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

March 15, 2024

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

RE: Notice of Exempt Modification // Site: BERLIN 2 CT (ATC: 302483)
286 Beckley Road, Berlin, CT 06037
N 41.631771 // W -72.729914

Dear Ms. Bachman,

Cellco Partnership d/b/a Verizon Wireless currently maintains fifteen (15) antenna at the 118-ft level on the existing 150 ft Tower, located at 286 Beckley Road, Berlin, CT. The tower is owned by American Tower. Verizon Wireless proposed modification involves the installation of a new mount modification, platform and the additional of three (3) RRH, two (2) OVPs and six (6) coax cables on Verizon Wireless existing antenna platform and mounting assembly.

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 Berlin's Chief Elected Official and Land Use Officer.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2). Enclosed to accommodate this filing are construction drawings dated December 15, 2023, by A.T Engineering Services, LLC, a structural analysis dated January 4, 2024, by American Tower Corp., and a structural mount analysis by Colliers Engineering and Design dated November 15, 2023, and Non-Ionizing Electromagnetic Radiation (NIER) Study dated December 10, 2023, by Tower Engineering Professionals.

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

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

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

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

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

6. The existing structure and its foundation can support the proposed loading, as shown in the attached structural analysis and a structural mount analysis, pursuant to certain conditions defined therein. Design and engineering are fully illustrated within final construction drawings.

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

Sincerely,

Derek Maheux

_____

Derek Maheux, Program Manager
c/o Cellco Partnership d/b/a Verizon Wireless
Centerline Communications, LLC
750 West Center Street, Suite 301
West Bridgewater, MA 02379
Mobile: (508) 649 2307
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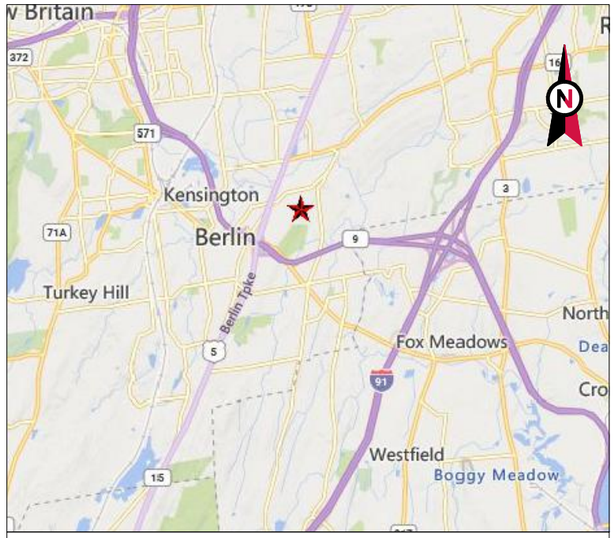
Attachments:
Exhibit 1 – Construction Drawings
Exhibit 2 – Property Card and GIS
Exhibit 3 – Structural Analysis
Exhibit 4 – Mount Analysis
Exhibit 5 – RF Emissions Analysis Report Evaluation
Exhibit 6 – Available Original Tower Approval Records
Exhibit 7 – Notice Deliver Confirmations

cc: Mark Kaczynski – Mayor – Chief Elected Official
Maureen Giusti – Town Planner - as P&Z official
SO New England Frontier Communications – as ground owner
American Tower Corporation - as tower owner

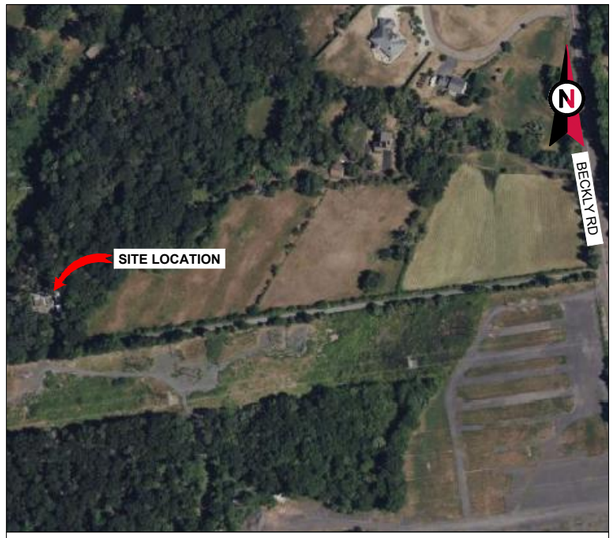
EXHIBIT 1



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: BRLN - BERLIN
ATC SITE NUMBER: 302483
VERIZON SITE NAME: BERLIN 2 CT
VERIZON SITE NUMBER: 5000384280
VERIZON FUZE PID: 2552218
SITE ADDRESS: 286 BECKLEY ROAD
BERLIN, CT 06037



LOCATION MAP

VERIZON AMENDMENT DRAWINGS

COMPLIANCE CODE

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

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

DESIGN CRITERIA FROM TOWER STRUCTUAL ANALYSIS:

BASIC WIND SPEED:	118 MPH (3-SECOND GUST)
BASIC WIND SPEED W/ ICE:	50 MPH (3-SECOND GUST) W/ 1.50" RADICAL ICE CONCURRENT
CODE(S):	ANSI/TIA-222-H / 2021 IBC / 2022 CONNECTICUT STATE BUILDING CODE
EXPOSURE CATEGORY:	B
RISK CATEGORY:	II
TOPO FACTOR PROCEDURE:	METHOD 1
TOPOGRAPHIC CATEGORY:	1
SPECTRAL RESPONSE:	S_S=0.20, S_1=0.06
SITE CLASS:	D-STIFF SOIL - DEFAULT

INFORMATION TAKEN FROM STRUCTURAL ANALYSIS COMPLETED BY ATC, DATED 01/03/2024.

UTILITY COMPANIES

POWER COMPANY: EVERSOURCE
PHONE: (877) 659-6326

TELEPHONE COMPANY: FRONTIER COMMUNICATIONS
PHONE: (800) 376-6843

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

PROJECT SUMMARY

SITE ADDRESS:

286 BECKLEY ROAD
BERLIN, CT 06037
COUNTY: HARTFORD

GEOGRAPHIC COORDINATES:

LATITUDE: 41° 37' 54.145" N

LONGITUDE: 72° 43' 47.687" W

GROUND ELEVATION: 185' 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:

JOHN C MATULIS JR
286 BECKLEY ROAD
BERLIN, CT 06037

PROJECT DESCRIPTION

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

REMOVE (15) ANTENNA(s), (9) RRH(s), (2) OVP(s), AND (6) 1-5/8" COAX CABLE(s)

INSTALL MOUNT MODIFICATIONS, (1) PLATFORM, (11) ANTENNA(s), (12) RRH(s), (2) OVP, AND (2) 1-5/8" HYBRID CABLE(s)

EXISTING (1) 1-5/8" HYBRID CABLE(s) TO RELOCATED

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

I-91 S VIA EXIT 52 TOWARD NEW HAVEN. 10.9 MIMAP AVOID 5: MERGE ONTO CT-9 N VIA EXIT 22N TOWARD NEW BRITAIN. 2.2 MIMAP AVOID 6: TAKE THE CT-372 E EXIT, EXIT 21, TOWARD EAST BERLIN. 0.3 MIMAP AVOID 7: TURN LEFT ONTO CT-372/MILL ST. 0.4 MIMAP AVOID 8: TURN LEFT ONTO BERLIN ST. 0.1 MIMAP AVOID 9: TURN LEFT ONTO BECKLEY RD. 1.1 MIMAP AVOID 10: END AT 261 BECKLEY RD BERLIN, CT 06037-2505 MAP ESTIMATED TIME: 20 MINUTES ESTIMATED DISTANCE: 16.12 MILES

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	0	3/7/2024	JM
G-002	GENERAL NOTES	0	3/7/2024	JM
C-101	DETAILED SITE PLAN	0	3/7/2024	JM
C-201	TOWER ELEVATION	0	3/7/2024	JM
C-401	ANTENNA INFORMATION & SCHEDULE	0	3/7/2024	JM
C-501	CONSTRUCTION DETAILS	0	3/7/2024	JM
E-501	GROUNDING DETAILS	0	3/7/2024	JM
R-601	SUPPLEMENTAL			
R-602	SUPPLEMENTAL			

CONTRACTOR PMI REQUIREMENTS

PMI ACCESSED AT:	HTTPS://PMI.VZWSMART.COM
SMART TOOL VENDOR PROJECT NUMBER:	10211288
VZW LOCATION CODE (PSLC):	5000384280

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

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

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

REV.	DESCRIPTION	BY	DATE
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ATC SITE NUMBER:
302483
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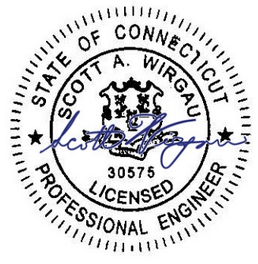
BERLIN, CT 06037

SEAL:



verizon

ATC JOB NO:	14529771_G0
CUSTOMER ID:	BERLIN 2 CT
CUSTOMER #:	5000384280

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	0

GENERAL CONSTRUCTION NOTES:

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

SPECIAL CONSTRUCTION ANTENNA INSTALLATION NOTES:

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

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

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

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0	FOR CONSTRUCTION	JM	3/7/2024

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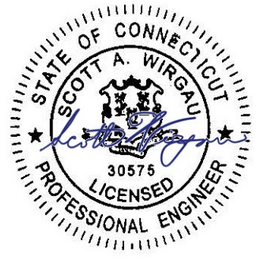
VERIZON SITE NAME:
BERLIN 2 CT
SITE ADDRESS:
286 BECKLEY ROAD
BERLIN, CT 06037

SEAL:



Digitally Signed: 2024-03-08

verizon

ATC JOB NO:	14529771_G0
CUSTOMER ID:	BERLIN 2 CT
CUSTOMER #:	5000384280

GENERAL NOTES

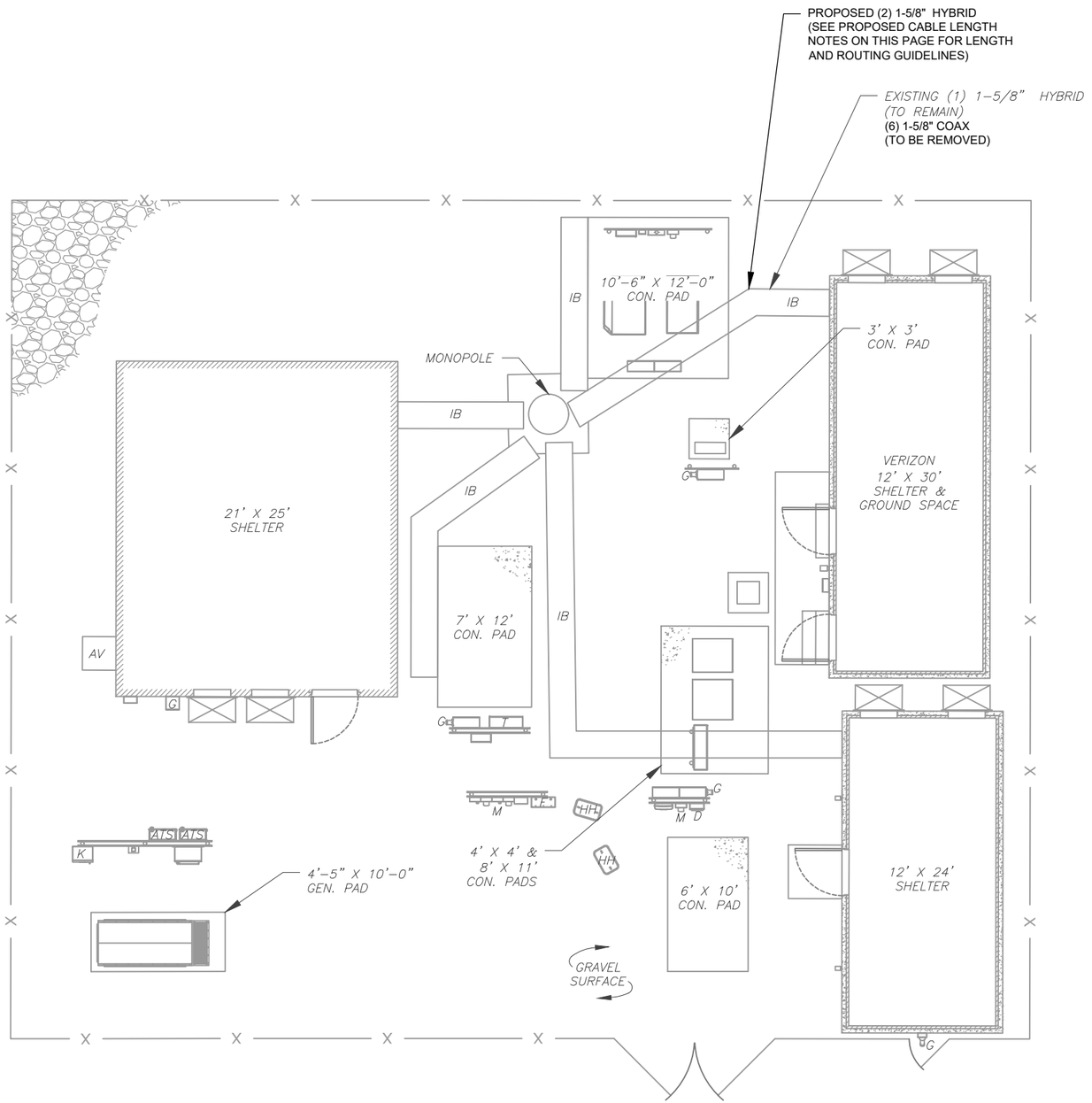
SHEET NUMBER:	REVISION:
G-002	0

SITE PLAN NOTES:

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

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

3. NO ELECTRICAL SCOPE IS INCLUDED IN THIS PROJECT.



LEGEND

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

PROPOSED CABLE NOTES:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **189'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES), CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.

