Colin Robinson, Site Acquisition Consultant
c/o Cellco Partnership d/b/a Verizon Wireless
Centerline Communications, LLC
750 West Center Street, Floor 3
West Bridgewater, MA 02379
Mobile: (360) 561-3311
crobinson@clinellc.com

11/4/2025

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

RE: Notice of Exempt Modification
Site: Hartford North 2 CT (ATC: **411187**)
811 Blue Hills Avenue Bloomfield, CT 06002
Latitude: 41.809722 **Longitude:** -72.696667

Dear Ms. Bachman,

Cellco Partnership d/b/a Verizon Wireless currently maintains Fifteen (15) antennas at the 105-foot level on the existing 109-foot tower, located at 811 Blue Hills Avenue Bloomfield, CT. The tower is owned by American Tower. The property is owned by Samo Realty LLC. The Council approved the construction of the tower in 2007.

Proposed Modifications:

Tower:
Install: (2) Filters

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Anthony C. Harrington, Mayor, Jonathan Colman, Planning Director; American Tower, tower owner, Samo Realty LLC, property owner.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2). Enclosed to accommodate this filing are construction drawings dated October 22, 2025, by A.T. Engineering Services, LLC, a structural analysis dated June 19, 2025, by A.T. Engineering Services, LLC, and a Non-Ionizing Electromagnetic Radiation (NIER) Study dated August 6, 2025, by Tower Engineering Professionals.

1. The proposed modifications will not result in an increase in the height of the existing structure.

2. The proposed modifications will not require the extension of the site boundary.

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

4. The operation of the new antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.

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

6. The existing structure and its foundation can support the proposed loading, as shown in the attached structural analysis by A.T. Engineering Services, LLC, dated June 18, 2025, pursuant to certain conditions defined therein. Design and engineering are fully illustrated within final construction drawings, signed and stamped dated October 22, 2025.

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

Sincerely,

Colin Robinson

Colin Robinson

Colin Robinson, Site Acquisition Consultant
c/o Cellco Partnership d/b/a Verizon Wireless
Centerline Communications, LLC
750 West Center Street, Floor 3
West Bridgewater, MA 02379
Mobile: (360) 561-3311
crobinson@clinellc.com

Attachments

cc: Anthony C. Harrington – Chief Elected Official
Town of Bloomfield Council Chambers
Bloomfield Town Hall
800 Bloomfield Avenue,
Bloomfield CT 06002

Director Jonathan Colman - Planning Official
Planning & Zoning Department
Town of Bloomfield
Bloomfield Town Hall
800 Bloomfield Avenue,
Bloomfield CT 06002

American Tower Corporation - Tower Owner
10 Presidential Way
Woburn, MA 01801

Samo Realty LLC - Ground Owner
811 Blue Hills Ave
Bloomfield CT 06002

Exhibit A

Original Facility Approval

DOCKET NO. 336 - Cellco Partnership d/b/a Verizon Wireless application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located at 811 Blue Hills Avenue, Bloomfield, Connecticut.	}	Connecticut
	}	Siting
	}	Council

October 16, 2007

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental Compatibility and Pubic Need, as provided by General Statutes § 16-50k, be issued to Cellco Partnership d/b/a Verizon Wireless for the construction, maintenance and operation of a wireless telecommunications facility to be located at 811 Blue Hills Avenue in Bloomfield, Connecticut.

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

1. The tower shall be designed and constructed as a monopole no taller than 110 feet above ground level to provide telecommunications services to both public and private entities. Said tower may be designed and constructed in such a manner that it could be expandable in the future.

2. The tower shall be designed and constructed with a yield point to minimize its setback radius.

3. Antennas on the tower may be flush-mounted or mounted on T-arm mounts.

4. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Bloomfield and the City of Hartford and all parties and intervenors, as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:

    a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antenna mountings, equipment building, access road, and utility line;

b) construction plans for site clearing, water drainage, and erosion and sedimentation control consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended; and

c) a landscaping plan.

5. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of the electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of the electromagnetic radio frequency power density be submitted to the Council in the event other carriers locate at this facility or if circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.

6. Upon the establishment of any new state or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.

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

8. The Certificate Holder shall provide reasonable space on the tower for no compensation for any Town of Bloomfield public safety services (police, fire and medical services), provided such use can be accommodated and is compatible with the structural integrity of the tower.

9. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed and providing wireless services within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline.

10. Any request for extension of the time period referred to in Condition 9 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the Town of Bloomfield. Any proposed modifications to this Decision and Order shall likewise be so served.

11. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.

12. The Certificate Holder shall remove any nonfunctioning antenna, and associated antenna mounting equipment, within 60 days of the date the antenna ceased to function.

13. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction and the commencement of site operation.

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

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

The parties and intervenors in this proceeding are:

Status Granted	**Status Holder (name, address & phone number)**	**Representative (name, address & phone number)**
Applicant	Cellco Partnership d/b/a Verizon Wireless	Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103-3597 (860) 275-8200 (860) 275-8299 fax kbaldwin@rc.com Sandy Carter, Regulatory Manager Verizon Wireless 99 East River Drive East Hartford, CT 06108 (860) 803-8219 alexandria.carter@verizonwireless.com
Party (granted 05/22/07)	Buckley Broadcast – WDRC	Scott Baron Chief Engineer WDRC AM 869 Blue Hills Avenue Bloomfield, CT 06002 (860) 243-1115 (860) 286-8257 fax scottbaron@wdrc.com

Exhibit B

Property Card

Town of Bloomfield, CT

Property Listing Report

Map Block Lot	89-2 3002	Building #	1	PID	545	Account	R00574

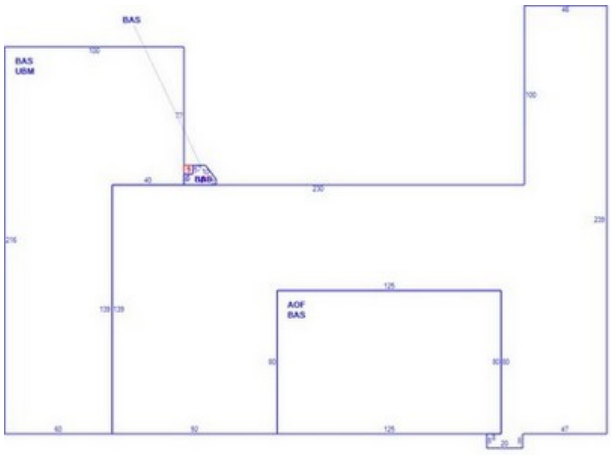
Property Information

Property Location	811 BLUE HILLS AVE
Owner	SAMO REALTY LLC
Co-Owner	
Mailing Address	811 BLUE HILLS AVE BLOOMFIELD CT 06002
Land Use	300 Industrial
Land Class	I
Zoning Code	GWB
Census Tract	4712

Site Index	C
Acreage	6.98
Utilities	
Lot Setting/Desc	
Fire District	B
Book / Page	1226/0094

Photo

Sketch



Primary Construction Details

Year Built	1985
Building Desc.	Industrial
Building Style	Warehouse - Storage
Building Grade	C
Stories	1
Occupancy	2.00
Exterior Walls	Concrete
Exterior Walls 2	
Roof Style	Flat
Roof Cover	Rolled Compos
Interior Walls	Minimum
Interior Walls 2	Drywall
Interior Floors 1	Concrete
Interior Floors 2	Carpet

Heating Fuel	Gas
Heating Type	Hot Air-No Duc
AC Type	27
Bedrooms	
Full Bathrooms	
Half Bathrooms	
Extra Fixtures	
Total Rooms	
Bath Style	
Kitchen Style	
Bsmt Fin Area	0
Rec Rm Area	0
Bsmt Gar	0
Fireplaces	0

(*Industrial / Commercial Details)

Building Use	Industrial
Building Condition	A
Sprinkler %	100
Heat / AC	HEAT/AC SPLIT
Frame Type	Masonry
Baths / Plumbing	Average
Ceiling / Wall	Ceil & Wall
Rooms / Prtns	Average
Wall Height	19.00
First Floor Use	
Foundation	NA

Report Created On 11/3/2025

Town of Bloomfield, CT

Property Listing Report

Map Block Lot	89-2 3002	Building #	1	PID	545	Account	R00574

Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	3180000	2226000
Extras	37400	26180
Improvements		
Outbuildings	129800	90860
Land	618500	432950
Total	3965700	2775990

Outbuilding and Extra Features

Type	Description
Ovhd 8'	10 UNITS
Ovhd 14'	2 UNITS
Paving	108000 S.F.
Light Single	1 UNITS
Load Leveller	10 Units
Lights Double	3 UNITS
Fence	300 L.F.

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Office Area	10000	10000
First Floor	59313	59313
Finished Open Porch	25	0
Basement	16040	0
Total Area	85378	69313

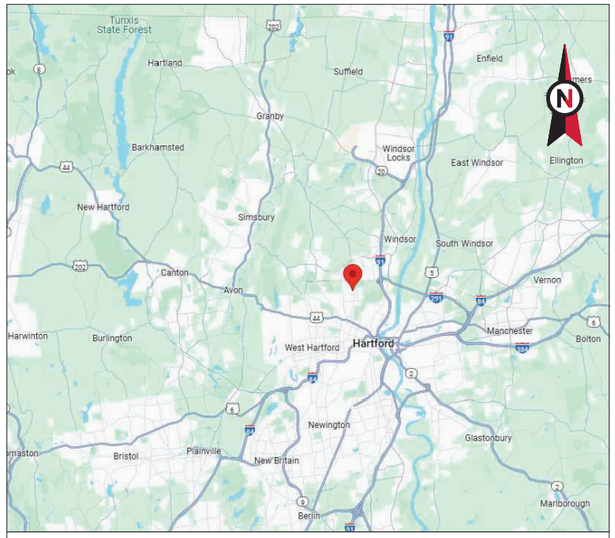
Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
SAMO REALTY LLC	1226/0094	2005-03-24	1800000
BERNIES ASSOCIATES	0277/0219	1995-12-19	0

Report Created On 11/3/2025

Exhibit C

Construction Drawings



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: HARTFORD NORTH 2 CT
ATC SITE NUMBER: 411187
VERIZON SITE NAME: BLOOMFIELD BLUE HILLS CT
VERIZON SITE NUMBER: 5000103428
VERIZON FUZE PID: 17390723
SITE ADDRESS: 811 BLUE HILLS AVENUE
BLOOMFIELD, CT 06002

LOCATION MAP

VERIZON AMENDMENT DRAWINGS

COMPLIANCE CODE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. 2020 NFPA 70, NATIONAL ELECTRIC CODE (NEC)
2. 2022 CONNECTICUT STATE BUILDING CODE
3. 2021 INTERNATIONAL BUILDING CODE (IBC)

DESIGN CRITERIA FROM TOWER STRUCTURAL ANALYSIS:

BASIC WIND SPEED:	115 MPH
BASIC WIND SPEED W/ ICE:	48 MPH
CODE(S):	ANSI/TIA-222-I / 2021 IBC / 2022 CONNECTICUT STATE BUILDING CODE
EXPOSURE CATEGORY:	B
RISK CATEGORY:	II
TOPO FACTOR PROCEDURE:	METHOD 1
FEATURE:	FLAT
SPECTRAL RESPONSE:	S_S=0.17, S_1=0.07
SITE CLASS:	DEFAULT

INFORMATION TAKEN FROM STRUCTURAL ANALYSIS COMPLETED BY ATC, DATED 06/19/25.

UTILITY COMPANIES

POWER COMPANY: NORTHEAST UTILITY SERVICES
PHONE: (888) 783-6617

TELEPHONE COMPANY: UNKNOWN
PHONE: N/A

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

PROJECT SUMMARY

SITE ADDRESS:

811 BLUE HILLS AVENUE
BLOOMFIELD, CT 06002
COUNTY: HARTFORD

REGISTERED COORDINATES:

LATITUDE: 41.809722
41° 48' 34.999" N
LONGITUDE: -72.696667
72° 41' 48.001" W
GROUND ELEVATION: 153' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

APPLICANT:

VERIZON WIRELESS

ENGINEER:

A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN, STE 300
CARY, NC 27511

PROPERTY OWNER:

AIRTOUCH ATLAS NO PAY
811 BLUE HILLS AVENUE
BLOOMFIELD, CT 06002

PROJECT DESCRIPTION

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

INSTALL MOUNT MODIFICATIONS AND (2) FILTER(S)

EXISTING (15) ANTENNA(s), (9) RRH(s), (2) OVP(s), (6) 1-5/8" COAX, AND (2) 1-5/8" 6X12 HYBRIFLEX CABLE(s) TO REMAIN

PROJECT NOTES

1. THE FACILITY IS UNMANNED.
2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.
3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.
4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.
5. HANDICAP ACCESS IS NOT REQUIRED.
6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).

PROJECT LOCATION DIRECTIONS

FROM DOWNTOWN HARTFORD CT START OUT GOING NORTH ON MAIN ST TOWARD ATHENEUM SQ N. TAKE THE 2ND RIGHT ONTO CENTRAL ROW CENTRAL ROW BECOMES AMERICAN ROW. TURN RIGHT ONTO PROSPECT ST. TAKE THE 1ST LEFT ONTO GROVE ST. MERGE ONTO I-91 N TOWARD SPRINGFIELD. TAKE THE CT-218 EXIT, EXIT 35B, TOWARD WINDSOR/BLOOMFIELD. TURN LEFT ONTO CT-218. TURN LEFT ONTO BLUE HILLS AVE/CT-187. 811 BLUE HILLS AVE IS ON THE RIGHT

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	1	10/21/25	HED
G-002	GENERAL NOTES	0	09/04/25	HED
C-101	DETAILED SITE PLAN	0	09/04/25	HED
C-201	TOWER ELEVATION	0	09/04/25	HED
C-401	ANTENNA INFORMATION & SCHEDULE	1	10/21/25	HED
C-501	CONSTRUCTION DETAILS	0	09/04/25	HED
E-501	GROUNDING DETAILS	0	09/04/25	HED
	SUPPLEMENTAL SHEETS (4 PAGES)			

CONTRACTOR PMI REQUIREMENTS

PMI ACCESSED AT:	HTTPS://PMI.VZWSMART.COM
SMART TOOL VENDOR PROJECT NUMBER:	10286998
VZW LOCATION CODE (PSLC):	5000103428

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

MOUNT MODIFICATION REQUIRED:	NO
VZW APPROVED SMART KIT VENDORS:	REFER TO MOUNT MODIFICATION DRAWINGS PAGES FOR VZW SMART KIT APPROVED VENDORS

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

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	HED	09/04/25
1	UPDATED MA	HED	10/21/25

ATC SITE NUMBER:
411187
ATC SITE NAME:
HARTFORD NORTH 2 CT
VERIZON SITE NAME:
BLOOMFIELD BLUE HILLS CT
SITE ADDRESS:
811 BLUE HILLS AVENUE
BLOOMFIELD, CT 06002

SEAL:

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

Scott Wirgau
Digitally signed by Scott Wirgau
Date: 2025.10.22 22:45:48 -04'00'

verizon

ATC JOB NO:	15315106_G0
CUSTOMER ID:	BLOOMFIELD BLUE HILLS CT
CUSTOMER #:	5000103428

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	1

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, VERIZON "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
   - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
   - B. AC/TELCO INTERFACE BOX (PPC)
   - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
   - D. TOWERS, MONOPOLES
   - E. TOWER LIGHTING
   - F. GENERATORS & LIQUID PROPANE TANK
   - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
   - H. ANTENNAS (INSTALLED BY OTHERS)
   - I. TRANSMISSION LINE
   - J. TRANSMISSION LINE JUMPERS
   - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
   - L. TRANSMISSION LINE GROUND KITS
   - M. HANGERS
   - N. HOISTING GRIPS
   - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF VERIZON TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE VERIZON REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE VERIZON REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE VERIZON REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE VERIZON CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE VERIZON REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH VERIZON AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO VERIZON FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY VERIZON REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. WHEN THE PROJECT SCOPE REQUIRES THE USE OF THE SAFETY CLIMB, THE GENERAL CONTRACTOR SHALL ENSURE THE SAFETY CLIMB IS FREE OF OBSTRUCTIONS, NOT RUBBING ON OR TRAPPED BY ANY INSTALLED CUSTOMER EQUIPMENT, IS VISUALLY TAUT, MEETS MANUFACTURER INSTALLATION SPECIFICATIONS, AND IS FIRMLY SECURED AT ALL CABLE GUIDE LOCATIONS UPON PROJECT COMPLETION.
29. COMPLETION OF PROJECT SHALL NOT OBSTRUCT, TRAP, LOOSEN, OR OTHERWISE CAUSE FAILURE TO MEET MANUFACTURER INSTALLATION REQUIREMENTS FOR THE SAFETY CLIMB.
30. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
31. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
32. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE VERIZON REP. ANY WORK FOUND BY THE VERIZON REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
33. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
34. VERIZON FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE VERIZON WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
35. VERIZON OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO VERIZON OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
   - A. ANTENNA AND COAXIAL/HYBRID CABLES ARE FURNISHED BY VERIZON UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL.
   - B. INSTALL ANTENNAS AS INDICATED ON DRAWINGS AND VERIZON SPECIFICATIONS.
   - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.
   - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE.
   - E. INSTALL COAXIAL/HYBRID CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL/HYBRID CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
2. ANTENNA AND COAXIAL/HYBRID CABLE GROUNDING:
   - A. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.
   - B. ALL COAXIAL/HYBRID CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL/HYBRID CABLE (NOT WITHIN BENDS)

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

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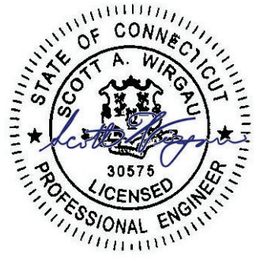
A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	HED	09/04/25

ATC SITE NUMBER:
411187
ATC SITE NAME:
HARTFORD NORTH 2 CT
VERIZON SITE NAME:
BLOOMFIELD BLUE HILLS CT
SITE ADDRESS:
811 BLUE HILLS AVENUE
BLOOMFIELD, CT 06002

SEAL:



Digitally Signed: 2025-10-22

verizon

ATC JOB NO:	15315106_G0
CUSTOMER ID:	BLOOMFIELD BLUE HILLS CT
CUSTOMER #:	5000103428

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	0

SITE PLAN NOTES:

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

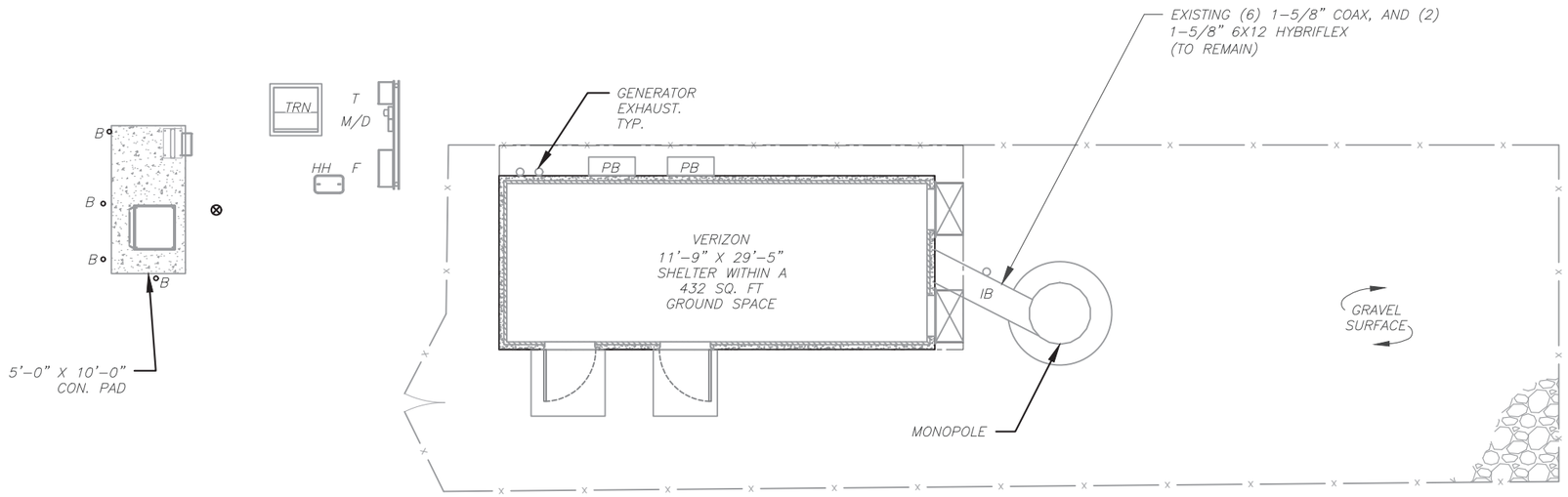
2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.

3. ALL CONDUITS SHALL BE INSTALLED UNDERGROUND AND PER APPLICABLE NEC AND LOCAL REQUIREMENTS UNLESS SHOWN OTHERWISE ON THESE PLANS. ANY CONDUITS INSTALLED ABOVE GRADE SHALL BE SECURED PER NEC 344 (MAX INTERVAL 10') AND THE ENTIRE CONDUIT SHALL BE PAINTED SAFETY/REFLECTIVE YELLOW OR ORANGE TO INCREASE VISIBILITY AND REDUCE TRIP HAZARDS.

4. NO ELECTRICAL SCOPE IS INCLUDED IN THIS PROJECT.

LEGEND

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



1 DETAILED SITE PLAN

GRAPHIC SCALE

10 0 5 10

(IN FEET)
1 UNIT = 10 FEET

N

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PEC.0001553

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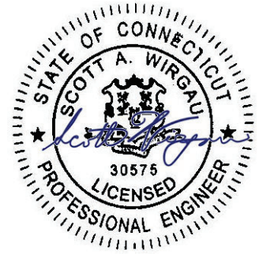
SITE ADDRESS:
811 BLUE HILLS AVENUE
BLOOMFIELD, CT 06002

SEAL:



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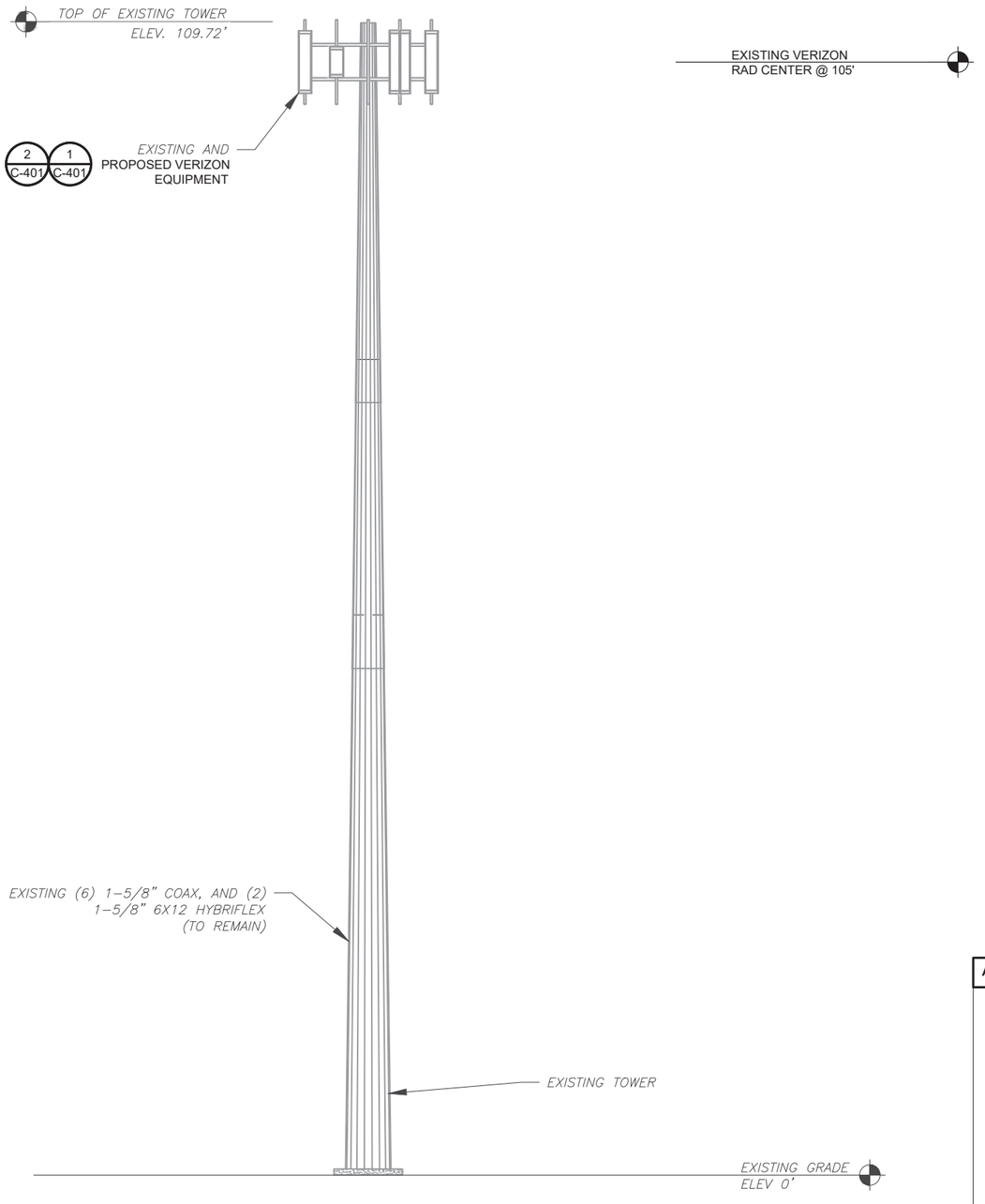
ATC JOB NO:	15315106_G0
CUSTOMER ID:	BLOOMFIELD BLUE HILLS CT
CUSTOMER #:	5000103428

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	0

FAA REGISTRATION NOT REQUIRED

PER MOUNT ANALYSIS COMPLETED BY COLLIERS ENGINEERING & DESIGN, DATED 04/21/25, THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION DETAILED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.



1 TOWER ELEVATION
SCALE: N.T.S.

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

TOWER NOTE:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
2. WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
3. TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.

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0	FOR CONSTRUCTION	HED	09/04/25

ATC SITE NUMBER:
411187

ATC SITE NAME:
HARTFORD NORTH 2 CT

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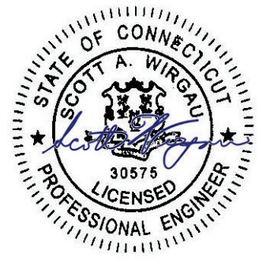
BLOOMFIELD BLUE HILLS CT

SITE ADDRESS:
811 BLUE HILLS AVENUE
BLOOMFIELD, CT 06002

SEAL:



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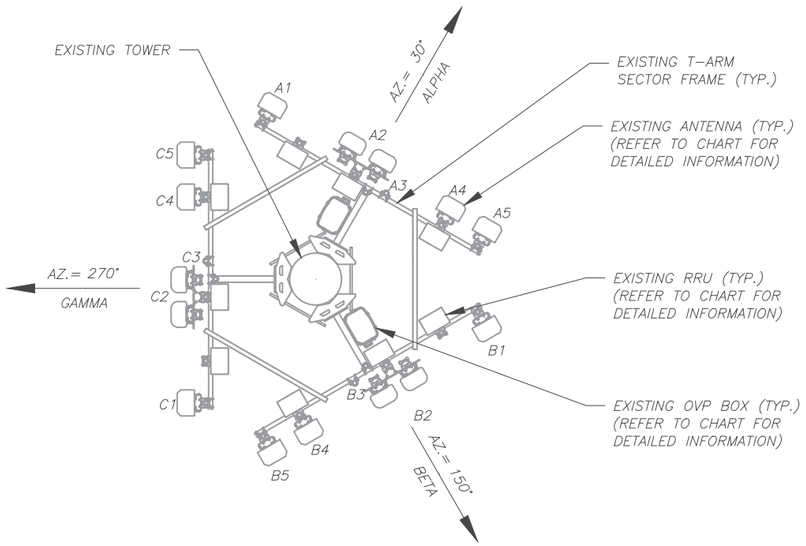
ATC JOB NO:	15315106_G0
CUSTOMER ID:	BLOOMFIELD BLUE HILLS CT
CUSTOMER #:	5000103428

TOWER ELEVATION

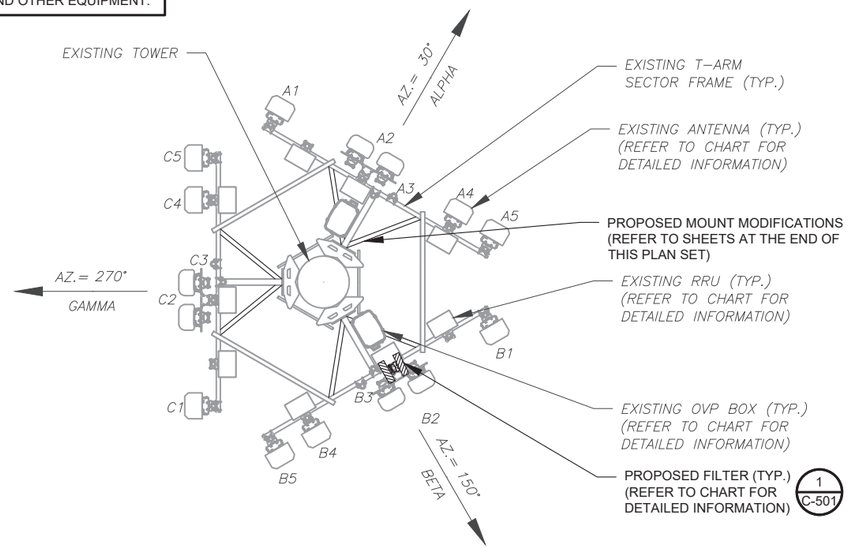
SHEET NUMBER:	REVISION:
C-201	0



1 EXISTING ANTENNA PLAN

SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY COLLIERS ENGINEERING & DESIGN, DATED 04/21/25, THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION DETAILED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.



2 FINAL ANTENNA PLAN

SCALE: N.T.S.

EXISTING ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	105'	30°	A1	LPA–80063/6CF_5	–	RMN	RF4439D–25A	RMN
			A2	NHHSS–65BR2BT2 NHH–65B–R2B	LTE AWS, LTE CRBS LRE700, 5G850, LTE850, LTE1900	RMN RMN	RF4440D–13A	RMN
			A3	–	–	–	–	–
			A4	MT6407–77A	5G L–SUB6	RMN	RT4401–48A	RMN
			A5	LPA–80063/6CF_5	–	RMN	–	–
BETA	105'	150°	B1	LPA–80063/6CF_5	–	RMN	RF4439D–25A	RMN
			B2	NHHSS–65BR2BT2 NHH–65B–R2B	LTE AWS, LTE CRBS LRE700, 5G850, LTE850, LTE1900	RMN RMN	RF4440D–13A	RMN
			B3	–	–	–	–	–
			B4	MT6407–77A	5G L–SUB6	RMN	RT4401–48A	RMN
			B5	LPA–80063/6CF_5	–	RMN	–	–
GAMMA	105'	270°	C1	LPA–80063/6CF_5	–	RMN	RF4439D–25A	RMN
			C2	NHHSS–65BR2BT2 NHH–65B–R2B	LTE AWS, LTE CRBS LRE700, 5G850, LTE850, LTE1900	RMN RMN	RF4440D–13A	RMN
			C3	–	–	–	–	–
			C4	MT6407–77A	5G L–SUB6	RMN	RT4401–48A	RMN
			C5	LPA–80063/6CF_5	–	RMN	–	–

NOTES

1. GC TO VERIFY THE FINAL RFDS MATCHES THE FINAL CONSTRUCTION DRAWINGS. GC TO NOTIFY ATC PM OF ANY DISCREPANCY PRIOR TO INSTALLING THE EQUIPMENT.
2. GC TO CAP ALL UNUSED PORTS.
3. GC TO CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.

STATUS ABBREVIATIONS

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

CABLE LENGTHS FOR JUMPERS

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

FINAL ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	105'	30°	A1	LPA–80063/6CF_5	–	RMN	RF4439D–25A	RMN
			A2	NHHSS–65BR2BT2 NHH–65B–R2B	LTE AWS, LTE CRBS LRE700, 5G850, LTE850, LTE1900	RMN RMN	RF4440D–13A	RMN
			A3	–	–	–	–	–
			A4	MT6407–77A	5G L–SUB6	RMN	RT4401–48A	RMN
			A5	LPA–80063/6CF_5	–	RMN	–	–
BETA	105'	150°	B1	LPA–80063/6CF_5	–	RMN	RF4439D–25A	RMN
			B2	NHHSS–65BR2BT2 NHH–65B–R2B	LTE AWS, LTE CRBS LRE700, 5G850, LTE850, LTE1900	RMN RMN	RF4440D–13A (2) BSF0020F3V1-1	RMN ADD
			B3	–	–	–	–	–
			B4	MT6407–77A	5G L–SUB6	RMN	RT4401–48A	RMN
			B5	LPA–80063/6CF_5	–	RMN	–	–
GAMMA	105'	270°	C1	LPA–80063/6CF_5	–	RMN	RF4439D–25A	RMN
			C2	NHHSS–65BR2BT2 NHH–65B–R2B	LTE AWS, LTE CRBS LRE700, 5G850, LTE850, LTE1900	RMN RMN	RF4440D–13A	RMN
			C3	–	–	–	–	–
			C4	MT6407–77A	5G L–SUB6	RMN	RT4401–48A	RMN
			C5	LPA–80063/6CF_5	–	RMN	–	–

EXISTING FIBER DISTRIBUTION / OVP BOX		EXISTING CABLING SUMMARY	
MODEL NUMBER	STATUS	CABLE QTY, SIZE, TYPE	STATUS
(2) RRFDC–3315–PF–48 (6 OVP)	RMN	(6) 1–5/8" COAX, AND (2) 1–5/8" 6X12 HYBRIFLEX	RMN
–	–	----	-

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY	
MODEL NUMBER	STATUS	CABLE QTY, SIZE, TYPE	STATUS
(2) RRFDC–3315–PF–48 (6 OVP)	RMN	(6) 1–5/8" COAX, AND (2) 1–5/8" 6X12 HYBRIFLEX	RMN
-	ADD	----	ADD

3 EQUIPMENT SCHEDULES

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

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	HED	09/04/25
1	UPDATED MA	HED	10/21/25

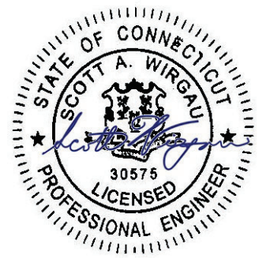
ATC SITE NUMBER:
411187

ATC SITE NAME:
HARTFORD NORTH 2 CT

VERIZON SITE NAME:
BLOOMFIELD BLUE HILLS CT

SITE ADDRESS:
811 BLUE HILLS AVENUE
BLOOMFIELD, CT 06002

SEAL:



Digitally Signed: 2025-10-22

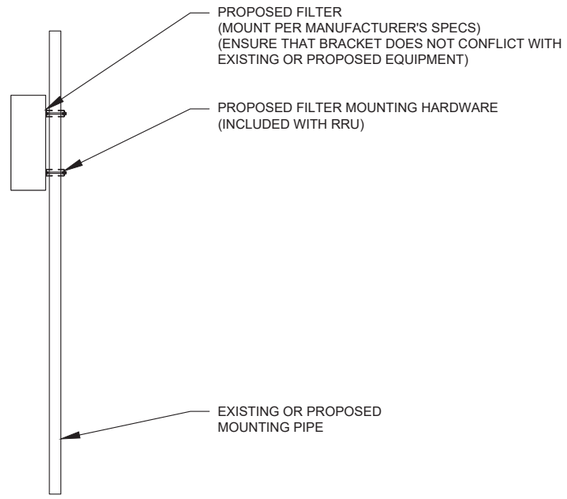
verizon

ATC JOB NO:	15315106_G0
CUSTOMER ID:	BLOOMFIELD BLUE HILLS CT
CUSTOMER #:	5000103428

ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	1

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



1 PROPOSED FILTER MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.

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CARY, NC 27511
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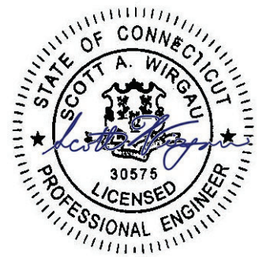

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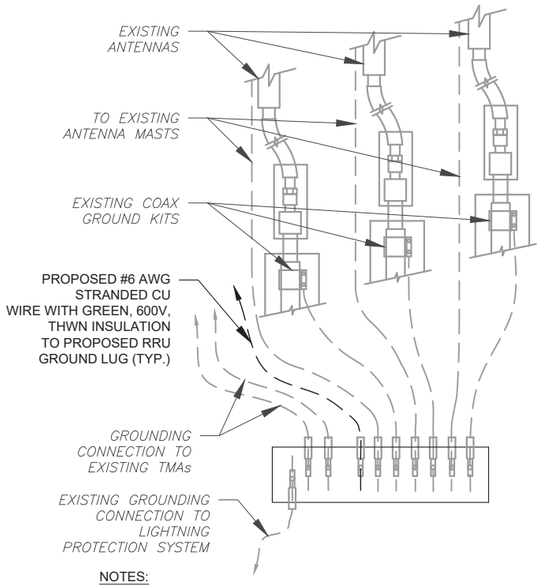
verizon

ATC JOB NO:	15315106_G0
CUSTOMER ID:	BLOOMFIELD BLUE HILLS CT
CUSTOMER #:	5000103428

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	0

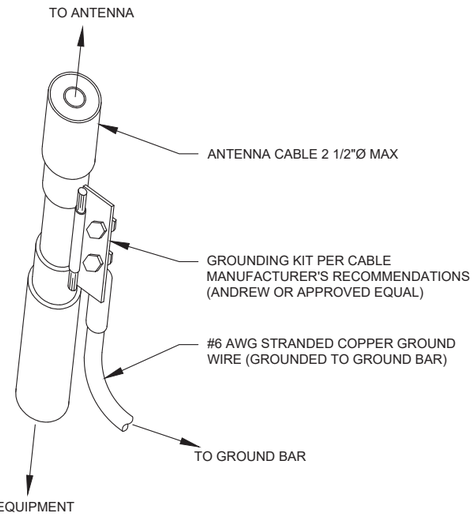


NOTES:

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

1 TYPICAL ANTENNA GROUNDING DIAGRAM

SCALE: N.T.S.

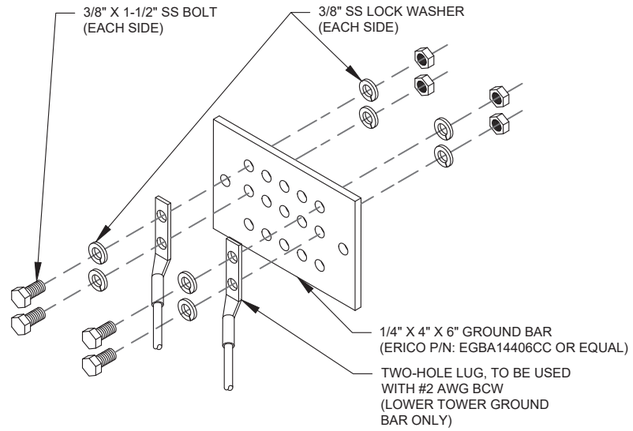


GROUND KIT NOTES:

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

2 CABLE GROUND KIT CONNECTION DETAIL

SCALE: N.T.S.



GROUND BAR NOTES:

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

3 TOWER GROUND BAR DETAIL

SCALE: N.T.S.

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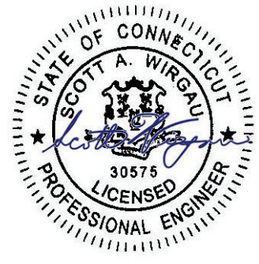

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verizon

ATC JOB NO:	15315106_G0
CUSTOMER ID:	BLOOMFIELD BLUE HILLS CT
CUSTOMER #:	5000103428

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	0

Colliers Engineering & Design,
Architecture, Landscape Architecture,
Surveying, CT P.C.
2000 Midlantic Drive, Suite 100
Mt. Laurel, NJ 08054
856.797.0412
sean.osullivan@collierseng.com

Post-Modification Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10322905
Colliers Engineering & Design Project #: 25777186

September 24, 2025

Site Information

Site ID:	*5000103428-VZW / BLOOMFIELD BLUE HILLS CT*
Site Name:	*BLOOMFIELD BLUE HILLS CT*
Carrier Name:	*Verizon Wireless*
Address:	*811 Blue Hills Ave* *Bloomfield, Connecticut 06002* *Hartford County*
Latitude:	*41.80968333°*
Longitude:	*-72.69659722°*

Structure Information

Tower Type:	*110-Ft Monopole*
Mount Type:	*12.00-Ft T-Arm*

FUZE ID # 17390723

Analysis Results

T-Arm: **77.0% 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: Chris Lemkan

Digitally signed by Grant Walters
Date: 2025.09.24 11:17:36-05'00'

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. Analysis Calculations
6. Mount-Tower Interaction

1 MOUNT ANALYSIS

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

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-601	1

verizon

MOUNT MODIFICATION DRAWINGS
EXISTING 12.00' T-ARM

TOWER OWNER: AMERICAN TOWER CORPORATION
TOWER OWNER SITE NUMBER: 411187

CARRIER SITE NAME: BLOOMFIELD BLUE HILLS CT
CARRIER SITE NUMBER: 5000103428
FUZE ID: 17390723

811 BLUE HILLS AVE
BLOOMFIELD, CONNECTICUT 06002
HARTFORD COUNTY

LATITUDE: 41.80968333° N
LONGITUDE: 72.69659722° W

DESIGN CRITERIA

WIND LOADS

BASIC WIND SPEED (3 SECOND GUST), V = 120 MPH
EXPOSURE CATEGORY: C
TOPOGRAPHIC CATEGORY: 1
TOPOGRAPHIC CONSIDERED: N/A
TOPOGRAPHIC METHOD: N/A
MEAN BASE ELEVATION (AMSL) = 154.2'

ICE LOADS

ICE WIND SPEED (3 SECOND GUST), V = 50 MPH
ICE THICKNESS = 1.50 IN

SEISMIC LOADS

SEISMIC DESIGN CATEGORY: B
SHORT TERM MCER GROUND MOTION, S_s = .182
LONG TERM MCER GROUND MOTION, S_1 = .055

PROJECT INFORMATION

APPLICANT/LESSEE

COMPANY: VERIZON WIRELESS

CLIENT REPRESENTATIVE

COMPANY: VERIZON WIRELESS

PROJECT MANAGER

COMPANY: COLLIERS ENGINEERING & DESIGN
CONTACT: SEAN O'SULLIVAN
PHONE: 856.797.0413
E-MAIL: SEAN.OSULLIVAN@COLLIERSENG.COM

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION: HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #: 10322905
VZW MDG #: 5000103428
ANALYSIS DATE: 9/24/2025

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

SHEET INDEX

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VERIZON WIRELESS

MOUNT MODIFICATION

BLOOMFIELD BLUE HILLS CT
5000103428
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HARTFORD COUNTY

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MT. LAUREL
2000 Midlantic Drive, Suite 100
Mt. Laurel Township, NJ 08054
Phone: 856.797.0412
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING (S, A).

SCALE	DRAWN BY
AS SHOWN	CFL
DESIGNED BY	REVIEWED BY
CFL	GHW
DATE ISSUED	PROJECT NUMBER
09/24/25	25777186

SHEET NAME:

TITLE SHEET

DRAWING NUMBER:

ST-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS)
1	VZWSMART	VZWSMART-PLK7	MONOPOLE COLLAR MOUNT ASSEMBLY		150	150
3		VZWSMART-PLK6	V-BRACING KIT FOR MONOPOLE		109	327
3		VZWSMART-AL333	CLIP ANGLE		3	9

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS)
-	-	U-BOLTS	5/8" DIA. GR. A36 U-BOLTS	GALVANIZED. U-BOLT QUANTITY AND INNER WIDTH ARE TO BE VERIFIED BY CONTRACTOR.	-	-

SECTION 3 - REQUIRED SAFETY CLIMB PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
					TOTAL:	486

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 PARTS ARE GALVANIZED UNLESS NOTED OTHERWISE
3. ALL MATERIALS REQUIRED FOR THE DESIGNED MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.

VZWSMART KITS - APPROVED VENDORS

COMMSCOPE	
CONTACT	SALVADOR ANGUIANO
PHONE	(817) 204-7492
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) 438-6937
EMAIL	AKWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRESTESOLUTIONS.COM

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

Colliers Engineering & Design
www.collieresngineering.com

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SCALE: AS SHOWN | DRAWN BY: CFL
DESIGNED BY: CFL | REVIEWED BY: GHW
DATE ISSUED: 09/24/25 | PROJECT NUMBER: 25777186
SHEET NAME:

BILL OF MATERIALS

DRAWING NUMBER:

SBOM-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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 DAILY 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 SIZES 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

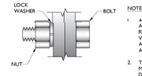
3. ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND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

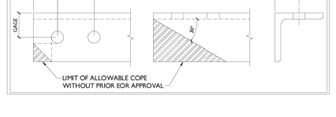


TYP. BOLT ASSEMBLY

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 DIRECTED IN THE DRAWINGS
4. MATCH EXISTING GAGES WHEN APPLICABLE, UNLESS MINIMUM EDGE DISTANCES ARE COMPROMISED.

ALLOWABLE COPING



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VERIZON WIRELESS

MOUNT MODIFICATION

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5000103428
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Phone: 856.797.0412
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING (S, A).

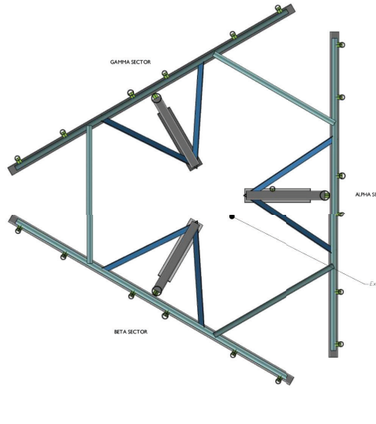
SCALE: AS SHOWN | DRAWN BY: CFL
DESIGNED BY: CFL | REVIEWED BY: GHW
DATE ISSUED: 09/24/25 | PROJECT NUMBER: 25777186
SHEET NAME:

GENERAL NOTES

DRAWING NUMBER:

SGN-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



NOTE:

A DESKTOP MAPPING WAS COMPLETED AND THERE IS INSUFFICIENT INFORMATION ON THE CLIMBING FACILITY

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

STRUCTURAL NOTES:

1. CONTRACTOR TO INSPECT CLIMBING FACILITIES AT SITE AND ENSURE THAT THE SAFETY CLIMB IS IN GOOD CONDITION AND THAT THE WIRE ROPE DOES NOT OR WILL NOT INTERFERE WITH THE EXISTING OR PROPOSED MOUNT CONNECTIONS. CONTRACTOR SHALL INSTALL SAFETY CLIMB WIRE ROPE GUIDED AROUND MOUNT CONNECTIONS AS NEEDED.
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: AS SHOWN | DRAWN BY: CFL
DESIGNED BY: CFL | REVIEWED BY: GHW
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CLIMBING FACILITY DETAIL

DRAWING NUMBER:

SCF-1

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SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-602	1

LEGEND:

- PROPOSED
- RELOCATED
- EXISTING

TOTAL VERTICAL ENVELOPE:

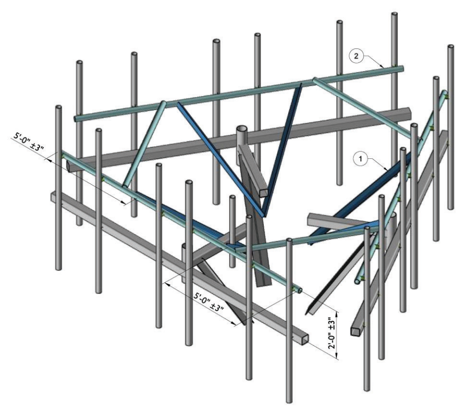
CONTRACTOR SHALL VERIFY AND CONFIRM IN FIELD THAT VERIZON'S OVERALL TIP TO TIP VERTICAL SPACE CONFIGURATION (EQUIPMENT AND STEEL COMBINED) DOES NOT EXCEED THE VERTICAL ENVELOPE LISTED IN THESE DRAWINGS. IF THE SITE'S EXISTING OR PROPOSED CONFIGURATION EXCEEDS THE ALLOWED VERTICAL ENVELOPE LISTED IN THESE DRAWINGS, CONTRACTOR SHALL CONTACT EOR IMMEDIATELY FOR A SOLUTION ON HOW TO CORRECT THE ISSUE PRIOR TO LEAVING THE SITE.

MOUNT MODIFICATION SCHEDULE

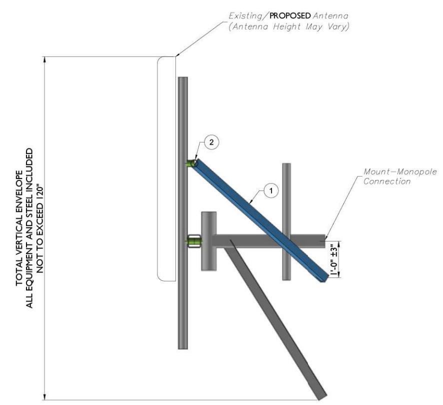
NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	100'-00"	3	PROPOSED V-BRACING KIT FOR MONOPOLE (PART #: VZWSMART-PLK6)	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1. CONTRACTOR SHALL INSTALL ONE PROPOSED CLIP ANGLE (PART #:VZWSMART-AL333) AT EITHER END OF EACH LONG ANGLE IN THE PLK6 KIT. CONNECT OTHER END OF V-BRACING KIT TO MONOPOLE COLLAR MOUNT ASSEMBLY (PART #: VZWSMART-PLK7). SEE GENERAL NOTE B.
2		1	RELOCATED SUPPORT RAIL HARDWARE	CONTRACTOR TO SHIFT EXISTING SUPPORT RAIL AND BRACING PIPES DOWNWARD. RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHEIVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE. RECONNECT SHIFTED HARDWARE TO ALL EXISTING MOUNT PIPES WITH EXISTING CONNECTION HARDWARE AND NEW BOLTS. DO NOT REJSE EXISTING BOLTS. RESTORE ANY DEGRADATION IN GALVANIZATION DUE TO RELOCATED HARDWARE WITH TWO (2) COATS OF ZINGA OR ZINC KOTE.

GENERAL NOTES:

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



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



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

Colliers Engineering & Design

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VERIZON WIRELESS

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SCALE: AS SHOWN
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SHEET NAME: MODIFICATION DETAILS
DRAWING NUMBER: SS-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

MOUNT PHOTO 1

MOUNT PHOTO 2

MOUNT PHOTO 3

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REVIEWED BY: GHW
DATE ISSUED: 09/24/25
PROJECT NUMBER: 25777186
SHEET NAME: MOUNT PHOTOS
DRAWING NUMBER: SS-2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

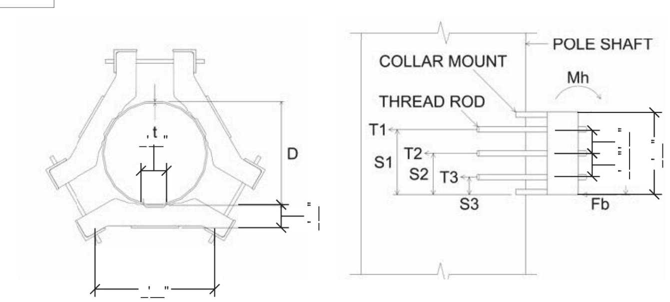
EXISTING MEMBERS

NO.	DESCRIPTION	SHAPE	LENGTH	NOTES
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

LIST ALL SHAPES:
ANGLE (LEG1xLEG2xTH.): EX. L2x2x1/4
CHANNEL (DEPTHxFLANGE WIDTH): EX. CH6"x1-7/8"
PIPE (ODxTH.): EX. PIPE 2.4"x0.12"
PLATE (TH.xDEPTH): EX. PLATE 1/2"x2"

NOTE:

CONTRACTOR SHALL RECORD ALL DIMENSIONS AND MEMBER SIZES SHOWN IN THIS SKETCH. DOCUMENT VIA PHOTOS AND SKETCHES AND PROVIDE TO THE EOR FOR EVALUATION.



1 MOUNT TO TOWER COLLAR DETAIL
SCALE: N.T.S.

Colliers Engineering & Design

verizon

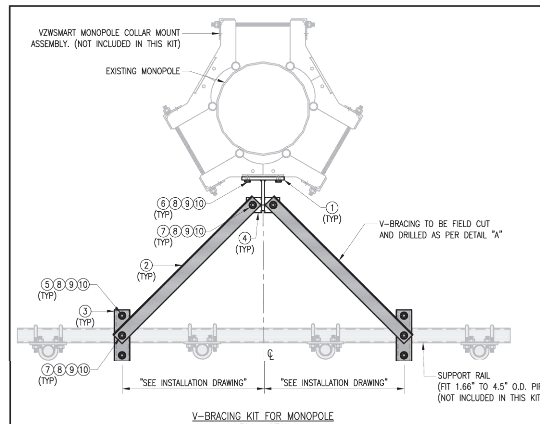
VERIZON WIRELESS

MOUNT MODIFICATION

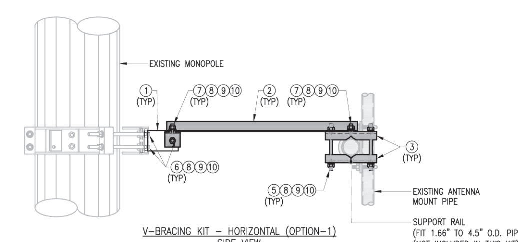
BLOOMFIELD BLUE HILLS CT
5000103428
811 BLUE HILLS AVE
BLOOMFIELD, CONNECTICUT 06002
HARTFORD COUNTY

SCALE: AS SHOWN
DRAWN BY: CFL
DESIGNED BY: CFL
REVIEWED BY: GHW
DATE ISSUED: 09/24/25
PROJECT NUMBER: 25777186
SHEET NAME: GEOMETRY VERIFICATION SKETCHES
DRAWING NUMBER: SS-3

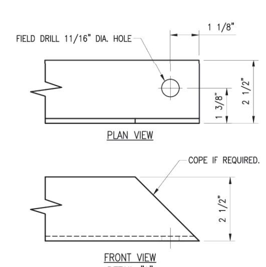
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



V-BRACING KIT FOR MONOPOLE
PLAN VIEW

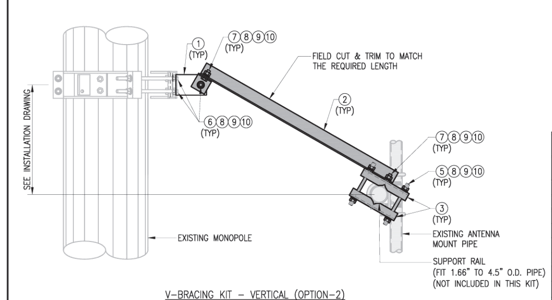


V-BRACING KIT - HORIZONTAL (OPTION-1)
SIDE VIEW



PLAN VIEW

FRONT VIEW
DETAIL "A"



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

VZWSMART-PLK6 (V-BRACING KIT FOR MONOPOLE)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	BRKW-6A	WELDMENT BRACKET	PLK6-F1	16
2	2	L252525-8	L 2 1/2" X 2 1/2" X 1/4" X 8'-0" A36	PLK6-F2	67
3	4	BP6875-10	PL 3/8" X 6 7/8" X 10" A36 BENT PLATE	PLK6-F2	20
4	2	AL-333	L 3" X 3" X 1/4" X 3" A36	PLK6-F2	3
5	4	---	THREADED ROD 5/8" DIA. X 10" F1554-36 HDG	---	--
6	5	---	BOLT 5/8" X 2 1/4" A325	---	--
7	4	---	BOLT 5/8" X 1 3/4" A325	---	--
8	17	FW-625	5/8" HDG USS FLAT WASHER	---	2
9	17	LW-625	5/8" HDG LOCK WASHER	---	0
10	17	NUT-625	5/8" HDG HEX NUT	---	2
				GALVANIZED WT	109

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

VzW SMART Tool© Vendor

verizon

FOR REFERENCE ONLY

SHEET TITLE: VZWSMART-PLK6 V-BRACING KIT FOR MONOPOLE

SHEET NUMBER: VZWSMART-PLK6 REV # 0

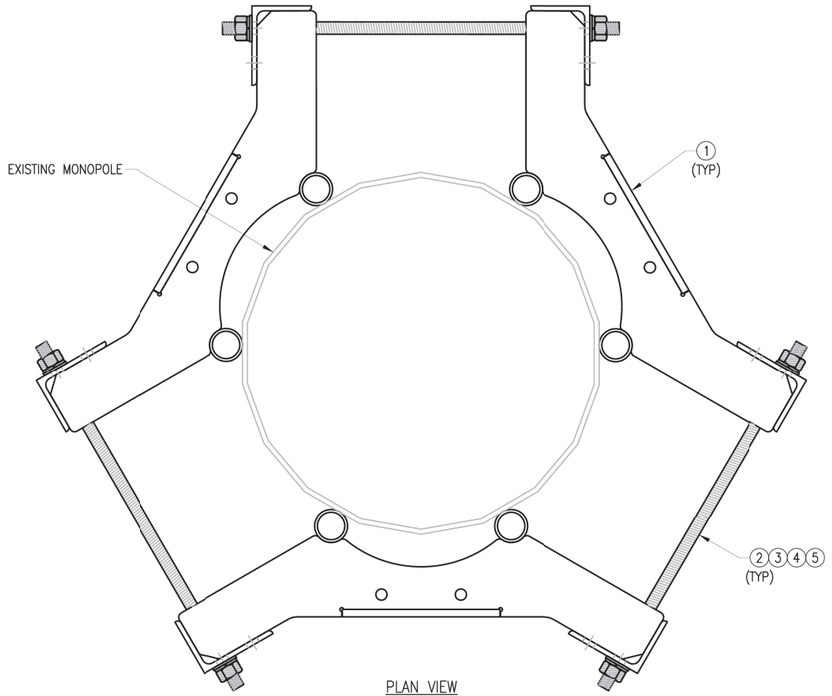
1 MOUNT MODIFICATIONS

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

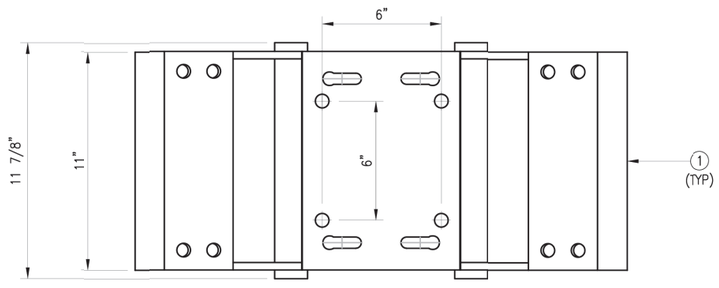
SUPPLEMENTAL

SHEET NUMBER: R-603

REVISION: 1



PLAN VIEW
MONOPOLE COLLAR MOUNT ASSEMBLY



FRONT VIEW

NOTES:
1. FIT 12" TO 45" DIA MONOPOLE.
2. HOT-DIPPED GALVANIZED PER ASTM A123.

VZWSMART-PLK7 (MONOPOLE COLLAR MOUNT ASSEMBLY)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	3	CM-1245	COLLAR MOUNT ASSEMBLY	PLK7-F1	147
2	6	---	THREADED ROD 5/8" X 4'-0" A193-B7	---	
3	12	FW-625	5/8" HDG USS FLAT WASHER	---	1
4	12	LW-625	5/8" HDG LOCK WASHER	---	0
5	12	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	150

VzW
SMART Tool©
Vendor

verizon

FOR REFERENCE ONLY

DRAWN BY: BT | CHECKED BY: HMA/KW

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	05/11/20

SHEET TITLE:
VZWSMART-PLK7
MONOPOLE COLLAR
MOUNT ASSEMBLY

SHEET NUMBER: VZWSMART-PLK7 | REV #: 0

1 MOUNT ANALYSIS

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

SUPPLEMENTAL

SHEET NUMBER: R-604 | REVISION: 1

Exhibit D

Structural Analysis

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	109 ft Monopole
ATC Asset Name	:	Hartford North 2 CT
ATC Asset Number	:	411187
Engineering Number	:	15315106_C3_01
Proposed Carrier	:	VERIZON WIRELESS
Carrier Site Name	:	BLOOMFIELD BLUE HILLS CT
Carrier Site Number	:	5000103428
Site Location	:	811 Blue Hills Avenue Bloomfield, CT 06002-3612 41.8097° N, 72.6966° W
County	:	Hartford
Date	:	June 18, 2025
Max Usage	:	34%
Analysis Result	:	Pass

Created By:

Samuel Hernandez
Structural Engineer I

STATE OF CONNECTICUT
ESHA KAUSHAL MODI
32593
LICENSED
PROFESSIONAL ENGINEER

Esha Modi

Digitally signed by Esha Modi
Date: 2025.06.19 22:33:00 -04'00'

COA: PEC.0001553

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 109 ft Monopole tower to reflect the change in loading by VERIZON WIRELESS.

Supporting Documents

Tower:	EEI Drawing #GS56960, dated November 19, 2007
Foundation:	EEI Drawing #15165D-118.0, dated November 19, 2007
Geotechnical:	Clarence Welti Assoc Tower #411187, dated October 16, 2007

Analysis

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

Basic Wind Speed:	115 mph (3-second gust)
Basic Wind Speed w/ Ice:	48 mph (3-second gust) w/ 1.20" radial ice concurrent
Code(s):	ANSI/TIA-222-I / 2021 IBC / 2022 Connecticut State Building Code
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 1
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	S_{DS} = 0.17, S_{D1} = 0.07
Site Class:	Default

Conclusion

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

If you have any questions or require additional information, please reach out to your American Tower contact. If you do not have an American Tower contact and have an Engineering question, please contact **Engineering@americantower.com** Please include the American Tower asset name, asset number, and engineering number in the subject line for any questions.

Structure Usages

Structural Component	Usage	Control	Result
Pole Shaft	34.5%	1.2D + 1.0W	Pass
Serviceability Usage	15.4%	1.0D + 1.0W	Pass
Base Plate @ 0.0 ft	18.0%	Rods	Pass
Pier	21.3%	Flexure [Steel]	Pass

Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Shear (k)
Monopole Base	971.6	22.2	12.3

Reactions shown reflect the results from the Load Case with maximum Moment excluding Overstrength Load Cases

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

VERIZON WIRELESS Final Loading

Elev (ft)	Qty	Equipment	Lines
107.0	3	Light Sector Frame	-
	3	Mount Reinforcement	
106.0	2	Raycap RRFDC-3315-PF-48 (32lbs)	(2) 1 5/8" Hybriflex
105.0	2	Kaelus BSF0020F3V1-1	(6) 1 5/8" Coax
	3	Commscope NHH-65B-R2B	
	3	Commscope NHHSS-65B-R2BT2	
	3	Samsung MT6407-77A	
	3	Samsung RF4439d-25A	
	3	Samsung RF4440d-13A	
	3	Samsung RT4401-48A	
	6	Antel LPA-80063/6CF_5	
102.0	1	Unused Reserve (13914.45 sqin)	-

Install proposed lines inside the pole shaft.

Other Existing/Reserved Loading

No loading was considered in addition to the VERIZON WIRELESS Final Loading.

