.089	3
8	MP3A	Z	14.485	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
9	MP3A	Mx	.008	3
10	MP3A	X	-25.089	45
11	MP3A	Z	14.485	45
12	MP3A	Mx	.008	45
13	MP4A	X	-8.111	12
14	MP4A	Z	4.683	12
15	MP4A	Mx	.005	12
16	MP4A	X	-8.111	36
17	MP4A	Z	4.683	36
18	MP4A	Mx	.005	36
19	MP3A	X	-2.929	36
20	MP3A	Z	1.691	36
21	MP3A	Mx	-.000732	36
22	MP3A	X	-11.413	12
23	MP3A	Z	6.589	12
24	MP3A	Mx	-.006	12
25	MP2A	X	-11.547	12
26	MP2A	Z	6.667	12
27	MP2A	Mx	-.006	12
28	MP1A	X	-18.833	9
29	MP1A	Z	10.873	9
30	MP1A	Mx	.016	9
31	MP1A	X	-18.833	39
32	MP1A	Z	10.873	39
33	MP1A	Mx	.016	39
34	MP5A	X	-18.833	9
35	MP5A	Z	10.873	9
36	MP5A	Mx	.016	9
37	MP5A	X	-18.833	39
38	MP5A	Z	10.873	39
39	MP5A	Mx	.016	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-25.953	3
2	MP3A	Z	0	3
3	MP3A	Mx	.017	3
4	MP3A	X	-25.953	45
5	MP3A	Z	0	45
6	MP3A	Mx	.017	45
7	MP3A	X	-25.953	3
8	MP3A	Z	0	3
9	MP3A	Mx	.017	3
10	MP3A	X	-25.953	45
11	MP3A	Z	0	45
12	MP3A	Mx	.017	45
13	MP4A	X	-6.984	12
14	MP4A	Z	0	12
15	MP4A	Mx	.005	12
16	MP4A	X	-6.984	36
17	MP4A	Z	0	36
18	MP4A	Mx	.005	36
19	MP3A	X	-3.124	36
20	MP3A	Z	0	36
21	MP3A	Mx	-.000781	36
22	MP3A	X	-11.881	12

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
23	MP3A	Z	0	12
24	MP3A	Mx	-.006	12
25	MP2A	X	-12.089	12
26	MP2A	Z	0	12
27	MP2A	Mx	-.006	12
28	MP1A	X	-22.698	9
29	MP1A	Z	0	9
30	MP1A	Mx	.017	9
31	MP1A	X	-22.698	39
32	MP1A	Z	0	39
33	MP1A	Mx	.017	39
34	MP5A	X	-22.698	9
35	MP5A	Z	0	9
36	MP5A	Mx	.017	9
37	MP5A	X	-22.698	39
38	MP5A	Z	0	39
39	MP5A	Mx	.017	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-25.089	3
2	MP3A	Z	-14.485	3
3	MP3A	Mx	.008	3
4	MP3A	X	-25.089	45
5	MP3A	Z	-14.485	45
6	MP3A	Mx	.008	45
7	MP3A	X	-25.089	3
8	MP3A	Z	-14.485	3
9	MP3A	Mx	.025	3
10	MP3A	X	-25.089	45
11	MP3A	Z	-14.485	45
12	MP3A	Mx	.025	45
13	MP4A	X	-8.111	12
14	MP4A	Z	-4.683	12
15	MP4A	Mx	.005	12
16	MP4A	X	-8.111	36
17	MP4A	Z	-4.683	36
18	MP4A	Mx	.005	36
19	MP3A	X	-2.929	36
20	MP3A	Z	-1.691	36
21	MP3A	Mx	-.000732	36
22	MP3A	X	-11.413	12
23	MP3A	Z	-6.589	12
24	MP3A	Mx	-.006	12
25	MP2A	X	-11.547	12
26	MP2A	Z	-6.667	12
27	MP2A	Mx	-.006	12
28	MP1A	X	-16.021	9
29	MP1A	Z	-9.25	9
30	MP1A	Mx	.011	9
31	MP1A	X	-16.021	39
32	MP1A	Z	-9.25	39
33	MP1A	Mx	.011	39
34	MP5A	X	-16.021	9
35	MP5A	Z	-9.25	9
36	MP5A	Mx	.011	9

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
37	MP5A	X	-16.021	39
38	MP5A	Z	-9.25	39
39	MP5A	Mx	.011	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-17.502	3
2	MP3A	Z	-30.314	3
3	MP3A	Mx	-.006	3
4	MP3A	X	-17.502	45
5	MP3A	Z	-30.314	45
6	MP3A	Mx	-.006	45
7	MP3A	X	-17.502	3
8	MP3A	Z	-30.314	3
9	MP3A	Mx	.029	3
10	MP3A	X	-17.502	45
11	MP3A	Z	-30.314	45
12	MP3A	Mx	.029	45
13	MP4A	X	-7.065	12
14	MP4A	Z	-12.237	12
15	MP4A	Mx	.005	12
16	MP4A	X	-7.065	36
17	MP4A	Z	-12.237	36
18	MP4A	Mx	.005	36
19	MP3A	X	-1.95	36
20	MP3A	Z	-3.377	36
21	MP3A	Mx	-.000488	36
22	MP3A	X	-7.886	12
23	MP3A	Z	-13.659	12
24	MP3A	Mx	-.004	12
25	MP2A	X	-7.912	12
26	MP2A	Z	-13.704	12
27	MP2A	Mx	-.004	12
28	MP1A	X	-6.675	9
29	MP1A	Z	-11.561	9
30	MP1A	Mx	.004	9
31	MP1A	X	-6.675	39
32	MP1A	Z	-11.561	39
33	MP1A	Mx	.004	39
34	MP5A	X	-6.675	9
35	MP5A	Z	-11.561	9
36	MP5A	Mx	.004	9
37	MP5A	X	-6.675	39
38	MP5A	Z	-11.561	39
39	MP5A	Mx	.004	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	0	3
2	MP3A	Z	-12.47	3
3	MP3A	Mx	-.007	3
4	MP3A	X	0	45
5	MP3A	Z	-12.47	45
6	MP3A	Mx	-.007	45
7	MP3A	X	0	3
8	MP3A	Z	-12.47	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
9	MP3A	Mx	.007	3
10	MP3A	X	0	45
11	MP3A	Z	-12.47	45
12	MP3A	Mx	.007	45
13	MP4A	X	0	12
14	MP4A	Z	-5.188	12
15	MP4A	Mx	0	12
16	MP4A	X	0	36
17	MP4A	Z	-5.188	36
18	MP4A	Mx	0	36
19	MP3A	X	0	36
20	MP3A	Z	-1.013	36
21	MP3A	Mx	0	36
22	MP3A	X	0	12
23	MP3A	Z	-4.244	12
24	MP3A	Mx	0	12
25	MP2A	X	0	12
26	MP2A	Z	-5.12	12
27	MP2A	Mx	0	12
28	MP1A	X	0	9
29	MP1A	Z	-3.688	9
30	MP1A	Mx	-.000494	9
31	MP1A	X	0	39
32	MP1A	Z	-3.688	39
33	MP1A	Mx	-.000494	39
34	MP5A	X	0	9
35	MP5A	Z	-3.688	9
36	MP5A	Mx	-.000494	9
37	MP5A	X	0	39
38	MP5A	Z	-3.688	39
39	MP5A	Mx	-.000494	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	5.7	3
2	MP3A	Z	-9.873	3
3	MP3A	Mx	-.01	3
4	MP3A	X	5.7	45
5	MP3A	Z	-9.873	45
6	MP3A	Mx	-.01	45
7	MP3A	X	5.7	3
8	MP3A	Z	-9.873	3
9	MP3A	Mx	.002	3
10	MP3A	X	5.7	45
11	MP3A	Z	-9.873	45
12	MP3A	Mx	.002	45
13	MP4A	X	2.195	12
14	MP4A	Z	-3.802	12
15	MP4A	Mx	-.001	12
16	MP4A	X	2.195	36
17	MP4A	Z	-3.802	36
18	MP4A	Mx	-.001	36
19	MP3A	X	.467	36
20	MP3A	Z	-.81	36
21	MP3A	Mx	.000117	36
22	MP3A	X	1.947	12

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
23	MP3A	Z	-3.373	12
24	MP3A	Mx	.000974	12
25	MP2A	X	2.356	12
26	MP2A	Z	-4.081	12
27	MP2A	Mx	.001	12
28	MP1A	X	2.575	9
29	MP1A	Z	-4.46	9
30	MP1A	Mx	-.003	9
31	MP1A	X	2.575	39
32	MP1A	Z	-4.46	39
33	MP1A	Mx	-.003	39
34	MP5A	X	2.575	9
35	MP5A	Z	-4.46	9
36	MP5A	Mx	-.003	9
37	MP5A	X	2.575	39
38	MP5A	Z	-4.46	39
39	MP5A	Mx	-.003	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	8.02	3
2	MP3A	Z	-4.63	3
3	MP3A	Mx	-.008	3
4	MP3A	X	8.02	45
5	MP3A	Z	-4.63	45
6	MP3A	Mx	-.008	45
7	MP3A	X	8.02	3
8	MP3A	Z	-4.63	3
9	MP3A	Mx	-.003	3
10	MP3A	X	8.02	45
11	MP3A	Z	-4.63	45
12	MP3A	Mx	-.003	45
13	MP4A	X	2.421	12
14	MP4A	Z	-1.398	12
15	MP4A	Mx	-.002	12
16	MP4A	X	2.421	36
17	MP4A	Z	-1.398	36
18	MP4A	Mx	-.002	36
19	MP3A	X	.675	36
20	MP3A	Z	-.389	36
21	MP3A	Mx	.000169	36
22	MP3A	X	2.768	12
23	MP3A	Z	-1.598	12
24	MP3A	Mx	.001	12
25	MP2A	X	3.376	12
26	MP2A	Z	-1.949	12
27	MP2A	Mx	.002	12
28	MP1A	X	6.013	9
29	MP1A	Z	-3.472	9
30	MP1A	Mx	-.005	9
31	MP1A	X	6.013	39
32	MP1A	Z	-3.472	39
33	MP1A	Mx	-.005	39
34	MP5A	X	6.013	9
35	MP5A	Z	-3.472	9
36	MP5A	Mx	-.005	9