1 DETAILED SITE PLAN

GRAPHIC SCALE

10 0 5 10

(IN FEET)
1 UNIT = 10 FEET

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

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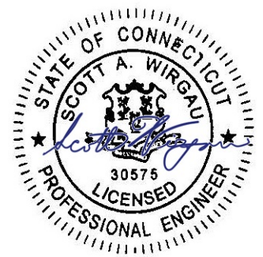
ATC SITE NUMBER:
302483

ATC SITE NAME:
BRLN - BERLIN

VERIZON SITE NAME:
BERLIN 2 CT

SITE ADDRESS:
286 BECKLEY ROAD
BERLIN, CT 06037

SEAL:



Digitally Signed: 2024-03-08

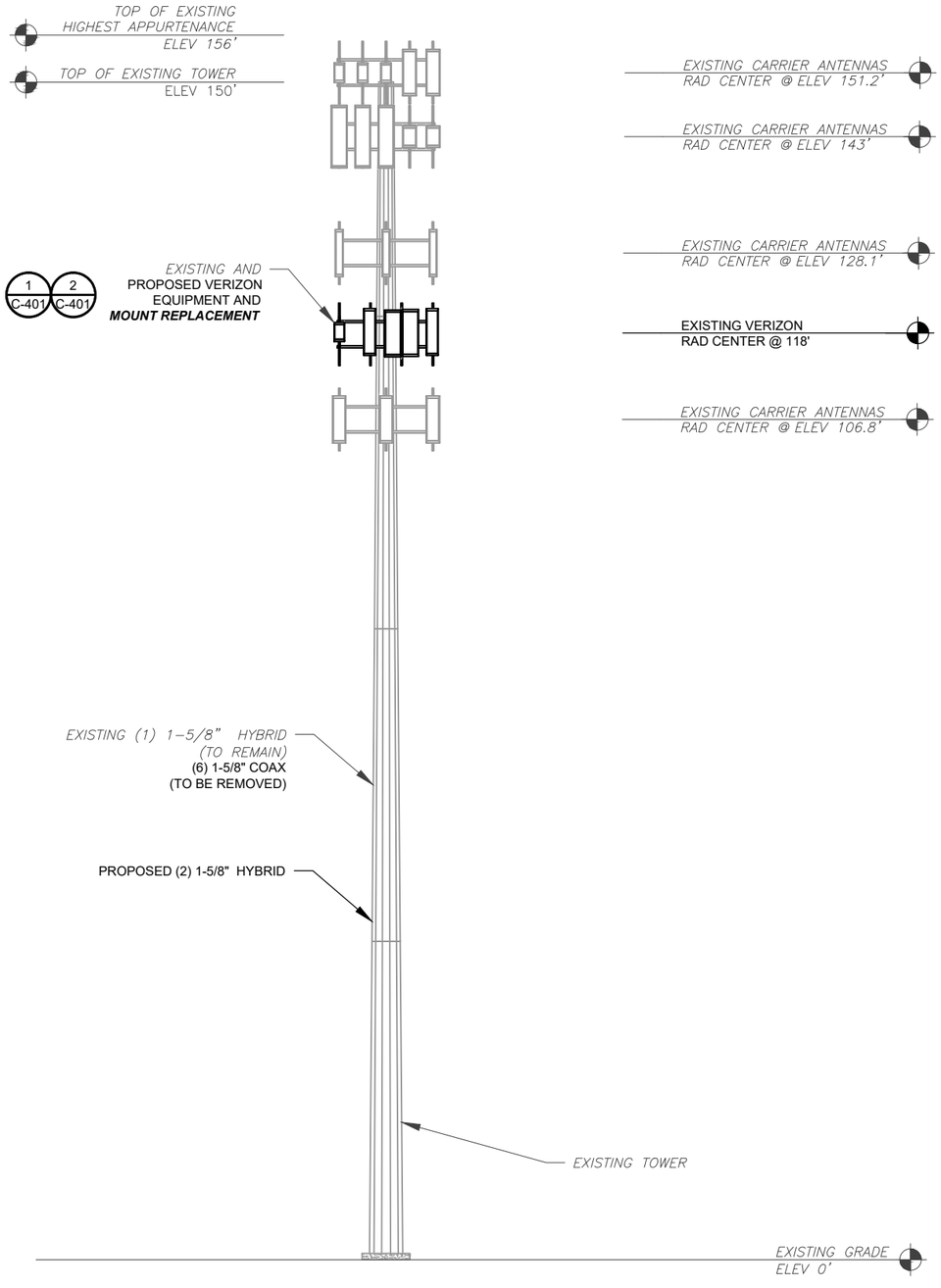
verizon

ATC JOB NO:	14529771_G0
CUSTOMER ID:	BERLIN 2 CT
CUSTOMER #:	5000384280

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	0

PER MOUNT ANALYSIS COMPLETED BY COLLIERS, DATED 11/29/23, THE PROPOSED MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED 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. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.
4. TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.

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

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JM	3/7/2024

ATC SITE NUMBER:
302483

ATC SITE NAME:
BRLN - BERLIN

VERIZON SITE NAME:
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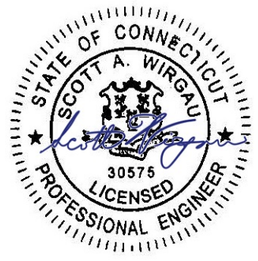
SITE ADDRESS:
286 BECKLEY ROAD
BERLIN, CT 06037

SEAL:



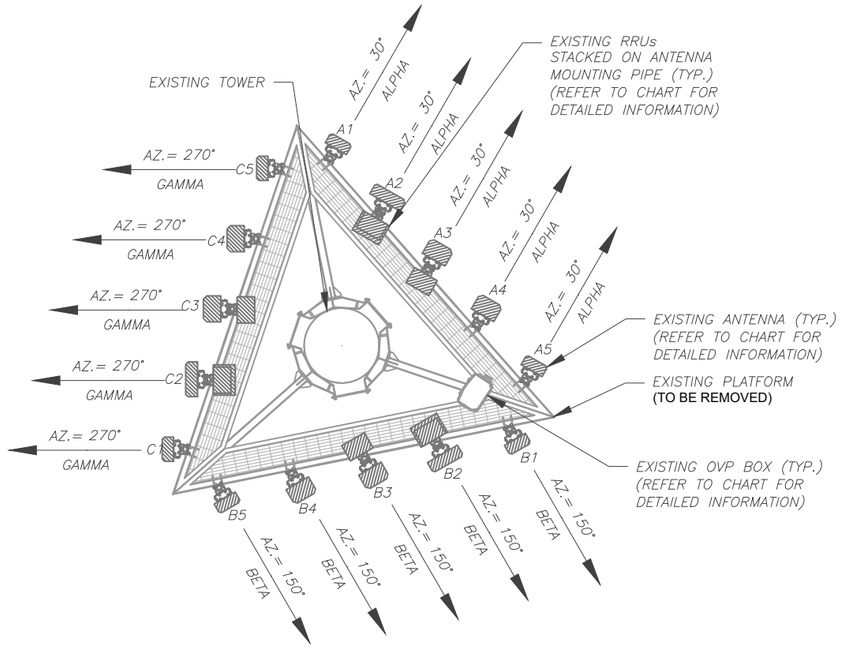
Digitally Signed: 2024-03-08

verizon

ATC JOB NO:	14529771_G0
CUSTOMER ID:	BERLIN 2 CT
CUSTOMER #:	5000384280

TOWER ELEVATION

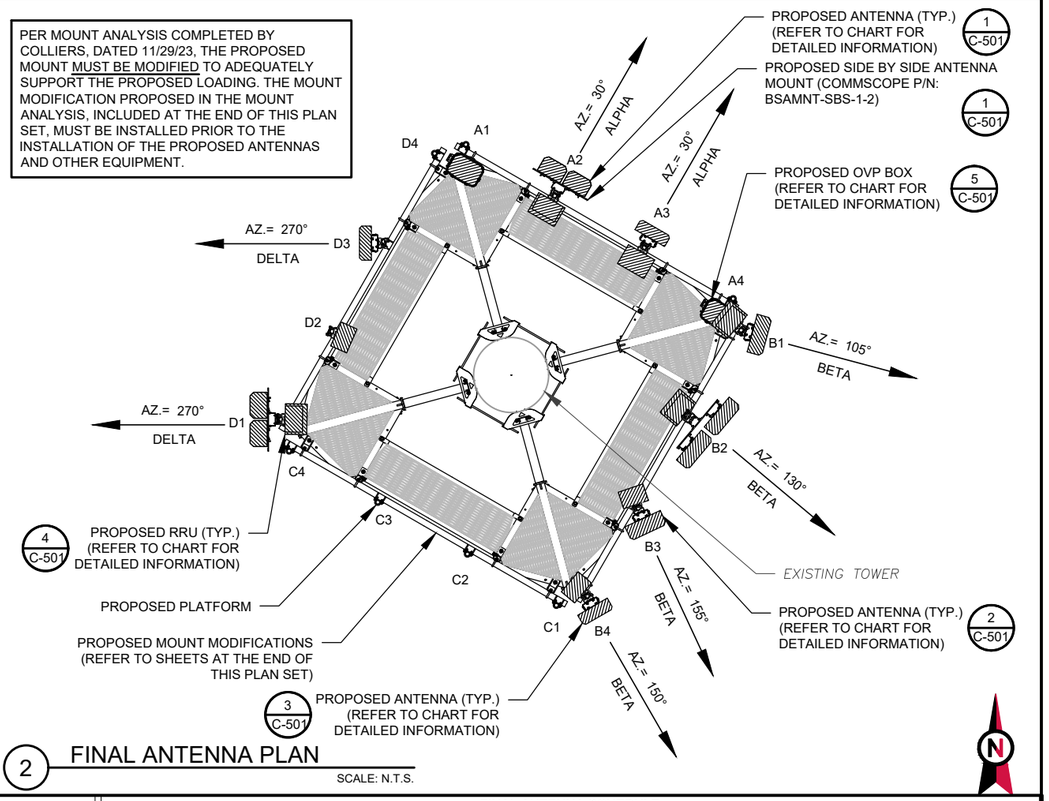
SHEET NUMBER:	REVISION:
C-201	0



1 EXISTING ANTENNA PLAN

SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY COLLIERS, DATED 11/29/23, THE PROPOSED MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED 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	116'	30°	A1	LPA-80063/6CF	850 CDMA	RMV	–	–
			A2	LNX-6514DS	–	RMV	B2/B66A RRH-BR049 B5/B13 RRH-BR04C	RMV RMV
			A3	SBNHH-1D65B	700 LTE	RMV	RT4401-48A	RMV
			A4	SBNHH-1D65B	AWS LTE	RMV	–	–
			A5	LPA-80063/6CF	850 CDMA	RMV		
BETA	116'	150°	B1	LPA-80063/6CF	850 CDMA	RMV	–	–
			B2	LNX-6514DS	–	RMV	B2/B66A RRH-BR049 B5/B13 RRH-BR04C	RMV RMV
			B3	SBNHH-1D65B	700 LTE	RMV	RT4401-48A	RMV
			B4	SBNHH-1D65B	AWS LTE	RMV	–	–
			B5	LPA-80063/6CF	850 CDMA	RMV		
GAMMA	116'	270°	C1	LPA-80063/6CF	850 CDMA	RMV	–	–
			C2	LNX-6514DS	–	RMV	B2/B66A RRH-BR049 B5/B13 RRH-BR04C	RMV RMV
			C3	SBNHH-1D65B	700 LTE	RMV	RT4401-48A	RMV
			C4	SBNHH-1D65B	AWS LTE	RMV	–	–
			C5	LPA-80063/6CF	850 CDMA	RMV		

NOTES

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

STATUS ABBREVIATIONS

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

CABLE LENGTHS FOR JUMPERS

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

FINAL ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	118'	30°	A1	-	-	-	-	-
			A2	NHH-65B-R2B	700 LTE/ 850 LTE/ 1900 LTE/ 850 5G	ADD	RF4439D-25A	ADD
				NHHSS-65B-R2BT4	AWS LTE/ CBRS LTE	ADD	RT4423-48A	ADD
			A3	MT6413-77A	L-SUB6 5G	ADD	RF4461D-13A	ADD
			A4	-	-	-	-	-
BETA	118'	105°	B1	NHHSS-45B-R2BT4	CBRS LTE	ADD	RF4439D-25A	ADD
							RT4423-48A	ADD
		130°	B2	2NN2HH-33B-R4	700 / 850/ 1900/ AWS LTE/ 850 5G	ADD	RF4439D-25A	ADD
				2NN2HH-33B-R4	700 / 850/ 1900/ AWS LTE/ 850 5G	ADD	RT4423-48A	ADD
		155°	B3	NHHSS-45B-R2BT4	CBRS LTE	ADD	RF4461D-13A	ADD
		150°	B4	MT6413-77A	L-SUB6 5G	ADD	RF4461D-13A	ADD
GAMMA	118'	-	C1	-	-	-	-	-
			C2	-	-	-	-	-
			C3	-	--	-	-	-
			C4	-	-	-	-	-
DELTA	118'	270°	D1	NHH-65B-R2B	700 LTE/ 850 LTE/ 1900 LTE/ 850 5G	ADD	RF4439D-25A	ADD
				NHHSS-65B-R2BT4	AWS LTE/ CBRS LTE	ADD	RT4423-48A	ADD
			D2	-	-	-	-	-
			D3	MT6413-77A	L-SUB6 5G	ADD	RF4461D-13A	ADD
			D4	-	-	-	-	-

EXISTING FIBER DISTRIBUTION / OVP BOX

MODEL NUMBER	STATUS
–	REL
(2) RRFDC-3315-PF-48	RMV

EXISTING CABLING SUMMARY

CABLE QTY, SIZE, TYPE	STATUS
(1) 1-5/8" HYBRID	REL
(6) 1-5/8" COAX	RMV

FINAL FIBER DISTRIBUTION / OVP BOX

MODEL NUMBER	STATUS
–	REL
(1) RVZDC-6627-PF-48 & (1) RVZDC-3315-PF-48	ADD

FINAL CABLING SUMMARY

CABLE QTY, SIZE, TYPE	STATUS
(1) 1-5/8" HYBRID	REL
(2) 1-5/8" HYBRID	ADD

3 EQUIPMENT SCHEDULES

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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	JM	3/7/2024

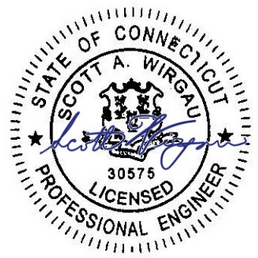
ATC SITE NUMBER:
302483

ATC SITE NAME:
BRLN - BERLIN

VERIZON SITE NAME:
BERLIN 2 CT

SITE ADDRESS:
286 BECKLEY ROAD
BERLIN, CT 06037

SEAL:



Digitally Signed: 2024-03-08

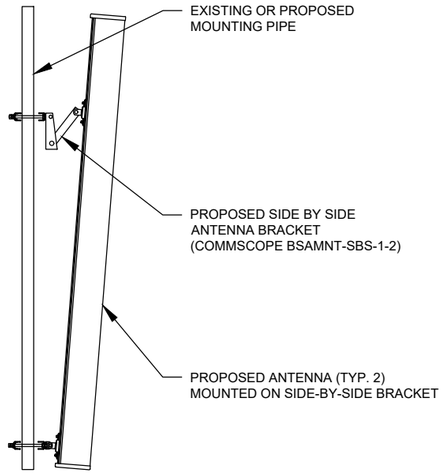
verizon

ATC JOB NO:	14529771_G0
CUSTOMER ID:	BERLIN 2 CT
CUSTOMER #:	5000384280

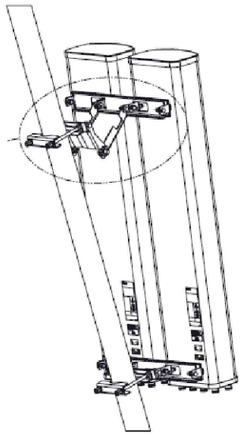
ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	0

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



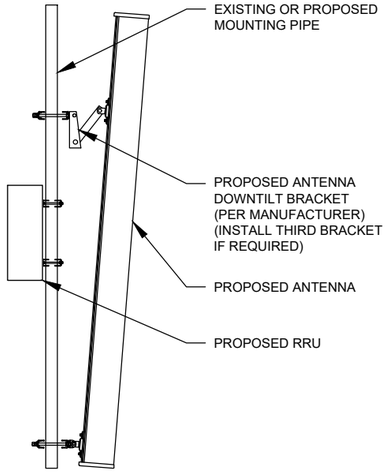
PROFILE VIEW



ISOMETRIC VIEW (BY MANUFACTURER)

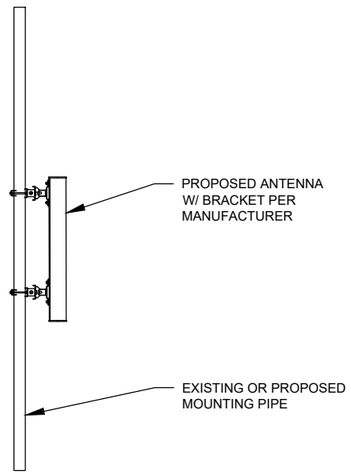
1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



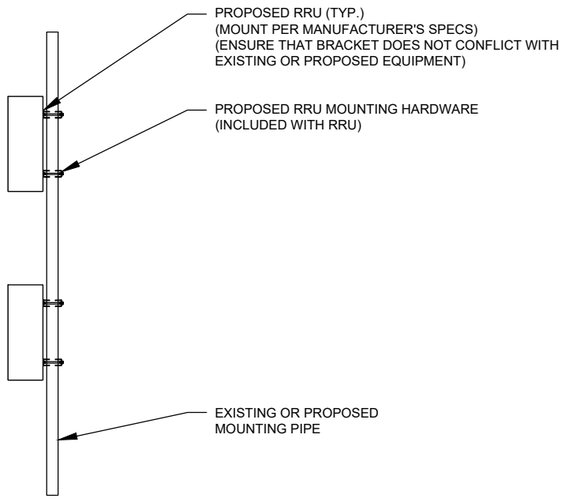
2 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