Standard Conditions

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

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

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

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

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

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

ASSET:	Hartford North 2 CT, 411187	CODE:	ANSI/TIA-222-I
CUSTOMER:	VERIZON WIRELESS	PROJECT:	15315106

ANALYSIS PARAMETERS

Design Wind:	115 mph	**Ice Wind:**	48 mph w/ 1.2" ice	**Service Wind:**	60 mph
Risk Category:	II	**Exposure:**	B	**S_{D1}:** 0.068	**S_{DS}:** 0.170
Topo Factor:	Method 1	**Topo Feature:**	**Flat**		
Structure Height:	108.71000000000001 ft	**Base Elevation:**	0.00 ft	**Structure Type:**	Taper
Base Diameter:	51.00 in	**Base Rotation:**	0.00°	**Taper:**	0.3220 (in/ft)

POLE SECTION PROPERTIES

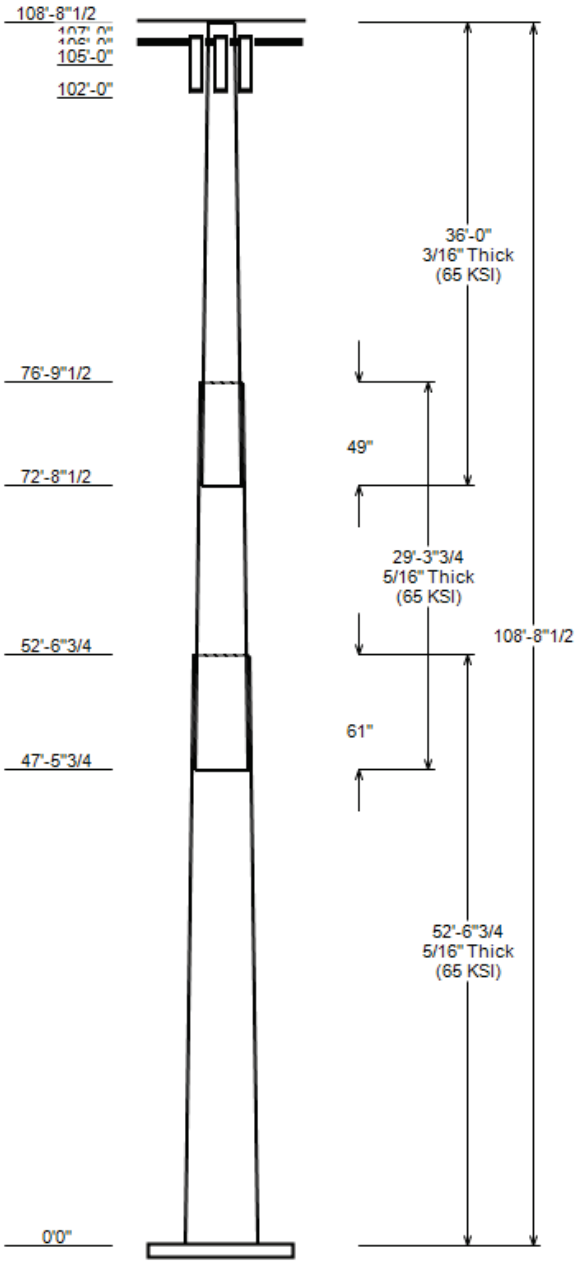
Section	Length (ft)	Flat Diameter (in) Top	Flat Diameter (in) Bottom	Thick (in)	Joint Type	Joint Length (in)	Pole Shape	Yield Strength (ksi)
1	52.563	34.08	51.00	0.312		0.00	18 Sides	65
2	29.313	26.90	36.34	0.312	Slip Joint	61.00	18 Sides	65
3	36.002	17.00	28.59	0.188	Slip Joint	49.00	18 Sides	65

DISCRETE APPURTENANCE

Elev (ft)	Description
107.0	(3) Generic Flat Light Sector Frame
107.0	(3) Generic Mount Reinforcement
106.0	(2) Raycap RRFDC-3315-PF-48 (32lbs)
105.0	(3) Samsung MT6407-77A
105.0	(3) Commscope NHH-65B-R2B
105.0	(3) Samsung RT4401-48A
105.0	(2) Kaelus BSF0020F3V1-1
105.0	(3) Samsung RF4440d-13A
105.0	(3) Commscope NHHSS-65B-R2BT2
105.0	(6) Antel LPA-80063/6CF_5
105.0	(3) Samsung RF4439d-25A
102.0	(1) Unused Reserve (13914.45 sqin)

LINEAR APPURTENANCE

Elev To (ft)	Description
106.0	(2) 1 5/8" Hybriflex
105.0	(6) 1 5/8" Coax



GLOBAL BASE REACTIONS

Load Case	Moment (kip-ft)	Axial (kip)	Shear (kip)
1.2D + 1.0W	971.55	22.23	12.30
0.9D + 1.0W	966.43	16.67	12.30
1.2D + 1.0Di + 1.0Wi	267.20	33.18	3.44
1.2D + 1.0Ev + 1.0Eh	52.41	21.78	0.58
0.9D - 1.0Ev + 1.0Eh	52.08	15.28	0.58
1.0D + 1.0W	235.78	18.53	2.99

Model ID: 118525.0 Scenario ID: 381024.0 6/18/2025 12:04:02

ANALYSIS PARAMETERS

Location:	Hartford County,CT	**Height:**	108.71 ft
Type and Shape:	Taper, 18 Sides	**Base Diameter:**	51.00 in
Manufacturer:	EEI	**Top Diameter:**	17.00 in
K_d (non-service):	0.95	**Taper:**	0.3220 in/ft
K_e:	0.99	**Rotation:**	0.000°

ICE & WIND PARAMETERS

Risk Category:	II	**Design Wind Speed:**	115 mph
Exposure Category:	B	**Design Wind Speed w/ Ice:**	48 mph
Design Ice Thickness:	1.20 in		
Topo Factor Procedure:	Method 1		
Crest Height(H):	0 ft	**Service Wind Speed:**	60 mph
Crest Length(L):	0 ft	**HMSL:**	153.00 ft
Feature:	Flat	**Distance from Apex (x):**	0 ft
		Upwind/Downwind:	

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	Default		**Period Based on Rayleigh Method (sec):**		1.44
T_L (sec):	6	**P:**	1	**C_s:**	0.031
S_{ds}:	0.170	**S_{d1}:**	0.068	**C_s Max:**	0.031
				C_s Min:	0.030

LOAD CASES

1.2D + 1.0W	115 mph Wind with No Ice
0.9D + 1.0W	115 mph Wind with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	48 mph Wind with 1.2" Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	60 mph Wind with No Ice
1.2D + 1.0Ev + 1.5Eh	Seismic Overstrength
0.9D - 1.0Ev + 1.5Eh	Seismic Overstrength (Reduced DL)

SHAFT SECTION PROPERTIES

Section	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (in^2)	Bottom Ix (in^4)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (in^2)	Top Ix (in^4)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-18	52.56	0.3125	65		0.00	7,491	51.00	-0.003	50.27	16,319.1	27.37	163.20	34.08	52.56	33.49	4,823.6	17.82	109.05	0.3220
2-18	29.31	0.3125	65	Slip	61.00	3,097	36.34	47.477	35.73	5,859.3	19.09	116.28	26.90	76.79	26.37	2,355.5	13.77	86.08	0.3220
3-18	36.00	0.1875	65	Slip	49.00	1,648	28.59	72.708	16.90	1,722.9	25.48	152.49	17.00	108.71	10.01	357.3	14.58	90.67	0.3220
			Total Shaft Weight			**12,236**													

DISCRETE APPURTENANCE PROPERTIES

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice Weight (lb)	No Ice EPAa (sf)	No Ice Orientation Factor	Ice Weight (lb)	Ice EPAa (sf)	Ice Orientation Factor
107.00	Generic Flat Light Sector Fram	3	0.75	0.000	800.00	17.900	0.67	1663.47	29.589	0.67
107.00	Generic Mount Reinforcement	3	0.75	0.000	200.00	4.980	0.67	349.92	8.831	0.67
106.00	Raycap RRFDC-3315-PF-48 (32lbs	2	0.80	0.000	32.00	2.798	0.67	102.03	3.727	0.67
105.00	Samsung RF4439d-25A	3	0.80	0.000	74.70	2.500	0.50	136.44	3.309	0.50
105.00	Samsung MT6407-77A	3	0.80	0.000	81.60	4.709	0.61	160.33	5.882	0.61
105.00	Commscope NHH-65B-R2B	3	0.80	0.000	43.70	8.079	0.69	178.38	10.231	0.69
105.00	Samsung RT4401-48A	3	0.80	0.400	18.60	0.996	0.50	39.46	1.524	0.50
105.00	Kaelus BSF0020F3V1-1	2	0.80	0.000	15.40	1.097	0.50	35.12	1.635	0.50
105.00	Samsung RF4440d-13A	3	0.80	0.000	70.30	1.875	0.50	116.91	2.572	0.50
105.00	Antel LPA-80063/6CF_5	6	0.80	0.000	27.00	9.593	0.76	225.98	11.704	0.76
105.00	Commscope NHHSS-65B-R2BT2	3	0.80	0.000	50.90	8.079	0.69	185.14	10.240	0.69
102.00	Unused Reserve (13914.45 sqin)	1	0.80	0.000	1223.80	96.628	0.90	1880.75	148.499	0.90
Totals	**Row Count: 12**	**35**			**5,500.00**			**12,001.08**		

LINEAR APPURTENANCE PROPERTIES

Load Case Azimuth (deg): 0.00

Elev From (ft)	Elev To (ft)	Qty	Description	Diameter (in)	Weight (lb/ft)	Flat	Max/ Row	Distance Between Rows(in)	Distance Between Cols(in)	Azimuth (deg)	Distance From Face (in)	Exposed To Wind	Carrier
0.00	106.00	2	1 5/8" Hybriflex	1.98	1.3	N	0	0	0	0	0	N	VERIZON WIRELESS
0.00	105.00	6	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	VERIZON WIRELESS

SEGMENT PROPERTIES

Seg Top Elev (ft)	Description	(Max Length: 5 ft)	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in^3)	Z (in^3)	Weight (lb)
0.00			0.3125	51.000	50.274	16,319.10	27.37	163.20	69.2	630.2	0.0	0.0
5.00			0.3125	49.390	48.677	14,813.10	26.46	158.05	70.3	590.7	0.0	841.8
10.00			0.3125	47.780	47.081	13,402.80	25.55	152.90	71.4	552.5	0.0	814.6
15.00			0.3125	46.171	45.484	12,084.90	24.64	147.75	72.4	515.5	0.0	787.4
20.00			0.3125	44.561	43.887	10,856.40	23.73	142.59	73.5	479.9	0.0	760.3
25.00			0.3125	42.951	42.291	9,714.00	22.82	137.44	74.6	445.5	0.0	733.1
30.00			0.3125	41.341	40.694	8,654.80	21.92	132.29	75.6	412.3	0.0	705.9
35.00			0.3125	39.731	39.097	7,675.50	21.01	127.14	76.7	380.5	0.0	678.8
40.00			0.3125	38.122	37.501	6,773.00	20.10	121.99	77.8	349.9	0.0	651.6
45.00			0.3125	36.512	35.904	5,944.20	19.19	116.84	78.8	320.7	0.0	624.4
47.48	Bot - Section 2		0.3125	35.714	35.112	5,559.60	18.74	114.28	79.4	306.6	0.0	299.5
50.00			0.3125	34.902	34.307	5,185.90	18.28	111.69	79.9	292.7	0.0	600.8
52.56	Top - Section 1		0.3125	34.702	34.109	5,096.50	18.17	111.05	80	289.3	0.0	596.6
55.00			0.3125	33.917	33.330	4,755.50	17.73	108.54	80.6	276.2	0.0	279.7
60.00			0.3125	32.307	31.734	4,104.30	16.82	103.38	81.6	250.2	0.0	553.5
65.00			0.3125	30.698	30.137	3,515.40	15.91	98.23	82.6	225.6	0.0	526.3
70.00			0.3125	29.088	28.540	2,985.80	15.00	93.08	82.6	202.2	0.0	499.2
72.71	Bot - Section 3		0.3125	28.216	27.676	2,722.50	14.51	90.29	82.6	190.0	0.0	259.0
75.00			0.3125	27.478	26.944	2,512.20	14.09	87.93	82.6	180.1	0.0	343.1
76.79	Top - Section 2		0.1875	27.276	16.121	1,494.50	24.24	145.47	72.9	107.9	0.0	261.9
80.00			0.1875	26.243	15.506	1,330.00	23.27	139.96	74	99.8	0.0	172.6
85.00			0.1875	24.633	14.548	1,098.40	21.75	131.38	75.8	87.8	0.0	255.7
90.00			0.1875	23.024	13.590	895.40	20.24	122.79	77.6	76.6	0.0	239.4
95.00			0.1875	21.414	12.632	719.10	18.73	114.21	79.4	66.1	0.0	223.1
100.00			0.1875	19.804	11.674	567.60	17.21	105.62	81.2	56.4	0.0	206.8
102.00			0.1875	19.160	11.291	513.50	16.61	102.19	81.9	52.8	0.0	78.1
105.00			0.1875	18.194	10.716	439.00	15.70	97.04	82.6	47.5	0.0	112.3
106.00			0.1875	17.872	10.524	415.90	15.40	95.32	82.6	45.8	0.0	36.1
107.00			0.1875	17.550	10.333	393.60	15.09	93.60	82.6	44.2	0.0	35.5
108.71			0.1875	17.000	10.005	357.30	14.58	90.67	82.6	41.4	0.0	59.2
											Total:	**12,236.3**

CALCULATED FORCES

Load Case: 1.2D + 1.0W — 115 mph Wind with No Ice — 20 Iterations

Gust Response Factor: 1.10
Dead load Factor: 1.20
Wind Load Factor: 1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-22.23	-12.30	0.00	-971.6	0.00	971.55	3,131.67	882.31	4,039.19	3,271.61	0	0	0.304
5.00	-21.15	-11.95	0.00	-910.0	0.00	910.05	3,079.01	854.28	3,786.72	3,113.81	0.04	-0.08	0.299
10.00	-20.11	-11.62	0.00	-850.3	0.00	850.28	3,023.29	826.26	3,542.40	2,956.53	0.18	-0.17	0.294
15.00	-19.11	-11.29	0.00	-792.2	0.00	792.19	2,964.49	798.24	3,306.23	2,800.08	0.4	-0.25	0.290
20.00	-18.13	-10.98	0.00	-735.7	0.00	735.72	2,902.62	770.22	3,078.20	2,644.75	0.71	-0.34	0.285
25.00	-17.19	-10.67	0.00	-680.8	0.00	680.83	2,837.68	742.20	2,858.33	2,490.85	1.12	-0.44	0.280
30.00	-16.29	-10.38	0.00	-627.5	0.00	627.47	2,769.67	714.18	2,646.59	2,338.70	1.63	-0.53	0.274
35.00	-15.41	-10.09	0.00	-575.6	0.00	575.58	2,698.59	686.16	2,443.01	2,188.60	2.24	-0.63	0.269
40.00	-14.57	-9.80	0.00	-525.1	0.00	525.14	2,624.45	658.13	2,247.57	2,040.86	2.96	-0.73	0.263
45.00	-13.77	-9.58	0.00	-476.2	0.00	476.16	2,547.23	630.11	2,060.28	1,895.78	3.78	-0.84	0.257
47.48	-13.38	-9.43	0.00	-452.4	0.00	452.43	2,507.80	616.22	1,970.43	1,824.93	4.23	-0.89	0.253
50.00	-12.63	-9.28	0.00	-428.7	0.00	428.66	2,466.93	602.09	1,881.13	1,753.68	4.72	-0.95	0.250
52.56	-11.88	-9.12	0.00	-404.9	0.00	404.89	2,456.74	598.61	1,859.44	1,736.24	5.25	-1.01	0.238
55.00	-11.52	-8.91	0.00	-382.6	0.00	382.65	2,416.30	584.95	1,775.55	1,668.34	5.78	-1.07	0.234
60.00	-10.80	-8.63	0.00	-338.1	0.00	338.08	2,331.06	556.93	1,609.54	1,531.68	6.95	-1.17	0.226
65.00	-10.11	-8.35	0.00	-294.9	0.00	294.93	2,239.04	528.91	1,451.67	1,396.47	8.24	-1.28	0.216
70.00	-9.46	-8.14	0.00	-253.2	0.00	253.17	2,120.41	500.89	1,301.95	1,251.71	9.64	-1.39	0.207
72.71	-9.12	-8.01	0.00	-231.1	0.00	231.13	2,056.16	485.71	1,224.25	1,176.60	10.45	-1.46	0.201
75.00	-8.68	-7.89	0.00	-212.8	0.00	212.78	2,001.79	472.86	1,160.37	1,114.86	11.16	-1.51	0.195
76.79	-8.35	-7.76	0.00	-198.6	0.00	198.64	1,057.52	282.92	692.20	589.98	11.74	-1.55	0.345

CALCULATED FORCES

80.00	-8.10	-7.56	0.00	-173.7	0.00	173.74	1,033.14	272.13	640.42	554.25	12.81	-1.62	0.322
85.00	-7.74	-7.33	0.00	-135.9	0.00	135.92	992.62	255.31	563.74	499.37	14.6	-1.79	0.281
90.00	-7.39	-7.11	0.00	-99.3	0.00	99.26	949.04	238.50	491.94	445.77	16.56	-1.94	0.231
95.00	-7.08	-6.89	0.00	-63.7	0.00	63.72	902.38	221.69	425.04	393.73	18.66	-2.07	0.171
100.00	-6.78	-6.74	0.00	-29.2	0.00	29.25	852.65	204.88	363.02	343.57	20.89	-2.16	0.094
102.00	-5.29	-4.25	0.00	-15.8	0.00	15.76	831.90	198.15	339.58	324.10	21.8	-2.19	0.055
105.00	-3.78	-1.54	0.00	-3.0	0.00	2.99	796.13	188.06	305.89	294.22	23.18	-2.2	0.015
106.00	-3.66	-1.40	0.00	-1.4	0.00	1.45	781.90	184.70	295.05	283.74	23.64	-2.2	0.010
107.00	-0.07	-0.03	0.00	-0.1	0.00	0.06	767.66	181.34	284.41	273.45	24.1	-2.2	0.000
108.71	0.00	-0.03	0.00	0.0	0.00	0.00	743.32	175.59	266.66	256.29	24.89	-2.2	0.000

CALCULATED FORCES

Load Case: 0.9D + 1.0W — 115 mph Wind with No Ice (Reduced DL) — 20 Iterations

Gust Response Factor: 1.10
Dead load Factor: 0.90
Wind Load Factor: 1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-16.67	-12.30	0.00	-966.4	0.00	966.43	3,131.67	882.31	4,039.19	3,271.61	0	0	0.301
5.00	-15.86	-11.94	0.00	-905.0	0.00	904.95	3,079.01	854.28	3,786.72	3,113.81	0.04	-0.08	0.296
10.00	-15.07	-11.60	0.00	-845.2	0.00	845.24	3,023.29	826.26	3,542.40	2,956.53	0.18	-0.17	0.291
15.00	-14.32	-11.27	0.00	-787.2	0.00	787.24	2,964.49	798.24	3,306.23	2,800.08	0.4	-0.25	0.286
20.00	-13.58	-10.95	0.00	-730.9	0.00	730.90	2,902.62	770.22	3,078.20	2,644.75	0.71	-0.34	0.281
25.00	-12.87	-10.64	0.00	-676.2	0.00	676.17	2,837.68	742.20	2,858.33	2,490.85	1.12	-0.43	0.276
30.00	-12.19	-10.34	0.00	-623.0	0.00	622.99	2,769.67	714.18	2,646.59	2,338.70	1.62	-0.53	0.271
35.00	-11.53	-10.04	0.00	-571.3	0.00	571.31	2,698.59	686.16	2,443.01	2,188.60	2.23	-0.63	0.266
40.00	-10.90	-9.74	0.00	-521.1	0.00	521.11	2,624.45	658.13	2,247.57	2,040.86	2.94	-0.73	0.260
45.00	-10.29	-9.52	0.00	-472.4	0.00	472.39	2,547.23	630.11	2,060.28	1,895.78	3.76	-0.83	0.253
47.48	-10.00	-9.37	0.00	-448.8	0.00	448.78	2,507.80	616.22	1,970.43	1,824.93	4.21	-0.89	0.250
50.00	-9.43	-9.22	0.00	-425.2	0.00	425.15	2,466.93	602.09	1,881.13	1,753.68	4.69	-0.94	0.246
52.56	-8.87	-9.07	0.00	-401.5	0.00	401.53	2,456.74	598.61	1,859.44	1,736.24	5.21	-1	0.235
55.00	-8.60	-8.86	0.00	-379.4	0.00	379.42	2,416.30	584.95	1,775.55	1,668.34	5.74	-1.06	0.231
60.00	-8.05	-8.57	0.00	-335.2	0.00	335.15	2,331.06	556.93	1,609.54	1,531.68	6.91	-1.16	0.223
65.00	-7.54	-8.29	0.00	-292.3	0.00	292.30	2,239.04	528.91	1,451.67	1,396.47	8.18	-1.27	0.213
70.00	-7.05	-8.08	0.00	-250.8	0.00	250.85	2,120.41	500.89	1,301.95	1,251.71	9.58	-1.38	0.204
72.71	-6.79	-7.94	0.00	-229.0	0.00	228.97	2,056.16	485.71	1,224.25	1,176.60	10.38	-1.45	0.198
75.00	-6.46	-7.83	0.00	-210.8	0.00	210.77	2,001.79	472.86	1,160.37	1,114.86	11.09	-1.5	0.193
76.79	-6.21	-7.70	0.00	-196.7	0.00	196.74	1,057.52	282.92	692.20	589.98	11.66	-1.54	0.340
80.00	-6.02	-7.50	0.00	-172.0	0.00	172.03	1,033.14	272.13	640.42	554.25	12.72	-1.61	0.317
85.00	-5.75	-7.27	0.00	-134.5	0.00	134.52	992.62	255.31	563.74	499.37	14.5	-1.77	0.276
90.00	-5.49	-7.04	0.00	-98.2	0.00	98.20	949.04	238.50	491.94	445.77	16.44	-1.93	0.227
95.00	-5.25	-6.82	0.00	-63.0	0.00	63.00	902.38	221.69	425.04	393.73	18.53	-2.05	0.167
100.00	-5.03	-6.67	0.00	-28.9	0.00	28.87	852.65	204.88	363.02	343.57	20.73	-2.14	0.091
102.00	-3.93	-4.20	0.00	-15.5	0.00	15.52	831.90	198.15	339.58	324.10	21.64	-2.17	0.053
105.00	-2.82	-1.50	0.00	-2.9	0.00	2.92	796.13	188.06	305.89	294.22	23.01	-2.18	0.014
106.00	-2.74	-1.36	0.00	-1.4	0.00	1.42	781.90	184.70	295.05	283.74	23.46	-2.18	0.009
107.00	-0.05	-0.03	0.00	-0.1	0.00	0.06	767.66	181.34	284.41	273.45	23.92	-2.18	0.000
108.71	0.00	-0.03	0.00	0.0	0.00	0.00	743.32	175.59	266.66	256.29	24.7	-2.18	0.000

CALCULATED FORCES

Load Case: 1.2D + 1.0Di + 1.0Wi — 48 mph Wind with 1.2" Radial Ice — 19 Iterations

Gust Response Factor: 1.10
Dead load Factor: 1.20
Wind Load Factor: 1.00

Ice Dead Load Factor 1.00

Ice Importance Factor 1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-33.18	-3.44	0.00	-267.2	0.00	267.20	3,131.67	882.31	4,039.19	3,271.61	0	0	0.092
5.00	-31.83	-3.34	0.00	-250.0	0.00	250.00	3,079.01	854.28	3,786.72	3,113.81	0.01	-0.02	0.091
10.00	-30.49	-3.24	0.00	-233.3	0.00	233.30	3,023.29	826.26	3,542.40	2,956.53	0.05	-0.05	0.089
15.00	-29.18	-3.15	0.00	-217.1	0.00	217.08	2,964.49	798.24	3,306.23	2,800.08	0.11	-0.07	0.087
20.00	-27.90	-3.06	0.00	-201.3	0.00	201.34	2,902.62	770.22	3,078.20	2,644.75	0.2	-0.09	0.086
25.00	-26.65	-2.97	0.00	-186.0	0.00	186.05	2,837.68	742.20	2,858.33	2,490.85	0.31	-0.12	0.084
30.00	-25.45	-2.88	0.00	-171.2	0.00	171.20	2,769.67	714.18	2,646.59	2,338.70	0.45	-0.15	0.082
35.00	-24.28	-2.80	0.00	-156.8	0.00	156.79	2,698.59	686.16	2,443.01	2,188.60	0.61	-0.17	0.081
40.00	-23.15	-2.71	0.00	-142.8	0.00	142.81	2,624.45	658.13	2,247.57	2,040.86	0.81	-0.2	0.079
45.00	-22.06	-2.65	0.00	-129.3	0.00	129.26	2,547.23	630.11	2,060.28	1,895.78	1.04	-0.23	0.077
47.48	-21.54	-2.60	0.00	-122.7	0.00	122.70	2,507.80	616.22	1,970.43	1,824.93	1.16	-0.24	0.076
50.00	-20.65	-2.56	0.00	-116.1	0.00	116.14	2,466.93	602.09	1,881.13	1,753.68	1.29	-0.26	0.075
52.56	-19.77	-2.51	0.00	-109.6	0.00	109.59	2,456.74	598.61	1,859.44	1,736.24	1.44	-0.28	0.071
55.00	-19.27	-2.45	0.00	-103.5	0.00	103.47	2,416.30	584.95	1,775.55	1,668.34	1.58	-0.29	0.070
60.00	-18.30	-2.36	0.00	-91.2	0.00	91.23	2,331.06	556.93	1,609.54	1,531.68	1.9	-0.32	0.067
65.00	-17.36	-2.28	0.00	-79.4	0.00	79.41	2,239.04	528.91	1,451.67	1,396.47	2.25	-0.35	0.065
70.00	-16.47	-2.21	0.00	-68.0	0.00	68.02	2,120.41	500.89	1,301.95	1,251.71	2.63	-0.38	0.062
72.71	-16.01	-2.17	0.00	-62.0	0.00	62.02	2,056.16	485.71	1,224.25	1,176.60	2.85	-0.4	0.061
75.00	-15.47	-2.14	0.00	-57.0	0.00	57.04	2,001.79	472.86	1,160.37	1,114.86	3.05	-0.41	0.059
76.79	-15.05	-2.10	0.00	-53.2	0.00	53.21	1,057.52	282.92	692.20	589.98	3.2	-0.42	0.104
80.00	-14.67	-2.04	0.00	-46.5	0.00	46.48	1,033.14	272.13	640.42	554.25	3.49	-0.44	0.098
85.00	-14.10	-1.97	0.00	-36.3	0.00	36.28	992.62	255.31	563.74	499.37	3.98	-0.48	0.087
90.00	-13.57	-1.90	0.00	-26.4	0.00	26.44	949.04	238.50	491.94	445.77	4.51	-0.53	0.074
95.00	-13.07	-1.83	0.00	-17.0	0.00	16.95	902.38	221.69	425.04	393.73	5.08	-0.56	0.058
100.00	-12.60	-1.78	0.00	-7.8	0.00	7.80	852.65	204.88	363.02	343.57	5.68	-0.58	0.038
102.00	-10.42	-1.10	0.00	-4.2	0.00	4.24	831.90	198.15	339.58	324.10	5.93	-0.59	0.026
105.00	-6.54	-0.47	0.00	-0.9	0.00	0.93	796.13	188.06	305.89	294.22	6.3	-0.59	0.011
106.00	-6.27	-0.44	0.00	-0.4	0.00	0.45	781.90	184.70	295.05	283.74	6.43	-0.6	0.010
107.00	-0.12	-0.01	0.00	-0.0	0.00	0.02	767.66	181.34	284.41	273.45	6.55	-0.6	0.000
108.71	0.00	-0.01	0.00	0.0	0.00	0.00	743.32	175.59	266.66	256.29	6.76	-0.6	0.000

CALCULATED FORCES

Load Case: 1.0D + 1.0W — 60 mph Wind with No Ice — 19 Iterations

Gust Response Factor: 1.10
Dead load Factor: 1.00
Wind Load Factor: 1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-18.53	-2.99	0.00	-235.8	0.00	235.78	3,131.67	882.31	4,039.19	3,271.61	0	0	0.078
5.00	-17.65	-2.91	0.00	-220.8	0.00	220.81	3,079.01	854.28	3,786.72	3,113.81	0.01	-0.02	0.077
10.00	-16.79	-2.83	0.00	-206.3	0.00	206.27	3,023.29	826.26	3,542.40	2,956.53	0.04	-0.04	0.075
15.00	-15.97	-2.75	0.00	-192.1	0.00	192.14	2,964.49	798.24	3,306.23	2,800.08	0.1	-0.06	0.074
20.00	-15.17	-2.67	0.00	-178.4	0.00	178.41	2,902.62	770.22	3,078.20	2,644.75	0.17	-0.08	0.073
25.00	-14.40	-2.59	0.00	-165.1	0.00	165.07	2,837.68	742.20	2,858.33	2,490.85	0.27	-0.11	0.071
30.00	-13.65	-2.52	0.00	-152.1	0.00	152.10	2,769.67	714.18	2,646.59	2,338.70	0.4	-0.13	0.070
35.00	-12.94	-2.45	0.00	-139.5	0.00	139.50	2,698.59	686.16	2,443.01	2,188.60	0.54	-0.15	0.069
40.00	-12.25	-2.38	0.00	-127.3	0.00	127.26	2,624.45	658.13	2,247.57	2,040.86	0.72	-0.18	0.067
45.00	-11.58	-2.32	0.00	-115.4	0.00	115.37	2,547.23	630.11	2,060.28	1,895.78	0.92	-0.2	0.065
47.48	-11.27	-2.29	0.00	-109.6	0.00	109.61	2,507.80	616.22	1,970.43	1,824.93	1.03	-0.22	0.065
50.00	-10.64	-2.25	0.00	-103.8	0.00	103.85	2,466.93	602.09	1,881.13	1,753.68	1.14	-0.23	0.064
52.56	-10.03	-2.21	0.00	-98.1	0.00	98.08	2,456.74	598.61	1,859.44	1,736.24	1.27	-0.24	0.061
55.00	-9.73	-2.16	0.00	-92.7	0.00	92.69	2,416.30	584.95	1,775.55	1,668.34	1.4	-0.26	0.060
60.00	-9.14	-2.09	0.00	-81.9	0.00	81.88	2,331.06	556.93	1,609.54	1,531.68	1.69	-0.28	0.057
65.00	-8.57	-2.02	0.00	-71.4	0.00	71.42	2,239.04	528.91	1,451.67	1,396.47	2	-0.31	0.055
70.00	-8.04	-1.97	0.00	-61.3	0.00	61.30	2,120.41	500.89	1,301.95	1,251.71	2.34	-0.34	0.053
72.71	-7.76	-1.94	0.00	-56.0	0.00	55.96	2,056.16	485.71	1,224.25	1,176.60	2.53	-0.35	0.051
75.00	-7.40	-1.91	0.00	-51.5	0.00	51.51	2,001.79	472.86	1,160.37	1,114.86	2.71	-0.37	0.050
76.79	-7.12	-1.88	0.00	-48.1	0.00	48.09	1,057.52	282.92	692.20	589.98	2.85	-0.38	0.088
80.00	-6.92	-1.83	0.00	-42.0	0.00	42.05	1,033.14	272.13	640.42	554.25	3.1	-0.39	0.083
85.00	-6.63	-1.78	0.00	-32.9	0.00	32.89	992.62	255.31	563.74	499.37	3.54	-0.43	0.073
90.00	-6.35	-1.72	0.00	-24.0	0.00	24.01	949.04	238.50	491.94	445.77	4.01	-0.47	0.061
95.00	-6.09	-1.67	0.00	-15.4	0.00	15.41	902.38	221.69	425.04	393.73	4.52	-0.5	0.046
100.00	-5.85	-1.63	0.00	-7.1	0.00	7.07	852.65	204.88	363.02	343.57	5.06	-0.52	0.027
102.00	-4.54	-1.03	0.00	-3.8	0.00	3.80	831.90	198.15	339.58	324.10	5.28	-0.53	0.017
105.00	-3.19	-0.37	0.00	-0.7	0.00	0.72	796.13	188.06	305.89	294.22	5.62	-0.53	0.006
106.00	-3.09	-0.33	0.00	-0.4	0.00	0.35	781.90	184.70	295.05	283.74	5.73	-0.53	0.005
107.00	-0.06	-0.01	0.00	-0.0	0.00	0.01	767.66	181.34	284.41	273.45	5.84	-0.53	0.000
108.71	0.00	-0.01	0.00	0.0	0.00	0.00	743.32	175.59	266.66	256.29	6.03	-0.53	0.000

EQUIVALENT LATERAL FORCES METHOD ANALYSIS

Design Spectral Response Acceleration at Short Period (S_{ds}):	0.170
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.068
Long-Period Transition Period (T_L – Seconds):	6
Importance Factor (I_e):	1.000
Response Modification Coefficient (R):	1.500
Seismic Response Coefficient (C_s):	0.031
Upper Limit C_S:	0.031
Lower Limit C_S:	0.030
Period based on Rayleigh Method (sec):	1.440
Redundancy Factor (p):	1.000
Seismic Force Distribution Exponent (k):	1.470
Total Unfactored Dead Load:	18.530 k
Seismic Base Shear (E):	0.580 k

SEISMIC FORCES

1.2D + 1.0Ev + 1.0Eh **Seismic**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
29	107.855	59	58	0.006	4	73
28	106.5	35	34	0.004	2	44
27	105.5	39	37	0.004	2	48
26	103.5	135	124	0.014	8	166
25	101	93	83	0.009	5	115
24	97.5	244	205	0.023	13	302
23	92.5	261	203	0.023	13	322
22	87.5	277	199	0.022	13	342
21	82.5	293	193	0.022	13	362
20	78.3958	197	120	0.013	8	243
19	75.8958	275	160	0.018	10	340
18	73.8542	360	201	0.022	13	445
17	71.3542	279	148	0.016	10	345
16	67.5	537	263	0.029	17	662
15	62.5	564	247	0.028	16	696
14	57.5	591	229	0.026	15	729
13	53.7813	298	104	0.012	7	368
12	51.2813	616	201	0.022	13	760
11	48.7396	620	188	0.021	12	765
10	46.2396	318	89	0.010	6	393
9	42.5	662	164	0.018	11	817
8	37.5	689	142	0.016	9	850
7	32.5	716	120	0.013	8	884
6	27.5	744	97	0.011	6	918
5	22.5	771	75	0.008	5	951
4	17.5	798	54	0.006	3	985
3	12.5	825	34	0.004	2	1,018
2	7.5	852	16	0.002	1	1,052
1	2.5	879	3	0.000	0	1,085
Generic Mount Reinforcement	107	600	578	0.064	38	740
Generic Flat Light Sector Frame	107	2,400	2,314	0.258	150	2,962
Raycap RRFDC-3315-PF-48 (32lbs)	106	64	61	0.007	4	79
Samsung RT4401-48A	105	56	52	0.006	3	69
Kaelus BSF0020F3V1-1	105	31	29	0.003	2	38
Samsung RF4440d-13A	105	211	198	0.022	13	260
Samsung RF4439d-25A	105	224	210	0.023	14	277
Samsung MT6407-77A	105	245	230	0.026	15	302
Commscope NHHSS-65B-R2BT2	105	153	143	0.016	9	188
Commscope NHH-65B-R2B	105	131	123	0.014	8	162
Antel LPA-80063/6CF_5	105	162	152	0.017	10	200
Unused Reserve (13914.45 sqin)	102	1,224	1,100	0.122	71	1,510
	Totals:	**18,528**	**8,981**	**1.000**	**583**	**22,864**

SEISMIC FORCES

1.2D + 1.0Ev + 1.0Eh **Seismic**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)

SEISMIC FORCES

0.9D - 1.0Ev + 1.0Eh **Seismic (Reduced DL)**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
29	107.855	59	58	0.006	4	51
28	106.5	35	34	0.004	2	31
27	105.5	39	37	0.004	2	34
26	103.5	135	124	0.014	8	117
25	101	93	83	0.009	5	81
24	97.5	244	205	0.023	13	212
23	92.5	261	203	0.023	13	226
22	87.5	277	199	0.022	13	240
21	82.5	293	193	0.022	13	254
20	78.3958	197	120	0.013	8	170
19	75.8958	275	160	0.018	10	238
18	73.8542	360	201	0.022	13	312
17	71.3542	279	148	0.016	10	242
16	67.5	537	263	0.029	17	465
15	62.5	564	247	0.028	16	488
14	57.5	591	229	0.026	15	512
13	53.7813	298	104	0.012	7	258
12	51.2813	616	201	0.022	13	533
11	48.7396	620	188	0.021	12	537
10	46.2396	318	89	0.010	6	276
9	42.5	662	164	0.018	11	573
8	37.5	689	142	0.016	9	597
7	32.5	716	120	0.013	8	620
6	27.5	744	97	0.011	6	644
5	22.5	771	75	0.008	5	667
4	17.5	798	54	0.006	3	691
3	12.5	825	34	0.004	2	714
2	7.5	852	16	0.002	1	738
1	2.5	879	3	0.000	0	762
Generic Mount Reinforcement	107	600	578	0.064	38	520
Generic Flat Light Sector Frame	107	2,400	2,314	0.258	150	2,078
Raycap RRFDC-3315-PF-48 (32lbs)	106	64	61	0.007	4	55
Samsung RT4401-48A	105	56	52	0.006	3	48
Kaelus BSF0020F3V1-1	105	31	29	0.003	2	27
Samsung RF4440d-13A	105	211	198	0.022	13	183
Samsung RF4439d-25A	105	224	210	0.023	14	194
Samsung MT6407-77A	105	245	230	0.026	15	212
Commscope NHHSS-65B-R2BT2	105	153	143	0.016	9	132
Commscope NHH-65B-R2B	105	131	123	0.014	8	114
Antel LPA-80063/6CF_5	105	162	152	0.017	10	140
Unused Reserve (13914.45 sqin)	102	1,224	1,100	0.122	71	1,060
	Totals:	**18,528**	**8,981**	**1.000**	**583**	**16,046**

SEISMIC FORCES

1.2D + 1.0Ev + 1.5Eh **Seismic Overstrength**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
29	107.855	59	58	0.006	6	73
28	106.5	35	34	0.004	3	44
27	105.5	39	37	0.004	4	48
26	103.5	135	124	0.014	12	166
25	101	93	83	0.009	8	115
24	97.5	244	205	0.023	20	302
23	92.5	261	203	0.023	20	322
22	87.5	277	199	0.022	19	342

SEISMIC FORCES

1.2D + 1.0Ev + 1.5Eh **Seismic Overstrength**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
21	82.5	293	193	0.022	19	362
20	78.3958	197	120	0.013	12	243
19	75.8958	275	160	0.018	16	340
18	73.8542	360	201	0.022	20	445
17	71.3542	279	148	0.016	14	345
16	67.5	537	263	0.029	26	662
15	62.5	564	247	0.028	24	696
14	57.5	591	229	0.026	22	729
13	53.7813	298	104	0.012	10	368
12	51.2813	616	201	0.022	20	760
11	48.7396	620	188	0.021	18	765
10	46.2396	318	89	0.010	9	393
9	42.5	662	164	0.018	16	817
8	37.5	689	142	0.016	14	850
7	32.5	716	120	0.013	12	884
6	27.5	744	97	0.011	9	918
5	22.5	771	75	0.008	7	951
4	17.5	798	54	0.006	5	985
3	12.5	825	34	0.004	3	1,018
2	7.5	852	16	0.002	2	1,052
1	2.5	879	3	0.000	0	1,085
Generic Mount Reinforcement	107	600	578	0.064	56	740
Generic Flat Light Sector Frame	107	2,400	2,314	0.258	225	2,962
Raycap RRFDC-3315-PF-48 (32lbs)	106	64	61	0.007	6	79
Samsung RT4401-48A	105	56	52	0.006	5	69
Kaelus BSF0020F3V1-1	105	31	29	0.003	3	38
Samsung RF4440d-13A	105	211	198	0.022	19	260
Samsung RF4439d-25A	105	224	210	0.023	20	277
Samsung MT6407-77A	105	245	230	0.026	22	302
Commscope NHHSS-65B-R2BT2	105	153	143	0.016	14	188
Commscope NHH-65B-R2B	105	131	123	0.014	12	162
Antel LPA-80063/6CF_5	105	162	152	0.017	15	200
Unused Reserve (13914.45 sqin)	102	1,224	1,100	0.122	107	1,510
	Totals:	**18,528**	**8,981**	**1.000**	**874**	**22,864**

SEISMIC FORCES

0.9D - 1.0Ev + 1.5Eh **Seismic Overstrength (Reduced DL)**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
29	107.855	59	58	0.006	6	51
28	106.5	35	34	0.004	3	31
27	105.5	39	37	0.004	4	34
26	103.5	135	124	0.014	12	117
25	101	93	83	0.009	8	81
24	97.5	244	205	0.023	20	212
23	92.5	261	203	0.023	20	226
22	87.5	277	199	0.022	19	240
21	82.5	293	193	0.022	19	254
20	78.3958	197	120	0.013	12	170
19	75.8958	275	160	0.018	16	238
18	73.8542	360	201	0.022	20	312
17	71.3542	279	148	0.016	14	242
16	67.5	537	263	0.029	26	465
15	62.5	564	247	0.028	24	488
14	57.5	591	229	0.026	22	512
13	53.7813	298	104	0.012	10	258
12	51.2813	616	201	0.022	20	533
11	48.7396	620	188	0.021	18	537
10	46.2396	318	89	0.010	9	276
9	42.5	662	164	0.018	16	573
8	37.5	689	142	0.016	14	597

SEISMIC FORCES

0.9D - 1.0Ev + 1.5Eh **Seismic Overstrength (Reduced DL)**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
7	32.5	716	120	0.013	12	620
6	27.5	744	97	0.011	9	644
5	22.5	771	75	0.008	7	667
4	17.5	798	54	0.006	5	691
3	12.5	825	34	0.004	3	714
2	7.5	852	16	0.002	2	738
1	2.5	879	3	0.000	0	762
Generic Mount Reinforcement	107	600	578	0.064	56	520
Generic Flat Light Sector Frame	107	2,400	2,314	0.258	225	2,078
Raycap RRFDC-3315-PF-48 (32lbs)	106	64	61	0.007	6	55
Samsung RT4401-48A	105	56	52	0.006	5	48
Kaelus BSF0020F3V1-1	105	31	29	0.003	3	27
Samsung RF4440d-13A	105	211	198	0.022	19	183
Samsung RF4439d-25A	105	224	210	0.023	20	194
Samsung MT6407-77A	105	245	230	0.026	22	212
Commscope NHHSS-65B-R2BT2	105	153	143	0.016	14	132
Commscope NHH-65B-R2B	105	131	123	0.014	12	114
Antel LPA-80063/6CF_5	105	162	152	0.017	15	140
Unused Reserve (13914.45 sqin)	102	1,224	1,100	0.122	107	1,060
	Totals:	**18,528**	**8,981**	**1.000**	**874**	**16,046**

1.2D + 1.0Ev + 1.0Eh **Seismic**

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-21.78	-0.58	0.00	-52.41	0.00	52.41	3,131.67	882.31	4,039	3,271.61	0.00	0.00	0.02
5.00	-20.73	-0.58	0.00	-49.50	0.00	49.50	3,079.01	854.28	3,787	3,113.81	0.00	0.00	0.02
10.00	-19.71	-0.58	0.00	-46.58	0.00	46.58	3,023.29	826.26	3,542	2,956.53	0.01	-0.01	0.02
15.00	-18.72	-0.58	0.00	-43.67	0.00	43.67	2,964.49	798.24	3,306	2,800.08	0.02	-0.01	0.02
20.00	-17.77	-0.58	0.00	-40.77	0.00	40.77	2,902.62	770.22	3,078	2,644.75	0.04	-0.02	0.02
25.00	-16.86	-0.57	0.00	-37.88	0.00	37.88	2,837.68	742.20	2,858	2,490.85	0.06	-0.02	0.02
30.00	-15.97	-0.57	0.00	-35.02	0.00	35.02	2,769.67	714.18	2,647	2,338.70	0.09	-0.03	0.02
35.00	-15.12	-0.56	0.00	-32.19	0.00	32.19	2,698.59	686.16	2,443	2,188.60	0.12	-0.03	0.02
40.00	-14.30	-0.55	0.00	-29.41	0.00	29.41	2,624.45	658.13	2,248	2,040.86	0.16	-0.04	0.02
45.00	-13.91	-0.54	0.00	-26.67	0.00	26.67	2,547.23	630.11	2,060	1,895.78	0.21	-0.05	0.02
47.48	-13.15	-0.53	0.00	-25.33	0.00	25.33	2,507.80	616.22	1,970	1,824.93	0.23	-0.05	0.02
50.00	-12.39	-0.52	0.00	-23.99	0.00	23.99	2,466.93	602.09	1,881	1,753.68	0.26	-0.05	0.02
52.56	-12.02	-0.51	0.00	-22.67	0.00	22.67	2,456.74	598.61	1,859	1,736.24	0.29	-0.06	0.02
55.00	-11.29	-0.50	0.00	-21.42	0.00	21.42	2,416.30	584.95	1,776	1,668.34	0.32	-0.06	0.02
60.00	-10.59	-0.48	0.00	-18.94	0.00	18.94	2,331.06	556.93	1,610	1,531.68	0.38	-0.07	0.02
65.00	-9.93	-0.46	0.00	-16.54	0.00	16.54	2,239.04	528.91	1,452	1,396.47	0.46	-0.07	0.02
70.00	-9.59	-0.45	0.00	-14.22	0.00	14.22	2,120.41	500.89	1,302	1,251.71	0.53	-0.08	0.02
72.71	-9.14	-0.44	0.00	-12.99	0.00	12.99	2,056.16	485.71	1,224	1,176.60	0.58	-0.08	0.02
75.00	-8.80	-0.43	0.00	-11.98	0.00	11.98	2,001.79	472.86	1,160	1,114.86	0.62	-0.08	0.02
76.79	-8.56	-0.42	0.00	-11.21	0.00	11.21	1,057.52	282.92	692	589.98	0.65	-0.09	0.03
80.00	-8.20	-0.41	0.00	-9.85	0.00	9.85	1,033.14	272.13	640	554.25	0.71	-0.09	0.03
85.00	-7.86	-0.40	0.00	-7.79	0.00	7.79	992.62	255.31	564	499.37	0.81	-0.10	0.02
90.00	-7.53	-0.39	0.00	-5.80	0.00	5.80	949.04	238.50	492	445.77	0.92	-0.11	0.02
95.00	-7.23	-0.37	0.00	-3.86	0.00	3.86	902.38	221.69	425	393.73	1.04	-0.12	0.02
100.00	-7.12	-0.37	0.00	-2.00	0.00	2.00	852.65	204.88	363	343.57	1.16	-0.12	0.01
102.00	-5.44	-0.29	0.00	-1.26	0.00	1.26	831.90	198.15	340	324.10	1.21	-0.12	0.01
105.00	-3.90	-0.21	0.00	-0.41	0.00	0.41	796.13	188.06	306	294.22	1.29	-0.13	0.01
106.00	-3.77	-0.20	0.00	-0.20	0.00	0.20	781.90	184.70	295	283.74	1.32	-0.13	0.01
107.00	0.00	0.00	0.00	0.00	0.00	0.00	767.66	181.34	284	273.45	1.35	-0.13	0.00
108.71	0.00	0.00	0.00	0.00	0.00	0.00	743.32	175.59	267	256.29	1.39	-0.13	0.00

0.9D - 1.0Ev + 1.0Eh **Seismic (Reduced DL)**

CALCULATED FORCES

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-15.28	-0.58	0.00	-52.08	0.00	52.08	3,131.67	882.31	4,039	3,271.61	0.00	0.00	0.02
5.00	-14.55	-0.58	0.00	-49.17	0.00	49.17	3,079.01	854.28	3,787	3,113.81	0.00	0.00	0.02
10.00	-13.83	-0.58	0.00	-46.26	0.00	46.26	3,023.29	826.26	3,542	2,956.53	0.01	-0.01	0.02
15.00	-13.14	-0.58	0.00	-43.35	0.00	43.35	2,964.49	798.24	3,306	2,800.08	0.02	-0.01	0.02
20.00	-12.47	-0.58	0.00	-40.45	0.00	40.45	2,902.62	770.22	3,078	2,644.75	0.04	-0.02	0.02
25.00	-11.83	-0.57	0.00	-37.58	0.00	37.58	2,837.68	742.20	2,858	2,490.85	0.06	-0.02	0.02
30.00	-11.21	-0.56	0.00	-34.73	0.00	34.73	2,769.67	714.18	2,647	2,338.70	0.09	-0.03	0.02
35.00	-10.61	-0.55	0.00	-31.92	0.00	31.92	2,698.59	686.16	2,443	2,188.60	0.12	-0.03	0.02
40.00	-10.04	-0.54	0.00	-29.15	0.00	29.15	2,624.45	658.13	2,248	2,040.86	0.16	-0.04	0.02
45.00	-9.76	-0.54	0.00	-26.43	0.00	26.43	2,547.23	630.11	2,060	1,895.78	0.21	-0.05	0.02
47.48	-9.23	-0.53	0.00	-25.09	0.00	25.09	2,507.80	616.22	1,970	1,824.93	0.23	-0.05	0.02
50.00	-8.69	-0.51	0.00	-23.76	0.00	23.76	2,466.93	602.09	1,881	1,753.68	0.26	-0.05	0.02
52.56	-8.43	-0.51	0.00	-22.45	0.00	22.45	2,456.74	598.61	1,859	1,736.24	0.29	-0.06	0.02
55.00	-7.92	-0.49	0.00	-21.21	0.00	21.21	2,416.30	584.95	1,776	1,668.34	0.32	-0.06	0.02
60.00	-7.43	-0.48	0.00	-18.75	0.00	18.75	2,331.06	556.93	1,610	1,531.68	0.38	-0.06	0.02
65.00	-6.97	-0.46	0.00	-16.37	0.00	16.37	2,239.04	528.91	1,452	1,396.47	0.45	-0.07	0.02
70.00	-6.73	-0.45	0.00	-14.07	0.00	14.07	2,120.41	500.89	1,302	1,251.71	0.53	-0.08	0.01
72.71	-6.42	-0.44	0.00	-12.85	0.00	12.85	2,056.16	485.71	1,224	1,176.60	0.57	-0.08	0.01
75.00	-6.18	-0.43	0.00	-11.84	0.00	11.84	2,001.79	472.86	1,160	1,114.86	0.61	-0.08	0.01
76.79	-6.01	-0.42	0.00	-11.08	0.00	11.08	1,057.52	282.92	692	589.98	0.65	-0.09	0.02
80.00	-5.75	-0.41	0.00	-9.73	0.00	9.73	1,033.14	272.13	640	554.25	0.70	-0.09	0.02
85.00	-5.51	-0.39	0.00	-7.70	0.00	7.70	992.62	255.31	564	499.37	0.80	-0.10	0.02
90.00	-5.29	-0.38	0.00	-5.73	0.00	5.73	949.04	238.50	492	445.77	0.91	-0.11	0.02
95.00	-5.08	-0.37	0.00	-3.82	0.00	3.82	902.38	221.69	425	393.73	1.03	-0.12	0.02
100.00	-4.99	-0.36	0.00	-1.97	0.00	1.97	852.65	204.88	363	343.57	1.15	-0.12	0.01
102.00	-3.82	-0.28	0.00	-1.25	0.00	1.25	831.90	198.15	340	324.10	1.20	-0.12	0.01
105.00	-2.73	-0.20	0.00	-0.40	0.00	0.40	796.13	188.06	306	294.22	1.28	-0.12	0.01
106.00	-2.65	-0.20	0.00	-0.20	0.00	0.20	781.90	184.70	295	283.74	1.31	-0.12	0.00
107.00	0.00	0.00	0.00	0.00	0.00	0.00	767.66	181.34	284	273.45	1.33	-0.12	0.00
108.71	0.00	0.00	0.00	0.00	0.00	0.00	743.32	175.59	267	256.29	1.38	-0.12	0.00

ANALYSIS SUMMARY

Load Case	Base Reactions: Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Max Usage: Elev (ft)	Interaction Ratio
1.2D + 1.0W	12.30	0.00	22.23	0.00	0.00	971.55	76.79	0.35
0.9D + 1.0W	12.30	0.00	16.67	0.00	0.00	966.43	76.79	0.34
1.2D + 1.0Di + 1.0Wi	3.44	0.00	33.18	0.00	0.00	267.20	76.79	0.1
1.2D + 1.0Ev + 1.0Eh	0.58	0.00	21.78	0.00	0.00	52.41	76.79	0.03
0.9D - 1.0Ev + 1.0Eh	0.58	0.00	15.28	0.00	0.00	52.08	76.79	0.02
1.0D + 1.0W	2.99	0.00	18.53	0.00	0.00	235.78	76.79	0.09

ANALYSIS SUMMARY – OVERSTRENGTH LOAD CASES

Load Case	Base Reactions: Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.0Ev + 1.5Eh	0.87	0.00	21.78	0.00	0.00	78.62
0.9D - 1.0Ev + 1.5Eh	0.87	0.00	15.28	0.00	0.00	78.12

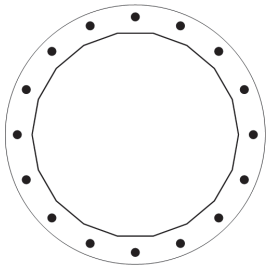
BASE PLATE ANALYSIS @ 0 FT

APPLIED REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
971.55	22.23	12.3

PLATE PARAMETERS (ID# 35126)

Width:	65	in
Shape:	Round	
Thickness:	2.5	in
Grade:	A572-50	
Yield Strength:	50	ksi
Tensile Strength:	65	ksi
Rod Detail Type:	d	
Clear Distance	3	in
Base Weld Size:	0.125	in
Orientation Offset:	-	°
Analysis Type:	Plastic	
Neutral Axis:	0	°



ANCHOR ROD PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	F_y (ksi)	F_u (ksi)	Spacing (in)	Offset (°)
Original [ID#36035]	Radial	16	2.25	59	A615-75	75	100	-	-

COMPONENT PROPERTIES

Component	ID	Gross Area (in^2)	Net Area (in^2)	Individual Inertia (in^4)	Moment of Inertia (in^4)	Threads/in
Pole	51"ø x 0.3125" (18 Sides)	49.5101	-	-	15901.92	-
Bolt Group	Original (16) 2.25"ø	3.9761	3.2477	0.8393	20656.66	4.5

REACTION DISTRIBUTION

Component	ID	Moment M_u (k-ft)	Axial Load P_u (k)	Shear V_u (k)	Moment Factor
Pole	51"ø x 0.3125" (18 Sides)	971.6	22.23	12.30	1.000
Bolt Group	Original (16) 2.25"ø	971.6	-	12.30	1.000

BASE PLATE BEND LINE ANALYSIS @ 0 FT

POLE PROPERTIES

Flat-to-Flat Diameter:	51.12	in	Flat Width:	9.015	in
Point-to-Point Diameter:	51.91	in	Flat Radians:	0.349	rad
Orientation Offset:	-	°			

PLATE PROPERTIES

Neutral Axis:	0	°
Bend Line Limits:	0.944 to 2.198	rad

Bend Line	Chord Length (in)	Additional Length (in)	Section Modulus (in^3)	Applied Moment M_u (k-in)	Moment Capacity ΦM_n (k-in)	Flexure Result $M_u/\Phi M_n$
Flats	35.760	0.00	55.874	186.4	2514.3	7.4%
Corners	34.605	0.00	54.070	126.7	2433.1	5.2%
Circumferential	48.505	0.00	75.789	337.5	3410.5	9.9%

PLASTIC ANCHOR ROD ANALYSIS

Class	Group Quantity	Rod Diameter (in)	Applied Axial Load P_u (k)	Applied Shear Load V_u (k)	Compressive Capacity ΦP_n (k)	Interaction Result
Original	16	2.25	40.0	1.2	243.6	16.4%

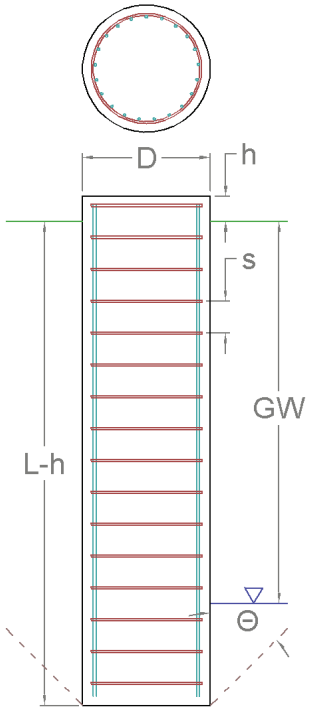
PIER FOUNDATION ANALYSIS

GLOBAL REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
971.55	22.23	12.30

FOUNDATION PARAMETERS

Pier Diameter:	D	7.00	ft
Pier Embedment Depth:	L-h	26.0	ft
Pier Height above Grade:	h	1.00	ft
Concrete Compressive Strength:		4,000	psi
Vertical Rebar:		(36) #8 bars [60 ksi]	
Tie Rebar:	s	#5 bars @ 12.0" c/c [60 ksi]	
Rebar Clear Cover:		4.00	in



SOIL PARAMETERS

Water Table Depth [BGL]: GW - ft

Layer Depth (ft) Top	Layer Depth (ft) Bottom	Unit Weight pcf	Cohesion psf	Friction Angle °	Ultimate Skin Friction psf	Ultimate Net Bearing psf
0	3	105	0	0	0	0
3	5	133	0	40	0	0
5	7	122	0	32	800	0
7	9	117	0	29	750	0
9	10	117	0	29	900	0
10	13	134	0	40	1,350	0
13	15	119	0	30	1,600	0
15	17	127	0	34	1,800	0
17	20	124	0	33	2,000	0
20	22	136	6,200	0	2,750	0
22	27	136	6,250	0	2,800	32,400

SOIL STRENGTH ANALYSIS

Volume of Concrete (ft^3)	Buoyant Weight of Concrete (k)	Skin Friction Resistance (k)	Inflection Point [BGL] (ft)
1,039.08	155.86	825.77	20.87

SOIL MOMENT ANALYSIS

Total Lateral Resistance (k)	Moment at Inflection Point, M_u (k-ft)	Additional Resistance (k-ft)	Nominal Moment Capacity, ΦM_n (k-ft)	Soil Moment Usage, $M_u / \Phi M_n$
3,593.47	1,240.55	0.00	11,899.07	**10.4%**

SOIL COMPRESSION ANALYSIS

Compressive Bearing Resistance (k)	Compressive Force, P_u (k)	Additional Resistance (k)	Nominal Compressive Capacity, ΦP_n (k)	Soil Compressive Usage, $P_u / \Phi P_n$
1,246.90	51.88	0.00	1,554.50	**3.3%**

REINFORCING STEEL STRENGTH ANALYSIS

Rebar Cage Diameter (in)	Steel Elastic Modulus, E (ksi)	Strength Bending/Tension Reduction Factor, Φ_b	Strength Shear Reduction Factor, Φ_v	Strength Compression Reduction Factor, Φ_c
73.75	29,000	0.9	0.75	0.65

PIER REINFORCING MOMENT ANALYSIS

Design Moment, M_u (k-ft)	Nominal Moment Capacity, $\Phi_b M_n$ (k-ft)	Bending Reinforcement Ratio	Pier Rebar Flexure Usage, $M_u/\Phi_b M_n$	
984.20	4,615.68	0.01	**21.3%**	✓

PIER REINFORCING COMPRESSION ANALYSIS

Buoyant Weight of Concrete (k)	Design Compression, P_u (k)	Nominal Compressive Capacity, $\Phi_p P_n$ (k)	Pier Rebar Compressive Usage, $P_u / \Phi_p P_n$	
155.86	51.88	10,634.89	**0.5%**	✓

PIER REINFORCING SHEAR ANALYSIS

Design Shear, V_u (k)	Nominal Shear Capacity, $\Phi_v V_n$ (k)	Pier Rebar Shear Usage, $V_u / \Phi_v V_n$	
107.77	683.03	**15.8%**	✓

Exhibit E

Mount Analysis

Colliers Engineering & Design,
Architecture, Landscape Architecture,
Surveying, CT P.C.
2000 Midlantic Drive, Suite 100
Mt. Laurel, NJ 08054
856.797.0412
sean.osullivan@collierseng.com

Post-Modification Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10322905
Colliers Engineering & Design Project #: 25777186

September 24, 2025

Site Information	*Site ID:*	*5000103428-VZW / BLOOMFIELD BLUE HILLS CT*
	Site Name:	*BLOOMFIELD BLUE HILLS CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*811 Blue Hills Ave* *Bloomfield, Connecticut 06002* *Hartford County*
	Latitude:	*41.80968333°*
	Longitude:	*-72.69659722°*
Structure Information	*Tower Type:*	*110-Ft Monopole*
	Mount Type:	*12.00-Ft T-Arm*

FUZE ID # 17390723

Analysis Results

T-Arm: **77.0%** **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: Chris Lemkan

Digitally signed by Grant Walters
Date: 2025.09.24 11:17:36-05'00'

STATE OF CONNECTICUT
GRANT HOLLAND WALTERS
37635
LICENSED PROFESSIONAL ENGINEER

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: 674846, dated: November 15, 2024*
Desktop Mount Mapping Report	*Maser Consulting Connecticut, Project #: 21781043, dated: June 17, 2021*
Previous Mount Analysis Report	*Colliers Engineering & Design, Project #: 25777186 Rev 1), Dated: September 6, 2025*
Modification Drawings	*Colliers Engineering & Design, Project #: 25777186, dated: September 24, 2025*
Closeout Photos	*Eastern Communication, dated: September 28, 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}:	120 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.50 in
	Risk Category:	II
	Exposure Category:	C
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.994
Seismic Parameters:	S_S:	0.182 g
	S_1:	0.055 g
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Load, Lv:	250 lbs.
	Maintenance Load, Lm:	500 lbs.
Analysis Software:	RISA-3D (V22)	

Final Loading Configuration:

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
100.00	102.00	3	Commscope	NHH-65B-R2B	Retained
		3	Commscope	NHHSS-65B-R2BT4	
		3	Samsung	MT6407-77A	
		1	RFS	DB-B1-6C-12AB-0Z	
		6	Antel	LPA-80063/6CF_5	
		3	Samsung	CBRS RRH-RT-4401-48A*	
		3	Samsung	RF4439d-25A*	
		3	Samsung	RF4440d-13A*	
		2	KAelus	BSF0020F3V1-1	Added

* Equipment is flush mounted directly to the Monopole. They are not mounted on the T-Arm mounts and are not included in this mount analysis.

It is acceptable to install up to three (3) OVPs with dimensions not to exceed 30" x 17" x 13" and 40 lbs. 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.

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
Standoff Horizontal	22.1 %	Pass
Face Horizontal	25.3 %	Pass
Mount Pipe (P2 STD)	25.6 %	Pass
Mod Mount Pipe (P2.5 STD)	13.0 %	Pass
Mod Face Horizontal (P2 STD)	45.9 %	Pass
Mod Kickers	8.7 %	Pass
Mod Stabilizer Pipe	11.8 %	Pass
MOD V-Bracing	27.2 %	Pass
Mount Connection	77.0 %	Pass
Mount-Tower Interaction	12.2 %	Pass

Structure Rating – *(Controlling Utilization of all Components)*	**77.0%**

Mount Connection Envelope Reactions:

Connection Description	Elev. AGL (Ft)	Node Label	Envelope Wind Reactions				Envelope Wind + Ice Reactions			
			Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)	Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)
Sector A Standoff	100.0	A1	1182	3164	1.489	1.476	980	1755	0.806	0.392
Sector A Bottom Reinforcement	96.0	N67	3525	2138	0.000	0.001	3263	1990	0.000	0.000
Sector B Standoff	100.0	N69A	1192	3029	1.429	1.493	1151	1781	0.864	0.395
Sector C Standoff	100.0	N137	1176	2978	1.426	1.464	1119	1686	0.888	0.387
Sector C Bottom Reinforcement	96.0	N176 B	3483	2112	0.000	0.001	3216	1961	0.000	0.000
Sector B Bottom Reinforcement	96.0	N179 B	3529	2140	0.000	0.001	3325	2029	0.000	0.000
Sector A Top Reinforcement	99.0	N182	2110	2314	0.002	0.002	1747	1903	0.001	0.001
Sector C Top Reinforcement	99.0	N183	2126	2343	0.002	0.002	1751	1912	0.001	0.001
Sector B Top Reinforcement	99.0	N188	2130	2348	0.002	0.002	1771	1934	0.001	0.001

Notes:
- Axial loads act along the axis of the tower
- Lateral reactions act perpendicular to the tower
- Moment loads introduce bending moment to the tower
- Torsion loads introduce twisting moment to the tower
- 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	37.3	37.3	62.1	62.1
0.5	48.4	48.4	83.2	83.2
1	58.1	58.1	103.0	103.0

Notes:
- (EPA)a values listed above may be used in the absence of more precise information
- (EPA)a values in the table above include 3 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. Analysis Calculations
6. Mount-Tower Interaction

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Mount Modification

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

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MDG #: 5000103428 SMART Project #: 10322905 Fuze Project ID: 17390723

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:

Contractor shall install the proposed filter units on new Site Pro 1 Dual Swivel Mount Kit (Part #: RRUDSM or EOR approved equivalent) in the location shown in the placement diagrams. Contractor shall verify Project #: 21781043 by Colliers Engineering and Design, dated December 21, 2023 has been installed prior to installation of equipment. Escalate any discrepancies to EOR immediately as it may render the results of this analysis invalid and require additional modifications. Contractor shall record all dimensions and member sizes requested in the Mount Geometry Verification Requirements section of the Mount Modification Drawings. Contractor shall provide the requested information to Colliers Engineering & Design for structural verification while on site. Contact EOR if these documents are not available to the general contractor.