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
37	MP5A	X	6.013	39
38	MP5A	Z	-3.472	39
39	MP5A	Mx	-.005	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	8.19	3
2	MP3A	Z	0	3
3	MP3A	Mx	-.005	3
4	MP3A	X	8.19	45
5	MP3A	Z	0	45
6	MP3A	Mx	-.005	45
7	MP3A	X	8.19	3
8	MP3A	Z	0	3
9	MP3A	Mx	-.005	3
10	MP3A	X	8.19	45
11	MP3A	Z	0	45
12	MP3A	Mx	-.005	45
13	MP4A	X	1.998	12
14	MP4A	Z	0	12
15	MP4A	Mx	-.001	12
16	MP4A	X	1.998	36
17	MP4A	Z	0	36
18	MP4A	Mx	-.001	36
19	MP3A	X	.701	36
20	MP3A	Z	0	36
21	MP3A	Mx	.000175	36
22	MP3A	X	2.847	12
23	MP3A	Z	0	12
24	MP3A	Mx	.001	12
25	MP2A	X	3.491	12
26	MP2A	Z	0	12
27	MP2A	Mx	.002	12
28	MP1A	X	7.275	9
29	MP1A	Z	0	9
30	MP1A	Mx	-.006	9
31	MP1A	X	7.275	39
32	MP1A	Z	0	39
33	MP1A	Mx	-.006	39
34	MP5A	X	7.275	9
35	MP5A	Z	0	9
36	MP5A	Mx	-.006	9
37	MP5A	X	7.275	39
38	MP5A	Z	0	39
39	MP5A	Mx	-.006	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	8.02	3
2	MP3A	Z	4.63	3
3	MP3A	Mx	-.003	3
4	MP3A	X	8.02	45
5	MP3A	Z	4.63	45
6	MP3A	Mx	-.003	45
7	MP3A	X	8.02	3
8	MP3A	Z	4.63	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
9	MP3A	Mx	-.008	3
10	MP3A	X	8.02	45
11	MP3A	Z	4.63	45
12	MP3A	Mx	-.008	45
13	MP4A	X	2.421	12
14	MP4A	Z	1.398	12
15	MP4A	Mx	-.002	12
16	MP4A	X	2.421	36
17	MP4A	Z	1.398	36
18	MP4A	Mx	-.002	36
19	MP3A	X	.675	36
20	MP3A	Z	.389	36
21	MP3A	Mx	.000169	36
22	MP3A	X	2.768	12
23	MP3A	Z	1.598	12
24	MP3A	Mx	.001	12
25	MP2A	X	3.376	12
26	MP2A	Z	1.949	12
27	MP2A	Mx	.002	12
28	MP1A	X	5.034	9
29	MP1A	Z	2.907	9
30	MP1A	Mx	-.003	9
31	MP1A	X	5.034	39
32	MP1A	Z	2.907	39
33	MP1A	Mx	-.003	39
34	MP5A	X	5.034	9
35	MP5A	Z	2.907	9
36	MP5A	Mx	-.003	9
37	MP5A	X	5.034	39
38	MP5A	Z	2.907	39
39	MP5A	Mx	-.003	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	5.7	3
2	MP3A	Z	9.873	3
3	MP3A	Mx	.002	3
4	MP3A	X	5.7	45
5	MP3A	Z	9.873	45
6	MP3A	Mx	.002	45
7	MP3A	X	5.7	3
8	MP3A	Z	9.873	3
9	MP3A	Mx	-.01	3
10	MP3A	X	5.7	45
11	MP3A	Z	9.873	45
12	MP3A	Mx	-.01	45
13	MP4A	X	2.195	12
14	MP4A	Z	3.802	12
15	MP4A	Mx	-.001	12
16	MP4A	X	2.195	36
17	MP4A	Z	3.802	36
18	MP4A	Mx	-.001	36
19	MP3A	X	.467	36
20	MP3A	Z	.81	36
21	MP3A	Mx	.000117	36
22	MP3A	X	1.947	12

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
23	MP3A	Z	3.373	12
24	MP3A	Mx	.000974	12
25	MP2A	X	2.356	12
26	MP2A	Z	4.081	12
27	MP2A	Mx	.001	12
28	MP1A	X	2.01	9
29	MP1A	Z	3.481	9
30	MP1A	Mx	-.001	9
31	MP1A	X	2.01	39
32	MP1A	Z	3.481	39
33	MP1A	Mx	-.001	39
34	MP5A	X	2.01	9
35	MP5A	Z	3.481	9
36	MP5A	Mx	-.001	9
37	MP5A	X	2.01	39
38	MP5A	Z	3.481	39
39	MP5A	Mx	-.001	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	0	3
2	MP3A	Z	12.47	3
3	MP3A	Mx	.007	3
4	MP3A	X	0	45
5	MP3A	Z	12.47	45
6	MP3A	Mx	.007	45
7	MP3A	X	0	3
8	MP3A	Z	12.47	3
9	MP3A	Mx	-.007	3
10	MP3A	X	0	45
11	MP3A	Z	12.47	45
12	MP3A	Mx	-.007	45
13	MP4A	X	0	12
14	MP4A	Z	5.188	12
15	MP4A	Mx	0	12
16	MP4A	X	0	36
17	MP4A	Z	5.188	36
18	MP4A	Mx	0	36
19	MP3A	X	0	36
20	MP3A	Z	1.013	36
21	MP3A	Mx	0	36
22	MP3A	X	0	12
23	MP3A	Z	4.244	12
24	MP3A	Mx	0	12
25	MP2A	X	0	12
26	MP2A	Z	5.12	12
27	MP2A	Mx	0	12
28	MP1A	X	0	9
29	MP1A	Z	3.688	9
30	MP1A	Mx	.000494	9
31	MP1A	X	0	39
32	MP1A	Z	3.688	39
33	MP1A	Mx	.000494	39
34	MP5A	X	0	9
35	MP5A	Z	3.688	9
36	MP5A	Mx	.000494	9

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
37	MP5A	X	0	39
38	MP5A	Z	3.688	39
39	MP5A	Mx	.000494	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-5.7	3
2	MP3A	Z	9.873	3
3	MP3A	Mx	.01	3
4	MP3A	X	-5.7	45
5	MP3A	Z	9.873	45
6	MP3A	Mx	.01	45
7	MP3A	X	-5.7	3
8	MP3A	Z	9.873	3
9	MP3A	Mx	-.002	3
10	MP3A	X	-5.7	45
11	MP3A	Z	9.873	45
12	MP3A	Mx	-.002	45
13	MP4A	X	-2.195	12
14	MP4A	Z	3.802	12
15	MP4A	Mx	.001	12
16	MP4A	X	-2.195	36
17	MP4A	Z	3.802	36
18	MP4A	Mx	.001	36
19	MP3A	X	-.467	36
20	MP3A	Z	.81	36
21	MP3A	Mx	-.000117	36
22	MP3A	X	-1.947	12
23	MP3A	Z	3.373	12
24	MP3A	Mx	-.000974	12
25	MP2A	X	-2.356	12
26	MP2A	Z	4.081	12
27	MP2A	Mx	-.001	12
28	MP1A	X	-2.575	9
29	MP1A	Z	4.46	9
30	MP1A	Mx	.003	9
31	MP1A	X	-2.575	39
32	MP1A	Z	4.46	39
33	MP1A	Mx	.003	39
34	MP5A	X	-2.575	9
35	MP5A	Z	4.46	9
36	MP5A	Mx	.003	9
37	MP5A	X	-2.575	39
38	MP5A	Z	4.46	39
39	MP5A	Mx	.003	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-8.02	3
2	MP3A	Z	4.63	3
3	MP3A	Mx	.008	3
4	MP3A	X	-8.02	45
5	MP3A	Z	4.63	45
6	MP3A	Mx	.008	45
7	MP3A	X	-8.02	3
8	MP3A	Z	4.63	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
9	MP3A	Mx	.003	3
10	MP3A	X	-8.02	45
11	MP3A	Z	4.63	45
12	MP3A	Mx	.003	45
13	MP4A	X	-2.421	12
14	MP4A	Z	1.398	12
15	MP4A	Mx	.002	12
16	MP4A	X	-2.421	36
17	MP4A	Z	1.398	36
18	MP4A	Mx	.002	36
19	MP3A	X	-.675	36
20	MP3A	Z	.389	36
21	MP3A	Mx	-.000169	36
22	MP3A	X	-2.768	12
23	MP3A	Z	1.598	12
24	MP3A	Mx	-.001	12
25	MP2A	X	-3.376	12
26	MP2A	Z	1.949	12
27	MP2A	Mx	-.002	12
28	MP1A	X	-6.013	9
29	MP1A	Z	3.472	9
30	MP1A	Mx	.005	9
31	MP1A	X	-6.013	39
32	MP1A	Z	3.472	39
33	MP1A	Mx	.005	39
34	MP5A	X	-6.013	9
35	MP5A	Z	3.472	9
36	MP5A	Mx	.005	9
37	MP5A	X	-6.013	39
38	MP5A	Z	3.472	39
39	MP5A	Mx	.005	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-8.19	3
2	MP3A	Z	0	3
3	MP3A	Mx	.005	3
4	MP3A	X	-8.19	45
5	MP3A	Z	0	45
6	MP3A	Mx	.005	45
7	MP3A	X	-8.19	3
8	MP3A	Z	0	3
9	MP3A	Mx	.005	3
10	MP3A	X	-8.19	45
11	MP3A	Z	0	45
12	MP3A	Mx	.005	45
13	MP4A	X	-1.998	12
14	MP4A	Z	0	12
15	MP4A	Mx	.001	12
16	MP4A	X	-1.998	36
17	MP4A	Z	0	36
18	MP4A	Mx	.001	36
19	MP3A	X	-.701	36
20	MP3A	Z	0	36
21	MP3A	Mx	-.000175	36
22	MP3A	X	-2.847	12

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
23	MP3A	Z	0	12
24	MP3A	Mx	-.001	12
25	MP2A	X	-3.491	12
26	MP2A	Z	0	12
27	MP2A	Mx	-.002	12
28	MP1A	X	-7.275	9
29	MP1A	Z	0	9
30	MP1A	Mx	.006	9
31	MP1A	X	-7.275	39
32	MP1A	Z	0	39
33	MP1A	Mx	.006	39
34	MP5A	X	-7.275	9
35	MP5A	Z	0	9
36	MP5A	Mx	.006	9
37	MP5A	X	-7.275	39
38	MP5A	Z	0	39
39	MP5A	Mx	.006	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-8.02	3
2	MP3A	Z	-4.63	3
3	MP3A	Mx	.003	3
4	MP3A	X	-8.02	45
5	MP3A	Z	-4.63	45
6	MP3A	Mx	.003	45
7	MP3A	X	-8.02	3
8	MP3A	Z	-4.63	3
9	MP3A	Mx	.008	3
10	MP3A	X	-8.02	45
11	MP3A	Z	-4.63	45
12	MP3A	Mx	.008	45
13	MP4A	X	-2.421	12
14	MP4A	Z	-1.398	12
15	MP4A	Mx	.002	12
16	MP4A	X	-2.421	36
17	MP4A	Z	-1.398	36
18	MP4A	Mx	.002	36
19	MP3A	X	-.675	36
20	MP3A	Z	-.389	36
21	MP3A	Mx	-.000169	36
22	MP3A	X	-2.768	12
23	MP3A	Z	-1.598	12
24	MP3A	Mx	-.001	12
25	MP2A	X	-3.376	12
26	MP2A	Z	-1.949	12
27	MP2A	Mx	-.002	12
28	MP1A	X	-5.034	9
29	MP1A	Z	-2.907	9
30	MP1A	Mx	.003	9
31	MP1A	X	-5.034	39
32	MP1A	Z	-2.907	39
33	MP1A	Mx	.003	39
34	MP5A	X	-5.034	9
35	MP5A	Z	-2.907	9
36	MP5A	Mx	.003	9

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
37	MP5A	X	-5.034	39
38	MP5A	Z	-2.907	39
39	MP5A	Mx	.003	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	-5.7	3
2	MP3A	Z	-9.873	3
3	MP3A	Mx	-.002	3
4	MP3A	X	-5.7	45
5	MP3A	Z	-9.873	45
6	MP3A	Mx	-.002	45
7	MP3A	X	-5.7	3
8	MP3A	Z	-9.873	3
9	MP3A	Mx	.01	3
10	MP3A	X	-5.7	45
11	MP3A	Z	-9.873	45
12	MP3A	Mx	.01	45
13	MP4A	X	-2.195	12
14	MP4A	Z	-3.802	12
15	MP4A	Mx	.001	12
16	MP4A	X	-2.195	36
17	MP4A	Z	-3.802	36
18	MP4A	Mx	.001	36
19	MP3A	X	-.467	36
20	MP3A	Z	-.81	36
21	MP3A	Mx	-.000117	36
22	MP3A	X	-1.947	12
23	MP3A	Z	-3.373	12
24	MP3A	Mx	-.000974	12
25	MP2A	X	-2.356	12
26	MP2A	Z	-4.081	12
27	MP2A	Mx	-.001	12
28	MP1A	X	-2.01	9
29	MP1A	Z	-3.481	9
30	MP1A	Mx	.001	9
31	MP1A	X	-2.01	39
32	MP1A	Z	-3.481	39
33	MP1A	Mx	.001	39
34	MP5A	X	-2.01	9
35	MP5A	Z	-3.481	9
36	MP5A	Mx	.001	9
37	MP5A	X	-2.01	39
38	MP5A	Z	-3.481	39
39	MP5A	Mx	.001	39

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	M6	Y	-500	0

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	M45	Y	-500	0

Member Point Loads (BLC 79 : Lv1)

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

Member Point Loads (BLC 80 : Lv2)