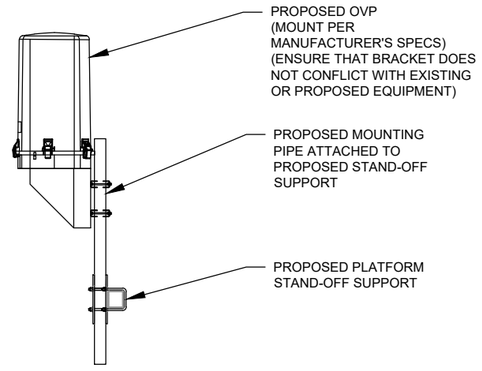
3 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



4 PROPOSED RRU MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



5 PROPOSED OVP MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.

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SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JM	3/7/2024

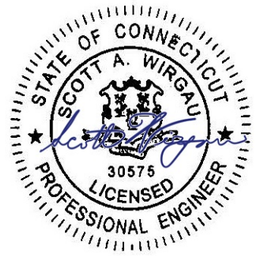
ATC SITE NUMBER:
302483

ATC SITE NAME:
BRLN - BERLIN

VERIZON SITE NAME:
BERLIN 2 CT

SITE ADDRESS:
286 BECKLEY ROAD
BERLIN, CT 06037

SEAL:



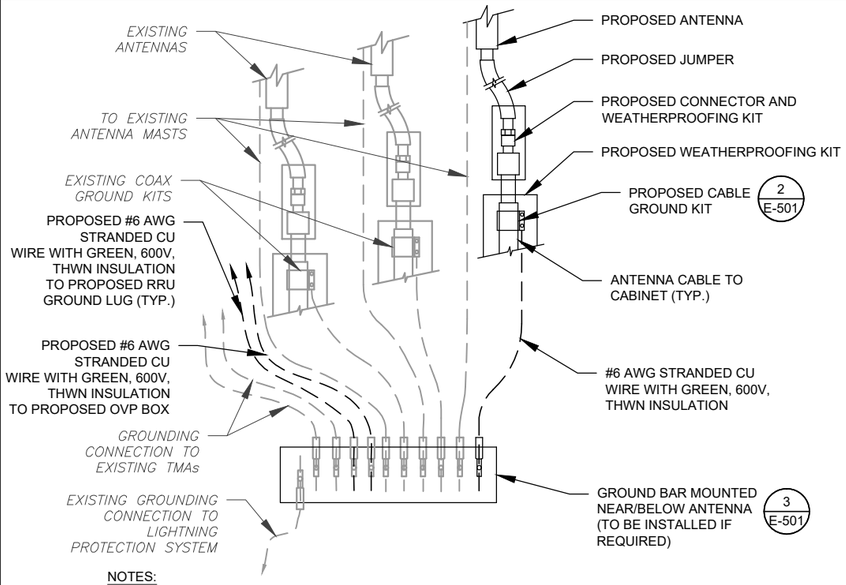
Digitally Signed: 2024-03-08

verizon

ATC JOB NO:	14529771_G0
CUSTOMER ID:	BERLIN 2 CT
CUSTOMER #:	5000384280

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	0

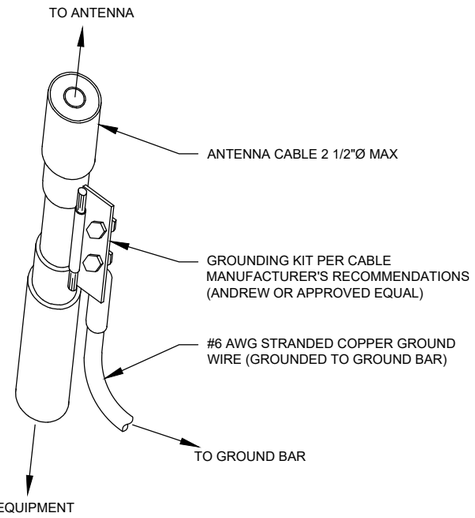


NOTES:

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.

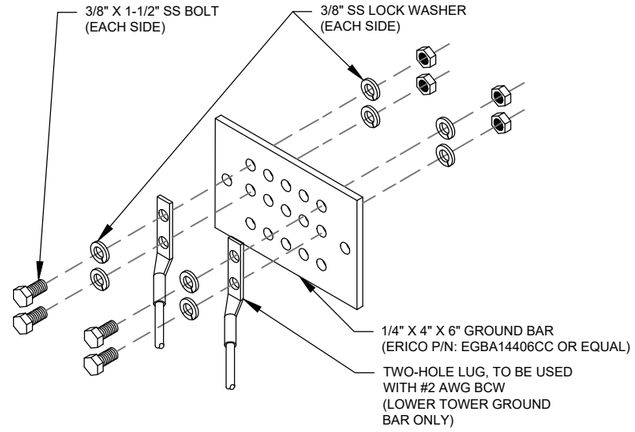


GROUND KIT NOTES:

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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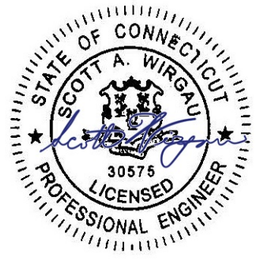


Digitally Signed: 2024-03-08

verizon

ATC JOB NO:	14529771_G0
CUSTOMER ID:	BERLIN 2 CT
CUSTOMER #:	5000384280

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	0

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

New/Replacement Antenna Mount Analysis Report and PMI Requirements

Mount ReAnalysis-VZW

SMART Tool Project #: 10211288
Colliers Engineering & Design Project #: 21777888 (Rev 4)

November 29, 2023

Site Information	*Site ID:*	*5000384280-VZW / BERLIN 2 CT*
	Site Name:	*BERLIN 2 CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*260 Beckley Rd* *Berlin, Connecticut 06037* *Hartford County*
	Latitude:	*41.631711°*
	Longitude:	*-72.729914°*
Structure Information	*Tower Type:*	*152-Ft Monopole*
	Mount Type:	*12.50-Ft Platform*

FUZE ID # 2552218

Analysis Results

Platform: **90.0% Pass w/ Mount Replacement***
(Site Pro 1 F4P-12 w/ F4P-HRK12)

***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: Cody Sherman

Requirements:

The proposed antenna mount is **SUFFICIENT** for the final loading configuration (attachment 2) upon completion of the mount replacement (attachment 3) and requirements below.

Contractor shall replace existing mount with new fortress quad platform mount (Site Pro 1 Part #: F4P-12).

Contractor shall install new Support Rail kit (Site Pro 1 Part #: F4P-HRK12) 42'' above the proposed mount face members.

Contractor shall install (4) 96'' long P2.5 SCH 40 mount pipes spaced evenly along proposed mount face on all sectors.

Contractor shall install new (6) 96" long P2.5 SCH 40 secondary mount pipes in the proposed antenna loading locations on the Beta and Delta sectors. Connect dual pipes together using one (1) new pipe to pipe clamp set for each pipe (VZWSMART-MSK3D) with a maximum pipe to pipe spacing of 6'' C.C. Lower clamp set shall be installed 9'' above the lower face horizontal and the upper clamp set shall be installed 33'' above the lower face horizontal.

Contractor shall inspect climbing facilities and safety climb and ensure they are in good condition. Contractor shall install safety climb wire rope guides in locations where wire rope is rubbing against the mount or mount-to-tower connection steel. Wire brush clean any observed corrosion and protect with two (2) coats of cold galvanization (Zinga or Zinc Kote). Contractor shall provide photos of wire rope guide installation as part of PMI documents. Contact EOR if additional guidance is required.

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 Post Installation Inspection (PMI) Report Deliverables**
2. Antenna Placement Diagrams
3. Mount Manufacturer Drawings
4. Existing Mount Photos
5. Analysis Calculations

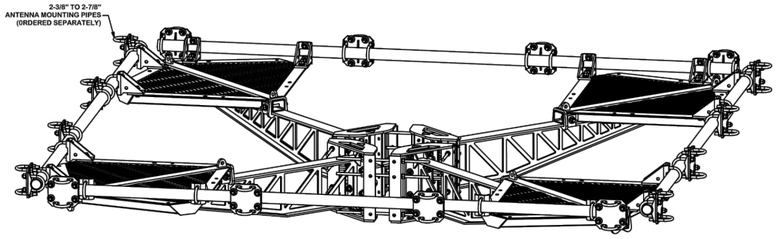
1 MOUNT ANALYSIS

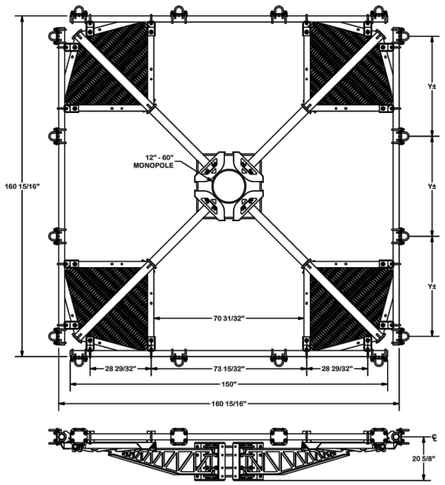
NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERYIFY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

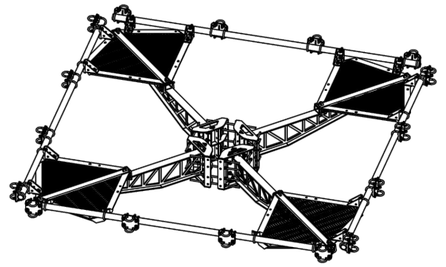
SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-601	0

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	4	X-LPP-CW	LOW PROFILE PLATFORM CORNER WELDMENT		198.75	795.01
2	4	X-LPP-SA12	SIDE ARM WELDMENT FOR 12' LOW PROFILE PLATFORMS		119.21	476.84
3	4	X-RM4HD	WELDMENT FOR 4-SIDED HEAVY DUTY RING MOUNT		71.27	285.08
4	16	X-LPP-FC	FACE PIPE CONNECTION BRACKET FORTRESS PLATFORM		7.01	112.15
5	16	X-SCX3-FR	FORTRESS CROSSOVER PLATE		6.61	105.82
6	16	X-LPP-A7	CORNER WELDMENT ATTACHMENT ANGLE	2 1/2 in	1.27	20.33
7	4	P3X150	2-7/8" X 150" (2-1/2" SCH. 40) GALVANIZED PIPE	150 in	76.84	307.75
8	16	GS8R-48	5/8" x 48" THREADED ROD (HDG.)	48 in	0.40	6.38
9	16	GS8R-24	5/8" x 24" THREADED ROD (HDG.)	24 in	0.40	6.38
10	8	GS8R-8	5/8" x 8" THREADED ROD (HDG.)		0.70	5.58
11	64	X-UBS300	5/8" X 3" X 5-1/4" X 2-1/2" U-BOLT (HDG.)		1.15	73.56
12	32	X-UBS258	5/8" X 2-5/8" X 4-1/2" X 2" U-BOLT (HDG.)		1.00	32.00
13	16	X-UBS304	5/8" X 3" X 4-1/4" X 2-1/2" U-BOLT (HDG.)		0.98	15.60
14	48	GS8214	5/8" x 2-1/4" HDG HEX BOLT GR5		0.29	13.99
15	224	GS8FW	5/8" HDG USS FLATWASHER	1/8 in	0.07	15.78
16	256	GS8LW	5/8" HDG LOCKWASHER		0.03	6.68
17	256	GS8NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	33.25
					TOTAL WT. #	2399.79







TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION: 12' FORTRESS™ QUAD MOUNT PLATFORM

SITE PRO 1 — Engineering Support Team: 1-888-753-7446
Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX
valmont | CUSHCRAFT

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	PAGE
	CEK 8/10/2017		F4P-12	1 OF 4
CLASS / SUB	DRAWING USAGE	CHECKED BY	DWG. NO.	
81 / 02	CUSTOMER	BMC 8/30/2017	F4P-12	

TOLERANCE NOTES

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PROPRIETARY NOTE:
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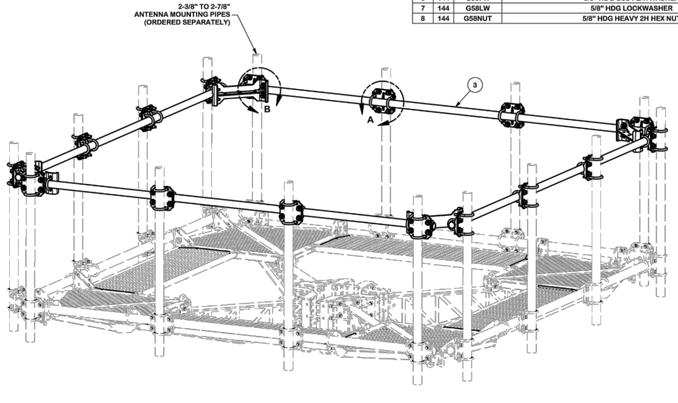
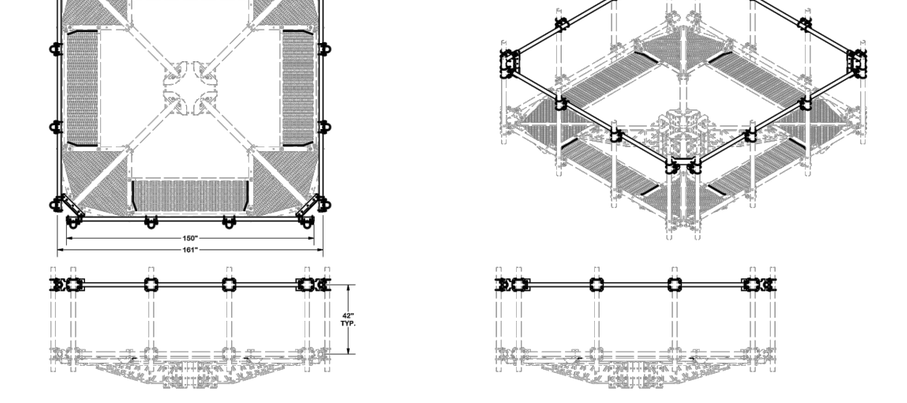
CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	PAGE
	CEK 8/10/2017		F4P-12	2 OF 4
CLASS / SUB	DRAWING USAGE	CHECKED BY	DWG. NO.	
81 / 02	CUSTOMER	BMC 8/30/2017	F4P-12	

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	4	X-F4PHRW	CORNER WELDMENT FOR 4-SIDED FORTRESS PLATFORM HADNRAIL KITS		19.32	77.27
2	16	X-SCX3-FR	FORTRESS CROSSOVER PLATE		6.61	105.82
3	4	P2150	2-3/8" O.D. X 150" SCH 40 GALVANIZED PIPE	150 in	45.77	183.07
4	32	X-UBS300	5/8" X 3" X 5-1/4" X 2-1/2" U-BOLT (HDG.)		1.15	36.78
5	72	X-UBS258	5/8" X 2-5/8" X 4-1/2" X 2" U-BOLT (HDG.)		1.00	72.01
6	144	GS8FW	5/8" HDG USS FLATWASHER	1/8 in	0.07	10.15
7	144	GS8LW	5/8" HDG LOCKWASHER		0.03	3.76
8	144	GS8NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	18.70
					TOTAL WT. #	507.57





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BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION: HANDRAIL KIT FOR 12' 4-SIDED FORTRESS™ PLATFORM