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:

Contractor to provide measurement from top of the highest equipment/steel to the bottom of the lowest equipment/steel by documenting it using the most appropriate illustration below along with supporting photos (highest and lowest measurement across all sectors):

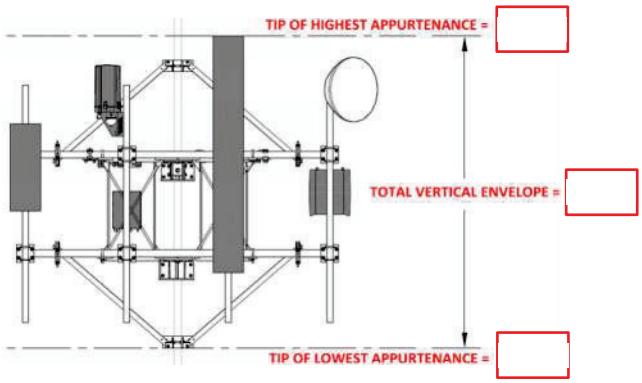

Illustration #1

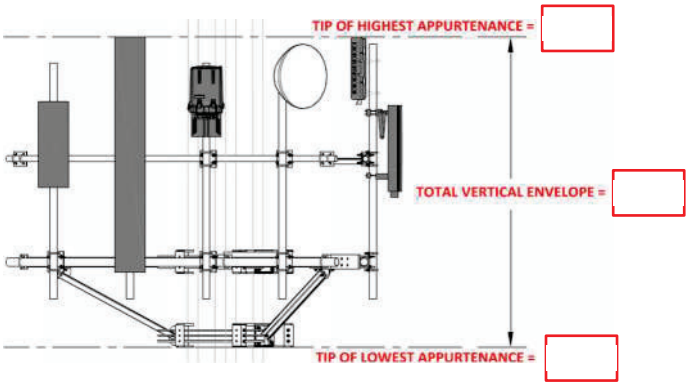

Illustration #2

Certifying Individual:

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

Structure: 5000103428-VZW - BLOOMFIELD BLUE HILLS CT

Sector: **A**

Structure Type: Monopole

Mount Elev: 100.00

10319722

9/22/2025

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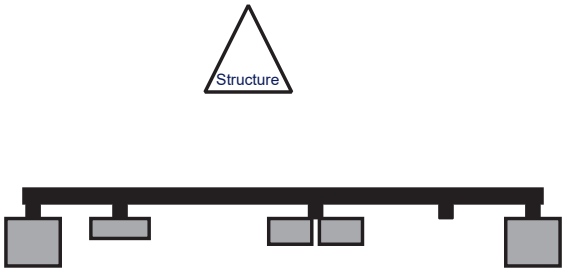
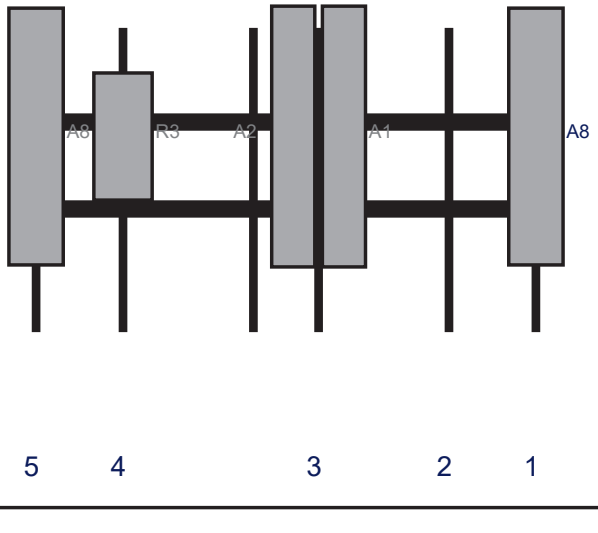
Plan View



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
OVP	DB-B1-6C-12AB-0Z	28.9	15.7		Member					Retained	09/29/2023
A8	LPA-80063/6CF_5	70.9	15	141	1	a	Front	30	0	Retained	09/29/2023
A1	NHH-65B-R2B	72	11.9	81	3	a	Front	30	7	Retained	09/29/2023
A2	NHHSS-65B-R2BT4	72	11.9	81	3	b	Front	30	-7	Retained	09/29/2023
R3	MT6407-77A	35.1	16.1	27	4	a	Front	30	0	Retained	09/29/2023
A8	LPA-80063/6CF_5	70.9	15	3	5	a	Front	30	0	Retained	09/29/2023

Sector: **B**

Structure Type: Monopole

Mount Elev: 100.00

10319722

9/22/2025

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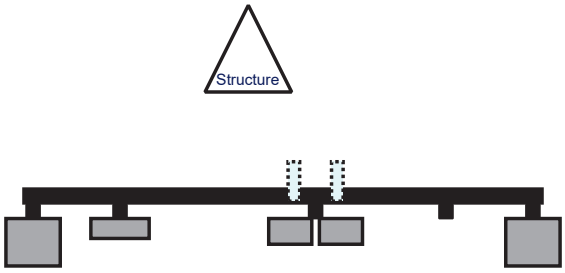
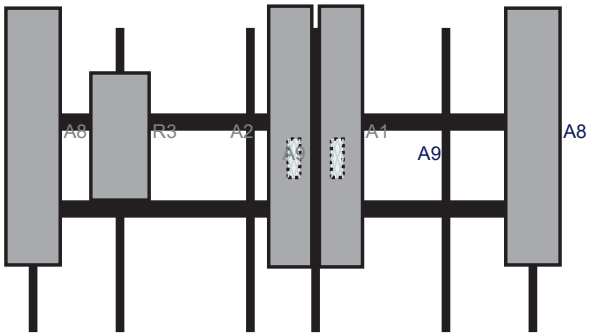
Plan View



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
A8	LPA-80063/6CF_5	70.9	15	141	1	a	Front	30	0	Retained	09/29/2023
A1	NHH-65B-R2B	72	11.9	81	3	a	Front	30	7	Retained	09/29/2023
A2	NHHSS-65B-R2BT4	72	11.9	81	3	b	Front	30	-7	Retained	09/29/2023
A9	BSF0020F3V1-1	10.6	3.2	81	3	a	Behind	36	6	Added	
A9	BSF0020F3V1-1	10.6	3.2	81	3	b	Behind	36	-6	Added	
R3	MT6407-77A	35.1	16.1	27	4	a	Front	30	0	Retained	09/29/2023
A8	LPA-80063/6CF_5	70.9	15	3	5	a	Front	30	0	Retained	09/29/2023

Sector: **C**

Structure Type: Monopole

Mount Elev: 100.00

10319722

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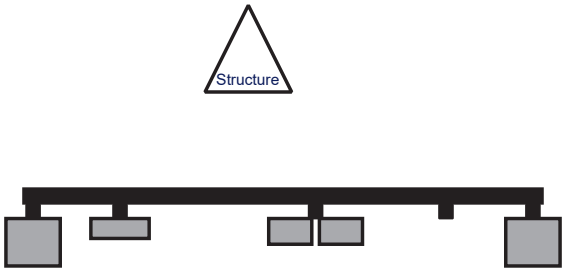
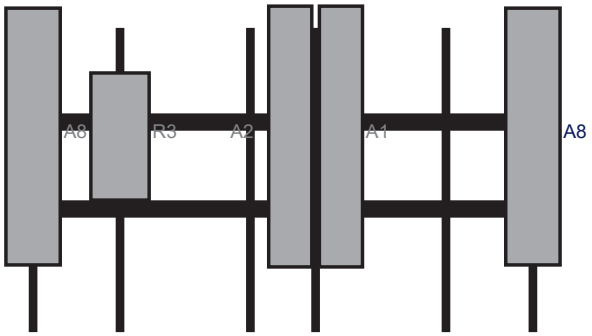
Plan View



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
A8	LPA-80063/6CF_5	70.9	15	141	1	a	Front	30	0	Retained	09/29/2023
A1	NHH-65B-R2B	72	11.9	81	3	a	Front	30	7	Retained	09/29/2023
A2	NHHSS-65B-R2BT4	72	11.9	81	3	b	Front	30	-7	Retained	09/29/2023
R3	MT6407-77A	35.1	16.1	27	4	a	Front	30	0	Retained	09/29/2023
A8	LPA-80063/6CF_5	70.9	15	3	5	a	Front	30	0	Retained	09/29/2023

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MOUNT MODIFICATION DRAWINGS
EXISTING 12.00' T-ARM

TOWER OWNER: AMERICAN TOWER CORPORATION
TOWER OWNER SITE NUMBER: 411187

CARRIER SITE NAME: BLOOMFIELD BLUE HILLS CT
CARRIER SITE NUMBER: 5000103428
FUZE ID: 17390723

811 BLUE HILLS AVE
BLOOMFIELD, CONNECTICUT 06002
HARTFORD COUNTY

LATITUDE: 41.80968333° N
LONGITUDE: 72.69659722° W

DESIGN CRITERIA

WIND LOADS

BASIC WIND SPEED (3 SECOND GUST), V = 120 MPH
EXPOSURE CATEGORY C
TOPOGRAPHIC CATEGORY: 1
TOPOGRAPHIC CONSIDERED: N/A
TOPOGRAPHIC METHOD: N/A
MEAN BASE ELEVATION (AMSL) = 154.24'

ICE LOADS

ICE WIND SPEED (3 SECOND GUST), V = 50 MPH
ICE THICKNESS = 1.50 IN

SEISMIC LOADS

SEISMIC DESIGN CATEGORY B
SHORT TERM MCER GROUND MOTION, S_S = .182
LONG TERM MCER GROUND MOTION, S_1 = .055

PROJECT INFORMATION

APPLICANT/LESSEE

COMPANY: VERIZON WIRELESS

CLIENT REPRESENTATIVE

COMPANY: VERIZON WIRELESS

PROJECT MANAGER

COMPANY: COLLIERS ENGINEERING & DESIGN
CONTACT: SEAN O'SULLIVAN
PHONE: 856.797.0412
E-MAIL: SEAN.OSULLIVAN@COLLIERSENG.COM

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION: HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #: 10322905
VZW MDG #: 5000103428
ANALYSIS DATE: 9/24/2025

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

SHEET INDEX

Colliers Engineering & Design

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VERIZON WIRELESS

MOUNT MODIFICATION

BLOOMFIELD BLUE HILLS CT
5000103428
811 BLUE HILLS AVE
BLOOMFIELD,
CONNECTICUT 06002
HARTFORD COUNTY

Colliers Engineering & Design
MT. LAUREL
2000 Midlantic Drive, Suite 100
Mt. Laurel Township, NJ 08054
Phone: 856.797.0412
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT, P.C.

SCALE: AS SHOWN
DRAWN BY: CFL
DESIGNED BY: CFL
REVIEWED BY: GHW
DATE ISSUED: 09/24/25
PROJECT NUMBER: 25777186
SHEET NAME: TITLE SHEET
DRAWING NUMBER: ST-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
1	VZWSMART	VZWSMART-PLK7	MONOPOLE COLLAR MOUNT ASSEMBLY		150	150
3		VZWSMART-PLK6	V-BRACING KIT FOR MONOPOLE		109	327
3		VZWSMART-AL333	CLIP ANGLE		3	9

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
-	-	U-BOLTS	5/8" DIA. GR. A36 U-BOLTS	GALVANIZED. U-BOLT QUANTITY AND INNER WIDTH ARE TO BE VERIFIED BY CONTRACTOR.	-	-

SECTION 3 - REQUIRED SAFETY CLIMB PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
					TOTAL:	486

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 PARTS ARE GALVANIZED UNLESS NOTED OTHERWISE
3. ALL MATERIALS REQUIRED FOR THE DESIGNED MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.

VZWSMART KITS - APPROVED VENDORS

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

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

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

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

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

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0	09/24/25	ISSUED FOR CONSTRUCTION
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VERIZON WIRELESS

MOUNT MODIFICATION

BLOOMFIELD BLUE HILLS CT
5000103428
811 BLUE HILLS AVE
BLOOMFIELD, CONNECTICUT 06002
HARTFORD COUNTY

Colliers Engineering & Design
MT. LAUREL
2000 Midlantic Drive, Suite 100
Mt. Laurel Township, NJ 08054
Phone: 856.797.0412
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT, P.C.

SCALE: AS SHOWN	DRAWN BY: CFL
DESIGNED BY: CFL	REVIEWED BY: GHW
DATE ISSUED: 09/24/25	PROJECT NUMBER: 25777186

SHEET NAME: BILL OF MATERIALS

DRAWING NUMBER: SBOM-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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

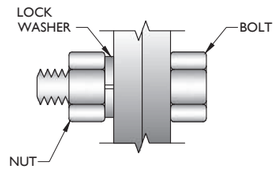
1. DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING PUBLICATIONS EXCEPT AS SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS.
   a. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION (15TH EDITION)
   b. SPECIFICATION FOR STRUCTURAL 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
      SEAN.OSULLIVAN@COLLIERSENG.COM
   b. PROVIDE COLLIERS ENGINEERING & DESIGN PROJECT # AND COLLIERS ENGINEERING & DESIGN PROJECT ENGINEER CONTACT IN THE BODY OF THE EMAIL.
5. DRILL NO HOLES IN ANY NEW OR EXISTING STRUCTURAL STEEL MEMBERS OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.
6. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
7. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
8. ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH TIA-222-H SECTION 4.9.2 REQUIREMENTS.
9. WHERE CONNECTIONS ARE NOT FULLY DETAILED ON THESE DRAWINGS, FABRICATOR SHALL DESIGN CONNECTIONS TO RESIST LOADS AND FORCES WHERE SHOWN ON DRAWINGS AND AS OUTLINED IN SPECIFICATIONS.
10. FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE. MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
11. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT IS AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
12. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
13. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
14. ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINC COTE, OR EOR APPROVED EQUAL), AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).
15. ALL HOLES IN STEEL MEMBERS SHALL BE SIZED 1/16" LARGER THAN THE BOLT DIAMETER. STANDARD HOLES SHALL BE USED UNLESS NOTED OTHERWISE.

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

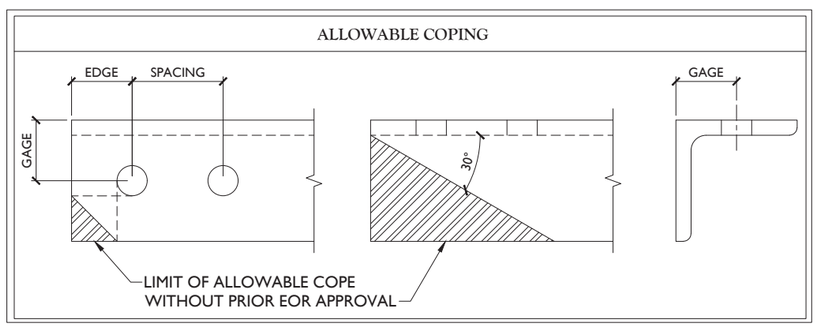
WORKABLE GAGES (IN.)	
LEG	**GAGE**
4	2 1/2
3 1/2	2
3	1 3/4
2 1/2	1 3/8
2	1 1/8



TYP. BOLT ASSEMBLY

NOTES:

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



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REV	DATE	DESCRIPTION
0	09/24/25	ISSUED FOR CONSTRUCTION

verizon

VERIZON WIRELESS

MOUNT MODIFICATION

BLOOMFIELD BLUE HILLS CT
5000103428
811 BLUE HILLS AVE
BLOOMFIELD,
CONNECTICUT 06002
HARTFORD COUNTY

Colliers Engineering & Design
MT. LAUREL
2000 Midlantic Drive, Suite 100
Mt. Laurel Township, NJ 08054
Phone: 856.797.0412
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT, P.C.

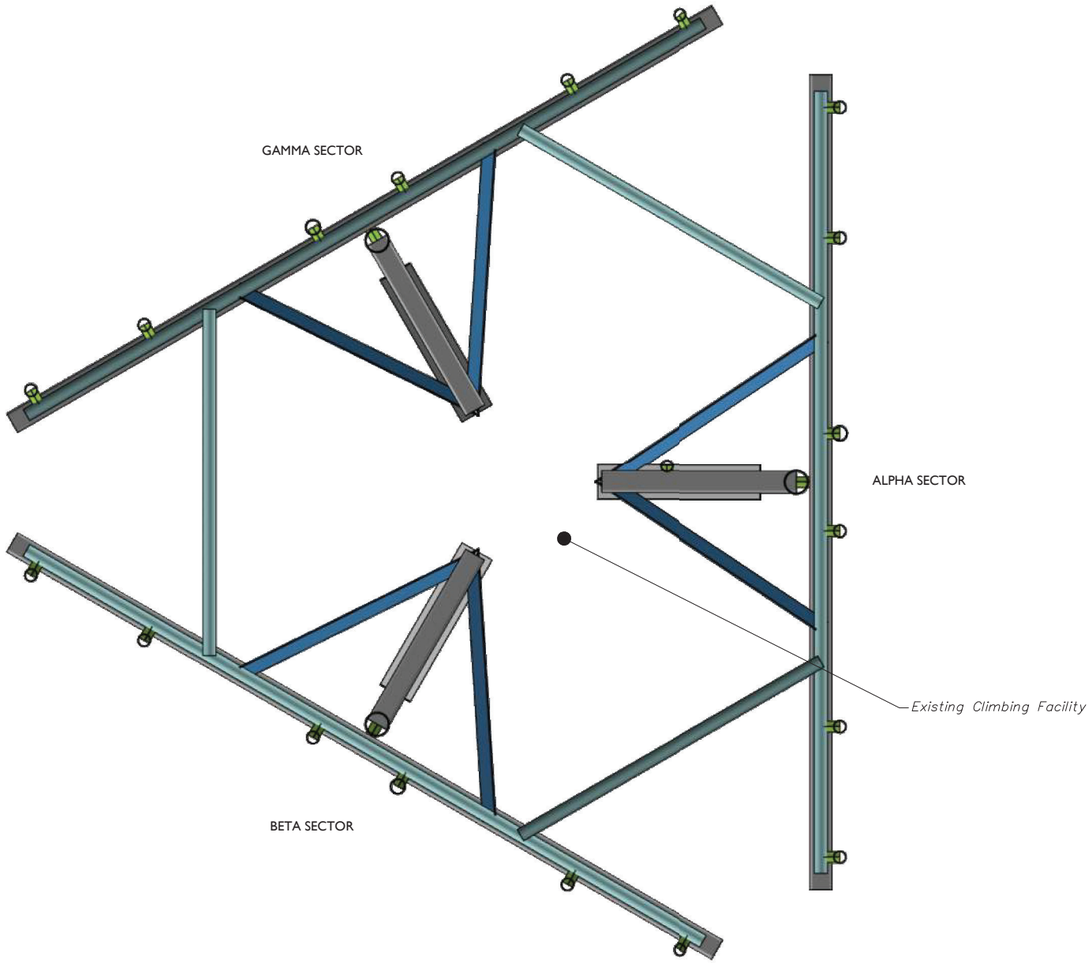
SCALE:	DRAWN BY:
AS SHOWN	CFL
DESIGNED BY:	REVIEWED BY:
CFL	GHW
DATE ISSUED:	PROJECT NUMBER:
09/24/25	25777186

SHEET NAME:

GENERAL NOTES

DRAWING NUMBER:

SGN-1



1 CLIMBING FACILITY LOCATION

SCALE : N.T.S.

NOTE:

A DESKTOP MAPPING WAS COMPLETED AND THERE IS INSUFFICIENT INFORMATION ON THE CLIMBING FACILITY

CLIMBING FACILITY PHOTO

STRUCTURAL NOTES:

1. CONTRACTOR TO INSPECT CLIMBING FACILITIES AT SITE AND ENSURE THAT THE SAFETY CLIMB IS IN GOOD CONDITION AND THAT THE WIRE ROPE DOES NOT OR WILL NOT INTERFERE WITH THE EXISTING OR PROPOSED MOUNT CONNECTIONS. CONTRACTOR SHALL INSTALL SAFETY CLIMB WIRE ROPE GUIDED AROUND MOUNT CONNECTIONS AS NEEDED.

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.

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REV	DATE	DESCRIPTION
0	09/24/25	ISSUED FOR CONSTRUCTION

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VERIZON WIRELESS

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DESIGNED BY: CFL
REVIEWED BY: GHW
DATE ISSUED: 09/24/25
PROJECT NUMBER: 25777186
SHEET NAME:

CLIMBING FACILITY DETAIL

DRAWING NUMBER:

SCF-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

LEGEND:

PROPOSED

RELOCATED

EXISTING

TOTAL VERTICAL ENVELOPE:

CONTRACTOR SHALL VERIFY AND CONFIRM IN FIELD THAT VERIZON'S OVERALL TIP TO TIP VERTICAL SPACE CONFIGURATION (EQUIPMENT AND STEEL COMBINED) DOES NOT EXCEED THE VERTICAL ENVELOPE LISTED IN THESE DRAWINGS. IF THE SITE'S EXISTING OR PROPOSED CONFIGURATION EXCEEDS THE ALLOWED VERTICAL ENVELOPE LISTED IN THESE DRAWINGS, CONTRACTOR SHALL CONTACT EOR IMMEDIATELY FOR A SOLUTION ON HOW TO CORRECT THE ISSUE PRIOR TO LEAVING THE SITE.

MOUNT MODIFICATION SCHEDULE

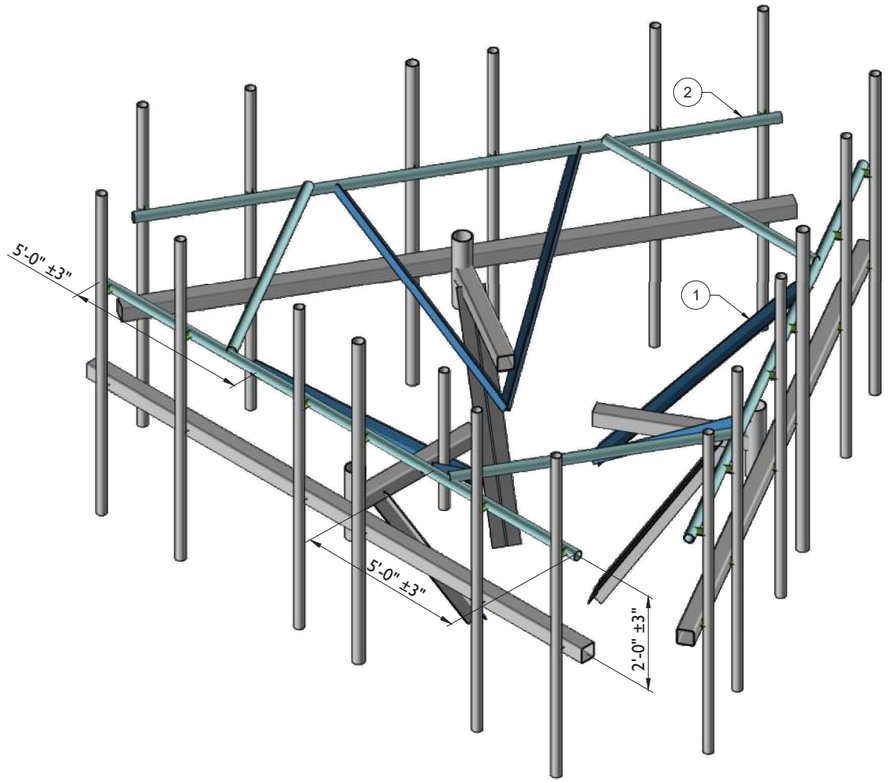
NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	100'-00"	3	PROPOSED V-BRACING KIT FOR MONOPOLE (PART #: VZWSMART-PLK6)	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1. CONTRACTOR SHALL INSTALL ONE PROPOSED CLIP ANGLE (PART #:VZWSMART-AL333) AT EITHER END OF EACH LONG ANGLE IN THE PLK6 KIT. CONNECT OTHER END OF V-BRACING KIT TO MONOPOLE COLLAR MOUNT ASSEMBLY (PART #: VZWSMART-PLK7). SEE GENERAL NOTE B.
2		1	RELOCATED SUPPORT RAIL HARDWARE	CONTRACTOR TO SHIFT EXISTING SUPPORT RAIL AND BRACING PIPES DOWNWARD. RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE. RECONNECT SHIFTED HARDWARE TO ALL EXISTING MOUNT PIPES WITH EXISTING CONNECTION HARDWARE AND NEW BOLTS. DO NOT REUSE EXISTING BOLTS. RESTORE ANY DEGRADATION IN GALVANIZATION DUE TO RELOCATED HARDWARE WITH TWO (2) COATS OF ZINGA OR ZINC KOTE.

GENERAL NOTES:

A. CONTRACTOR SHALL VERIFY THAT NEW & EXISTING STEEL IS FREE OF CORROSION. VISIBLE MINOR CORROSION SHALL BE WIRE BRUSHED CLEAN AND TREATED WITH ZINGA OR ZINC KOTE. REPORT ANY SIGNIFICANT CORROSION TO EOR

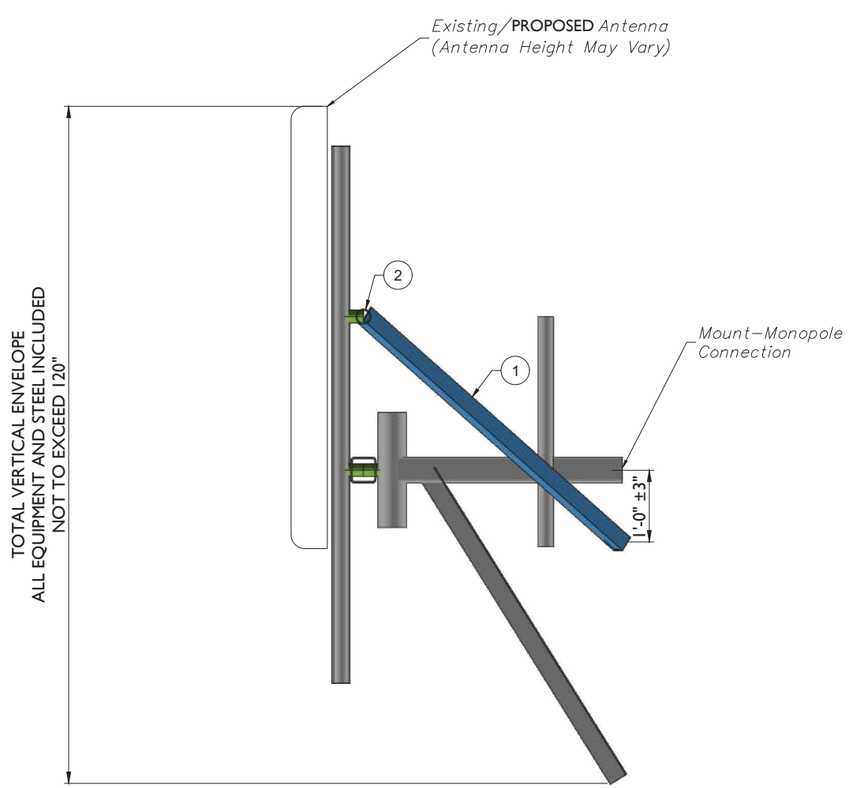
B. THREADED ROD FROM PROPOSED KITS SHALL BE TRIMMED TO EXTEND NO MORE THAN 3" BEYOND THE LOCK NUT. TREAT ALL CUT ENDS WITH ZINGA OR ZINC KOTE.

C. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.



1 PROPOSED ISOMETRIC VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.



2 PROPOSED SIDE ELEVATION VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.

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VERIZON WIRELESS

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SCALE:	DRAWN BY:
AS SHOWN	CFL
DESIGNED BY:	REVIEWED BY:
CFL	GHW
DATE ISSUED:	PROJECT NUMBER:
09/24/25	25777186

SHEET NAME:

MODIFICATION DETAILS

DRAWING NUMBER:

SS-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

MOUNT PHOTO 1

MOUNT PHOTO 2

MOUNT PHOTO 3

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SCALE: AS SHOWN
DRAWN BY: CFL
DESIGNED BY: CFL
REVIEWED BY: GHW
DATE ISSUED: 09/24/25
PROJECT NUMBER: 25777186

SHEET NAME:

MOUNT PHOTOS

DRAWING NUMBER:

SS-2

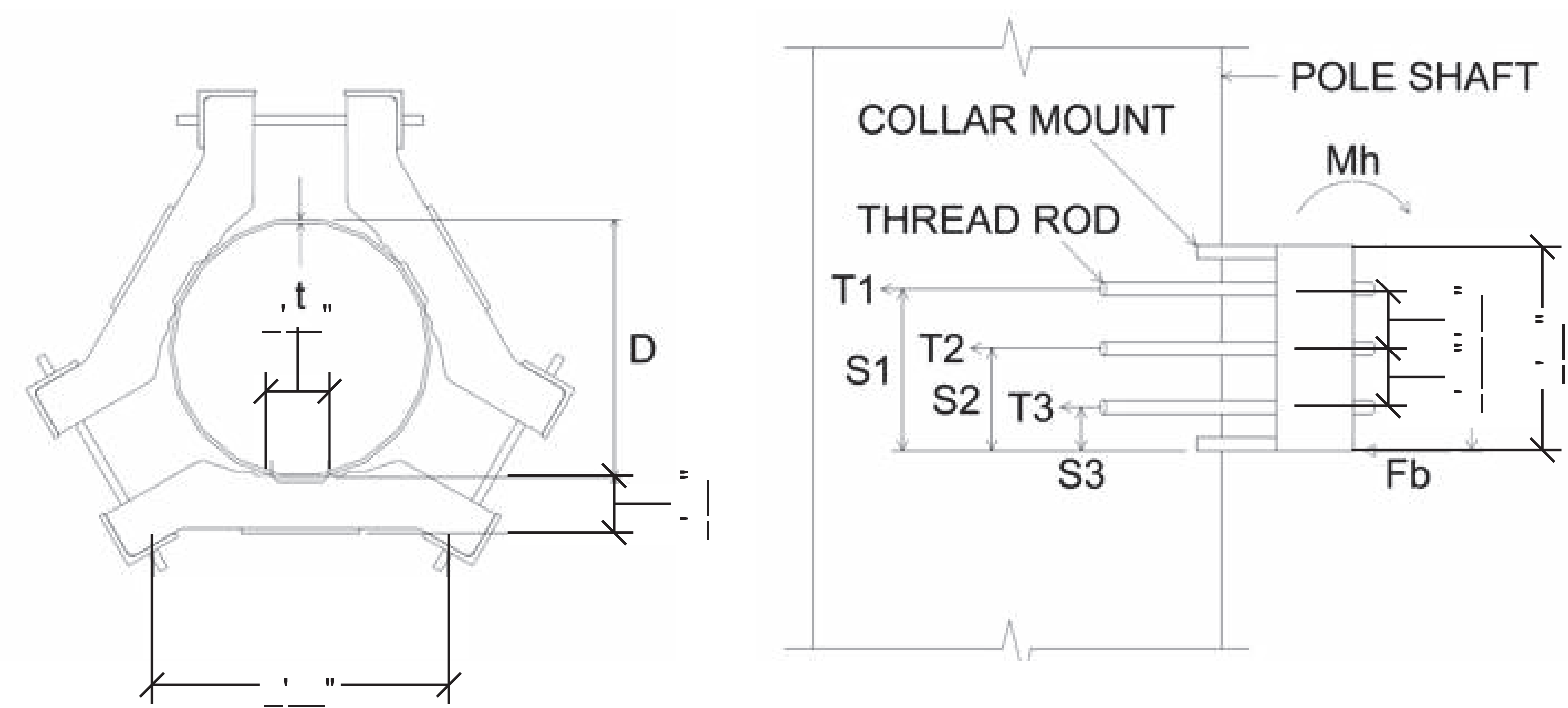
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

EXISTING MEMBERS				
NO.	DESCRIPTION	SHAPE	LENGTH	NOTES
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

LIST ALL SHAPES:
ANGLE (LEG1xLEG2xTH.): EX. L2x2x1/4
CHANNEL (DEPTHxFLANGE WIDTH): EX. CH6"x1-7/8"
PIPE (ODxTH.): EX. PIPE 2.4"x0.12"
PLATE (TH.xDEPTH): EX. PLATE 1/2"x2"

NOTE:

CONTRACTOR SHALL RECORD ALL DIMENSIONS AND MEMBER SIZES SHOWN IN THIS SKETCH. DOCUMENT VIA PHOTOS AND SKETCHES AND PROVIDE TO THE EOR FOR EVALUATION.



1 MOUNT TO TOWER COLLAR DETAIL

SCALE : N.T.S.

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REV	DATE	DESCRIPTION
0	09/24/25	ISSUED FOR CONSTRUCTION

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VERIZON WIRELESS

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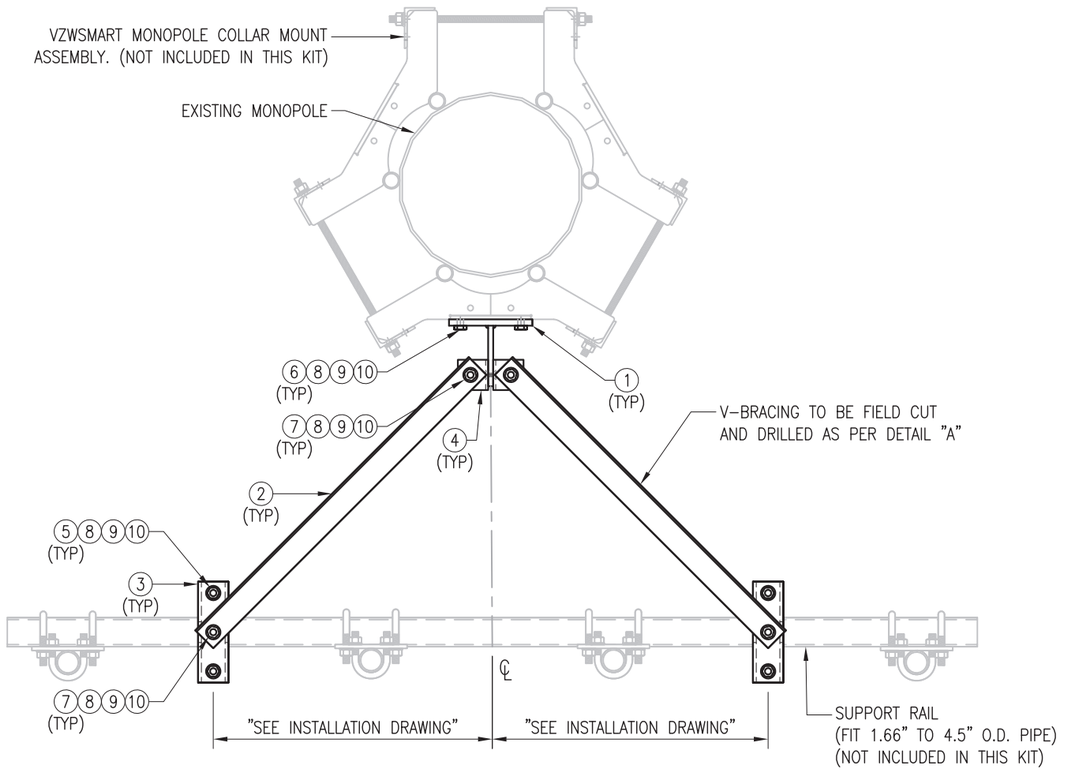
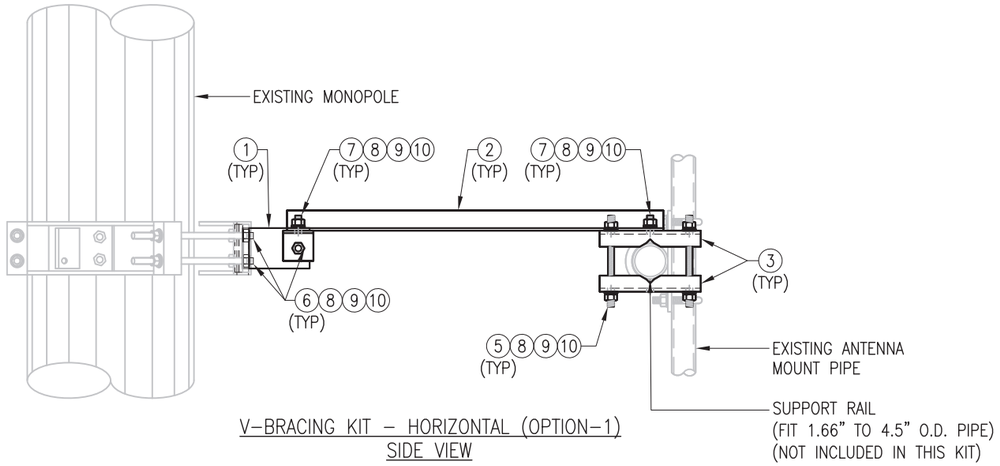
SCALE: AS SHOWN
DRAWN BY: CFL
DESIGNED BY: CFL
REVIEWED BY: GHW
DATE ISSUED: 09/24/25
PROJECT NUMBER: 25777186
SHEET NAME: GEOMETRY VERIFICATION SKETCHES
DRAWING NUMBER: SS-3

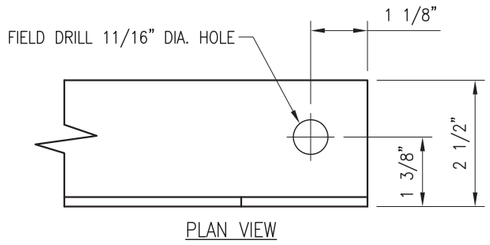
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



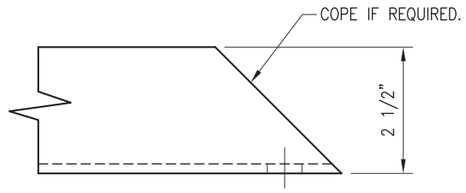
V-BRACING KIT FOR MONOPOLE
PLAN VIEW



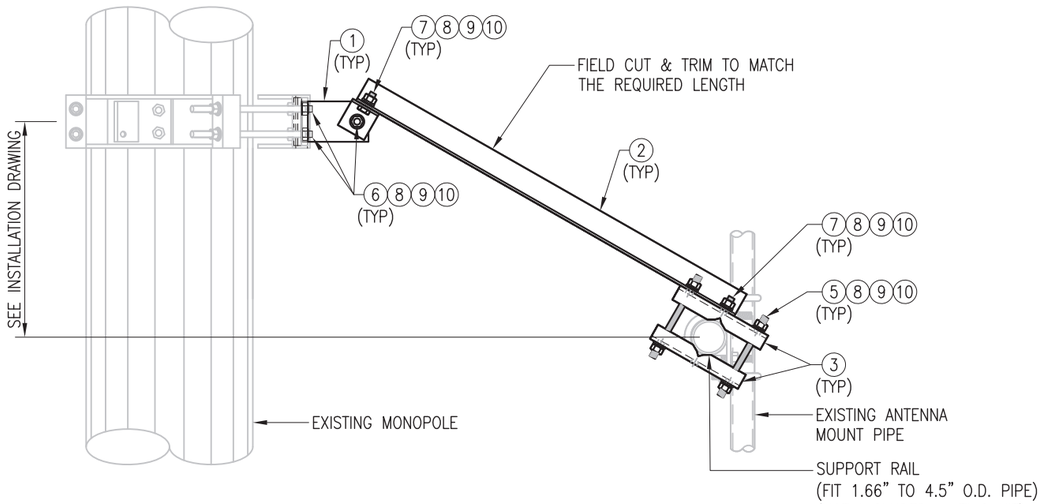
V-BRACING KIT - HORIZONTAL (OPTION-1)
SIDE VIEW



PLAN VIEW



FRONT VIEW
DETAIL "A"



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

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

VZWSMART-PLK6 (V-BRACING KIT FOR MONOPOLE)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	BRKW-6A	WELDMENT BRACKET	PLK6-F1	16
2	2	L252525-8	L 2 1/2" X 2 1/2" X 1/4" X 8'-0" A36	PLK6-F2	67
3	4	BP6875-10	PL 3/8" X 6 7/8" X 10" A36 BENT PLATE	PLK6-F2	20
4	2	AL-333	L 3" X 3" X 1/4" X 3" A36	PLK6-F2	3
5	4	---	THREADED ROD 5/8" DIA. X 10" F1554-36 HDG	---	--
6	5	---	BOLT 5/8" X 2 1/4" A325	---	--
7	4	---	BOLT 5/8" X 1 3/4" A325	---	--
8	17	FW-625	5/8" HDG USS FLAT WASHER	---	2
9	17	LW-625	5/8" HDG LOCK WASHER	---	0
10	17	NUT-625	5/8" HDG HEX NUT	---	2
				GALVANIZED WT	109

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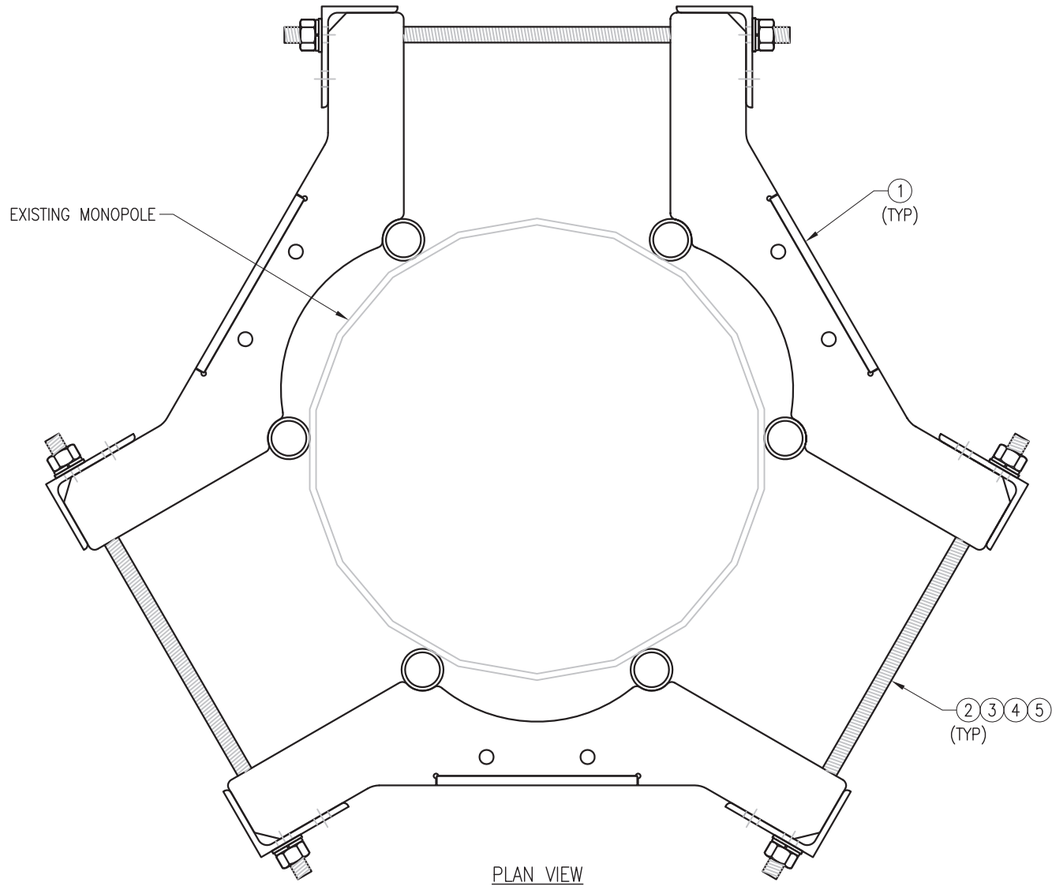
DRAWN BY: FL | CHECKED BY: KL/BT

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	FL	04/13/21

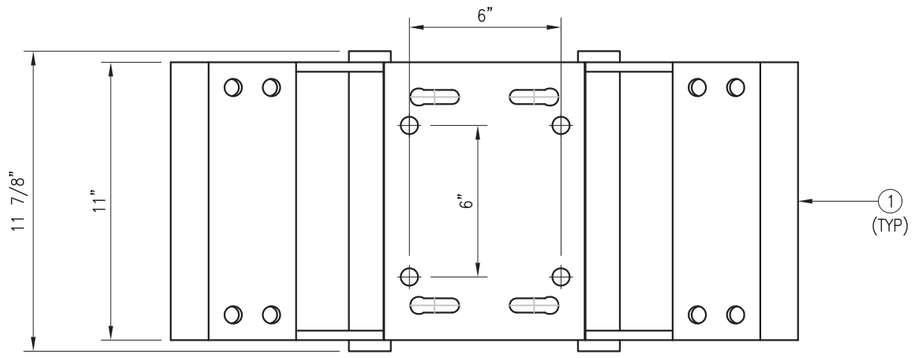
SHEET TITLE:
VZWSMART-PLK6
V-BRACING KIT FOR MONOPOLE

SHEET NUMBER: VZWSMART-PLK6

REV #: 0



PLAN VIEW
MONOPOLE COLLAR MOUNT ASSEMBLY



FRONT VIEW

NOTES:
1. FIT 12" TO 45" DIA MONOPOLE.
2. HOT-DIPPED GALVANIZED PER ASTM A123.

VZWSMART-PLK7 (MONOPOLE COLLAR MOUNT ASSEMBLY)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	3	CM-1245	COLLAR MOUNT ASSEMBLY	PLK7-F1	147
2	6	---	THREADED ROD 5/8" X 4'-0" A193-B7	---	
3	12	FW-625	5/8" HDG USS FLAT WASHER	---	1
4	12	LW-625	5/8" HDG LOCK WASHER	---	0
5	12	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	150

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DRAWN BY: BT | CHECKED BY: HMA/KW

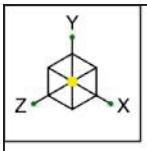
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	05/11/20

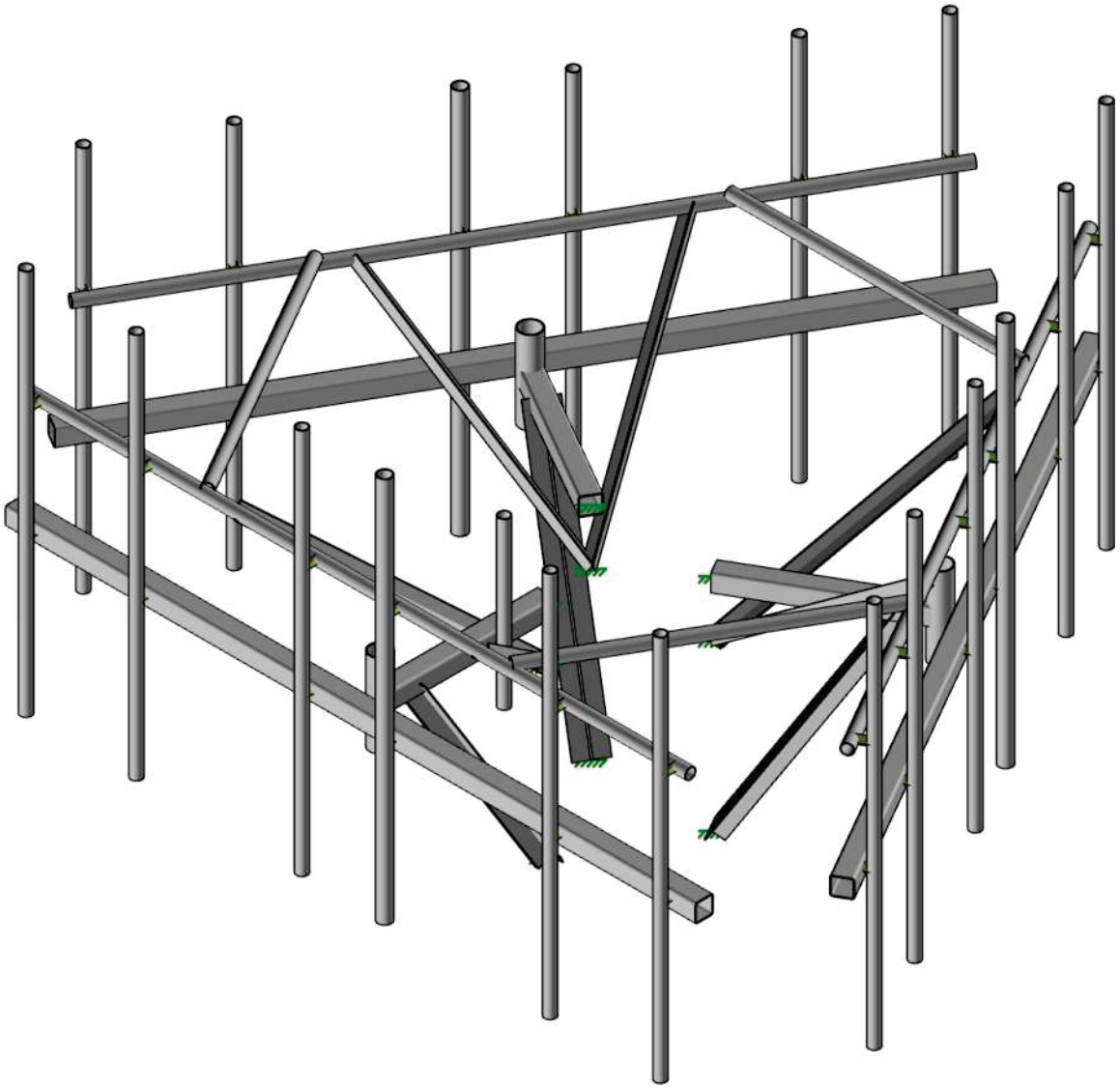
SHEET TITLE:
VZWSMART-PLK7
MONOPOLE COLLAR
MOUNT ASSEMBLY

SHEET NUMBER: VZWSMART-PLK7

REV #: 0


United States





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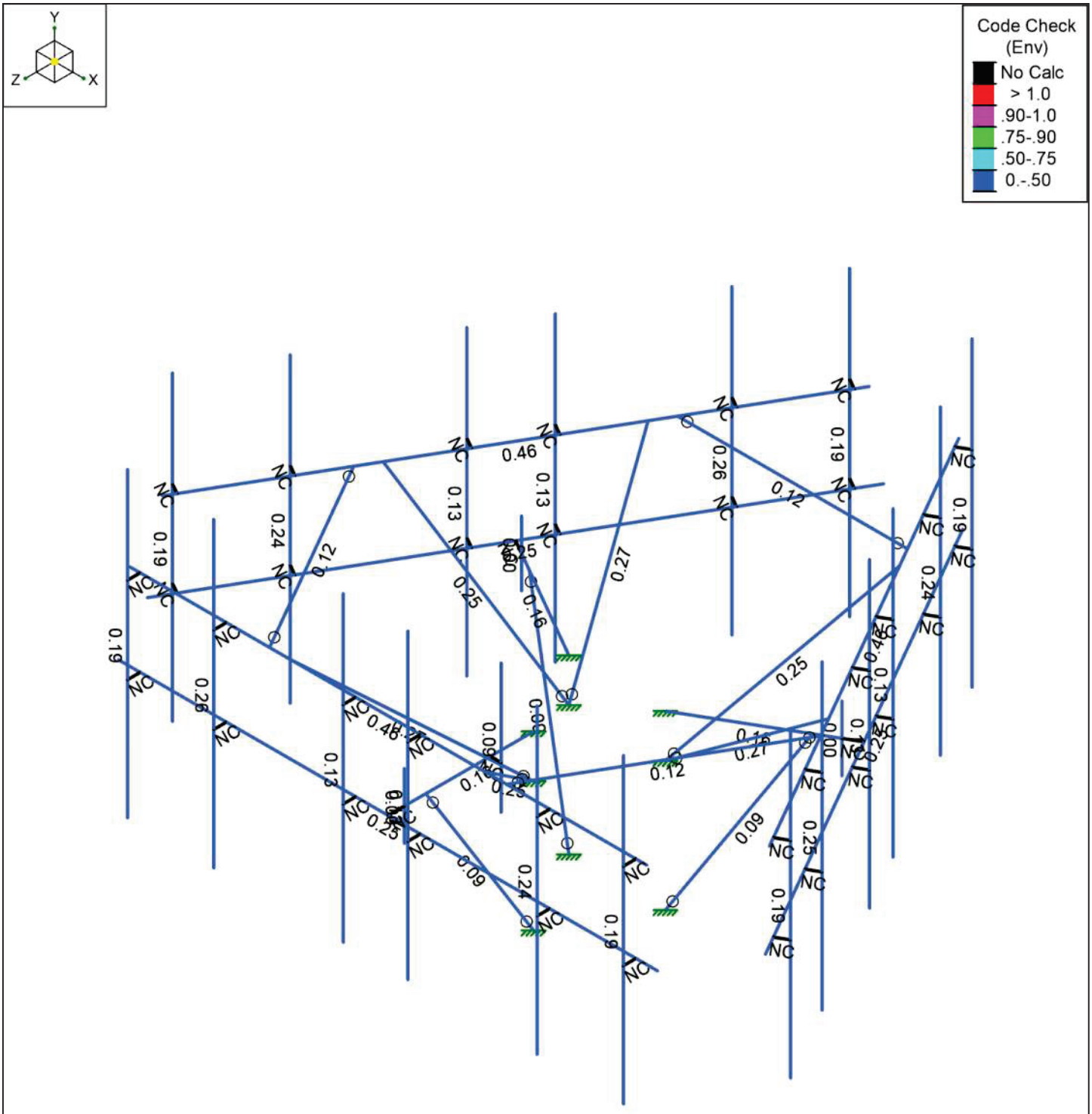
	Project No. 10322905		5000103428-VZW_MT_LO_…



Member Code Checks Displayed (Enveloped)
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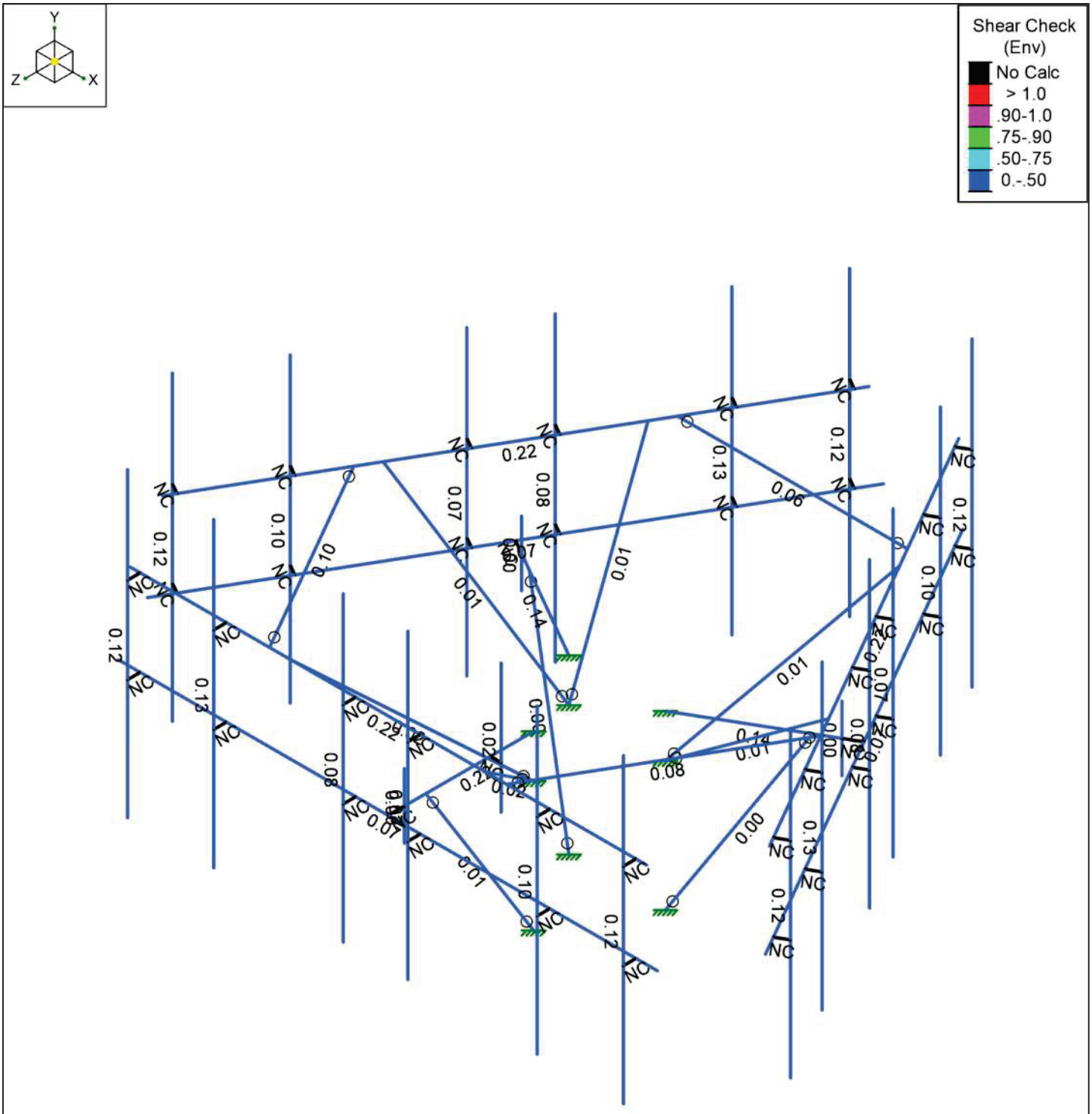
	Project No. 10322905		5000103428-VZW_MT_LO_…



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	Project No. 10322905		5000103428-VZW_MT_LO_…

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Point	Distributed
1	Antenna D	None				99	
2	Antenna Di	None				99	
3	Antenna Wo (0 Deg)	None				99	
4	Antenna Wo (30 Deg)	None				99	
5	Antenna Wo (60 Deg)	None				99	
6	Antenna Wo (90 Deg)	None				99	
7	Antenna Wo (120 Deg)	None				99	
8	Antenna Wo (150 Deg)	None				99	
9	Antenna Wo (180 Deg)	None				99	
10	Antenna Wo (210 Deg)	None				99	
11	Antenna Wo (240 Deg)	None				99	
12	Antenna Wo (270 Deg)	None				99	
13	Antenna Wo (300 Deg)	None				99	
14	Antenna Wo (330 Deg)	None				99	
15	Antenna Wi (0 Deg)	None				99	
16	Antenna Wi (30 Deg)	None				99	
17	Antenna Wi (60 Deg)	None				99	
18	Antenna Wi (90 Deg)	None				99	
19	Antenna Wi (120 Deg)	None				99	
20	Antenna Wi (150 Deg)	None				99	
21	Antenna Wi (180 Deg)	None				99	
22	Antenna Wi (210 Deg)	None				99	
23	Antenna Wi (240 Deg)	None				99	
24	Antenna Wi (270 Deg)	None				99	
25	Antenna Wi (300 Deg)	None				99	
26	Antenna Wi (330 Deg)	None				99	
27	Antenna Wm (0 Deg)	None				99	
28	Antenna Wm (30 Deg)	None				99	
29	Antenna Wm (60 Deg)	None				99	
30	Antenna Wm (90 Deg)	None				99	
31	Antenna Wm (120 Deg)	None				99	
32	Antenna Wm (150 Deg)	None				99	
33	Antenna Wm (180 Deg)	None				99	
34	Antenna Wm (210 Deg)	None				99	
35	Antenna Wm (240 Deg)	None				99	
36	Antenna Wm (270 Deg)	None				99	
37	Antenna Wm (300 Deg)	None				99	
38	Antenna Wm (330 Deg)	None				99	
39	Structure D	None		-1			
40	Structure Di	None					43
41	Structure Wo (0 Deg)	None					86
42	Structure Wo (30 Deg)	None					86
43	Structure Wo (60 Deg)	None					86
44	Structure Wo (90 Deg)	None					86
45	Structure Wo (120 Deg)	None					86
46	Structure Wo (150 Deg)	None					86
47	Structure Wo (180 Deg)	None					86
48	Structure Wo (210 Deg)	None					86
49	Structure Wo (240 Deg)	None					86
50	Structure Wo (270 Deg)	None					86
51	Structure Wo (300 Deg)	None					86
52	Structure Wo (330 Deg)	None					86
53	Structure Wi (0 Deg)	None					86
54	Structure Wi (30 Deg)	None					86
55	Structure Wi (60 Deg)	None					86

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Point	Distributed
56	Structure Wi (90 Deg)	None					86
57	Structure Wi (120 Deg)	None					86
58	Structure Wi (150 Deg)	None					86
59	Structure Wi (180 Deg)	None					86
60	Structure Wi (210 Deg)	None					86
61	Structure Wi (240 Deg)	None					86
62	Structure Wi (270 Deg)	None					86
63	Structure Wi (300 Deg)	None					86
64	Structure Wi (330 Deg)	None					86
65	Structure Wm (0 Deg)	None					86
66	Structure Wm (30 Deg)	None					86
67	Structure Wm (60 Deg)	None					86
68	Structure Wm (90 Deg)	None					86
69	Structure Wm (120 Deg)	None					86
70	Structure Wm (150 Deg)	None					86
71	Structure Wm (180 Deg)	None					86
72	Structure Wm (210 Deg)	None					86
73	Structure Wm (240 Deg)	None					86
74	Structure Wm (270 Deg)	None					86
75	Structure Wm (300 Deg)	None					86
76	Structure Wm (330 Deg)	None					86
77	Lm1	None				1	
78	Lm2	None				1	
79	Lv1	None				1	
80	Lv2	None				1	
81	Antenna Ev	None				99	
82	Antenna Eh (0 Deg)	None				66	
83	Antenna Eh (90 Deg)	None				66	
84	Structure Ev	ELY		-0.039			
85	Structure Eh (0 Deg)	ELZ			-0.097		
86	Structure Eh (90 Deg)	ELX	0.097				

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
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				
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				

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
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 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	31	1	69	1						
30	1.2D + 1.5Lm1 + 1.0Wm (150 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	32	1	70	1						
31	1.2D + 1.5Lm1 + 1.0Wm (180 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	33	1	71	1						
32	1.2D + 1.5Lm1 + 1.0Wm (210 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	34	1	72	1						
33	1.2D + 1.5Lm1 + 1.0Wm (240 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	35	1	73	1						
34	1.2D + 1.5Lm1 + 1.0Wm (270 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	36	1	74	1						
35	1.2D + 1.5Lm1 + 1.0Wm (300 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	37	1	75	1						
36	1.2D + 1.5Lm1 + 1.0Wm (330 Deg)	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 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	31	1	69	1						
42	1.2D + 1.5Lm2 + 1.0Wm (150 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	32	1	70	1						
43	1.2D + 1.5Lm2 + 1.0Wm (180 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	33	1	71	1						
44	1.2D + 1.5Lm2 + 1.0Wm (210 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	34	1	72	1						
45	1.2D + 1.5Lm2 + 1.0Wm (240 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	35	1	73	1						
46	1.2D + 1.5Lm2 + 1.0Wm (270 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	36	1	74	1						
47	1.2D + 1.5Lm2 + 1.0Wm (300 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	37	1	75	1						
48	1.2D + 1.5Lm2 + 1.0Wm (330 Deg)	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	ELY	1	82	1	83		ELZ	1	ELX	
53	1.2D + 1.0Ev + 1.0Eh (30 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.866	83	0.5	ELZ	0.866	ELX	0.5
54	1.2D + 1.0Ev + 1.0Eh (60 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.5	83	0.866	ELZ	0.5	ELX	0.866
55	1.2D + 1.0Ev + 1.0Eh (90 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82		83	1	ELZ		ELX	1
56	1.2D + 1.0Ev + 1.0Eh (120 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.5	83	0.866	ELZ	-0.5	ELX	0.866
57	1.2D + 1.0Ev + 1.0Eh (150 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.866	83	0.5	ELZ	-0.866	ELX	0.5
58	1.2D + 1.0Ev + 1.0Eh (180 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-1	83		ELZ	-1	ELX	
59	1.2D + 1.0Ev + 1.0Eh (210 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.866	83	-0.5	ELZ	-0.866	ELX	-0.5
60	1.2D + 1.0Ev + 1.0Eh (240 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.5	83	-0.866	ELZ	-0.5	ELX	-0.866
61	1.2D + 1.0Ev + 1.0Eh (270 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82		83	-1	ELZ		ELX	-1
62	1.2D + 1.0Ev + 1.0Eh (300 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.5	83	-0.866	ELZ	0.5	ELX	-0.866
63	1.2D + 1.0Ev + 1.0Eh (330 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.866	83	-0.5	ELZ	0.866	ELX	-0.5
64	0.9D - 1.0Ev + 1.0Eh (0 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	1	83		ELZ	1	ELX	
65	0.9D - 1.0Ev + 1.0Eh (30 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.866	83	0.5	ELZ	0.866	ELX	0.5
66	0.9D - 1.0Ev + 1.0Eh (60 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.5	83	0.866	ELZ	0.5	ELX	0.866
67	0.9D - 1.0Ev + 1.0Eh (90 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82		83	1	ELZ		ELX	1
68	0.9D - 1.0Ev + 1.0Eh (120 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.5	83	0.866	ELZ	-0.5	ELX	0.866
69	0.9D - 1.0Ev + 1.0Eh (150 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.866	83	0.5	ELZ	-0.866	ELX	0.5
70	0.9D - 1.0Ev + 1.0Eh (180 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-1	83		ELZ	-1	ELX	
71	0.9D - 1.0Ev + 1.0Eh (210 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.866	83	-0.5	ELZ	-0.866	ELX	-0.5
72	0.9D - 1.0Ev + 1.0Eh (240 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.5	83	-0.866	ELZ	-0.5	ELX	-0.866
73	0.9D - 1.0Ev + 1.0Eh (270 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82		83	-1	ELZ		ELX	-1
74	0.9D - 1.0Ev + 1.0Eh (300 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.5	83	-0.866	ELZ	0.5	ELX	-0.866
75	0.9D - 1.0Ev + 1.0Eh (330 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.866	83	-0.5	ELZ	0.866	ELX	-0.5

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	Standoff Horizontal	HSS4X4X4	None	None	A500 Gr.B RECT	Typical	3.37	7.8	7.8	12.8
2	Standoff Vertical	PIPE 4.0	None	None	A53 Gr.B	Typical	2.96	6.82	6.82	13.6
3	Face Horizontal	HSS4X4X4	None	None	A500 Gr.B RECT	Typical	3.37	7.8	7.8	12.8
4	Mount Pipe (P2 STD)	PIPE 2.0	None	None	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
5	Mod Face Horizontal (P2 STD)	PIPE_2.0	None	None	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
6	Mod Mount Pipe (P2.5 STD)	PIPE 2.5	None	None	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
7	Mod Kickers	LL3X3X3X3	None	None	A36 Gr.36	Typical	2.18	4.09	1.9	0.027
8	Mod Stabilizer Pipe	PIPE 2.0	None	None	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
9	MOD V-Bracing	L2.5X2.5X4	Column	Single Angle	A53 Gr.B	Typical	1.19	0.692	0.692	0.026