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

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	Y	-1.29	3
2	MP3A	My	-.00086	3
3	MP3A	Mz	.000752	3
4	MP3A	Y	-1.29	45
5	MP3A	My	-.00086	45
6	MP3A	Mz	.000752	45
7	MP3A	Y	-1.29	3
8	MP3A	My	-.00086	3
9	MP3A	Mz	-.000752	3
10	MP3A	Y	-1.29	45
11	MP3A	My	-.00086	45
12	MP3A	Mz	-.000752	45
13	MP4A	Y	-1.167	12
14	MP4A	My	-.000778	12
15	MP4A	Mz	0	12
16	MP4A	Y	-1.167	36
17	MP4A	My	-.000778	36
18	MP4A	Mz	0	36
19	MP3A	Y	-.424	36
20	MP3A	My	.000106	36
21	MP3A	Mz	0	36
22	MP3A	Y	-3.044	12
23	MP3A	My	.002	12
24	MP3A	Mz	0	12
25	MP2A	Y	-3.223	12
26	MP2A	My	.002	12
27	MP2A	Mz	0	12
28	MP1A	Y	-.244	9
29	MP1A	My	-.000186	9
30	MP1A	Mz	3.3e-5	9
31	MP1A	Y	-.244	39
32	MP1A	My	-.000186	39
33	MP1A	Mz	3.3e-5	39
34	MP5A	Y	-.244	9
35	MP5A	My	-.000186	9
36	MP5A	Mz	3.3e-5	9
37	MP5A	Y	-.244	39
38	MP5A	My	-.000186	39
39	MP5A	Mz	3.3e-5	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	Z	-3.224	3
2	MP3A	Mx	-.002	3
3	MP3A	Z	-3.224	45
4	MP3A	Mx	-.002	45
5	MP3A	Z	-3.224	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
6	MP3A	Mx	.002	3
7	MP3A	Z	-3.224	45
8	MP3A	Mx	.002	45
9	MP4A	Z	-2.918	12
10	MP4A	Mx	0	12
11	MP4A	Z	-2.918	36
12	MP4A	Mx	0	36
13	MP3A	Z	-1.059	36
14	MP3A	Mx	0	36
15	MP3A	Z	-7.609	12
16	MP3A	Mx	0	12
17	MP2A	Z	-8.058	12
18	MP2A	Mx	0	12
19	MP1A	Z	-.611	9
20	MP1A	Mx	-8.2e-5	9
21	MP1A	Z	-.611	39
22	MP1A	Mx	-8.2e-5	39
23	MP5A	Z	-.611	9
24	MP5A	Mx	-8.2e-5	9
25	MP5A	Z	-.611	39
26	MP5A	Mx	-8.2e-5	39

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP3A	X	3.224	3
2	MP3A	Mx	-.002	3
3	MP3A	X	3.224	45
4	MP3A	Mx	-.002	45
5	MP3A	X	3.224	3
6	MP3A	Mx	-.002	3
7	MP3A	X	3.224	45
8	MP3A	Mx	-.002	45
9	MP4A	X	2.918	12
10	MP4A	Mx	-.002	12
11	MP4A	X	2.918	36
12	MP4A	Mx	-.002	36
13	MP3A	X	1.059	36
14	MP3A	Mx	.000265	36
15	MP3A	X	7.609	12
16	MP3A	Mx	.004	12
17	MP2A	X	8.058	12
18	MP2A	Mx	.004	12
19	MP1A	X	.611	9
20	MP1A	Mx	-.000464	9
21	MP1A	X	.611	39
22	MP1A	Mx	-.000464	39
23	MP5A	X	.611	9
24	MP5A	Mx	-.000464	9
25	MP5A	X	.611	39
26	MP5A	Mx	-.000464	39

Member Area Loads

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

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N71	max	113.689	22	558.824	24	828.868	1	-.044	5	0	75	.052	6
2		min	-5.161	1	64.069	6	-1222.066	7	-.153	23	0	1	-.055	12
3	N72	max	-2.356	6	560.032	13	520.115	26	-.042	5	0	75	.107	7
4		min	-108.156	24	-20.546	7	-80.156	8	-.154	35	0	1	-.107	1
5	N80A	max	294.362	3	21.135	23	1155.304	3	0	75	0	75	0	75
6		min	-291.052	9	6.084	67	-1154.426	9	0	1	0	1	0	1
7	N82	max	1223.536	10	1521.03	6	949.432	12	.004	12	0	50	0	12
8		min	-1292.262	4	-1003.753	12	-1340.511	6	-.002	6	0	12	0	50
9	N85	max	1008.585	10	1025.731	11	1169.577	12	.003	1	0	12	.001	12
10		min	-949.548	4	-623.141	5	-778.577	6	-.001	7	0	50	0	50
11	Totals:	max	1990.13	10	2193.806	13	2695.614	1						
12		min	-1990.129	4	691.723	70	-2695.625	7						

Joint Reactions (By Combination)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	1	N71	-5.161	395.656	828.868	-.082	0	-.054
2	1	N72	-68.892	508.367	464.036	-.084	0	-.107
3	1	N80A	-14.621	8.618	-51.7	0	0	0
4	1	N82	-6.095	-615.2	648.519	.003	0	0
5	1	N85	94.773	668.603	805.891	.003	0	0
6	1	Totals:	.004	966.044	2695.614			
7	1	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
8	2	N71	.609	313.915	756.322	-.07	0	-.033
9	2	N72	-37.655	418.108	480.875	-.07	0	-.086
10	2	N80A	203.985	7.535	776.811	0	0	0
11	2	N82	-848.636	97.97	26.145	.002	0	0
12	2	N85	-601.311	128.514	182.044	.003	0	0
13	2	Totals:	-1283.007	966.042	2222.198			
14	2	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
15	3	N71	-.707	226.03	391.624	-.06	0	-.006
16	3	N72	-33.678	289.544	397.567	-.059	0	-.04
17	3	N80A	294.362	7.808	1155.304	0	0	0
18	3	N82	-1254.145	712.504	-536.584	0	0	0
19	3	N85	-922.578	-269.848	-301.319	.002	0	0
20	3	Totals:	-1916.746	966.038	1106.593			
21	3	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
22	4	N71	-1.955	146.341	24.754	-.05	0	.016
23	4	N72	-36.867	169.461	303.925	-.049	0	.003
24	4	N80A	290.504	8.524	1139.706	0	0	0
25	4	N82	-1292.262	1118.116	-912.783	0	0	0
26	4	N85	-949.548	-476.408	-555.643	0	0	0
27	4	Totals:	-1990.129	966.033	-.041			
28	4	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
29	5	N71	27.909	84.263	-365.012	-.044	0	.036
30	5	N72	-17.53	62.689	207.428	-.042	0	.043
31	5	N80A	282.268	9.146	1057.32	0	0	0
32	5	N82	-1210.136	1433.073	-1215.158	-.002	0	0
33	5	N85	-918.263	-623.141	-744.487	0	0	0
34	5	Totals:	-1835.752	966.029	-1059.909			
35	5	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
36	6	N71	74.14	64.069	-864.864	-.047	0	.052
37	6	N72	-2.356	-15.905	67.193	-.044	0	.085
38	6	N80A	213.004	9.227	775.501	0	0	0
39	6	N82	-851.067	1521.03	-1340.511	-.002	0	0

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
40	6	N85	-669.968	-612.394	-778.577	-.001	0	0
41	6	Totals:	-1236.248	966.026	-2141.258			
42	6	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
43	7	N71	96.635	101.162	-1222.066	-.057	0	.05
44	7	N72	-23.354	-20.546	-62.207	-.054	0	.107
45	7	N80A	13.916	8.555	48.999	0	0	0
46	7	N82	-56.705	1137.288	-1041.898	-.002	0	0
47	7	N85	-30.496	-260.433	-418.453	-.001	0	0
48	7	Totals:	-.003	966.026	-2695.625			
49	7	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
50	8	N71	95.911	178.419	-1150.063	-.067	0	.03
51	8	N72	-53.288	63.971	-80.156	-.067	0	.086
52	8	N80A	-202.286	8.374	-775.005	0	0	0
53	8	N82	781.388	435.53	-419.681	0	0	0
54	8	N85	661.283	279.734	202.697	0	0	0
55	8	Totals:	1283.008	966.028	-2222.208			
56	8	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
57	9	N71	98.871	265.445	-785.953	-.077	0	.004
58	9	N72	-56.686	190.829	1.602	-.078	0	.041
59	9	N80A	-291.052	9.062	-1154.426	0	0	0
60	9	N82	1184.968	-176.069	144.839	.001	0	0
61	9	N85	980.646	676.765	687.335	0	0	0
62	9	Totals:	1916.746	966.032	-1106.603			
63	9	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
64	10	N71	98.964	347.345	-418.44	-.088	0	-.018
65	10	N72	-53.64	313.249	95.094	-.089	0	-.001
66	10	N80A	-287.315	9.812	-1140.791	0	0	0
67	10	N82	1223.536	-585.419	521.193	.002	0	0
68	10	N85	1008.585	881.05	942.974	.001	0	0
69	10	Totals:	1990.13	966.036	.03			
70	10	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
71	11	N71	66.839	413.397	-28.514	-.096	0	-.039
72	11	N72	-73.173	424.69	192.142	-.097	0	-.042
73	11	N80A	-279.918	10.398	-1061.649	0	0	0
74	11	N82	1143.004	-908.175	823.933	.004	0	0
75	11	N85	979	1025.731	1133.985	.002	0	0
76	11	Totals:	1835.753	966.041	1059.897			
77	11	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
78	12	N71	16.892	435.936	471.123	-.093	0	-.055
79	12	N72	-89.407	506.729	333.58	-.096	0	-.085
80	12	N80A	-212.796	10.166	-782.465	0	0	0
81	12	N82	787.744	-1003.753	949.432	.004	0	0
82	12	N85	733.815	1016.966	1169.577	.003	0	.001
83	12	Totals:	1236.248	966.044	2141.246			
84	12	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
85	13	N71	90.286	549.927	-235.516	-.151	0	-.009
86	13	N72	-105.477	560.032	511.446	-.151	0	-.014
87	13	N80A	-3.982	20.816	-13.924	0	0	0
88	13	N82	-45.678	437.67	-276.567	.002	0	0
89	13	N85	64.852	625.361	637.14	.002	0	0
90	13	Totals:	.001	2193.806	622.578			
91	13	COG (in):	X: 79.838	Y: 25.737	Z: -4.152			
92	14	N71	90.044	531.802	-245.603	-.148	0	-.005
93	14	N72	-99.868	540.898	516.889	-.148	0	-.01
94	14	N80A	44.093	20.569	173.237	0	0	0
95	14	N82	-231.892	604.152	-423.012	.002	0	0
96	14	N85	-96.333	496.384	487.623	.002	0	0