SITE PRO 1 — Engineering Support Team: 1-888-753-7446
Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX
valmont | CUSHCRAFT

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	PAGE
	CEK 8/29/2017		F4P-HRK12	1 OF 2
CLASS / SUB	DRAWING USAGE	CHECKED BY	DWG. NO.	
81 / 02	CUSTOMER		F4P-HRK12	

TOLERANCE NOTES

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LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

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DESCRIPTION: HANDRAIL KIT FOR 12' 4-SIDED FORTRESS™ PLATFORM

SITE PRO 1 — Engineering Support Team: 1-888-753-7446
Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX
valmont | CUSHCRAFT

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	PAGE
	CEK 8/29/2017		F4P-HRK12	2 OF 2
CLASS / SUB	DRAWING USAGE	CHECKED BY	DWG. NO.	
81 / 02	CUSTOMER		F4P-HRK12	

1 MOUNT ANALYSIS

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

SUPPLEMENTAL

SHEET NUMBER: R-602

REVISION: 0

EXHIBIT 2

Town of Berlin, CT

Property Listing Report

Map Block Lot	11-3-132-7-1	Building #	1	PID	7922	Account	1060060

Property Information

Property Location	286 BECKLEY RD
Owner	SO NEW ENGLAND %FRONTIER COMMUNICATIONS
Co-Owner	ATTENTION TAX DEPT
Mailing Address	PO BOX 2629 ADDISON TX 75001
Land Use	4310 Tel Rel Twr
Land Class	I
Zoning Code	R-43
Census Tract	4001

District	0
Acreage	0
Utilities	UNKNOWN
Book / Page	0230/0842

Photo

Sketch

No Photo Available

Primary Construction Details

Year Built	0
Building Desc.	Tel Rel Twr
Building Style	UNKNOWN
Stories	
Occupancy	
Exterior Walls	
Exterior Walls 2	
Roof Style	
Roof Cover	
Interior Walls	
Interior Walls 2	
Interior Floors 1	
Interior Floors 2	

Heating Fuel	
Heating Type	
AC Type	
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Total Rooms	0
Bath Style	
Kitchen Style	
Fin BSMT Area	
Fin BSMT Quality	
Fin BSMT Area 2	
Fin BSMT Qual 2	

BSMT Garages	0
Fireplaces	0
Whirlpool Tub	0
Building Use	Vacant
Building Condition	

Industrial / Commercial Details
(*Residential Not Applicable)

Heat / AC	NA
Frame Type	NA
Baths / Plumbing	NA
Ceiling / Wall	NA
Rooms / Prtns	NA
Wall Height	NA
First Floor Use	NA

Report Created On 3/14/2024

Town of Berlin, CT

Property Listing Report

Map Block Lot	11-3-132-7-1	Building #	1	PID	7922	Account	1060060

Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	0	0
Extras	0	0
Improvements		
Outbuildings	485900	340100
Land	0	0
Total	485900	340100

Outbuilding and Extra Features

Type	Description
FENCE-6' CHAIN	270 L.F.
Cell Tower	150 S.F.
Shed PreFab Cell	240 S.F.
Generator	130 UNITS

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area	0	0

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
SO NEW ENGLAND %FRONTIER COMMUNICATIONS	0230/0842	2007-10-02	0
SOUTHERN NEW ENGLAND	0230/0000	1983-07-19	0

Report Created On 3/14/2024

Town of Berlin, Connecticut - Assessment Parcel Map

Parcel: 11-3-132-7-1 Address: 286 BECKLEY RD

N
W E
S

NEGEO
New England GeoSystems
www.negeosystems.com
420 East Main Street - Bldg 3 Suite 18
Branford, CT 06405 • (203) 404 - 7129

Approximate Scale: 1 inch = 5 feet

0 2 4 6 8 Feet

Map Produced: November 2022

EXHIBIT 3

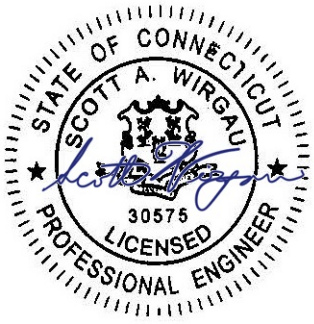
AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	151.5 ft Monopole
ATC Asset Name	:	Brln - Berlin
ATC Asset Number	:	302483
Engineering Number	:	14529771_C3_03
Proposed Carrier	:	VERIZON WIRELESS
Carrier Site Name	:	BERLIN 2 CT
Carrier Site Number	:	5000384280
Site Location	:	286 Beckley Road Berlin, CT 06037-2419 41.6317° N, 72.7299° W
County	:	Hartford
Date	:	December 28, 2023
Max Usage	:	87%
Analysis Result	:	Pass

Created By:

Steven Nedrud
Structural Engineer II



COA: PEC.0001553

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 151.5 ft Monopole tower to reflect the change in loading by VERIZON WIRELESS.

Supporting Documents

Tower:	ITT Meyer Type "B", dated July 21, 2001 Mapping by Smith Cullum Acq. #CT-0019, dated July 21, 2001 Mapping by ATC Report #0682, dated January 7, 2016
Foundation:	SpectraSite Project #CT-0019, dated May 29, 2003
Geotechnical:	Daniel G. Loucks Project #CT-0019, dated December 21, 2001
Modification:	Scientel Project #Berlin-CT0019, dated July 30, 2002 ATC Project #11912109_P5_02, dated October 3, 2017

Analysis

The tower was analyzed using the most recent version Tower Numerics tnxTower tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	118 mph (3-second gust)
Basic Wind Speed w/ Ice:	50 mph (3-second gust) w/ 1.50" radial ice concurrent
Code(s):	ANSI/TIA-222-H / 2021 IBC / 2022 Connecticut State Building Code
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Spectral Response:	Ss = 0.20, S_1 = 0.06
Site Class:	D - Stiff Soil - Default

Conclusion

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

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

Structure Usages

Structural Component	Usage	Result
Pole Shaft	66.2%	Pass
Base Plate	21.0%	Pass
Anchor Rods	87.0%	Pass
Foundation	84.0%	Pass

Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Uplift (k)	Shear (k)
Monopole Base*	3442.0	87.1	-	31.9

Reactions shown reflect the results from the Load Case with maximum Moment

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

VERIZON WIRELESS Final Loading

Elev (ft)	Qty	Equipment	Lines
118.0	2	Commscope 2NN2HH-33B-R4	(2) 1 5/8" (1.63"-41.3mm) Fiber
	2	Commscope NHH-65B-R2B	
	2	Commscope NHHSS-45B-R2BT4	
	2	Commscope NHHSS-65B-R2BT4	
	2	Raycap RRFDC-3315-PF-48 (32lbs)	
	3	Samsung MT6413-77A	
	4	Samsung RF4439d-25A	
	4	Samsung RF4461d-13A	
	4	Samsung RT4423-48A	
116.0	1	Square Platform with Handrails	-

Other Existing/Reserved Loading

Elev (ft)	Qty	Equipment	Lines	Carrier
152.0	1	Platform with Handrails	(3) 0.39" (10mm) Fiber Trunk (7) 0.92" (23.4mm) Cable (12) 1 1/4" Coax (1) 2" conduit	AT&T MOBILITY
	1	Raycap DC9-48-60-24-8C-EV (Enclosure)		
	2	Raycap DC6-48-60-18-8F(32.8 lbs)		
	3	CCI DMP65R-BU6DA		
	3	Ericsson AIR 6419 N77G		
	3	Ericsson AIR 6449 n77D		
	3	Ericsson RRUS 32 B30		
	3	Ericsson RRUS 4415 B25		
	3	Ericsson RRUS 4426 B66		
	3	Ericsson RRUS 4449 B5, B12		
	3	Ericsson RRUS 4478 B14		
	3	Quintel QD6616-7		
142.0	1	Platform with Handrails	(3) 1 1/4" (1.25"- 31.8mm) Fiber (2) 1 5/8" Hybriflex	T-MOBILE
	3	Ericsson AIR32 B66Aa/B2a		
	3	Ericsson Air6449 B41		
	3	Ericsson Radio 4449 B71 B85A		
	3	Ericsson Radio 4460 B25+B66		
	3	RFS APXVAARR24_43-U-NA20		
132.7	3	Alcatel-Lucent 800 MHz 2X50W RRH w/ Filter	(4) 1 5/8" Hybriflex Cable	SPRINT NEXTEL
128.2	2	RFS APXVSPP18-C-A20		
128.1	1	RFS APXV9ERR18-C-A20		
119.7	3	Alcatel-Lucent RRH2x60		
105.0	1	Square Platform with Handrails	(1) 1.60" (40.6mm) Hybrid	DISH WIRELESS L.L.C.
	1	Commscope RDIDC-9181-PF-48		
	3	Fujitsu TA08025-B604		
	3	Fujitsu TA08025-B605		
	3	JMA Wireless MX08FRO665-21		

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

Standard Conditions

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

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

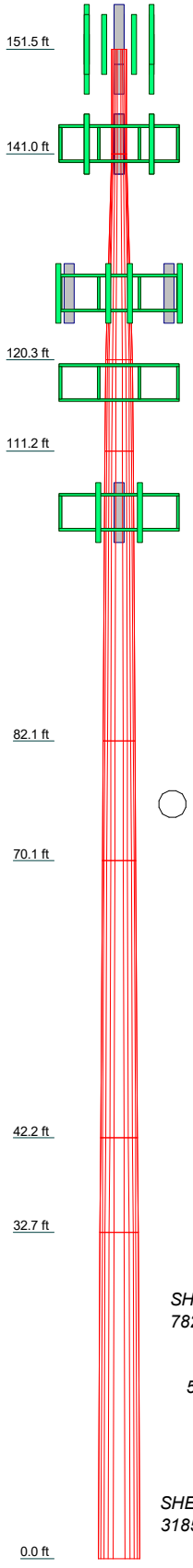
It is the responsibility of the client to ensure that the information provided to A.T. Engineering Services LLC and used in the performance of our engineering services is correct and complete.

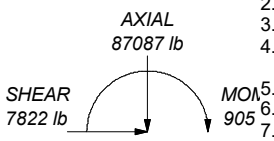
All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with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

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

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

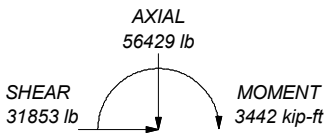
Section	Length (ft)	Number of Sides	Thickness (in)	Top Dia (in)	Bot Dia (in)	Grade	Weight (lb)
1	10.50	12	0.2400	17.1872	17.7841	A572-65	476.2
2	20.67	12	0.3059	17.7841	31.5570		1688.0
3	9.14	12	0.3063	31.5570	33.0280		981.2
4	29.11	12	0.3141	33.0280	38.3470		3543.9
5	12.02	12	0.3804	38.3470	39.7110		1936.3
6	27.82	12	0.4014	39.7110	43.9500		5069.1
7	9.53	12	0.4706	43.9500	45.0640		2164.0
8	32.71	12	0.4906	45.0640	49.5520		8232.0
							24090.6





ALL REACTIONS ARE FACTORED

TORQUE 1 kip-ft
50 mph WIND - 1.5000 in IC



TORQUE 6 kip-ft
REACTIONS - 118 mph WIND

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
QD6616-7	152	APXVAARR24_43-U-NA20	142
QD6616-7	152	Round Platform w/ Handrails	142
QD6616-7	152	800 MHz 2X50W RRH w/ Filter	132.7
DC9-48-60-24-8C-EV	151.5	800 MHz 2X50W RRH w/ Filter	132.7
RRUS-32 B30	151.5	800 MHz 2X50W RRH w/ Filter	132.7
RRUS-32 B30	151.5	APXVSPP18-C-A20	127
RRUS-32 B30	151.5	APXVSPP18-C-A20	127
RRUS 4478 B14	151.5	APXV9ERR18-C-A20	127
RRUS 4478 B14	151.5	Round Platform w/ Handrails	127
RRUS 4478 B14	151.5	RRH2X60	119.7
RRUS 4449 B5/B12	151.5	RRH2X60	119.7
RRUS 4449 B5/B12	151.5	RRH2X60	119.7
RRUS 4449 B5/B12	151.5	Flat Platform w/ Handrails	118
RRUS 4415 B25	151.5	(2) RT4423-48A	118
RRUS 4415 B25	151.5	RT4423-48A	118
RRUS 4415 B25	151.5	RT4423-48A	118
AIR 6449 n77D	151.5	(2) RF4461d-13A	118
AIR 6449 n77D	151.5	RF4461d-13A	118
AIR 6449 n77D	151.5	RF4461d-13A	118
DC6-48-60-18-8F(32.8 lbs)	151.5	(2) RF4439d-25A	118
DC6-48-60-18-8F(32.8 lbs)	151.5	RF4439d-25A	118
RRUS 4426 B66	151.5	RF4439d-25A	118
RRUS 4426 B66	151.5	MT6413-77A	118
RRUS 4426 B66	151.5	MT6413-77A	118
AIR 6419 N77G	151.5	MT6413-77A	118
AIR 6419 N77G	151.5	NHHSS-65B-R2BT4	118
AIR 6419 N77G	151.5	NHHSS-65B-R2BT4	118
DMP65R-BU6DA	151.5	NHH-65B-R2B	118
DMP65R-BU6DA	151.5	NHH-65B-R2B	118
DMP65R-BU6DA	151.5	NHHSS-45B-R2BT4	118
Round Platform w/ Handrails	142	NHHSS-45B-R2BT4	118
RADIO 4449 B71/B85A	142	RRFDC-3315-PF-48	116
RADIO 4449 B71/B85A	142	RRFDC-3315-PF-48	116
RADIO 4449 B71/B85A	142	Flat Platform w/ Handrails	105
RADIO 4460 B2/B25 B66	142	RDIDC-9181-PF-48	105
RADIO 4460 B2/B25 B66	142	TA08025-B605	105
RADIO 4460 B2/B25 B66	142	TA08025-B605	105
AIR 6449 B41	142	TA08025-B605	105
AIR 6449 B41	142	TA08025-B604	105
AIR 6449 B41	142	TA08025-B604	105
AIR32 B66Aa/B2a	142	TA08025-B604	105
AIR32 B66Aa/B2a	142	MX08FRO665-21	105
AIR32 B66Aa/B2a	142	MX08FRO665-21	105
APXVAARR24_43-U-NA20	142	MX08FRO665-21	105
APXVAARR24_43-U-NA20	142		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 118 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. Combined pole and wrap structure.
9. Sections modeled to have equivalent inertia to pole and wrap combined.
10. TOWER RATING: 66.2%

American Tower Engineering
1 Fenton Main Street, Suite 300
Cary, NC 27511
Phone: (919) 466-5058
FAX:

Tower Analysis

Job: **Brln-Berlin (302483)**			
Project: ***14529771_C3_03***			
Client: VERIZON WIRELESS	Drawn by: Steven.Nedrud		App'd:
Code: TIA-222-H	Date: 12/28/23		Scale: NTS
Path: X:\A-B\Brln-Berlin_CT_(302483)\14529771 VERIZON WIRELESS\14529771_03_CUST_STRTNX\302483 Brln-Berlin_CT.eri			Dwg No. E-1

Tower Input Data

The tower is a monopole.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

- Tower is located in Hartford County, Connecticut.
- Tower base elevation above sea level: 196.00 ft.
- Basic wind speed of 118 mph.
- Risk Category II.
- Exposure Category B.
- Simplified Topographic Factor Procedure for wind speed-up calculations is used.
- Topographic Category: 1.
- Crest Height: 0.00 ft.
- Nominal ice thickness of 1.5000 in.
- Ice thickness is considered to increase with height.
- Ice density of 56 pcf.
- A wind speed of 50 mph is used in combination with ice.
- Temperature drop of 50 °F.
- Deflections calculated using a wind speed of 60 mph.
- Combined pole and wrap structure..
- Sections modeled to have equivalent inertia to pole and wrap combined..
- A non-linear (P-delta) analysis was used.
- Pressures are calculated at each section.
- Stress ratio used in pole design is 1.
- Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