Node Coordinates

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1	A1	-0.000003	0	1.166665	
2	A2	-0.000003	0	4.166665	
3	A3	-6.250003	0	4.541665	
4	A4	6.249997	0	4.541665	
5	A5	-5.750003	0	4.541665	
6	A6	-5.750003	0	4.833332	
7	A7	-3.750003	0	4.541665	
8	A8	-3.750003	0	4.833332	
9	A9	-0.750003	0	4.541665	
10	A10	-0.750003	0	4.833332	
11	A11	0.749997	0	4.541665	
12	A12	0.749997	0	4.833332	
13	A13	3.749997	0	4.541665	
14	A14	3.749997	0	4.833332	
15	A15	5.749997	0	4.541665	
16	A16	5.749997	0	4.833332	
17	A17	-0.000003	0	4.541665	
18	A18	0	0.75	4.166665	
19	A19	0	-0.75	4.166665	
20	A20	-5.750003	4.22223	4.833332	
21	A21	-3.750003	4.22223	4.833332	
22	A22	-0.750003	4.22223	4.833332	
23	A23	0.749997	4.22223	4.833332	
24	A24	3.749997	4.22223	4.833332	
25	A25	5.749997	4.22223	4.833332	
26	A26	-5.750003	-2.77777	4.833332	
27	A27	-3.750003	-2.77777	4.833332	
28	A28	-0.750003	-2.77777	4.833332	
29	A29	0.749997	-2.77777	4.833332	
30	A30	3.749997	-2.77777	4.833332	
31	A31	5.749997	-2.77777	4.833332	
32	N34	-6.000003	2	4.541665	
33	N35	5.999997	2	4.541665	
34	N36	-5.750003	2	4.541665	
35	N37	-5.750003	2	4.833332	
36	N38	-3.750003	2	4.541665	
37	N39	-3.750003	2	4.833332	
38	N40	-0.750003	2	4.541665	
39	N41	-0.750003	2	4.833332	
40	N42	0.749997	2	4.541665	
41	N43	0.749997	2	4.833332	
42	N44	3.749997	2	4.541665	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
43	N45	3.749997	2	4.833332	
44	N46	5.749997	2	4.541665	
45	N47	5.749997	2	4.833332	
46	N67	-0.000003	-4	1.166665	
47	N68	-0.000003	0	3.666665	
48	N72A	-0.000003	0	-0.125002	
49	N69A	-1.118619	0	-0.770835	
50	N70	-3.716691	0	-2.270833	
51	N73A	-1.166455	0	-7.437981	
52	N74	-1.419045	0	-7.583814	
53	N75	-2.166455	0	-5.70593	
54	N76	-2.419045	0	-5.851764	
55	N77	-3.666455	0	-3.107854	
56	N78	-3.919045	0	-3.253687	
57	N79	-4.416455	0	-1.808816	
58	N80	-4.669045	0	-1.954649	
59	N81	-5.916455	0	0.78926	
60	N82	-6.169045	0	0.643427	
61	N83	-6.916455	0	2.521311	
62	N84	-7.169045	0	2.375478	
63	N85	-4.041455	0	-2.458335	
64	N86	-3.716696	0.75	-2.270833	
65	N87	-3.716696	-0.75	-2.270833	
66	N88	-1.419045	4.22223	-7.583814	
67	N89	-2.419045	4.22223	-5.851764	
68	N90	-3.919045	4.22223	-3.253687	
69	N91	-4.669045	4.22223	-1.954649	
70	N92	-6.169045	4.22223	0.643427	
71	N93	-7.169045	4.22223	2.375478	
72	N94	-1.419045	-2.77777	-7.583814	
73	N95	-2.419045	-2.77777	-5.851764	
74	N96	-3.919045	-2.77777	-3.253687	
75	N97	-4.669045	-2.77777	-1.954649	
76	N98	-6.169045	-2.77777	0.643427	
77	N99	-7.169045	-2.77777	2.375478	
78	N100	-1.041455	2	-7.654487	
79	N101	-7.041455	2	2.737817	
80	N102	-1.166455	2	-7.437981	
81	N103	-1.419045	2	-7.583814	
82	N104	-2.166455	2	-5.70593	
83	N105	-2.419045	2	-5.851764	
84	N106	-3.666455	2	-3.107854	
85	N107	-3.919045	2	-3.253687	
86	N108	-4.416455	2	-1.808816	
87	N109	-4.669045	2	-1.954649	
88	N110	-5.916455	2	0.78926	
89	N111	-6.169045	2	0.643427	
90	N112	-6.916455	2	2.521311	
91	N113	-7.169045	2	2.375478	
92	N137	1.118613	0	-0.770835	
93	N138	3.716694	0	-2.270837	
94	N141	6.916449	0	2.521311	
95	N142	7.16904	0	2.375478	
96	N143	5.916449	0	0.78926	
97	N144	6.16904	0	0.643427	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
98	N145	4.416449	0	-1.808816	
99	N146	4.66904	0	-1.954649	
100	N147	3.666449	0	-3.107854	
101	N148	3.91904	0	-3.253687	
102	N149	2.166449	0	-5.70593	
103	N150	2.41904	0	-5.851764	
104	N151	1.166449	0	-7.437981	
105	N152	1.41904	0	-7.583814	
106	N153	4.041449	0	-2.458335	
107	N154	3.716688	0.75	-2.270837	
108	N155	3.716688	-0.75	-2.270837	
109	N156	7.16904	4.22223	2.375478	
110	N157	6.16904	4.22223	0.643427	
111	N158	4.66904	4.22223	-1.954649	
112	N159	3.91904	4.22223	-3.253687	
113	N160	2.41904	4.22223	-5.851764	
114	N161	1.41904	4.22223	-7.583814	
115	N162	7.16904	-2.77777	2.375478	
116	N163	6.16904	-2.77777	0.643427	
117	N164	4.66904	-2.77777	-1.954649	
118	N165	3.91904	-2.77777	-3.253687	
119	N166	2.41904	-2.77777	-5.851764	
120	N167	1.41904	-2.77777	-7.583814	
121	N168	7.041449	2	2.737817	
122	N169	1.041449	2	-7.654487	
123	N170	6.916449	2	2.521311	
124	N171	7.16904	2	2.375478	
125	N172	5.916449	2	0.78926	
126	N173	6.16904	2	0.643427	
127	N174	4.416449	2	-1.808816	
128	N175	4.66904	2	-1.954649	
129	N176	3.666449	2	-3.107854	
130	N177	3.91904	2	-3.253687	
131	N178	2.166449	2	-5.70593	
132	N179	2.41904	2	-5.851764	
133	N180	1.166449	2	-7.437981	
134	N181	1.41904	2	-7.583814	
135	N203	-2.750003	2	4.541665	
136	N204A	2.749997	2	4.541665	
137	N205	-2.666456	2	-4.839902	
138	N206	-5.416455	2	-0.076765	
139	N207	5.416449	2	-0.076765	
140	N208	2.666451	2	-4.839902	
141	N152A	-3.283682	0	-2.020835	
142	N155A	3.283677	0	-2.020835	
143	N158A	-2.666456	0	-4.839902	
144	N159A	-5.416455	0	-0.076765	
145	N160A	5.416449	0	-0.076765	
146	N161A	2.666451	0	-4.839902	
147	N158B	-5.000003	0	4.541665	
148	N159B	-5.000003	2	4.541665	
149	N160B	4.999997	0	4.541665	
150	N161B	4.999997	2	4.541665	
151	N163A	6.541449	0	1.871792	
152	N164A	6.541449	2	1.871792	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
153	N165A	1.541449	0	-6.788462	
154	N166A	1.541449	2	-6.788462	
155	N168A	-1.541455	0	-6.788462	
156	N169A	-1.541455	2	-6.788462	
157	N170A	-6.541455	0	1.871792	
158	N171A	-6.541455	2	1.871792	
159	N171B	4.916449	2	-0.94279	
160	N172A	3.166449	2	-3.973879	
161	N176A	-3.166455	2	-3.973879	
162	N177A	-4.916455	2	-0.94279	
163	N176B	1.118613	-4	-0.770835	
164	N179B	-1.118619	-4	-0.770835	
165	N168B	7.166449	0	2.954324	
166	N169B	0.916449	0	-7.870994	
167	N173A	-0.916455	0	-7.870994	
168	N174A	-7.166455	0	2.954324	
169	N172B	-0.000003	0	2.166665	
170	N173B	0.249997	0	2.166665	
171	N174B	0.249997	2	2.166665	
172	N175A	0.249997	-1	2.166665	
173	N182	-0.000003	-1	1.166665	
174	N185	2.249997	2	4.541665	
175	N186	-2.250003	2	4.541665	
176	N183	1.118613	-1	-0.770835	
177	N184	5.166449	2	-0.509778	
178	N187	2.916449	2	-4.406892	
179	N188	-1.118619	-1	-0.770835	
180	N189	-2.916455	2	-4.406892	
181	N190	-5.166455	2	-0.509778	

Node Boundary Conditions

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
1	A1	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N67	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N72A						
4	N69A	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
5	N137	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
6	N176B	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
7	N179B	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
8	N172B						
9	N173B						
10	N174B						
11	N175A						
12	N182	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
13	N183	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
14	N188	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e^{5}°F^{-1}]	Density [k/ft^{3}]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3

Hot Rolled Steel Properties (Continued)

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e⁵°F⁻¹]	Density [k/ft³]	Yield [ksi]	Ry	Fu [ksi]	Rt
5	A500 Gr.B RECT	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A500 Gr.C RND	29000	11154	0.3	0.65	0.527	46	1.4	62	1.3
7	A500 Gr.C RECT	29000	11154	0.3	0.65	0.527	50	1.4	62	1.3
8	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
9	A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3
10	A913 Gr.65	29000	11154	0.3	0.65	0.49	65	1.1	80	1.1

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	A1	A1	A2		Standoff Horizontal	None	None	A500 Gr.B RECT	Typical
2	A2	A3	A4		Face Horizontal	None	None	A500 Gr.B RECT	Typical
3	A3	A5	A6		RIGID	None	None	RIGID	Typical
4	A4	A7	A8		RIGID	None	None	RIGID	Typical
5	A5	A9	A10		RIGID	None	None	RIGID	Typical
6	A6	A11	A12		RIGID	None	None	RIGID	Typical
7	A7	A13	A14		RIGID	None	None	RIGID	Typical
8	A8	A15	A16		RIGID	None	None	RIGID	Typical
9	A9	A2	A17		RIGID	None	None	RIGID	Typical
10	A10	A18	A19		Standoff Vertical	None	None	A53 Gr.B	Typical
11	MP1A	A25	A31		Mount Pipe (P2 STD)	None	None	A53 Gr.B	Typical
12	MP2A	A24	A30		Mount Pipe (P2 STD)	None	None	A53 Gr.B	Typical
13	MP3A	A23	A29		Mod Mount Pipe (P2.5 STD)	None	None	A53 Gr.B	Typical
14	MP3.5A	A22	A28		Mount Pipe (P2 STD)	None	None	A53 Gr.B	Typical
15	MP4A	A21	A27		Mount Pipe (P2 STD)	None	None	A53 Gr.B	Typical
16	MP5A	A20	A26		Mount Pipe (P2 STD)	None	None	A53 Gr.B	Typical
17	M18	N34	N35		Mod Face Horizontal (P2 STD)	None	None	A53 Gr.B	Typical
18	M19	N36	N37		RIGID	None	None	RIGID	Typical
19	M20	N38	N39		RIGID	None	None	RIGID	Typical
20	M21	N40	N41		RIGID	None	None	RIGID	Typical
21	M22	N42	N43		RIGID	None	None	RIGID	Typical
22	M23	N44	N45		RIGID	None	None	RIGID	Typical
23	M24	N46	N47		RIGID	None	None	RIGID	Typical
24	M35	N68	N67		Mod Kickers	None	None	A36 Gr.36	Typical
25	M36A	N69A	N70		Standoff Horizontal	None	None	A500 Gr.B RECT	Typical
26	M38	N73A	N74		RIGID	None	None	RIGID	Typical
27	M39	N75	N76		RIGID	None	None	RIGID	Typical
28	M40	N77	N78		RIGID	None	None	RIGID	Typical
29	M41	N79	N80		RIGID	None	None	RIGID	Typical
30	M42	N81	N82		RIGID	None	None	RIGID	Typical
31	M43	N83	N84		RIGID	None	None	RIGID	Typical
32	M44	N70	N85		RIGID	None	None	RIGID	Typical
33	M45	N86	N87	120	Standoff Vertical	None	None	A53 Gr.B	Typical
34	MP1B	N93	N99		Mount Pipe (P2 STD)	None	None	A53 Gr.B	Typical
35	MP2B	N92	N98		Mount Pipe (P2 STD)	None	None	A53 Gr.B	Typical
36	MP3B	N91	N97		Mod Mount Pipe (P2.5 STD)	None	None	A53 Gr.B	Typical
37	MP3.5B	N90	N96		Mount Pipe (P2 STD)	None	None	A53 Gr.B	Typical
38	MP4B	N89	N95		Mount Pipe (P2 STD)	None	None	A53 Gr.B	Typical
39	MP5B	N88	N94		Mount Pipe (P2 STD)	None	None	A53 Gr.B	Typical
40	M52	N100	N101		Mod Face Horizontal (P2 STD)	None	None	A53 Gr.B	Typical
41	M53	N102	N103		RIGID	None	None	RIGID	Typical
42	M54	N104	N105		RIGID	None	None	RIGID	Typical
43	M55	N106	N107		RIGID	None	None	RIGID	Typical
44	M56	N108	N109		RIGID	None	None	RIGID	Typical
45	M57	N110	N111		RIGID	None	None	RIGID	Typical
46	M58	N112	N113		RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
47	M71	N137	N138		Standoff Horizontal	None	None	A500 Gr.B RECT	Typical
48	M73	N141	N142		RIGID	None	None	RIGID	Typical
49	M74	N143	N144		RIGID	None	None	RIGID	Typical
50	M75	N145	N146		RIGID	None	None	RIGID	Typical
51	M76	N147	N148		RIGID	None	None	RIGID	Typical
52	M77	N149	N150		RIGID	None	None	RIGID	Typical
53	M78	N151	N152		RIGID	None	None	RIGID	Typical
54	M79	N138	N153		RIGID	None	None	RIGID	Typical
55	M80	N154	N155	240	Standoff Vertical	None	None	A53 Gr.B	Typical
56	MP1C	N161	N167		Mount Pipe (P2 STD)	None	None	A53 Gr.B	Typical
57	MP2C	N160	N166		Mount Pipe (P2 STD)	None	None	A53 Gr.B	Typical
58	MP3C	N159	N165		Mod Mount Pipe (P2.5 STD)	None	None	A53 Gr.B	Typical
59	MP3.5C	N158	N164		Mount Pipe (P2 STD)	None	None	A53 Gr.B	Typical
60	MP4C	N157	N163		Mount Pipe (P2 STD)	None	None	A53 Gr.B	Typical
61	MP5C	N156	N162		Mount Pipe (P2 STD)	None	None	A53 Gr.B	Typical
62	M87	N168	N169		Mod Face Horizontal (P2 STD)	None	None	A53 Gr.B	Typical
63	M88	N170	N171		RIGID	None	None	RIGID	Typical
64	M89	N172	N173		RIGID	None	None	RIGID	Typical
65	M90	N174	N175		RIGID	None	None	RIGID	Typical
66	M91	N176	N177		RIGID	None	None	RIGID	Typical
67	M92	N178	N179		RIGID	None	None	RIGID	Typical
68	M93	N180	N181		RIGID	None	None	RIGID	Typical
69	M106	N203	N206		Mod Stabilizer Pipe	None	None	A53 Gr.B	Typical
70	M107	N205	N208		Mod Stabilizer Pipe	None	None	A53 Gr.B	Typical
71	M108	N207	N204A		Mod Stabilizer Pipe	None	None	A53 Gr.B	Typical
72	M80C	N155A	N176B		Mod Kickers	None	None	A36 Gr.36	Typical
73	M81A	N152A	N179B		Mod Kickers	None	None	A36 Gr.36	Typical
74	M77A	N168B	N169B		Face Horizontal	None	None	A500 Gr.B RECT	Typical
75	M78A	N173A	N174A		Face Horizontal	None	None	A500 Gr.B RECT	Typical
76	M79B	N172B	N173B		RIGID	None	None	RIGID	Typical
77	OVP	N174B	N175A		Mount Pipe (P2 STD)	None	None	A53 Gr.B	Typical
78	M83	N185	N182	270	MOD V-Bracing	Column	Single Angle	A53 Gr.B	Typical
79	M84	N186	N182		MOD V-Bracing	Column	Single Angle	A53 Gr.B	Typical
80	M81	N184	N183		MOD V-Bracing	Column	Single Angle	A53 Gr.B	Typical
81	M82	N187	N183	270	MOD V-Bracing	Column	Single Angle	A53 Gr.B	Typical
82	M85	N189	N188		MOD V-Bracing	Column	Single Angle	A53 Gr.B	Typical
83	M86	N190	N188	270	MOD V-Bracing	Column	Single Angle	A53 Gr.B	Typical

Member Advanced Data

	Label	I Release	J Release	Col-Wall Vert Release	Physical	Deflection Ratio Options	Analysis Offset [in]	Seismic DR
1	A1				Yes	** NA **		None
2	A2				Yes	** NA **		None
3	A3				Yes	** NA **		None
4	A4				Yes	** NA **		None
5	A5				Yes	** NA **		None
6	A6				Yes	** NA **		None
7	A7				Yes	** NA **		None
8	A8				Yes	** NA **		None
9	A9				Yes	** NA **		None
10	A10				Yes	** NA **		None
11	MP1A				Yes	** NA **		None
12	MP2A				Yes	** NA **		None
13	MP3A				Yes	** NA **		None
14	MP3.5A				Yes	** NA **		None
15	MP4A				Yes	** NA **		None

Member Advanced Data (Continued)

	Label	I Release	J Release	Col-Wall Vert Release	Physical	Deflection Ratio Options	Analysis Offset [in]	Seismic DR
16	MP5A				Yes	** NA **		None
17	M18				Yes	** NA **		None
18	M19				Yes	** NA **		None
19	M20				Yes	** NA **		None
20	M21				Yes	** NA **		None
21	M22				Yes	** NA **		None
22	M23				Yes	** NA **		None
23	M24				Yes	** NA **		None
24	M35	BenPIN	BenPIN		Yes	** NA **		None
25	M36A				Yes	** NA **		None
26	M38				Yes	** NA **		None
27	M39				Yes	** NA **		None
28	M40				Yes	** NA **		None
29	M41				Yes	** NA **		None
30	M42				Yes	** NA **		None
31	M43				Yes	** NA **		None
32	M44				Yes	** NA **		None
33	M45				Yes	** NA **		None
34	MP1B				Yes	** NA **		None
35	MP2B				Yes	** NA **		None
36	MP3B				Yes	** NA **		None
37	MP3.5B				Yes	** NA **		None
38	MP4B				Yes	** NA **		None
39	MP5B				Yes	** NA **		None
40	M52				Yes	** NA **		None
41	M53				Yes	** NA **		None
42	M54				Yes	** NA **		None
43	M55				Yes	** NA **		None
44	M56				Yes	** NA **		None
45	M57				Yes	** NA **		None
46	M58				Yes	** NA **		None
47	M71				Yes	** NA **		None
48	M73				Yes	** NA **		None
49	M74				Yes	** NA **		None
50	M75				Yes	** NA **		None
51	M76				Yes	** NA **		None
52	M77				Yes	** NA **		None
53	M78				Yes	** NA **		None
54	M79				Yes	** NA **		None
55	M80				Yes	** NA **		None
56	MP1C				Yes	** NA **		None
57	MP2C				Yes	** NA **		None
58	MP3C				Yes	** NA **		None
59	MP3.5C				Yes	** NA **		None
60	MP4C				Yes	** NA **		None
61	MP5C				Yes	** NA **		None
62	M87				Yes	** NA **		None
63	M88				Yes	** NA **		None
64	M89				Yes	** NA **		None
65	M90				Yes	** NA **		None
66	M91				Yes	** NA **		None
67	M92				Yes	** NA **		None
68	M93				Yes	** NA **		None
69	M106	BenPIN	BenPIN		Yes	** NA **	+y	None
70	M107	BenPIN	BenPIN		Yes	** NA **	+y	None

Member Advanced Data (Continued)

	Label	I Release	J Release	Col-Wall Vert Release	Physical	Deflection Ratio Options	Analysis Offset [in]	Seismic DR
71	M108	BenPIN	BenPIN		Yes	** NA **	+y	None
72	M80C	BenPIN	BenPIN		Yes	** NA **		None
73	M81A	BenPIN	BenPIN		Yes	** NA **		None
74	M77A				Yes	** NA **		None
75	M78A				Yes	** NA **		None
76	M79B				Yes	** NA **		None
77	OVP				Yes	** NA **		None
78	M83		BenPIN		Yes	** NA **		None
79	M84		BenPIN		Yes	** NA **		None
80	M81		BenPIN		Yes	** NA **		None
81	M82		BenPIN		Yes	** NA **		None
82	M85		BenPIN		Yes	** NA **		None
83	M86		BenPIN		Yes	** NA **		None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	Y	-21.85	0.5
2	MP3A	My	-0.018	0.5
3	MP3A	Mz	0.013	0.5
4	MP3A	Y	-21.85	4.5
5	MP3A	My	-0.018	4.5
6	MP3A	Mz	0.013	4.5
7	MP3B	Y	-21.85	0.5
8	MP3B	My	-0.002	0.5
9	MP3B	Mz	-0.022	0.5
10	MP3B	Y	-21.85	4.5
11	MP3B	My	-0.002	4.5
12	MP3B	Mz	-0.022	4.5
13	MP3C	Y	-21.85	0.5
14	MP3C	My	0.02	0.5
15	MP3C	Mz	0.009	0.5
16	MP3C	Y	-21.85	4.5
17	MP3C	My	0.02	4.5
18	MP3C	Mz	0.009	4.5
19	MP3A	Y	-32.3	0.5
20	MP3A	My	-0.027	0.5
21	MP3A	Mz	-0.019	0.5
22	MP3A	Y	-32.3	4.5
23	MP3A	My	-0.027	4.5
24	MP3A	Mz	-0.019	4.5
25	MP3B	Y	-32.3	0.5
26	MP3B	My	0.03	0.5
27	MP3B	Mz	-0.014	0.5
28	MP3B	Y	-32.3	4.5
29	MP3B	My	0.03	4.5
30	MP3B	Mz	-0.014	4.5
31	MP3C	Y	-32.3	0.5
32	MP3C	My	-0.003	0.5
33	MP3C	Mz	0.033	0.5
34	MP3C	Y	-32.3	4.5
35	MP3C	My	-0.003	4.5
36	MP3C	Mz	0.033	4.5
37	MP4A	Y	-43.55	1.5
38	MP4A	My	-0.036	1.5
39	MP4A	Mz	0	1.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
40	MP4A	Y	-43.55	3.5
41	MP4A	My	-0.036	3.5
42	MP4A	Mz	0	3.5
43	MP4B	Y	-43.55	1.5
44	MP4B	My	0.018	1.5
45	MP4B	Mz	-0.031	1.5
46	MP4B	Y	-43.55	3.5
47	MP4B	My	0.018	3.5
48	MP4B	Mz	-0.031	3.5
49	MP4C	Y	-43.55	1.5
50	MP4C	My	0.018	1.5
51	MP4C	Mz	0.031	1.5
52	MP4C	Y	-43.55	3.5
53	MP4C	My	0.018	3.5
54	MP4C	Mz	0.031	3.5
55	OVP	Y	-32	1
56	OVP	My	0	1
57	OVP	Mz	0	1
58	MP1A	Y	-13.5	0.5
59	MP1A	My	-0.013	0.5
60	MP1A	Mz	0	0.5
61	MP1A	Y	-13.5	4.5
62	MP1A	My	-0.013	4.5
63	MP1A	Mz	0	4.5
64	MP1B	Y	-13.5	0.5
65	MP1B	My	0.007	0.5
66	MP1B	Mz	-0.012	0.5
67	MP1B	Y	-13.5	4.5
68	MP1B	My	0.007	4.5
69	MP1B	Mz	-0.012	4.5
70	MP1C	Y	-13.5	0.5
71	MP1C	My	0.007	0.5
72	MP1C	Mz	0.012	0.5
73	MP1C	Y	-13.5	4.5
74	MP1C	My	0.007	4.5
75	MP1C	Mz	0.012	4.5
76	MP5A	Y	-13.5	0.5
77	MP5A	My	-0.013	0.5
78	MP5A	Mz	0	0.5
79	MP5A	Y	-13.5	4.5
80	MP5A	My	-0.013	4.5
81	MP5A	Mz	0	4.5
82	MP5B	Y	-13.5	0.5
83	MP5B	My	0.007	0.5
84	MP5B	Mz	-0.012	0.5
85	MP5B	Y	-13.5	4.5
86	MP5B	My	0.007	4.5
87	MP5B	Mz	-0.012	4.5
88	MP5C	Y	-13.5	0.5
89	MP5C	My	0.007	0.5
90	MP5C	Mz	0.012	0.5
91	MP5C	Y	-13.5	4.5
92	MP5C	My	0.007	4.5
93	MP5C	Mz	0.012	4.5
94	MP3B	Y	-17.6	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
95	MP3B	My	-0.015	3
96	MP3B	Mz	0.008	3
97	MP3B	Y	-17.6	3
98	MP3B	My	0.000288	3
99	MP3B	Mz	0.017	3