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
97	14	Totals:	-293.957	2193.806	509.134			
98	14	COG (in):	X: 79.838	Y: 25.737	Z: -4.152			
99	15	N71	88.975	513.284	-317.424	-.145	0	0
100	15	N72	-99.131	514.309	497.155	-.145	0	-.001
101	15	N80A	60.745	20.5	252.512	0	0	0
102	15	N82	-317.551	744.877	-553.162	.002	0	0
103	15	N85	-165.478	400.834	370.569	.002	0	0
104	15	Totals:	-432.44	2193.805	249.65			
105	15	COG (in):	X: 79.838	Y: 25.737	Z: -4.152			
106	16	N71	88.847	497.221	-394.796	-.143	0	.004
107	16	N72	-99.39	489.485	473.078	-.143	0	.007
108	16	N80A	58.332	20.538	243.397	0	0	0
109	16	N82	-324.279	831.545	-634.493	.001	0	0
110	16	N85	-168.943	355.016	312.796	.002	0	0
111	16	Totals:	-445.433	2193.804	-.018			
112	16	COG (in):	X: 79.838	Y: 25.737	Z: -4.152			
113	17	N71	95.78	484.03	-475.573	-.142	0	.008
114	17	N72	-94.319	466.615	449.869	-.141	0	.015
115	17	N80A	59.882	20.58	230.318	0	0	0
116	17	N82	-310.579	906.945	-706.661	.001	0	0
117	17	N85	-166.547	315.635	261.976	.002	0	0
118	17	Totals:	-415.783	2193.803	-240.07			
119	17	COG (in):	X: 79.838	Y: 25.737	Z: -4.152			
120	18	N71	106.43	479.277	-575.036	-.142	0	.011
121	18	N72	-89.375	449.656	418.244	-.141	0	.024
122	18	N80A	48.12	20.644	176.163	0	0	0
123	18	N82	-235.511	941.574	-748.053	0	0	0
124	18	N85	-114.009	302.65	236.174	.001	0	0
125	18	Totals:	-284.343	2193.803	-492.507			
126	18	COG (in):	X: 79.838	Y: 25.737	Z: -4.152			
127	19	N71	111.995	488.013	-647.965	-.144	0	.011
128	19	N72	-92.092	449.474	387.883	-.143	0	.028
129	19	N80A	3.896	20.782	13.6	0	0	0
130	19	N82	-59.012	860.459	-686.142	.001	0	0
131	19	N85	35.213	375.075	310.024	.001	0	0
132	19	Totals:	0	2193.802	-622.599			
133	19	COG (in):	X: 79.838	Y: 25.737	Z: -4.152			
134	20	N71	112.466	505.907	-637.914	-.147	0	.007
135	20	N72	-97.629	468.319	382.384	-.147	0	.024
136	20	N80A	-44.054	20.973	-173.31	0	0	0
137	20	N82	126.996	694.559	-539.706	.001	0	0
138	20	N85	196.18	504.046	459.391	.001	0	0
139	20	Totals:	293.958	2193.803	-509.154			
140	20	COG (in):	X: 79.838	Y: 25.737	Z: -4.152			
141	21	N71	113.614	524.388	-566.116	-.15	0	.002
142	21	N72	-98.328	494.834	402.04	-.149	0	.015
143	21	N80A	-60.63	21.092	-252.633	0	0	0
144	21	N82	212.557	553.966	-409.466	.002	0	0
145	21	N85	265.228	599.525	576.504	.002	0	0
146	21	Totals:	432.441	2193.804	-249.671			
147	21	COG (in):	X: 79.838	Y: 25.737	Z: -4.152			
148	22	N71	113.689	540.55	-488.714	-.152	0	-.002
149	22	N72	-98.075	519.764	426.109	-.151	0	.006
150	22	N80A	-58.231	21.118	-243.618	0	0	0
151	22	N82	219.308	467.12	-328.124	.002	0	0
152	22	N85	268.744	645.253	634.344	.002	0	0
153	22	Totals:	445.434	2193.805	-.003			

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
154	22	COG (in):	X: 79.838	Y: 25.737	Z: -4.152			
155	23	N71	106.657	553.935	-407.918	-.153	0	-.006
156	23	N72	-103.155	542.859	449.339	-.153	0	-.002
157	23	N80A	-59.814	21.135	-230.691	0	0	0
158	23	N82	205.672	391.358	-255.946	.002	0	0
159	23	N85	266.424	684.519	685.266	.002	0	0
160	23	Totals:	415.785	2193.806	240.05			
161	23	COG (in):	X: 79.838	Y: 25.737	Z: -4.152			
162	24	N71	95.84	558.824	-308.454	-.153	0	-.009
163	24	N72	-108.156	560.004	481.025	-.154	0	-.01
164	24	N80A	-48.154	21.067	-176.69	0	0	0
165	24	N82	130.776	356.33	-214.551	.002	0	0
166	24	N85	214.038	697.582	711.157	.002	0	0
167	24	Totals:	284.345	2193.806	492.487			
168	24	COG (in):	X: 79.838	Y: 25.737	Z: -4.152			
169	25	N71	106.523	518.597	-437.799	-.153	0	.007
170	25	N72	-104.906	509.208	519.055	-.153	0	.012
171	25	N80A	-.793	8.52	-2.794	0	0	0
172	25	N82	-91.724	349.137	-260.592	.001	0	0
173	25	N85	90.9	330.57	337.477	.001	0	0
174	25	Totals:	0	1716.032	155.346			
175	25	COG (in):	X: 82.131	Y: 14.942	Z: -2.444			
176	26	N71	106.704	514.007	-442.009	-.152	0	.009
177	26	N72	-103.135	504.169	520.115	-.152	0	.013
178	26	N80A	11.735	8.483	44.827	0	0	0
179	26	N82	-140.133	389.92	-296.427	.001	0	0
180	26	N85	50.89	299.454	301.551	.001	0	0
181	26	Totals:	-73.938	1716.032	128.058			
182	26	COG (in):	X: 82.131	Y: 14.942	Z: -2.444			
183	27	N71	106.561	508.985	-463.027	-.151	0	.01
184	27	N72	-102.908	496.816	515.385	-.152	0	.016
185	27	N80A	16.895	8.468	66.658	0	0	0
186	27	N82	-163.433	425.228	-328.872	0	0	0
187	27	N85	32.425	276.534	273.617	.001	0	0
188	27	Totals:	-110.458	1716.032	63.76			
189	27	COG (in):	X: 82.131	Y: 14.942	Z: -2.444			
190	28	N71	106.502	504.357	-484.187	-.151	0	.011
191	28	N72	-103.075	489.848	510.005	-.151	0	.018
192	28	N80A	16.675	8.47	65.807	0	0	0
193	28	N82	-165.633	448.67	-350.532	0	0	0
194	28	N85	30.85	264.686	258.895	0	0	0
195	28	Totals:	-114.682	1716.031	-.013			
196	28	COG (in):	X: 82.131	Y: 14.942	Z: -2.444			
197	29	N71	108.266	500.699	-506.645	-.15	0	.013
198	29	N72	-101.942	483.582	504.435	-.151	0	.021
199	29	N80A	16.227	8.476	61.154	0	0	0
200	29	N82	-160.948	467.006	-367.955	0	0	0
201	29	N85	32.605	256.268	247.918	0	0	0
202	29	Totals:	-105.793	1716.031	-61.093			
203	29	COG (in):	X: 82.131	Y: 14.942	Z: -2.444			
204	30	N71	111.012	499.507	-535.416	-.151	0	.013
205	30	N72	-101.024	478.967	496.296	-.151	0	.023
206	30	N80A	12.297	8.488	44.99	0	0	0
207	30	N82	-140.365	472.258	-375.177	0	0	0
208	30	N85	46.834	256.812	245.89	0	0	0
209	30	Totals:	-71.246	1716.031	-123.416			
210	30	COG (in):	X: 82.131	Y: 14.942	Z: -2.444			

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
211	31	N71	112.289	501.755	-555.962	-.151	0	.013
212	31	N72	-102.212	478.778	488.751	-.151	0	.025
213	31	N80A	.852	8.515	3.01	0	0	0
214	31	N82	-94.617	450.005	-357.919	0	0	0
215	31	N85	83.689	276.978	266.753	0	0	0
216	31	Totals:	0	1716.031	-155.367			
217	31	COG (in):	X: 82.131	Y: 14.942	Z: -2.444			
218	32	N71	112.125	506.33	-551.753	-.152	0	.012
219	32	N72	-103.979	483.798	487.687	-.152	0	.023
220	32	N80A	-11.668	8.548	-44.597	0	0	0
221	32	N82	-46.223	409.26	-322.085	0	0	0
222	32	N85	123.685	308.094	302.67	0	0	0
223	32	Totals:	73.94	1716.031	-128.079			
224	32	COG (in):	X: 82.131	Y: 14.942	Z: -2.444			
225	33	N71	112.274	511.349	-530.737	-.152	0	.011
226	33	N72	-104.205	491.145	492.413	-.153	0	.021
227	33	N80A	-16.823	8.566	-66.431	0	0	0
228	33	N82	-22.93	373.961	-289.634	0	0	0
229	33	N85	142.143	331.009	330.608	0	0	0
230	33	Totals:	110.459	1716.031	-63.782			
231	33	COG (in):	X: 82.131	Y: 14.942	Z: -2.444			
232	34	N71	112.329	515.985	-509.576	-.153	0	.009
233	34	N72	-104.038	498.122	497.792	-.153	0	.018
234	34	N80A	-16.603	8.569	-65.586	0	0	0
235	34	N82	-20.728	350.507	-267.973	.001	0	0
236	34	N85	143.722	342.85	345.334	0	0	0
237	34	Totals:	114.683	1716.032	-.008			
238	34	COG (in):	X: 82.131	Y: 14.942	Z: -2.444			
239	35	N71	110.557	519.656	-487.117	-.153	0	.008
240	35	N72	-105.171	504.403	503.363	-.154	0	.016
241	35	N80A	-16.157	8.567	-60.944	0	0	0
242	35	N82	-25.407	332.145	-250.549	.001	0	0
243	35	N85	141.973	351.261	356.318	.001	0	0
244	35	Totals:	105.794	1716.032	61.072			
245	35	COG (in):	X: 82.131	Y: 14.942	Z: -2.444			
246	36	N71	107.799	520.856	-458.347	-.153	0	.007
247	36	N72	-106.093	509.029	511.506	-.154	0	.013
248	36	N80A	-12.234	8.555	-44.789	0	0	0
249	36	N82	-45.978	326.868	-243.327	.001	0	0
250	36	N85	127.754	350.724	358.352	.001	0	0
251	36	Totals:	71.247	1716.032	123.395			
252	36	COG (in):	X: 82.131	Y: 14.942	Z: -2.444			
253	37	N71	72.865	411.03	-215.29	-.108	0	-.016
254	37	N72	-88.852	411.33	297.748	-.107	0	-.018
255	37	N80A	-.844	8.519	-2.981	0	0	0
256	37	N82	293.897	467.558	-358.828	.002	0	0
257	37	N85	-277.066	417.603	434.711	.002	0	0
258	37	Totals:	0	1716.04	155.36			
259	37	COG (in):	X: 60.715	Y: 14.942	Z: -2.444			
260	38	N71	73.055	406.43	-219.432	-.107	0	-.015
261	38	N72	-87.091	406.278	298.729	-.106	0	-.017
262	38	N80A	11.682	8.492	44.621	0	0	0
263	38	N82	245.477	508.329	-394.715	.002	0	0
264	38	N85	-317.062	386.511	398.868	.002	0	0
265	38	Totals:	-73.939	1716.04	128.072			
266	38	COG (in):	X: 60.715	Y: 14.942	Z: -2.444			
267	39	N71	72.917	401.376	-240.425	-.107	0	-.013

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
268	39	N72	-86.876	398.894	293.94	-.106	0	-.014
269	39	N80A	16.835	8.482	66.416	0	0	0
270	39	N82	222.179	543.635	-427.164	.002	0	0
271	39	N85	-335.513	363.653	371.007	.002	0	0
272	39	Totals:	-110.458	1716.04	63.775			
273	39	COG (in):	X: 60.715	Y: 14.942	Z: -2.444			
274	40	N71	72.856	396.713	-261.577	-.106	0	-.012
275	40	N72	-87.053	391.891	288.522	-.105	0	-.012
276	40	N80A	16.605	8.484	65.532	0	0	0
277	40	N82	219.987	567.082	-448.807	.002	0	0
278	40	N85	-337.077	351.869	356.333	.002	0	0
279	40	Totals:	-114.682	1716.039	.002			
280	40	COG (in):	X: 60.715	Y: 14.942	Z: -2.444			
281	41	N71	74.62	393.017	-284.033	-.106	0	-.011
282	41	N72	-85.93	385.59	282.923	-.105	0	-.01
283	41	N80A	16.15	8.489	60.853	0	0	0
284	41	N82	224.678	585.437	-466.218	.002	0	0
285	41	N85	-335.311	343.506	345.396	.002	0	0
286	41	Totals:	-105.793	1716.039	-61.078			
287	41	COG (in):	X: 60.715	Y: 14.942	Z: -2.444			
288	42	N71	77.365	391.782	-312.838	-.106	0	-.01
289	42	N72	-85.021	380.942	274.791	-.105	0	-.007
290	42	N80A	12.212	8.497	44.668	0	0	0
291	42	N82	245.27	590.718	-473.406	.002	0	0
292	42	N85	-321.072	344.1	343.384	.002	0	0
293	42	Totals:	-71.246	1716.039	-123.402			
294	42	COG (in):	X: 60.715	Y: 14.942	Z: -2.444			
295	43	N71	78.638	394.005	-333.46	-.107	0	-.01
296	43	N72	-86.211	380.738	267.304	-.105	0	-.006
297	43	N80A	.762	8.516	2.681	0	0	0
298	43	N82	291.03	568.489	-456.083	.002	0	0
299	43	N85	-284.219	364.292	364.205	.002	0	0
300	43	Totals:	0	1716.039	-155.353			
301	43	COG (in):	X: 60.715	Y: 14.942	Z: -2.444			
302	44	N71	78.465	398.589	-329.32	-.107	0	-.011
303	44	N72	-87.968	385.772	266.319	-.106	0	-.007
304	44	N80A	-11.756	8.539	-44.906	0	0	0
305	44	N82	339.435	527.755	-420.197	.002	0	0
306	44	N85	-244.236	395.384	400.039	.002	0	0
307	44	Totals:	73.94	1716.039	-128.064			
308	44	COG (in):	X: 60.715	Y: 14.942	Z: -2.444			
309	45	N71	78.609	403.64	-308.33	-.108	0	-.013
310	45	N72	-88.181	393.15	271.103	-.107	0	-.01
311	45	N80A	-16.903	8.553	-66.704	0	0	0
312	45	N82	362.727	492.459	-387.741	.002	0	0
313	45	N85	-225.792	418.238	427.904	.002	0	0
314	45	Totals:	110.459	1716.039	-63.767			
315	45	COG (in):	X: 60.715	Y: 14.942	Z: -2.444			
316	46	N71	78.666	408.311	-287.175	-.108	0	-.014
317	46	N72	-88.005	400.16	276.521	-.107	0	-.012
318	46	N80A	-16.675	8.555	-65.826	0	0	0
319	46	N82	364.921	469	-366.097	.002	0	0
320	46	N85	-224.225	430.014	442.582	.002	0	0
321	46	Totals:	114.683	1716.04	.006			
322	46	COG (in):	X: 60.715	Y: 14.942	Z: -2.444			
323	47	N71	76.895	412.02	-264.719	-.109	0	-.015
324	47	N72	-89.129	406.477	282.122	-.108	0	-.014