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

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	151.50-141.00	10.50	0.00	12	17.1872	17.7841	0.2400	0.9600	A572-65 (65 ksi)
L2	141.00-120.33	20.67	0.00	12	17.7841	31.5570	0.3059	2.0000	A572-65 (65 ksi)
L3	120.33-111.19	9.14	0.00	12	31.5570	33.0280	0.3063	2.0000	A572-65 (65 ksi)
L4	111.19-82.08	29.11	0.00	12	33.0280	38.3470	0.3141	2.2000	A572-65 (65 ksi)
L5	82.08-70.06	12.02	0.00	12	38.3470	39.7110	0.3804	2.4000	A572-65 (65 ksi)
L6	70.06-42.24	27.82	0.00	12	39.7110	43.9500	0.4014	2.6000	A572-65 (65 ksi)
L7	42.24-32.71	9.53	0.00	12	43.9500	45.0640	0.4706	2.8000	A572-65 (65 ksi)
L8	32.71-0.00	32.71		12	45.0640	49.5520	0.4906	3.0000	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	17.7088	13.0968	480.1168	6.0671	8.9030	53.9277	972.8469	6.4458	3.9630	16.512
	18.3268	13.5581	532.6554	6.2808	9.2122	57.8209	1079.3043	6.6729	4.1229	17.179
L2	18.2488	17.2160	671.2919	6.2572	9.2122	72.8702	1360.2194	8.4732	3.5302	11.54
	32.5075	30.7823	3837.2246	11.1879	16.3465	234.7425	7775.2574	15.1501	7.2213	23.607
L3	32.5075	30.8221	3842.0947	11.1878	16.3465	235.0404	7785.1256	15.1697	7.2211	23.575
	34.0304	32.2730	4410.5870	11.7144	17.1085	257.8009	8937.0451	15.8838	7.6153	24.862
L4	34.0157	33.0869	4519.6700	11.7116	17.1085	264.1768	9158.0767	16.2844	7.5039	23.89
	39.5224	38.4666	7102.1213	13.6158	19.8637	357.5419	14390.8231	18.9321	8.9294	28.429
L5	39.5036	46.5048	8556.3285	13.5920	19.8637	430.7510	17337.4413	22.8883	8.7867	23.099
	40.9157	48.1756	9512.0483	14.0804	20.5703	462.4166	19273.9886	23.7106	9.1523	24.06
L6	40.9001	50.8080	10021.0923	14.0728	20.5703	487.1632	20305.4499	25.0061	9.0338	22.506
	45.2886	56.2869	13625.1654	15.5904	22.7661	598.4848	27608.2791	27.7027	10.1698	25.336
L7	45.2696	65.8857	15898.0688	15.5656	22.7661	698.3220	32213.7975	32.4270	10.0256	21.304
	46.4229	67.5738	17151.6341	15.9644	23.3432	734.7608	34753.8607	33.2578	10.3241	21.938
L8	46.4074	70.4140	17856.5130	15.9573	23.3432	764.9572	36182.1365	34.6556	10.2062	20.803
	51.0537	77.5039	23811.6328	17.5640	25.6679	927.6801	48248.8237	38.1450	11.4090	23.255

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 151.50-141.00				1	1	1			
L2 141.00-120.33				1	1	1			
L3 120.33-111.19				1	1	1			
L4 111.19-82.08				1	1	1			
L5 82.08-70.06				1	1	1			
L6 70.06-42.24				1	1	1			
L7 42.24-32.71				1	1	1			
L8 32.71-0.00				1	1	1			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
***										
1 5/8" (1.63"-41.3mm) Fiber	B	No	Surface Ar (CaAa)	116.00 - 5.00	2	2	0.100 0.500	1.6300		1.61
***										
4" Wrap Seams	A	No	Surface Ar (CaAa)	141.00 - 5.00	1	1	0.000 0.000	4.0000		0.00
4" Wrap Seams	B	No	Surface Ar (CaAa)	141.00 - 5.00	1	1	0.000 0.000	4.0000		0.00
4" Wrap Seams	C	No	Surface Ar (CaAa)	141.00 - 5.00	1	1	0.000 0.000	4.0000		0.00
***										

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
1 1/4" Coax	C	No	No	Inside Pole	151.50 - 5.00	12	No Ice	0.00	0.66
							1/2" Ice	0.00	0.66
							1" Ice	0.00	0.66
							2" Ice	0.00	0.66
0.39" (10mm) Fiber Trunk	C	No	No	Inside Pole	151.50 - 5.00	3	No Ice	0.00	0.06
							1/2" Ice	0.00	0.06
							1" Ice	0.00	0.06
							2" Ice	0.00	0.06
2" Conduit	C	No	No	Inside Pole	151.50 - 0.00	1	No Ice	0.00	3.65
							1/2" Ice	0.00	3.65
							1" Ice	0.00	3.65
							2" Ice	0.00	3.65
0.92 (23.4mm) Cable	C	No	No	Inside Pole	151.50 - 0.00	7	No Ice	0.00	0.89
							1/2" Ice	0.00	0.89
							1" Ice	0.00	0.89
							2" Ice	0.00	0.89
***									
1 5/8" Hybriflex	C	No	No	Inside Pole	142.00 - 5.00	2	No Ice	0.00	1.61
							1/2" Ice	0.00	1.61
							1" Ice	0.00	1.61
							2" Ice	0.00	1.61
1 1/4" (1.25"-31.8mm) Fiber	C	No	No	Inside Pole	142.00 - 5.00	3	No Ice	0.00	1.05
							1/2" Ice	0.00	1.05
							1" Ice	0.00	1.05
							2" Ice	0.00	1.05
***									
1 1/4" Hybriflex	C	No	No	Inside Pole	127.00 - 5.00	4	No Ice	0.00	0.66
							1/2" Ice	0.00	0.66
							1" Ice	0.00	0.66
							2" Ice	0.00	0.66
***									
1.6" (40.6mm) Hybrid	A	No	No	Inside Pole	105.00 - 5.00	1	No Ice	0.00	0.56
							1/2" Ice	0.00	0.56

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
							1" Ice	0.00	0.56
							2" Ice	0.00	0.56
***									

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
L1	151.50-141.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	195.16
L2	141.00-120.33	A	0.000	0.000	8.268	0.000	0.00
		B	0.000	0.000	8.268	0.000	0.00
		C	0.000	0.000	8.268	0.000	520.92
L3	120.33-111.19	A	0.000	0.000	3.656	0.000	0.00
		B	0.000	0.000	5.224	0.000	15.49
		C	0.000	0.000	3.656	0.000	246.69
L4	111.19-82.08	A	0.000	0.000	11.644	0.000	12.84
		B	0.000	0.000	21.134	0.000	93.73
		C	0.000	0.000	11.644	0.000	785.68
L5	82.08-70.06	A	0.000	0.000	4.808	0.000	6.73
		B	0.000	0.000	8.727	0.000	38.70
		C	0.000	0.000	4.808	0.000	324.42
L6	70.06-42.24	A	0.000	0.000	11.128	0.000	15.58
		B	0.000	0.000	20.197	0.000	89.58
		C	0.000	0.000	11.128	0.000	750.86
L7	42.24-32.71	A	0.000	0.000	3.812	0.000	5.34
		B	0.000	0.000	6.919	0.000	30.69
		C	0.000	0.000	3.812	0.000	257.21
L8	32.71-0.00	A	0.000	0.000	11.084	0.000	15.52
		B	0.000	0.000	20.117	0.000	89.23
		C	0.000	0.000	11.084	0.000	797.29

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
L1	151.50-141.00	A	1.741	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	195.16
L2	141.00-120.33	A	1.720	0.000	0.000	15.379	0.000	248.46
		B		0.000	0.000	15.379	0.000	248.46
		C		0.000	0.000	15.379	0.000	769.38
L3	120.33-111.19	A	1.701	0.000	0.000	6.765	0.000	108.25
		B		0.000	0.000	10.770	0.000	168.45
		C		0.000	0.000	6.765	0.000	354.94
L4	111.19-82.08	A	1.670	0.000	0.000	21.364	0.000	349.47
		B		0.000	0.000	45.376	0.000	694.34
		C		0.000	0.000	21.364	0.000	1122.31

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
L5	82.08-70.06	A	1.631	0.000	0.000	8.728	0.000	141.56
		B		0.000	0.000	18.526	0.000	279.12
		C		0.000	0.000	8.728	0.000	459.25
L6	70.06-42.24	A	1.581	0.000	0.000	19.926	0.000	315.53
		B		0.000	0.000	42.260	0.000	624.05
		C		0.000	0.000	19.926	0.000	1050.82
L7	42.24-32.71	A	1.519	0.000	0.000	6.707	0.000	102.95
		B		0.000	0.000	14.210	0.000	204.47
		C		0.000	0.000	6.707	0.000	354.83
L8	32.71-0.00	A	1.396	0.000	0.000	18.821	0.000	270.55
		B		0.000	0.000	39.784	0.000	542.47
		C		0.000	0.000	18.821	0.000	1052.33

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	151.50-141.00	0.0000	0.0000	0.0000	0.0000
L2	141.00-120.33	0.0000	0.0000	0.0000	0.0000
L3	120.33-111.19	0.7299	0.0767	1.1218	0.1179
L4	111.19-82.08	1.3634	0.1433	1.9987	0.2101
L5	82.08-70.06	1.3996	0.1471	2.0725	0.2178
L6	70.06-42.24	1.4268	0.1500	2.1219	0.2230
L7	42.24-32.71	1.4507	0.1525	2.1577	0.2268
L8	32.71-0.00	1.2957	0.1362	1.9388	0.2038

Note: For pole sections, center of pressure calculations do not consider feed line shielding.

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L2	17	4" Wrap Seams	120.33 - 141.00	1.0000	1.0000
L2	18	4" Wrap Seams	120.33 - 141.00	1.0000	1.0000
L2	19	4" Wrap Seams	120.33 - 141.00	1.0000	1.0000
L3	15	1 5/8" (1.63"-41.3mm) Fiber	111.19 - 116.00	1.0000	1.0000
L3	17	4" Wrap Seams	111.19 - 120.33	1.0000	1.0000
L3	18	4" Wrap Seams	111.19 - 120.33	1.0000	1.0000
L3	19	4" Wrap Seams	111.19 - 120.33	1.0000	1.0000
L4	15	1 5/8" (1.63"-41.3mm) Fiber	82.08 - 111.19	1.0000	1.0000
L4	17	4" Wrap Seams	82.08 - 111.19	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L4	18	4" Wrap Seams	82.08 - 111.19	1.0000	1.0000
L4	19	4" Wrap Seams	82.08 - 111.19	1.0000	1.0000
L5	15	1 5/8" (1.63"-41.3mm) Fiber	70.06 - 82.08	1.0000	1.0000
L5	17	4" Wrap Seams	70.06 - 82.08	1.0000	1.0000
L5	18	4" Wrap Seams	70.06 - 82.08	1.0000	1.0000
L5	19	4" Wrap Seams	70.06 - 82.08	1.0000	1.0000
L6	15	1 5/8" (1.63"-41.3mm) Fiber	42.24 - 70.06	1.0000	1.0000
L6	17	4" Wrap Seams	42.24 - 70.06	1.0000	1.0000
L6	18	4" Wrap Seams	42.24 - 70.06	1.0000	1.0000
L6	19	4" Wrap Seams	42.24 - 70.06	1.0000	1.0000
L7	15	1 5/8" (1.63"-41.3mm) Fiber	32.71 - 42.24	1.0000	1.0000
L7	17	4" Wrap Seams	32.71 - 42.24	1.0000	1.0000
L7	18	4" Wrap Seams	32.71 - 42.24	1.0000	1.0000
L7	19	4" Wrap Seams	32.71 - 42.24	1.0000	1.0000
L8	15	1 5/8" (1.63"-41.3mm) Fiber	5.00 - 32.71	1.0000	1.0000
L8	17	4" Wrap Seams	5.00 - 32.71	1.0000	1.0000
L8	18	4" Wrap Seams	5.00 - 32.71	1.0000	1.0000
L8	19	4" Wrap Seams	5.00 - 32.71	1.0000	1.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
DMP65R-BU6DA	A	From Leg	3.00 0.00 0.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	14.33 14.93 15.54 16.78	5.62 6.07 6.53 7.47	79.40 153.36 233.96 415.90
DMP65R-BU6DA	B	From Leg	3.00 0.00 0.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	14.33 14.93 15.54 16.78	5.62 6.07 6.53 7.47	79.40 153.36 233.96 415.90
DMP65R-BU6DA	C	From Leg	3.00 0.00 0.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	14.33 14.93 15.54 16.78	5.62 6.07 6.53 7.47	79.40 153.36 233.96 415.90
DC9-48-60-24-8C-EV	A	From Leg	3.00 0.00 0.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	3.13 3.40 3.68 4.28	5.58 5.91 6.24 6.94	26.20 63.27 104.42 199.74
RRUS-32 B30	A	From Leg	3.00 0.00 0.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	3.87 4.15 4.44 5.06	2.76 3.02 3.29 3.85	77.00 104.93 136.47 211.15
RRUS-32 B30	B	From Leg	3.00 0.00 0.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	3.87 4.15 4.44 5.06	2.76 3.02 3.29 3.85	77.00 104.93 136.47 211.15
RRUS-32 B30	C	From Leg	3.00 0.00 0.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice	3.87 4.15 4.44	2.76 3.02 3.29	77.00 104.93 136.47

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
						2" Ice	5.06	3.85	211.15
RRUS 4478 B14	A	From Leg	3.00 0.00 0.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	2.15 2.35 2.55 2.99	1.24 1.40 1.57 1.93	59.90 75.78 94.29 139.98
RRUS 4478 B14	B	From Leg	3.00 0.00 0.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	2.15 2.35 2.55 2.99	1.24 1.40 1.57 1.93	59.90 75.78 94.29 139.98
RRUS 4478 B14	C	From Leg	3.00 0.00 0.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	2.15 2.35 2.55 2.99	1.24 1.40 1.57 1.93	59.90 75.78 94.29 139.98
RRUS 4449 B5/B12	A	From Leg	3.00 0.00 0.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	2.30 2.50 2.72 3.17	1.64 1.82 2.01 2.42	71.00 89.51 110.84 162.74
RRUS 4449 B5/B12	B	From Leg	3.00 0.00 0.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	2.30 2.50 2.72 3.17	1.64 1.82 2.01 2.42	71.00 89.51 110.84 162.74
RRUS 4449 B5/B12	C	From Leg	3.00 0.00 0.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	2.30 2.50 2.72 3.17	1.64 1.82 2.01 2.42	71.00 89.51 110.84 162.74
RRUS 4415 B25	A	From Leg	3.00 0.00 0.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	2.15 2.35 2.55 2.99	0.95 1.10 1.25 1.60	46.00 60.07 76.66 118.17
RRUS 4415 B25	B	From Leg	3.00 0.00 0.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	2.15 2.35 2.55 2.99	0.95 1.10 1.25 1.60	46.00 60.07 76.66 118.17
RRUS 4415 B25	C	From Leg	3.00 0.00 0.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	2.15 2.35 2.55 2.99	0.95 1.10 1.25 1.60	46.00 60.07 76.66 118.17
AIR 6449 n77D	A	From Leg	3.00 0.00 1.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	4.70 5.00 5.32 5.97	2.39 2.65 2.91 3.46	81.60 111.21 144.55 223.15
AIR 6449 n77D	B	From Leg	3.00 0.00 1.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	4.70 5.00 5.32 5.97	2.39 2.65 2.91 3.46	81.60 111.21 144.55 223.15
AIR 6449 n77D	C	From Leg	3.00 0.00 1.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	4.70 5.00 5.32 5.97	2.39 2.65 2.91 3.46	81.60 111.21 144.55 223.15
DC6-48-60-18-8F(32.8 lbs)	B	From Leg	3.00 0.00 0.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	1.28 1.27 1.45 1.83	0.79 1.27 1.45 1.83	20.00 35.12 52.57 95.09
DC6-48-60-18-8F(32.8 lbs)	C	From Leg	3.00 0.00 0.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	1.28 1.27 1.45 1.83	0.79 1.27 1.45 1.83	20.00 35.12 52.57 95.09