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	Y	-92.425	0.5
2	MP3A	My	-0.077	0.5
3	MP3A	Mz	0.054	0.5
4	MP3A	Y	-92.425	4.5
5	MP3A	My	-0.077	4.5
6	MP3A	Mz	0.054	4.5
7	MP3B	Y	-92.425	0.5
8	MP3B	My	-0.008	0.5
9	MP3B	Mz	-0.094	0.5
10	MP3B	Y	-92.425	4.5
11	MP3B	My	-0.008	4.5
12	MP3B	Mz	-0.094	4.5
13	MP3C	Y	-92.425	0.5
14	MP3C	My	0.085	0.5
15	MP3C	Mz	0.04	0.5
16	MP3C	Y	-92.425	4.5
17	MP3C	My	0.085	4.5
18	MP3C	Mz	0.04	4.5
19	MP3A	Y	-92.425	0.5
20	MP3A	My	-0.077	0.5
21	MP3A	Mz	-0.054	0.5
22	MP3A	Y	-92.425	4.5
23	MP3A	My	-0.077	4.5
24	MP3A	Mz	-0.054	4.5
25	MP3B	Y	-92.425	0.5
26	MP3B	My	0.085	0.5
27	MP3B	Mz	-0.04	0.5
28	MP3B	Y	-92.425	4.5
29	MP3B	My	0.085	4.5
30	MP3B	Mz	-0.04	4.5
31	MP3C	Y	-92.425	0.5
32	MP3C	My	-0.008	0.5
33	MP3C	Mz	0.094	0.5
34	MP3C	Y	-92.425	4.5
35	MP3C	My	-0.008	4.5
36	MP3C	Mz	0.094	4.5
37	MP4A	Y	-54.536	1.5
38	MP4A	My	-0.045	1.5
39	MP4A	Mz	0	1.5
40	MP4A	Y	-54.536	3.5
41	MP4A	My	-0.045	3.5
42	MP4A	Mz	0	3.5
43	MP4B	Y	-54.536	1.5
44	MP4B	My	0.023	1.5
45	MP4B	Mz	-0.039	1.5
46	MP4B	Y	-54.536	3.5
47	MP4B	My	0.023	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
48	MP4B	Mz	-0.039	3.5
49	MP4C	Y	-54.536	1.5
50	MP4C	My	0.023	1.5
51	MP4C	Mz	0.039	1.5
52	MP4C	Y	-54.536	3.5
53	MP4C	My	0.023	3.5
54	MP4C	Mz	0.039	3.5
55	OVP	Y	-115.52	1
56	OVP	My	0	1
57	OVP	Mz	0	1
58	MP1A	Y	-133.642	0.5
59	MP1A	My	-0.134	0.5
60	MP1A	Mz	0	0.5
61	MP1A	Y	-133.642	4.5
62	MP1A	My	-0.134	4.5
63	MP1A	Mz	0	4.5
64	MP1B	Y	-133.642	0.5
65	MP1B	My	0.067	0.5
66	MP1B	Mz	-0.116	0.5
67	MP1B	Y	-133.642	4.5
68	MP1B	My	0.067	4.5
69	MP1B	Mz	-0.116	4.5
70	MP1C	Y	-133.642	0.5
71	MP1C	My	0.067	0.5
72	MP1C	Mz	0.116	0.5
73	MP1C	Y	-133.642	4.5
74	MP1C	My	0.067	4.5
75	MP1C	Mz	0.116	4.5
76	MP5A	Y	-133.642	0.5
77	MP5A	My	-0.134	0.5
78	MP5A	Mz	0	0.5
79	MP5A	Y	-133.642	4.5
80	MP5A	My	-0.134	4.5
81	MP5A	Mz	0	4.5
82	MP5B	Y	-133.642	0.5
83	MP5B	My	0.067	0.5
84	MP5B	Mz	-0.116	0.5
85	MP5B	Y	-133.642	4.5
86	MP5B	My	0.067	4.5
87	MP5B	Mz	-0.116	4.5
88	MP5C	Y	-133.642	0.5
89	MP5C	My	0.067	0.5
90	MP5C	Mz	0.116	0.5
91	MP5C	Y	-133.642	4.5
92	MP5C	My	0.067	4.5
93	MP5C	Mz	0.116	4.5
94	MP3B	Y	-27.725	3
95	MP3B	My	-0.024	3
96	MP3B	Mz	0.013	3
97	MP3B	Y	-27.725	3
98	MP3B	My	0.000453	3
99	MP3B	Mz	0.027	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	0	0.5
2	MP3A	Z	-108.15	0.5
3	MP3A	Mx	-0.063	0.5
4	MP3A	X	0	4.5
5	MP3A	Z	-108.15	4.5
6	MP3A	Mx	-0.063	4.5
7	MP3B	X	0	0.5
8	MP3B	Z	-61.843	0.5
9	MP3B	Mx	0.063	0.5
10	MP3B	X	0	4.5
11	MP3B	Z	-61.843	4.5
12	MP3B	Mx	0.063	4.5
13	MP3C	X	0	0.5
14	MP3C	Z	-61.843	0.5
15	MP3C	Mx	-0.027	0.5
16	MP3C	X	0	4.5
17	MP3C	Z	-61.843	4.5
18	MP3C	Mx	-0.027	4.5
19	MP3A	X	0	0.5
20	MP3A	Z	-108.15	0.5
21	MP3A	Mx	0.063	0.5
22	MP3A	X	0	4.5
23	MP3A	Z	-108.15	4.5
24	MP3A	Mx	0.063	4.5
25	MP3B	X	0	0.5
26	MP3B	Z	-61.843	0.5
27	MP3B	Mx	0.027	0.5
28	MP3B	X	0	4.5
29	MP3B	Z	-61.843	4.5
30	MP3B	Mx	0.027	4.5
31	MP3C	X	0	0.5
32	MP3C	Z	-61.843	0.5
33	MP3C	Mx	-0.063	0.5
34	MP3C	X	0	4.5
35	MP3C	Z	-61.843	4.5
36	MP3C	Mx	-0.063	4.5
37	MP4A	X	0	1.5
38	MP4A	Z	-78.075	1.5
39	MP4A	Mx	0	1.5
40	MP4A	X	0	3.5
41	MP4A	Z	-78.075	3.5
42	MP4A	Mx	0	3.5
43	MP4B	X	0	1.5
44	MP4B	Z	-39.685	1.5
45	MP4B	Mx	0.029	1.5
46	MP4B	X	0	3.5
47	MP4B	Z	-39.685	3.5
48	MP4B	Mx	0.029	3.5
49	MP4C	X	0	1.5
50	MP4C	Z	-39.685	1.5
51	MP4C	Mx	-0.029	1.5
52	MP4C	X	0	3.5
53	MP4C	Z	-39.685	3.5
54	MP4C	Mx	-0.029	3.5
55	OVP	X	0	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
56	OVP	Z	-137.637	1
57	OVP	Mx	0	1
58	MP1A	X	0	0.5
59	MP1A	Z	-191.205	0.5
60	MP1A	Mx	0	0.5
61	MP1A	X	0	4.5
62	MP1A	Z	-191.205	4.5
63	MP1A	Mx	0	4.5
64	MP1B	X	0	0.5
65	MP1B	Z	-175.889	0.5
66	MP1B	Mx	0.152	0.5
67	MP1B	X	0	4.5
68	MP1B	Z	-175.889	4.5
69	MP1B	Mx	0.152	4.5
70	MP1C	X	0	0.5
71	MP1C	Z	-175.889	0.5
72	MP1C	Mx	-0.152	0.5
73	MP1C	X	0	4.5
74	MP1C	Z	-175.889	4.5
75	MP1C	Mx	-0.152	4.5
76	MP5A	X	0	0.5
77	MP5A	Z	-191.205	0.5
78	MP5A	Mx	0	0.5
79	MP5A	X	0	4.5
80	MP5A	Z	-191.205	4.5
81	MP5A	Mx	0	4.5
82	MP5B	X	0	0.5
83	MP5B	Z	-175.889	0.5
84	MP5B	Mx	0.152	0.5
85	MP5B	X	0	4.5
86	MP5B	Z	-175.889	4.5
87	MP5B	Mx	0.152	4.5
88	MP5C	X	0	0.5
89	MP5C	Z	-175.889	0.5
90	MP5C	Mx	-0.152	0.5
91	MP5C	X	0	4.5
92	MP5C	Z	-175.889	4.5
93	MP5C	Mx	-0.152	4.5
94	MP3B	X	0	3
95	MP3B	Z	-31.522	3
96	MP3B	Mx	-0.015	3
97	MP3B	X	0	3
98	MP3B	Z	-31.522	3
99	MP3B	Mx	-0.031	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	46.357	0.5
2	MP3A	Z	-80.293	0.5
3	MP3A	Mx	-0.085	0.5
4	MP3A	X	46.357	4.5
5	MP3A	Z	-80.293	4.5
6	MP3A	Mx	-0.085	4.5
7	MP3B	X	23.203	0.5
8	MP3B	Z	-40.19	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
9	MP3B	Mx	0.039	0.5
10	MP3B	X	23.203	4.5
11	MP3B	Z	-40.19	4.5
12	MP3B	Mx	0.039	4.5
13	MP3C	X	46.357	0.5
14	MP3C	Z	-80.293	0.5
15	MP3C	Mx	0.008	0.5
16	MP3C	X	46.357	4.5
17	MP3C	Z	-80.293	4.5
18	MP3C	Mx	0.008	4.5
19	MP3A	X	46.357	0.5
20	MP3A	Z	-80.293	0.5
21	MP3A	Mx	0.008	0.5
22	MP3A	X	46.357	4.5
23	MP3A	Z	-80.293	4.5
24	MP3A	Mx	0.008	4.5
25	MP3B	X	23.203	0.5
26	MP3B	Z	-40.19	0.5
27	MP3B	Mx	0.039	0.5
28	MP3B	X	23.203	4.5
29	MP3B	Z	-40.19	4.5
30	MP3B	Mx	0.039	4.5
31	MP3C	X	46.357	0.5
32	MP3C	Z	-80.293	0.5
33	MP3C	Mx	-0.085	0.5
34	MP3C	X	46.357	4.5
35	MP3C	Z	-80.293	4.5
36	MP3C	Mx	-0.085	4.5
37	MP4A	X	32.639	1.5
38	MP4A	Z	-56.533	1.5
39	MP4A	Mx	-0.027	1.5
40	MP4A	X	32.639	3.5
41	MP4A	Z	-56.533	3.5
42	MP4A	Mx	-0.027	3.5
43	MP4B	X	13.444	1.5
44	MP4B	Z	-23.286	1.5
45	MP4B	Mx	0.022	1.5
46	MP4B	X	13.444	3.5
47	MP4B	Z	-23.286	3.5
48	MP4B	Mx	0.022	3.5
49	MP4C	X	32.639	1.5
50	MP4C	Z	-56.533	1.5
51	MP4C	Mx	-0.027	1.5
52	MP4C	X	32.639	3.5
53	MP4C	Z	-56.533	3.5
54	MP4C	Mx	-0.027	3.5
55	OVP	X	56.111	1
56	OVP	Z	-97.188	1
57	OVP	Mx	0	1
58	MP1A	X	93.05	0.5
59	MP1A	Z	-161.167	0.5
60	MP1A	Mx	-0.093	0.5
61	MP1A	X	93.05	4.5
62	MP1A	Z	-161.167	4.5
63	MP1A	Mx	-0.093	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
64	MP1B	X	85.392	0.5
65	MP1B	Z	-147.904	0.5
66	MP1B	Mx	0.171	0.5
67	MP1B	X	85.392	4.5
68	MP1B	Z	-147.904	4.5
69	MP1B	Mx	0.171	4.5
70	MP1C	X	93.05	0.5
71	MP1C	Z	-161.167	0.5
72	MP1C	Mx	-0.093	0.5
73	MP1C	X	93.05	4.5
74	MP1C	Z	-161.167	4.5
75	MP1C	Mx	-0.093	4.5
76	MP5A	X	93.05	0.5
77	MP5A	Z	-161.167	0.5
78	MP5A	Mx	-0.093	0.5
79	MP5A	X	93.05	4.5
80	MP5A	Z	-161.167	4.5
81	MP5A	Mx	-0.093	4.5
82	MP5B	X	85.392	0.5
83	MP5B	Z	-147.904	0.5
84	MP5B	Mx	0.171	0.5
85	MP5B	X	85.392	4.5
86	MP5B	Z	-147.904	4.5
87	MP5B	Mx	0.171	4.5
88	MP5C	X	93.05	0.5
89	MP5C	Z	-161.167	0.5
90	MP5C	Mx	-0.093	0.5
91	MP5C	X	93.05	4.5
92	MP5C	Z	-161.167	4.5
93	MP5C	Mx	-0.093	4.5
94	MP3B	X	19.097	3
95	MP3B	Z	-33.077	3
96	MP3B	Mx	-0.032	3
97	MP3B	X	19.097	3
98	MP3B	Z	-33.077	3
99	MP3B	Mx	-0.032	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	53.557	0.5
2	MP3A	Z	-30.921	0.5
3	MP3A	Mx	-0.063	0.5
4	MP3A	X	53.557	4.5
5	MP3A	Z	-30.921	4.5
6	MP3A	Mx	-0.063	4.5
7	MP3B	X	53.557	0.5
8	MP3B	Z	-30.921	0.5
9	MP3B	Mx	0.027	0.5
10	MP3B	X	53.557	4.5
11	MP3B	Z	-30.921	4.5
12	MP3B	Mx	0.027	4.5
13	MP3C	X	93.661	0.5
14	MP3C	Z	-54.075	0.5
15	MP3C	Mx	0.063	0.5
16	MP3C	X	93.661	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
17	MP3C	Z	-54.075	4.5
18	MP3C	Mx	0.063	4.5
19	MP3A	X	53.557	0.5
20	MP3A	Z	-30.921	0.5
21	MP3A	Mx	-0.027	0.5
22	MP3A	X	53.557	4.5
23	MP3A	Z	-30.921	4.5
24	MP3A	Mx	-0.027	4.5
25	MP3B	X	53.557	0.5
26	MP3B	Z	-30.921	0.5
27	MP3B	Mx	0.063	0.5
28	MP3B	X	53.557	4.5
29	MP3B	Z	-30.921	4.5
30	MP3B	Mx	0.063	4.5
31	MP3C	X	93.661	0.5
32	MP3C	Z	-54.075	0.5
33	MP3C	Mx	-0.063	0.5
34	MP3C	X	93.661	4.5
35	MP3C	Z	-54.075	4.5
36	MP3C	Mx	-0.063	4.5
37	MP4A	X	34.368	1.5
38	MP4A	Z	-19.842	1.5
39	MP4A	Mx	-0.029	1.5
40	MP4A	X	34.368	3.5
41	MP4A	Z	-19.842	3.5
42	MP4A	Mx	-0.029	3.5
43	MP4B	X	34.368	1.5
44	MP4B	Z	-19.842	1.5
45	MP4B	Mx	0.029	1.5
46	MP4B	X	34.368	3.5
47	MP4B	Z	-19.842	3.5
48	MP4B	Mx	0.029	3.5
49	MP4C	X	67.615	1.5
50	MP4C	Z	-39.038	1.5
51	MP4C	Mx	0	1.5
52	MP4C	X	67.615	3.5
53	MP4C	Z	-39.038	3.5
54	MP4C	Mx	0	3.5
55	OVP	X	86.183	1
56	OVP	Z	-49.758	1
57	OVP	Mx	0	1
58	MP1A	X	152.325	0.5
59	MP1A	Z	-87.945	0.5
60	MP1A	Mx	-0.152	0.5
61	MP1A	X	152.325	4.5
62	MP1A	Z	-87.945	4.5
63	MP1A	Mx	-0.152	4.5
64	MP1B	X	152.325	0.5
65	MP1B	Z	-87.945	0.5
66	MP1B	Mx	0.152	0.5
67	MP1B	X	152.325	4.5
68	MP1B	Z	-87.945	4.5
69	MP1B	Mx	0.152	4.5
70	MP1C	X	165.588	0.5
71	MP1C	Z	-95.602	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
72	MP1C	Mx	0	0.5
73	MP1C	X	165.588	4.5
74	MP1C	Z	-95.602	4.5
75	MP1C	Mx	0	4.5
76	MP5A	X	152.325	0.5
77	MP5A	Z	-87.945	0.5
78	MP5A	Mx	-0.152	0.5
79	MP5A	X	152.325	4.5
80	MP5A	Z	-87.945	4.5
81	MP5A	Mx	-0.152	4.5
82	MP5B	X	152.325	0.5
83	MP5B	Z	-87.945	0.5
84	MP5B	Mx	0.152	0.5
85	MP5B	X	152.325	4.5
86	MP5B	Z	-87.945	4.5
87	MP5B	Mx	0.152	4.5
88	MP5C	X	165.588	0.5
89	MP5C	Z	-95.602	0.5
90	MP5C	Mx	0	0.5
91	MP5C	X	165.588	4.5
92	MP5C	Z	-95.602	4.5
93	MP5C	Mx	0	4.5
94	MP3B	X	27.299	3
95	MP3B	Z	-15.761	3
96	MP3B	Mx	-0.031	3
97	MP3B	X	27.299	3
98	MP3B	Z	-15.761	3
99	MP3B	Mx	-0.015	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	46.407	0.5
2	MP3A	Z	0	0.5
3	MP3A	Mx	-0.039	0.5
4	MP3A	X	46.407	4.5
5	MP3A	Z	0	4.5
6	MP3A	Mx	-0.039	4.5
7	MP3B	X	92.714	0.5
8	MP3B	Z	0	0.5
9	MP3B	Mx	-0.008	0.5
10	MP3B	X	92.714	4.5
11	MP3B	Z	0	4.5
12	MP3B	Mx	-0.008	4.5
13	MP3C	X	92.714	0.5
14	MP3C	Z	0	0.5
15	MP3C	Mx	0.085	0.5
16	MP3C	X	92.714	4.5
17	MP3C	Z	0	4.5
18	MP3C	Mx	0.085	4.5
19	MP3A	X	46.407	0.5
20	MP3A	Z	0	0.5
21	MP3A	Mx	-0.039	0.5
22	MP3A	X	46.407	4.5
23	MP3A	Z	0	4.5
24	MP3A	Mx	-0.039	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
25	MP3B	X	92.714	0.5
26	MP3B	Z	0	0.5
27	MP3B	Mx	0.085	0.5
28	MP3B	X	92.714	4.5
29	MP3B	Z	0	4.5
30	MP3B	Mx	0.085	4.5
31	MP3C	X	92.714	0.5
32	MP3C	Z	0	0.5
33	MP3C	Mx	-0.008	0.5
34	MP3C	X	92.714	4.5
35	MP3C	Z	0	4.5
36	MP3C	Mx	-0.008	4.5
37	MP4A	X	26.888	1.5
38	MP4A	Z	0	1.5
39	MP4A	Mx	-0.022	1.5
40	MP4A	X	26.888	3.5
41	MP4A	Z	0	3.5
42	MP4A	Mx	-0.022	3.5
43	MP4B	X	65.278	1.5
44	MP4B	Z	0	1.5
45	MP4B	Mx	0.027	1.5
46	MP4B	X	65.278	3.5
47	MP4B	Z	0	3.5
48	MP4B	Mx	0.027	3.5
49	MP4C	X	65.278	1.5
50	MP4C	Z	0	1.5
51	MP4C	Mx	0.027	1.5
52	MP4C	X	65.278	3.5
53	MP4C	Z	0	3.5
54	MP4C	Mx	0.027	3.5
55	OVP	X	112.223	1
56	OVP	Z	0	1
57	OVP	Mx	0	1
58	MP1A	X	170.784	0.5
59	MP1A	Z	0	0.5
60	MP1A	Mx	-0.171	0.5
61	MP1A	X	170.784	4.5
62	MP1A	Z	0	4.5
63	MP1A	Mx	-0.171	4.5
64	MP1B	X	186.1	0.5
65	MP1B	Z	0	0.5
66	MP1B	Mx	0.093	0.5
67	MP1B	X	186.1	4.5
68	MP1B	Z	0	4.5
69	MP1B	Mx	0.093	4.5
70	MP1C	X	186.1	0.5
71	MP1C	Z	0	0.5
72	MP1C	Mx	0.093	0.5
73	MP1C	X	186.1	4.5
74	MP1C	Z	0	4.5
75	MP1C	Mx	0.093	4.5
76	MP5A	X	170.784	0.5
77	MP5A	Z	0	0.5
78	MP5A	Mx	-0.171	0.5
79	MP5A	X	170.784	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
80	MP5A	Z	0	4.5
81	MP5A	Mx	-0.171	4.5
82	MP5B	X	186.1	0.5
83	MP5B	Z	0	0.5
84	MP5B	Mx	0.093	0.5
85	MP5B	X	186.1	4.5
86	MP5B	Z	0	4.5
87	MP5B	Mx	0.093	4.5
88	MP5C	X	186.1	0.5
89	MP5C	Z	0	0.5
90	MP5C	Mx	0.093	0.5
91	MP5C	X	186.1	4.5
92	MP5C	Z	0	4.5
93	MP5C	Mx	0.093	4.5
94	MP3B	X	18.176	3
95	MP3B	Z	0	3
96	MP3B	Mx	-0.015	3
97	MP3B	X	18.176	3
98	MP3B	Z	0	3
99	MP3B	Mx	0.000297	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	53.557	0.5
2	MP3A	Z	30.921	0.5
3	MP3A	Mx	-0.027	0.5
4	MP3A	X	53.557	4.5
5	MP3A	Z	30.921	4.5
6	MP3A	Mx	-0.027	4.5
7	MP3B	X	93.661	0.5
8	MP3B	Z	54.075	0.5
9	MP3B	Mx	-0.063	0.5
10	MP3B	X	93.661	4.5
11	MP3B	Z	54.075	4.5
12	MP3B	Mx	-0.063	4.5
13	MP3C	X	53.557	0.5
14	MP3C	Z	30.921	0.5
15	MP3C	Mx	0.063	0.5
16	MP3C	X	53.557	4.5
17	MP3C	Z	30.921	4.5
18	MP3C	Mx	0.063	4.5
19	MP3A	X	53.557	0.5
20	MP3A	Z	30.921	0.5
21	MP3A	Mx	-0.063	0.5
22	MP3A	X	53.557	4.5
23	MP3A	Z	30.921	4.5
24	MP3A	Mx	-0.063	4.5
25	MP3B	X	93.661	0.5
26	MP3B	Z	54.075	0.5
27	MP3B	Mx	0.063	0.5
28	MP3B	X	93.661	4.5
29	MP3B	Z	54.075	4.5
30	MP3B	Mx	0.063	4.5
31	MP3C	X	53.557	0.5
32	MP3C	Z	30.921	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
33	MP3C	Mx	0.027	0.5
34	MP3C	X	53.557	4.5
35	MP3C	Z	30.921	4.5
36	MP3C	Mx	0.027	4.5
37	MP4A	X	34.368	1.5
38	MP4A	Z	19.842	1.5
39	MP4A	Mx	-0.029	1.5
40	MP4A	X	34.368	3.5
41	MP4A	Z	19.842	3.5
42	MP4A	Mx	-0.029	3.5
43	MP4B	X	67.615	1.5
44	MP4B	Z	39.038	1.5
45	MP4B	Mx	0	1.5
46	MP4B	X	67.615	3.5
47	MP4B	Z	39.038	3.5
48	MP4B	Mx	0	3.5
49	MP4C	X	34.368	1.5
50	MP4C	Z	19.842	1.5
51	MP4C	Mx	0.029	1.5
52	MP4C	X	34.368	3.5
53	MP4C	Z	19.842	3.5
54	MP4C	Mx	0.029	3.5
55	OVP	X	119.197	1
56	OVP	Z	68.818	1
57	OVP	Mx	0	1
58	MP1A	X	152.325	0.5
59	MP1A	Z	87.945	0.5
60	MP1A	Mx	-0.152	0.5
61	MP1A	X	152.325	4.5
62	MP1A	Z	87.945	4.5
63	MP1A	Mx	-0.152	4.5
64	MP1B	X	165.588	0.5
65	MP1B	Z	95.602	0.5
66	MP1B	Mx	0	0.5
67	MP1B	X	165.588	4.5
68	MP1B	Z	95.602	4.5
69	MP1B	Mx	0	4.5
70	MP1C	X	152.325	0.5
71	MP1C	Z	87.945	0.5
72	MP1C	Mx	0.152	0.5
73	MP1C	X	152.325	4.5
74	MP1C	Z	87.945	4.5
75	MP1C	Mx	0.152	4.5
76	MP5A	X	152.325	0.5
77	MP5A	Z	87.945	0.5
78	MP5A	Mx	-0.152	0.5
79	MP5A	X	152.325	4.5
80	MP5A	Z	87.945	4.5
81	MP5A	Mx	-0.152	4.5
82	MP5B	X	165.588	0.5
83	MP5B	Z	95.602	0.5
84	MP5B	Mx	0	0.5
85	MP5B	X	165.588	4.5
86	MP5B	Z	95.602	4.5
87	MP5B	Mx	0	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
88	MP5C	X	152.325	0.5
89	MP5C	Z	87.945	0.5
90	MP5C	Mx	0.152	0.5
91	MP5C	X	152.325	4.5
92	MP5C	Z	87.945	4.5
93	MP5C	Mx	0.152	4.5
94	MP3B	X	9.963	3
95	MP3B	Z	5.752	3
96	MP3B	Mx	-0.006	3
97	MP3B	X	9.963	3
98	MP3B	Z	5.752	3
99	MP3B	Mx	0.006	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	46.357	0.5
2	MP3A	Z	80.293	0.5
3	MP3A	Mx	0.008	0.5
4	MP3A	X	46.357	4.5
5	MP3A	Z	80.293	4.5
6	MP3A	Mx	0.008	4.5
7	MP3B	X	46.357	0.5
8	MP3B	Z	80.293	0.5
9	MP3B	Mx	-0.085	0.5
10	MP3B	X	46.357	4.5
11	MP3B	Z	80.293	4.5
12	MP3B	Mx	-0.085	4.5
13	MP3C	X	23.203	0.5
14	MP3C	Z	40.19	0.5
15	MP3C	Mx	0.039	0.5
16	MP3C	X	23.203	4.5
17	MP3C	Z	40.19	4.5
18	MP3C	Mx	0.039	4.5
19	MP3A	X	46.357	0.5
20	MP3A	Z	80.293	0.5
21	MP3A	Mx	-0.085	0.5
22	MP3A	X	46.357	4.5
23	MP3A	Z	80.293	4.5
24	MP3A	Mx	-0.085	4.5
25	MP3B	X	46.357	0.5
26	MP3B	Z	80.293	0.5
27	MP3B	Mx	0.008	0.5
28	MP3B	X	46.357	4.5
29	MP3B	Z	80.293	4.5
30	MP3B	Mx	0.008	4.5
31	MP3C	X	23.203	0.5
32	MP3C	Z	40.19	0.5
33	MP3C	Mx	0.039	0.5
34	MP3C	X	23.203	4.5
35	MP3C	Z	40.19	4.5
36	MP3C	Mx	0.039	4.5
37	MP4A	X	32.639	1.5
38	MP4A	Z	56.533	1.5
39	MP4A	Mx	-0.027	1.5
40	MP4A	X	32.639	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
41	MP4A	Z	56.533	3.5
42	MP4A	Mx	-0.027	3.5
43	MP4B	X	32.639	1.5
44	MP4B	Z	56.533	1.5
45	MP4B	Mx	-0.027	1.5
46	MP4B	X	32.639	3.5
47	MP4B	Z	56.533	3.5
48	MP4B	Mx	-0.027	3.5
49	MP4C	X	13.444	1.5
50	MP4C	Z	23.286	1.5
51	MP4C	Mx	0.022	1.5
52	MP4C	X	13.444	3.5
53	MP4C	Z	23.286	3.5
54	MP4C	Mx	0.022	3.5
55	OVP	X	75.172	1
56	OVP	Z	130.202	1
57	OVP	Mx	0	1
58	MP1A	X	93.05	0.5
59	MP1A	Z	161.167	0.5
60	MP1A	Mx	-0.093	0.5
61	MP1A	X	93.05	4.5
62	MP1A	Z	161.167	4.5
63	MP1A	Mx	-0.093	4.5
64	MP1B	X	93.05	0.5
65	MP1B	Z	161.167	0.5
66	MP1B	Mx	-0.093	0.5
67	MP1B	X	93.05	4.5
68	MP1B	Z	161.167	4.5
69	MP1B	Mx	-0.093	4.5
70	MP1C	X	85.392	0.5
71	MP1C	Z	147.904	0.5
72	MP1C	Mx	0.171	0.5
73	MP1C	X	85.392	4.5
74	MP1C	Z	147.904	4.5
75	MP1C	Mx	0.171	4.5
76	MP5A	X	93.05	0.5
77	MP5A	Z	161.167	0.5
78	MP5A	Mx	-0.093	0.5
79	MP5A	X	93.05	4.5
80	MP5A	Z	161.167	4.5
81	MP5A	Mx	-0.093	4.5
82	MP5B	X	93.05	0.5
83	MP5B	Z	161.167	0.5
84	MP5B	Mx	-0.093	0.5
85	MP5B	X	93.05	4.5
86	MP5B	Z	161.167	4.5
87	MP5B	Mx	-0.093	4.5
88	MP5C	X	85.392	0.5
89	MP5C	Z	147.904	0.5
90	MP5C	Mx	0.171	0.5
91	MP5C	X	85.392	4.5
92	MP5C	Z	147.904	4.5
93	MP5C	Mx	0.171	4.5
94	MP3B	X	9.088	3
95	MP3B	Z	15.741	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
96	MP3B	Mx	-0.000297	3
97	MP3B	X	9.088	3
98	MP3B	Z	15.741	3
99	MP3B	Mx	0.015	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	0	0.5
2	MP3A	Z	108.15	0.5
3	MP3A	Mx	0.063	0.5
4	MP3A	X	0	4.5
5	MP3A	Z	108.15	4.5
6	MP3A	Mx	0.063	4.5
7	MP3B	X	0	0.5
8	MP3B	Z	61.843	0.5
9	MP3B	Mx	-0.063	0.5
10	MP3B	X	0	4.5
11	MP3B	Z	61.843	4.5
12	MP3B	Mx	-0.063	4.5
13	MP3C	X	0	0.5
14	MP3C	Z	61.843	0.5
15	MP3C	Mx	0.027	0.5
16	MP3C	X	0	4.5
17	MP3C	Z	61.843	4.5
18	MP3C	Mx	0.027	4.5
19	MP3A	X	0	0.5
20	MP3A	Z	108.15	0.5
21	MP3A	Mx	-0.063	0.5
22	MP3A	X	0	4.5
23	MP3A	Z	108.15	4.5
24	MP3A	Mx	-0.063	4.5
25	MP3B	X	0	0.5
26	MP3B	Z	61.843	0.5
27	MP3B	Mx	-0.027	0.5
28	MP3B	X	0	4.5
29	MP3B	Z	61.843	4.5
30	MP3B	Mx	-0.027	4.5
31	MP3C	X	0	0.5
32	MP3C	Z	61.843	0.5
33	MP3C	Mx	0.063	0.5
34	MP3C	X	0	4.5
35	MP3C	Z	61.843	4.5
36	MP3C	Mx	0.063	4.5
37	MP4A	X	0	1.5
38	MP4A	Z	78.075	1.5
39	MP4A	Mx	0	1.5
40	MP4A	X	0	3.5
41	MP4A	Z	78.075	3.5
42	MP4A	Mx	0	3.5
43	MP4B	X	0	1.5
44	MP4B	Z	39.685	1.5
45	MP4B	Mx	-0.029	1.5
46	MP4B	X	0	3.5
47	MP4B	Z	39.685	3.5
48	MP4B	Mx	-0.029	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
49	MP4C	X	0	1.5
50	MP4C	Z	39.685	1.5
51	MP4C	Mx	0.029	1.5
52	MP4C	X	0	3.5
53	MP4C	Z	39.685	3.5
54	MP4C	Mx	0.029	3.5
55	OVP	X	0	1
56	OVP	Z	137.637	1
57	OVP	Mx	0	1
58	MP1A	X	0	0.5
59	MP1A	Z	191.205	0.5
60	MP1A	Mx	0	0.5
61	MP1A	X	0	4.5
62	MP1A	Z	191.205	4.5
63	MP1A	Mx	0	4.5
64	MP1B	X	0	0.5
65	MP1B	Z	175.889	0.5
66	MP1B	Mx	-0.152	0.5
67	MP1B	X	0	4.5
68	MP1B	Z	175.889	4.5
69	MP1B	Mx	-0.152	4.5
70	MP1C	X	0	0.5
71	MP1C	Z	175.889	0.5
72	MP1C	Mx	0.152	0.5
73	MP1C	X	0	4.5
74	MP1C	Z	175.889	4.5
75	MP1C	Mx	0.152	4.5
76	MP5A	X	0	0.5
77	MP5A	Z	191.205	0.5
78	MP5A	Mx	0	0.5
79	MP5A	X	0	4.5
80	MP5A	Z	191.205	4.5
81	MP5A	Mx	0	4.5
82	MP5B	X	0	0.5
83	MP5B	Z	175.889	0.5
84	MP5B	Mx	-0.152	0.5
85	MP5B	X	0	4.5
86	MP5B	Z	175.889	4.5
87	MP5B	Mx	-0.152	4.5
88	MP5C	X	0	0.5
89	MP5C	Z	175.889	0.5
90	MP5C	Mx	0.152	0.5
91	MP5C	X	0	4.5
92	MP5C	Z	175.889	4.5
93	MP5C	Mx	0.152	4.5
94	MP3B	X	0	3
95	MP3B	Z	31.522	3
96	MP3B	Mx	0.015	3
97	MP3B	X	0	3
98	MP3B	Z	31.522	3
99	MP3B	Mx	0.031	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	-46.357	0.5
2	MP3A	Z	80.293	0.5
3	MP3A	Mx	0.085	0.5
4	MP3A	X	-46.357	4.5
5	MP3A	Z	80.293	4.5
6	MP3A	Mx	0.085	4.5
7	MP3B	X	-23.203	0.5
8	MP3B	Z	40.19	0.5
9	MP3B	Mx	-0.039	0.5
10	MP3B	X	-23.203	4.5
11	MP3B	Z	40.19	4.5
12	MP3B	Mx	-0.039	4.5
13	MP3C	X	-46.357	0.5
14	MP3C	Z	80.293	0.5
15	MP3C	Mx	-0.008	0.5
16	MP3C	X	-46.357	4.5
17	MP3C	Z	80.293	4.5
18	MP3C	Mx	-0.008	4.5
19	MP3A	X	-46.357	0.5
20	MP3A	Z	80.293	0.5
21	MP3A	Mx	-0.008	0.5
22	MP3A	X	-46.357	4.5
23	MP3A	Z	80.293	4.5
24	MP3A	Mx	-0.008	4.5
25	MP3B	X	-23.203	0.5
26	MP3B	Z	40.19	0.5
27	MP3B	Mx	-0.039	0.5
28	MP3B	X	-23.203	4.5
29	MP3B	Z	40.19	4.5
30	MP3B	Mx	-0.039	4.5
31	MP3C	X	-46.357	0.5
32	MP3C	Z	80.293	0.5
33	MP3C	Mx	0.085	0.5
34	MP3C	X	-46.357	4.5
35	MP3C	Z	80.293	4.5
36	MP3C	Mx	0.085	4.5
37	MP4A	X	-32.639	1.5
38	MP4A	Z	56.533	1.5
39	MP4A	Mx	0.027	1.5
40	MP4A	X	-32.639	3.5
41	MP4A	Z	56.533	3.5
42	MP4A	Mx	0.027	3.5
43	MP4B	X	-13.444	1.5
44	MP4B	Z	23.286	1.5
45	MP4B	Mx	-0.022	1.5
46	MP4B	X	-13.444	3.5
47	MP4B	Z	23.286	3.5
48	MP4B	Mx	-0.022	3.5
49	MP4C	X	-32.639	1.5
50	MP4C	Z	56.533	1.5
51	MP4C	Mx	0.027	1.5
52	MP4C	X	-32.639	3.5
53	MP4C	Z	56.533	3.5
54	MP4C	Mx	0.027	3.5
55	OVP	X	-56.111	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
56	OVP	Z	97.188	1
57	OVP	Mx	0	1
58	MP1A	X	-93.05	0.5
59	MP1A	Z	161.167	0.5
60	MP1A	Mx	0.093	0.5
61	MP1A	X	-93.05	4.5
62	MP1A	Z	161.167	4.5
63	MP1A	Mx	0.093	4.5
64	MP1B	X	-85.392	0.5
65	MP1B	Z	147.904	0.5
66	MP1B	Mx	-0.171	0.5
67	MP1B	X	-85.392	4.5
68	MP1B	Z	147.904	4.5
69	MP1B	Mx	-0.171	4.5
70	MP1C	X	-93.05	0.5
71	MP1C	Z	161.167	0.5
72	MP1C	Mx	0.093	0.5
73	MP1C	X	-93.05	4.5
74	MP1C	Z	161.167	4.5
75	MP1C	Mx	0.093	4.5
76	MP5A	X	-93.05	0.5
77	MP5A	Z	161.167	0.5
78	MP5A	Mx	0.093	0.5
79	MP5A	X	-93.05	4.5
80	MP5A	Z	161.167	4.5
81	MP5A	Mx	0.093	4.5
82	MP5B	X	-85.392	0.5
83	MP5B	Z	147.904	0.5
84	MP5B	Mx	-0.171	0.5
85	MP5B	X	-85.392	4.5
86	MP5B	Z	147.904	4.5
87	MP5B	Mx	-0.171	4.5
88	MP5C	X	-93.05	0.5
89	MP5C	Z	161.167	0.5
90	MP5C	Mx	0.093	0.5
91	MP5C	X	-93.05	4.5
92	MP5C	Z	161.167	4.5
93	MP5C	Mx	0.093	4.5
94	MP3B	X	-19.097	3
95	MP3B	Z	33.077	3
96	MP3B	Mx	0.032	3
97	MP3B	X	-19.097	3
98	MP3B	Z	33.077	3
99	MP3B	Mx	0.032	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	-53.557	0.5
2	MP3A	Z	30.921	0.5
3	MP3A	Mx	0.063	0.5
4	MP3A	X	-53.557	4.5
5	MP3A	Z	30.921	4.5
6	MP3A	Mx	0.063	4.5
7	MP3B	X	-53.557	0.5
8	MP3B	Z	30.921	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
9	MP3B	Mx	-0.027	0.5
10	MP3B	X	-53.557	4.5
11	MP3B	Z	30.921	4.5
12	MP3B	Mx	-0.027	4.5
13	MP3C	X	-93.661	0.5
14	MP3C	Z	54.075	0.5
15	MP3C	Mx	-0.063	0.5
16	MP3C	X	-93.661	4.5
17	MP3C	Z	54.075	4.5
18	MP3C	Mx	-0.063	4.5
19	MP3A	X	-53.557	0.5
20	MP3A	Z	30.921	0.5
21	MP3A	Mx	0.027	0.5
22	MP3A	X	-53.557	4.5
23	MP3A	Z	30.921	4.5
24	MP3A	Mx	0.027	4.5
25	MP3B	X	-53.557	0.5
26	MP3B	Z	30.921	0.5
27	MP3B	Mx	-0.063	0.5
28	MP3B	X	-53.557	4.5
29	MP3B	Z	30.921	4.5
30	MP3B	Mx	-0.063	4.5
31	MP3C	X	-93.661	0.5
32	MP3C	Z	54.075	0.5
33	MP3C	Mx	0.063	0.5
34	MP3C	X	-93.661	4.5
35	MP3C	Z	54.075	4.5
36	MP3C	Mx	0.063	4.5
37	MP4A	X	-34.368	1.5
38	MP4A	Z	19.842	1.5
39	MP4A	Mx	0.029	1.5
40	MP4A	X	-34.368	3.5
41	MP4A	Z	19.842	3.5
42	MP4A	Mx	0.029	3.5
43	MP4B	X	-34.368	1.5
44	MP4B	Z	19.842	1.5
45	MP4B	Mx	-0.029	1.5
46	MP4B	X	-34.368	3.5
47	MP4B	Z	19.842	3.5
48	MP4B	Mx	-0.029	3.5
49	MP4C	X	-67.615	1.5
50	MP4C	Z	39.038	1.5
51	MP4C	Mx	0	1.5
52	MP4C	X	-67.615	3.5
53	MP4C	Z	39.038	3.5
54	MP4C	Mx	0	3.5
55	OVP	X	-86.183	1
56	OVP	Z	49.758	1
57	OVP	Mx	0	1
58	MP1A	X	-152.325	0.5
59	MP1A	Z	87.945	0.5
60	MP1A	Mx	0.152	0.5
61	MP1A	X	-152.325	4.5
62	MP1A	Z	87.945	4.5
63	MP1A	Mx	0.152	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
64	MP1B	X	-152.325	0.5
65	MP1B	Z	87.945	0.5
66	MP1B	Mx	-0.152	0.5
67	MP1B	X	-152.325	4.5
68	MP1B	Z	87.945	4.5
69	MP1B	Mx	-0.152	4.5
70	MP1C	X	-165.588	0.5
71	MP1C	Z	95.602	0.5
72	MP1C	Mx	0	0.5
73	MP1C	X	-165.588	4.5
74	MP1C	Z	95.602	4.5
75	MP1C	Mx	0	4.5
76	MP5A	X	-152.325	0.5
77	MP5A	Z	87.945	0.5
78	MP5A	Mx	0.152	0.5
79	MP5A	X	-152.325	4.5
80	MP5A	Z	87.945	4.5
81	MP5A	Mx	0.152	4.5
82	MP5B	X	-152.325	0.5
83	MP5B	Z	87.945	0.5
84	MP5B	Mx	-0.152	0.5
85	MP5B	X	-152.325	4.5
86	MP5B	Z	87.945	4.5
87	MP5B	Mx	-0.152	4.5
88	MP5C	X	-165.588	0.5
89	MP5C	Z	95.602	0.5
90	MP5C	Mx	0	0.5
91	MP5C	X	-165.588	4.5
92	MP5C	Z	95.602	4.5
93	MP5C	Mx	0	4.5
94	MP3B	X	-27.299	3
95	MP3B	Z	15.761	3
96	MP3B	Mx	0.031	3
97	MP3B	X	-27.299	3
98	MP3B	Z	15.761	3
99	MP3B	Mx	0.015	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	-46.407	0.5
2	MP3A	Z	0	0.5
3	MP3A	Mx	0.039	0.5
4	MP3A	X	-46.407	4.5
5	MP3A	Z	0	4.5
6	MP3A	Mx	0.039	4.5
7	MP3B	X	-92.714	0.5
8	MP3B	Z	0	0.5
9	MP3B	Mx	0.008	0.5
10	MP3B	X	-92.714	4.5
11	MP3B	Z	0	4.5
12	MP3B	Mx	0.008	4.5
13	MP3C	X	-92.714	0.5
14	MP3C	Z	0	0.5
15	MP3C	Mx	-0.085	0.5
16	MP3C	X	-92.714	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
17	MP3C	Z	0	4.5
18	MP3C	Mx	-0.085	4.5
19	MP3A	X	-46.407	0.5
20	MP3A	Z	0	0.5
21	MP3A	Mx	0.039	0.5
22	MP3A	X	-46.407	4.5
23	MP3A	Z	0	4.5
24	MP3A	Mx	0.039	4.5
25	MP3B	X	-92.714	0.5
26	MP3B	Z	0	0.5
27	MP3B	Mx	-0.085	0.5
28	MP3B	X	-92.714	4.5
29	MP3B	Z	0	4.5
30	MP3B	Mx	-0.085	4.5
31	MP3C	X	-92.714	0.5
32	MP3C	Z	0	0.5
33	MP3C	Mx	0.008	0.5
34	MP3C	X	-92.714	4.5
35	MP3C	Z	0	4.5
36	MP3C	Mx	0.008	4.5
37	MP4A	X	-26.888	1.5
38	MP4A	Z	0	1.5
39	MP4A	Mx	0.022	1.5
40	MP4A	X	-26.888	3.5
41	MP4A	Z	0	3.5
42	MP4A	Mx	0.022	3.5
43	MP4B	X	-65.278	1.5
44	MP4B	Z	0	1.5
45	MP4B	Mx	-0.027	1.5
46	MP4B	X	-65.278	3.5
47	MP4B	Z	0	3.5
48	MP4B	Mx	-0.027	3.5
49	MP4C	X	-65.278	1.5
50	MP4C	Z	0	1.5
51	MP4C	Mx	-0.027	1.5
52	MP4C	X	-65.278	3.5
53	MP4C	Z	0	3.5
54	MP4C	Mx	-0.027	3.5
55	OVP	X	-112.223	1
56	OVP	Z	0	1
57	OVP	Mx	0	1
58	MP1A	X	-170.784	0.5
59	MP1A	Z	0	0.5
60	MP1A	Mx	0.171	0.5
61	MP1A	X	-170.784	4.5
62	MP1A	Z	0	4.5
63	MP1A	Mx	0.171	4.5
64	MP1B	X	-186.1	0.5
65	MP1B	Z	0	0.5
66	MP1B	Mx	-0.093	0.5
67	MP1B	X	-186.1	4.5
68	MP1B	Z	0	4.5
69	MP1B	Mx	-0.093	4.5
70	MP1C	X	-186.1	0.5
71	MP1C	Z	0	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
72	MP1C	Mx	-0.093	0.5
73	MP1C	X	-186.1	4.5
74	MP1C	Z	0	4.5
75	MP1C	Mx	-0.093	4.5
76	MP5A	X	-170.784	0.5
77	MP5A	Z	0	0.5
78	MP5A	Mx	0.171	0.5
79	MP5A	X	-170.784	4.5
80	MP5A	Z	0	4.5
81	MP5A	Mx	0.171	4.5
82	MP5B	X	-186.1	0.5
83	MP5B	Z	0	0.5
84	MP5B	Mx	-0.093	0.5
85	MP5B	X	-186.1	4.5
86	MP5B	Z	0	4.5
87	MP5B	Mx	-0.093	4.5
88	MP5C	X	-186.1	0.5
89	MP5C	Z	0	0.5
90	MP5C	Mx	-0.093	0.5
91	MP5C	X	-186.1	4.5
92	MP5C	Z	0	4.5
93	MP5C	Mx	-0.093	4.5
94	MP3B	X	-18.176	3
95	MP3B	Z	0	3
96	MP3B	Mx	0.015	3
97	MP3B	X	-18.176	3
98	MP3B	Z	0	3
99	MP3B	Mx	-0.000297	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	-53.557	0.5
2	MP3A	Z	-30.921	0.5
3	MP3A	Mx	0.027	0.5
4	MP3A	X	-53.557	4.5
5	MP3A	Z	-30.921	4.5
6	MP3A	Mx	0.027	4.5
7	MP3B	X	-93.661	0.5
8	MP3B	Z	-54.075	0.5
9	MP3B	Mx	0.063	0.5
10	MP3B	X	-93.661	4.5
11	MP3B	Z	-54.075	4.5
12	MP3B	Mx	0.063	4.5
13	MP3C	X	-53.557	0.5
14	MP3C	Z	-30.921	0.5
15	MP3C	Mx	-0.063	0.5
16	MP3C	X	-53.557	4.5
17	MP3C	Z	-30.921	4.5
18	MP3C	Mx	-0.063	4.5
19	MP3A	X	-53.557	0.5
20	MP3A	Z	-30.921	0.5
21	MP3A	Mx	0.063	0.5
22	MP3A	X	-53.557	4.5
23	MP3A	Z	-30.921	4.5
24	MP3A	Mx	0.063	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
25	MP3B	X	-93.661	0.5
26	MP3B	Z	-54.075	0.5
27	MP3B	Mx	-0.063	0.5
28	MP3B	X	-93.661	4.5
29	MP3B	Z	-54.075	4.5
30	MP3B	Mx	-0.063	4.5
31	MP3C	X	-53.557	0.5
32	MP3C	Z	-30.921	0.5
33	MP3C	Mx	-0.027	0.5
34	MP3C	X	-53.557	4.5
35	MP3C	Z	-30.921	4.5
36	MP3C	Mx	-0.027	4.5
37	MP4A	X	-34.368	1.5
38	MP4A	Z	-19.842	1.5
39	MP4A	Mx	0.029	1.5
40	MP4A	X	-34.368	3.5
41	MP4A	Z	-19.842	3.5
42	MP4A	Mx	0.029	3.5
43	MP4B	X	-67.615	1.5
44	MP4B	Z	-39.038	1.5
45	MP4B	Mx	0	1.5
46	MP4B	X	-67.615	3.5
47	MP4B	Z	-39.038	3.5
48	MP4B	Mx	0	3.5
49	MP4C	X	-34.368	1.5
50	MP4C	Z	-19.842	1.5
51	MP4C	Mx	-0.029	1.5
52	MP4C	X	-34.368	3.5
53	MP4C	Z	-19.842	3.5
54	MP4C	Mx	-0.029	3.5
55	OVP	X	-119.197	1
56	OVP	Z	-68.818	1
57	OVP	Mx	0	1
58	MP1A	X	-152.325	0.5
59	MP1A	Z	-87.945	0.5
60	MP1A	Mx	0.152	0.5
61	MP1A	X	-152.325	4.5
62	MP1A	Z	-87.945	4.5
63	MP1A	Mx	0.152	4.5
64	MP1B	X	-165.588	0.5
65	MP1B	Z	-95.602	0.5
66	MP1B	Mx	0	0.5
67	MP1B	X	-165.588	4.5
68	MP1B	Z	-95.602	4.5
69	MP1B	Mx	0	4.5
70	MP1C	X	-152.325	0.5
71	MP1C	Z	-87.945	0.5
72	MP1C	Mx	-0.152	0.5
73	MP1C	X	-152.325	4.5
74	MP1C	Z	-87.945	4.5
75	MP1C	Mx	-0.152	4.5
76	MP5A	X	-152.325	0.5
77	MP5A	Z	-87.945	0.5
78	MP5A	Mx	0.152	0.5
79	MP5A	X	-152.325	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
80	MP5A	Z	-87.945	4.5
81	MP5A	Mx	0.152	4.5
82	MP5B	X	-165.588	0.5
83	MP5B	Z	-95.602	0.5
84	MP5B	Mx	0	0.5
85	MP5B	X	-165.588	4.5
86	MP5B	Z	-95.602	4.5
87	MP5B	Mx	0	4.5
88	MP5C	X	-152.325	0.5
89	MP5C	Z	-87.945	0.5
90	MP5C	Mx	-0.152	0.5
91	MP5C	X	-152.325	4.5
92	MP5C	Z	-87.945	4.5
93	MP5C	Mx	-0.152	4.5
94	MP3B	X	-9.963	3
95	MP3B	Z	-5.752	3
96	MP3B	Mx	0.006	3
97	MP3B	X	-9.963	3
98	MP3B	Z	-5.752	3
99	MP3B	Mx	-0.006	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	-46.357	0.5
2	MP3A	Z	-80.293	0.5
3	MP3A	Mx	-0.008	0.5
4	MP3A	X	-46.357	4.5
5	MP3A	Z	-80.293	4.5
6	MP3A	Mx	-0.008	4.5
7	MP3B	X	-46.357	0.5
8	MP3B	Z	-80.293	0.5
9	MP3B	Mx	0.085	0.5
10	MP3B	X	-46.357	4.5
11	MP3B	Z	-80.293	4.5
12	MP3B	Mx	0.085	4.5
13	MP3C	X	-23.203	0.5
14	MP3C	Z	-40.19	0.5
15	MP3C	Mx	-0.039	0.5
16	MP3C	X	-23.203	4.5
17	MP3C	Z	-40.19	4.5
18	MP3C	Mx	-0.039	4.5
19	MP3A	X	-46.357	0.5
20	MP3A	Z	-80.293	0.5
21	MP3A	Mx	0.085	0.5
22	MP3A	X	-46.357	4.5
23	MP3A	Z	-80.293	4.5
24	MP3A	Mx	0.085	4.5
25	MP3B	X	-46.357	0.5
26	MP3B	Z	-80.293	0.5
27	MP3B	Mx	-0.008	0.5
28	MP3B	X	-46.357	4.5
29	MP3B	Z	-80.293	4.5
30	MP3B	Mx	-0.008	4.5
31	MP3C	X	-23.203	0.5
32	MP3C	Z	-40.19	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
33	MP3C	Mx	-0.039	0.5
34	MP3C	X	-23.203	4.5
35	MP3C	Z	-40.19	4.5
36	MP3C	Mx	-0.039	4.5
37	MP4A	X	-32.639	1.5
38	MP4A	Z	-56.533	1.5
39	MP4A	Mx	0.027	1.5
40	MP4A	X	-32.639	3.5
41	MP4A	Z	-56.533	3.5
42	MP4A	Mx	0.027	3.5
43	MP4B	X	-32.639	1.5
44	MP4B	Z	-56.533	1.5
45	MP4B	Mx	0.027	1.5
46	MP4B	X	-32.639	3.5
47	MP4B	Z	-56.533	3.5
48	MP4B	Mx	0.027	3.5
49	MP4C	X	-13.444	1.5
50	MP4C	Z	-23.286	1.5
51	MP4C	Mx	-0.022	1.5
52	MP4C	X	-13.444	3.5
53	MP4C	Z	-23.286	3.5
54	MP4C	Mx	-0.022	3.5
55	OVP	X	-75.172	1
56	OVP	Z	-130.202	1
57	OVP	Mx	0	1
58	MP1A	X	-93.05	0.5
59	MP1A	Z	-161.167	0.5
60	MP1A	Mx	0.093	0.5
61	MP1A	X	-93.05	4.5
62	MP1A	Z	-161.167	4.5
63	MP1A	Mx	0.093	4.5
64	MP1B	X	-93.05	0.5
65	MP1B	Z	-161.167	0.5
66	MP1B	Mx	0.093	0.5
67	MP1B	X	-93.05	4.5
68	MP1B	Z	-161.167	4.5
69	MP1B	Mx	0.093	4.5
70	MP1C	X	-85.392	0.5
71	MP1C	Z	-147.904	0.5
72	MP1C	Mx	-0.171	0.5
73	MP1C	X	-85.392	4.5
74	MP1C	Z	-147.904	4.5
75	MP1C	Mx	-0.171	4.5
76	MP5A	X	-93.05	0.5
77	MP5A	Z	-161.167	0.5
78	MP5A	Mx	0.093	0.5
79	MP5A	X	-93.05	4.5
80	MP5A	Z	-161.167	4.5
81	MP5A	Mx	0.093	4.5
82	MP5B	X	-93.05	0.5
83	MP5B	Z	-161.167	0.5
84	MP5B	Mx	0.093	0.5
85	MP5B	X	-93.05	4.5
86	MP5B	Z	-161.167	4.5
87	MP5B	Mx	0.093	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
88	MP5C	X	-85.392	0.5
89	MP5C	Z	-147.904	0.5
90	MP5C	Mx	-0.171	0.5
91	MP5C	X	-85.392	4.5
92	MP5C	Z	-147.904	4.5
93	MP5C	Mx	-0.171	4.5
94	MP3B	X	-9.088	3
95	MP3B	Z	-15.741	3
96	MP3B	Mx	0.000297	3
97	MP3B	X	-9.088	3
98	MP3B	Z	-15.741	3
99	MP3B	Mx	-0.015	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	0	0.5
2	MP3A	Z	-32.226	0.5
3	MP3A	Mx	-0.019	0.5
4	MP3A	X	0	4.5
5	MP3A	Z	-32.226	4.5
6	MP3A	Mx	-0.019	4.5
7	MP3B	X	0	0.5
8	MP3B	Z	-25.021	0.5
9	MP3B	Mx	0.025	0.5
10	MP3B	X	0	4.5
11	MP3B	Z	-25.021	4.5
12	MP3B	Mx	0.025	4.5
13	MP3C	X	0	0.5
14	MP3C	Z	-25.021	0.5
15	MP3C	Mx	-0.011	0.5
16	MP3C	X	0	4.5
17	MP3C	Z	-25.021	4.5
18	MP3C	Mx	-0.011	4.5
19	MP3A	X	0	0.5
20	MP3A	Z	-32.226	0.5
21	MP3A	Mx	0.019	0.5
22	MP3A	X	0	4.5
23	MP3A	Z	-32.226	4.5
24	MP3A	Mx	0.019	4.5
25	MP3B	X	0	0.5
26	MP3B	Z	-25.021	0.5
27	MP3B	Mx	0.011	0.5
28	MP3B	X	0	4.5
29	MP3B	Z	-25.021	4.5
30	MP3B	Mx	0.011	4.5
31	MP3C	X	0	0.5
32	MP3C	Z	-25.021	0.5
33	MP3C	Mx	-0.025	0.5
34	MP3C	X	0	4.5
35	MP3C	Z	-25.021	4.5
36	MP3C	Mx	-0.025	4.5
37	MP4A	X	0	1.5
38	MP4A	Z	-19.364	1.5
39	MP4A	Mx	0	1.5
40	MP4A	X	0	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
41	MP4A	Z	-19.364	3.5
42	MP4A	Mx	0	3.5
43	MP4B	X	0	1.5
44	MP4B	Z	-11.267	1.5
45	MP4B	Mx	0.008	1.5
46	MP4B	X	0	3.5
47	MP4B	Z	-11.267	3.5
48	MP4B	Mx	0.008	3.5
49	MP4C	X	0	1.5
50	MP4C	Z	-11.267	1.5
51	MP4C	Mx	-0.008	1.5
52	MP4C	X	0	3.5
53	MP4C	Z	-11.267	3.5
54	MP4C	Mx	-0.008	3.5
55	OVP	X	0	1
56	OVP	Z	-29.03	1
57	OVP	Mx	0	1
58	MP1A	X	0	0.5
59	MP1A	Z	-37.684	0.5
60	MP1A	Mx	0	0.5
61	MP1A	X	0	4.5
62	MP1A	Z	-37.684	4.5
63	MP1A	Mx	0	4.5
64	MP1B	X	0	0.5
65	MP1B	Z	-34.924	0.5
66	MP1B	Mx	0.03	0.5
67	MP1B	X	0	4.5
68	MP1B	Z	-34.924	4.5
69	MP1B	Mx	0.03	4.5
70	MP1C	X	0	0.5
71	MP1C	Z	-34.924	0.5
72	MP1C	Mx	-0.03	0.5
73	MP1C	X	0	4.5
74	MP1C	Z	-34.924	4.5
75	MP1C	Mx	-0.03	4.5
76	MP5A	X	0	0.5
77	MP5A	Z	-37.684	0.5
78	MP5A	Mx	0	0.5
79	MP5A	X	0	4.5
80	MP5A	Z	-37.684	4.5
81	MP5A	Mx	0	4.5
82	MP5B	X	0	0.5
83	MP5B	Z	-34.924	0.5
84	MP5B	Mx	0.03	0.5
85	MP5B	X	0	4.5
86	MP5B	Z	-34.924	4.5
87	MP5B	Mx	0.03	4.5
88	MP5C	X	0	0.5
89	MP5C	Z	-34.924	0.5
90	MP5C	Mx	-0.03	0.5
91	MP5C	X	0	4.5
92	MP5C	Z	-34.924	4.5
93	MP5C	Mx	-0.03	4.5
94	MP3B	X	0	3
95	MP3B	Z	-8.032	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
96	MP3B	Mx	-0.004	3
97	MP3B	X	0	3
98	MP3B	Z	-8.032	3
99	MP3B	Mx	-0.008	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	14.912	0.5
2	MP3A	Z	-25.829	0.5
3	MP3A	Mx	-0.027	0.5
4	MP3A	X	14.912	4.5
5	MP3A	Z	-25.829	4.5
6	MP3A	Mx	-0.027	4.5
7	MP3B	X	11.31	0.5
8	MP3B	Z	-19.589	0.5
9	MP3B	Mx	0.019	0.5
10	MP3B	X	11.31	4.5
11	MP3B	Z	-19.589	4.5
12	MP3B	Mx	0.019	4.5
13	MP3C	X	14.912	0.5
14	MP3C	Z	-25.829	0.5
15	MP3C	Mx	0.003	0.5
16	MP3C	X	14.912	4.5
17	MP3C	Z	-25.829	4.5
18	MP3C	Mx	0.003	4.5
19	MP3A	X	14.912	0.5
20	MP3A	Z	-25.829	0.5
21	MP3A	Mx	0.003	0.5
22	MP3A	X	14.912	4.5
23	MP3A	Z	-25.829	4.5
24	MP3A	Mx	0.003	4.5
25	MP3B	X	11.31	0.5
26	MP3B	Z	-19.589	0.5
27	MP3B	Mx	0.019	0.5
28	MP3B	X	11.31	4.5
29	MP3B	Z	-19.589	4.5
30	MP3B	Mx	0.019	4.5
31	MP3C	X	14.912	0.5
32	MP3C	Z	-25.829	0.5
33	MP3C	Mx	-0.027	0.5
34	MP3C	X	14.912	4.5
35	MP3C	Z	-25.829	4.5
36	MP3C	Mx	-0.027	4.5
37	MP4A	X	8.332	1.5
38	MP4A	Z	-14.432	1.5
39	MP4A	Mx	-0.007	1.5
40	MP4A	X	8.332	3.5
41	MP4A	Z	-14.432	3.5
42	MP4A	Mx	-0.007	3.5
43	MP4B	X	4.284	1.5
44	MP4B	Z	-7.421	1.5
45	MP4B	Mx	0.007	1.5
46	MP4B	X	4.284	3.5
47	MP4B	Z	-7.421	3.5
48	MP4B	Mx	0.007	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
49	MP4C	X	8.332	1.5
50	MP4C	Z	-14.432	1.5
51	MP4C	Mx	-0.007	1.5
52	MP4C	X	8.332	3.5
53	MP4C	Z	-14.432	3.5
54	MP4C	Mx	-0.007	3.5
55	OVP	X	12.124	1
56	OVP	Z	-21	1
57	OVP	Mx	0	1
58	MP1A	X	18.382	0.5
59	MP1A	Z	-31.839	0.5
60	MP1A	Mx	-0.018	0.5
61	MP1A	X	18.382	4.5
62	MP1A	Z	-31.839	4.5
63	MP1A	Mx	-0.018	4.5
64	MP1B	X	17.002	0.5
65	MP1B	Z	-29.448	0.5
66	MP1B	Mx	0.034	0.5
67	MP1B	X	17.002	4.5
68	MP1B	Z	-29.448	4.5
69	MP1B	Mx	0.034	4.5
70	MP1C	X	18.382	0.5
71	MP1C	Z	-31.839	0.5
72	MP1C	Mx	-0.018	0.5
73	MP1C	X	18.382	4.5
74	MP1C	Z	-31.839	4.5
75	MP1C	Mx	-0.018	4.5
76	MP5A	X	18.382	0.5
77	MP5A	Z	-31.839	0.5
78	MP5A	Mx	-0.018	0.5
79	MP5A	X	18.382	4.5
80	MP5A	Z	-31.839	4.5
81	MP5A	Mx	-0.018	4.5
82	MP5B	X	17.002	0.5
83	MP5B	Z	-29.448	0.5
84	MP5B	Mx	0.034	0.5
85	MP5B	X	17.002	4.5
86	MP5B	Z	-29.448	4.5
87	MP5B	Mx	0.034	4.5
88	MP5C	X	18.382	0.5
89	MP5C	Z	-31.839	0.5
90	MP5C	Mx	-0.018	0.5
91	MP5C	X	18.382	4.5
92	MP5C	Z	-31.839	4.5
93	MP5C	Mx	-0.018	4.5
94	MP3B	X	4.71	3
95	MP3B	Z	-8.158	3
96	MP3B	Mx	-0.008	3
97	MP3B	X	4.71	3
98	MP3B	Z	-8.158	3
99	MP3B	Mx	-0.008	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	21.669	0.5
2	MP3A	Z	-12.511	0.5
3	MP3A	Mx	-0.025	0.5
4	MP3A	X	21.669	4.5
5	MP3A	Z	-12.511	4.5
6	MP3A	Mx	-0.025	4.5
7	MP3B	X	21.669	0.5
8	MP3B	Z	-12.511	0.5
9	MP3B	Mx	0.011	0.5
10	MP3B	X	21.669	4.5
11	MP3B	Z	-12.511	4.5
12	MP3B	Mx	0.011	4.5
13	MP3C	X	27.909	0.5
14	MP3C	Z	-16.113	0.5
15	MP3C	Mx	0.019	0.5
16	MP3C	X	27.909	4.5
17	MP3C	Z	-16.113	4.5
18	MP3C	Mx	0.019	4.5
19	MP3A	X	21.669	0.5
20	MP3A	Z	-12.511	0.5
21	MP3A	Mx	-0.011	0.5
22	MP3A	X	21.669	4.5
23	MP3A	Z	-12.511	4.5
24	MP3A	Mx	-0.011	4.5
25	MP3B	X	21.669	0.5
26	MP3B	Z	-12.511	0.5
27	MP3B	Mx	0.025	0.5
28	MP3B	X	21.669	4.5
29	MP3B	Z	-12.511	4.5
30	MP3B	Mx	0.025	4.5
31	MP3C	X	27.909	0.5
32	MP3C	Z	-16.113	0.5
33	MP3C	Mx	-0.019	0.5
34	MP3C	X	27.909	4.5
35	MP3C	Z	-16.113	4.5
36	MP3C	Mx	-0.019	4.5
37	MP4A	X	9.758	1.5
38	MP4A	Z	-5.634	1.5
39	MP4A	Mx	-0.008	1.5
40	MP4A	X	9.758	3.5
41	MP4A	Z	-5.634	3.5
42	MP4A	Mx	-0.008	3.5
43	MP4B	X	9.758	1.5
44	MP4B	Z	-5.634	1.5
45	MP4B	Mx	0.008	1.5
46	MP4B	X	9.758	3.5
47	MP4B	Z	-5.634	3.5
48	MP4B	Mx	0.008	3.5
49	MP4C	X	16.769	1.5
50	MP4C	Z	-9.682	1.5
51	MP4C	Mx	0	1.5
52	MP4C	X	16.769	3.5
53	MP4C	Z	-9.682	3.5
54	MP4C	Mx	0	3.5
55	OVP	X	18.93	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
56	OVP	Z	-10.929	1
57	OVP	Mx	0	1
58	MP1A	X	30.245	0.5
59	MP1A	Z	-17.462	0.5
60	MP1A	Mx	-0.03	0.5
61	MP1A	X	30.245	4.5
62	MP1A	Z	-17.462	4.5
63	MP1A	Mx	-0.03	4.5
64	MP1B	X	30.245	0.5
65	MP1B	Z	-17.462	0.5
66	MP1B	Mx	0.03	0.5
67	MP1B	X	30.245	4.5
68	MP1B	Z	-17.462	4.5
69	MP1B	Mx	0.03	4.5
70	MP1C	X	32.636	0.5
71	MP1C	Z	-18.842	0.5
72	MP1C	Mx	0	0.5
73	MP1C	X	32.636	4.5
74	MP1C	Z	-18.842	4.5
75	MP1C	Mx	0	4.5
76	MP5A	X	30.245	0.5
77	MP5A	Z	-17.462	0.5
78	MP5A	Mx	-0.03	0.5
79	MP5A	X	30.245	4.5
80	MP5A	Z	-17.462	4.5
81	MP5A	Mx	-0.03	4.5
82	MP5B	X	30.245	0.5
83	MP5B	Z	-17.462	0.5
84	MP5B	Mx	0.03	0.5
85	MP5B	X	30.245	4.5
86	MP5B	Z	-17.462	4.5
87	MP5B	Mx	0.03	4.5
88	MP5C	X	32.636	0.5
89	MP5C	Z	-18.842	0.5
90	MP5C	Mx	0	0.5
91	MP5C	X	32.636	4.5
92	MP5C	Z	-18.842	4.5
93	MP5C	Mx	0	4.5
94	MP3B	X	6.956	3
95	MP3B	Z	-4.016	3
96	MP3B	Mx	-0.008	3
97	MP3B	X	6.956	3
98	MP3B	Z	-4.016	3
99	MP3B	Mx	-0.004	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	22.62	0.5
2	MP3A	Z	0	0.5
3	MP3A	Mx	-0.019	0.5
4	MP3A	X	22.62	4.5
5	MP3A	Z	0	4.5
6	MP3A	Mx	-0.019	4.5
7	MP3B	X	29.825	0.5
8	MP3B	Z	0	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
9	MP3B	Mx	-0.003	0.5
10	MP3B	X	29.825	4.5
11	MP3B	Z	0	4.5
12	MP3B	Mx	-0.003	4.5
13	MP3C	X	29.825	0.5
14	MP3C	Z	0	0.5
15	MP3C	Mx	0.027	0.5
16	MP3C	X	29.825	4.5
17	MP3C	Z	0	4.5
18	MP3C	Mx	0.027	4.5
19	MP3A	X	22.62	0.5
20	MP3A	Z	0	0.5
21	MP3A	Mx	-0.019	0.5
22	MP3A	X	22.62	4.5
23	MP3A	Z	0	4.5
24	MP3A	Mx	-0.019	4.5
25	MP3B	X	29.825	0.5
26	MP3B	Z	0	0.5
27	MP3B	Mx	0.027	0.5
28	MP3B	X	29.825	4.5
29	MP3B	Z	0	4.5
30	MP3B	Mx	0.027	4.5
31	MP3C	X	29.825	0.5
32	MP3C	Z	0	0.5
33	MP3C	Mx	-0.003	0.5
34	MP3C	X	29.825	4.5
35	MP3C	Z	0	4.5
36	MP3C	Mx	-0.003	4.5
37	MP4A	X	8.569	1.5
38	MP4A	Z	0	1.5
39	MP4A	Mx	-0.007	1.5
40	MP4A	X	8.569	3.5
41	MP4A	Z	0	3.5
42	MP4A	Mx	-0.007	3.5
43	MP4B	X	16.665	1.5
44	MP4B	Z	0	1.5
45	MP4B	Mx	0.007	1.5
46	MP4B	X	16.665	3.5
47	MP4B	Z	0	3.5
48	MP4B	Mx	0.007	3.5
49	MP4C	X	16.665	1.5
50	MP4C	Z	0	1.5
51	MP4C	Mx	0.007	1.5
52	MP4C	X	16.665	3.5
53	MP4C	Z	0	3.5
54	MP4C	Mx	0.007	3.5
55	OVP	X	24.249	1
56	OVP	Z	0	1
57	OVP	Mx	0	1
58	MP1A	X	34.004	0.5
59	MP1A	Z	0	0.5
60	MP1A	Mx	-0.034	0.5
61	MP1A	X	34.004	4.5
62	MP1A	Z	0	4.5
63	MP1A	Mx	-0.034	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
64	MP1B	X	36.764	0.5
65	MP1B	Z	0	0.5
66	MP1B	Mx	0.018	0.5
67	MP1B	X	36.764	4.5
68	MP1B	Z	0	4.5
69	MP1B	Mx	0.018	4.5
70	MP1C	X	36.764	0.5
71	MP1C	Z	0	0.5
72	MP1C	Mx	0.018	0.5
73	MP1C	X	36.764	4.5
74	MP1C	Z	0	4.5
75	MP1C	Mx	0.018	4.5
76	MP5A	X	34.004	0.5
77	MP5A	Z	0	0.5
78	MP5A	Mx	-0.034	0.5
79	MP5A	X	34.004	4.5
80	MP5A	Z	0	4.5
81	MP5A	Mx	-0.034	4.5
82	MP5B	X	36.764	0.5
83	MP5B	Z	0	0.5
84	MP5B	Mx	0.018	0.5
85	MP5B	X	36.764	4.5
86	MP5B	Z	0	4.5
87	MP5B	Mx	0.018	4.5
88	MP5C	X	36.764	0.5
89	MP5C	Z	0	0.5
90	MP5C	Mx	0.018	0.5
91	MP5C	X	36.764	4.5
92	MP5C	Z	0	4.5
93	MP5C	Mx	0.018	4.5
94	MP3B	X	5.258	3
95	MP3B	Z	0	3
96	MP3B	Mx	-0.004	3
97	MP3B	X	5.258	3
98	MP3B	Z	0	3
99	MP3B	Mx	8.6e-5	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	21.669	0.5
2	MP3A	Z	12.511	0.5
3	MP3A	Mx	-0.011	0.5
4	MP3A	X	21.669	4.5
5	MP3A	Z	12.511	4.5
6	MP3A	Mx	-0.011	4.5
7	MP3B	X	27.909	0.5
8	MP3B	Z	16.113	0.5
9	MP3B	Mx	-0.019	0.5
10	MP3B	X	27.909	4.5
11	MP3B	Z	16.113	4.5
12	MP3B	Mx	-0.019	4.5
13	MP3C	X	21.669	0.5
14	MP3C	Z	12.511	0.5
15	MP3C	Mx	0.025	0.5
16	MP3C	X	21.669	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
17	MP3C	Z	12.511	4.5
18	MP3C	Mx	0.025	4.5
19	MP3A	X	21.669	0.5
20	MP3A	Z	12.511	0.5
21	MP3A	Mx	-0.025	0.5
22	MP3A	X	21.669	4.5
23	MP3A	Z	12.511	4.5
24	MP3A	Mx	-0.025	4.5
25	MP3B	X	27.909	0.5
26	MP3B	Z	16.113	0.5
27	MP3B	Mx	0.019	0.5
28	MP3B	X	27.909	4.5
29	MP3B	Z	16.113	4.5
30	MP3B	Mx	0.019	4.5
31	MP3C	X	21.669	0.5
32	MP3C	Z	12.511	0.5
33	MP3C	Mx	0.011	0.5
34	MP3C	X	21.669	4.5
35	MP3C	Z	12.511	4.5
36	MP3C	Mx	0.011	4.5
37	MP4A	X	9.758	1.5
38	MP4A	Z	5.634	1.5
39	MP4A	Mx	-0.008	1.5
40	MP4A	X	9.758	3.5
41	MP4A	Z	5.634	3.5
42	MP4A	Mx	-0.008	3.5
43	MP4B	X	16.769	1.5
44	MP4B	Z	9.682	1.5
45	MP4B	Mx	0	1.5
46	MP4B	X	16.769	3.5
47	MP4B	Z	9.682	3.5
48	MP4B	Mx	0	3.5
49	MP4C	X	9.758	1.5
50	MP4C	Z	5.634	1.5
51	MP4C	Mx	0.008	1.5
52	MP4C	X	9.758	3.5
53	MP4C	Z	5.634	3.5
54	MP4C	Mx	0.008	3.5
55	OVP	X	25.141	1
56	OVP	Z	14.515	1
57	OVP	Mx	0	1
58	MP1A	X	30.245	0.5
59	MP1A	Z	17.462	0.5
60	MP1A	Mx	-0.03	0.5
61	MP1A	X	30.245	4.5
62	MP1A	Z	17.462	4.5
63	MP1A	Mx	-0.03	4.5
64	MP1B	X	32.636	0.5
65	MP1B	Z	18.842	0.5
66	MP1B	Mx	0	0.5
67	MP1B	X	32.636	4.5
68	MP1B	Z	18.842	4.5
69	MP1B	Mx	0	4.5
70	MP1C	X	30.245	0.5
71	MP1C	Z	17.462	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
72	MP1C	Mx	0.03	0.5
73	MP1C	X	30.245	4.5
74	MP1C	Z	17.462	4.5
75	MP1C	Mx	0.03	4.5
76	MP5A	X	30.245	0.5
77	MP5A	Z	17.462	0.5
78	MP5A	Mx	-0.03	0.5
79	MP5A	X	30.245	4.5
80	MP5A	Z	17.462	4.5
81	MP5A	Mx	-0.03	4.5
82	MP5B	X	32.636	0.5
83	MP5B	Z	18.842	0.5
84	MP5B	Mx	0	0.5
85	MP5B	X	32.636	4.5
86	MP5B	Z	18.842	4.5
87	MP5B	Mx	0	4.5
88	MP5C	X	30.245	0.5
89	MP5C	Z	17.462	0.5
90	MP5C	Mx	0.03	0.5
91	MP5C	X	30.245	4.5
92	MP5C	Z	17.462	4.5
93	MP5C	Mx	0.03	4.5
94	MP3B	X	3.353	3
95	MP3B	Z	1.936	3
96	MP3B	Mx	-0.002	3
97	MP3B	X	3.353	3
98	MP3B	Z	1.936	3
99	MP3B	Mx	0.002	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	14.912	0.5
2	MP3A	Z	25.829	0.5
3	MP3A	Mx	0.003	0.5
4	MP3A	X	14.912	4.5
5	MP3A	Z	25.829	4.5
6	MP3A	Mx	0.003	4.5
7	MP3B	X	14.912	0.5
8	MP3B	Z	25.829	0.5
9	MP3B	Mx	-0.027	0.5
10	MP3B	X	14.912	4.5
11	MP3B	Z	25.829	4.5
12	MP3B	Mx	-0.027	4.5
13	MP3C	X	11.31	0.5
14	MP3C	Z	19.589	0.5
15	MP3C	Mx	0.019	0.5
16	MP3C	X	11.31	4.5
17	MP3C	Z	19.589	4.5
18	MP3C	Mx	0.019	4.5
19	MP3A	X	14.912	0.5
20	MP3A	Z	25.829	0.5
21	MP3A	Mx	-0.027	0.5
22	MP3A	X	14.912	4.5
23	MP3A	Z	25.829	4.5
24	MP3A	Mx	-0.027	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
25	MP3B	X	14.912	0.5
26	MP3B	Z	25.829	0.5
27	MP3B	Mx	0.003	0.5
28	MP3B	X	14.912	4.5
29	MP3B	Z	25.829	4.5
30	MP3B	Mx	0.003	4.5
31	MP3C	X	11.31	0.5
32	MP3C	Z	19.589	0.5
33	MP3C	Mx	0.019	0.5
34	MP3C	X	11.31	4.5
35	MP3C	Z	19.589	4.5
36	MP3C	Mx	0.019	4.5
37	MP4A	X	8.332	1.5
38	MP4A	Z	14.432	1.5
39	MP4A	Mx	-0.007	1.5
40	MP4A	X	8.332	3.5
41	MP4A	Z	14.432	3.5
42	MP4A	Mx	-0.007	3.5
43	MP4B	X	8.332	1.5
44	MP4B	Z	14.432	1.5
45	MP4B	Mx	-0.007	1.5
46	MP4B	X	8.332	3.5
47	MP4B	Z	14.432	3.5
48	MP4B	Mx	-0.007	3.5
49	MP4C	X	4.284	1.5
50	MP4C	Z	7.421	1.5
51	MP4C	Mx	0.007	1.5
52	MP4C	X	4.284	3.5
53	MP4C	Z	7.421	3.5
54	MP4C	Mx	0.007	3.5
55	OVP	X	15.71	1
56	OVP	Z	27.211	1
57	OVP	Mx	0	1
58	MP1A	X	18.382	0.5
59	MP1A	Z	31.839	0.5
60	MP1A	Mx	-0.018	0.5
61	MP1A	X	18.382	4.5
62	MP1A	Z	31.839	4.5
63	MP1A	Mx	-0.018	4.5
64	MP1B	X	18.382	0.5
65	MP1B	Z	31.839	0.5
66	MP1B	Mx	-0.018	0.5
67	MP1B	X	18.382	4.5
68	MP1B	Z	31.839	4.5
69	MP1B	Mx	-0.018	4.5
70	MP1C	X	17.002	0.5
71	MP1C	Z	29.448	0.5
72	MP1C	Mx	0.034	0.5
73	MP1C	X	17.002	4.5
74	MP1C	Z	29.448	4.5
75	MP1C	Mx	0.034	4.5
76	MP5A	X	18.382	0.5
77	MP5A	Z	31.839	0.5
78	MP5A	Mx	-0.018	0.5
79	MP5A	X	18.382	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
80	MP5A	Z	31.839	4.5
81	MP5A	Mx	-0.018	4.5
82	MP5B	X	18.382	0.5
83	MP5B	Z	31.839	0.5
84	MP5B	Mx	-0.018	0.5
85	MP5B	X	18.382	4.5
86	MP5B	Z	31.839	4.5
87	MP5B	Mx	-0.018	4.5
88	MP5C	X	17.002	0.5
89	MP5C	Z	29.448	0.5
90	MP5C	Mx	0.034	0.5
91	MP5C	X	17.002	4.5
92	MP5C	Z	29.448	4.5
93	MP5C	Mx	0.034	4.5
94	MP3B	X	2.629	3
95	MP3B	Z	4.554	3
96	MP3B	Mx	-8.6e-5	3
97	MP3B	X	2.629	3
98	MP3B	Z	4.554	3
99	MP3B	Mx	0.004	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	0	0.5
2	MP3A	Z	32.226	0.5
3	MP3A	Mx	0.019	0.5
4	MP3A	X	0	4.5
5	MP3A	Z	32.226	4.5
6	MP3A	Mx	0.019	4.5
7	MP3B	X	0	0.5
8	MP3B	Z	25.021	0.5
9	MP3B	Mx	-0.025	0.5
10	MP3B	X	0	4.5
11	MP3B	Z	25.021	4.5
12	MP3B	Mx	-0.025	4.5
13	MP3C	X	0	0.5
14	MP3C	Z	25.021	0.5
15	MP3C	Mx	0.011	0.5
16	MP3C	X	0	4.5
17	MP3C	Z	25.021	4.5
18	MP3C	Mx	0.011	4.5
19	MP3A	X	0	0.5
20	MP3A	Z	32.226	0.5
21	MP3A	Mx	-0.019	0.5
22	MP3A	X	0	4.5
23	MP3A	Z	32.226	4.5
24	MP3A	Mx	-0.019	4.5
25	MP3B	X	0	0.5
26	MP3B	Z	25.021	0.5
27	MP3B	Mx	-0.011	0.5
28	MP3B	X	0	4.5
29	MP3B	Z	25.021	4.5
30	MP3B	Mx	-0.011	4.5
31	MP3C	X	0	0.5
32	MP3C	Z	25.021	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
33	MP3C	Mx	0.025	0.5
34	MP3C	X	0	4.5
35	MP3C	Z	25.021	4.5
36	MP3C	Mx	0.025	4.5
37	MP4A	X	0	1.5
38	MP4A	Z	19.364	1.5
39	MP4A	Mx	0	1.5
40	MP4A	X	0	3.5
41	MP4A	Z	19.364	3.5
42	MP4A	Mx	0	3.5
43	MP4B	X	0	1.5
44	MP4B	Z	11.267	1.5
45	MP4B	Mx	-0.008	1.5
46	MP4B	X	0	3.5
47	MP4B	Z	11.267	3.5
48	MP4B	Mx	-0.008	3.5
49	MP4C	X	0	1.5
50	MP4C	Z	11.267	1.5
51	MP4C	Mx	0.008	1.5
52	MP4C	X	0	3.5
53	MP4C	Z	11.267	3.5
54	MP4C	Mx	0.008	3.5
55	OVP	X	0	1
56	OVP	Z	29.03	1
57	OVP	Mx	0	1
58	MP1A	X	0	0.5
59	MP1A	Z	37.684	0.5
60	MP1A	Mx	0	0.5
61	MP1A	X	0	4.5
62	MP1A	Z	37.684	4.5
63	MP1A	Mx	0	4.5
64	MP1B	X	0	0.5
65	MP1B	Z	34.924	0.5
66	MP1B	Mx	-0.03	0.5
67	MP1B	X	0	4.5
68	MP1B	Z	34.924	4.5
69	MP1B	Mx	-0.03	4.5
70	MP1C	X	0	0.5
71	MP1C	Z	34.924	0.5
72	MP1C	Mx	0.03	0.5
73	MP1C	X	0	4.5
74	MP1C	Z	34.924	4.5
75	MP1C	Mx	0.03	4.5
76	MP5A	X	0	0.5
77	MP5A	Z	37.684	0.5
78	MP5A	Mx	0	0.5
79	MP5A	X	0	4.5
80	MP5A	Z	37.684	4.5
81	MP5A	Mx	0	4.5
82	MP5B	X	0	0.5
83	MP5B	Z	34.924	0.5
84	MP5B	Mx	-0.03	0.5
85	MP5B	X	0	4.5
86	MP5B	Z	34.924	4.5
87	MP5B	Mx	-0.03	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
88	MP5C	X	0	0.5
89	MP5C	Z	34.924	0.5
90	MP5C	Mx	0.03	0.5
91	MP5C	X	0	4.5
92	MP5C	Z	34.924	4.5
93	MP5C	Mx	0.03	4.5
94	MP3B	X	0	3
95	MP3B	Z	8.032	3
96	MP3B	Mx	0.004	3
97	MP3B	X	0	3
98	MP3B	Z	8.032	3
99	MP3B	Mx	0.008	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	-14.912	0.5
2	MP3A	Z	25.829	0.5
3	MP3A	Mx	0.027	0.5
4	MP3A	X	-14.912	4.5
5	MP3A	Z	25.829	4.5
6	MP3A	Mx	0.027	4.5
7	MP3B	X	-11.31	0.5
8	MP3B	Z	19.589	0.5
9	MP3B	Mx	-0.019	0.5
10	MP3B	X	-11.31	4.5
11	MP3B	Z	19.589	4.5
12	MP3B	Mx	-0.019	4.5
13	MP3C	X	-14.912	0.5
14	MP3C	Z	25.829	0.5
15	MP3C	Mx	-0.003	0.5
16	MP3C	X	-14.912	4.5
17	MP3C	Z	25.829	4.5
18	MP3C	Mx	-0.003	4.5
19	MP3A	X	-14.912	0.5
20	MP3A	Z	25.829	0.5
21	MP3A	Mx	-0.003	0.5
22	MP3A	X	-14.912	4.5
23	MP3A	Z	25.829	4.5
24	MP3A	Mx	-0.003	4.5
25	MP3B	X	-11.31	0.5
26	MP3B	Z	19.589	0.5
27	MP3B	Mx	-0.019	0.5
28	MP3B	X	-11.31	4.5
29	MP3B	Z	19.589	4.5
30	MP3B	Mx	-0.019	4.5
31	MP3C	X	-14.912	0.5
32	MP3C	Z	25.829	0.5
33	MP3C	Mx	0.027	0.5
34	MP3C	X	-14.912	4.5
35	MP3C	Z	25.829	4.5
36	MP3C	Mx	0.027	4.5
37	MP4A	X	-8.332	1.5
38	MP4A	Z	14.432	1.5
39	MP4A	Mx	0.007	1.5
40	MP4A	X	-8.332	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
41	MP4A	Z	14.432	3.5
42	MP4A	Mx	0.007	3.5
43	MP4B	X	-4.284	1.5
44	MP4B	Z	7.421	1.5
45	MP4B	Mx	-0.007	1.5
46	MP4B	X	-4.284	3.5
47	MP4B	Z	7.421	3.5
48	MP4B	Mx	-0.007	3.5
49	MP4C	X	-8.332	1.5
50	MP4C	Z	14.432	1.5
51	MP4C	Mx	0.007	1.5
52	MP4C	X	-8.332	3.5
53	MP4C	Z	14.432	3.5
54	MP4C	Mx	0.007	3.5
55	OVP	X	-12.124	1
56	OVP	Z	21	1
57	OVP	Mx	0	1
58	MP1A	X	-18.382	0.5
59	MP1A	Z	31.839	0.5
60	MP1A	Mx	0.018	0.5
61	MP1A	X	-18.382	4.5
62	MP1A	Z	31.839	4.5
63	MP1A	Mx	0.018	4.5
64	MP1B	X	-17.002	0.5
65	MP1B	Z	29.448	0.5
66	MP1B	Mx	-0.034	0.5
67	MP1B	X	-17.002	4.5
68	MP1B	Z	29.448	4.5
69	MP1B	Mx	-0.034	4.5
70	MP1C	X	-18.382	0.5
71	MP1C	Z	31.839	0.5
72	MP1C	Mx	0.018	0.5
73	MP1C	X	-18.382	4.5
74	MP1C	Z	31.839	4.5
75	MP1C	Mx	0.018	4.5
76	MP5A	X	-18.382	0.5
77	MP5A	Z	31.839	0.5
78	MP5A	Mx	0.018	0.5
79	MP5A	X	-18.382	4.5
80	MP5A	Z	31.839	4.5
81	MP5A	Mx	0.018	4.5
82	MP5B	X	-17.002	0.5
83	MP5B	Z	29.448	0.5
84	MP5B	Mx	-0.034	0.5
85	MP5B	X	-17.002	4.5
86	MP5B	Z	29.448	4.5
87	MP5B	Mx	-0.034	4.5
88	MP5C	X	-18.382	0.5
89	MP5C	Z	31.839	0.5
90	MP5C	Mx	0.018	0.5
91	MP5C	X	-18.382	4.5
92	MP5C	Z	31.839	4.5
93	MP5C	Mx	0.018	4.5
94	MP3B	X	-4.71	3
95	MP3B	Z	8.158	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
96	MP3B	Mx	0.008	3
97	MP3B	X	-4.71	3
98	MP3B	Z	8.158	3
99	MP3B	Mx	0.008	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	-21.669	0.5
2	MP3A	Z	12.511	0.5
3	MP3A	Mx	0.025	0.5
4	MP3A	X	-21.669	4.5
5	MP3A	Z	12.511	4.5
6	MP3A	Mx	0.025	4.5
7	MP3B	X	-21.669	0.5
8	MP3B	Z	12.511	0.5
9	MP3B	Mx	-0.011	0.5
10	MP3B	X	-21.669	4.5
11	MP3B	Z	12.511	4.5
12	MP3B	Mx	-0.011	4.5
13	MP3C	X	-27.909	0.5
14	MP3C	Z	16.113	0.5
15	MP3C	Mx	-0.019	0.5
16	MP3C	X	-27.909	4.5
17	MP3C	Z	16.113	4.5
18	MP3C	Mx	-0.019	4.5
19	MP3A	X	-21.669	0.5
20	MP3A	Z	12.511	0.5
21	MP3A	Mx	0.011	0.5
22	MP3A	X	-21.669	4.5
23	MP3A	Z	12.511	4.5
24	MP3A	Mx	0.011	4.5
25	MP3B	X	-21.669	0.5
26	MP3B	Z	12.511	0.5
27	MP3B	Mx	-0.025	0.5
28	MP3B	X	-21.669	4.5
29	MP3B	Z	12.511	4.5
30	MP3B	Mx	-0.025	4.5
31	MP3C	X	-27.909	0.5
32	MP3C	Z	16.113	0.5
33	MP3C	Mx	0.019	0.5
34	MP3C	X	-27.909	4.5
35	MP3C	Z	16.113	4.5
36	MP3C	Mx	0.019	4.5
37	MP4A	X	-9.758	1.5
38	MP4A	Z	5.634	1.5
39	MP4A	Mx	0.008	1.5
40	MP4A	X	-9.758	3.5
41	MP4A	Z	5.634	3.5
42	MP4A	Mx	0.008	3.5
43	MP4B	X	-9.758	1.5
44	MP4B	Z	5.634	1.5
45	MP4B	Mx	-0.008	1.5
46	MP4B	X	-9.758	3.5
47	MP4B	Z	5.634	3.5
48	MP4B	Mx	-0.008	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
49	MP4C	X	-16.769	1.5
50	MP4C	Z	9.682	1.5
51	MP4C	Mx	0	1.5
52	MP4C	X	-16.769	3.5
53	MP4C	Z	9.682	3.5
54	MP4C	Mx	0	3.5
55	OVP	X	-18.93	1
56	OVP	Z	10.929	1
57	OVP	Mx	0	1
58	MP1A	X	-30.245	0.5
59	MP1A	Z	17.462	0.5
60	MP1A	Mx	0.03	0.5
61	MP1A	X	-30.245	4.5
62	MP1A	Z	17.462	4.5
63	MP1A	Mx	0.03	4.5
64	MP1B	X	-30.245	0.5
65	MP1B	Z	17.462	0.5
66	MP1B	Mx	-0.03	0.5
67	MP1B	X	-30.245	4.5
68	MP1B	Z	17.462	4.5
69	MP1B	Mx	-0.03	4.5
70	MP1C	X	-32.636	0.5
71	MP1C	Z	18.842	0.5
72	MP1C	Mx	0	0.5
73	MP1C	X	-32.636	4.5
74	MP1C	Z	18.842	4.5
75	MP1C	Mx	0	4.5
76	MP5A	X	-30.245	0.5
77	MP5A	Z	17.462	0.5
78	MP5A	Mx	0.03	0.5
79	MP5A	X	-30.245	4.5
80	MP5A	Z	17.462	4.5
81	MP5A	Mx	0.03	4.5
82	MP5B	X	-30.245	0.5
83	MP5B	Z	17.462	0.5
84	MP5B	Mx	-0.03	0.5
85	MP5B	X	-30.245	4.5
86	MP5B	Z	17.462	4.5
87	MP5B	Mx	-0.03	4.5
88	MP5C	X	-32.636	0.5
89	MP5C	Z	18.842	0.5
90	MP5C	Mx	0	0.5
91	MP5C	X	-32.636	4.5
92	MP5C	Z	18.842	4.5
93	MP5C	Mx	0	4.5
94	MP3B	X	-6.956	3
95	MP3B	Z	4.016	3
96	MP3B	Mx	0.008	3
97	MP3B	X	-6.956	3
98	MP3B	Z	4.016	3
99	MP3B	Mx	0.004	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	-22.62	0.5
2	MP3A	Z	0	0.5
3	MP3A	Mx	0.019	0.5
4	MP3A	X	-22.62	4.5
5	MP3A	Z	0	4.5
6	MP3A	Mx	0.019	4.5
7	MP3B	X	-29.825	0.5
8	MP3B	Z	0	0.5
9	MP3B	Mx	0.003	0.5
10	MP3B	X	-29.825	4.5
11	MP3B	Z	0	4.5
12	MP3B	Mx	0.003	4.5
13	MP3C	X	-29.825	0.5
14	MP3C	Z	0	0.5
15	MP3C	Mx	-0.027	0.5
16	MP3C	X	-29.825	4.5
17	MP3C	Z	0	4.5
18	MP3C	Mx	-0.027	4.5
19	MP3A	X	-22.62	0.5
20	MP3A	Z	0	0.5
21	MP3A	Mx	0.019	0.5
22	MP3A	X	-22.62	4.5
23	MP3A	Z	0	4.5
24	MP3A	Mx	0.019	4.5
25	MP3B	X	-29.825	0.5
26	MP3B	Z	0	0.5
27	MP3B	Mx	-0.027	0.5
28	MP3B	X	-29.825	4.5
29	MP3B	Z	0	4.5
30	MP3B	Mx	-0.027	4.5
31	MP3C	X	-29.825	0.5
32	MP3C	Z	0	0.5
33	MP3C	Mx	0.003	0.5
34	MP3C	X	-29.825	4.5
35	MP3C	Z	0	4.5
36	MP3C	Mx	0.003	4.5
37	MP4A	X	-8.569	1.5
38	MP4A	Z	0	1.5
39	MP4A	Mx	0.007	1.5
40	MP4A	X	-8.569	3.5
41	MP4A	Z	0	3.5
42	MP4A	Mx	0.007	3.5
43	MP4B	X	-16.665	1.5
44	MP4B	Z	0	1.5
45	MP4B	Mx	-0.007	1.5
46	MP4B	X	-16.665	3.5
47	MP4B	Z	0	3.5
48	MP4B	Mx	-0.007	3.5
49	MP4C	X	-16.665	1.5
50	MP4C	Z	0	1.5
51	MP4C	Mx	-0.007	1.5
52	MP4C	X	-16.665	3.5
53	MP4C	Z	0	3.5
54	MP4C	Mx	-0.007	3.5
55	OVP	X	-24.249	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
56	OVP	Z	0	1
57	OVP	Mx	0	1
58	MP1A	X	-34.004	0.5
59	MP1A	Z	0	0.5
60	MP1A	Mx	0.034	0.5
61	MP1A	X	-34.004	4.5
62	MP1A	Z	0	4.5
63	MP1A	Mx	0.034	4.5
64	MP1B	X	-36.764	0.5
65	MP1B	Z	0	0.5
66	MP1B	Mx	-0.018	0.5
67	MP1B	X	-36.764	4.5
68	MP1B	Z	0	4.5
69	MP1B	Mx	-0.018	4.5
70	MP1C	X	-36.764	0.5
71	MP1C	Z	0	0.5
72	MP1C	Mx	-0.018	0.5
73	MP1C	X	-36.764	4.5
74	MP1C	Z	0	4.5
75	MP1C	Mx	-0.018	4.5
76	MP5A	X	-34.004	0.5
77	MP5A	Z	0	0.5
78	MP5A	Mx	0.034	0.5
79	MP5A	X	-34.004	4.5
80	MP5A	Z	0	4.5
81	MP5A	Mx	0.034	4.5
82	MP5B	X	-36.764	0.5
83	MP5B	Z	0	0.5
84	MP5B	Mx	-0.018	0.5
85	MP5B	X	-36.764	4.5
86	MP5B	Z	0	4.5
87	MP5B	Mx	-0.018	4.5
88	MP5C	X	-36.764	0.5
89	MP5C	Z	0	0.5
90	MP5C	Mx	-0.018	0.5
91	MP5C	X	-36.764	4.5
92	MP5C	Z	0	4.5
93	MP5C	Mx	-0.018	4.5
94	MP3B	X	-5.258	3
95	MP3B	Z	0	3
96	MP3B	Mx	0.004	3
97	MP3B	X	-5.258	3
98	MP3B	Z	0	3
99	MP3B	Mx	-8.6e-5	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	-21.669	0.5
2	MP3A	Z	-12.511	0.5
3	MP3A	Mx	0.011	0.5
4	MP3A	X	-21.669	4.5
5	MP3A	Z	-12.511	4.5
6	MP3A	Mx	0.011	4.5
7	MP3B	X	-27.909	0.5
8	MP3B	Z	-16.113	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
9	MP3B	Mx	0.019	0.5
10	MP3B	X	-27.909	4.5
11	MP3B	Z	-16.113	4.5
12	MP3B	Mx	0.019	4.5
13	MP3C	X	-21.669	0.5
14	MP3C	Z	-12.511	0.5
15	MP3C	Mx	-0.025	0.5
16	MP3C	X	-21.669	4.5
17	MP3C	Z	-12.511	4.5
18	MP3C	Mx	-0.025	4.5
19	MP3A	X	-21.669	0.5
20	MP3A	Z	-12.511	0.5
21	MP3A	Mx	0.025	0.5
22	MP3A	X	-21.669	4.5
23	MP3A	Z	-12.511	4.5
24	MP3A	Mx	0.025	4.5
25	MP3B	X	-27.909	0.5
26	MP3B	Z	-16.113	0.5
27	MP3B	Mx	-0.019	0.5
28	MP3B	X	-27.909	4.5
29	MP3B	Z	-16.113	4.5
30	MP3B	Mx	-0.019	4.5
31	MP3C	X	-21.669	0.5
32	MP3C	Z	-12.511	0.5
33	MP3C	Mx	-0.011	0.5
34	MP3C	X	-21.669	4.5
35	MP3C	Z	-12.511	4.5
36	MP3C	Mx	-0.011	4.5
37	MP4A	X	-9.758	1.5
38	MP4A	Z	-5.634	1.5
39	MP4A	Mx	0.008	1.5
40	MP4A	X	-9.758	3.5
41	MP4A	Z	-5.634	3.5
42	MP4A	Mx	0.008	3.5
43	MP4B	X	-16.769	1.5
44	MP4B	Z	-9.682	1.5
45	MP4B	Mx	0	1.5
46	MP4B	X	-16.769	3.5
47	MP4B	Z	-9.682	3.5
48	MP4B	Mx	0	3.5
49	MP4C	X	-9.758	1.5
50	MP4C	Z	-5.634	1.5
51	MP4C	Mx	-0.008	1.5
52	MP4C	X	-9.758	3.5
53	MP4C	Z	-5.634	3.5
54	MP4C	Mx	-0.008	3.5
55	OVP	X	-25.141	1
56	OVP	Z	-14.515	1
57	OVP	Mx	0	1
58	MP1A	X	-30.245	0.5
59	MP1A	Z	-17.462	0.5
60	MP1A	Mx	0.03	0.5
61	MP1A	X	-30.245	4.5
62	MP1A	Z	-17.462	4.5
63	MP1A	Mx	0.03	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
64	MP1B	X	-32.636	0.5
65	MP1B	Z	-18.842	0.5
66	MP1B	Mx	0	0.5
67	MP1B	X	-32.636	4.5
68	MP1B	Z	-18.842	4.5
69	MP1B	Mx	0	4.5
70	MP1C	X	-30.245	0.5
71	MP1C	Z	-17.462	0.5
72	MP1C	Mx	-0.03	0.5
73	MP1C	X	-30.245	4.5
74	MP1C	Z	-17.462	4.5
75	MP1C	Mx	-0.03	4.5
76	MP5A	X	-30.245	0.5
77	MP5A	Z	-17.462	0.5
78	MP5A	Mx	0.03	0.5
79	MP5A	X	-30.245	4.5
80	MP5A	Z	-17.462	4.5
81	MP5A	Mx	0.03	4.5
82	MP5B	X	-32.636	0.5
83	MP5B	Z	-18.842	0.5
84	MP5B	Mx	0	0.5
85	MP5B	X	-32.636	4.5
86	MP5B	Z	-18.842	4.5
87	MP5B	Mx	0	4.5
88	MP5C	X	-30.245	0.5
89	MP5C	Z	-17.462	0.5
90	MP5C	Mx	-0.03	0.5
91	MP5C	X	-30.245	4.5
92	MP5C	Z	-17.462	4.5
93	MP5C	Mx	-0.03	4.5
94	MP3B	X	-3.353	3
95	MP3B	Z	-1.936	3
96	MP3B	Mx	0.002	3
97	MP3B	X	-3.353	3
98	MP3B	Z	-1.936	3
99	MP3B	Mx	-0.002	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	-14.912	0.5
2	MP3A	Z	-25.829	0.5
3	MP3A	Mx	-0.003	0.5
4	MP3A	X	-14.912	4.5
5	MP3A	Z	-25.829	4.5
6	MP3A	Mx	-0.003	4.5
7	MP3B	X	-14.912	0.5
8	MP3B	Z	-25.829	0.5
9	MP3B	Mx	0.027	0.5
10	MP3B	X	-14.912	4.5
11	MP3B	Z	-25.829	4.5
12	MP3B	Mx	0.027	4.5
13	MP3C	X	-11.31	0.5
14	MP3C	Z	-19.589	0.5
15	MP3C	Mx	-0.019	0.5
16	MP3C	X	-11.31	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
17	MP3C	Z	-19.589	4.5
18	MP3C	Mx	-0.019	4.5
19	MP3A	X	-14.912	0.5
20	MP3A	Z	-25.829	0.5
21	MP3A	Mx	0.027	0.5
22	MP3A	X	-14.912	4.5
23	MP3A	Z	-25.829	4.5
24	MP3A	Mx	0.027	4.5
25	MP3B	X	-14.912	0.5
26	MP3B	Z	-25.829	0.5
27	MP3B	Mx	-0.003	0.5
28	MP3B	X	-14.912	4.5
29	MP3B	Z	-25.829	4.5
30	MP3B	Mx	-0.003	4.5
31	MP3C	X	-11.31	0.5
32	MP3C	Z	-19.589	0.5
33	MP3C	Mx	-0.019	0.5
34	MP3C	X	-11.31	4.5
35	MP3C	Z	-19.589	4.5
36	MP3C	Mx	-0.019	4.5
37	MP4A	X	-8.332	1.5
38	MP4A	Z	-14.432	1.5
39	MP4A	Mx	0.007	1.5
40	MP4A	X	-8.332	3.5
41	MP4A	Z	-14.432	3.5
42	MP4A	Mx	0.007	3.5
43	MP4B	X	-8.332	1.5
44	MP4B	Z	-14.432	1.5
45	MP4B	Mx	0.007	1.5
46	MP4B	X	-8.332	3.5
47	MP4B	Z	-14.432	3.5
48	MP4B	Mx	0.007	3.5
49	MP4C	X	-4.284	1.5
50	MP4C	Z	-7.421	1.5
51	MP4C	Mx	-0.007	1.5
52	MP4C	X	-4.284	3.5
53	MP4C	Z	-7.421	3.5
54	MP4C	Mx	-0.007	3.5
55	OVP	X	-15.71	1
56	OVP	Z	-27.211	1
57	OVP	Mx	0	1
58	MP1A	X	-18.382	0.5
59	MP1A	Z	-31.839	0.5
60	MP1A	Mx	0.018	0.5
61	MP1A	X	-18.382	4.5
62	MP1A	Z	-31.839	4.5
63	MP1A	Mx	0.018	4.5
64	MP1B	X	-18.382	0.5
65	MP1B	Z	-31.839	0.5
66	MP1B	Mx	0.018	0.5
67	MP1B	X	-18.382	4.5
68	MP1B	Z	-31.839	4.5
69	MP1B	Mx	0.018	4.5
70	MP1C	X	-17.002	0.5
71	MP1C	Z	-29.448	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
72	MP1C	Mx	-0.034	0.5
73	MP1C	X	-17.002	4.5
74	MP1C	Z	-29.448	4.5
75	MP1C	Mx	-0.034	4.5
76	MP5A	X	-18.382	0.5
77	MP5A	Z	-31.839	0.5
78	MP5A	Mx	0.018	0.5
79	MP5A	X	-18.382	4.5
80	MP5A	Z	-31.839	4.5
81	MP5A	Mx	0.018	4.5
82	MP5B	X	-18.382	0.5
83	MP5B	Z	-31.839	0.5
84	MP5B	Mx	0.018	0.5
85	MP5B	X	-18.382	4.5
86	MP5B	Z	-31.839	4.5
87	MP5B	Mx	0.018	4.5
88	MP5C	X	-17.002	0.5
89	MP5C	Z	-29.448	0.5
90	MP5C	Mx	-0.034	0.5
91	MP5C	X	-17.002	4.5
92	MP5C	Z	-29.448	4.5
93	MP5C	Mx	-0.034	4.5
94	MP3B	X	-2.629	3
95	MP3B	Z	-4.554	3
96	MP3B	Mx	8.6e-5	3
97	MP3B	X	-2.629	3
98	MP3B	Z	-4.554	3
99	MP3B	Mx	-0.004	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	0	0.5
2	MP3A	Z	-6.759	0.5
3	MP3A	Mx	-0.004	0.5
4	MP3A	X	0	4.5
5	MP3A	Z	-6.759	4.5
6	MP3A	Mx	-0.004	4.5
7	MP3B	X	0	0.5
8	MP3B	Z	-3.865	0.5
9	MP3B	Mx	0.004	0.5
10	MP3B	X	0	4.5
11	MP3B	Z	-3.865	4.5
12	MP3B	Mx	0.004	4.5
13	MP3C	X	0	0.5
14	MP3C	Z	-3.865	0.5
15	MP3C	Mx	-0.002	0.5
16	MP3C	X	0	4.5
17	MP3C	Z	-3.865	4.5
18	MP3C	Mx	-0.002	4.5
19	MP3A	X	0	0.5
20	MP3A	Z	-6.759	0.5
21	MP3A	Mx	0.004	0.5
22	MP3A	X	0	4.5
23	MP3A	Z	-6.759	4.5
24	MP3A	Mx	0.004	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
25	MP3B	X	0	0.5
26	MP3B	Z	-3.865	0.5
27	MP3B	Mx	0.002	0.5
28	MP3B	X	0	4.5
29	MP3B	Z	-3.865	4.5
30	MP3B	Mx	0.002	4.5
31	MP3C	X	0	0.5
32	MP3C	Z	-3.865	0.5
33	MP3C	Mx	-0.004	0.5
34	MP3C	X	0	4.5
35	MP3C	Z	-3.865	4.5
36	MP3C	Mx	-0.004	4.5
37	MP4A	X	0	1.5
38	MP4A	Z	-4.88	1.5
39	MP4A	Mx	0	1.5
40	MP4A	X	0	3.5
41	MP4A	Z	-4.88	3.5
42	MP4A	Mx	0	3.5
43	MP4B	X	0	1.5
44	MP4B	Z	-2.48	1.5
45	MP4B	Mx	0.002	1.5
46	MP4B	X	0	3.5
47	MP4B	Z	-2.48	3.5
48	MP4B	Mx	0.002	3.5
49	MP4C	X	0	1.5
50	MP4C	Z	-2.48	1.5
51	MP4C	Mx	-0.002	1.5
52	MP4C	X	0	3.5
53	MP4C	Z	-2.48	3.5
54	MP4C	Mx	-0.002	3.5
55	OVP	X	0	1
56	OVP	Z	-8.602	1
57	OVP	Mx	0	1
58	MP1A	X	0	0.5
59	MP1A	Z	-11.95	0.5
60	MP1A	Mx	0	0.5
61	MP1A	X	0	4.5
62	MP1A	Z	-11.95	4.5
63	MP1A	Mx	0	4.5
64	MP1B	X	0	0.5
65	MP1B	Z	-10.993	0.5
66	MP1B	Mx	0.01	0.5
67	MP1B	X	0	4.5
68	MP1B	Z	-10.993	4.5
69	MP1B	Mx	0.01	4.5
70	MP1C	X	0	0.5
71	MP1C	Z	-10.993	0.5
72	MP1C	Mx	-0.01	0.5
73	MP1C	X	0	4.5
74	MP1C	Z	-10.993	4.5
75	MP1C	Mx	-0.01	4.5
76	MP5A	X	0	0.5
77	MP5A	Z	-11.95	0.5
78	MP5A	Mx	0	0.5
79	MP5A	X	0	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
80	MP5A	Z	-11.95	4.5
81	MP5A	Mx	0	4.5
82	MP5B	X	0	0.5
83	MP5B	Z	-10.993	0.5
84	MP5B	Mx	0.01	0.5
85	MP5B	X	0	4.5
86	MP5B	Z	-10.993	4.5
87	MP5B	Mx	0.01	4.5
88	MP5C	X	0	0.5
89	MP5C	Z	-10.993	0.5
90	MP5C	Mx	-0.01	0.5
91	MP5C	X	0	4.5
92	MP5C	Z	-10.993	4.5
93	MP5C	Mx	-0.01	4.5
94	MP3B	X	0	3
95	MP3B	Z	-1.97	3
96	MP3B	Mx	-0.000929	3
97	MP3B	X	0	3
98	MP3B	Z	-1.97	3
99	MP3B	Mx	-0.002	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	2.897	0.5
2	MP3A	Z	-5.018	0.5
3	MP3A	Mx	-0.005	0.5
4	MP3A	X	2.897	4.5
5	MP3A	Z	-5.018	4.5
6	MP3A	Mx	-0.005	4.5
7	MP3B	X	1.45	0.5
8	MP3B	Z	-2.512	0.5
9	MP3B	Mx	0.002	0.5
10	MP3B	X	1.45	4.5
11	MP3B	Z	-2.512	4.5
12	MP3B	Mx	0.002	4.5
13	MP3C	X	2.897	0.5
14	MP3C	Z	-5.018	0.5
15	MP3C	Mx	0.000513	0.5
16	MP3C	X	2.897	4.5
17	MP3C	Z	-5.018	4.5
18	MP3C	Mx	0.000513	4.5
19	MP3A	X	2.897	0.5
20	MP3A	Z	-5.018	0.5
21	MP3A	Mx	0.000513	0.5
22	MP3A	X	2.897	4.5
23	MP3A	Z	-5.018	4.5
24	MP3A	Mx	0.000513	4.5
25	MP3B	X	1.45	0.5
26	MP3B	Z	-2.512	0.5
27	MP3B	Mx	0.002	0.5
28	MP3B	X	1.45	4.5
29	MP3B	Z	-2.512	4.5
30	MP3B	Mx	0.002	4.5
31	MP3C	X	2.897	0.5
32	MP3C	Z	-5.018	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
33	MP3C	Mx	-0.005	0.5
34	MP3C	X	2.897	4.5
35	MP3C	Z	-5.018	4.5
36	MP3C	Mx	-0.005	4.5
37	MP4A	X	2.04	1.5
38	MP4A	Z	-3.533	1.5
39	MP4A	Mx	-0.002	1.5
40	MP4A	X	2.04	3.5
41	MP4A	Z	-3.533	3.5
42	MP4A	Mx	-0.002	3.5
43	MP4B	X	0.84	1.5
44	MP4B	Z	-1.455	1.5
45	MP4B	Mx	0.001	1.5
46	MP4B	X	0.84	3.5
47	MP4B	Z	-1.455	3.5
48	MP4B	Mx	0.001	3.5
49	MP4C	X	2.04	1.5
50	MP4C	Z	-3.533	1.5
51	MP4C	Mx	-0.002	1.5
52	MP4C	X	2.04	3.5
53	MP4C	Z	-3.533	3.5
54	MP4C	Mx	-0.002	3.5
55	OVP	X	3.507	1
56	OVP	Z	-6.074	1
57	OVP	Mx	0	1
58	MP1A	X	5.816	0.5
59	MP1A	Z	-10.073	0.5
60	MP1A	Mx	-0.006	0.5
61	MP1A	X	5.816	4.5
62	MP1A	Z	-10.073	4.5
63	MP1A	Mx	-0.006	4.5
64	MP1B	X	5.337	0.5
65	MP1B	Z	-9.244	0.5
66	MP1B	Mx	0.011	0.5
67	MP1B	X	5.337	4.5
68	MP1B	Z	-9.244	4.5
69	MP1B	Mx	0.011	4.5
70	MP1C	X	5.816	0.5
71	MP1C	Z	-10.073	0.5
72	MP1C	Mx	-0.006	0.5
73	MP1C	X	5.816	4.5
74	MP1C	Z	-10.073	4.5
75	MP1C	Mx	-0.006	4.5
76	MP5A	X	5.816	0.5
77	MP5A	Z	-10.073	0.5
78	MP5A	Mx	-0.006	0.5
79	MP5A	X	5.816	4.5
80	MP5A	Z	-10.073	4.5
81	MP5A	Mx	-0.006	4.5
82	MP5B	X	5.337	0.5
83	MP5B	Z	-9.244	0.5
84	MP5B	Mx	0.011	0.5
85	MP5B	X	5.337	4.5
86	MP5B	Z	-9.244	4.5
87	MP5B	Mx	0.011	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
88	MP5C	X	5.816	0.5
89	MP5C	Z	-10.073	0.5
90	MP5C	Mx	-0.006	0.5
91	MP5C	X	5.816	4.5
92	MP5C	Z	-10.073	4.5
93	MP5C	Mx	-0.006	4.5
94	MP3B	X	1.194	3
95	MP3B	Z	-2.067	3
96	MP3B	Mx	-0.002	3
97	MP3B	X	1.194	3
98	MP3B	Z	-2.067	3
99	MP3B	Mx	-0.002	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	3.347	0.5
2	MP3A	Z	-1.933	0.5
3	MP3A	Mx	-0.004	0.5
4	MP3A	X	3.347	4.5
5	MP3A	Z	-1.933	4.5
6	MP3A	Mx	-0.004	4.5
7	MP3B	X	3.347	0.5
8	MP3B	Z	-1.933	0.5
9	MP3B	Mx	0.002	0.5
10	MP3B	X	3.347	4.5
11	MP3B	Z	-1.933	4.5
12	MP3B	Mx	0.002	4.5
13	MP3C	X	5.854	0.5
14	MP3C	Z	-3.38	0.5
15	MP3C	Mx	0.004	0.5
16	MP3C	X	5.854	4.5
17	MP3C	Z	-3.38	4.5
18	MP3C	Mx	0.004	4.5
19	MP3A	X	3.347	0.5
20	MP3A	Z	-1.933	0.5
21	MP3A	Mx	-0.002	0.5
22	MP3A	X	3.347	4.5
23	MP3A	Z	-1.933	4.5
24	MP3A	Mx	-0.002	4.5
25	MP3B	X	3.347	0.5
26	MP3B	Z	-1.933	0.5
27	MP3B	Mx	0.004	0.5
28	MP3B	X	3.347	4.5
29	MP3B	Z	-1.933	4.5
30	MP3B	Mx	0.004	4.5
31	MP3C	X	5.854	0.5
32	MP3C	Z	-3.38	0.5
33	MP3C	Mx	-0.004	0.5
34	MP3C	X	5.854	4.5
35	MP3C	Z	-3.38	4.5
36	MP3C	Mx	-0.004	4.5
37	MP4A	X	2.148	1.5
38	MP4A	Z	-1.24	1.5
39	MP4A	Mx	-0.002	1.5
40	MP4A	X	2.148	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
41	MP4A	Z	-1.24	3.5
42	MP4A	Mx	-0.002	3.5
43	MP4B	X	2.148	1.5
44	MP4B	Z	-1.24	1.5
45	MP4B	Mx	0.002	1.5
46	MP4B	X	2.148	3.5
47	MP4B	Z	-1.24	3.5
48	MP4B	Mx	0.002	3.5
49	MP4C	X	4.226	1.5
50	MP4C	Z	-2.44	1.5
51	MP4C	Mx	0	1.5
52	MP4C	X	4.226	3.5
53	MP4C	Z	-2.44	3.5
54	MP4C	Mx	0	3.5
55	OVP	X	5.386	1
56	OVP	Z	-3.11	1
57	OVP	Mx	0	1
58	MP1A	X	9.52	0.5
59	MP1A	Z	-5.497	0.5
60	MP1A	Mx	-0.01	0.5
61	MP1A	X	9.52	4.5
62	MP1A	Z	-5.497	4.5
63	MP1A	Mx	-0.01	4.5
64	MP1B	X	9.52	0.5
65	MP1B	Z	-5.497	0.5
66	MP1B	Mx	0.01	0.5
67	MP1B	X	9.52	4.5
68	MP1B	Z	-5.497	4.5
69	MP1B	Mx	0.01	4.5
70	MP1C	X	10.349	0.5
71	MP1C	Z	-5.975	0.5
72	MP1C	Mx	0	0.5
73	MP1C	X	10.349	4.5
74	MP1C	Z	-5.975	4.5
75	MP1C	Mx	0	4.5
76	MP5A	X	9.52	0.5
77	MP5A	Z	-5.497	0.5
78	MP5A	Mx	-0.01	0.5
79	MP5A	X	9.52	4.5
80	MP5A	Z	-5.497	4.5
81	MP5A	Mx	-0.01	4.5
82	MP5B	X	9.52	0.5
83	MP5B	Z	-5.497	0.5
84	MP5B	Mx	0.01	0.5
85	MP5B	X	9.52	4.5
86	MP5B	Z	-5.497	4.5
87	MP5B	Mx	0.01	4.5
88	MP5C	X	10.349	0.5
89	MP5C	Z	-5.975	0.5
90	MP5C	Mx	0	0.5
91	MP5C	X	10.349	4.5
92	MP5C	Z	-5.975	4.5
93	MP5C	Mx	0	4.5
94	MP3B	X	1.706	3
95	MP3B	Z	-0.985	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
96	MP3B	Mx	-0.002	3
97	MP3B	X	1.706	3
98	MP3B	Z	-0.985	3
99	MP3B	Mx	-0.000929	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	2.9	0.5
2	MP3A	Z	0	0.5
3	MP3A	Mx	-0.002	0.5
4	MP3A	X	2.9	4.5
5	MP3A	Z	0	4.5
6	MP3A	Mx	-0.002	4.5
7	MP3B	X	5.795	0.5
8	MP3B	Z	0	0.5
9	MP3B	Mx	-0.000513	0.5
10	MP3B	X	5.795	4.5
11	MP3B	Z	0	4.5
12	MP3B	Mx	-0.000513	4.5
13	MP3C	X	5.795	0.5
14	MP3C	Z	0	0.5
15	MP3C	Mx	0.005	0.5
16	MP3C	X	5.795	4.5
17	MP3C	Z	0	4.5
18	MP3C	Mx	0.005	4.5
19	MP3A	X	2.9	0.5
20	MP3A	Z	0	0.5
21	MP3A	Mx	-0.002	0.5
22	MP3A	X	2.9	4.5
23	MP3A	Z	0	4.5
24	MP3A	Mx	-0.002	4.5
25	MP3B	X	5.795	0.5
26	MP3B	Z	0	0.5
27	MP3B	Mx	0.005	0.5
28	MP3B	X	5.795	4.5
29	MP3B	Z	0	4.5
30	MP3B	Mx	0.005	4.5
31	MP3C	X	5.795	0.5
32	MP3C	Z	0	0.5
33	MP3C	Mx	-0.000513	0.5
34	MP3C	X	5.795	4.5
35	MP3C	Z	0	4.5
36	MP3C	Mx	-0.000513	4.5
37	MP4A	X	1.681	1.5
38	MP4A	Z	0	1.5
39	MP4A	Mx	-0.001	1.5
40	MP4A	X	1.681	3.5
41	MP4A	Z	0	3.5
42	MP4A	Mx	-0.001	3.5
43	MP4B	X	4.08	1.5
44	MP4B	Z	0	1.5
45	MP4B	Mx	0.002	1.5
46	MP4B	X	4.08	3.5
47	MP4B	Z	0	3.5
48	MP4B	Mx	0.002	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
49	MP4C	X	4.08	1.5
50	MP4C	Z	0	1.5
51	MP4C	Mx	0.002	1.5
52	MP4C	X	4.08	3.5
53	MP4C	Z	0	3.5
54	MP4C	Mx	0.002	3.5
55	OVP	X	7.014	1
56	OVP	Z	0	1
57	OVP	Mx	0	1
58	MP1A	X	10.674	0.5
59	MP1A	Z	0	0.5
60	MP1A	Mx	-0.011	0.5
61	MP1A	X	10.674	4.5
62	MP1A	Z	0	4.5
63	MP1A	Mx	-0.011	4.5
64	MP1B	X	11.631	0.5
65	MP1B	Z	0	0.5
66	MP1B	Mx	0.006	0.5
67	MP1B	X	11.631	4.5
68	MP1B	Z	0	4.5
69	MP1B	Mx	0.006	4.5
70	MP1C	X	11.631	0.5
71	MP1C	Z	0	0.5
72	MP1C	Mx	0.006	0.5
73	MP1C	X	11.631	4.5
74	MP1C	Z	0	4.5
75	MP1C	Mx	0.006	4.5
76	MP5A	X	10.674	0.5
77	MP5A	Z	0	0.5
78	MP5A	Mx	-0.011	0.5
79	MP5A	X	10.674	4.5
80	MP5A	Z	0	4.5
81	MP5A	Mx	-0.011	4.5
82	MP5B	X	11.631	0.5
83	MP5B	Z	0	0.5
84	MP5B	Mx	0.006	0.5
85	MP5B	X	11.631	4.5
86	MP5B	Z	0	4.5
87	MP5B	Mx	0.006	4.5
88	MP5C	X	11.631	0.5
89	MP5C	Z	0	0.5
90	MP5C	Mx	0.006	0.5
91	MP5C	X	11.631	4.5
92	MP5C	Z	0	4.5
93	MP5C	Mx	0.006	4.5
94	MP3B	X	1.136	3
95	MP3B	Z	0	3
96	MP3B	Mx	-0.000965	3
97	MP3B	X	1.136	3
98	MP3B	Z	0	3
99	MP3B	Mx	1.9e-5	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	3.347	0.5
2	MP3A	Z	1.933	0.5
3	MP3A	Mx	-0.002	0.5
4	MP3A	X	3.347	4.5
5	MP3A	Z	1.933	4.5
6	MP3A	Mx	-0.002	4.5
7	MP3B	X	5.854	0.5
8	MP3B	Z	3.38	0.5
9	MP3B	Mx	-0.004	0.5
10	MP3B	X	5.854	4.5
11	MP3B	Z	3.38	4.5
12	MP3B	Mx	-0.004	4.5
13	MP3C	X	3.347	0.5
14	MP3C	Z	1.933	0.5
15	MP3C	Mx	0.004	0.5
16	MP3C	X	3.347	4.5
17	MP3C	Z	1.933	4.5
18	MP3C	Mx	0.004	4.5
19	MP3A	X	3.347	0.5
20	MP3A	Z	1.933	0.5
21	MP3A	Mx	-0.004	0.5
22	MP3A	X	3.347	4.5
23	MP3A	Z	1.933	4.5
24	MP3A	Mx	-0.004	4.5
25	MP3B	X	5.854	0.5
26	MP3B	Z	3.38	0.5
27	MP3B	Mx	0.004	0.5
28	MP3B	X	5.854	4.5
29	MP3B	Z	3.38	4.5
30	MP3B	Mx	0.004	4.5
31	MP3C	X	3.347	0.5
32	MP3C	Z	1.933	0.5
33	MP3C	Mx	0.002	0.5
34	MP3C	X	3.347	4.5
35	MP3C	Z	1.933	4.5
36	MP3C	Mx	0.002	4.5
37	MP4A	X	2.148	1.5
38	MP4A	Z	1.24	1.5
39	MP4A	Mx	-0.002	1.5
40	MP4A	X	2.148	3.5
41	MP4A	Z	1.24	3.5
42	MP4A	Mx	-0.002	3.5
43	MP4B	X	4.226	1.5
44	MP4B	Z	2.44	1.5
45	MP4B	Mx	0	1.5
46	MP4B	X	4.226	3.5
47	MP4B	Z	2.44	3.5
48	MP4B	Mx	0	3.5
49	MP4C	X	2.148	1.5
50	MP4C	Z	1.24	1.5
51	MP4C	Mx	0.002	1.5
52	MP4C	X	2.148	3.5
53	MP4C	Z	1.24	3.5
54	MP4C	Mx	0.002	3.5
55	OVP	X	7.45	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
56	OVP	Z	4.301	1
57	OVP	Mx	0	1
58	MP1A	X	9.52	0.5
59	MP1A	Z	5.497	0.5
60	MP1A	Mx	-0.01	0.5
61	MP1A	X	9.52	4.5
62	MP1A	Z	5.497	4.5
63	MP1A	Mx	-0.01	4.5
64	MP1B	X	10.349	0.5
65	MP1B	Z	5.975	0.5
66	MP1B	Mx	0	0.5
67	MP1B	X	10.349	4.5
68	MP1B	Z	5.975	4.5
69	MP1B	Mx	0	4.5
70	MP1C	X	9.52	0.5
71	MP1C	Z	5.497	0.5
72	MP1C	Mx	0.01	0.5
73	MP1C	X	9.52	4.5
74	MP1C	Z	5.497	4.5
75	MP1C	Mx	0.01	4.5
76	MP5A	X	9.52	0.5
77	MP5A	Z	5.497	0.5
78	MP5A	Mx	-0.01	0.5
79	MP5A	X	9.52	4.5
80	MP5A	Z	5.497	4.5
81	MP5A	Mx	-0.01	4.5
82	MP5B	X	10.349	0.5
83	MP5B	Z	5.975	0.5
84	MP5B	Mx	0	0.5
85	MP5B	X	10.349	4.5
86	MP5B	Z	5.975	4.5
87	MP5B	Mx	0	4.5
88	MP5C	X	9.52	0.5
89	MP5C	Z	5.497	0.5
90	MP5C	Mx	0.01	0.5
91	MP5C	X	9.52	4.5
92	MP5C	Z	5.497	4.5
93	MP5C	Mx	0.01	4.5
94	MP3B	X	0.623	3
95	MP3B	Z	0.359	3
96	MP3B	Mx	-0.00036	3
97	MP3B	X	0.623	3
98	MP3B	Z	0.359	3
99	MP3B	Mx	0.000359	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	2.897	0.5
2	MP3A	Z	5.018	0.5
3	MP3A	Mx	0.000513	0.5
4	MP3A	X	2.897	4.5
5	MP3A	Z	5.018	4.5
6	MP3A	Mx	0.000513	4.5
7	MP3B	X	2.897	0.5
8	MP3B	Z	5.018	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
9	MP3B	Mx	-0.005	0.5
10	MP3B	X	2.897	4.5
11	MP3B	Z	5.018	4.5
12	MP3B	Mx	-0.005	4.5
13	MP3C	X	1.45	0.5
14	MP3C	Z	2.512	0.5
15	MP3C	Mx	0.002	0.5
16	MP3C	X	1.45	4.5
17	MP3C	Z	2.512	4.5
18	MP3C	Mx	0.002	4.5
19	MP3A	X	2.897	0.5
20	MP3A	Z	5.018	0.5
21	MP3A	Mx	-0.005	0.5
22	MP3A	X	2.897	4.5
23	MP3A	Z	5.018	4.5
24	MP3A	Mx	-0.005	4.5
25	MP3B	X	2.897	0.5
26	MP3B	Z	5.018	0.5
27	MP3B	Mx	0.000513	0.5
28	MP3B	X	2.897	4.5
29	MP3B	Z	5.018	4.5
30	MP3B	Mx	0.000513	4.5
31	MP3C	X	1.45	0.5
32	MP3C	Z	2.512	0.5
33	MP3C	Mx	0.002	0.5
34	MP3C	X	1.45	4.5
35	MP3C	Z	2.512	4.5
36	MP3C	Mx	0.002	4.5
37	MP4A	X	2.04	1.5
38	MP4A	Z	3.533	1.5
39	MP4A	Mx	-0.002	1.5
40	MP4A	X	2.04	3.5
41	MP4A	Z	3.533	3.5
42	MP4A	Mx	-0.002	3.5
43	MP4B	X	2.04	1.5
44	MP4B	Z	3.533	1.5
45	MP4B	Mx	-0.002	1.5
46	MP4B	X	2.04	3.5
47	MP4B	Z	3.533	3.5
48	MP4B	Mx	-0.002	3.5
49	MP4C	X	0.84	1.5
50	MP4C	Z	1.455	1.5
51	MP4C	Mx	0.001	1.5
52	MP4C	X	0.84	3.5
53	MP4C	Z	1.455	3.5
54	MP4C	Mx	0.001	3.5
55	OVP	X	4.698	1
56	OVP	Z	8.138	1
57	OVP	Mx	0	1
58	MP1A	X	5.816	0.5
59	MP1A	Z	10.073	0.5
60	MP1A	Mx	-0.006	0.5
61	MP1A	X	5.816	4.5
62	MP1A	Z	10.073	4.5
63	MP1A	Mx	-0.006	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
64	MP1B	X	5.816	0.5
65	MP1B	Z	10.073	0.5
66	MP1B	Mx	-0.006	0.5
67	MP1B	X	5.816	4.5
68	MP1B	Z	10.073	4.5
69	MP1B	Mx	-0.006	4.5
70	MP1C	X	5.337	0.5
71	MP1C	Z	9.244	0.5
72	MP1C	Mx	0.011	0.5
73	MP1C	X	5.337	4.5
74	MP1C	Z	9.244	4.5
75	MP1C	Mx	0.011	4.5
76	MP5A	X	5.816	0.5
77	MP5A	Z	10.073	0.5
78	MP5A	Mx	-0.006	0.5
79	MP5A	X	5.816	4.5
80	MP5A	Z	10.073	4.5
81	MP5A	Mx	-0.006	4.5
82	MP5B	X	5.816	0.5
83	MP5B	Z	10.073	0.5
84	MP5B	Mx	-0.006	0.5
85	MP5B	X	5.816	4.5
86	MP5B	Z	10.073	4.5
87	MP5B	Mx	-0.006	4.5
88	MP5C	X	5.337	0.5
89	MP5C	Z	9.244	0.5
90	MP5C	Mx	0.011	0.5
91	MP5C	X	5.337	4.5
92	MP5C	Z	9.244	4.5
93	MP5C	Mx	0.011	4.5
94	MP3B	X	0.568	3
95	MP3B	Z	0.984	3
96	MP3B	Mx	-1.8e-5	3
97	MP3B	X	0.568	3
98	MP3B	Z	0.984	3
99	MP3B	Mx	0.000965	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	0	0.5
2	MP3A	Z	6.759	0.5
3	MP3A	Mx	0.004	0.5
4	MP3A	X	0	4.5
5	MP3A	Z	6.759	4.5
6	MP3A	Mx	0.004	4.5
7	MP3B	X	0	0.5
8	MP3B	Z	3.865	0.5
9	MP3B	Mx	-0.004	0.5
10	MP3B	X	0	4.5
11	MP3B	Z	3.865	4.5
12	MP3B	Mx	-0.004	4.5
13	MP3C	X	0	0.5
14	MP3C	Z	3.865	0.5
15	MP3C	Mx	0.002	0.5
16	MP3C	X	0	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
17	MP3C	Z	3.865	4.5
18	MP3C	Mx	0.002	4.5
19	MP3A	X	0	0.5
20	MP3A	Z	6.759	0.5
21	MP3A	Mx	-0.004	0.5
22	MP3A	X	0	4.5
23	MP3A	Z	6.759	4.5
24	MP3A	Mx	-0.004	4.5
25	MP3B	X	0	0.5
26	MP3B	Z	3.865	0.5
27	MP3B	Mx	-0.002	0.5
28	MP3B	X	0	4.5
29	MP3B	Z	3.865	4.5
30	MP3B	Mx	-0.002	4.5
31	MP3C	X	0	0.5
32	MP3C	Z	3.865	0.5
33	MP3C	Mx	0.004	0.5
34	MP3C	X	0	4.5
35	MP3C	Z	3.865	4.5
36	MP3C	Mx	0.004	4.5
37	MP4A	X	0	1.5
38	MP4A	Z	4.88	1.5
39	MP4A	Mx	0	1.5
40	MP4A	X	0	3.5
41	MP4A	Z	4.88	3.5
42	MP4A	Mx	0	3.5
43	MP4B	X	0	1.5
44	MP4B	Z	2.48	1.5
45	MP4B	Mx	-0.002	1.5
46	MP4B	X	0	3.5
47	MP4B	Z	2.48	3.5
48	MP4B	Mx	-0.002	3.5
49	MP4C	X	0	1.5
50	MP4C	Z	2.48	1.5
51	MP4C	Mx	0.002	1.5
52	MP4C	X	0	3.5
53	MP4C	Z	2.48	3.5
54	MP4C	Mx	0.002	3.5
55	OVP	X	0	1
56	OVP	Z	8.602	1
57	OVP	Mx	0	1
58	MP1A	X	0	0.5
59	MP1A	Z	11.95	0.5
60	MP1A	Mx	0	0.5
61	MP1A	X	0	4.5
62	MP1A	Z	11.95	4.5
63	MP1A	Mx	0	4.5
64	MP1B	X	0	0.5
65	MP1B	Z	10.993	0.5
66	MP1B	Mx	-0.01	0.5
67	MP1B	X	0	4.5
68	MP1B	Z	10.993	4.5
69	MP1B	Mx	-0.01	4.5
70	MP1C	X	0	0.5
71	MP1C	Z	10.993	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
72	MP1C	Mx	0.01	0.5
73	MP1C	X	0	4.5
74	MP1C	Z	10.993	4.5
75	MP1C	Mx	0.01	4.5
76	MP5A	X	0	0.5
77	MP5A	Z	11.95	0.5
78	MP5A	Mx	0	0.5
79	MP5A	X	0	4.5
80	MP5A	Z	11.95	4.5
81	MP5A	Mx	0	4.5
82	MP5B	X	0	0.5
83	MP5B	Z	10.993	0.5
84	MP5B	Mx	-0.01	0.5
85	MP5B	X	0	4.5
86	MP5B	Z	10.993	4.5
87	MP5B	Mx	-0.01	4.5
88	MP5C	X	0	0.5
89	MP5C	Z	10.993	0.5
90	MP5C	Mx	0.01	0.5
91	MP5C	X	0	4.5
92	MP5C	Z	10.993	4.5
93	MP5C	Mx	0.01	4.5
94	MP3B	X	0	3
95	MP3B	Z	1.97	3
96	MP3B	Mx	0.000929	3
97	MP3B	X	0	3
98	MP3B	Z	1.97	3
99	MP3B	Mx	0.002	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	-2.897	0.5
2	MP3A	Z	5.018	0.5
3	MP3A	Mx	0.005	0.5
4	MP3A	X	-2.897	4.5
5	MP3A	Z	5.018	4.5
6	MP3A	Mx	0.005	4.5
7	MP3B	X	-1.45	0.5
8	MP3B	Z	2.512	0.5
9	MP3B	Mx	-0.002	0.5
10	MP3B	X	-1.45	4.5
11	MP3B	Z	2.512	4.5
12	MP3B	Mx	-0.002	4.5
13	MP3C	X	-2.897	0.5
14	MP3C	Z	5.018	0.5
15	MP3C	Mx	-0.000513	0.5
16	MP3C	X	-2.897	4.5
17	MP3C	Z	5.018	4.5
18	MP3C	Mx	-0.000513	4.5
19	MP3A	X	-2.897	0.5
20	MP3A	Z	5.018	0.5
21	MP3A	Mx	-0.000513	0.5
22	MP3A	X	-2.897	4.5
23	MP3A	Z	5.018	4.5
24	MP3A	Mx	-0.000513	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
25	MP3B	X	-1.45	0.5
26	MP3B	Z	2.512	0.5
27	MP3B	Mx	-0.002	0.5
28	MP3B	X	-1.45	4.5
29	MP3B	Z	2.512	4.5
30	MP3B	Mx	-0.002	4.5
31	MP3C	X	-2.897	0.5
32	MP3C	Z	5.018	0.5
33	MP3C	Mx	0.005	0.5
34	MP3C	X	-2.897	4.5
35	MP3C	Z	5.018	4.5
36	MP3C	Mx	0.005	4.5
37	MP4A	X	-2.04	1.5
38	MP4A	Z	3.533	1.5
39	MP4A	Mx	0.002	1.5
40	MP4A	X	-2.04	3.5
41	MP4A	Z	3.533	3.5
42	MP4A	Mx	0.002	3.5
43	MP4B	X	-0.84	1.5
44	MP4B	Z	1.455	1.5
45	MP4B	Mx	-0.001	1.5
46	MP4B	X	-0.84	3.5
47	MP4B	Z	1.455	3.5
48	MP4B	Mx	-0.001	3.5
49	MP4C	X	-2.04	1.5
50	MP4C	Z	3.533	1.5
51	MP4C	Mx	0.002	1.5
52	MP4C	X	-2.04	3.5
53	MP4C	Z	3.533	3.5
54	MP4C	Mx	0.002	3.5
55	OVP	X	-3.507	1
56	OVP	Z	6.074	1
57	OVP	Mx	0	1
58	MP1A	X	-5.816	0.5
59	MP1A	Z	10.073	0.5
60	MP1A	Mx	0.006	0.5
61	MP1A	X	-5.816	4.5
62	MP1A	Z	10.073	4.5
63	MP1A	Mx	0.006	4.5
64	MP1B	X	-5.337	0.5
65	MP1B	Z	9.244	0.5
66	MP1B	Mx	-0.011	0.5
67	MP1B	X	-5.337	4.5
68	MP1B	Z	9.244	4.5
69	MP1B	Mx	-0.011	4.5
70	MP1C	X	-5.816	0.5
71	MP1C	Z	10.073	0.5
72	MP1C	Mx	0.006	0.5
73	MP1C	X	-5.816	4.5
74	MP1C	Z	10.073	4.5
75	MP1C	Mx	0.006	4.5
76	MP5A	X	-5.816	0.5
77	MP5A	Z	10.073	0.5
78	MP5A	Mx	0.006	0.5
79	MP5A	X	-5.816	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
80	MP5A	Z	10.073	4.5
81	MP5A	Mx	0.006	4.5
82	MP5B	X	-5.337	0.5
83	MP5B	Z	9.244	0.5
84	MP5B	Mx	-0.011	0.5
85	MP5B	X	-5.337	4.5
86	MP5B	Z	9.244	4.5
87	MP5B	Mx	-0.011	4.5
88	MP5C	X	-5.816	0.5
89	MP5C	Z	10.073	0.5
90	MP5C	Mx	0.006	0.5
91	MP5C	X	-5.816	4.5
92	MP5C	Z	10.073	4.5
93	MP5C	Mx	0.006	4.5
94	MP3B	X	-1.194	3
95	MP3B	Z	2.067	3
96	MP3B	Mx	0.002	3
97	MP3B	X	-1.194	3
98	MP3B	Z	2.067	3
99	MP3B	Mx	0.002	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	-3.347	0.5
2	MP3A	Z	1.933	0.5
3	MP3A	Mx	0.004	0.5
4	MP3A	X	-3.347	4.5
5	MP3A	Z	1.933	4.5
6	MP3A	Mx	0.004	4.5
7	MP3B	X	-3.347	0.5
8	MP3B	Z	1.933	0.5
9	MP3B	Mx	-0.002	0.5
10	MP3B	X	-3.347	4.5
11	MP3B	Z	1.933	4.5
12	MP3B	Mx	-0.002	4.5
13	MP3C	X	-5.854	0.5
14	MP3C	Z	3.38	0.5
15	MP3C	Mx	-0.004	0.5
16	MP3C	X	-5.854	4.5
17	MP3C	Z	3.38	4.5
18	MP3C	Mx	-0.004	4.5
19	MP3A	X	-3.347	0.5
20	MP3A	Z	1.933	0.5
21	MP3A	Mx	0.002	0.5
22	MP3A	X	-3.347	4.5
23	MP3A	Z	1.933	4.5
24	MP3A	Mx	0.002	4.5
25	MP3B	X	-3.347	0.5
26	MP3B	Z	1.933	0.5
27	MP3B	Mx	-0.004	0.5
28	MP3B	X	-3.347	4.5
29	MP3B	Z	1.933	4.5
30	MP3B	Mx	-0.004	4.5
31	MP3C	X	-5.854	0.5
32	MP3C	Z	3.38	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
33	MP3C	Mx	0.004	0.5
34	MP3C	X	-5.854	4.5
35	MP3C	Z	3.38	4.5
36	MP3C	Mx	0.004	4.5
37	MP4A	X	-2.148	1.5
38	MP4A	Z	1.24	1.5
39	MP4A	Mx	0.002	1.5
40	MP4A	X	-2.148	3.5
41	MP4A	Z	1.24	3.5
42	MP4A	Mx	0.002	3.5
43	MP4B	X	-2.148	1.5
44	MP4B	Z	1.24	1.5
45	MP4B	Mx	-0.002	1.5
46	MP4B	X	-2.148	3.5
47	MP4B	Z	1.24	3.5
48	MP4B	Mx	-0.002	3.5
49	MP4C	X	-4.226	1.5
50	MP4C	Z	2.44	1.5
51	MP4C	Mx	0	1.5
52	MP4C	X	-4.226	3.5
53	MP4C	Z	2.44	3.5
54	MP4C	Mx	0	3.5
55	OVP	X	-5.386	1
56	OVP	Z	3.11	1
57	OVP	Mx	0	1
58	MP1A	X	-9.52	0.5
59	MP1A	Z	5.497	0.5
60	MP1A	Mx	0.01	0.5
61	MP1A	X	-9.52	4.5
62	MP1A	Z	5.497	4.5
63	MP1A	Mx	0.01	4.5
64	MP1B	X	-9.52	0.5
65	MP1B	Z	5.497	0.5
66	MP1B	Mx	-0.01	0.5
67	MP1B	X	-9.52	4.5
68	MP1B	Z	5.497	4.5
69	MP1B	Mx	-0.01	4.5
70	MP1C	X	-10.349	0.5
71	MP1C	Z	5.975	0.5
72	MP1C	Mx	0	0.5
73	MP1C	X	-10.349	4.5
74	MP1C	Z	5.975	4.5
75	MP1C	Mx	0	4.5
76	MP5A	X	-9.52	0.5
77	MP5A	Z	5.497	0.5
78	MP5A	Mx	0.01	0.5
79	MP5A	X	-9.52	4.5
80	MP5A	Z	5.497	4.5
81	MP5A	Mx	0.01	4.5
82	MP5B	X	-9.52	0.5
83	MP5B	Z	5.497	0.5
84	MP5B	Mx	-0.01	0.5
85	MP5B	X	-9.52	4.5
86	MP5B	Z	5.497	4.5
87	MP5B	Mx	-0.01	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
88	MP5C	X	-10.349	0.5
89	MP5C	Z	5.975	0.5
90	MP5C	Mx	0	0.5
91	MP5C	X	-10.349	4.5
92	MP5C	Z	5.975	4.5
93	MP5C	Mx	0	4.5
94	MP3B	X	-1.706	3
95	MP3B	Z	0.985	3
96	MP3B	Mx	0.002	3
97	MP3B	X	-1.706	3
98	MP3B	Z	0.985	3
99	MP3B	Mx	0.000929	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	-2.9	0.5
2	MP3A	Z	0	0.5
3	MP3A	Mx	0.002	0.5
4	MP3A	X	-2.9	4.5
5	MP3A	Z	0	4.5
6	MP3A	Mx	0.002	4.5
7	MP3B	X	-5.795	0.5
8	MP3B	Z	0	0.5
9	MP3B	Mx	0.000513	0.5
10	MP3B	X	-5.795	4.5
11	MP3B	Z	0	4.5
12	MP3B	Mx	0.000513	4.5
13	MP3C	X	-5.795	0.5
14	MP3C	Z	0	0.5
15	MP3C	Mx	-0.005	0.5
16	MP3C	X	-5.795	4.5
17	MP3C	Z	0	4.5
18	MP3C	Mx	-0.005	4.5
19	MP3A	X	-2.9	0.5
20	MP3A	Z	0	0.5
21	MP3A	Mx	0.002	0.5
22	MP3A	X	-2.9	4.5
23	MP3A	Z	0	4.5
24	MP3A	Mx	0.002	4.5
25	MP3B	X	-5.795	0.5
26	MP3B	Z	0	0.5
27	MP3B	Mx	-0.005	0.5
28	MP3B	X	-5.795	4.5
29	MP3B	Z	0	4.5
30	MP3B	Mx	-0.005	4.5
31	MP3C	X	-5.795	0.5
32	MP3C	Z	0	0.5
33	MP3C	Mx	0.000513	0.5
34	MP3C	X	-5.795	4.5
35	MP3C	Z	0	4.5
36	MP3C	Mx	0.000513	4.5
37	MP4A	X	-1.681	1.5
38	MP4A	Z	0	1.5
39	MP4A	Mx	0.001	1.5
40	MP4A	X	-1.681	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
41	MP4A	Z	0	3.5
42	MP4A	Mx	0.001	3.5
43	MP4B	X	-4.08	1.5
44	MP4B	Z	0	1.5
45	MP4B	Mx	-0.002	1.5
46	MP4B	X	-4.08	3.5
47	MP4B	Z	0	3.5
48	MP4B	Mx	-0.002	3.5
49	MP4C	X	-4.08	1.5
50	MP4C	Z	0	1.5
51	MP4C	Mx	-0.002	1.5
52	MP4C	X	-4.08	3.5
53	MP4C	Z	0	3.5
54	MP4C	Mx	-0.002	3.5
55	OVP	X	-7.014	1
56	OVP	Z	0	1
57	OVP	Mx	0	1
58	MP1A	X	-10.674	0.5
59	MP1A	Z	0	0.5
60	MP1A	Mx	0.011	0.5
61	MP1A	X	-10.674	4.5
62	MP1A	Z	0	4.5
63	MP1A	Mx	0.011	4.5
64	MP1B	X	-11.631	0.5
65	MP1B	Z	0	0.5
66	MP1B	Mx	-0.006	0.5
67	MP1B	X	-11.631	4.5
68	MP1B	Z	0	4.5
69	MP1B	Mx	-0.006	4.5
70	MP1C	X	-11.631	0.5
71	MP1C	Z	0	0.5
72	MP1C	Mx	-0.006	0.5
73	MP1C	X	-11.631	4.5
74	MP1C	Z	0	4.5
75	MP1C	Mx	-0.006	4.5
76	MP5A	X	-10.674	0.5
77	MP5A	Z	0	0.5
78	MP5A	Mx	0.011	0.5
79	MP5A	X	-10.674	4.5
80	MP5A	Z	0	4.5
81	MP5A	Mx	0.011	4.5
82	MP5B	X	-11.631	0.5
83	MP5B	Z	0	0.5
84	MP5B	Mx	-0.006	0.5
85	MP5B	X	-11.631	4.5
86	MP5B	Z	0	4.5
87	MP5B	Mx	-0.006	4.5
88	MP5C	X	-11.631	0.5
89	MP5C	Z	0	0.5
90	MP5C	Mx	-0.006	0.5
91	MP5C	X	-11.631	4.5
92	MP5C	Z	0	4.5
93	MP5C	Mx	-0.006	4.5
94	MP3B	X	-1.136	3
95	MP3B	Z	0	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
96	MP3B	Mx	0.000965	3
97	MP3B	X	-1.136	3
98	MP3B	Z	0	3
99	MP3B	Mx	-1.9e-5	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	-3.347	0.5
2	MP3A	Z	-1.933	0.5
3	MP3A	Mx	0.002	0.5
4	MP3A	X	-3.347	4.5
5	MP3A	Z	-1.933	4.5
6	MP3A	Mx	0.002	4.5
7	MP3B	X	-5.854	0.5
8	MP3B	Z	-3.38	0.5
9	MP3B	Mx	0.004	0.5
10	MP3B	X	-5.854	4.5
11	MP3B	Z	-3.38	4.5
12	MP3B	Mx	0.004	4.5
13	MP3C	X	-3.347	0.5
14	MP3C	Z	-1.933	0.5
15	MP3C	Mx	-0.004	0.5
16	MP3C	X	-3.347	4.5
17	MP3C	Z	-1.933	4.5
18	MP3C	Mx	-0.004	4.5
19	MP3A	X	-3.347	0.5
20	MP3A	Z	-1.933	0.5
21	MP3A	Mx	0.004	0.5
22	MP3A	X	-3.347	4.5
23	MP3A	Z	-1.933	4.5
24	MP3A	Mx	0.004	4.5
25	MP3B	X	-5.854	0.5
26	MP3B	Z	-3.38	0.5
27	MP3B	Mx	-0.004	0.5
28	MP3B	X	-5.854	4.5
29	MP3B	Z	-3.38	4.5
30	MP3B	Mx	-0.004	4.5
31	MP3C	X	-3.347	0.5
32	MP3C	Z	-1.933	0.5
33	MP3C	Mx	-0.002	0.5
34	MP3C	X	-3.347	4.5
35	MP3C	Z	-1.933	4.5
36	MP3C	Mx	-0.002	4.5
37	MP4A	X	-2.148	1.5
38	MP4A	Z	-1.24	1.5
39	MP4A	Mx	0.002	1.5
40	MP4A	X	-2.148	3.5
41	MP4A	Z	-1.24	3.5
42	MP4A	Mx	0.002	3.5
43	MP4B	X	-4.226	1.5
44	MP4B	Z	-2.44	1.5
45	MP4B	Mx	0	1.5
46	MP4B	X	-4.226	3.5
47	MP4B	Z	-2.44	3.5
48	MP4B	Mx	0	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
49	MP4C	X	-2.148	1.5
50	MP4C	Z	-1.24	1.5
51	MP4C	Mx	-0.002	1.5
52	MP4C	X	-2.148	3.5
53	MP4C	Z	-1.24	3.5
54	MP4C	Mx	-0.002	3.5
55	OVP	X	-7.45	1
56	OVP	Z	-4.301	1
57	OVP	Mx	0	1
58	MP1A	X	-9.52	0.5
59	MP1A	Z	-5.497	0.5
60	MP1A	Mx	0.01	0.5
61	MP1A	X	-9.52	4.5
62	MP1A	Z	-5.497	4.5
63	MP1A	Mx	0.01	4.5
64	MP1B	X	-10.349	0.5
65	MP1B	Z	-5.975	0.5
66	MP1B	Mx	0	0.5
67	MP1B	X	-10.349	4.5
68	MP1B	Z	-5.975	4.5
69	MP1B	Mx	0	4.5
70	MP1C	X	-9.52	0.5
71	MP1C	Z	-5.497	0.5
72	MP1C	Mx	-0.01	0.5
73	MP1C	X	-9.52	4.5
74	MP1C	Z	-5.497	4.5
75	MP1C	Mx	-0.01	4.5
76	MP5A	X	-9.52	0.5
77	MP5A	Z	-5.497	0.5
78	MP5A	Mx	0.01	0.5
79	MP5A	X	-9.52	4.5
80	MP5A	Z	-5.497	4.5
81	MP5A	Mx	0.01	4.5
82	MP5B	X	-10.349	0.5
83	MP5B	Z	-5.975	0.5
84	MP5B	Mx	0	0.5
85	MP5B	X	-10.349	4.5
86	MP5B	Z	-5.975	4.5
87	MP5B	Mx	0	4.5
88	MP5C	X	-9.52	0.5
89	MP5C	Z	-5.497	0.5
90	MP5C	Mx	-0.01	0.5
91	MP5C	X	-9.52	4.5
92	MP5C	Z	-5.497	4.5
93	MP5C	Mx	-0.01	4.5
94	MP3B	X	-0.623	3
95	MP3B	Z	-0.359	3
96	MP3B	Mx	0.00036	3
97	MP3B	X	-0.623	3
98	MP3B	Z	-0.359	3
99	MP3B	Mx	-0.000359	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	-2.897	0.5
2	MP3A	Z	-5.018	0.5
3	MP3A	Mx	-0.000513	0.5
4	MP3A	X	-2.897	4.5
5	MP3A	Z	-5.018	4.5
6	MP3A	Mx	-0.000513	4.5
7	MP3B	X	-2.897	0.5
8	MP3B	Z	-5.018	0.5
9	MP3B	Mx	0.005	0.5
10	MP3B	X	-2.897	4.5
11	MP3B	Z	-5.018	4.5
12	MP3B	Mx	0.005	4.5
13	MP3C	X	-1.45	0.5
14	MP3C	Z	-2.512	0.5
15	MP3C	Mx	-0.002	0.5
16	MP3C	X	-1.45	4.5
17	MP3C	Z	-2.512	4.5
18	MP3C	Mx	-0.002	4.5
19	MP3A	X	-2.897	0.5
20	MP3A	Z	-5.018	0.5
21	MP3A	Mx	0.005	0.5
22	MP3A	X	-2.897	4.5
23	MP3A	Z	-5.018	4.5
24	MP3A	Mx	0.005	4.5
25	MP3B	X	-2.897	0.5
26	MP3B	Z	-5.018	0.5
27	MP3B	Mx	-0.000513	0.5
28	MP3B	X	-2.897	4.5
29	MP3B	Z	-5.018	4.5
30	MP3B	Mx	-0.000513	4.5
31	MP3C	X	-1.45	0.5
32	MP3C	Z	-2.512	0.5
33	MP3C	Mx	-0.002	0.5
34	MP3C	X	-1.45	4.5
35	MP3C	Z	-2.512	4.5
36	MP3C	Mx	-0.002	4.5
37	MP4A	X	-2.04	1.5
38	MP4A	Z	-3.533	1.5
39	MP4A	Mx	0.002	1.5
40	MP4A	X	-2.04	3.5
41	MP4A	Z	-3.533	3.5
42	MP4A	Mx	0.002	3.5
43	MP4B	X	-2.04	1.5
44	MP4B	Z	-3.533	1.5
45	MP4B	Mx	0.002	1.5
46	MP4B	X	-2.04	3.5
47	MP4B	Z	-3.533	3.5
48	MP4B	Mx	0.002	3.5
49	MP4C	X	-0.84	1.5
50	MP4C	Z	-1.455	1.5
51	MP4C	Mx	-0.001	1.5
52	MP4C	X	-0.84	3.5
53	MP4C	Z	-1.455	3.5
54	MP4C	Mx	-0.001	3.5
55	OVP	X	-4.698	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
56	OVP	Z	-8.138	1
57	OVP	Mx	0	1
58	MP1A	X	-5.816	0.5
59	MP1A	Z	-10.073	0.5
60	MP1A	Mx	0.006	0.5
61	MP1A	X	-5.816	4.5
62	MP1A	Z	-10.073	4.5
63	MP1A	Mx	0.006	4.5
64	MP1B	X	-5.816	0.5
65	MP1B	Z	-10.073	0.5
66	MP1B	Mx	0.006	0.5
67	MP1B	X	-5.816	4.5
68	MP1B	Z	-10.073	4.5
69	MP1B	Mx	0.006	4.5
70	MP1C	X	-5.337	0.5
71	MP1C	Z	-9.244	0.5
72	MP1C	Mx	-0.011	0.5
73	MP1C	X	-5.337	4.5
74	MP1C	Z	-9.244	4.5
75	MP1C	Mx	-0.011	4.5
76	MP5A	X	-5.816	0.5
77	MP5A	Z	-10.073	0.5
78	MP5A	Mx	0.006	0.5
79	MP5A	X	-5.816	4.5
80	MP5A	Z	-10.073	4.5
81	MP5A	Mx	0.006	4.5
82	MP5B	X	-5.816	0.5
83	MP5B	Z	-10.073	0.5
84	MP5B	Mx	0.006	0.5
85	MP5B	X	-5.816	4.5
86	MP5B	Z	-10.073	4.5
87	MP5B	Mx	0.006	4.5
88	MP5C	X	-5.337	0.5
89	MP5C	Z	-9.244	0.5
90	MP5C	Mx	-0.011	0.5
91	MP5C	X	-5.337	4.5
92	MP5C	Z	-9.244	4.5
93	MP5C	Mx	-0.011	4.5
94	MP3B	X	-0.568	3
95	MP3B	Z	-0.984	3
96	MP3B	Mx	1.8e-5	3
97	MP3B	X	-0.568	3
98	MP3B	Z	-0.984	3
99	MP3B	Mx	-0.000965	3