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
325	47	N80A	-16.221	8.555	-61.158	0	0	0
326	47	N82	360.234	450.618	-348.686	.002	0	0
327	47	N85	-225.985	438.37	453.527	.002	0	0
328	47	Totals:	105.794	1716.04	61.086			
329	47	COG (in):	X: 60.715	Y: 14.942	Z: -2.444			
330	48	N71	74.137	413.263	-235.914	-.109	0	-.016
331	48	N72	-90.04	411.136	290.258	-.108	0	-.017
332	48	N80A	-12.291	8.546	-44.982	0	0	0
333	48	N82	339.656	445.312	-341.497	.002	0	0
334	48	N85	-240.214	437.783	455.544	.002	0	0
335	48	Totals:	71.248	1716.04	123.41			
336	48	COG (in):	X: 60.715	Y: 14.942	Z: -2.444			
337	49	N71	87.439	379.219	-352.715	-.11	0	.004
338	49	N72	-85.886	370.577	358.626	-.108	0	.003
339	49	N80A	-.003	8.517	-.011	0	0	0
340	49	N82	-32.278	330.321	-251.141	0	0	0
341	49	N85	30.728	252.398	245.234	0	0	0
342	49	Totals:	0	1341.033	-.007			
343	49	COG (in):	X: 79.091	Y: 19.121	Z: -3.128			
344	50	N71	42.425	299.818	-184.265	-.079	0	-.011
345	50	N72	-52.665	297.405	196.391	-.078	0	-.012
346	50	N80A	.505	8.517	1.843	0	0	0
347	50	N82	339.822	422.094	-327.099	.002	0	0
348	50	N85	-330.087	313.203	313.138	.002	0	0
349	50	Totals:	0	1341.037	.009			
350	50	COG (in):	X: 53.085	Y: 19.121	Z: -3.128			
351	51	N71	55.618	286.944	-228.702	-.08	0	-.002
352	51	N72	-53.737	280.733	233.761	-.08	0	0
353	51	N80A	-.002	9.937	-.006	0	0	0
354	51	N82	-38.086	310.438	-229.968	0	0	0
355	51	N85	36.207	238.989	224.908	0	0	0
356	51	Totals:	0	1127.041	-.006			
357	51	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
358	52	N71	47.873	258.665	-168.578	-.072	0	-.003
359	52	N72	-48.261	257.054	217.26	-.071	0	-.003
360	52	N80A	.516	8.805	2.606	0	0	0
361	52	N82	-33.539	252.537	-182.136	0	0	0
362	52	N85	33.412	221.777	212.847	0	0	0
363	52	Totals:	0	998.838	81.999			
364	52	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
365	53	N71	46.46	256.032	-168.32	-.071	0	-.002
366	53	N72	-48.487	254.536	217.734	-.071	0	-.002
367	53	N80A	5.553	8.794	22.219	0	0	0
368	53	N82	-58.342	271.207	-198.21	0	0	0
369	53	N85	13.814	208.269	197.587	0	0	0
370	53	Totals:	-41.002	998.837	71.01			
371	53	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
372	54	N71	45.804	252.925	-177.261	-.071	0	-.002
373	54	N72	-48.48	250.494	215.388	-.071	0	0
374	54	N80A	9.101	8.786	35.875	0	0	0
375	54	N82	-76.557	290.918	-215.793	0	0	0
376	54	N85	-.886	195.715	182.788	0	0	0
377	54	Totals:	-71.016	998.837	40.996			
378	54	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
379	55	N71	46.081	250.177	-193.005	-.07	0	0
380	55	N72	-48.243	246.01	210.85	-.07	0	0
381	55	N80A	10.211	8.785	39.916	0	0	0

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
382	55	N82	-83.304	306.39	-230.178	0	0	0
383	55	N85	-6.751	187.476	172.41	0	0	0
384	55	Totals:	-82.005	998.837	-.007			
385	55	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
386	56	N71	47.216	248.523	-211.334	-.07	0	0
387	56	N72	-47.839	242.285	205.337	-.07	0	.002
388	56	N80A	8.583	8.789	33.259	0	0	0
389	56	N82	-76.771	313.477	-237.508	0	0	0
390	56	N85	-2.206	185.764	169.237	0	0	0
391	56	Totals:	-71.017	998.837	-41.009			
392	56	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
393	57	N71	48.906	248.404	-227.336	-.071	0	0
394	57	N72	-47.376	240.315	200.326	-.07	0	.004
395	57	N80A	4.655	8.797	17.691	0	0	0
396	57	N82	-58.715	310.285	-235.82	0	0	0
397	57	N85	11.526	191.036	174.116	0	0	0
398	57	Totals:	-41.003	998.837	-71.022			
399	57	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
400	58	N71	50.701	249.852	-236.725	-.071	0	0
401	58	N72	-46.978	240.627	197.159	-.071	0	.004
402	58	N80A	-.519	8.808	-2.62	0	0	0
403	58	N82	-33.971	297.671	-225.565	0	0	0
404	58	N85	30.767	201.879	185.741	0	0	0
405	58	Totals:	0	998.837	-82.01			
406	58	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
407	59	N71	52.119	252.481	-236.983	-.071	0	0
408	59	N72	-46.75	243.14	196.684	-.071	0	.004
409	59	N80A	-5.554	8.818	-22.23	0	0	0
410	59	N82	-9.172	279.011	-209.49	0	0	0
411	59	N85	50.361	215.387	200.998	0	0	0
412	59	Totals:	41.003	998.837	-71.021			
413	59	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
414	60	N71	52.778	255.587	-228.044	-.072	0	-.001
415	60	N72	-46.756	247.18	199.028	-.071	0	.002
416	60	N80A	-9.101	8.827	-35.887	0	0	0
417	60	N82	9.039	259.304	-191.904	0	0	0
418	60	N85	65.058	227.939	215.799	0	0	0
419	60	Totals:	71.017	998.837	-41.007			
420	60	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
421	61	N71	52.5	258.339	-212.3	-.072	0	-.002
422	61	N72	-46.993	251.668	203.564	-.072	0	0
423	61	N80A	-10.211	8.83	-39.932	0	0	0
424	61	N82	15.786	243.825	-177.517	0	0	0
425	61	N85	70.923	236.175	226.18	0	0	0
426	61	Totals:	82.006	998.837	-.004			
427	61	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
428	62	N71	51.361	259.997	-193.97	-.072	0	-.003
429	62	N72	-47.399	255.398	209.078	-.072	0	0
430	62	N80A	-8.584	8.827	-33.277	0	0	0
431	62	N82	9.258	236.728	-170.189	0	0	0
432	62	N85	66.382	237.886	229.355	0	0	0
433	62	Totals:	71.017	998.837	40.998			
434	62	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
435	63	N71	49.667	260.117	-177.967	-.072	0	-.003
436	63	N72	-47.863	257.37	214.091	-.072	0	-.002
437	63	N80A	-4.659	8.818	-17.708	0	0	0
438	63	N82	-8.795	239.916	-171.88	0	0	0

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
439	63	N85	52.653	232.617	224.475	0	0	0
440	63	Totals:	41.003	998.838	71.011			
441	63	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
442	64	N71	32.709	180.41	-106.22	-.05	0	-.003
443	64	N72	-33.609	180.601	153.623	-.05	0	-.003
444	64	N80A	.517	6.098	2.61	0	0	0
445	64	N82	-23.16	167.92	-119.525	0	0	0
446	64	N85	23.542	156.696	151.513	0	0	0
447	64	Totals:	0	691.724	82.001			
448	64	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
449	65	N71	31.298	177.784	-105.957	-.049	0	-.002
450	65	N72	-33.834	178.088	154.09	-.049	0	-.002
451	65	N80A	5.554	6.09	22.222	0	0	0
452	65	N82	-47.964	186.584	-135.602	0	0	0
453	65	N85	3.944	143.178	136.258	0	0	0
454	65	Totals:	-41.002	691.724	71.012			
455	65	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
456	66	N71	30.644	174.683	-114.891	-.049	0	-.001
457	66	N72	-33.828	174.052	151.735	-.049	0	-.001
458	66	N80A	9.103	6.085	35.876	0	0	0
459	66	N82	-66.179	206.29	-153.187	0	0	0
460	66	N85	-10.757	130.614	121.464	0	0	0
461	66	Totals:	-71.017	691.724	40.997			
462	66	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
463	67	N71	30.923	171.937	-130.628	-.049	0	0
464	67	N72	-33.593	169.574	147.191	-.048	0	0
465	67	N80A	10.213	6.084	39.916	0	0	0
466	67	N82	-72.928	221.761	-167.574	0	0	0
467	67	N85	-16.621	122.368	111.089	0	0	0
468	67	Totals:	-82.005	691.724	-.005			
469	67	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
470	68	N71	32.06	170.281	-148.953	-.048	0	0
471	68	N72	-33.191	165.852	141.674	-.048	0	.002
472	68	N80A	8.584	6.087	33.258	0	0	0
473	68	N82	-66.397	228.85	-174.904	0	0	0
474	68	N85	-12.074	120.653	107.917	0	0	0
475	68	Totals:	-71.017	691.724	-41.007			
476	68	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
477	69	N71	33.752	170.157	-164.953	-.049	0	0
478	69	N72	-32.729	163.882	136.665	-.048	0	.003
479	69	N80A	4.656	6.093	17.689	0	0	0
480	69	N82	-48.342	225.663	-173.216	0	0	0
481	69	N85	1.66	125.928	112.794	0	0	0
482	69	Totals:	-41.003	691.723	-71.021			
483	69	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
484	70	N71	35.547	171.599	-174.344	-.049	0	0
485	70	N72	-32.332	164.191	133.502	-.049	0	.004
486	70	N80A	-.52	6.1	-2.622	0	0	0
487	70	N82	-23.599	213.056	-162.96	0	0	0
488	70	N85	20.903	136.778	124.415	0	0	0
489	70	Totals:	0	691.723	-82.009			
490	70	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
491	71	N71	36.963	174.22	-174.608	-.049	0	0
492	71	N72	-32.104	166.698	133.035	-.049	0	.003
493	71	N80A	-5.556	6.107	-22.232	0	0	0
494	71	N82	1.201	194.402	-146.882	0	0	0
495	71	N85	40.498	150.297	139.668	0	0	0