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
RRUS 4426 B66	A	From Leg	3.00 0.00 0.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	1.92 2.11 2.30 2.72	0.84 0.98 1.13 1.45	48.40 61.22 76.43 114.82
RRUS 4426 B66	B	From Leg	3.00 0.00 0.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	1.92 2.11 2.30 2.72	0.84 0.98 1.13 1.45	48.40 61.22 76.43 114.82
RRUS 4426 B66	C	From Leg	3.00 0.00 0.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	1.92 2.11 2.30 2.72	0.84 0.98 1.13 1.45	48.40 61.22 76.43 114.82
AIR 6419 N77G	A	From Leg	3.00 0.00 -1.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	4.58 4.88 5.19 5.83	1.02 1.17 1.33 1.67	70.00 96.92 127.43 199.99
AIR 6419 N77G	B	From Leg	3.00 0.00 -1.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	4.58 4.88 5.19 5.83	1.02 1.17 1.33 1.67	70.00 96.92 127.43 199.99
AIR 6419 N77G	C	From Leg	3.00 0.00 -1.50	0.0000	151.50	No Ice 1/2" Ice 1" Ice 2" Ice	4.58 4.88 5.19 5.83	1.02 1.17 1.33 1.67	70.00 96.92 127.43 199.99
QD6616-7	A	From Leg	1.00 0.00 0.00	0.0000	152.00	No Ice 1/2" Ice 1" Ice 2" Ice	13.58 13.99 14.40 15.22	3.89 4.01 4.13 4.37	130.00 171.99 213.98 297.96
QD6616-7	B	From Leg	1.00 0.00 0.00	0.0000	152.00	No Ice 1/2" Ice 1" Ice 2" Ice	13.58 13.99 14.40 15.22	3.89 4.01 4.13 4.37	130.00 171.99 213.98 297.96
QD6616-7	C	From Leg	1.00 0.00 0.00	0.0000	152.00	No Ice 1/2" Ice 1" Ice 2" Ice	13.58 13.99 14.40 15.22	3.89 4.01 4.13 4.37	130.00 171.99 213.98 297.96
Round Platform w/ Handrails	C	None		0.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice	27.20 34.20 41.20 55.20	27.20 34.20 41.20 55.20	2500.00 2400.00 2800.00 3600.00
***									
RADIO 4449 B71/B85A	A	From Leg	3.00 0.00 0.00	0.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.65 1.80 1.97 2.33	1.31 1.46 1.61 1.94	75.00 92.22 112.19 161.00
RADIO 4449 B71/B85A	B	From Leg	3.00 0.00 0.00	0.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.65 1.80 1.97 2.33	1.31 1.46 1.61 1.94	75.00 92.22 112.19 161.00
RADIO 4449 B71/B85A	C	From Leg	3.00 0.00 0.00	0.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.65 1.80 1.97 2.33	1.31 1.46 1.61 1.94	75.00 92.22 112.19 161.00
RADIO 4460 B2/B25 B66	A	From Leg	3.00 0.00 0.00	0.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.56 2.95 3.33 4.10	1.61 1.85 2.02 2.39	109.00 131.16 156.36 216.68

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
RADIO 4460 B2/B25 B66	B	From Leg	3.00 0.00 0.00	0.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.56 2.95 3.33 4.10	1.61 1.85 2.02 2.39	109.00 131.16 156.36 216.68
RADIO 4460 B2/B25 B66	C	From Leg	3.00 0.00 0.00	0.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.56 2.95 3.33 4.10	1.61 1.85 2.02 2.39	109.00 131.16 156.36 216.68
AIR 6449 B41	A	From Leg	3.00 0.00 0.00	0.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice	5.68 5.96 6.27 6.91	2.48 2.70 2.94 3.43	104.00 153.54 196.67 296.37
AIR 6449 B41	B	From Leg	3.00 0.00 0.00	0.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice	5.68 5.96 6.27 6.91	2.48 2.70 2.94 3.43	104.00 153.54 196.67 296.37
AIR 6449 B41	C	From Leg	3.00 0.00 0.00	0.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice	5.68 5.96 6.27 6.91	2.48 2.70 2.94 3.43	104.00 153.54 196.67 296.37
AIR32 B66Aa/B2a	A	From Leg	3.00 0.00 0.00	0.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice	6.51 7.78 9.05 11.59	2.70 3.22 3.74 4.78	132.20 178.00 223.80 315.40
AIR32 B66Aa/B2a	B	From Leg	3.00 0.00 0.00	0.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice	6.51 7.78 9.05 11.59	2.70 3.22 3.74 4.78	132.20 178.00 223.80 315.40
AIR32 B66Aa/B2a	C	From Leg	3.00 0.00 0.00	0.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice	6.51 7.78 9.05 11.59	2.70 3.22 3.74 4.78	132.20 178.00 223.80 315.40
APXVAARR24_43-U-NA20	A	From Leg	3.00 0.00 0.00	0.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice	20.24 23.53 26.82 33.40	5.15 5.99 6.83 8.51	127.90 240.00 352.10 576.30
APXVAARR24_43-U-NA20	B	From Leg	3.00 0.00 0.00	0.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice	20.24 23.53 26.82 33.40	5.15 5.99 6.83 8.51	127.90 240.00 352.10 576.30
APXVAARR24_43-U-NA20	C	From Leg	3.00 0.00 0.00	0.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice	20.24 23.53 26.82 33.40	5.15 5.99 6.83 8.51	127.90 240.00 352.10 576.30
Round Platform w/ Handrails	C	None		0.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice	27.20 34.20 41.20 55.20	27.20 34.20 41.20 55.20	2500.00 2400.00 2800.00 3600.00
***									
800 MHz 2X50W RRH w/ Filter	A	From Leg	3.00 0.00 0.00	0.0000	132.70	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 2.24 2.43 2.83	1.93 2.11 2.29 2.68	60.00 86.12 111.30 171.62
800 MHz 2X50W RRH w/ Filter	B	From Leg	3.00 0.00 0.00	0.0000	132.70	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 2.24 2.43 2.83	1.93 2.11 2.29 2.68	60.00 86.12 111.30 171.62

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
800 MHz 2X50W RRH w/ Filter	C	From Leg	3.00 0.00 0.00	0.0000	132.70	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 2.24 2.43 2.83	1.93 2.11 2.29 2.68	60.00 86.12 111.30 171.62
APXVSPP18-C-A20	A	From Leg	3.00 0.00 0.00	0.0000	127.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.02 8.48 8.94 9.89	5.28 5.74 6.20 7.14	60.00 106.52 162.12 292.33
APXVSPP18-C-A20	B	From Leg	3.00 0.00 0.00	0.0000	127.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.02 8.48 8.94 9.89	5.28 5.74 6.20 7.14	60.00 106.52 162.12 292.33
APXV9ERR18-C-A20	C	From Leg	3.00 0.00 0.00	0.0000	127.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.02 8.48 8.94 9.89	5.81 6.27 6.73 7.68	60.00 113.99 172.12 307.57
RRH2X60	A	From Leg	3.00 0.00 0.00	0.0000	119.70	No Ice 1/2" Ice 1" Ice 2" Ice	3.50 3.76 4.03 4.58	1.82 2.05 2.29 2.79	60.00 82.72 109.06 173.43
RRH2X60	B	From Leg	3.00 0.00 0.00	0.0000	119.70	No Ice 1/2" Ice 1" Ice 2" Ice	3.50 3.76 4.03 4.58	1.82 2.05 2.29 2.79	60.00 82.72 109.06 173.43
RRH2X60	C	From Leg	3.00 0.00 0.00	0.0000	119.70	No Ice 1/2" Ice 1" Ice 2" Ice	3.50 3.76 4.03 4.58	1.82 2.05 2.29 2.79	60.00 82.72 109.06 173.43
Round Platform w/ Handrails	C	None		0.0000	127.00	No Ice 1/2" Ice 1" Ice 2" Ice	27.20 34.20 41.20 55.20	27.20 34.20 41.20 55.20	2500.00 2400.00 2800.00 3600.00
**									
RRFDC-3315-PF-48	A	From Leg	3.00 0.00 0.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.80 3.60 3.84 4.34	2.19 2.39 2.61 3.05	32.00 49.94 82.01 157.57
RRFDC-3315-PF-48	B	From Leg	3.00 0.00 0.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.80 3.60 3.84 4.34	2.19 2.39 2.61 3.05	32.00 49.94 82.01 157.57
Flat Platform w/ Handrails	C	None		0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice	42.40 48.40 54.40 66.40	42.40 48.40 54.40 66.40	2500.00 2450.00 2900.00 3800.00
**									
(2) RT4423-48A	A	From Leg	1.00 0.00 0.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.86 0.94 1.02 1.18	0.36 0.40 0.44 0.52	18.70 21.96 25.22 31.74
RT4423-48A	B	From Leg	1.00 0.00 0.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.86 0.94 1.02 1.18	0.36 0.40 0.44 0.52	18.70 21.96 25.22 31.74
RT4423-48A	C	From Leg	1.00 0.00 0.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice	0.86 0.94 1.02	0.36 0.40 0.44	18.70 21.96 25.22

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
						2" Ice	1.18	0.52	31.74
(2) RF4461d-13A	A	From Leg	1.00 0.00 0.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.88 2.00 2.12 2.36	1.28 1.36 1.44 1.60	79.10 88.35 97.60 116.10
RF4461d-13A	B	From Leg	1.00 0.00 0.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.88 2.00 2.12 2.36	1.28 1.36 1.44 1.60	79.10 88.35 97.60 116.10
RF4461d-13A	C	From Leg	1.00 0.00 0.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.88 2.00 2.12 2.36	1.28 1.36 1.44 1.60	79.10 88.35 97.60 116.10
(2) RF4439d-25A	A	From Leg	1.00 0.00 0.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.50 2.65 2.80 3.10	1.73 1.84 1.95 2.17	74.70 86.17 97.64 120.58
RF4439d-25A	B	From Leg	1.00 0.00 0.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.50 2.65 2.80 3.10	1.73 1.84 1.95 2.17	74.70 86.17 97.64 120.58
RF4439d-25A	C	From Leg	1.00 0.00 0.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.50 2.65 2.80 3.10	1.73 1.84 1.95 2.17	74.70 86.17 97.64 120.58
MT6413-77A	A	From Leg	1.00 0.00 0.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.81 4.00 4.19 4.57	0.84 0.88 0.92 1.00	57.30 69.49 81.68 106.06
MT6413-77A	B	From Leg	1.00 0.00 0.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.81 4.00 4.19 4.57	0.84 0.88 0.92 1.00	57.30 69.49 81.68 106.06
MT6413-77A	C	From Leg	1.00 0.00 0.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.81 4.00 4.19 4.57	0.84 0.88 0.92 1.00	57.30 69.49 81.68 106.06
NHHSS-65B-R2BT4	A	From Leg	1.00 0.00 0.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.08 8.48 8.88 9.68	3.09 3.24 3.39 3.69	51.00 75.95 100.90 150.80
NHHSS-65B-R2BT4	B	From Leg	1.00 0.00 0.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.08 8.48 8.88 9.68	3.09 3.24 3.39 3.69	51.00 75.95 100.90 150.80
NHH-65B-R2B	B	From Leg	1.00 0.00 0.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.08 8.48 8.88 9.68	3.09 3.24 3.39 3.69	43.70 68.73 93.76 143.82
NHH-65B-R2B	C	From Leg	1.00 0.00 0.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.08 8.48 8.88 9.68	3.09 3.24 3.39 3.69	43.70 68.73 93.76 143.82
NHHSS-45B-R2BT4	B	From Leg	1.00 0.00 0.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice	11.40 11.80 12.20 13.00	3.06 3.16 3.26 3.46	76.90 109.67 142.44 207.98

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
NHHSS-45B-R2BT4	C	From Leg	1.00 0.00 0.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice	11.40 11.80 12.20 13.00	3.06 3.16 3.26 3.46	76.90 109.67 142.44 207.98
**									
Flat Platform w/ Handrails	C	None		0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	42.40 48.40 54.40 66.40	42.40 48.40 54.40 66.40	2500.00 2450.00 2900.00 3800.00
*****									
RDIDC-9181-PF-48	A	From Leg	1.00 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.87 2.00 2.13 2.39	1.07 1.14 1.21 1.35	21.90 30.07 38.24 54.58
TA08025-B605	C	From Leg	1.00 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.96 2.09 2.22 2.48	1.19 1.27 1.35 1.51	75.00 83.99 92.98 110.96
TA08025-B605	A	From Leg	1.00 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.96 2.09 2.22 2.48	1.19 1.27 1.35 1.51	75.00 83.99 92.98 110.96
TA08025-B605	B	From Leg	1.00 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.96 2.09 2.22 2.48	1.19 1.27 1.35 1.51	75.00 83.99 92.98 110.96
TA08025-B604	A	From Leg	1.00 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.96 2.09 2.22 2.48	1.03 1.10 1.17 1.31	63.90 72.27 80.64 97.38
TA08025-B604	B	From Leg	1.00 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.96 2.09 2.22 2.48	1.03 1.10 1.17 1.31	63.90 72.27 80.64 97.38
TA08025-B604	C	From Leg	1.00 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.96 2.09 2.22 2.48	1.03 1.10 1.17 1.31	63.90 72.27 80.64 97.38
MX08FRO665-21	A	From Leg	1.00 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	12.49 12.89 13.29 14.09	3.38 3.49 3.60 3.82	64.50 101.39 138.28 212.06
MX08FRO665-21	B	From Leg	1.00 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	12.49 12.89 13.29 14.09	3.38 3.49 3.60 3.82	64.50 101.39 138.28 212.06
MX08FRO665-21	C	From Leg	1.00 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice 2" Ice	12.49 12.89 13.29 14.09	3.38 3.49 3.60 3.82	64.50 101.39 138.28 212.06

Tower Pressures - No Ice

$G_H = 1.100$

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1	146.22	1.102	37	15.766	A	0.000	15.766	15.766	100.00	0.000	0.000
151.50-141.00					B	0.000	15.766		100.00	0.000	0.000
					C	0.000	15.766		100.00	0.000	0.000
L2	129.70	1.064	36	43.714	A	0.000	43.714	43.714	100.00	8.268	0.000
141.00-120.33					B	0.000	43.714		100.00	8.268	0.000
					C	0.000	43.714		100.00	8.268	0.000
L3	115.73	1.03	35	25.340	A	0.000	25.340	25.340	100.00	3.656	0.000
120.33-111.19					B	0.000	25.340		100.00	5.224	0.000
					C	0.000	25.340		100.00	3.656	0.000
L4	96.27	0.978	33	89.196	A	0.000	89.196	89.196	100.00	11.644	0.000
111.19-82.08					B	0.000	89.196		100.00	21.134	0.000
					C	0.000	89.196		100.00	11.644	0.000
L5 82.08-70.06	76.03	0.914	31	40.277	A	0.000	40.277	40.277	100.00	4.808	0.000
					B	0.000	40.277		100.00	8.727	0.000
					C	0.000	40.277		100.00	4.808	0.000
L6 70.06-42.24	55.92	0.837	28	99.907	A	0.000	99.907	99.907	100.00	11.128	0.000
					B	0.000	99.907		100.00	20.197	0.000
					C	0.000	99.907		100.00	11.128	0.000
L7 42.24-32.71	37.46	0.746	25	36.410	A	0.000	36.410	36.410	100.00	3.812	0.000
					B	0.000	36.410		100.00	6.919	0.000
					C	0.000	36.410		100.00	3.812	0.000
L8 32.71-0.00	16.10	0.7	24	132.831	A	0.000	132.831	132.831	100.00	11.084	0.000
					B	0.000	132.831		100.00	20.117	0.000
					C	0.000	132.831		100.00	11.084	0.000