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	A2	Y	-500	%56

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	A4	Y	-500	0

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	A2	Y	-250	0

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	A2	Y	-250	%50

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	Y	-0.848	0.5
2	MP3A	My	-0.000707	0.5
3	MP3A	Mz	0.000495	0.5
4	MP3A	Y	-0.848	4.5
5	MP3A	My	-0.000707	4.5
6	MP3A	Mz	0.000495	4.5
7	MP3B	Y	-0.848	0.5
8	MP3B	My	-7.5e-5	0.5
9	MP3B	Mz	-0.00086	0.5
10	MP3B	Y	-0.848	4.5
11	MP3B	My	-7.5e-5	4.5
12	MP3B	Mz	-0.00086	4.5
13	MP3C	Y	-0.848	0.5
14	MP3C	My	0.000782	0.5
15	MP3C	Mz	0.000365	0.5
16	MP3C	Y	-0.848	4.5
17	MP3C	My	0.000782	4.5
18	MP3C	Mz	0.000365	4.5
19	MP3A	Y	-1.254	0.5
20	MP3A	My	-0.001	0.5
21	MP3A	Mz	-0.000732	0.5
22	MP3A	Y	-1.254	4.5
23	MP3A	My	-0.001	4.5
24	MP3A	Mz	-0.000732	4.5
25	MP3B	Y	-1.254	0.5
26	MP3B	My	0.001	0.5
27	MP3B	Mz	-0.000539	0.5
28	MP3B	Y	-1.254	4.5
29	MP3B	My	0.001	4.5
30	MP3B	Mz	-0.000539	4.5
31	MP3C	Y	-1.254	0.5
32	MP3C	My	-0.000111	0.5
33	MP3C	Mz	0.001	0.5
34	MP3C	Y	-1.254	4.5
35	MP3C	My	-0.000111	4.5
36	MP3C	Mz	0.001	4.5
37	MP4A	Y	-1.691	1.5
38	MP4A	My	-0.001	1.5
39	MP4A	Mz	0	1.5
40	MP4A	Y	-1.691	3.5
41	MP4A	My	-0.001	3.5
42	MP4A	Mz	0	3.5
43	MP4B	Y	-1.691	1.5
44	MP4B	My	0.000705	1.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
45	MP4B	Mz	-0.001	1.5
46	MP4B	Y	-1.691	3.5
47	MP4B	My	0.000705	3.5
48	MP4B	Mz	-0.001	3.5
49	MP4C	Y	-1.691	1.5
50	MP4C	My	0.000705	1.5
51	MP4C	Mz	0.001	1.5
52	MP4C	Y	-1.691	3.5
53	MP4C	My	0.000705	3.5
54	MP4C	Mz	0.001	3.5
55	OVP	Y	-1.242	1
56	OVP	My	0	1
57	OVP	Mz	0	1
58	MP1A	Y	-0.524	0.5
59	MP1A	My	-0.000524	0.5
60	MP1A	Mz	0	0.5
61	MP1A	Y	-0.524	4.5
62	MP1A	My	-0.000524	4.5
63	MP1A	Mz	0	4.5
64	MP1B	Y	-0.524	0.5
65	MP1B	My	0.000262	0.5
66	MP1B	Mz	-0.000454	0.5
67	MP1B	Y	-0.524	4.5
68	MP1B	My	0.000262	4.5
69	MP1B	Mz	-0.000454	4.5
70	MP1C	Y	-0.524	0.5
71	MP1C	My	0.000262	0.5
72	MP1C	Mz	0.000454	0.5
73	MP1C	Y	-0.524	4.5
74	MP1C	My	0.000262	4.5
75	MP1C	Mz	0.000454	4.5
76	MP5A	Y	-0.524	0.5
77	MP5A	My	-0.000524	0.5
78	MP5A	Mz	0	0.5
79	MP5A	Y	-0.524	4.5
80	MP5A	My	-0.000524	4.5
81	MP5A	Mz	0	4.5
82	MP5B	Y	-0.524	0.5
83	MP5B	My	0.000262	0.5
84	MP5B	Mz	-0.000454	0.5
85	MP5B	Y	-0.524	4.5
86	MP5B	My	0.000262	4.5
87	MP5B	Mz	-0.000454	4.5
88	MP5C	Y	-0.524	0.5
89	MP5C	My	0.000262	0.5
90	MP5C	Mz	0.000454	0.5
91	MP5C	Y	-0.524	4.5
92	MP5C	My	0.000262	4.5
93	MP5C	Mz	0.000454	4.5
94	MP3B	Y	-0.683	3
95	MP3B	My	-0.000581	3
96	MP3B	Mz	0.000322	3
97	MP3B	Y	-0.683	3
98	MP3B	My	1.1e-5	3
99	MP3B	Mz	0.000664	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	Z	-2.121	0.5
2	MP3A	Mx	-0.001	0.5
3	MP3A	Z	-2.121	4.5
4	MP3A	Mx	-0.001	4.5
5	MP3B	Z	-2.121	0.5
6	MP3B	Mx	0.002	0.5
7	MP3B	Z	-2.121	4.5
8	MP3B	Mx	0.002	4.5
9	MP3C	Z	-2.121	0.5
10	MP3C	Mx	-0.000912	0.5
11	MP3C	Z	-2.121	4.5
12	MP3C	Mx	-0.000912	4.5
13	MP3A	Z	-3.135	0.5
14	MP3A	Mx	0.002	0.5
15	MP3A	Z	-3.135	4.5
16	MP3A	Mx	0.002	4.5
17	MP3B	Z	-3.135	0.5
18	MP3B	Mx	0.001	0.5
19	MP3B	Z	-3.135	4.5
20	MP3B	Mx	0.001	4.5
21	MP3C	Z	-3.135	0.5
22	MP3C	Mx	-0.003	0.5
23	MP3C	Z	-3.135	4.5
24	MP3C	Mx	-0.003	4.5
25	MP4A	Z	-4.227	1.5
26	MP4A	Mx	0	1.5
27	MP4A	Z	-4.227	3.5
28	MP4A	Mx	0	3.5
29	MP4B	Z	-4.227	1.5
30	MP4B	Mx	0.003	1.5
31	MP4B	Z	-4.227	3.5
32	MP4B	Mx	0.003	3.5
33	MP4C	Z	-4.227	1.5
34	MP4C	Mx	-0.003	1.5
35	MP4C	Z	-4.227	3.5
36	MP4C	Mx	-0.003	3.5
37	OVP	Z	-3.106	1
38	OVP	Mx	0	1
39	MP1A	Z	-1.31	0.5
40	MP1A	Mx	0	0.5
41	MP1A	Z	-1.31	4.5
42	MP1A	Mx	0	4.5
43	MP1B	Z	-1.31	0.5
44	MP1B	Mx	0.001	0.5
45	MP1B	Z	-1.31	4.5
46	MP1B	Mx	0.001	4.5
47	MP1C	Z	-1.31	0.5
48	MP1C	Mx	-0.001	0.5
49	MP1C	Z	-1.31	4.5
50	MP1C	Mx	-0.001	4.5
51	MP5A	Z	-1.31	0.5
52	MP5A	Mx	0	0.5
53	MP5A	Z	-1.31	4.5
54	MP5A	Mx	0	4.5
55	MP5B	Z	-1.31	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
56	MP5B	Mx	0.001	0.5
57	MP5B	Z	-1.31	4.5
58	MP5B	Mx	0.001	4.5
59	MP5C	Z	-1.31	0.5
60	MP5C	Mx	-0.001	0.5
61	MP5C	Z	-1.31	4.5
62	MP5C	Mx	-0.001	4.5
63	MP3B	Z	-1.708	3
64	MP3B	Mx	-0.000806	3
65	MP3B	Z	-1.708	3
66	MP3B	Mx	-0.002	3

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP3A	X	2.121	0.5
2	MP3A	Mx	-0.002	0.5
3	MP3A	X	2.121	4.5
4	MP3A	Mx	-0.002	4.5
5	MP3B	X	2.121	0.5
6	MP3B	Mx	-0.000188	0.5
7	MP3B	X	2.121	4.5
8	MP3B	Mx	-0.000188	4.5
9	MP3C	X	2.121	0.5
10	MP3C	Mx	0.002	0.5
11	MP3C	X	2.121	4.5
12	MP3C	Mx	0.002	4.5
13	MP3A	X	3.135	0.5
14	MP3A	Mx	-0.003	0.5
15	MP3A	X	3.135	4.5
16	MP3A	Mx	-0.003	4.5
17	MP3B	X	3.135	0.5
18	MP3B	Mx	0.003	0.5
19	MP3B	X	3.135	4.5
20	MP3B	Mx	0.003	4.5
21	MP3C	X	3.135	0.5
22	MP3C	Mx	-0.000278	0.5
23	MP3C	X	3.135	4.5
24	MP3C	Mx	-0.000278	4.5
25	MP4A	X	4.227	1.5
26	MP4A	Mx	-0.004	1.5
27	MP4A	X	4.227	3.5
28	MP4A	Mx	-0.004	3.5
29	MP4B	X	4.227	1.5
30	MP4B	Mx	0.002	1.5
31	MP4B	X	4.227	3.5
32	MP4B	Mx	0.002	3.5
33	MP4C	X	4.227	1.5
34	MP4C	Mx	0.002	1.5
35	MP4C	X	4.227	3.5
36	MP4C	Mx	0.002	3.5
37	OVP	X	3.106	1
38	OVP	Mx	0	1
39	MP1A	X	1.31	0.5
40	MP1A	Mx	-0.001	0.5
41	MP1A	X	1.31	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
42	MP1A	Mx	-0.001	4.5
43	MP1B	X	1.31	0.5
44	MP1B	Mx	0.000655	0.5
45	MP1B	X	1.31	4.5
46	MP1B	Mx	0.000655	4.5
47	MP1C	X	1.31	0.5
48	MP1C	Mx	0.000655	0.5
49	MP1C	X	1.31	4.5
50	MP1C	Mx	0.000655	4.5
51	MP5A	X	1.31	0.5
52	MP5A	Mx	-0.001	0.5
53	MP5A	X	1.31	4.5
54	MP5A	Mx	-0.001	4.5
55	MP5B	X	1.31	0.5
56	MP5B	Mx	0.000655	0.5
57	MP5B	X	1.31	4.5
58	MP5B	Mx	0.000655	4.5
59	MP5C	X	1.31	0.5
60	MP5C	Mx	0.000655	0.5
61	MP5C	X	1.31	4.5
62	MP5C	Mx	0.000655	4.5
63	MP3B	X	1.708	3
64	MP3B	Mx	-0.001	3
65	MP3B	X	1.708	3
66	MP3B	Mx	2.8e-5	3

Member Area Loads

No Data to Print...

Envelope Node Reactions

	Node Label		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	A1	max	663.659	9	804.133	1	2510.431	1	0.671	7	1.468	8	1.045	4
2		min	-631.762	3	-1182.351	7	-3162.455	7	-0.434	1	-1.476	2	-2.604	46
3	N67	max	41.838	10	3524.501	7	2137.783	7	0	75	0	4	0	4
4		min	-41.846	4	-1962.046	1	-1186.991	1	0	1	-0.002	46	-0.001	46
5	N69A	max	2565.51	11	708.204	5	1851.893	12	1.257	3	1.484	12	1.078	12
6		min	-1959.885	5	-1192.306	11	-1472.601	6	-1.054	9	-1.493	6	-0.608	6
7	N137	max	2067.405	9	718.719	9	1616.692	2	0.846	11	1.445	4	0.801	8
8		min	-2636.209	3	-1176.456	3	-1328.993	8	-1.392	5	-1.464	10	-0.821	2
9	N176B	max	1829.08	3	3483.275	3	587.805	9	0	12	0	12	0	6
10		min	-1017.963	9	-1943.629	9	-1055.953	3	0	6	-0.001	6	0	12
11	N179B	max	991.831	5	3528.539	11	572.575	5	0	2	0	8	0	2
12		min	-1853.533	11	-1895.227	5	-1070.199	11	0	8	-0.001	2	0	8
13	N182	max	541.073	10	2109.714	1	2313.423	1	0.001	7	0.001	4	0.001	4
14		min	-577.569	4	-1389.134	7	-1556.112	7	-0.001	1	-0.004	46	-0.004	46
15	N183	max	2008.567	9	2125.711	9	860.073	2	0.001	11	0.001	12	0.001	7
16		min	-1335.059	3	-1404.725	3	-1205.769	9	-0.002	5	-0.002	6	-0.001	1
17	N188	max	1393.333	11	2130.133	5	788.692	12	0.002	2	0.001	8	0.001	12
18		min	-2052.91	5	-1391.891	11	-1193.466	6	-0.001	8	-0.002	2	-0.001	6
19	Totals:	max	6215.902	10	8843.561	23	6162.372	1						
20		min	-6215.897	4	2008.384	68	-6162.372	7						