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
496	71	Totals:	41.003	691.724	-71.019			
497	71	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
498	72	N71	37.62	177.321	-165.676	-.05	0	0
499	72	N72	-32.109	170.733	135.387	-.05	0	.002
500	72	N80A	-9.103	6.113	-35.887	0	0	0
501	72	N82	19.414	174.699	-129.294	0	0	0
502	72	N85	55.196	162.859	154.465	0	0	0
503	72	Totals:	71.017	691.724	-41.005			
504	72	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
505	73	N71	37.34	180.07	-149.939	-.05	0	-.002
506	73	N72	-32.345	175.215	139.931	-.05	0	0
507	73	N80A	-10.212	6.116	-39.931	0	0	0
508	73	N82	26.163	159.221	-114.906	0	0	0
509	73	N85	61.06	171.102	164.842	0	0	0
510	73	Totals:	82.006	691.724	-.003			
511	73	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
512	74	N71	36.198	181.73	-131.614	-.05	0	-.002
513	74	N72	-32.748	178.942	145.448	-.05	0	-.001
514	74	N80A	-8.585	6.114	-33.274	0	0	0
515	74	N82	19.635	152.123	-107.577	0	0	0
516	74	N85	56.517	172.816	168.016	0	0	0
517	74	Totals:	71.017	691.724	41			
518	74	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			
519	75	N71	34.503	181.855	-115.613	-.05	0	-.003
520	75	N72	-33.211	180.913	150.46	-.05	0	-.002
521	75	N80A	-4.659	6.107	-17.704	0	0	0
522	75	N82	1.584	155.306	-109.268	0	0	0
523	75	N85	42.786	167.543	163.138	0	0	0
524	75	Totals:	41.003	691.724	71.013			
525	75	COG (in):	X: 80.68	Y: 26.543	Z: -4.342			

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

	Member	Shape	Code Check	Loc[in]	LC	Shear ...	Loc[in]	Dir	LC	phi*Pnc ...	phi*Pnt [...	phi*Mn y...	phi*Mn z...	Cb	Eqn
1	M1	PIPE_2.0	.414	153....	11	.210	153....		11	4094.317	32130	1.872	1.872	3...	H1-1b
2	M2	PIPE_2.0	.675	151....	5	.394	93		1	4094.317	32130	1.872	1.872	3...	H1-1a
3	MP1A	PIPE_2.0	.312	33.75	9	.124	21.25		11	23808.54	32130	1.872	1.872	2...	H1-1b
4	MP2A	PIPE_2.0X	.170	31.5	6	.124	60.75		12	28142.9...	44100	2.531	2.531	1...	H1-1b
5	MP3A	PIPE_2.0X	.409	27.75	7	.144	28.5		1	28142.9...	44100	2.531	2.531	1...	H1-1b
6	MP5A	PIPE_2.0	.313	50.625	50	.091	33.125		50	23808.54	32130	1.872	1.872	2...	H1-1b
7	RCP	HSS2.5X2.5...	.233	0	1	.064	6.5	y	12	60999.3...	63756	4.554	4.554	2...	H1-1b
8	M18	HSS2.5X2.5...	.149	24	25	.053	6.5	y	31	60999.3...	63756	4.554	4.554	2...	H1-1b
9	M19	SR_0.75	.049	30	12	.014	30		7	7395.536	14313.8...	.179	.179	1...	H1-1b*
10	M22	PIPE_3.0	.132	8.5	1	.125	3.5		7	59852.6...	65205	5.749	5.749	2...	H1-1b
11	M25	PL3/8x6	.462	4.25	7	.194	8.5	y	35	52694.7...	72900	.57	9.113	1...	H1-1b
12	M26	PL3/8x6	.197	4.25	26	.195	8.5	y	36	52694.7...	72900	.57	9.113	1...	H1-1b
13	M27	PL3/8x6	.192	0	7	.037	3	y	31	66560.9...	72900	.57	9.113	2...	H1-1b
14	M28	PL3/8x6	.128	3	7	.058	3	y	31	66560.9...	72900	.57	9.113	2...	H1-1b
15	M29	PL3/8x6	.083	0	14	.059	0	y	7	66560.9...	72900	.57	9.113	2...	H1-1b
16	M30	PL3/8x6	.055	3	26	.062	3	y	31	66560.9...	72900	.57	9.113	2...	H1-1b
17	M35	PL3/8x6	.048	2.531	25	.056	4.5	y	32	66560.9...	72900	.57	9.113	3...	H1-1b
18	M36	PL3/8x6	.107	4.5	26	.049	4.5	y	7	66560.9...	72900	.57	9.113	3...	H1-1b
19	M37	PL3/8x6	.092	2.531	7	.053	4.5	y	31	66560.9...	72900	.57	9.113	3...	H1-1b
20	M38	PL3/8x6	.254	4.5	7	.028	4.5	y	31	66560.9...	72900	.57	9.113	3...	H1-1b
21	M39	PL3/8x6	.302	4.75	7	.137	4.75	y	24	48601.4...	72900	.57	9.113	1...	H1-1b
22	M40	PL3/8x6	.144	4.75	26	.138	4.75	y	24	48601.4...	72900	.57	9.113	1...	H1-1b

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

	Member	Shape	Code Check	Loc[in]	LC	Shear ...	Loc[in]	Dir	LC	phi*Pnc ...	phi*Pnt [...	phi*Mn y...	phi*Mn z...	Cb	Eqn
23	MP4A	PIPE_2.0	.174	19.375	7	.119	48.75		48	23808.54	32130	1.872	1.872	2....	H1-1b
24	M46A	PIPE_1.5	.091	66.838	3	.003	0		9	13150.7...	23593.5	1.105	1.105	1....	H1-1b*
25	M47	L2.5x2.5x4	.171	40.669	12	.015	81.339	z	12	9440.252	38556	1.114	2.085	1....	H2-1
26	M48	L2.5x2.5x4	.186	38.488	12	.018	0	z	12	10984.2...	38556	1.114	2.128	1....	H2-1
27	M49	L2.5x2.5x4	.181	38.743	12	.013	77.486	y	50	10402.5...	38556	1.114	2.113	1....	H2-1
28	M50	L2.5x2.5x4	.169	36.358	9	.018	71.232	y	1	12309.15	38556	1.114	2.16	1....	H2-1

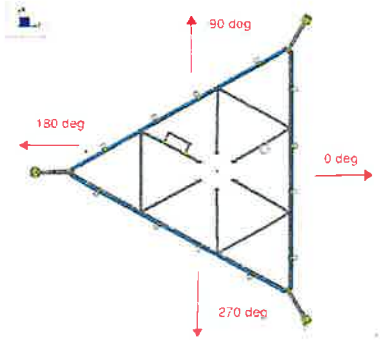
VzW SMART Tool© Vendor

Client:	Verizon Wireless	Date:	12/15/2023
Site Name:	BALTIC CT		
MDG #:	5000092862		
Fuze ID #.	10272037	Page:	1
			Version 2.00

I. Mount-to-Tower Connection Check

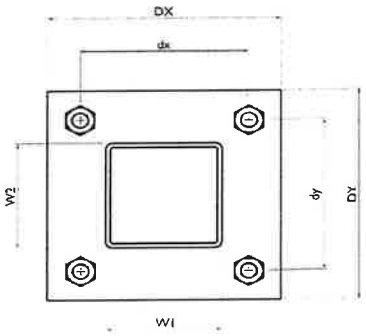
Custom Orientation Required	Yes

Nodes (labeled per Risa)	Orientation (per graphic of typical platform)
N71	330
N72	330



Tower Connection Bolt Checks	Yes
Bolt Orientation	Parallel

Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)* :	5
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	4
Bolt Type:	A307
Bolt Diameter (in):	0.5
Required Tensile Strength / bolt (kips):	0.1
Required Shear Strength / bolt (kips):	0.5
Tensile Capacity / bolt (kips):	6.6
Shear Capacity / bolt (kips):	4.0
Bolt Overall Utilization:	13.8%



Tower Connection Baseplate Checks	No

verizon

MOUNT MODIFICATION DRAWINGS
EXISTING 15.50' T-FRAME

TOWER OWNER: WIRELESS SOLUTIONS
TOWER OWNER SITE NUMBER: N/A

CARRIER SITE NAME: BALTIC CT
CARRIER SITE NUMBER: 5000092862
FUZE ID: 16272037

62 N. MAIN ST
BALTIC, CT 06330
NEW LONDON COUNTY

LATITUDE: 41.624167° N
LONGITUDE: 72.078056° W

DESIGN CRITERIA

WIND LOADS

BASIC WIND SPEED (3 SECOND GUST), V = 125 MPH
EXPOSURE CATEGORY C
TOPOGRAPHIC CATEGORY 1
MEAN BASE ELEVATION (AMSL) = 327.2'

ICE LOADS

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

SEISMIC LOADS

SEISMIC DESIGN CATEGORY B
SHORT TERM MCER GROUND MOTION, S_s = .191
LONG TERM MCER GROUND MOTION, S_1 = .054

PROJECT INFORMATION

APPLICANT/LESSEE

COMPANY: VERIZON WIRELESS

CLIENT REPRESENTATIVE

COMPANY: VERIZON WIRELESS

PROJECT MANAGER

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

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION: HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #: 10215773
VZW MDG#: 5000092862
ANALYSIS DATE: 12/19/2023

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

SHEET INDEX

SHEET	DESCRIPTION
ST-1	TITLE SHEET
SBOM-1	BILL OF MATERIALS
SGN-1	GENERAL NOTES
SCF-1	CLIMBING FACILITY DETAIL
SS-1	MODIFICATION DETAILS
SS-2	MOUNT PHOTOS
	SPECIFICATION SHEETS

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SCALE	DESIGNED
AS SHOWN	23111806

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
1	12/19/23	ISSUED FOR CONSTRUCTION	PM	DL
0	11/15/23	ISSUED FOR CONSTRUCTION	GL	DH

STATE OF CONNECTICUT
DEJIAN XU
No. 33733
LICENSED PROFESSIONAL ENGINEER
12/19/2023

SITE NAME:

BALTIC CT
5000092862
62 N. MAIN ST
BALTIC, CT 06330
NEW LONDON COUNTY

Colliers Engineering & Design
Stamford CT 06901
Phone: 203.324.0800

TITLE SHEET

ST-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
6	VZWSMART	VZWSMART-SFK3-SL	V-BRACING KIT FOR SMALL LEGS	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1.	117	702

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
3	SITE PRO 1	RS-REINF	RS UNIVERSAL PIPE MOUNT REINFORCEMENT KIT	OR EOR APPROVED EQUIVALENT. CONTACT MASER CONSULTING FOR APPROVAL OF SUBSTITUTION.	34	102
					TOTAL:	804

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

NOTES:

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

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Know what's below. Call before you dig.

SCALE: AS SHOWN	DRAWING: 21211BA		
1	12/19/23	ISSUED FOR CONSTRUCTION	AM
0	11/16/23	ISSUED FOR PRELIMINARY REVIEW	CL
REV	DATE	DESCRIPTION	DRAWN BY

STATE OF CONNECTICUT
DEJIAN XU
No. 33733
LICENSED PROFESSIONAL ENGINEER
12/19/2023

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

SITE NAME:
BALTIC CT
5000092862
62 N. MAIN ST
BALTIC, CT 06330
NEW LONDON COUNTY

Colliers Engineering & Design
STAMFORD
Stamford, CT 06901
Phone: 203.324.2635

BILL OF MATERIALS

SBOM-1

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).

GENERAL NOTES

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

STRUCTURAL STEEL

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

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

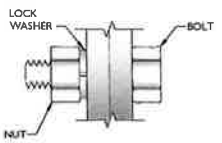
3. ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND REPLACEMENT, SHALL BE NOTED. ESTIMATES OF COSTS/CREDITS ASSOCIATED WITH THE SUBSTITUTION (INCLUDING RE-DESIGN COSTS AND COSTS TO SUB-CONTRACTORS) SHALL BE PROVIDED TO THE ENGINEER. CONTRACTOR SHALL PROVIDE ADDITIONAL DOCUMENTATION AND/OR SPECIFICATIONS TO THE ENGINEER AS REQUESTED.
4. PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION
   a. SUBMIT SHOP DRAWINGS TO
      PETER.ALBANO@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. CONTRACTOR SHALL PROTECT CUT ENDS OF ALL FIELD-CUT STEEL WITH TWO (2) COATS OF COLD GALVANIZATION (ZINGA OR ZINC COTE).
9. 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.
10. 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.
11. FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE. MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
12. 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.
13. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
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.