Tower Pressure - With Ice

$G_H = 1.100$

Section Elevation ft	z ft	K_Z	q_z psf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1	146.22	1.102	7	1.7408	18.812	A	0.000	18.812	18.812	100.00	0.000	0.000
151.50-141.00						B	0.000	18.812		100.00	0.000	0.000
						C	0.000	18.812		100.00	0.000	0.000
L2	129.70	1.064	6	1.7200	49.639	A	0.000	49.639	49.639	100.00	15.379	0.000
141.00-120.33						B	0.000	49.639		100.00	15.379	0.000
						C	0.000	49.639		100.00	15.379	0.000
L3	115.73	1.03	6	1.7005	27.930	A	0.000	27.930	27.930	100.00	6.765	0.000
120.33-111.19						B	0.000	27.930		100.00	10.770	0.000
						C	0.000	27.930		100.00	6.765	0.000
L4 111.19-82.08	96.27	0.978	6	1.6695	97.296	A	0.000	97.296	97.296	100.00	21.364	0.000
						B	0.000	97.296		100.00	45.376	0.000
						C	0.000	97.296		100.00	21.364	0.000
L5 82.08-70.06	76.03	0.914	6	1.6306	43.543	A	0.000	43.543	43.543	100.00	8.728	0.000
						B	0.000	43.543		100.00	18.526	0.000
						C	0.000	43.543		100.00	8.728	0.000
L6 70.06-42.24	55.92	0.837	5	1.5812	107.239	A	0.000	107.239	107.239	100.00	19.926	0.000
						B	0.000	107.239		100.00	42.260	0.000
						C	0.000	107.239		100.00	19.926	0.000

Section Elevation ft	z ft	K_Z	q_z psf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L7 42.24-32.71	37.46	0.746	5	1.5191	38.822	A	0.000	38.822	38.822	100.00	6.707	0.000
						B	0.000	38.822		100.00	14.210	0.000
						C	0.000	38.822		100.00	6.707	0.000
L8 32.71-0.00	16.10	0.7	4	1.3961	140.442	A	0.000	140.442	140.442	100.00	18.821	0.000
						B	0.000	140.442		100.00	39.784	0.000
						C	0.000	140.442		100.00	18.821	0.000

Tower Pressure - Service

$G_H = 1.100$

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1	146.22	1.102	9	15.766	A	0.000	15.766	15.766	100.00	0.000	0.000
151.50-141.00					B	0.000	15.766		100.00	0.000	0.000
					C	0.000	15.766		100.00	0.000	0.000
L2	129.70	1.064	8	43.714	A	0.000	43.714	43.714	100.00	8.268	0.000
141.00-120.33					B	0.000	43.714		100.00	8.268	0.000
					C	0.000	43.714		100.00	8.268	0.000
L3	115.73	1.03	8	25.340	A	0.000	25.340	25.340	100.00	3.656	0.000
120.33-111.19					B	0.000	25.340		100.00	5.224	0.000
					C	0.000	25.340		100.00	3.656	0.000
L4	96.27	0.978	8	89.196	A	0.000	89.196	89.196	100.00	11.644	0.000
111.19-82.08					B	0.000	89.196		100.00	21.134	0.000
					C	0.000	89.196		100.00	11.644	0.000
L5 82.08-70.06	76.03	0.914	7	40.277	A	0.000	40.277	40.277	100.00	4.808	0.000
					B	0.000	40.277		100.00	8.727	0.000
					C	0.000	40.277		100.00	4.808	0.000
L6 70.06-42.24	55.92	0.837	7	99.907	A	0.000	99.907	99.907	100.00	11.128	0.000
					B	0.000	99.907		100.00	20.197	0.000
					C	0.000	99.907		100.00	11.128	0.000
L7 42.24-32.71	37.46	0.746	6	36.410	A	0.000	36.410	36.410	100.00	3.812	0.000
					B	0.000	36.410		100.00	6.919	0.000
					C	0.000	36.410		100.00	3.812	0.000
L8 32.71-0.00	16.10	0.7	5	132.831	A	0.000	132.831	132.831	100.00	11.084	0.000
					B	0.000	132.831		100.00	20.117	0.000
					C	0.000	132.831		100.00	11.084	0.000

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice

Comb. No.	Description
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	151.5 - 141	Pole	Max Tension	1	0.00	0.000	0.000
			Max. Compression	26	-19532.90	-0.008	0.354
			Max. Mx	8	-10440.01	-49.032	0.311
			Max. My	2	-10472.23	-0.003	47.975
			Max. Vy	8	9526.39	-49.032	0.311
			Max. Vx	2	-9409.08	-0.003	47.975
			Max. Torque	17			-4.229
L2	141 - 120.33	Pole	Max Tension	1	0.00	0.000	0.000
			Max. Compression	26	-29293.88	-0.008	0.369
			Max. Mx	8	-16286.83	-279.034	0.232
			Max. My	2	-16347.96	-0.022	272.863

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	8	13575.56	-279.034	0.232
			Max. Vx	2	-13172.07	-0.022	272.863
			Max. Torque	17			-4.312
L3	120.33 - 111.19	Pole	Max Tension	1	0.00	0.000	0.000
			Max. Compression	26	-39094.30	-0.945	0.793
			Max. Mx	8	-22178.51	-436.993	0.596
			Max. My	2	-22271.83	-0.285	425.114
			Max. Vy	8	18825.98	-436.993	0.596
			Max. Vx	2	-18106.64	-0.285	425.114
			Max. Torque	13			5.706
L4	111.19 - 82.08	Pole	Max Tension	1	0.00	0.000	0.000
			Max. Compression	26	-53314.81	-1.501	1.255
			Max. Mx	8	-31252.73	-1092.206	0.673
			Max. My	2	-31337.39	-0.467	1058.579
			Max. Vy	8	24604.11	-1092.206	0.673
			Max. Vx	2	-23821.60	-0.467	1058.579
			Max. Torque	13			6.303
L5	82.08 - 70.06	Pole	Max Tension	1	0.00	0.000	0.000
			Max. Compression	26	-57590.16	-1.724	1.384
			Max. Mx	8	-34157.06	-1394.886	0.685
			Max. My	2	-34231.18	-0.546	1351.845
			Max. Vy	8	25771.60	-1394.886	0.685
			Max. Vx	2	-24992.88	-0.546	1351.845
			Max. Torque	13			6.294
L6	70.06 - 42.24	Pole	Max Tension	1	0.00	0.000	0.000
			Max. Compression	26	-68226.03	-2.260	1.694
			Max. Mx	8	-41697.16	-2145.694	0.751
			Max. My	2	-41742.83	-0.732	2081.085
			Max. Vy	8	28215.33	-2145.694	0.751
			Max. Vx	2	-27450.49	-0.732	2081.085
			Max. Torque	13			6.289
L7	42.24 - 32.71	Pole	Max Tension	1	0.00	0.000	0.000
			Max. Compression	26	-72378.07	-2.448	1.802
			Max. Mx	8	-44811.26	-2418.019	0.783
			Max. My	2	-44847.02	-0.797	2346.126
			Max. Vy	8	28957.81	-2418.019	0.783
			Max. Vx	2	-28199.28	-0.797	2346.126
			Max. Torque	13			6.280
L8	32.71 - 0	Pole	Max Tension	1	0.00	0.000	0.000
			Max. Compression	26	-87087.34	-2.983	2.111
			Max. Mx	8	-56410.49	-3402.218	0.906
			Max. My	2	-56411.42	-0.990	3305.876
			Max. Vy	8	31215.57	-3402.218	0.906
			Max. Vx	2	-30485.59	-0.990	3305.876
			Max. Torque	13			6.277

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Pole	Max. Vert	30	87087.34	-7821.40	0.00
	Max. H_x	21	42321.47	31182.78	-0.00
	Max. H_z	2	56428.63	-0.00	30453.73
	Max. M_x	2	3305.876	-0.00	30453.73
	Max. M_z	8	3402.218	-31182.77	-0.00

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
	Max. Torsion	13	6.274	-15833.25	-27423.99
	Min. Vert	19	42321.47	26517.84	-15310.08
	Min. H_x	9	42321.47	-31182.78	-0.00
	Min. H_z	14	56428.63	-0.00	-30453.73
	Min. M_x	14	-3304.209	-0.00	-30453.73
	Min. M_z	20	-3400.235	31182.77	-0.00
	Min. Torsion	25	-6.274	15833.25	27423.99

Tower Mast Reaction Summary

Load Combination	Vertical lb	$Shear_x$ lb	$Shear_z$ lb	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	47023.86	0.00	0.00	-0.644	-0.774	0.000
1.2 Dead+1.0 Wind 0 deg - No Ice	56428.63	0.00	-30453.73	-3305.876	-0.989	0.454
0.9 Dead+1.0 Wind 0 deg - No Ice	42321.47	0.00	-30453.72	-3255.955	-0.729	0.456
1.2 Dead+1.0 Wind 30 deg - No Ice	56428.63	15926.66	-27585.78	-2980.978	-1721.666	-5.483
0.9 Dead+1.0 Wind 30 deg - No Ice	42321.47	15926.66	-27585.78	-2936.196	-1695.653	-5.485
1.2 Dead+1.0 Wind 60 deg - No Ice	56428.63	26517.84	-15310.08	-1665.096	-2883.582	-0.147
0.9 Dead+1.0 Wind 60 deg - No Ice	42321.47	26517.84	-15310.08	-1639.831	-2839.942	-0.148
1.2 Dead+1.0 Wind 90 deg - No Ice	56428.63	31182.77	0.00	-0.907	-3402.218	5.228
0.9 Dead+1.0 Wind 90 deg - No Ice	42321.47	31182.78	0.00	-0.665	-3350.749	5.230
1.2 Dead+1.0 Wind 120 deg - No Ice	56428.63	26632.26	15376.14	1671.712	-2897.918	-0.602
0.9 Dead+1.0 Wind 120 deg - No Ice	42321.47	26632.26	15376.14	1646.764	-2854.065	-0.603
1.2 Dead+1.0 Wind 150 deg - No Ice	56428.63	15833.25	27423.99	2971.748	-1717.120	-6.270
0.9 Dead+1.0 Wind 150 deg - No Ice	42321.47	15833.25	27423.99	2927.412	-1691.160	-6.274
1.2 Dead+1.0 Wind 180 deg - No Ice	56428.63	0.00	30453.73	3304.209	-0.989	-0.454
0.9 Dead+1.0 Wind 180 deg - No Ice	42321.47	0.00	30453.72	3254.730	-0.729	-0.456
1.2 Dead+1.0 Wind 210 deg - No Ice	56428.63	-15926.66	27585.78	2979.387	1719.552	5.483
0.9 Dead+1.0 Wind 210 deg - No Ice	42321.47	-15926.66	27585.78	2935.027	1694.099	5.485
1.2 Dead+1.0 Wind 240 deg - No Ice	56428.63	-26517.84	15310.08	1663.431	2881.597	0.147
0.9 Dead+1.0 Wind 240 deg - No Ice	42321.47	-26517.84	15310.08	1638.608	2838.480	0.147
1.2 Dead+1.0 Wind 270 deg - No Ice	56428.63	-31182.77	0.00	-0.907	3400.235	-5.228
0.9 Dead+1.0 Wind 270 deg - No Ice	42321.47	-31182.78	0.00	-0.665	3349.288	-5.230
1.2 Dead+1.0 Wind 300 deg - No Ice	56428.63	-26632.26	-15376.14	-1673.373	2895.938	0.602
0.9 Dead+1.0 Wind 300 deg -	42321.47	-26632.26	-15376.14	-1647.984	2852.607	0.603

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	lb	lb	lb	kip-ft	kip-ft	kip-ft
No Ice 1.2 Dead+1.0 Wind 330 deg - No Ice	56428.63	-15833.25	-27423.99	-2973.335	1715.275	6.269
0.9 Dead+1.0 Wind 330 deg - No Ice	42321.47	-15833.25	-27423.99	-2928.579	1689.799	6.274
1.2 Dead+1.0 Ice+1.0 Temp	87087.34	0.01	-0.01	-2.111	-2.983	-0.000
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	87087.34	0.00	-7764.85	-896.169	-3.213	0.105
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	87087.34	3882.08	-6723.95	-776.470	-450.200	-1.282
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	87087.34	6748.44	-3896.22	-451.273	-780.887	-0.039
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	87087.34	7821.40	-0.00	-2.291	-905.143	1.215
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	87087.34	6774.13	3911.05	448.646	-784.245	-0.143
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	87087.34	3896.91	6749.64	775.270	-452.124	-1.463
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	87087.34	0.00	7764.85	891.604	-3.213	-0.105
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	87087.34	-3882.08	6723.95	771.913	443.759	1.282
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	87087.34	-6748.44	3896.21	446.708	774.461	0.039
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	87087.34	-7821.40	-0.00	-2.291	898.717	-1.215
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	87087.34	-6774.13	-3911.05	-453.211	777.818	0.143
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	87087.34	-3896.91	-6749.64	-779.827	445.712	1.463
Dead+Wind 0 deg - Service	47023.86	0.00	-7044.90	-758.358	-0.820	0.106
Dead+Wind 30 deg - Service	47023.86	3684.33	-6381.45	-683.974	-395.319	-1.280
Dead+Wind 60 deg - Service	47023.86	6134.40	-3541.70	-382.224	-661.659	-0.034
Dead+Wind 90 deg - Service	47023.86	7213.54	0.00	-0.692	-780.594	1.221
Dead+Wind 120 deg - Service	47023.86	6160.87	3556.98	382.749	-664.953	-0.141
Dead+Wind 150 deg - Service	47023.86	3662.72	6344.02	680.836	-394.295	-1.464
Dead+Wind 180 deg - Service	47023.86	0.00	7044.90	756.981	-0.820	-0.106
Dead+Wind 210 deg - Service	47023.86	-3684.33	6381.45	682.599	393.673	1.280
Dead+Wind 240 deg - Service	47023.86	-6134.40	3541.70	380.847	660.018	0.034
Dead+Wind 270 deg - Service	47023.86	-7213.54	0.00	-0.692	778.953	-1.221
Dead+Wind 300 deg - Service	47023.86	-6160.87	-3556.98	-384.126	663.313	0.141
Dead+Wind 330 deg - Service	47023.86	-3662.72	-6344.02	-682.210	392.660	1.464

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX	PY	PZ	PX	PY	PZ	% Error
	lb	lb	lb	lb	lb	lb	
1	0.00	-47023.86	0.00	0.00	47023.86	0.00	0.000%
2	0.00	-56428.63	-30453.72	-0.00	56428.63	30453.73	0.000%
3	0.00	-42321.47	-30453.72	-0.00	42321.47	30453.72	0.000%
4	15926.66	-56428.63	-27585.78	-15926.66	56428.63	27585.78	0.000%
5	15926.66	-42321.47	-27585.78	-15926.66	42321.47	27585.78	0.000%
6	26517.84	-56428.63	-15310.08	-26517.84	56428.63	15310.08	0.000%
7	26517.84	-42321.47	-15310.08	-26517.84	42321.47	15310.08	0.000%
8	31182.77	-56428.63	0.00	-31182.77	56428.63	-0.00	0.000%
9	31182.77	-42321.47	0.00	-31182.78	42321.47	-0.00	0.000%
10	26632.26	-56428.63	15376.14	-26632.26	56428.63	-15376.14	0.000%