Node Reactions

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	1	A1	-56.282	804.133	2510.431	-0.434	-0.066	-0.184
2	1	N67	-0.009	-1962.046	-1186.991	0	0	0
3	1	N69A	1104.671	-723.97	1322.395	0.956	1.282	1.062
4	1	N137	-1129.155	-698.561	1118.015	0.527	-0.93	-0.802
5	1	N176B	1100.977	2055.608	-591.988	0	0	0
6	1	N179B	-1189.181	2218.855	-643.31	0	0	0
7	1	N182	21.402	2109.714	2313.423	-0.001	0	0
8	1	N183	-208.212	-455.796	675.316	0.001	0.001	-0.001
9	1	N188	355.804	-549.352	645.082	0.001	-0.002	0.001
10	1	Totals:	0.014	2798.586	6162.372			
11	1	COG (ft):	X: -0.066	Y: 0.826	Z: -0.112			
12	2	A1	-630.182	664.01	2055.95	-0.361	-1.476	0.64
13	2	N67	-25.865	-1630.525	-989.061	0	0	0
14	2	N69A	121.026	-248.726	531.254	1.141	0.649	0.835
15	2	N137	-2014.367	-1046.785	1616.692	0.14	-1.154	-0.821
16	2	N176B	1620.059	3061.052	-908.5	0	0	0
17	2	N179B	-476.971	863.549	-227.092	0	-0.001	0
18	2	N182	-165.409	1918.251	2110.913	-0.001	0.001	0.001
19	2	N183	-945.808	-1112.362	860.073	0	0	-0.001
20	2	N188	-570.821	330.112	298.97	0.002	-0.002	0.001
21	2	Totals:	-3088.338	2798.577	5349.2			
22	2	COG (ft):	X: -0.066	Y: 0.826	Z: -0.112			
23	3	A1	-631.762	300.833	979.992	-0.158	-1.286	0.99
24	3	N67	-38.922	-625.334	-381.656	0	0	0
25	3	N69A	-1010.158	233.561	-21.915	1.257	1.026	0.562
26	3	N137	-2636.209	-1176.456	1386.014	-0.585	0.118	-0.489
27	3	N176B	1829.08	3483.275	-1055.953	0	0	0
28	3	N179B	233.27	-481.49	179.482	0	0	0
29	3	N182	-418.43	1276.07	1406.798	-0.001	0.001	0.001
30	3	N183	-1335.059	-1404.725	857.604	-0.001	-0.001	-0.001
31	3	N188	-1364.166	1192.838	-248.616	0.002	-0.002	0
32	3	Totals:	-5372.357	2798.571	3101.748			
33	3	COG (ft):	X: -0.065	Y: 0.826	Z: -0.111			
34	4	A1	-462.087	-189.65	-322.539	0.121	-0.674	1.045
35	4	N67	-41.846	740.428	449.659	0	0	0
36	4	N69A	-1876.217	584.802	-561.387	1.036	1.217	0.19
37	4	N137	-2536.622	-1050.569	752.055	-1.23	1.445	-0.027
38	4	N176B	1652.677	3163.972	-980.686	0	0	0
39	4	N179B	765.97	-1486.86	471.868	0	0	0
40	4	N182	-577.569	400.56	431.037	0	0.001	0.001
41	4	N183	-1258.993	-1210.374	570.614	-0.002	-0.001	0
42	4	N188	-1881.209	1846.257	-810.595	0.001	-0.001	0
43	4	Totals:	-6215.897	2798.566	0.025			
44	4	COG (ft):	X: -0.065	Y: 0.826	Z: -0.111			
45	5	A1	-560.741	-687.114	-1645.394	0.4	-1.079	1.005
46	5	N67	-37.727	2093.189	1272.961	0	0	0
47	5	N69A	-1959.885	708.204	-1229.069	0.356	-0.108	-0.285
48	5	N137	-1634.596	-704.958	290.837	-1.392	1.198	0.308
49	5	N176B	1126.868	2173.063	-693.987	0	0	0
50	5	N179B	991.831	-1895.227	572.575	0	0	0
51	5	N182	-485.294	-453.809	-521.817	0	0.001	0.001
52	5	N183	-758.265	-564.916	-6.345	-0.002	-0.002	0.001
53	5	N188	-2052.91	2130.133	-1140.513	0.001	0	-0.001
54	5	Totals:	-5370.718	2798.564	-3100.751			
55	5	COG (ft):	X: -0.065	Y: 0.826	Z: -0.111			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
56	6	A1	-501.682	-1053.648	-2735.655	0.599	-1.271	0.609
57	6	N67	-23.108	3107.352	1886.21	0	0	0
58	6	N69A	-1346.339	578.181	-1472.601	-0.364	-1.493	-0.608
59	6	N137	-465.764	-235.461	-138.881	-1.25	0.541	0.554
60	6	N176B	414.172	824.831	-287.461	0	-0.001	0
61	6	N179B	833.097	-1563.29	451.126	0	0	0
62	6	N182	-254.53	-1100.835	-1236.676	0.001	0	0
63	6	N183	18.731	313.133	-620.12	-0.002	-0.002	0.001
64	6	N188	-1761.985	1928.303	-1193.466	0	0.001	-0.001
65	6	Totals:	-3087.406	2798.566	-5347.523			
66	6	COG (ft):	X: -0.066	Y: 0.826	Z: -0.11			
67	7	A1	92.246	-1182.351	-3162.455	0.671	0.069	-0.255
68	7	N67	0.037	3524.501	2137.783	0	0	0
69	7	N69A	-488.208	233.557	-940.251	-0.75	-1.287	-0.591
70	7	N137	549.64	234.736	-828.427	-1.071	0.931	0.782
71	7	N176B	-284.639	-504.721	119.546	0	0	0
72	7	N179B	321.51	-572.734	140.695	0	0	0
73	7	N182	-57.823	-1389.134	-1556.112	0.001	-0.001	-0.001
74	7	N183	885.511	1172.453	-1020.146	-0.001	-0.002	0.001
75	7	N188	-1018.282	1282.266	-1053.005	-0.001	0.001	-0.001
76	7	Totals:	-0.009	2798.573	-6162.372			
77	7	COG (ft):	X: -0.066	Y: 0.826	Z: -0.11			
78	8	A1	661.986	-1044.804	-2712.128	0.6	1.468	-1.081
79	8	N67	22.967	3198.917	1943.452	0	0	0
80	8	N69A	492.842	-241.751	-145.548	-0.936	-0.646	-0.365
81	8	N137	1438.719	585.821	-1328.993	-0.682	1.159	0.801
82	8	N176B	-806.723	-1514.762	436.156	0	0	0
83	8	N179B	-390.318	780.73	-273.648	0	0	0
84	8	N182	136.853	-1200.185	-1354.224	0.001	-0.001	-0.001
85	8	N183	1622.9	1830.804	-1201.814	0	-0.001	0.001
86	8	N188	-90.882	403.812	-712.452	-0.001	0.001	-0.001
87	8	Totals:	3088.343	2798.582	-5349.2			
88	8	COG (ft):	X: -0.066	Y: 0.826	Z: -0.11			
89	9	A1	663.659	-685.344	-1641.627	0.4	1.282	-1.431
90	9	N67	37.538	2199.963	1339.706	0	0	0
91	9	N69A	1621.547	-723.857	411.739	-1.054	-1.015	-0.093
92	9	N137	2067.405	718.719	-1096.782	0.041	-0.125	0.473
93	9	N176B	-1017.963	-1943.629	587.805	0	0	0
94	9	N179B	-1101.481	2126.302	-679.5	0	0	0
95	9	N182	387.04	-560.504	-648.864	0	-0.002	-0.002
96	9	N183	2008.567	2125.711	-1205.769	0	0	0.001
97	9	N188	706.05	-458.772	-168.456	-0.001	0.001	0
98	9	Totals:	5372.362	2798.589	-3101.749			
99	9	COG (ft):	X: -0.067	Y: 0.826	Z: -0.111			
100	10	A1	498.537	-195.233	-339.118	0.121	0.678	-1.484
101	10	N67	41.838	833.004	507.522	0	-0.001	0
102	10	N69A	2483.872	-1072.127	948.793	-0.833	-1.202	0.277
103	10	N137	1966.253	590.26	-456.824	0.684	-1.464	0.01
104	10	N176B	-836.908	-1618.135	513.072	0	0	0
105	10	N179B	-1632.481	3126.847	-969.254	0	0	0
106	10	N182	541.073	315.771	328.968	0	-0.002	-0.002
107	10	N183	1928.032	1928.71	-925.267	0.001	0.001	0.001
108	10	N188	1225.684	-1110.504	392.084	-0.001	0	0.001
109	10	Totals:	6215.902	2798.593	-0.025			
110	10	COG (ft):	X: -0.067	Y: 0.826	Z: -0.111			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
111	11	A1	601.838	302.308	983.476	-0.158	1.09	-1.442
112	11	N67	38.816	-518.787	-315.068	0	0	0
113	11	N69A	2565.51	-1192.306	1609.738	-0.149	0.111	0.752
114	11	N137	1059.526	241.162	6.939	0.846	-1.211	-0.327
115	11	N176B	-308.842	-621.224	223.246	0	0	0
116	11	N179B	-1853.533	3528.539	-1070.199	0	0	0
117	11	N182	444.082	1170.042	1280.472	-0.001	-0.002	-0.002
118	11	N183	1429.993	1280.753	-346.368	0.001	0.001	0
119	11	N188	1393.333	-1391.891	728.515	0	-0.001	0.001
120	11	Totals:	5370.723	2798.596	3100.751			
121	11	COG (ft):	X: -0.067	Y: 0.826	Z: -0.111			
122	12	A1	542.282	671.951	2078.135	-0.36	1.286	-1.045
123	12	N67	25.717	-1537.75	-931.084	0	0	0
124	12	N69A	1958.097	-1064.996	1851.893	0.573	1.484	1.078
125	12	N137	-111.361	-228.467	432.525	0.705	-0.546	-0.574
126	12	N176B	402.196	725.367	-183.866	0	0	0
127	12	N179B	-1696.803	3203.144	-953.238	0	0	0
128	12	N182	210.751	1818.732	1993.746	-0.001	-0.001	-0.001
129	12	N183	657.463	403.463	270.721	0.001	0.001	-0.001
130	12	N188	1099.069	-1192.851	788.692	0.001	-0.001	0.001
131	12	Totals:	3087.411	2798.594	5347.523			
132	12	COG (ft):	X: -0.066	Y: 0.826	Z: -0.112			
133	13	A1	10.73	-434.702	-132.454	0.303	-0.014	-0.267
134	13	N67	0.019	1730.102	1056.356	0	0	0
135	13	N69A	1089.522	-1020.615	858.276	0.177	0.385	0.846
136	13	N137	-1053.581	-991.243	733.671	-0.321	-0.29	-0.541
137	13	N176B	1495.613	2823.065	-851.864	0	0	0
138	13	N179B	-1569.231	2959.102	-894.441	0	0	0
139	13	N182	-19.19	1747.102	1903.369	-0.001	0	0
140	13	N183	1033.382	1019.49	-400.623	0	0	0
141	13	N188	-987.263	1011.257	-457.792	0.001	-0.001	0
142	13	Totals:	0.001	8843.558	1814.499			
143	13	COG (ft):	X: -0.046	Y: 1.026	Z: -0.096			
144	14	A1	-145.476	-471.295	-256.737	0.323	-0.379	-0.045
145	14	N67	-5.85	1819.739	1110.621	0	0	0
146	14	N69A	789.518	-885.31	639.471	0.238	0.25	0.786
147	14	N137	-1315.117	-1085.608	859.497	-0.433	-0.303	-0.541
148	14	N176B	1640.909	3102.857	-940.803	0	0	0
149	14	N179B	-1366.435	2573.316	-775.383	0	0	0
150	14	N182	-82.547	1693.907	1846.452	-0.001	0	0
151	14	N183	825.049	834.38	-346.864	0	0	0
152	14	N188	-1250.345	1261.569	-559.564	0.001	-0.001	0
153	14	Totals:	-910.294	8843.556	1576.689			
154	14	COG (ft):	X: -0.046	Y: 1.026	Z: -0.096			
155	15	A1	-165.679	-570.314	-562.328	0.378	-0.374	0.062
156	15	N67	-10.111	2096.486	1279.001	0	0	0
157	15	N69A	463.839	-749.172	462.923	0.268	0.313	0.708
158	15	N137	-1486.836	-1119.414	795.945	-0.628	0.029	-0.451
159	15	N176B	1697.912	3216.249	-980.319	0	0	0
160	15	N179B	-1162.409	2188.237	-659.358	0	0	0
161	15	N182	-152.823	1516.171	1650.185	-0.001	0	0
162	15	N183	713.244	755.041	-356.954	0	-0.001	0
163	15	N188	-1483.381	1510.27	-713.269	0.001	-0.001	0
164	15	Totals:	-1586.244	8843.554	915.825			
165	15	COG (ft):	X: -0.046	Y: 1.026	Z: -0.096			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
166	16	A1	-132.638	-709.325	-945.773	0.458	-0.246	0.085
167	16	N67	-11.692	2485.235	1515.997	0	0	0
168	16	N69A	225.653	-654.006	293.543	0.202	0.317	0.604
169	16	N137	-1457.22	-1085.257	618.778	-0.804	0.375	-0.325
170	16	N176B	1648.826	3128.014	-958.544	0	0	0
171	16	N179B	-1012.737	1908.333	-577.889	0	0	0
172	16	N182	-194.466	1266.575	1370.582	0	0	0
173	16	N183	729.808	809.308	-445.685	-0.001	-0.001	0.001
174	16	N188	-1632.119	1694.676	-871.003	0.001	-0.001	0
175	16	Totals:	-1836.585	8843.553	0.006			
176	16	COG (ft):	X: -0.046	Y: 1.026	Z: -0.096			
177	17	A1	-144.759	-848.647	-1331.388	0.537	-0.316	0.068
178	17	N67	-10.056	2871.452	1751.42	0	0	0
179	17	N69A	202.517	-622.539	110.511	0.016	-0.027	0.476
180	17	N137	-1207.126	-989.018	467.368	-0.858	0.354	-0.227
181	17	N176B	1501.256	2852.097	-878.387	0	0	0
182	17	N179B	-952.87	1800.347	-550.112	0	0	0
183	17	N182	-172.067	1019.986	1094.138	0	0	0
184	17	N183	869.878	988.977	-606.816	-0.001	-0.001	0.001
185	17	N188	-1672.026	1770.898	-971.975	0.001	0	0
186	17	Totals:	-1585.253	8843.552	-915.24			
187	17	COG (ft):	X: -0.046	Y: 1.026	Z: -0.096			
188	18	A1	-110.741	-946.652	-1637.099	0.591	-0.321	-0.046
189	18	N67	-5.676	3152.164	1922.296	0	0	0
190	18	N69A	374.875	-657.975	45.323	-0.18	-0.385	0.388
191	18	N137	-869.222	-854.897	323.521	-0.826	0.213	-0.152
192	18	N176B	1297.4	2467.495	-762.652	0	0	0
193	18	N179B	-998.095	1892.124	-582.986	0	0	0
194	18	N182	-108.072	837.577	891.569	0	0	0
195	18	N183	1093.945	1239.259	-779.615	-0.001	-0.001	0.001
196	18	N188	-1584.136	1714.457	-996.047	0	0	0
197	18	Totals:	-909.723	8843.553	-1575.687			
198	18	COG (ft):	X: -0.046	Y: 1.026	Z: -0.096			
199	19	A1	49.785	-979.667	-1754.182	0.609	0.028	-0.276
200	19	N67	0.029	3262.886	1989.751	0	0	0
201	19	N69A	632.613	-753.504	181.665	-0.294	-0.375	0.389
202	19	N137	-561.076	-722.06	133.845	-0.772	0.279	-0.09
203	19	N176B	1097.338	2086.896	-645.366	0	0	0
204	19	N179B	-1140.788	2167.027	-670.291	0	0	0
205	19	N182	-43.601	760.112	805.517	0	-0.001	-0.001
206	19	N183	1342.46	1486.772	-899.999	-0.001	-0.001	0.001
207	19	N188	-1376.764	1535.092	-955.439	0	0	0
208	19	Totals:	-0.003	8843.555	-1814.499			
209	19	COG (ft):	X: -0.046	Y: 1.026	Z: -0.096			
210	20	A1	205.725	-943.248	-1630.173	0.589	0.392	-0.497
211	20	N67	5.691	3173.635	1935.718	0	0	0
212	20	N69A	932.467	-888.822	400.707	-0.355	-0.24	0.449
213	20	N137	-299.268	-627.494	7.88	-0.66	0.292	-0.09
214	20	N176B	951.841	1806.783	-556.409	0	0	0
215	20	N179B	-1343.579	2552.711	-789.21	0	0	0
216	20	N182	20.306	813.155	862.419	0	-0.001	-0.001
217	20	N183	1550.737	1671.992	-953.538	0	-0.001	0.001
218	20	N188	-1113.628	1284.845	-854.082	0	0	0
219	20	Totals:	910.292	8843.557	-1576.689			
220	20	COG (ft):	X: -0.046	Y: 1.026	Z: -0.096			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
221	21	A1	225.925	-844.485	-1324.959	0.534	0.387	-0.604
222	21	N67	10.046	2897.311	1767.585	0	0	0
223	21	N69A	1257.963	-1024.943	577.507	-0.385	-0.302	0.527
224	21	N137	-127.107	-593.469	71.524	-0.465	-0.041	-0.18
225	21	N176B	894.703	1692.96	-516.607	0	0	0
226	21	N179B	-1547.667	2937.805	-905.164	0	0	0
227	21	N182	90.414	990.735	1058.814	0	-0.001	-0.001
228	21	N183	1662.27	1751.477	-943.886	0	0	0.001
229	21	N188	-880.306	1036.17	-700.639	0	0	0
230	21	Totals:	1586.242	8843.559	-915.824			
231	21	COG (ft):	X: -0.046	Y: 1.026	Z: -0.096			
232	22	A1	193.177	-705.51	-941.537	0.454	0.26	-0.628
233	22	N67	11.74	2508.506	1530.544	0	0	0
234	22	N69A	1495.881	-1119.901	746.721	-0.319	-0.306	0.63
235	22	N137	-156.833	-627.8	249.083	-0.29	-0.387	-0.305
236	22	N176B	944.101	1781.601	-538.333	0	0	0
237	22	N179B	-1697.215	3217.373	-986.463	0	0	0
238	22	N182	131.677	1240.379	1338.574	0	-0.001	-0.001
239	22	N183	1645.417	1697.049	-855.624	0	0	0.001
240	22	N188	-731.362	851.865	-542.97	0	0	0
241	22	Totals:	1836.583	8843.56	-0.006			
242	22	COG (ft):	X: -0.046	Y: 1.026	Z: -0.096			
243	23	A1	205.598	-566.179	-555.918	0.375	0.331	-0.61
244	23	N67	10.197	2122.338	1295.16	0	0	0
245	23	N69A	1518.882	-1151.149	929.322	-0.133	0.037	0.758
246	23	N137	-407.248	-724.277	400.675	-0.236	-0.366	-0.404
247	23	N176B	1091.825	2057.923	-618.693	0	0	0
248	23	N179B	-1756.763	3324.927	-1014.272	0	0	0
249	23	N182	108.922	1486.972	1614.901	-0.001	-0.001	-0.001
250	23	N183	1505.557	1517.223	-694.404	0	0	0.001
251	23	N188	-691.72	775.784	-441.529	0.001	0	0
252	23	Totals:	1585.251	8843.561	915.24			
253	23	COG (ft):	X: -0.046	Y: 1.026	Z: -0.096			
254	24	A1	171.549	-467.956	-249.897	0.321	0.336	-0.496
255	24	N67	5.909	1841.291	1124.093	0	0	0
256	24	N69A	1346.931	-1115.898	994.428	0.063	0.395	0.846
257	24	N137	-745.3	-858.415	544.267	-0.268	-0.224	-0.479
258	24	N176B	1295.569	2442.435	-734.492	0	0	0
259	24	N179B	-1711.662	3233.582	-981.706	0	0	0
260	24	N182	44.767	1669.481	1817.321	-0.001	-0.001	-0.001
261	24	N183	1281.827	1266.988	-521.361	0	0	0
262	24	N188	-779.87	832.052	-416.966	0.001	-0.001	0
263	24	Totals:	909.721	8843.56	1575.687			
264	24	COG (ft):	X: -0.046	Y: 1.026	Z: -0.096			
265	25	A1	-15.418	-410.176	-736.355	0.247	0.063	0.252
266	25	N67	-0.075	1613.365	998.563	0	0	0
267	25	N69A	305.815	-235.851	208.171	0.176	0.007	0.27
268	25	N137	-293.092	-233.396	176.945	-0.232	-0.052	-0.034
269	25	N176B	413.086	784.177	-235.735	0	0	0
270	25	N179B	-425.007	806.172	-242.585	0	0	0
271	25	N182	21.754	499.375	540.883	0	0	0
272	25	N183	349.921	351.315	-146.483	0	0	0
273	25	N188	-356.979	373.596	-178.261	0	0	0
274	25	Totals:	0.003	3548.576	385.142			
275	25	COG (ft):	X: 0.107	Y: 0.652	Z: 0.872			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
276	26	A1	-51.196	-418.871	-764.668	0.252	-0.025	0.303
277	26	N67	-1.569	1633.952	1010.855	0	0	0
278	26	N69A	244.382	-206.132	158.614	0.188	-0.032	0.256
279	26	N137	-348.523	-255.241	208.171	-0.256	-0.066	-0.035
280	26	N176B	445.611	847.141	-255.516	0	0	0
281	26	N179B	-380.486	721.488	-216.621	0	0	0
282	26	N182	9.845	487.486	528.228	0	0	0
283	26	N183	303.823	310.217	-135.026	0	0	0
284	26	N188	-414.907	428.535	-199.716	0	0	0
285	26	Totals:	-193.019	3548.576	334.321			
286	26	COG (ft):	X: 0.107	Y: 0.652	Z: 0.872			
287	27	A1	-51.274	-441.456	-831.754	0.264	-0.013	0.325
288	27	N67	-2.44	1696.593	1048.714	0	0	0
289	27	N69A	173.746	-175.99	123.918	0.195	-0.009	0.239
290	27	N137	-387.572	-263.433	193.71	-0.302	0.014	-0.014
291	27	N176B	458.728	873.704	-264.85	0	0	0
292	27	N179B	-336.064	637.4	-191.23	0	0	0
293	27	N182	-5.908	447.446	484.17	0	0	0
294	27	N183	279.601	291.865	-134.986	0	0	0
295	27	N188	-464.581	482.447	-233.825	0	0	0
296	27	Totals:	-335.764	3548.575	193.867			
297	27	COG (ft):	X: 0.107	Y: 0.652	Z: 0.872			
298	28	A1	-40.776	-472.097	-913.16	0.282	0.025	0.329
299	28	N67	-2.686	1781.987	1100.701	0	0	0
300	28	N69A	119.732	-154.126	90.267	0.181	0.003	0.216
301	28	N137	-381.271	-255.476	153.908	-0.342	0.097	0.014
302	28	N176B	447.546	853.531	-260.153	0	0	0
303	28	N179B	-302.823	574.711	-173.037	0	0	0
304	28	N182	-15.735	392.719	423.103	0	0	0
305	28	N183	284.488	304.091	-152.728	0	0	0
306	28	N188	-496.967	523.236	-268.899	0	0	0
307	28	Totals:	-388.492	3548.575	0.001			
308	28	COG (ft):	X: 0.107	Y: 0.652	Z: 0.872			
309	29	A1	-47.074	-503.185	-995.83	0.299	0	0.326
310	29	N67	-2.452	1866.505	1152.141	0	0	0
311	29	N69A	114.58	-146.518	48.744	0.139	-0.08	0.186
312	29	N137	-324.731	-233.76	124.991	-0.352	0.082	0.035
313	29	N176B	414.598	791.389	-242.132	0	0	0
314	29	N179B	-288.861	549.412	-166.748	0	0	0
315	29	N182	-9.858	339.318	363.573	0	0	0
316	29	N183	315.709	344.516	-188.844	0	0	0
317	29	N188	-507.574	540.896	-289.698	0	0	0
318	29	Totals:	-335.663	3548.575	-193.803			
319	29	COG (ft):	X: 0.107	Y: 0.652	Z: 0.872			
320	30	A1	-43.358	-526.165	-1064.073	0.311	-0.012	0.302
321	30	N67	-1.577	1929.998	1190.533	0	0	0
322	30	N69A	152.769	-154.576	33.575	0.094	-0.166	0.166
323	30	N137	-251.621	-204.411	98.245	-0.343	0.04	0.051
324	30	N176B	370.104	707.172	-216.706	0	0	0
325	30	N179B	-298.738	569.998	-174.219	0	0	0
326	30	N182	4.615	298.825	318.941	0	0	0
327	30	N183	364.14	399.379	-227.298	0	0	0
328	30	N188	-489.293	528.355	-293.214	0	0	0
329	30	Totals:	-192.96	3548.575	-334.217			
330	30	COG (ft):	X: 0.107	Y: 0.652	Z: 0.872			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
331	31	A1	-6.056	-534.287	-1090.866	0.316	0.072	0.248
332	31	N67	-0.091	1956.221	1206.348	0	0	0
333	31	N69A	206.291	-176.022	66.771	0.07	-0.153	0.167
334	31	N137	-188.094	-175.028	55.261	-0.332	0.065	0.065
335	31	N176B	326.433	624.063	-191.239	0	0	0
336	31	N179B	-330.614	631.754	-193.613	0	0	0
337	31	N182	16.678	280.73	298.979	0	0	0
338	31	N183	418.285	453.096	-252.431	0	0	0
339	31	N188	-442.831	488.048	-284.352	0	0	0
340	31	Totals:	0.002	3548.576	-385.142			
341	31	COG (ft):	X: 0.107	Y: 0.652	Z: 0.872			
342	32	A1	29.706	-525.602	-1062.569	0.312	0.16	0.196
343	32	N67	1.391	1935.657	1194.07	0	0	0
344	32	N69A	267.713	-205.741	116.341	0.058	-0.113	0.181
345	32	N137	-132.648	-153.172	24.028	-0.308	0.079	0.066
346	32	N176B	293.897	561.081	-171.458	0	0	0
347	32	N179B	-375.133	716.431	-219.57	0	0	0
348	32	N182	28.618	292.609	311.631	0	0	0
349	32	N183	464.382	494.201	-263.876	0	0	0
350	32	N188	-384.9	433.113	-262.918	0	0	0
351	32	Totals:	193.024	3548.576	-334.321			
352	32	COG (ft):	X: 0.107	Y: 0.652	Z: 0.872			
353	33	A1	29.784	-503.032	-995.505	0.299	0.148	0.174
354	33	N67	2.267	1873.04	1156.226	0	0	0
355	33	N69A	338.339	-235.882	151.053	0.051	-0.137	0.198
356	33	N137	-93.573	-144.968	38.495	-0.263	-0.001	0.046
357	33	N176B	280.771	534.491	-162.108	0	0	0
358	33	N179B	-419.559	800.522	-244.958	0	0	0
359	33	N182	44.36	332.64	355.694	0	0	0
360	33	N183	488.59	512.563	-263.942	0	0	0
361	33	N188	-335.212	379.202	-228.823	0	0	0
362	33	Totals:	335.769	3548.577	-193.867			
363	33	COG (ft):	X: 0.106	Y: 0.652	Z: 0.872			
364	34	A1	19.303	-472.393	-914.098	0.281	0.11	0.171
365	34	N67	2.519	1787.642	1104.236	0	0	0
366	34	N69A	392.339	-257.735	184.695	0.064	-0.148	0.221
367	34	N137	-99.88	-152.935	78.32	-0.222	-0.085	0.017
368	34	N176B	291.971	554.689	-166.803	0	0	0
369	34	N179B	-452.793	863.191	-263.141	0	0	0
370	34	N182	54.167	387.37	416.769	0	0	0
371	34	N183	483.686	500.327	-246.225	0	0	0
372	34	N188	-302.816	338.419	-193.755	0	0	0
373	34	Totals:	388.497	3548.577	-0.002			
374	34	COG (ft):	X: 0.106	Y: 0.652	Z: 0.872			
375	35	A1	25.621	-441.304	-831.43	0.264	0.135	0.173
376	35	N67	2.289	1703.127	1052.798	0	0	0
377	35	N69A	397.482	-265.33	226.192	0.107	-0.066	0.251
378	35	N137	-156.438	-174.665	107.246	-0.212	-0.069	-0.004
379	35	N176B	324.928	616.854	-184.836	0	0	0
380	35	N179B	-466.736	888.464	-269.431	0	0	0
381	35	N182	48.272	440.77	476.294	0	0	0
382	35	N183	452.475	459.892	-210.101	0	0	0
383	35	N188	-292.224	320.769	-172.93	0	0	0
384	35	Totals:	335.668	3548.577	193.803			
385	35	COG (ft):	X: 0.106	Y: 0.652	Z: 0.872			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
386	36	A1	21.902	-418.312	-763.169	0.252	0.147	0.198
387	36	N67	1.42	1639.616	1014.396	0	0	0
388	36	N69A	359.318	-257.283	241.356	0.152	0.02	0.271
389	36	N137	-229.557	-204.014	133.977	-0.221	-0.028	-0.02
390	36	N176B	369.415	701.065	-210.264	0	0	0
391	36	N179B	-456.867	867.904	-261.977	0	0	0
392	36	N182	33.788	481.27	520.92	0	0	0
393	36	N183	404.062	405.032	-171.634	0	0	0
394	36	N188	-310.518	333.299	-169.386	0	0	0
395	36	Totals:	192.965	3548.577	334.217			
396	36	COG (ft):	X: 0.107	Y: 0.652	Z: 0.872			
397	37	A1	165.38	-399.703	-708.13	0.245	-0.34	-2.521
398	37	N67	0.431	1503.977	930.188	0	-0.002	-0.001
399	37	N69A	268.02	-242.05	243.029	0.074	0.179	0.216
400	37	N137	-229.911	-163.071	60.535	-0.132	0.19	-0.041
401	37	N176B	312.884	598.995	-177.8	0	0	0
402	37	N179B	-434.7	824.142	-248.258	0	0	0
403	37	N182	-213.535	598.539	657.095	0	-0.003	-0.004
404	37	N183	471.461	464.136	-169.889	0	0	0
405	37	N188	-340.03	363.639	-201.622	0	0	0
406	37	Totals:	0.001	3548.604	385.148			
407	37	COG (ft):	X: -0.845	Y: 0.652	Z: 0.872			
408	38	A1	129.536	-408.267	-736.207	0.249	-0.428	-2.47
409	38	N67	-1.06	1524.248	942.282	0	-0.002	-0.001
410	38	N69A	206.712	-212.384	193.465	0.085	0.139	0.202
411	38	N137	-285.451	-184.967	91.789	-0.157	0.175	-0.042
412	38	N176B	345.485	662.092	-197.614	0	0	0
413	38	N179B	-390.256	739.593	-222.33	0	0	0
414	38	N182	-225.377	586.628	644.512	0	-0.003	-0.004
415	38	N183	425.389	423.048	-158.472	0	0	0
416	38	N188	-398.001	418.613	-223.099	0	0	0
417	38	Totals:	-193.022	3548.603	334.326			
418	38	COG (ft):	X: -0.845	Y: 0.652	Z: 0.872			
419	39	A1	129.322	-430.796	-803.206	0.262	-0.416	-2.449
420	39	N67	-1.908	1586.794	980.081	0	-0.002	-0.001
421	39	N69A	136.126	-182.26	158.75	0.092	0.163	0.184
422	39	N137	-324.631	-193.224	77.372	-0.202	0.255	-0.021
423	39	N176B	358.694	688.829	-207.005	0	0	0
424	39	N179B	-345.864	655.553	-196.949	0	0	0
425	39	N182	-240.966	546.478	600.478	0	-0.003	-0.004
426	39	N183	401.164	404.675	-158.431	0	0	0
427	39	N188	-447.703	472.554	-257.218	0	0	0
428	39	Totals:	-335.767	3548.603	193.872			
429	39	COG (ft):	X: -0.845	Y: 0.652	Z: 0.872			
430	40	A1	139.723	-461.435	-884.626	0.279	-0.379	-2.446
431	40	N67	-2.123	1672.233	1032.095	0	-0.002	-0.001
432	40	N69A	82.026	-160.357	125.077	0.079	0.174	0.161
433	40	N137	-318.497	-185.346	37.611	-0.243	0.338	0.008
434	40	N176B	347.624	668.871	-202.383	0	0	0
435	40	N179B	-312.57	592.763	-178.719	0	0	0
436	40	N182	-250.601	491.651	539.394	0	-0.003	-0.004
437	40	N183	406.022	416.859	-176.14	0	0	0
438	40	N188	-480.098	513.363	-292.302	0	0	0
439	40	Totals:	-388.495	3548.602	0.007			
440	40	COG (ft):	X: -0.845	Y: 0.652	Z: 0.872			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
441	41	A1	133.347	-492.53	-967.314	0.297	-0.405	-2.45
442	41	N67	-1.861	1756.791	1083.56	0	-0.002	-0.001
443	41	N69A	76.737	-152.689	83.533	0.036	0.092	0.132
444	41	N137	-262.065	-163.683	8.726	-0.253	0.323	0.029
445	41	N176B	314.753	606.873	-184.412	0	0	0
446	41	N179B	-298.524	567.306	-172.378	0	0	0
447	41	N182	-244.545	438.267	479.813	0	-0.003	-0.004
448	41	N183	437.195	457.236	-212.223	0	0	0
449	41	N188	-490.702	531.032	-313.103	0	0	0
450	41	Totals:	-335.666	3548.602	-193.798			
451	41	COG (ft):	X: -0.845	Y: 0.652	Z: 0.872			
452	42	A1	136.957	-515.56	-1035.648	0.309	-0.417	-2.475
453	42	N67	-0.965	1820.414	1122.033	0	-0.002	-0.001
454	42	N69A	114.816	-160.7	68.35	-0.008	0.006	0.112
455	42	N137	-188.927	-134.329	-18.003	-0.244	0.282	0.044
456	42	N176B	270.248	522.643	-158.988	0	0	0
457	42	N179B	-308.332	587.764	-179.811	0	0	0
458	42	N182	-229.927	397.834	435.105	0	-0.003	-0.004
459	42	N183	485.57	512.059	-250.647	0	0	0
460	42	N188	-472.402	518.478	-316.602	0	0	0
461	42	Totals:	-192.962	3548.602	-334.212			
462	42	COG (ft):	X: -0.845	Y: 0.652	Z: 0.872			
463	43	A1	174.195	-523.806	-1062.672	0.314	-0.333	-2.529
464	43	N67	0.533	1846.958	1138.049	0	-0.002	-0.001
465	43	N69A	168.228	-182.098	101.541	-0.032	0.018	0.113
466	43	N137	-125.295	-104.901	-60.991	-0.233	0.306	0.058
467	43	N176B	226.511	439.42	-133.497	0	0	0
468	43	N179B	-340.137	649.396	-199.171	0	0	0
469	43	N182	-217.804	379.747	415.052	0	-0.003	-0.004
470	43	N183	539.669	565.746	-275.737	0	0	0
471	43	N188	-425.902	478.141	-307.711	0	0	0
472	43	Totals:	-0.001	3548.603	-385.137			
473	43	COG (ft):	X: -0.845	Y: 0.652	Z: 0.872			
474	44	A1	210.023	-515.252	-1034.612	0.309	-0.245	-2.581
475	44	N67	2.012	1826.711	1125.969	0	-0.002	-0.001
476	44	N69A	229.526	-211.764	151.119	-0.043	0.058	0.127
477	44	N137	-69.739	-82.993	-92.252	-0.208	0.32	0.06
478	44	N176B	193.898	376.304	-113.682	0	0	0
479	44	N179B	-384.58	733.937	-225.091	0	0	0
480	44	N182	-205.931	391.648	427.633	0	-0.003	-0.004
481	44	N183	585.74	606.842	-287.142	0	0	0
482	44	N188	-367.927	423.171	-286.256	0	0	0
483	44	Totals:	193.022	3548.603	-334.315			
484	44	COG (ft):	X: -0.845	Y: 0.652	Z: 0.872			
485	45	A1	210.238	-492.738	-967.634	0.297	-0.257	-2.602
486	45	N67	2.867	1764.189	1088.184	0	-0.002	-0.001
487	45	N69A	300.103	-241.887	185.85	-0.051	0.035	0.144
488	45	N137	-30.532	-74.724	-77.829	-0.163	0.24	0.039
489	45	N176B	180.681	349.542	-104.275	0	0	0
490	45	N179B	-428.976	817.98	-250.47	0	0	0
491	45	N182	-190.354	431.788	471.671	0	-0.004	-0.004
492	45	N183	609.951	625.224	-287.208	0	0	0
493	45	N188	-318.212	369.231	-252.151	0	0	0
494	45	Totals:	335.766	3548.604	-193.861			
495	45	COG (ft):	X: -0.845	Y: 0.652	Z: 0.872			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
496	46	A1	199.855	-462.1	-886.213	0.279	-0.294	-2.604
497	46	N67	3.086	1678.745	1036.166	0	-0.002	-0.001
498	46	N69A	354.188	-263.779	219.514	-0.037	0.023	0.167
499	46	N137	-36.672	-82.612	-38.045	-0.122	0.157	0.01
500	46	N176B	191.769	369.524	-108.895	0	0	0
501	46	N179B	-462.263	880.751	-268.689	0	0	0
502	46	N182	-180.739	486.617	532.764	0	-0.004	-0.004
503	46	N183	605.076	613.03	-269.525	0	0	0
504	46	N188	-285.807	328.428	-217.073	0	0	0
505	46	Totals:	388.494	3548.604	0.004			
506	46	COG (ft):	X: -0.845	Y: 0.652	Z: 0.872			
507	47	A1	206.249	-431.004	-803.527	0.262	-0.268	-2.6
508	47	N67	2.829	1594.191	984.705	0	-0.002	-0.001
509	47	N69A	359.469	-271.435	261.031	0.005	0.106	0.197
510	47	N137	-93.123	-104.289	-9.15	-0.112	0.173	-0.011
511	47	N176B	224.649	431.545	-126.878	0	0	0
512	47	N179B	-476.291	906.182	-275.031	0	0	0
513	47	N182	-186.813	540.001	592.339	0	-0.004	-0.004
514	47	N183	573.913	572.643	-233.434	0	0	0
515	47	N188	-275.218	310.769	-196.246	0	0	0
516	47	Totals:	335.666	3548.604	193.809			
517	47	COG (ft):	X: -0.845	Y: 0.652	Z: 0.872			
518	48	A1	202.637	-407.963	-735.175	0.249	-0.256	-2.575
519	48	N67	1.939	1530.549	946.221	0	-0.002	-0.001
520	48	N69A	321.414	-263.434	276.209	0.05	0.192	0.217
521	48	N137	-166.269	-133.644	17.563	-0.121	0.214	-0.027
522	48	N176B	269.147	515.77	-152.304	0	0	0
523	48	N179B	-466.49	885.749	-267.616	0	0	0
524	48	N182	-201.441	580.441	637.042	0	-0.003	-0.004
525	48	N183	525.555	517.824	-194.997	0	0	0
526	48	N188	-293.531	323.312	-192.719	0	0	0
527	48	Totals:	192.962	3548.604	334.223			
528	48	COG (ft):	X: -0.845	Y: 0.652	Z: 0.872			
529	49	A1	107.91	-325.054	-601.749	0.2	-0.353	-2.151
530	49	N67	0.323	1211.872	744.335	0	-0.001	-0.001
531	49	N69A	257.545	-237.186	209.501	0.032	0.139	0.189
532	49	N137	-219.818	-162.709	32.033	-0.2	0.223	-0.002
533	49	N176B	310.374	594.352	-179.129	0	0	0
534	49	N179B	-423.212	802.907	-244.396	0	0	0
535	49	N182	-154.843	441.119	478.511	0	-0.003	-0.003
536	49	N183	460.488	468.85	-201.358	0	0	0
537	49	N188	-338.767	379.448	-237.744	0	0	0
538	49	Totals:	0	3173.6	0.005			
539	49	COG (ft):	X: -0.797	Y: 0.729	Z: 0.439			
540	50	A1	19.136	-331.69	-622.628	0.2	0.004	-0.219
541	50	N67	0.009	1293.354	795.266	0	0	0
542	50	N69A	285.759	-230.509	173.817	0.105	-0.017	0.226
543	50	N137	-267.176	-217.277	128.417	-0.27	0.016	-0.001
544	50	N176B	387.765	737.378	-223.877	0	0	0
545	50	N179B	-412.88	783.765	-238.364	0	0	0
546	50	N182	-19.135	366.019	391.987	0	0	0
547	50	N183	364.358	381.721	-186.229	0	0	0
548	50	N188	-357.834	390.819	-218.389	0	0	0
549	50	Totals:	0.002	3173.58	0			
550	50	COG (ft):	X: -0.058	Y: 0.729	Z: 0.439			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
551	51	A1	21.27	-225.129	-387.966	0.141	0.003	-0.255
552	51	N67	0.008	919.806	559.59	0	0	0
553	51	N69A	359.72	-286.653	225.966	0.118	0.002	0.274
554	51	N137	-338.452	-271.291	172.346	-0.318	-0.003	-0.012
555	51	N176B	477.344	906.374	-275.606	0	0	0
556	51	N179B	-506.903	960.966	-292.654	0	0	0
557	51	N182	-21.476	416.839	445.575	0	0	0
558	51	N183	396.394	417.021	-204.727	0	0	0
559	51	N188	-387.902	427.077	-242.526	0	0	0
560	51	Totals:	0.003	3265.01	0			
561	51	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			
562	52	A1	15.16	-171.536	-249.867	0.11	0	-0.221
563	52	N67	0.005	735.479	447.839	0	0	0
564	52	N69A	346.027	-268.321	247.346	0.131	0.054	0.268
565	52	N137	-326.268	-252.38	191.005	-0.262	-0.043	-0.03
566	52	N176B	441.221	836.832	-253.065	0	0	0
567	52	N179B	-471.911	893.519	-270.773	0	0	0
568	52	N182	-18.402	419.55	451.169	0	0	0
569	52	N183	337.914	346.531	-153.216	0	0	0
570	52	N188	-323.744	349.456	-184.064	0	0	0
571	52	Totals:	0.003	2889.13	226.374			
572	52	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			
573	53	A1	0.447	-174.733	-261.327	0.112	-0.027	-0.203
574	53	N67	-0.837	743.749	452.781	0	0	0
575	53	N69A	306.023	-254.805	225.926	0.137	0.058	0.262
576	53	N137	-360.679	-262.395	197.714	-0.278	-0.023	-0.028
577	53	N176B	456.541	866.696	-262.622	0	0	0
578	53	N179B	-451.861	854.913	-258.937	0	0	0
579	53	N182	-28.239	414.467	445.557	0	0	0
580	53	N183	315.232	326.716	-147.862	0	0	0
581	53	N188	-349.811	374.522	-195.19	0	0	0
582	53	Totals:	-113.184	2889.13	196.04			
583	53	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			
584	54	A1	-9.333	-184.49	-294.755	0.117	-0.046	-0.191
585	54	N67	-1.452	770.821	469.08	0	0	0
586	54	N69A	269.314	-240.984	197.558	0.135	0.048	0.251
587	54	N137	-378.703	-266.429	192.307	-0.294	0.003	-0.021
588	54	N176B	462.713	879.239	-267.156	0	0	0
589	54	N179B	-430.927	815.087	-247.109	0	0	0
590	54	N182	-35.598	397.162	426.199	0	0	0
591	54	N183	302.06	318.232	-151.429	0	0	0
592	54	N188	-374.111	400.492	-211.509	0	0	0
593	54	Totals:	-196.037	2889.13	113.187			
594	54	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			
595	55	A1	-11.561	-198.196	-341.198	0.125	-0.052	-0.189
596	55	N67	-1.676	809.444	492.372	0	0	0
597	55	N69A	245.73	-230.558	169.839	0.124	0.025	0.238
598	55	N137	-375.516	-263.402	176.232	-0.307	0.028	-0.012
599	55	N176B	458.085	871.103	-265.455	0	0	0
600	55	N179B	-414.712	784.705	-238.457	0	0	0
601	55	N182	-38.508	372.268	398.277	0	0	0
602	55	N183	301.924	323.351	-162.961	0	0	0
603	55	N188	-390.136	420.413	-228.648	0	0	0
604	55	Totals:	-226.371	2889.13	0			
605	55	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
606	56	A1	-5.639	-212.175	-388.21	0.132	-0.044	-0.197
607	56	N67	-1.45	849.267	516.414	0	0	0
608	56	N69A	241.599	-226.325	150.199	0.109	-0.004	0.226
609	56	N137	-351.965	-254.123	153.794	-0.314	0.044	-0.002
610	56	N176B	443.893	844.46	-257.973	0	0	0
611	56	N179B	-407.567	771.919	-235.303	0	0	0
612	56	N182	-36.187	346.458	369.274	0	0	0
613	56	N183	314.867	340.705	-179.367	0	0	0
614	56	N188	-393.589	428.942	-242.015	0	0	0
615	56	Totals:	-196.037	2889.13	-113.187			
616	56	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			
617	57	A1	6.844	-222.682	-423.191	0.138	-0.023	-0.212
618	57	N67	-0.834	879.618	534.763	0	0	0
619	57	N69A	258.023	-229.417	143.902	0.092	-0.031	0.219
620	57	N137	-314.367	-241.079	131.008	-0.311	0.048	0.006
621	57	N176B	423.944	806.456	-246.717	0	0	0
622	57	N179B	-411.404	780.148	-238.49	0	0	0
623	57	N182	-29.256	326.649	346.963	0	0	0
624	57	N183	337.415	365.64	-196.25	0	0	0
625	57	N188	-383.548	423.795	-248.029	0	0	0
626	57	Totals:	-113.185	2889.13	-196.04			
627	57	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			
628	58	A1	22.544	-226.904	-436.776	0.141	0.005	-0.232
629	58	N67	0.007	892.372	542.507	0	0	0
630	58	N69A	290.602	-239.006	152.634	0.079	-0.049	0.218
631	58	N137	-272.787	-227.764	113.974	-0.301	0.038	0.009
632	58	N176B	403.578	767.266	-234.699	0	0	0
633	58	N179B	-425.196	807.19	-247.163	0	0	0
634	58	N182	-19.573	318.144	337.319	0	0	0
635	58	N183	363.529	391.48	-209.089	0	0	0
636	58	N188	-362.701	406.353	-245.081	0	0	0
637	58	Totals:	0.002	2889.13	-226.374			
638	58	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			
639	59	A1	37.255	-223.709	-425.318	0.139	0.032	-0.25
640	59	N67	0.847	884.104	537.567	0	0	0
641	59	N69A	330.607	-252.523	174.057	0.073	-0.054	0.224
642	59	N137	-238.373	-217.746	107.264	-0.285	0.017	0.007
643	59	N176B	388.256	737.397	-225.141	0	0	0
644	59	N179B	-445.247	845.798	-258.999	0	0	0
645	59	N182	-9.732	323.227	342.931	0	0	0
646	59	N183	386.209	411.296	-214.442	0	0	0
647	59	N188	-336.632	381.286	-233.958	0	0	0
648	59	Totals:	113.19	2889.13	-196.04			
649	59	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			
650	60	A1	47.036	-213.954	-391.895	0.133	0.051	-0.262
651	60	N67	1.463	857.037	521.27	0	0	0
652	60	N69A	367.314	-266.343	202.425	0.076	-0.044	0.235
653	60	N137	-220.346	-213.711	112.672	-0.269	-0.008	0
654	60	N176B	382.084	724.853	-220.605	0	0	0
655	60	N179B	-466.181	885.621	-270.825	0	0	0
656	60	N182	-2.374	340.53	362.29	0	0	0
657	60	N183	399.379	419.781	-210.878	0	0	0
658	60	N188	-312.331	355.317	-217.643	0	0	0
659	60	Totals:	196.043	2889.13	-113.187			
660	60	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
661	61	A1	49.266	-200.25	-345.454	0.126	0.058	-0.264
662	61	N67	1.688	818.416	497.98	0	0	0
663	61	N69A	390.894	-276.766	230.142	0.086	-0.021	0.248
664	61	N137	-223.534	-216.739	128.75	-0.255	-0.033	-0.01
665	61	N176B	386.714	732.992	-222.306	0	0	0
666	61	N179B	-482.393	915.998	-279.475	0	0	0
667	61	N182	0.533	365.423	390.213	0	0	0
668	61	N183	399.513	414.661	-199.349	0	0	0
669	61	N188	-296.305	335.397	-200.503	0	0	0
670	61	Totals:	226.377	2889.13	-0.001			
671	61	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			
672	62	A1	43.346	-186.27	-298.44	0.118	0.049	-0.256
673	62	N67	1.463	778.591	473.936	0	0	0
674	62	N69A	395.024	-280.998	249.778	0.101	0.008	0.259
675	62	N137	-247.088	-226.021	151.19	-0.249	-0.049	-0.02
676	62	N176B	400.908	759.639	-229.789	0	0	0
677	62	N179B	-489.537	928.782	-282.63	0	0	0
678	62	N182	-1.792	391.233	419.216	0	0	0
679	62	N183	386.572	397.306	-182.943	0	0	0
680	62	N188	-292.853	326.869	-187.132	0	0	0
681	62	Totals:	196.043	2889.13	113.186			
682	62	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			
683	63	A1	30.863	-175.76	-263.455	0.112	0.028	-0.24
684	63	N67	0.847	748.235	455.585	0	0	0
685	63	N69A	378.603	-277.907	256.075	0.118	0.035	0.267
686	63	N137	-284.69	-239.066	173.975	-0.252	-0.053	-0.027
687	63	N176B	420.857	797.644	-241.047	0	0	0
688	63	N179B	-485.7	920.555	-279.445	0	0	0
689	63	N182	-8.722	411.044	441.526	0	0	0
690	63	N183	364.027	372.37	-166.058	0	0	0
691	63	N188	-302.896	332.015	-181.115	0	0	0
692	63	Totals:	113.19	2889.13	196.039			
693	63	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			
694	64	A1	9.461	-110.832	-145.257	0.072	0	-0.152
695	64	N67	0.002	487.406	296.915	0	0	0
696	64	N69A	248.989	-191.001	186.437	0.099	0.053	0.194
697	64	N137	-235.027	-179.217	144.497	-0.177	-0.042	-0.027
698	64	N176B	312.472	592.363	-178.723	0	0	0
699	64	N179B	-335.171	634.296	-191.824	0	0	0
700	64	N182	-12.581	307.083	330.918	0	0	0
701	64	N183	230.943	234.039	-97.984	0	0	0
702	64	N188	-219.086	234.249	-118.607	0	0	0
703	64	Totals:	0.002	2008.385	226.374			
704	64	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			
705	65	A1	-5.251	-114.031	-156.72	0.073	-0.028	-0.134
706	65	N67	-0.842	495.68	301.86	0	0	0
707	65	N69A	208.989	-177.489	165.018	0.105	0.057	0.188
708	65	N137	-269.431	-189.226	151.201	-0.192	-0.022	-0.025
709	65	N176B	327.782	622.213	-188.275	0	0	0
710	65	N179B	-315.128	595.699	-179.99	0	0	0
711	65	N182	-22.421	302.002	325.307	0	0	0
712	65	N183	208.267	214.229	-92.632	0	0	0
713	65	N188	-245.15	259.306	-129.727	0	0	0
714	65	Totals:	-113.185	2008.385	196.04			
715	65	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
716	66	A1	-15.03	-123.788	-190.148	0.079	-0.047	-0.122
717	66	N67	-1.459	522.749	318.157	0	0	0
718	66	N69A	172.286	-163.672	136.652	0.103	0.047	0.177
719	66	N137	-287.45	-193.256	145.79	-0.209	0.004	-0.018
720	66	N176B	333.947	634.745	-192.808	0	0	0
721	66	N179B	-294.201	555.887	-168.168	0	0	0
722	66	N182	-29.783	284.703	305.952	0	0	0
723	66	N183	195.097	205.746	-96.201	0	0	0
724	66	N188	-269.445	285.269	-146.04	0	0	0
725	66	Totals:	-196.038	2008.384	113.187			
726	66	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			
727	67	A1	-17.256	-137.49	-236.587	0.087	-0.053	-0.12
728	67	N67	-1.684	561.363	341.443	0	0	0
729	67	N69A	148.708	-153.251	108.936	0.093	0.025	0.164
730	67	N137	-284.26	-190.226	129.714	-0.222	0.028	-0.008
731	67	N176B	329.316	626.604	-191.108	0	0	0
732	67	N179B	-277.993	525.52	-159.523	0	0	0
733	67	N182	-32.697	259.818	278.036	0	0	0
734	67	N183	194.96	210.862	-107.734	0	0	0
735	67	N188	-285.466	305.185	-163.176	0	0	0
736	67	Totals:	-226.372	2008.384	0			
737	67	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			
738	68	A1	-11.333	-151.465	-283.592	0.094	-0.045	-0.128
739	68	N67	-1.457	601.172	365.476	0	0	0
740	68	N69A	144.584	-149.023	89.299	0.077	-0.004	0.152
741	68	N137	-260.709	-180.948	107.277	-0.228	0.045	0.002
742	68	N176B	315.126	599.965	-183.629	0	0	0
743	68	N179B	-270.853	512.745	-156.374	0	0	0
744	68	N182	-30.379	234.015	249.04	0	0	0
745	68	N183	207.898	228.21	-124.142	0	0	0
746	68	N188	-288.915	313.712	-176.541	0	0	0
747	68	Totals:	-196.038	2008.384	-113.187			
748	68	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			
749	69	A1	1.151	-161.966	-318.565	0.1	-0.024	-0.144
750	69	N67	-0.839	631.509	383.815	0	0	0
751	69	N69A	161.01	-152.117	83.005	0.061	-0.032	0.145
752	69	N137	-223.113	-167.908	84.494	-0.226	0.048	0.009
753	69	N176B	295.182	561.972	-172.377	0	0	0
754	69	N179B	-274.692	520.979	-159.565	0	0	0
755	69	N182	-23.45	214.211	226.735	0	0	0
756	69	N183	230.439	253.137	-141.024	0	0	0
757	69	N188	-278.873	308.569	-182.558	0	0	0
758	69	Totals:	-113.185	2008.384	-196.04			
759	69	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			
760	70	A1	16.851	-166.184	-332.144	0.102	0.004	-0.163
761	70	N67	0.004	644.251	391.552	0	0	0
762	70	N69A	193.589	-161.706	91.737	0.048	-0.05	0.144
763	70	N137	-181.539	-154.598	67.466	-0.215	0.039	0.013
764	70	N176B	274.825	522.797	-160.363	0	0	0
765	70	N179B	-288.48	548.018	-168.238	0	0	0
766	70	N182	-13.766	205.707	217.093	0	0	0
767	70	N183	256.546	278.968	-153.862	0	0	0
768	70	N188	-258.027	291.132	-179.615	0	0	0
769	70	Totals:	0.002	2008.385	-226.374			
770	70	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
771	71	A1	31.562	-162.986	-320.682	0.101	0.031	-0.181
772	71	N67	0.846	635.978	386.609	0	0	0
773	71	N69A	233.59	-175.221	113.16	0.041	-0.055	0.15
774	71	N137	-147.132	-144.586	60.76	-0.2	0.018	0.01
775	71	N176B	259.512	492.942	-150.809	0	0	0
776	71	N179B	-308.526	586.616	-180.072	0	0	0
777	71	N182	-3.923	210.787	222.705	0	0	0
778	71	N183	279.22	298.78	-159.214	0	0	0
779	71	N188	-231.962	266.074	-168.498	0	0	0
780	71	Totals:	113.189	2008.385	-196.04			
781	71	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			
782	72	A1	41.341	-153.232	-287.258	0.095	0.05	-0.193
783	72	N67	1.464	608.914	370.314	0	0	0
784	72	N69A	270.29	-189.036	141.526	0.044	-0.044	0.161
785	72	N137	-129.11	-140.555	66.172	-0.183	-0.008	0.004
786	72	N176B	253.347	480.409	-146.274	0	0	0
787	72	N179B	-329.452	626.426	-191.892	0	0	0
788	72	N182	3.439	228.085	242.061	0	0	0
789	72	N183	292.388	307.264	-155.647	0	0	0
790	72	N188	-207.666	240.112	-152.189	0	0	0
791	72	Totals:	196.042	2008.385	-113.187			
792	72	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			
793	73	A1	43.571	-139.531	-240.822	0.088	0.057	-0.195
794	73	N67	1.69	570.303	347.03	0	0	0
795	73	N69A	293.864	-199.454	169.24	0.054	-0.022	0.174
796	73	N137	-132.301	-143.586	82.251	-0.17	-0.032	-0.006
797	73	N176B	257.98	488.552	-147.974	0	0	0
798	73	N179B	-345.657	656.787	-200.536	0	0	0
799	73	N182	6.35	252.969	269.978	0	0	0
800	73	N183	292.523	302.147	-144.116	0	0	0
801	73	N188	-191.644	220.197	-135.052	0	0	0
802	73	Totals:	226.376	2008.385	-0.001			
803	73	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			
804	74	A1	37.649	-125.556	-193.815	0.08	0.048	-0.187
805	74	N67	1.464	530.491	322.996	0	0	0
806	74	N69A	297.989	-203.681	188.873	0.07	0.007	0.186
807	74	N137	-155.856	-152.867	104.689	-0.164	-0.048	-0.016
808	74	N176B	272.173	515.195	-155.455	0	0	0
809	74	N179B	-352.795	669.561	-203.685	0	0	0
810	74	N182	4.028	278.772	298.974	0	0	0
811	74	N183	279.586	284.798	-127.709	0	0	0
812	74	N188	-188.196	211.671	-121.683	0	0	0
813	74	Totals:	196.042	2008.385	113.186			
814	74	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			
815	75	A1	25.165	-115.051	-158.838	0.074	0.027	-0.172
816	75	N67	0.847	500.15	304.654	0	0	0
817	75	N69A	281.565	-200.588	195.167	0.086	0.034	0.193
818	75	N137	-193.454	-165.908	127.471	-0.166	-0.052	-0.024
819	75	N176B	292.116	553.19	-166.709	0	0	0
820	75	N179B	-348.958	661.33	-200.496	0	0	0
821	75	N182	-2.901	298.578	321.278	0	0	0
822	75	N183	257.049	259.87	-110.825	0	0	0
823	75	N188	-198.24	216.814	-115.663	0	0	0
824	75	Totals:	113.189	2008.385	196.039			
825	75	COG (ft):	X: -0.066	Y: 0.826	Z: -0.111			

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
1	A1	HSS4X4X4	0.163	2.5	7	0.221	2.5	y	45	134360.669	139518	16.181	16.181	1.753	H1-1b
2	A2	HSS4X4X4	0.251	6.25	8	0.068	6.25	y	8	72549.721	139518	16.181	16.181	1.727	H1-1b
3	A10	PIPE_4.0	0	0.75	20	0	0.75		9	92571.332	93240	10.631	10.631	1	H1-1b*
4	MP1A	PIPE_2.0	0.194	2.188	7	0.123	4.229		10	17855.085	32130	1.872	1.872	1	H1-1b
5	MP2A	PIPE_2.0	0.239	4.156	20	0.1	2.26		8	17855.085	32130	1.872	1.872	1	H1-1b
6	MP3A	PIPE_2.5	0.127	4.156	8	0.072	2.26		8	33961.614	50715	3.596	3.596	1	H1-1b
7	MP3.5A	PIPE_2.0	0.127	2.26	7	0.081	2.26		12	17855.085	32130	1.872	1.872	1	H1-1b
8	MP4A	PIPE_2.0	0.255	4.156	18	0.129	3.573		6	17855.085	32130	1.872	1.872	1	H1-1b
9	MP5A	PIPE_2.0	0.194	2.188	7	0.123	4.229		10	17855.085	32130	1.872	1.872	1	H1-1b
10	M18	PIPE_2.0	0.459	3.75	1	0.22	3.75		2	6830.97	32130	1.872	1.872	1	H1-1b
11	M35	LL3X3X3X3	0.087	0	7	0.007	4.717	y	43	47766.821	70632	5.543	3.751	1	H1-1b*
12	M36A	HSS4X4X4	0.164	2.5	11	0.136	2.5	y	1	134360.685	139518	16.181	16.181	1.736	H1-1b
13	M45	PIPE_4.0	0	0.75	24	0	0.75		2	92571.332	93240	10.631	10.631	1	H1-1b*
14	MP1B	PIPE_2.0	0.194	2.188	11	0.123	4.229		2	17855.085	32130	1.872	1.872	1	H1-1b
15	MP2B	PIPE_2.0	0.239	4.156	24	0.101	2.26		12	17855.085	32130	1.872	1.872	1	H1-1b
16	MP3B	PIPE_2.5	0.13	4.156	12	0.075	3.063		12	33961.614	50715	3.596	3.596	1	H1-1b
17	MP3.5B	PIPE_2.0	0.126	2.26	11	0.082	2.26		4	17855.085	32130	1.872	1.872	1	H1-1b
18	MP4B	PIPE_2.0	0.256	4.156	22	0.129	3.573		10	17855.085	32130	1.872	1.872	1	H1-1b
19	MP5B	PIPE_2.0	0.194	2.188	11	0.123	4.229		2	17855.085	32130	1.872	1.872	1	H1-1b
20	M52	PIPE_2.0	0.458	3.75	5	0.218	3.75		6	6830.97	32130	1.872	1.872	1	H1-1b
21	M71	HSS4X4X4	0.162	2.5	3	0.136	2.5	y	5	134360.654	139518	16.181	16.181	1.736	H1-1b
22	M80	PIPE_4.0	0	0.75	15	0	0.75		5	92571.332	93240	10.631	10.631	1	H1-1b*
23	MP1C	PIPE_2.0	0.194	2.188	3	0.123	4.229		6	17855.085	32130	1.872	1.872	1	H1-1b
24	MP2C	PIPE_2.0	0.24	4.156	16	0.1	2.26		4	17855.085	32130	1.872	1.872	1	H1-1b
25	MP3C	PIPE_2.5	0.13	4.156	4	0.073	2.26		4	33961.614	50715	3.596	3.596	1	H1-1b
26	MP3.5C	PIPE_2.0	0.125	2.26	3	0.081	2.26		8	17855.085	32130	1.872	1.872	1	H1-1b
27	MP4C	PIPE_2.0	0.255	4.156	14	0.129	3.573		2	17855.085	32130	1.872	1.872	1	H1-1b
28	MP5C	PIPE_2.0	0.194	2.188	3	0.123	4.229		6	17855.085	32130	1.872	1.872	1	H1-1b
29	M87	PIPE_2.0	0.458	3.75	9	0.221	3.75		10	6830.97	32130	1.872	1.872	1	H1-1b
30	M106	PIPE_2.0	0.118	2.666	15	0.098	5.333		48	22846.569	32130	1.872	1.872	1	H1-1b
31	M107	PIPE_2.0	0.118	2.666	19	0.064	5.333		4	22846.561	32130	1.872	1.872	1	H1-1b
32	M108	PIPE_2.0	0.118	2.666	23	0.081	5.333		44	22846.569	32130	1.872	1.872	1	H1-1b
33	M80C	LL3X3X3X3	0.086	0	3	0.004	4.717	z	6	47766.821	70632	5.543	3.751	1	H1-1b*
34	M81A	LL3X3X3X3	0.087	0	11	0.004	4.717	z	2	47766.821	70632	5.543	3.751	1	H1-1b*
35	M77A	HSS4X4X4	0.253	6.25	4	0.068	6.25	y	4	72549.721	139518	16.181	16.181	1.728	H1-1b
36	M78A	HSS4X4X4	0.252	6.25	12	0.068	6.25	y	12	72549.721	139518	16.181	16.181	1.728	H1-1b
37	OVP	PIPE_2.0	0.09	2	12	0.017	2		12	28843.414	32130	1.872	1.872	1	H1-1b
38	M83	L2.5X2.5X4	0.246	0	1	0.016	0	z	47	16717.712	37485	1.083	2.321	1.5	H2-1
39	M84	L2.5X2.5X4	0.272	0	1	0.017	0	y	44	16717.712	37485	1.083	2.321	1.5	H2-1
40	M81	L2.5X2.5X4	0.271	0	9	0.015	0	y	4	16717.712	37485	1.083	2.321	1.5	H2-1
41	M82	L2.5X2.5X4	0.251	0	9	0.013	5.045	y	7	16717.712	37485	1.083	2.321	1.5	H2-1
42	M85	L2.5X2.5X4	0.272	0	5	0.014	0	y	12	16717.712	37485	1.083	2.321	1.5	H2-1
43	M86	L2.5X2.5X4	0.246	0	5	0.014	5.045	y	3	16717.712	37485	1.083	2.321	1.5	H2-1

VzW SMART Tool© Vendor

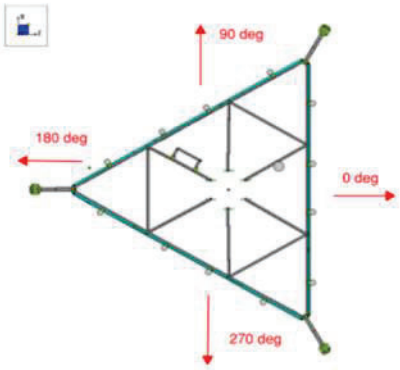
Client:	VERIZON	Date:	9/22/2025
Site Name:	BLOOMFIELD BLUE HILLS CT		
MDG #:	5000103428		
Fuze ID #:	17390723	Page:	1

Version 2.00

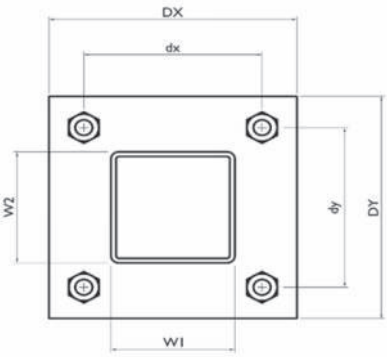
I. Mount-to-Tower Connection Check

Custom Orientation Required	Yes

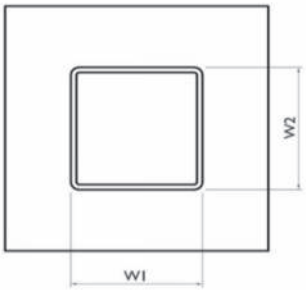
Nodes (labeled per Risa)	Orientation (per graphic of typical platform)
A1	0
N137	120
N69A	240



Tower Connection Bolt Checks	Yes
Bolt Orientation	Parallel
Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)* :	3
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	8
Bolt Type:	A325N
Bolt Diameter (in):	0.625
Required Tensile Strength / bolt (kips):	4.1
Required Shear Strength / bolt (kips):	1.0
Tensile Capacity / bolt (kips):	20.7
Shear Capacity / bolt (kips):	12.4
Bolt Overall Utilization:	**19.8%**



Tower Connection Baseplate Checks	Yes
Connecting Standoff Member Shape:	Rect Tube
Weld Stiffener Configuration:	No Stiffeners
Plate Width, D_x (in):	6
Plate Height, D_y (in):	10
W1(in):	4
W2 (in):	4
Member Thickness (in):	0.25
Stiffener location a_1 (in):	
Stiffener location b_1 (in):	
Stiffener location a_2 (in):	
Stiffener location b_2 (in):	
F_y (ksi, plate):	36
Plate Thickness (in):	0.5
Length of Yield Line, L_y (in):	4.90
Bolt Eccentricity, e (in):	1.86
M_u (kip-in):	7.64
Phi*M_n (kip-in):	9.92
Plate Bending Utilization:	**77.0%**



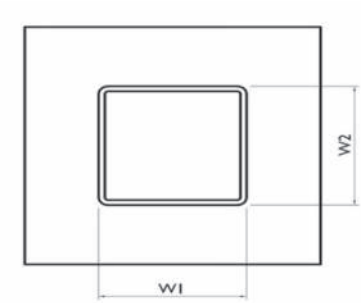
VzW SMART Tool© Vendor

Client:	VERIZON	Date:	9/22/2025
Site Name:	BLOOMFIELD BLUE HILLS CT		
PSLC #:	5000103428		
Fuze ID #:	17390723	Page:	2

Version 2.00

Tower Connection Weld Checks	Yes

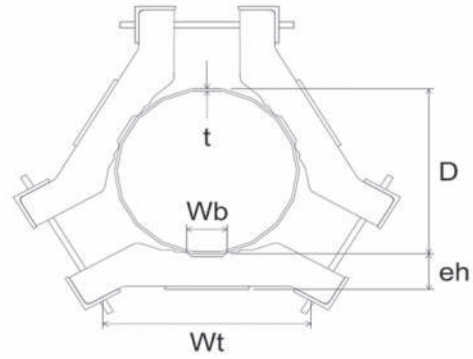
Weld Shape:	Rectangle
Weld Stiffener Configuration:	None
Stiffener Notch Length, n (in):	-
Weld Size (1/16 in):	4
W1 (in):	4
W2 (in):	4
Weld Total Length (in):	16.00
Z_x (in^3/in):	21.33
Z_y (in^3/in):	21.33
J_p (in^4/in):	85.33
c_x (in)	2.25
c_y (in)	2.25
Required combined strength (kip/in):	1.02
Weld Capacity (kip/in):	5.57
Weld Utilization:	**18.3%**



Colliers Engineering & Design	Mount to Tower Interaction Check: Collar # 1			
	Customer:	Verizon	Project No:	25777186
	Carrier:	Verizon	Date:	9/24/2025
	Site Name:	BLOOMFIELD BLUE HILLS CT	TIA Standard:	ANSI/TIA-222-I
	Site Number:	5000103428	Engineer Name:	C. Lemkan

Collar Mount and Pole Shaft Data:

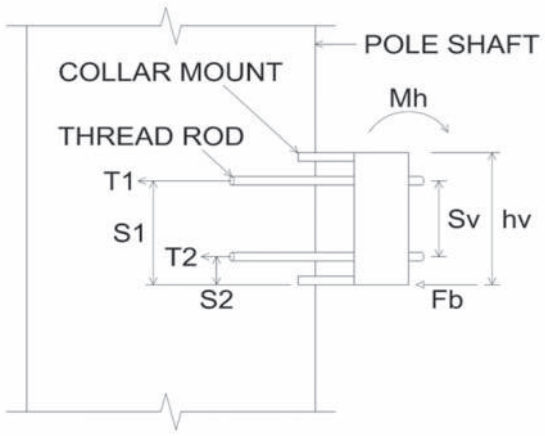
Max Moment, Mh [K-Ft] =	1.421
Collar Shape	3-sided
Vertical or Horizontal Bearing	Horizontal
# of Vert. Levels of Thread Rods	2
Collar Height, hv [In]	10
Thread Rod Vert. Spacing, Sv [In]	8
Thread Rod Width, Wt [In]	18
Bearing Width, Wb [In]	12
Add'l Horiz. Offset from Pole [In]	7
Pole Shaft Diameter, D [In]	18
Pole Thickness, t [In]	0.188
Pole Fy [KSI]	65
Thread Rod	1" A307
Thread Rod Diameter [In]	1
Thread Rod Fy [KSI]	36
Thread Rod Fu [KSI]	60
Thread Rod Threads Per Inch	8



Typical Collar Mount Configuration
Top View

Thread Rod Check:

S1 [In] =	9.00	
S2 [In] =	1.00	
R2 =	0.11	
δ [K] =	0.25	
T1 [K] =	1.11	
T2 [K] =	-0.10	
Thread Rod ϕ =	0.65	
Thread Rod Capacity, ϕRnt [K] =	23.62	
Max Thread Rod Usage [%] =	4.68	Pass



Typical Collar Mount Configuration
Side View

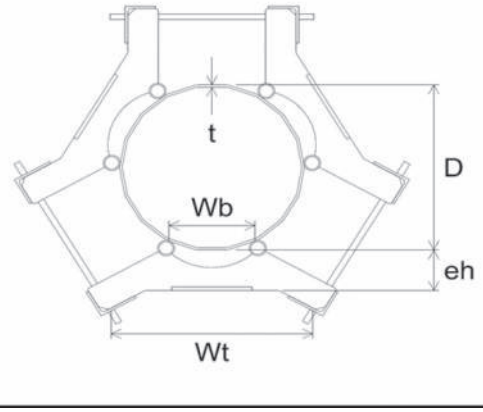
Pole Shaft Check:

Bearing Force, Fb [K] =	1.74	
Pole Shaft ϕ =	0.90	
Pole Shaft ϕRn [K] =	24.722	
Max Pole Shaft Usage [%] =	7.04	Pass

Colliers Engineering & Design	Mount to Tower Interaction Check: Collar # 2			
	Customer:	Verizon	Project No:	25777186
	Carrier:	Verizon	Date:	9/24/2025
	Site Name:	BLOOMFIELD BLUE HILLS CT	TIA Standard:	ANSI/TIA-222-I
	Site Number:	5000103428	Engineer Name:	C. Lemkan

Collar Mount and Pole Shaft Data:

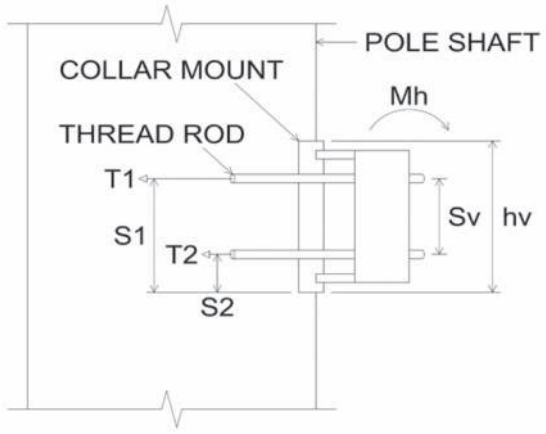
Max Moment, Mh [K-Ft] =	1.470
Collar Shape	3-sided
Vertical or Horizontal Bearing	Vertical
# of Vert. Levels of Thread Rods	2
Collar Height, hv [In]	11
Thread Rod Vert. Spacing, Sv [In]	7
Thread Rod Width, Wt [In]	20
Bearing Width, Wb [In]	12
Add'l Horiz. Offset from Pole [In]	5
Pole Shaft Diameter, D [In]	18
Pole Thickness, t [In]	0.188
Pole Fy [KSI]	65
Thread Rod	0.625" A193 B7
Thread Rod Diameter [In]	0.625
Thread Rod Fy [KSI]	105
Thread Rod Fu [KSI]	125
Thread Rod Threads Per Inch	11



Typical Collar Mount Configuration
Top View

Thread Rod Check:

S1 [In] =	9.00	
S2 [In] =	2.00	
R2 =	0.22	
δ [K] =	0.29	
T1 [K] =	1.13	
T2 [K] =	0.03	
Thread Rod ϕ =	0.65	
Thread Rod Capacity, ϕRnt [K] =	18.36	
Max Thread Rod Usage [%] =	6.13	Pass



Typical Collar Mount Configuration
Side View

Pole Shaft Check:

AR =	1.09	
Cv =	2.00	
Max Moment, Mh [K-Ft] =	1.470	
Pole Shaft ϕ =	0.75	
Pole Shaft ϕMn [K-Ft] =	12.02	
Max Pole Shaft Usage [%] =	12.23	Pass

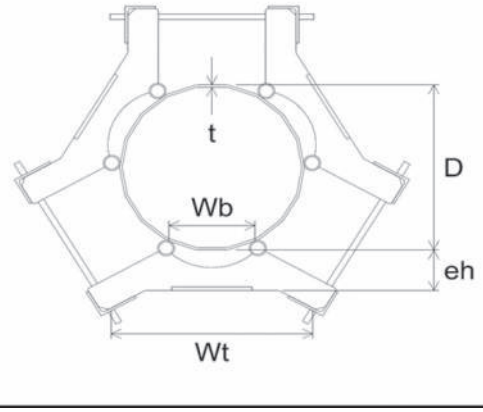
Colliers Engineering & Design

Mount to Tower Interaction Check: Collar # 3

Customer:	Verizon	Project No:	25777186
Carrier:	Verizon	Date:	9/24/2025
Site Name:	BLOOMFIELD BLUE HILLS CT	TIA Standard:	ANSI/TIA-222-I
Site Number:	5000103428	Engineer Name:	C. Lemkan

Collar Mount and Pole Shaft Data:

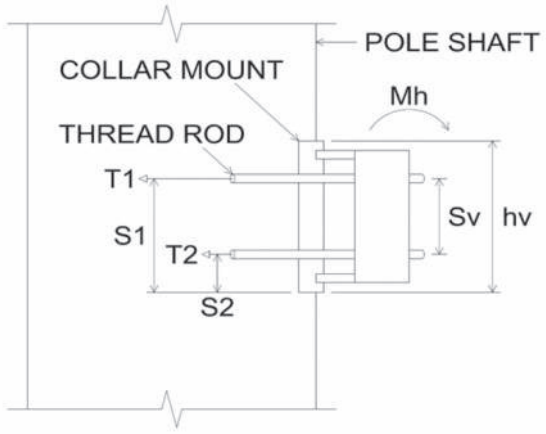
Max Moment, Mh [K-Ft] =	0.889
Collar Shape	3-sided
Vertical or Horizontal Bearing	Vertical
# of Vert. Levels of Thread Rods	2
Collar Height, hv [In]	11
Thread Rod Vert. Spacing, Sv [In]	7
Thread Rod Width, Wt [In]	20
Bearing Width, Wb [In]	12
Add'l Horiz. Offset from Pole [In]	5
Pole Shaft Diameter, D [In]	18
Pole Thickness, t [In]	0.188
Pole Fy [KSI]	65
Thread Rod	0.625" A193 B7
Thread Rod Diameter [In]	0.625
Thread Rod Fy [KSI]	105
Thread Rod Fu [KSI]	125
Thread Rod Threads Per Inch	11



Typical Collar Mount Configuration
Top View

Thread Rod Check:

S1 [In] =	9.00	
S2 [In] =	2.00	
R2 =	0.22	
δ [K] =	0.17	
T1 [K] =	0.68	
T2 [K] =	0.02	
Thread Rod ϕ =	0.65	
Thread Rod Capacity, ϕRnt [K] =	18.36	
Max Thread Rod Usage [%] =	3.71	Pass



Typical Collar Mount Configuration
Side View

Pole Shaft Check:

AR =	1.09	
Cv =	2.00	
Max Moment, Mh [K-Ft] =	0.889	
Pole Shaft ϕ =	0.75	
Pole Shaft ϕMn [K-Ft] =	12.02	
Max Pole Shaft Usage [%] =	7.40	Pass

verizon

MOUNT MODIFICATION DRAWINGS
EXISTING 12.00' T-ARM

TOWER OWNER: AMERICAN TOWER CORPORATION
TOWER OWNER SITE NUMBER: 411187

CARRIER SITE NAME: BLOOMFIELD BLUE HILLS CT
CARRIER SITE NUMBER: 5000103428
FUZE ID: 17390723

811 BLUE HILLS AVE
BLOOMFIELD, CONNECTICUT 06002
HARTFORD COUNTY

LATITUDE: 41.80968333° N
LONGITUDE: 72.69659722° W

DESIGN CRITERIA

WIND LOADS

BASIC WIND SPEED (3 SECOND GUST), V = 120 MPH
EXPOSURE CATEGORY C
TOPOGRAPHIC CATEGORY: 1
TOPOGRAPHIC CONSIDERED: N/A
TOPOGRAPHIC METHOD: N/A
MEAN BASE ELEVATION (AMSL) = 154.24'

ICE LOADS

ICE WIND SPEED (3 SECOND GUST), V = 50 MPH
ICE THICKNESS = 1.50 IN

SEISMIC LOADS

SEISMIC DESIGN CATEGORY B
SHORT TERM MCER GROUND MOTION, S_S = .182
LONG TERM MCER GROUND MOTION, S_1 = .055

PROJECT INFORMATION

APPLICANT/LESSEE

COMPANY: VERIZON WIRELESS

CLIENT REPRESENTATIVE

COMPANY: VERIZON WIRELESS

PROJECT MANAGER

COMPANY: COLLIERS ENGINEERING & DESIGN
CONTACT: SEAN O'SULLIVAN
PHONE: 856.797.0412
E-MAIL: SEAN.OSULLIVAN@COLLIERSENG.COM

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION: HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #: 10322905
VZW MDG #: 5000103428
ANALYSIS DATE: 9/24/2025

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

SHEET INDEX

Colliers Engineering & Design

www.colliersengineering.com

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VERIZON WIRELESS

MOUNT MODIFICATION

BLOOMFIELD BLUE HILLS CT
5000103428
811 BLUE HILLS AVE
BLOOMFIELD, CONNECTICUT 06002
HARTFORD COUNTY

Digitally signed by Grant H. Walters
Date: 2025.09.24 11:18:52-04'00'

STATE OF CONNECTICUT GRANT HOLLAND WALTERS 37635 LICENSED PROFESSIONAL ENGINEER

MT. LAUREL
2000 Midlantic Drive, Suite 100
Mt. Laurel Township, NJ 08054
Phone: 856.797.0412
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT, P.C.