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.)

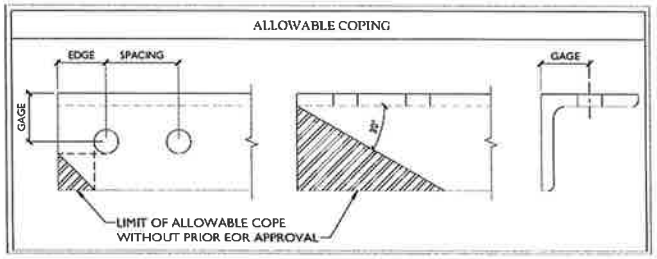
LEG	GAGE
4	2 1/2
3 1/2	2
3	1 3/4
2 1/2	1 3/8
2	1 1/8



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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verizon

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PROTECT YOURSELF
AS STATE REQUIRES NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DRILL, EXCAVATE, GRADE, SURFACE HARVEST OR PLANT STUMPS
FOR STATE SPECIFIC DIGCERT PHONE NUMBER & VISIT WWW.CALL811.COM

SCALE	AS SHOWN	JOB NUMBER	213772.06

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
1	10/19/23	PRELIMINARY CONSTRUCTION	AK	BA
0	9/19/23	ISSUED FOR CONSTRUCTION	G	DM

STATE OF CONNECTICUT
DEJIAN XU
No. 33733
LICENSED PROFESSIONAL ENGINEER
12/19/2023

SITE NAME:

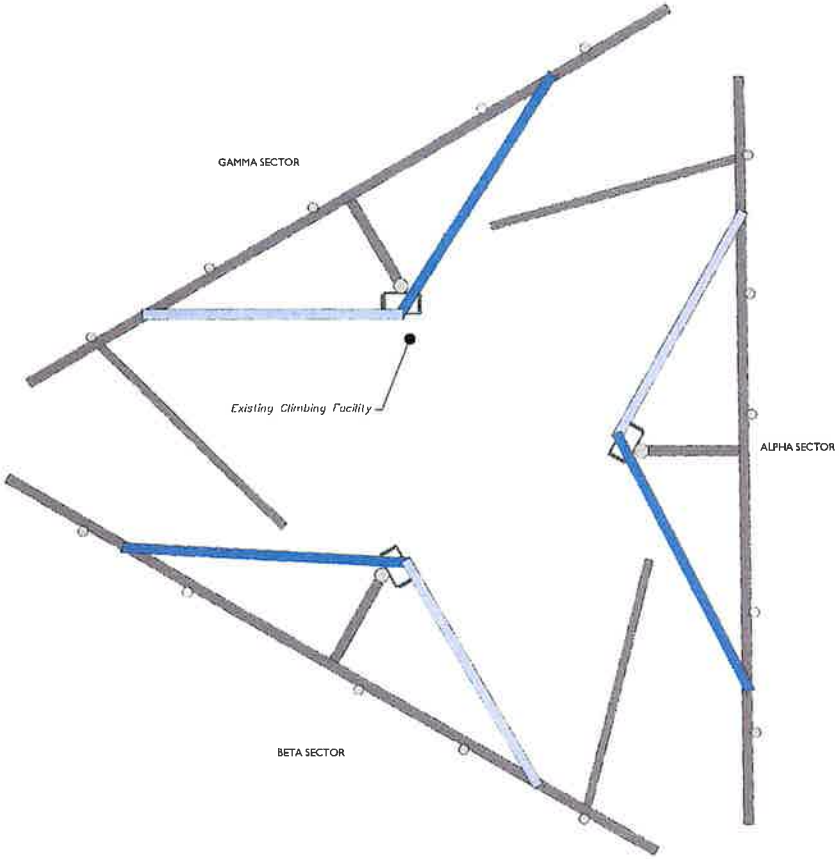
BALTIC CT
5000092862
62 N. MAIN ST
BALTIC, CT 06330
NEW LONDON COUNTY

Colliers Engineering & Design
STAMFORD
CT 06901
Phone: 203.924.0800
colliersengineering.com

MODIFICATION NOTES

SGN-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



1 CLIMBING FACILITY LOCATION

SCALE: N.T.S.

STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY RKS DESIGN & ENGINEERING, LLC ON 10/27/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (164'-0") ARE IN GOOD CONDITION. MASER DOES NOT WARRANT THIS INFORMATION.
2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.

CLIMBING FACILITY PHOTO

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SCALE	DATE PLOTTED
AS SHOWN	2/17/2023

REV	DATE	DESCRIPTION	BY	CK
1	12/19/23	PRELIMINARY CONSTRUCTION	HH	EK
0	11/15/23	PRELIMINARY FOR REVIEW ONLY	GL	JM
REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY

STATE OF CONNECTICUT
DEJIAN XU
No. 33733
LICENSED PROFESSIONAL ENGINEER
12/19/2023

SITE NAME:

BALTIC CT
5000092862

62 N. MAIN ST
BALTIC, CT 06330
NEW LONDON COUNTY

Colliers Engineering & Design
STAMFORD
Stamford CT 06901
Phone: 203.324.1670
Colliers Engineering & Design (CT), Inc.
Licensed Engineers, Land Surveyors, Landscape Architects

CLIMBING FACILITY DETAIL

SCF-1

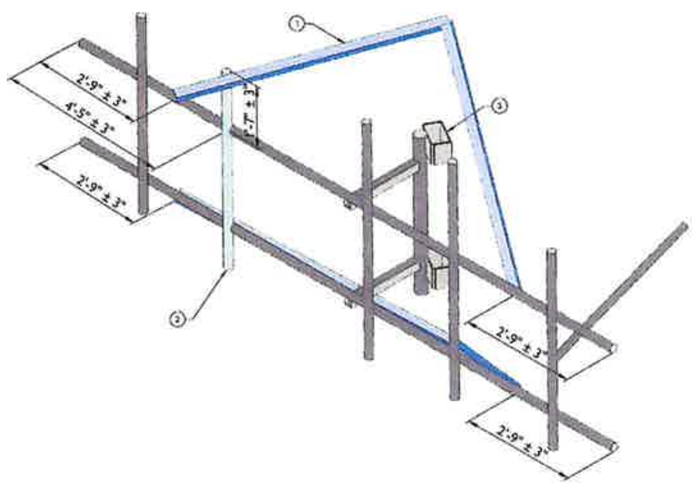
LEGEND:

- PROPOSED
- RELOCATED
- EXISTING

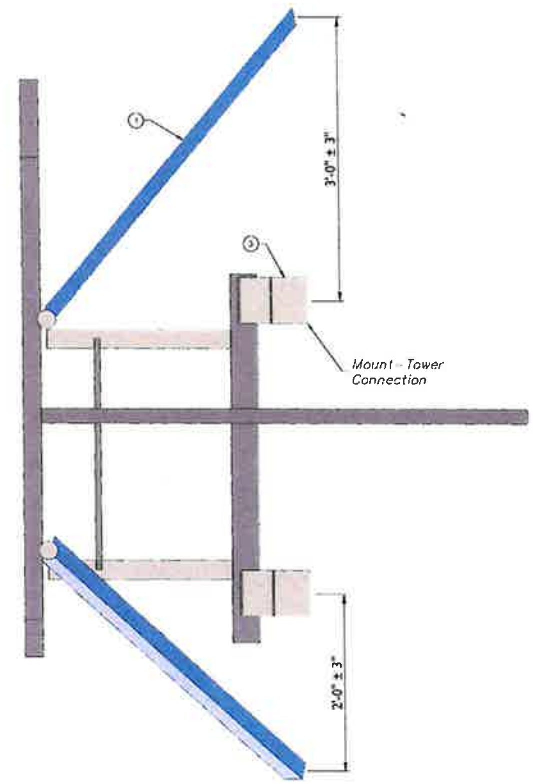
MOUNT MODIFICATION SCHEDULE

NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	164'-0"	6	PROPOSED V-BRACING KIT FOR SMALL LEGS (PART #: VZWSMART-SFK3L)	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1.
2		3	RELOCATED ANTENNA PIPE	RE-USE EXISTING HARDWARE
3		3	PROPOSED REINFORCEMENT (SITE PRO 1 PART #: RS-REINF)	

NOTES:
MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.



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



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

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STATE OF CONNECTICUT DEJIAN XU No. 33733 LICENSED PROFESSIONAL ENGINEER
12/19/2023

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:
BALTIC CT
5000092862
62 N. MAIN ST
BALTIC, CT 06330
NEW LONDON COUNTY

MODIFICATION DETAILS

SS-1

MOUNT PHOTO 1

MOUNT PHOTO 2

MOUNT PHOTO 3

MOUNT PHOTO 4

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Know what's below. Call before you dig.
FOR STATE SPECIFIC DIRECTIVES AND NUMBERS VISIT WWW.CALL811.COM

SCALE	DRAWING NO.
AS SHOWN	21111956

REV	DATE	DESCRIPTION	BY	CK
1	12/19/23	PER VERIZON COMMENTS	HH	DK
0	11/16/23	ISSUED FOR CONSTRUCTION	HH	DK
REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY

STATE OF CONNECTICUT
DEJIAN XU
No. 33733
LICENSED PROFESSIONAL ENGINEER
12/19/2023

SITE NAME:

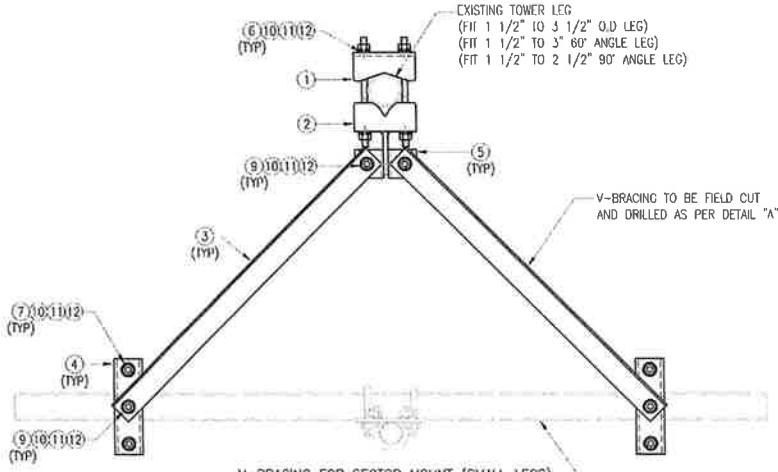
BALTIC CT
5000092862

62 N. MAIN ST
BALTIC, CT 06330
NEW LONDON COUNTY

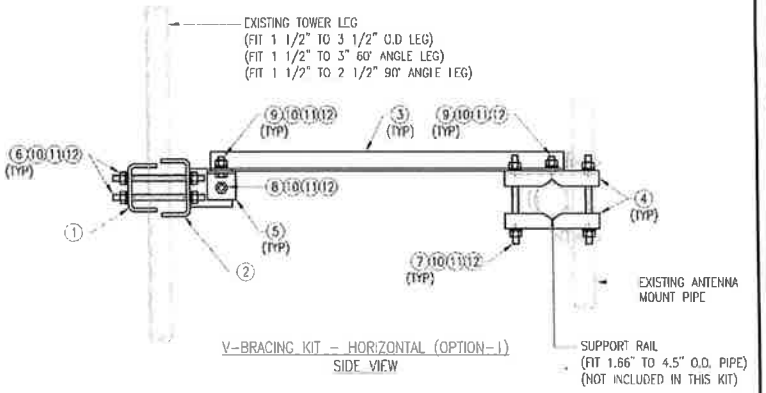
Colliers Engineering & Design
Stamford CT 06901
Phone: (203) 924-0700
www.colliersengineering.com