SCALE:	DRAWN BY:
AS SHOWN	CFL
DESIGNED BY:	REVIEWED BY:
CFL	GHW
DATE ISSUED:	PROJECT NUMBER:
09/24/25	25777186

SHEET NAME: TITLE SHEET

DRAWING NUMBER: ST-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
1	VZWSMART	VZWSMART-PLK7	MONOPOLE COLLAR MOUNT ASSEMBLY		150	150
3		VZWSMART-PLK6	V-BRACING KIT FOR MONOPOLE		109	327
3		VZWSMART-AL333	CLIP ANGLE		3	9

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
-	-	U-BOLTS	5/8" DIA. GR. A36 U-BOLTS	GALVANIZED. U-BOLT QUANTITY AND INNER WIDTH ARE TO BE VERIFIED BY CONTRACTOR.	-	-

SECTION 3 - REQUIRED SAFETY CLIMB PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
					TOTAL:	486

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 PARTS ARE GALVANIZED UNLESS NOTED OTHERWISE
3. ALL MATERIALS REQUIRED FOR THE DESIGNED MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.

VZWSMART KITS - APPROVED VENDORS

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

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

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

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

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

Colliers Engineering & Design

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MOUNT MODIFICATION

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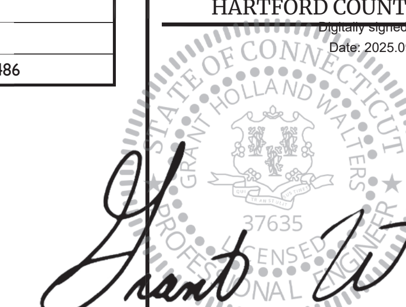

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Phone: 856.797.0412
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT, P.C.

SCALE: AS SHOWN	DRAWN BY: CFL
DESIGNED BY: CFL	REVIEWED BY: GHW
DATE ISSUED: 09/24/25	PROJECT NUMBER: 25777186

SHEET NAME: BILL OF MATERIALS

DRAWING NUMBER: SBOM-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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

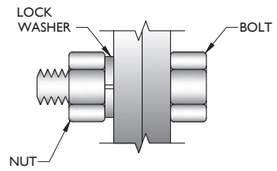
1. DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING PUBLICATIONS EXCEPT AS SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS.
   a. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION (15TH EDITION)
   b. SPECIFICATION FOR STRUCTURAL 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
      SEAN.OSULLIVAN@COLLIERSENG.COM
   b. PROVIDE COLLIERS ENGINEERING & DESIGN PROJECT # AND COLLIERS ENGINEERING & DESIGN PROJECT ENGINEER CONTACT IN THE BODY OF THE EMAIL.
5. DRILL NO HOLES IN ANY NEW OR EXISTING STRUCTURAL STEEL MEMBERS OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.
6. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
7. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
8. ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH TIA-222-H SECTION 4.9.2 REQUIREMENTS.
9. WHERE CONNECTIONS ARE NOT FULLY DETAILED ON THESE DRAWINGS, FABRICATOR SHALL DESIGN CONNECTIONS TO RESIST LOADS AND FORCES WHERE SHOWN ON DRAWINGS AND AS OUTLINED IN SPECIFICATIONS.
10. FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE. MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
11. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT IS AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
12. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
13. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
14. ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINC COTE, OR EOR APPROVED EQUAL), AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).
15. ALL HOLES IN STEEL MEMBERS SHALL BE SIZED 1/16" LARGER THAN THE BOLT DIAMETER. STANDARD HOLES SHALL BE USED UNLESS NOTED OTHERWISE.

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

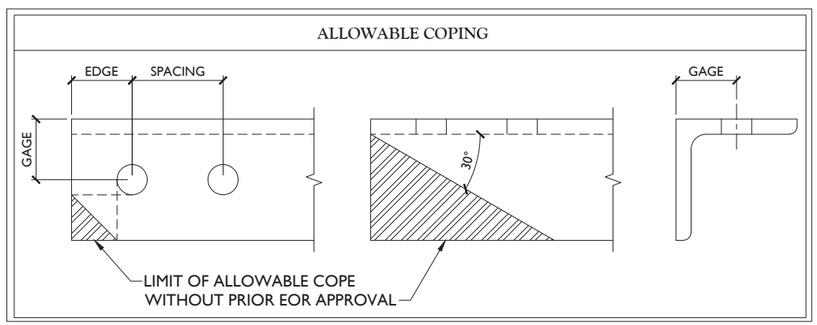
WORKABLE GAGES (IN.)	
LEG	**GAGE**
4	2 1/2
3 1/2	2
3	1 3/4
2 1/2	1 3/8
2	1 1/8



TYP. BOLT ASSEMBLY

NOTES:

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



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REV	DATE	DESCRIPTION
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VERIZON WIRELESS

MOUNT MODIFICATION

BLOOMFIELD BLUE HILLS CT
5000103428
811 BLUE HILLS AVE
BLOOMFIELD,
CONNECTICUT 06002
HARTFORD COUNTY

Digitally signed by Grant H. Walters
Date: 2025.09.24 11:18:55-04'00'

STATE OF CONNECTICUT · GRANT HOLLAND WALTERS · 37635 · LICENSED PROFESSIONAL ENGINEER

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2000 Midlantic Drive, Suite 100
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SCALE:	DRAWN BY:
AS SHOWN	CFL
DESIGNED BY:	REVIEWED BY:
CFL	GHW
DATE ISSUED:	PROJECT NUMBER:
09/24/25	25777186

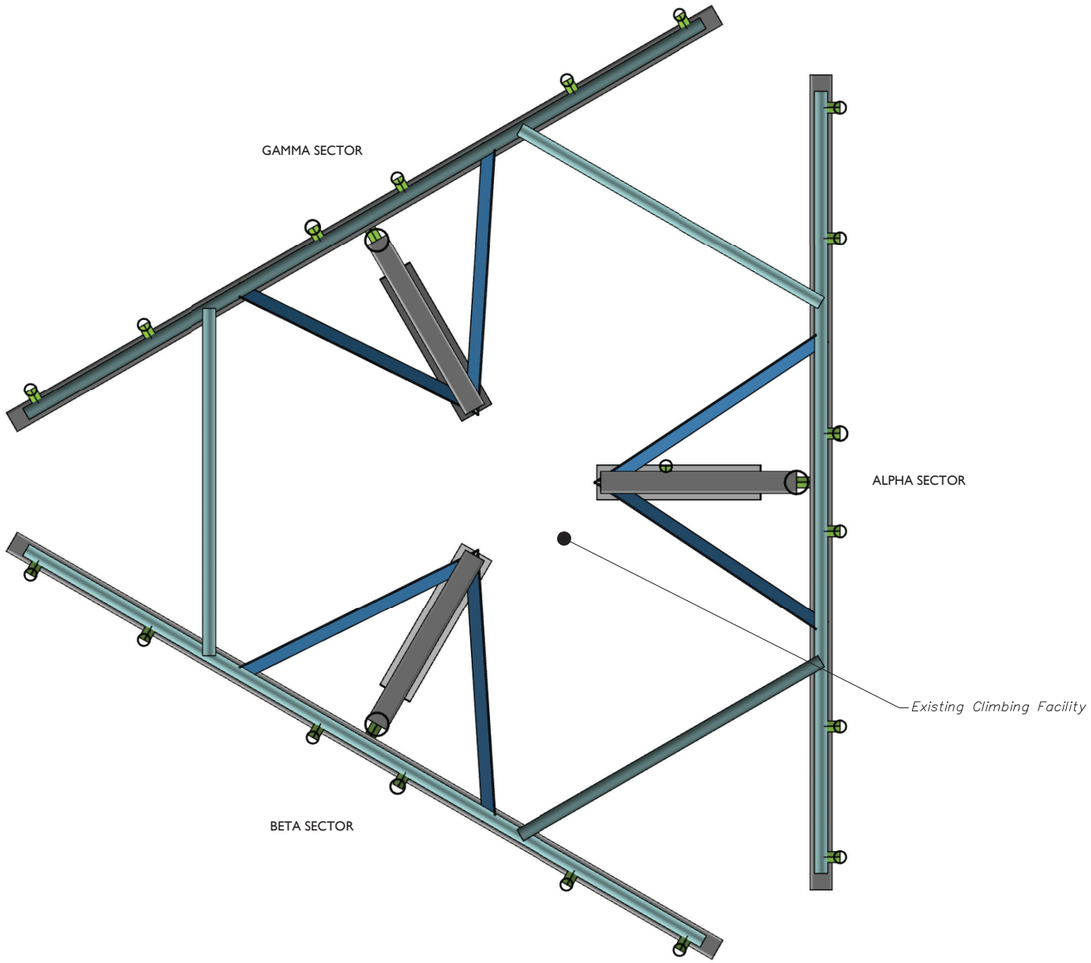
SHEET NAME:

GENERAL NOTES

DRAWING NUMBER:

SGN-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



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

NOTE:

A DESKTOP MAPPING WAS COMPLETED AND THERE IS INSUFFICIENT INFORMATION ON THE CLIMBING FACILITY

CLIMBING FACILITY PHOTO

STRUCTURAL NOTES:

1. CONTRACTOR TO INSPECT CLIMBING FACILITIES AT SITE AND ENSURE THAT THE SAFETY CLIMB IS IN GOOD CONDITION AND THAT THE WIRE ROPE DOES NOT OR WILL NOT INTERFERE WITH THE EXISTING OR PROPOSED MOUNT CONNECTIONS. CONTRACTOR SHALL INSTALL SAFETY CLIMB WIRE ROPE GUIDED AROUND MOUNT CONNECTIONS AS NEEDED.

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.

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CFL	GHW
DATE ISSUED:	PROJECT NUMBER:
09/24/25	25777186

SHEET NAME:

CLIMBING FACILITY DETAIL

DRAWING NUMBER:

SCF-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

LEGEND:

- PROPOSED
- RELOCATED
- EXISTING

TOTAL VERTICAL ENVELOPE:

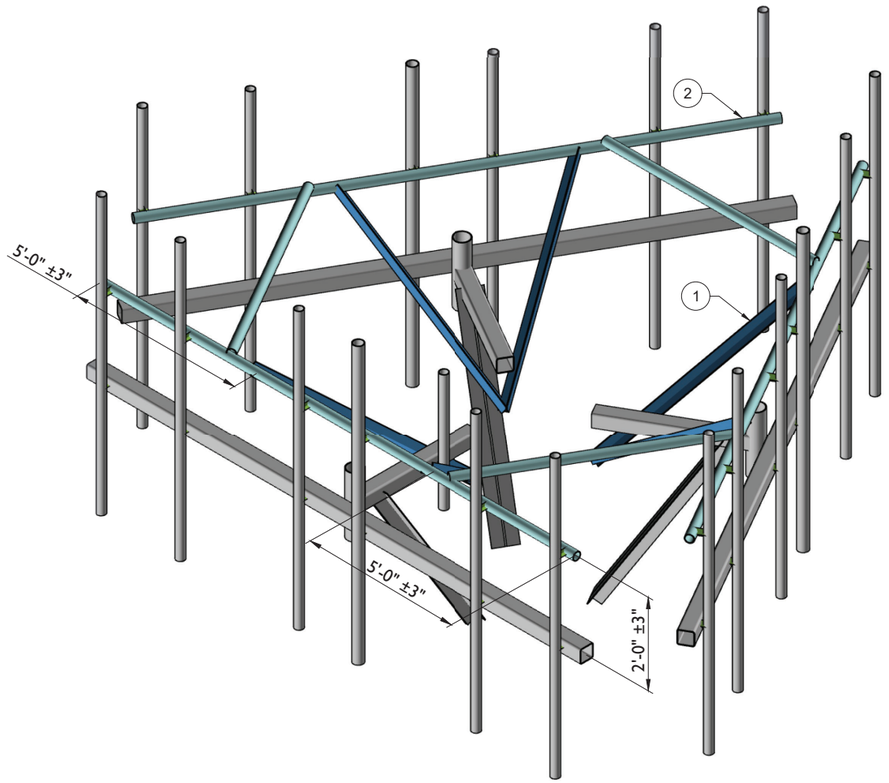
CONTRACTOR SHALL VERIFY AND CONFIRM IN FIELD THAT VERIZON'S OVERALL TIP TO TIP VERTICAL SPACE CONFIGURATION (EQUIPMENT AND STEEL COMBINED) DOES NOT EXCEED THE VERTICAL ENVELOPE LISTED IN THESE DRAWINGS. IF THE SITE'S EXISTING OR PROPOSED CONFIGURATION EXCEEDS THE ALLOWED VERTICAL ENVELOPE LISTED IN THESE DRAWINGS, CONTRACTOR SHALL CONTACT EOR IMMEDIATELY FOR A SOLUTION ON HOW TO CORRECT THE ISSUE PRIOR TO LEAVING THE SITE.

MOUNT MODIFICATION SCHEDULE

NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	100'-00"	3	PROPOSED V-BRACING KIT FOR MONOPOLE (PART #: VZWSMART-PLK6)	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1. CONTRACTOR SHALL INSTALL ONE PROPOSED CLIP ANGLE (PART #:VZWSMART-AL333) AT EITHER END OF EACH LONG ANGLE IN THE PLK6 KIT. CONNECT OTHER END OF V-BRACING KIT TO MONOPOLE COLLAR MOUNT ASSEMBLY (PART #: VZWSMART-PLK7). SEE GENERAL NOTE B.
2		1	RELOCATED SUPPORT RAIL HARDWARE	CONTRACTOR TO SHIFT EXISTING SUPPORT RAIL AND BRACING PIPES DOWNWARD. RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE. RECONNECT SHIFTED HARDWARE TO ALL EXISTING MOUNT PIPES WITH EXISTING CONNECTION HARDWARE AND NEW BOLTS. DO NOT REUSE EXISTING BOLTS. RESTORE ANY DEGRADATION IN GALVANIZATION DUE TO RELOCATED HARDWARE WITH TWO (2) COATS OF ZINGA OR ZINC KOTE.

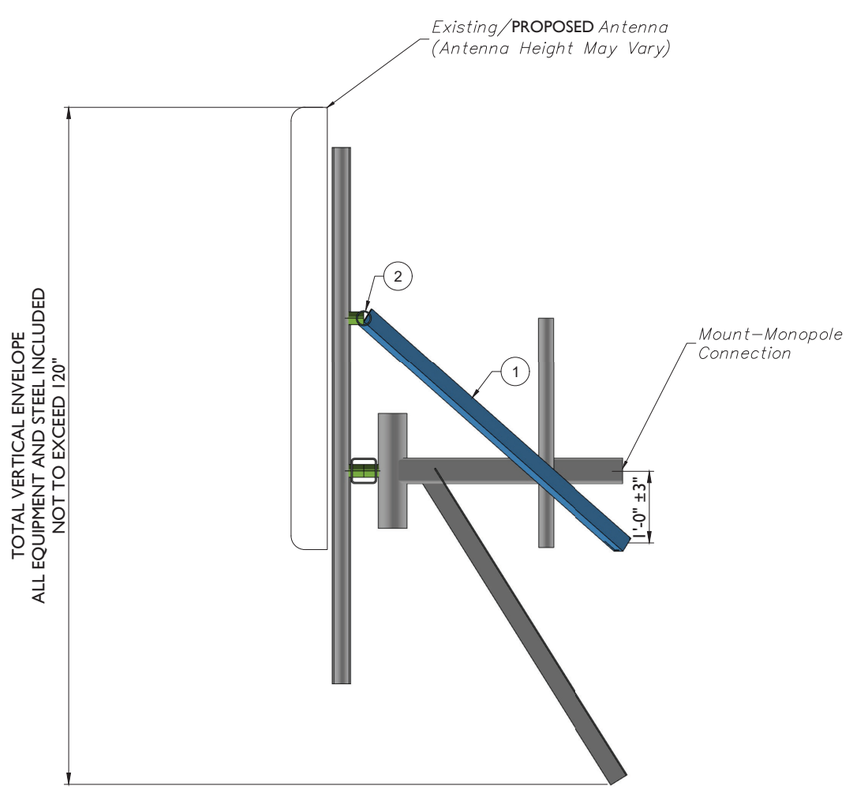
GENERAL NOTES:

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



1 PROPOSED ISOMETRIC VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.



2 PROPOSED SIDE ELEVATION VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.

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DESIGNED BY:	REVIEWED BY:
CFL	GHW
DATE ISSUED:	PROJECT NUMBER:
09/24/25	25777186

SHEET NAME:

MODIFICATION DETAILS

DRAWING NUMBER:

SS-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

MOUNT PHOTO 1

MOUNT PHOTO 2

MOUNT PHOTO 3

Colliers Engineering & Design

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REV	DATE	DESCRIPTION
0	09/24/25	ISSUED FOR CONSTRUCTION

verizon

VERIZON WIRELESS

MOUNT MODIFICATION

BLOOMFIELD BLUE HILLS CT
5000103428
811 BLUE HILLS AVE
BLOOMFIELD,
CONNECTICUT 06002
HARTFORD COUNTY

Digitally signed by Grant H. Walters
Date: 2025.09.24 11:18:55-04'00'

STATE OF CONNECTICUT · GRANT HOLLAND WALTERS · 37635 · LICENSED PROFESSIONAL ENGINEER

MT. LAUREL
Colliers Engineering & Design
2000 Midlantic Drive, Suite 100
Mt. Laurel Township, NJ 08054
Phone: 856.797.0412
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING CT, P.C.

SCALE:	DRAWN BY:
AS SHOWN	CFL
DESIGNED BY:	REVIEWED BY:
CFL	GHW
DATE ISSUED:	PROJECT NUMBER:
09/24/25	25777186

SHEET NAME:

MOUNT PHOTOS

DRAWING NUMBER:

SS-2

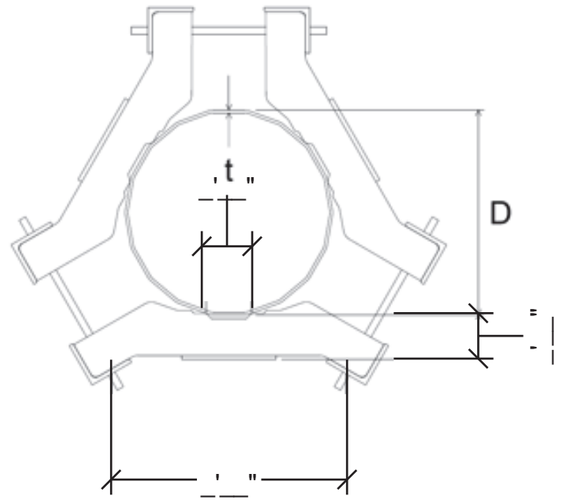
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

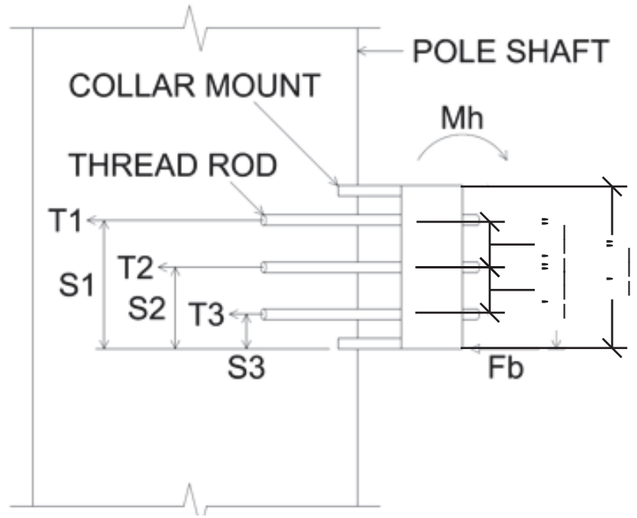
EXISTING MEMBERS				
NO.	DESCRIPTION	SHAPE	LENGTH	NOTES
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

LIST ALL SHAPES:
ANGLE (LEG1xLEG2xTH.): EX. L2x2x1/4
CHANNEL (DEPTHxFLANGE WIDTH): EX. CH6"x1-7/8"
PIPE (ODxTH.): EX. PIPE 2.4"x0.12"
PLATE (TH.xDEPTH): EX. PLATE 1/2"x2"

NOTE:

CONTRACTOR SHALL RECORD ALL DIMENSIONS AND MEMBER SIZES SHOWN IN THIS SKETCH. DOCUMENT VIA PHOTOS AND SKETCHES AND PROVIDE TO THE EOR FOR EVALUATION.





1 MOUNT TO TOWER COLLAR DETAIL
SCALE : N.T.S.

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REV	DATE	DESCRIPTION
0	09/24/25	ISSUED FOR CONSTRUCTION

verizon

VERIZON WIRELESS

MOUNT MODIFICATION

BLOOMFIELD BLUE HILLS CT
5000103428
811 BLUE HILLS AVE
BLOOMFIELD,
CONNECTICUT 06002
HARTFORD COUNTY

Digitally signed by Grant H. Walters
Date: 2025.09.24 11:18:56-04'00'

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Mt. Laurel Township, NJ 08054
Phone: 856.797.0412
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SCALE:	DRAWN BY:
AS SHOWN	CFL
DESIGNED BY:	REVIEWED BY:
CFL	GHW
DATE ISSUED:	PROJECT NUMBER:
09/24/25	25777186

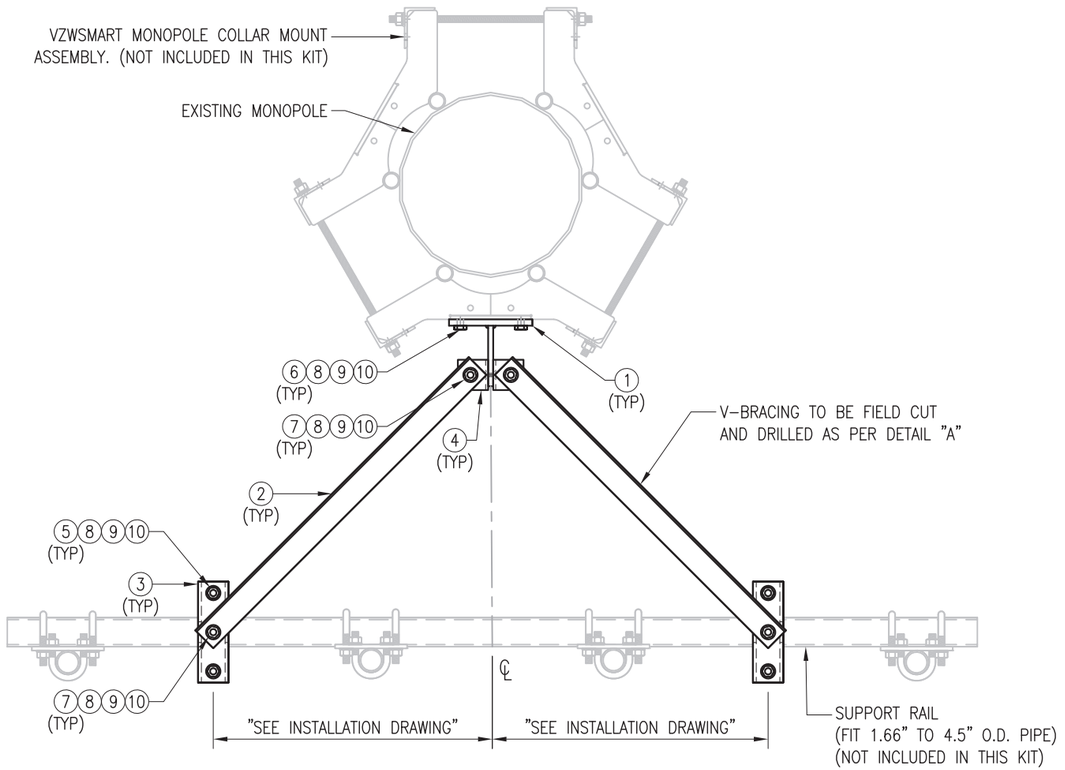
SHEET NAME:

GEOMETRY VERIFICATION SKETCHES

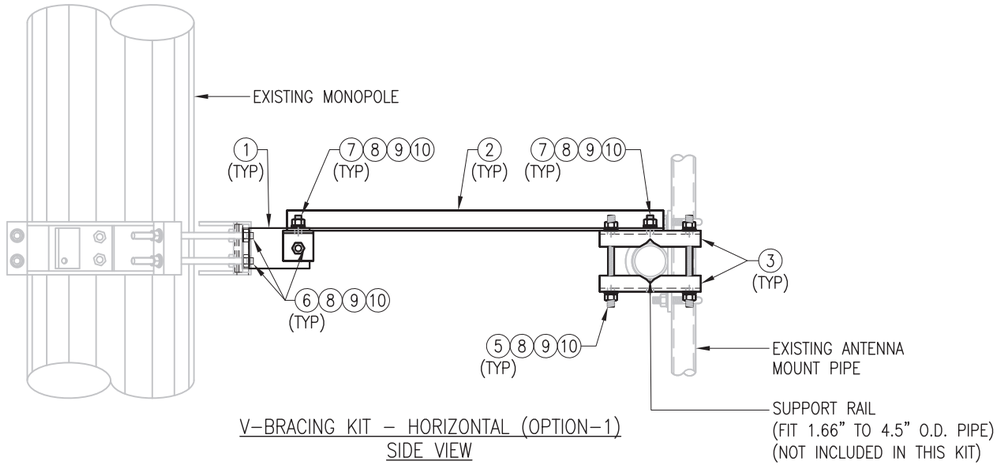
DRAWING NUMBER:

SS-3

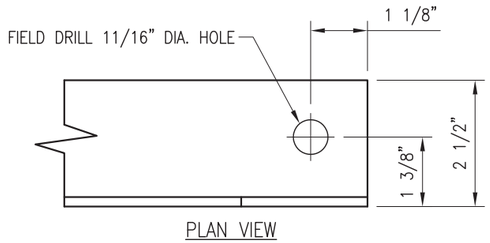
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



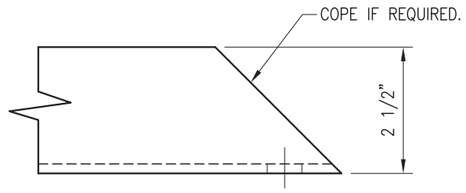
V-BRACING KIT FOR MONOPOLE
PLAN VIEW



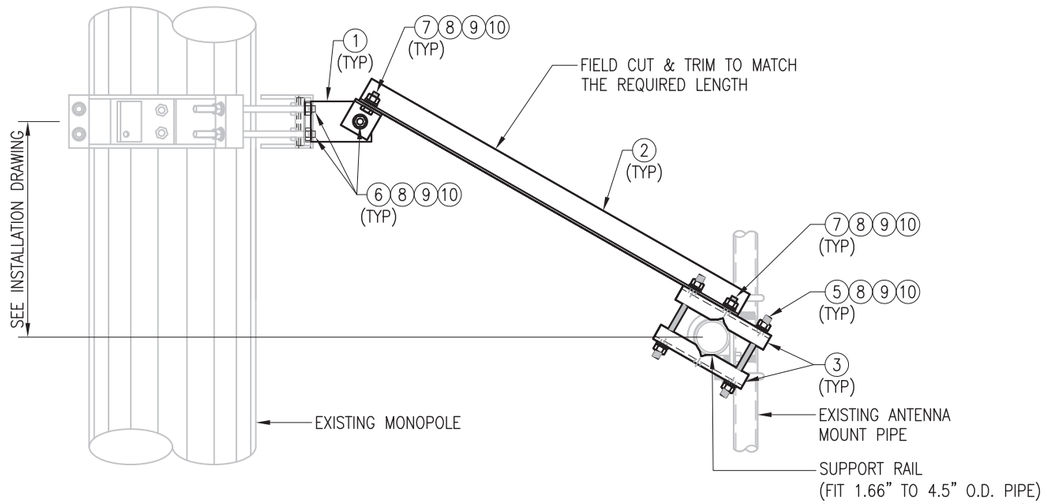
V-BRACING KIT - HORIZONTAL (OPTION-1)
SIDE VIEW



PLAN VIEW



FRONT VIEW
DETAIL "A"



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

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

VZWSMART-PLK6 (V-BRACING KIT FOR MONOPOLE)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	BRKW-6A	WELDMENT BRACKET	PLK6-F1	16
2	2	L252525-8	L 2 1/2" X 2 1/2" X 1/4" X 8'-0" A36	PLK6-F2	67
3	4	BP6875-10	PL 3/8" X 6 7/8" X 10" A36 BENT PLATE	PLK6-F2	20
4	2	AL-333	L 3" X 3" X 1/4" X 3" A36	PLK6-F2	3
5	4	---	THREADED ROD 5/8" DIA. X 10" F1554-36 HDG	---	--
6	5	---	BOLT 5/8" X 2 1/4" A325	---	--
7	4	---	BOLT 5/8" X 1 3/4" A325	---	--
8	17	FW-625	5/8" HDG USS FLAT WASHER	---	2
9	17	LW-625	5/8" HDG LOCK WASHER	---	0
10	17	NUT-625	5/8" HDG HEX NUT	---	2
				GALVANIZED WT	109

VzW SMART Tool© Vendor

verizon

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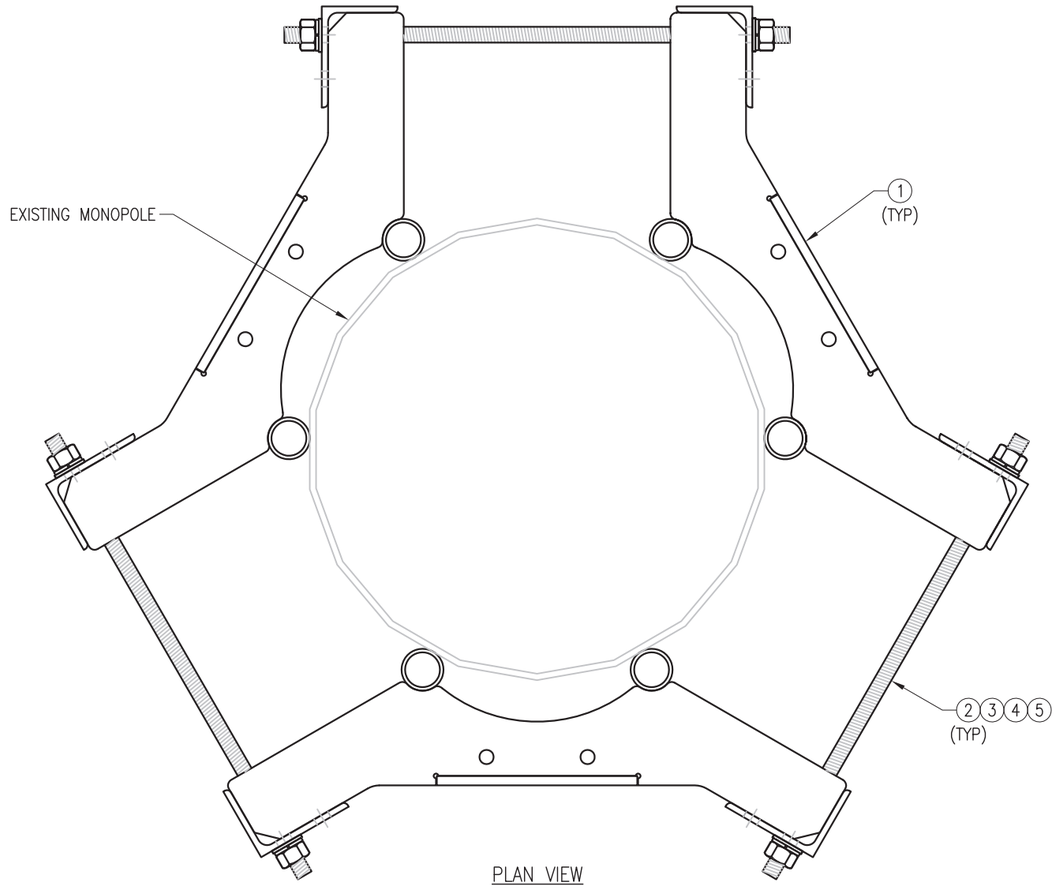
DRAWN BY: FL | CHECKED BY: KL/BT

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	FL	04/13/21

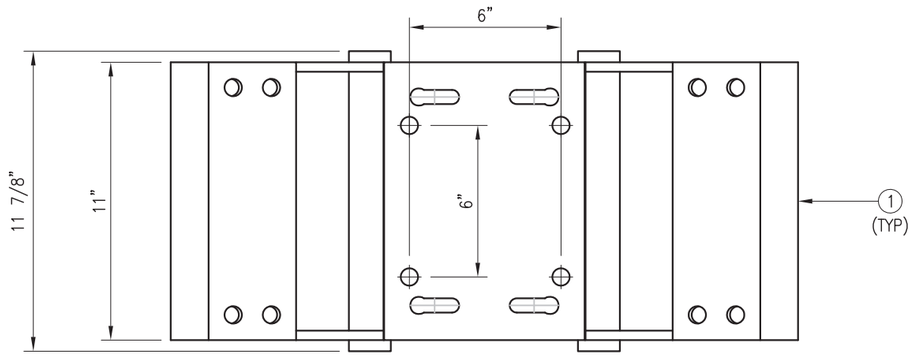
SHEET TITLE:
VZWSMART-PLK6
V-BRACING KIT FOR MONOPOLE

SHEET NUMBER: VZWSMART-PLK6

REV #: 0



PLAN VIEW
MONOPOLE COLLAR MOUNT ASSEMBLY



FRONT VIEW

NOTES:
1. FIT 12" TO 45" DIA MONOPOLE.
2. HOT-DIPPED GALVANIZED PER ASTM A123.

VZWSMART-PLK7 (MONOPOLE COLLAR MOUNT ASSEMBLY)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	3	CM-1245	COLLAR MOUNT ASSEMBLY	PLK7-F1	147
2	6	---	THREADED ROD 5/8" X 4'-0" A193-B7	---	
3	12	FW-625	5/8" HDG USS FLAT WASHER	---	1
4	12	LW-625	5/8" HDG LOCK WASHER	---	0
5	12	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	150

VzW
SMART Tool©
Vendor

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DRAWN BY: BT | CHECKED BY: HMA/KW

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	05/11/20

SHEET TITLE:
VZWSMART-PLK7
MONOPOLE COLLAR
MOUNT ASSEMBLY

SHEET NUMBER: VZWSMART-PLK7

REV #: 0

Exhibit F

Power Density Study

RF DESIGN & SERVICES

Non-Ionizing Radiation (NIER) Study

Site Number: **411187**	Site Name: **Hartford North 2 CT**	Location: **Bloomfield, Connecticut**
Tenant: **Verizon Wireless**		

Prepared For: **American Tower, Inc. Woburn, Massachusetts**

August 6, 2025

68997 P-488171

Prepared By

Gautam J. Sopal

Tower Engineering Professionals

Approved By

TEP Engineering, PLLC MCO.0904636

STATE OF CONNECTICUT
SCOTT C. BRANTLEY
35536
LICENSED PROFESSIONAL ENGINEER

08/06/25

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Non-Ionizing Electromagnetic Radiation (NIER) Study

411187 Hartford North 2 CT
Bloomfield, Connecticut

INTRODUCTION

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

SITE AND FACILITY CONSIDERATIONS

Site Number	411187
Site Name	Hartford North 2 CT
Address	811 Blue Hills Ave., Bloomfield, Connecticut
Co-ordinates	41.80967, -72.69658
Structure Type	Monopole
Structure Height	109 ft
Tenants	Verizon Wireless (VZW)

POWER DENSITY CALCULATIONS

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

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

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

- ATC furnished data and does not include other unidentified communication facilities.
- Load List at 411187 Hartford North 2 CT RF NIER Study 08/05/2025.
- FCC databases.
- Carrier standard configurations.
- Empirical data collected by TEP.

SITE MITIGATION & CONTROL

In order to comply with FCC, tenant, & ATC requirements, TEP recommends the placement of signage at the following points:

Site Entrance

1. Site ID Sign (tower owner defined)
2. RF Information Sign (Green)

Tower Access Point

1. RF Exposure Sign (Red)

Alpha Sector

No additional mitigation is required.

Beta Sector

No additional mitigation is required.

Gamma Sector

No additional mitigation is required

COMPLIANCE DETERMINATION

With the above mitigation implemented, this installation ***WILL BE*** in compliance with current FCC MPE limits as described in FCC OET-65.

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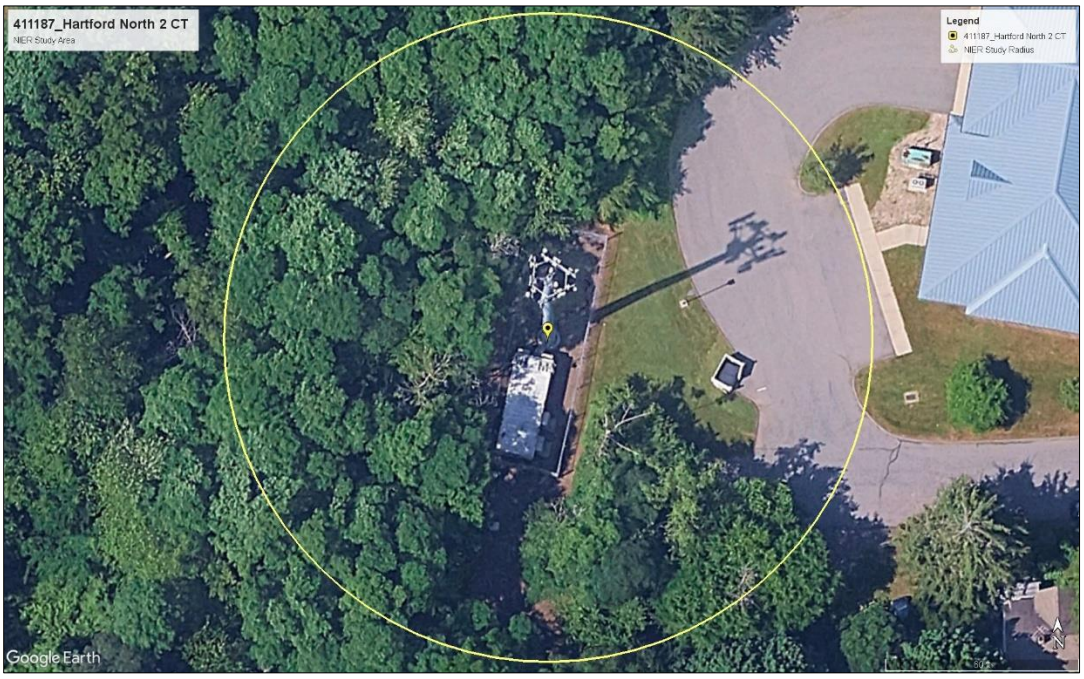
Appendix 1 Site Photos



Aerial View of the Site

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Appendix 2.1 Antenna Inventory

Ant #	Carrier	Manufacturer	Antenna Model	Az (deg)	TX (MHz)	RX (MHz)	EDT (deg)	MDT (deg)	Gain (dBd)	ERP (W)	Rad Ctr (ft)
1	VZW	Commscope	NHHSS-65B-R2BT2	030	746-757	776-787	0	0	12.5	5522	105
					869-880	824-835				6055	
					890-891.5	845-846.5				6055	
					1975-1985	1735-1740				11018	
					2110-2120	1740-1745				11538	
					2120-2130	1745-1750				11538	
					2160-2165	1770-1780				11538	
					2165-2170	1865-1870				11538	
2	VZW	Commscope	NHHSS-65B-R2BT2	150	746-757	776-787	0	0	12.5	5522	105
					869-880	824-835				6055	
					890-891.5	845-846.5				6055	
					1975-1985	1735-1740				11018	
					2110-2120	1740-1745				11538	
					2120-2130	1745-1750				11538	
					2160-2165	1770-1780				11538	
					2165-2170	1865-1870				11538	
3	VZW	Commscope	NHHSS-65B-R2BT2	270	746-757	776-787	0	0	12.5	5522	105
					869-880	824-835				6055	
					890-891.5	845-846.5				6055	
					1975-1985	1735-1740				11018	
					2110-2120	1740-1745				11538	
					2120-2130	1745-1750				11538	
					2160-2165	1770-1780				11538	
					2165-2170	1865-1870				11538	
4	VZW	Antel	LPA-80063/6CF_5	030	806-960	806-960	0	0	14.5	8590	105
5	VZW	Antel	LPA-80063/6CF_5	150	806-960	806-960	0	0	14.5	8590	105
6	VZW	Antel	LPA-80063/6CF_5	270	806-960	806-960	0	0	14.5	8590	105
7	VZW	Antel	LPA-80063/6CF_5	030	806-960	806-960	0	0	14.5	8590	105
8	VZW	Antel	LPA-80063/6CF_5	150	806-960	806-960	0	0	14.5	8590	105
9	VZW	Antel	LPA-80063/6CF_5	270	806-960	806-960	0	0	14.5	8590	105
10	VZW	Samsung	MT6407-77A	030	3700-3980	3700-3980	0	0	23.1	10789	105
11	VZW	Samsung	MT6407-77A	150	3700-3980	3700-3980	0	0	23.1	10789	105
12	VZW	Samsung	MT6407-77A	270	3700-3980	3700-3980	0	0	23.1	10789	105
13	VZW	Commscope	NHH-65B-R2B	030	698-806	698-806	0	0	12.3	5651	105
					806-896	806-896				5783	
					1695-1880	1695-1880				10768	
					1850-1990	1850-1990				11275	
					1920-2180	1920-2180				12651	
					2300-2360	2300-2360				13556	

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Appendix 2.2 Antenna Inventory

Ant #	Carrier	Manufacturer	Antenna Model	Az (deg)	TX (MHz)	RX (MHz)	EDT (deg)	MDT (deg)	Gain (dBd)	ERP (W)	Rad Ctr (ft)
14	VZW	Commscope	NHH-65B-R2B	150	698-806	698-806	0	0	12.3	5651	105
					806-896	806-896				5783	
					1695-1880	1695-1880				10768	
					1850-1990	1850-1990				11275	
					1920-2180	1920-2180				12651	
					2300-2360	2300-2360				13556	
15	VZW	Commscope	NHH-65B-R2B	270	698-806	698-806	0	0	12.3	5651	105
					806-896	806-896				5783	
					1695-1880	1695-1880				10768	
					1850-1990	1850-1990				11275	
					1920-2180	1920-2180				12651	
					2300-2360	2300-2360				13556	

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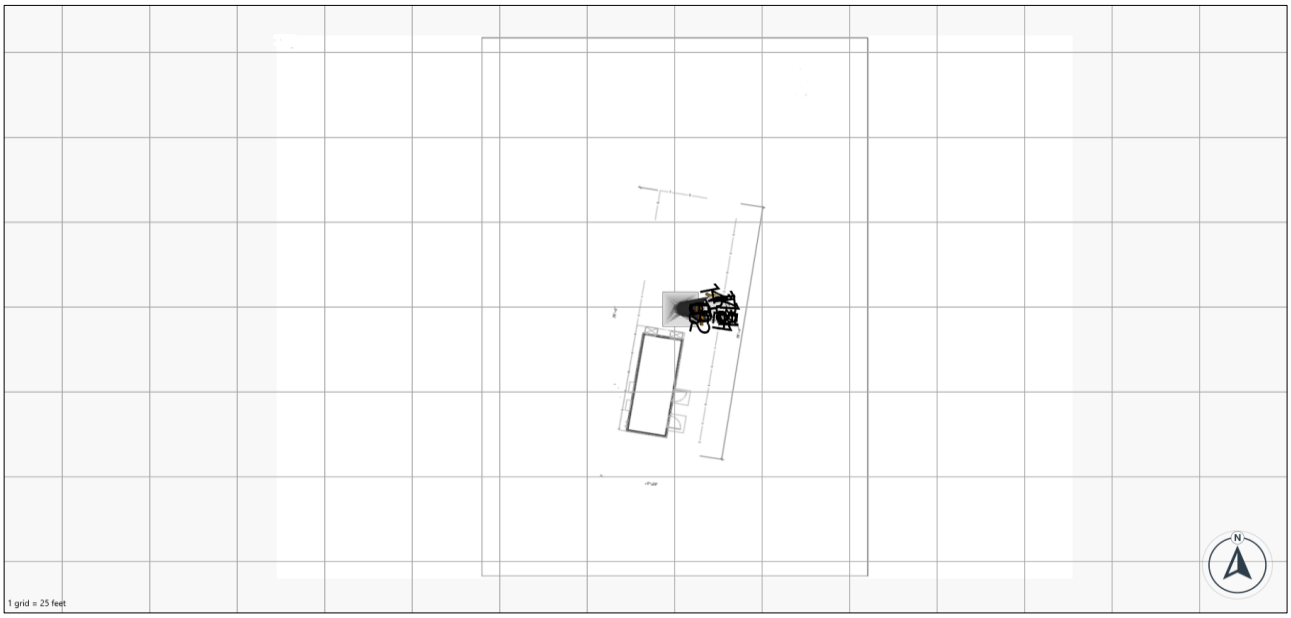
Appendix 3.1 MPE Limit Study General Population



Legend

Study Zone	Elev. (ft)	Type	Exposure Profile	Max MPE	Att	Carriers
Floor Study Zone	0.0	Floor	2D General Population...	2.00%	0.00	VZW

5%-100%	100%-500%	500%-5000%	5000%+

Exposure Profile Name	Model	Exposure Area	Standard	Resolution	RCF
2D General Population 0.25	Sula 9	Spatial Avg. (6 ft)	FCC General Public	0.25	1.0

VZW

Max MPE

Grid Size: 25.00 feet

Floor = Elevation +6' | Mid-Level = Elevation +/- 3'

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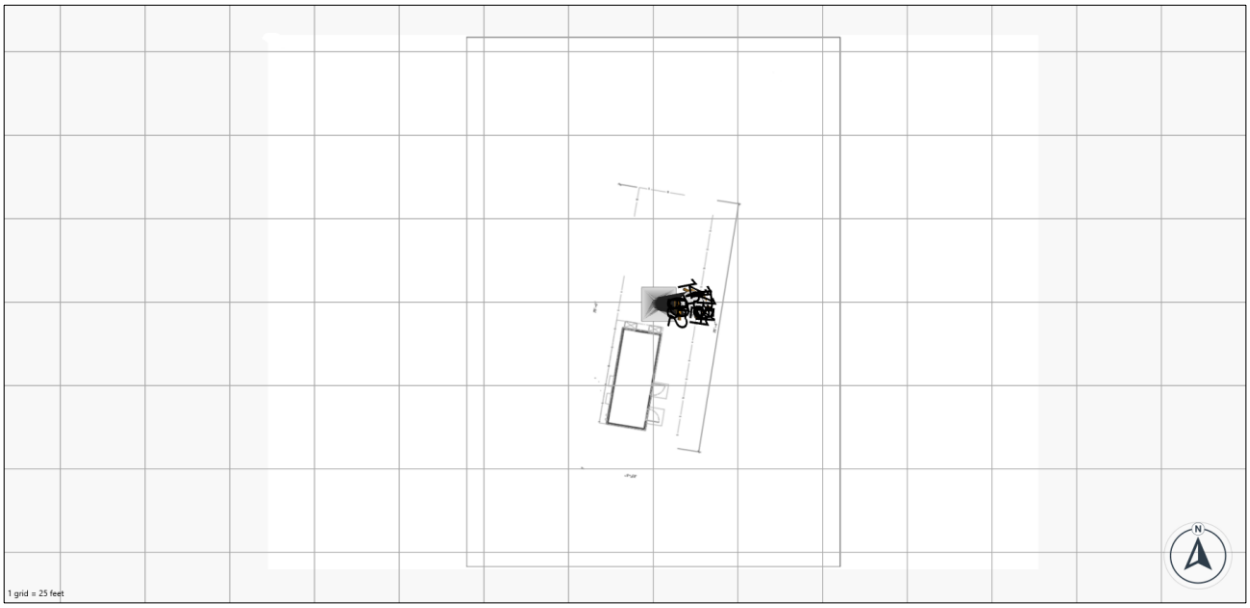
Appendix 3.2 MPE Limit Study Occupational Limit



Legend

Study Zone	Elev. (ft)	Type	Exposure Profile	Max MPE	Att	Carriers
Floor Study Zone	0.0	Floor	2D Occupational 0.25	0.40%	0.00	VZW

5%-100%	100%-500%	500%-5000%	5000%+

Exposure Profile Name	Model	Exposure Area	Standard	Resolution	RCF
2D Occupational 0.25	Sula 9	Spatial Avg. (6 ft)	FCC Occupational	0.25	1.0

VZW

Max MPE

Grid Size: 25.00 feet

Floor = Elevation +6' | Mid-Level = Elevation +/- 3'

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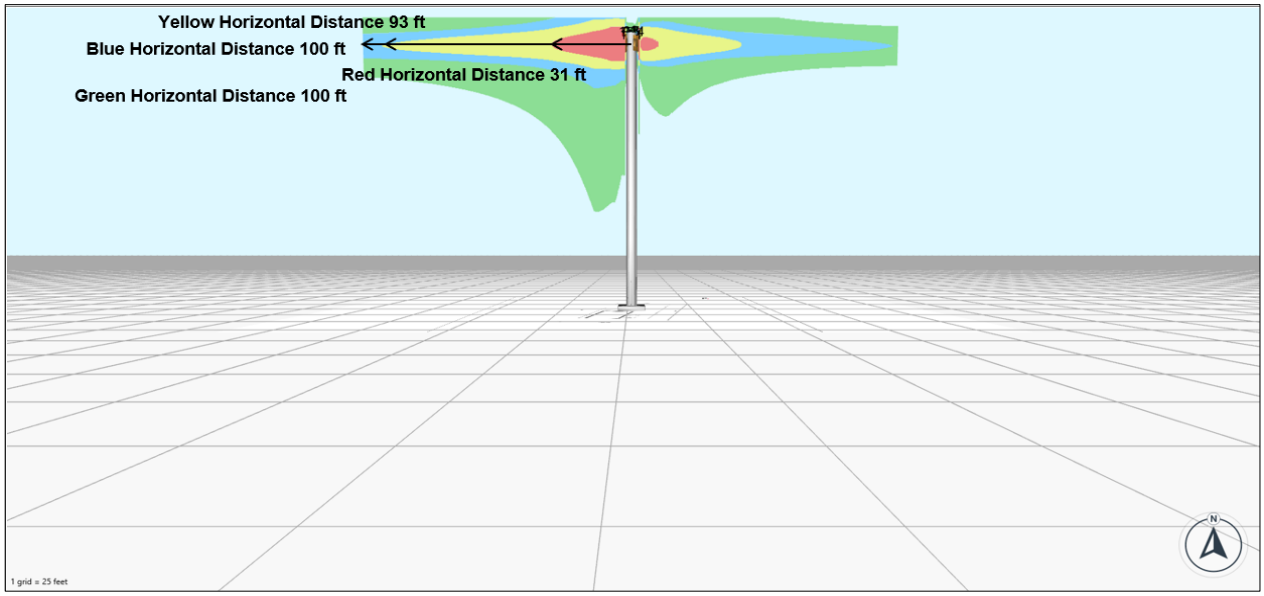
Appendix 3.3 MPE Limit Study General Population – Horizontal View



Legend

Study Zone	Elev. (ft)	Type	Exposure Profile	Max MPE	Att	Carriers
Vertical 2D Study Zone	15.0	Mid-Level	2D General Population...	130874.02%	0.00	VZW

5%-100%	100%-500%	500%-5000%	5000%+

Exposure Profile Name	Model	Exposure Area	Standard	Resolution	RCF
2D General Population 0.25	Sula 9	Spatial Avg. (6 ft)	FCC General Public	0.25	1.0

VZW

Max MPE

Grid Size: 25.00 feet

Floor = Elevation +6' | Mid-Level = Elevation +/- 3'

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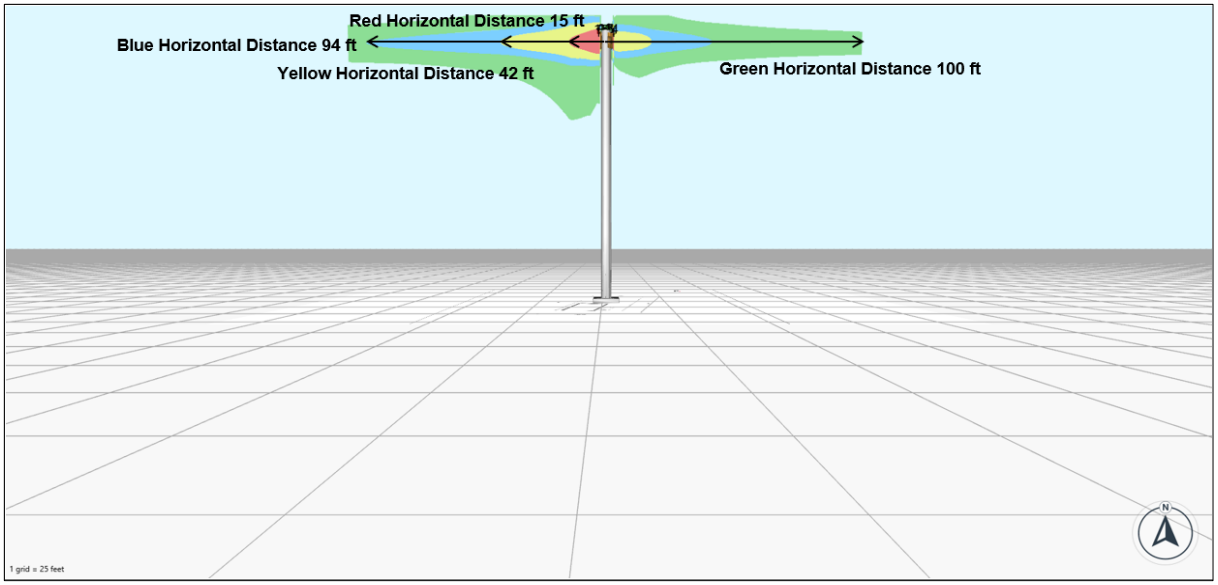
Appendix 3.4 MPE Limit Study Occupational Limit – Horizontal View



Legend

Study Zone	Elev. (ft)	Type	Exposure Profile	Max MPE	Att	Carriers
Vertical 2D Study Zone	15.0	Mid-Level	2D Occupational 0.25	26174.80%	0.00	VZW

5%-100%	100%-500%	500%-5000%	5000%+

Exposure Profile Name	Model	Exposure Area	Standard	Resolution	RCF
2D Occupational 0.25	Sula 9	Spatial Avg. (6 ft)	FCC Occupational	0.25	1.0

VZW

Max MPE

Grid Size: 25.00 feet

Floor = Elevation +6' | Mid-Level = Elevation +/- 3'

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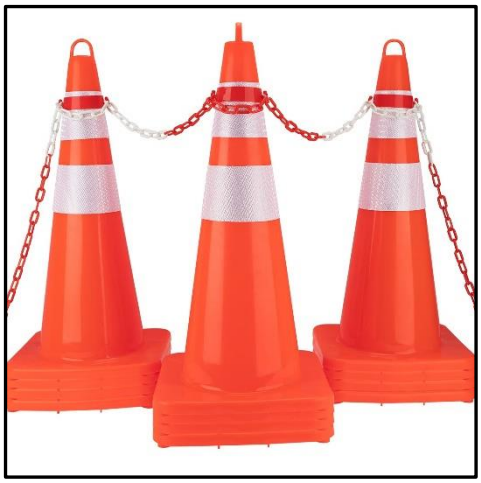
Appendix 4.1 Barrier & Sign Types

Stanchion Type



Cone Type

A-Frame Type

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Appendix 4.2 Barrier & Sign Types

<table>
<tr><th colspan="3">RF Safety Exposure Categorization</th></tr>
<tr><th>Exposure Conditions</th><th>Control Measures</th><th>Signage</th></tr>
<tr>
<td>
• Operational of the source(s) or locations where RF fields are too weak to cause exposures greater than General Public limit.
<table>
<tr><th>Cat.</th><th>Occupational Worker</th><th>General Public</th></tr>
<tr><td>1</td><td><20%</td><td><100%</td></tr>
</table>
• Green zone is where the time and spatial-average is below 20% of Occupational Worker limit or <100% of General Public limit.
</td>
<td>
• RF Safety Guideline/NIER report must be submitted to RFSO for approval.
• No special EME safety practices required in these areas.
• No signage required except Information sign.
</td>
<td>


*the antenna owner information and Antenna Structure Registration Number and must be displayed on the sign.
INFORMATION sign for access to rooftop/access door.
</td>
</tr>
<tr>
<td>
• Operational of the source(s) or locations where RF exposure could cause exposure greater than General Public limit but not the Occupational Worker limit to be exceeded in accessible areas.
<table>
<tr><th>Cat.</th><th>Occupational Worker</th><th>General</th></tr>
<tr><td>2</td><td>≥20% but <100%</td><td>>100%</td></tr>
</table>
• Blue zone is where the spatial average is between 20%-100% of Occupational Worker limit. This limit MUST be less than the Occupational limit.
</td>
<td>
• RF Safety Guideline/NIER report must be submitted to RFSO for approval.
• Recommended RF safety awareness training for all workers in this area.
• Controlled areas with barriers and/or signage required in these area.
• Do not walk in front of the antenna face or no loitering in this controlled area.
• Individual MUST have full control over any area where the exposure levels exceed the limit.
</td>
<td>


NOTICE signage shall be posted on the barriers/stanchion to prevent anyone from entering into the area (must be cordon off around the antennas - 4 posts /3 signs).
Or must be posted in location that can be easily viewed by individuals that enter the areas of concerns.
</td>
</tr>
<tr>
<td>
• Operational of the source(s) or locations where RF exposure exceeded the Occupational Worker limit in accessible areas.
<table>
<tr><th>Cat.</th><th>Occupational Worker</th><th>General Public</th></tr>
<tr><td>3</td><td>≥100%</td><td>≥500%</td></tr>
</table>
• Yellow zone is where the spatial average is above 100% of Occupational Worker limit.
</td>
<td>
• RF Safety Guideline/NIER report must be submitted to RFSO for approval.
• Individual <u>shall not</u> enter and work in these areas without RS approval
• Required RF safety training and access area is restricted only for authorized worker.
• Controlled areas with barriers and signage required in these area.
• Do not walk in front of the antenna face.
• Require reduction of RF power and approval from Radiation Safety prior any work on the antennas.
</td>
<td>


CAUTION signage shall be posted on the barriers/stanchion to prevent anyone from entering into the area (must be cordon off around the antennas - 4 posts /3 signs).
</td>
</tr>
<tr>
<td>
• Exposure will exceed exposure limit in accessible areas.
<table>
<tr><th>Cat.</th><th>Occupational Worker</th><th>General Public</th></tr>
<tr><td>4</td><td>>500%</td><td>>1000%</td></tr>
</table>
• Red zone is where the time and spatial-averaged levels fall above 500% of Occupational Worker limit or is not feasible to prevent exposures.
</td>
<td>
• RF Safety Guideline/NIER report must be submitted to RFSO for approval.
• MUST re-engineer site to reduce the EME fields.
• <u>No access allowed-Prohibited access!</u> There must be controls to detect any unauthorized enter and terminate the RF energy in the area.
• Lock out tag out of transmitters during the maintenance of the antenna system.
• PPE is not sufficient.
• Special RF training and PPE are required. (Applies only to individuals trained by RS).
</td>
<td>


RF WARNING & Pacemaker DANGER signage or appropriate DANGER sign shall be posted very near radiation RF sources or if appropriate DANGER sign.
</td>
</tr>
</table>

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Appendix 5 Information Pertaining to MPE Studies

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

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

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

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

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

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

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment-related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area. Additional details can be found in FCC OET 65.

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Appendix 6 MPE Standards Methodology

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

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

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

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

f = frequency

* = Plane-wave equivalent power density

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

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

f = frequency

* = Plane-wave equivalent power density

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

It is important to understand that these limits apply cumulatively to all sources of RF emissions affecting a given area. For example, if several different communications

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system antennas occupy a shared facility such as a tower or rooftop, then the total exposure from all systems at the facility must be within compliance of the FCC guidelines.

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

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

Cylindrical Model (Near Field Predictions)

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

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

Where:

S = Power Density

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

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

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

Where:

S = Power Density

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

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

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

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Spherical Model (Far Field Predictions)

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

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

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

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

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

Where:

S = Power Density

EIRP = Effective Radiated Power from antenna

Rc = Reflection Coefficient (2.56)

R = Distance from the antenna

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

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