MOUNT PHOTOS

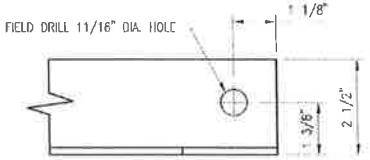
SS-2



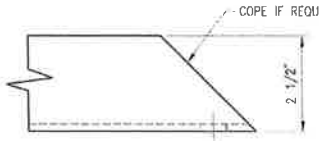
V-BRACING FOR SECTOR MOUNT (SMALL LEGS)
PLAN VIEW



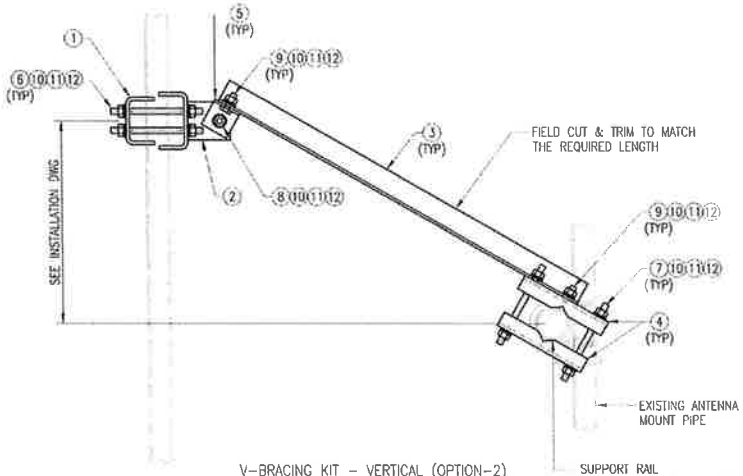
V-BRACING KIT - HORIZONTAL (OPTION-1)
SIDE VIEW



PLAN VIEW



FRONT VIEW
DETAIL "A"



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

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

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

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	BP9625-65	PL 3/8" X 9 5/8" X 6 1/2" A36 DENT PLATE	VBSM-SL-P1	12
2	1	BRKW-VBSM-SL	WELDMENT BRACKET	VBSM-SL-P3	11
3	2	L252525 8	L 2 1/2" X 2 1/2" X 1/4" X 8'-0" A36	VBSM-P5	27
4	4	BP6875-10	PL 3/8" X 6 7/8" X 10" A36 DENT PLATE	VBSM-P2	26
5	2	A-533	L 3" X 3" X 1/4" X 3" A36	VBSM-P3	1
6	4	-	THREADED ROD 5/8" DIA. X 1'-3" F1554-36 HDG		
7	4	-	THREADED ROD 5/8" DIA X 10" F1554-36 HDG		
8	1	-	BOLT 5/8" X 2 1/2" A325	---	---
9	4	-	BOLT 5/8" X 1 3/4" A325	---	---
10	21	LW-625	5/8" HDG LOCK FLAT WASHER	---	2
11	21	LW-625	5/8" HDG LOCK WASHER	---	5
12	21	NUT-625	5/8" HDG HEX NU	---	2
				GALVANIZED WT	117

VzW SMART Tool© Vendor

verizon

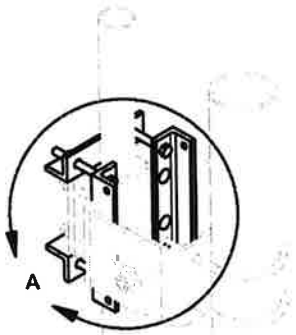
DRAWN BY: [illegible] CHECKED BY: MA

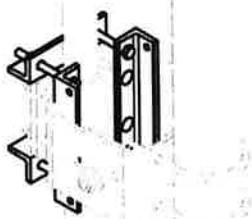
NO.	DESCRIPTION	BY	DATE
0	[illegible]	BT	04/10/21

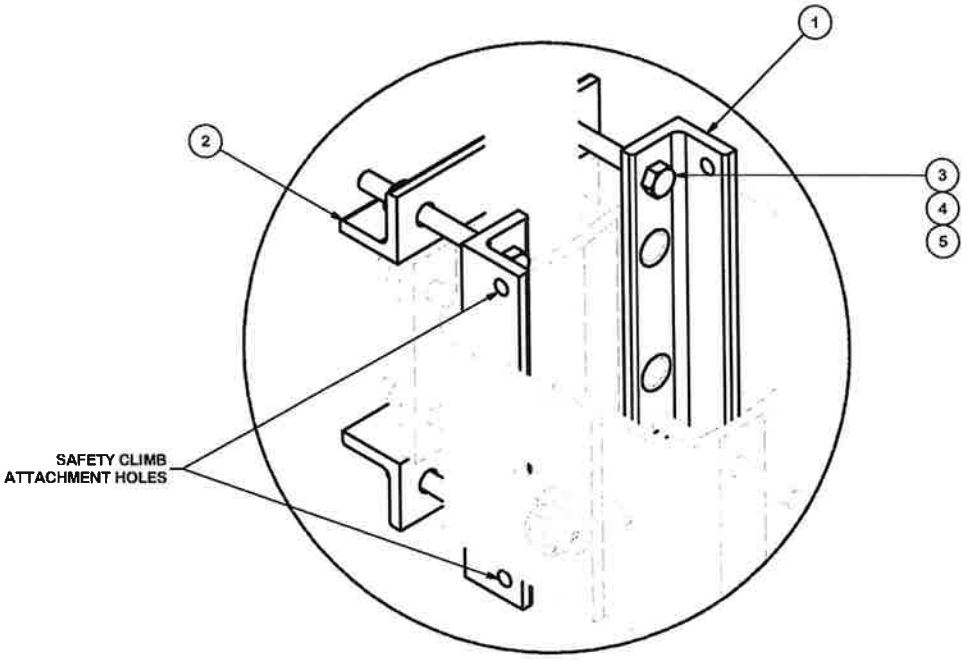
VZWSMART-SFK3-SL
V-BRACING KIT
FOR SMALL LEGS

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

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	4	X-R5-FRA1	REINFORCEMENT ANGLE	10 in	3.84	15.36
2	4	X-R5-RFA2	REINFORCEMENT ANGLE	7 1/8 in	2.86	11.45
3	8	G1208	1/2" x 8" HDG HEX BOLT GR5 FULL THREAD	8 in	0.49	3.94
3	8	G1205	1/2" x 5" HDG HEX BOLT GR5 FULL THREAD	5 in	0.33	2.61
4	8	G12LW	1/2" HDG LOCKWASHER		0.01	0.11
5	8	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.57
					TOTAL WT. #	34.04







DETAIL A

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: R5 UNIVERSAL PIPE MOUNT REINFORCEMENT KIT

SITE PRO 1 — A valmont company

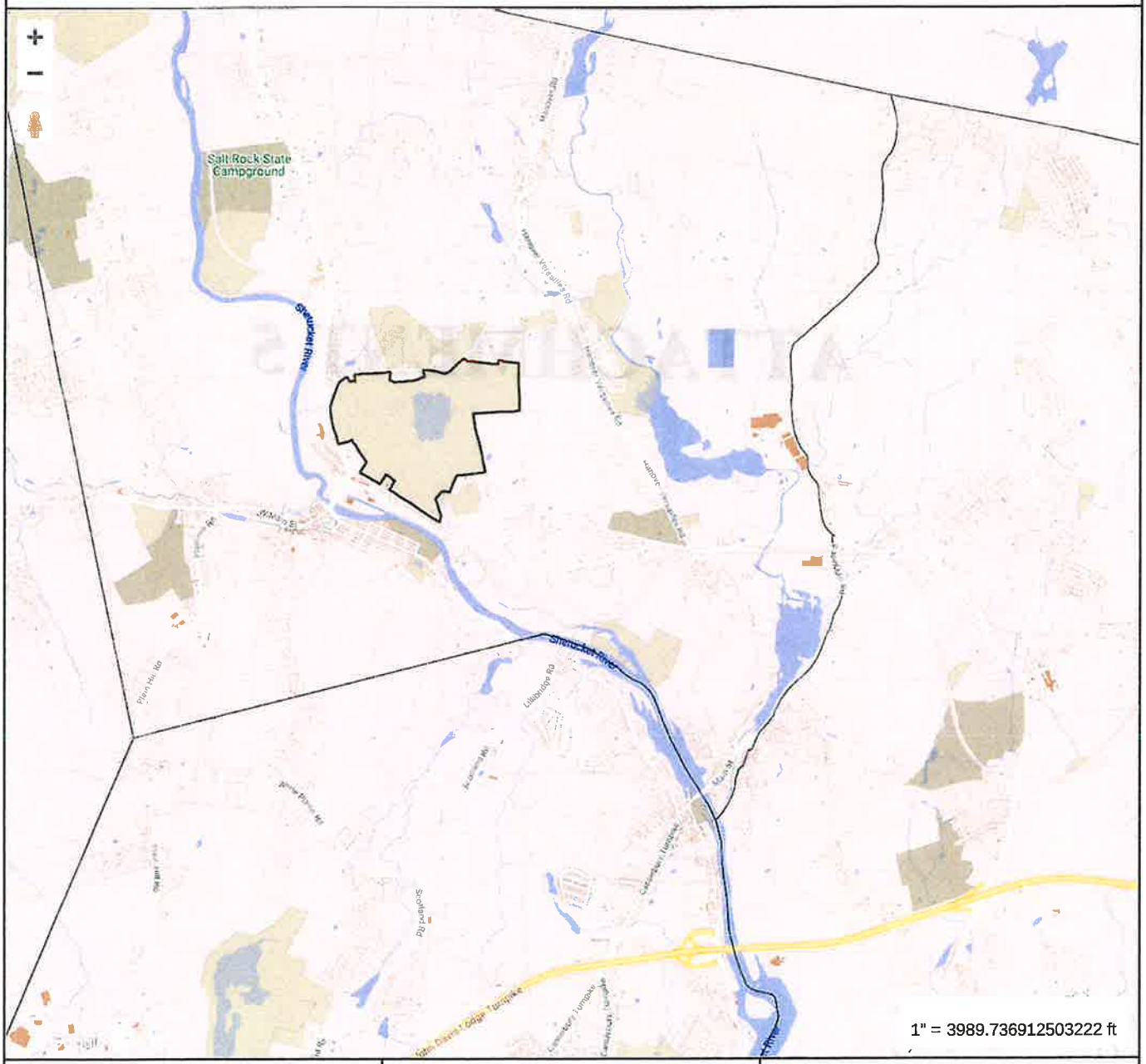
Engineering Support Team: 1-888-753-7446

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

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
	JFS 4/22/2020	5/6/2020	R5-REINF

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	02	CUSTOMER	BMC 5/6/2020	R5-REINF

ATTACHMENT 5



Property Information

Property ID	133-09-04-03
Location	0 BALTIC-HANOVER RD
Owner	SPRAGUE TOWN OF

SCCOG

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

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

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

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

0 BALTIC-HANOVER RD

Location	0 BALTIC-HANOVER RD	**Mblu**	10/ 4/ 18/ /
Acct#	B0001300	**Owner**	SPRAGUE TOWN OF
PBN		**Assessment**	$180,450
Appraisal	$257,780	**PID**	14
Building Count	1	**Utility**	

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2022	$0	$257,780	$257,780
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2022	$0	$180,450	$180,450

Owner of Record

Owner SPRAGUE TOWN OF
Co-Owner
Address 1 MAIN ST
BALTIC, CT 06330

Sale Price $0
Certificate 1
Book & Page 0022/0013
Sale Date 01/29/1968
Instrument 00

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
SPRAGUE TOWN OF	$0	1	0022/0013	00	01/29/1968

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0
Replacement Cost: $0
Building Percent Good:

Building Photo


Building Photo
(https://images.vgsi.com/photos2/SpragueCTPhotos//default.jpg)

ATTACHMENT 6

Verizon/Baltic

UNITED STATES POSTAL SERVICE®

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	3	quadient CORRECTION IMI $003.34 05/22/2024 ZIP 06101 043M3200019 USPS POSTAGE
	Postmaster, per *(name of receiving employee)*		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Cheryl Blanchard, First Selectman Town of Sprague 1 Main Street Sprague, CT 06330				
2.	Joseph D. Smith, Zoning Enforcement Officer Town of Sprague 1 Main Street Sprague, CT 06330				
3.	Greg Thompson K2 Towers II, LLC 57 E. Washington Street Chagrin Falls, OH 44022				
4.					
5.					
6.					

OLD STATE HOUSE POST OFFICE
MAY 22 2024
HARTFORD, CT 06103