Load Comb.	Sum of Applied Forces PX lb	PY lb	PZ lb	Sum of Reactions PX lb	PY lb	PZ lb	% Error
11	26632.26	-42321.47	15376.14	-26632.26	42321.47	-15376.14	0.000%
12	15833.25	-56428.63	27423.99	-15833.25	56428.63	-27423.99	0.000%
13	15833.25	-42321.47	27423.99	-15833.25	42321.47	-27423.99	0.000%
14	0.00	-56428.63	30453.72	-0.00	56428.63	-30453.73	0.000%
15	0.00	-42321.47	30453.72	-0.00	42321.47	-30453.72	0.000%
16	-15926.66	-56428.63	27585.78	15926.66	56428.63	-27585.78	0.000%
17	-15926.66	-42321.47	27585.78	15926.66	42321.47	-27585.78	0.000%
18	-26517.84	-56428.63	15310.08	26517.84	56428.63	-15310.08	0.000%
19	-26517.84	-42321.47	15310.08	26517.84	42321.47	-15310.08	0.000%
20	-31182.77	-56428.63	0.00	31182.77	56428.63	-0.00	0.000%
21	-31182.77	-42321.47	0.00	31182.78	42321.47	-0.00	0.000%
22	-26632.26	-56428.63	-15376.14	26632.26	56428.63	15376.14	0.000%
23	-26632.26	-42321.47	-15376.14	26632.26	42321.47	15376.14	0.000%
24	-15833.25	-56428.63	-27423.99	15833.25	56428.63	27423.99	0.000%
25	-15833.25	-42321.47	-27423.99	15833.25	42321.47	27423.99	0.000%
26	0.00	-87087.34	0.00	-0.01	87087.34	0.01	0.000%
27	0.00	-87087.34	-7764.82	-0.00	87087.34	7764.85	0.000%
28	3882.06	-87087.34	-6723.93	-3882.08	87087.34	6723.95	0.000%
29	6748.42	-87087.34	-3896.20	-6748.44	87087.34	3896.22	0.000%
30	7821.37	-87087.34	0.00	-7821.40	87087.34	0.00	0.000%
31	6774.11	-87087.34	3911.03	-6774.13	87087.34	-3911.05	0.000%
32	3896.90	-87087.34	6749.62	-3896.91	87087.34	-6749.64	0.000%
33	0.00	-87087.34	7764.82	-0.00	87087.34	-7764.85	0.000%
34	-3882.06	-87087.34	6723.93	3882.08	87087.34	-6723.95	0.000%
35	-6748.42	-87087.34	3896.20	6748.44	87087.34	-3896.21	0.000%
36	-7821.37	-87087.34	0.00	7821.40	87087.34	0.00	0.000%
37	-6774.11	-87087.34	-3911.03	6774.13	87087.34	3911.05	0.000%
38	-3896.90	-87087.34	-6749.62	3896.91	87087.34	6749.64	0.000%
39	0.00	-47023.86	-7044.89	-0.00	47023.86	7044.90	0.000%
40	3684.33	-47023.86	-6381.45	-3684.33	47023.86	6381.45	0.000%
41	6134.40	-47023.86	-3541.70	-6134.40	47023.86	3541.70	0.000%
42	7213.54	-47023.86	0.00	-7213.54	47023.86	-0.00	0.000%
43	6160.87	-47023.86	3556.98	-6160.87	47023.86	-3556.98	0.000%
44	3662.72	-47023.86	6344.02	-3662.72	47023.86	-6344.02	0.000%
45	0.00	-47023.86	7044.89	-0.00	47023.86	-7044.90	0.000%
46	-3684.33	-47023.86	6381.45	3684.33	47023.86	-6381.45	0.000%
47	-6134.40	-47023.86	3541.70	6134.40	47023.86	-3541.70	0.000%
48	-7213.54	-47023.86	0.00	7213.54	47023.86	-0.00	0.000%
49	-6160.87	-47023.86	-3556.98	6160.87	47023.86	3556.98	0.000%
50	-3662.72	-47023.86	-6344.02	3662.72	47023.86	6344.02	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	5	0.00000001	0.00015491
3	Yes	5	0.00000001	0.00006889
4	Yes	6	0.00000001	0.00056613
5	Yes	6	0.00000001	0.00019382
6	Yes	6	0.00000001	0.00058088
7	Yes	6	0.00000001	0.00020196
8	Yes	6	0.00000001	0.00009663
9	Yes	5	0.00000001	0.00065972
10	Yes	6	0.00000001	0.00057908
11	Yes	6	0.00000001	0.00020090

12	Yes	6	0.00000001	0.00068213
13	Yes	6	0.00000001	0.00023811
14	Yes	5	0.00000001	0.00015483
15	Yes	5	0.00000001	0.00006887
16	Yes	6	0.00000001	0.00067175
17	Yes	6	0.00000001	0.00023417
18	Yes	6	0.00000001	0.00057608
19	Yes	6	0.00000001	0.00020035
20	Yes	6	0.00000001	0.00009659
21	Yes	5	0.00000001	0.00065949
22	Yes	6	0.00000001	0.00059077
23	Yes	6	0.00000001	0.00020537
24	Yes	6	0.00000001	0.00056060
25	Yes	6	0.00000001	0.00019197
26	Yes	4	0.00000001	0.00004479
27	Yes	6	0.00000001	0.00021310
28	Yes	6	0.00000001	0.00027198
29	Yes	6	0.00000001	0.00027647
30	Yes	6	0.00000001	0.00021822
31	Yes	6	0.00000001	0.00027523
32	Yes	6	0.00000001	0.00028313
33	Yes	6	0.00000001	0.00021159
34	Yes	6	0.00000001	0.00027739
35	Yes	6	0.00000001	0.00027145
36	Yes	6	0.00000001	0.00021634
37	Yes	6	0.00000001	0.00027604
38	Yes	6	0.00000001	0.00027088
39	Yes	4	0.00000001	0.00031026
40	Yes	5	0.00000001	0.00010427
41	Yes	5	0.00000001	0.00010658
42	Yes	5	0.00000001	0.00006751
43	Yes	5	0.00000001	0.00010351
44	Yes	5	0.00000001	0.00016213
45	Yes	4	0.00000001	0.00030942
46	Yes	5	0.00000001	0.00015455
47	Yes	5	0.00000001	0.00010370
48	Yes	5	0.00000001	0.00006733
49	Yes	5	0.00000001	0.00010984
50	Yes	5	0.00000001	0.00010557

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection ft	Gov. Load Comb.	Tilt °	Twist °
L1	151.5 - 141	1.787	40	1.1948	0.0158
L2	141 - 120.33	1.570	40	1.1654	0.0115
L3	120.33 - 111.19	1.170	40	1.0579	0.0068
L4	111.19 - 82.08	1.005	40	1.0075	0.0058
L5	82.08 - 70.06	0.549	40	0.7661	0.0031
L6	70.06 - 42.24	0.400	40	0.6590	0.0024
L7	42.24 - 32.71	0.144	40	0.3875	0.0012
L8	32.71 - 0	0.087	40	0.3013	0.0008

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection ft	Tilt °	Twist °	Radius of Curvature ft
152.00	QD6616-7	40	1.787	1.1948	0.0158	21439
151.50	DMP65R-BU6DA	40	1.787	1.1948	0.0158	21439
142.00	Round Platform w/ Handrails	40	1.591	1.1690	0.0119	11855
132.70	800 MHz 2X50W RRH w/ Filter	40	1.405	1.1270	0.0091	10837
127.00	APXVSPP18-C-A20	40	1.295	1.0954	0.0078	11316
119.70	RRH2X60	40	1.158	1.0545	0.0067	11311
118.00	Flat Platform w/ Handrails	40	1.127	1.0454	0.0065	10794
116.00	RRFDC-3315-PF-48	40	1.090	1.0347	0.0063	10077
105.00	Flat Platform w/ Handrails	40	0.898	0.9651	0.0052	7854

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection ft	Gov. Load Comb.	Tilt °	Twist °
L1	151.5 - 141	7.797	4	5.2217	0.0680
L2	141 - 120.33	6.851	4	5.0939	0.0496
L3	120.33 - 111.19	5.103	4	4.6234	0.0292
L4	111.19 - 82.08	4.384	4	4.4028	0.0249
L5	82.08 - 70.06	2.397	4	3.3467	0.0134
L6	70.06 - 42.24	1.744	4	2.8779	0.0104
L7	42.24 - 32.71	0.629	4	1.6912	0.0049
L8	32.71 - 0	0.379	4	1.3144	0.0036

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection ft	Tilt °	Twist °	Radius of Curvature ft
152.00	QD6616-7	4	7.797	5.2217	0.0680	4988
151.50	DMP65R-BU6DA	4	7.797	5.2217	0.0680	4988
142.00	Round Platform w/ Handrails	4	6.940	5.1096	0.0512	2757
132.70	800 MHz 2X50W RRH w/ Filter	4	6.129	4.9263	0.0389	2513
127.00	APXVSPP18-C-A20	4	5.649	4.7878	0.0336	2618
119.70	RRH2X60	4	5.052	4.6085	0.0288	2611
118.00	Flat Platform w/ Handrails	4	4.916	4.5688	0.0279	2492
116.00	RRFDC-3315-PF-48	4	4.758	4.5223	0.0270	2327
105.00	Flat Platform w/ Handrails	4	3.919	4.2174	0.0223	1812

Compression Checks

Pole Design Data

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

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	lb	lb	
L1	151.5 - 150.45	TP17.7841x17.1872x0.24	10.50	0.00	0.0	13.1429	-2213.98	768861.00	0.003
	150.45 - 149.4					13.1891	-2288.26	771560.00	0.003
	149.4 - 148.35					13.2352	-2362.88	774258.00	0.003
	148.35 - 147.3					13.2813	-2437.87	776957.00	0.003
	147.3 - 146.25					13.3274	-2513.21	779655.00	0.003
	146.25 - 145.2					13.3736	-2588.93	782354.00	0.003
	145.2 - 144.15					13.4197	-2665.03	785052.00	0.003
	144.15 - 143.1					13.4658	-2741.52	787751.00	0.003
	143.1 - 142.05					13.5120	-2818.40	790449.00	0.004
	142.05 - 141					13.5581	-10440.00	793148.00	0.013
L2	141 - 139.966	TP31.557x17.7841x0.3059	20.67	0.00	0.0	17.8943	-10542.60	1046820.00	0.010
	139.966 - 138.933					18.5726	-10647.80	1086500.00	0.010
	138.933 - 137.899					19.2509	-10755.90	1126180.00	0.010
	137.899 - 136.866					19.9292	-10866.70	1165860.00	0.009
	136.866 - 135.833					20.6076	-10980.30	1205540.00	0.009
	135.833 - 134.799					21.2859	-11096.70	1245220.00	0.009
	134.799 - 133.766					21.9642	-11215.70	1284910.00	0.009
	133.766 - 132.732					22.6425	-11337.50	1324590.00	0.009
	132.732 - 131.698					23.3208	-11669.80	1364270.00	0.009
	131.698 - 130.665					23.9991	-11796.90	1403950.00	0.008
	130.665 - 129.631					24.6774	-11926.70	1443630.00	0.008
	129.631 - 128.598					25.3558	-12059.20	1483310.00	0.008
	128.598 - 127.564					26.0341	-12194.30	1522990.00	0.008
	127.564 - 126.531					26.7124	-15399.70	1562670.00	0.010
	126.531 - 125.498					27.3907	-15540.90	1602360.00	0.010
	125.498 - 124.464					28.0690	-15684.70	1642040.00	0.010
	124.464 - 123.43					28.7473	-15831.20	1681720.00	0.009
	123.43 - 122.397					29.4256	-15980.40	1721400.00	0.009
	122.397 - 121.364					30.1040	-16132.30	1761080.00	0.009
	121.364 - 120.33					30.7823	-16286.80	1800760.00	0.009
L3	120.33 - 119.314	TP33.028x31.557x0.3063	9.14	0.00	0.0	30.9833	-16642.80	1812520.00	0.009
	119.314 - 118.299					31.1445	-16802.80	1821960.00	0.009
	118.299 - 117.283					31.3057	-21116.90	1831390.00	0.012
	117.283 - 116.268					31.4669	-21280.30	1840820.00	0.012
	116.268 - 115.252					31.6281	-21510.40	1850250.00	0.012
	115.252 -					31.7893	-21675.90	1859680.00	0.012

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
	114.237								
	114.237 - 113.221					31.9505	-21842.40	1869110.00	0.012
	113.221 - 112.206					32.1118	-22010.00	1878540.00	0.012
	112.206 - 111.19					32.2730	-22178.50	1887970.00	0.012
L4	111.19 - 109.734	TP38.347x33.028x0.3141	29.11	0.00	0.0	33.3559	-22428.90	1951320.00	0.011
	109.734 - 108.279					33.6249	-22683.40	1967050.00	0.012
	108.279 - 106.823					33.8939	-22940.10	1982790.00	0.012
	106.823 - 105.368					34.1628	-23199.00	1998530.00	0.012
	105.368 - 103.912					34.4318	-27024.10	2014260.00	0.013
	103.912 - 102.457					34.7008	-27289.80	2030000.00	0.013
	102.457 - 101.001					34.9698	-27557.90	2045730.00	0.013
	101.001 - 99.546					35.2388	-27828.30	2061470.00	0.013
	99.546 - 98.0905					35.5077	-28101.00	2077200.00	0.014
	98.0905 - 96.635					35.7767	-28376.10	2092940.00	0.014
	96.635 - 95.1795					36.0457	-28653.50	2108670.00	0.014
	95.1795 - 93.724					36.3147	-28933.20	2124410.00	0.014
	93.724 - 92.2685					36.5837	-29215.20	2140140.00	0.014
	92.2685 - 90.813					36.8527	-29499.50	2155880.00	0.014
	90.813 - 89.3575					37.1216	-29786.00	2171620.00	0.014
	89.3575 - 87.902					37.3906	-30074.90	2187350.00	0.014
	87.902 - 86.4465					37.6596	-30366.00	2203090.00	0.014
	86.4465 - 84.991					37.9286	-30659.30	2218820.00	0.014
	84.991 - 83.5355					38.1976	-30954.90	2234560.00	0.014
	83.5355 - 82.08					38.4666	-31252.70	2250290.00	0.014
L5	82.08 - 81.0783	TP39.711x38.347x0.3804	12.02	0.00	0.0	46.6441	-31495.20	2728680.00	0.012
	81.0783 - 80.0767					46.7833	-31732.70	2736820.00	0.012
	80.0767 - 79.075					46.9225	-31971.10	2744970.00	0.012
	79.075 - 78.0733					47.0617	-32210.40	2753110.00	0.012
	78.0733 - 77.0717					47.2010	-32450.60	2761260.00	0.012
	77.0717 - 76.07					47.3402	-32691.60	2769400.00	0.012
	76.07 -					47.4794	-32933.60	2777550.00	0.012

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
	75.0683								
	75.0683 - 74.0667					47.6187	-33176.50	2785690.00	0.012
	74.0667 - 73.065					47.7579	-33420.30	2793840.00	0.012
	73.065 - 72.0633					47.8971	-33665.00	2801980.00	0.012
	72.0633 - 71.0617					48.0364	-33910.60	2810130.00	0.012
	71.0617 - 70.06					48.1756	-34136.30	2818270.00	0.012
L6	70.06 - 68.669	TP43.95x39.711x0.4014	27.82	0.00	0.0	51.0819	-34491.20	2988290.00	0.012
	68.669 - 67.278					51.3559	-34851.30	3004320.00	0.012
	67.278 - 65.887					51.6298	-35213.30	3020340.00	0.012
	65.887 - 64.496					51.9038	-35577.40	3036370.00	0.012
	64.496 - 63.105					52.1777	-35943.60	3052400.00	0.012
	63.105 - 61.714					52.4517	-36311.80	3068420.00	0.012
	61.714 - 60.323					52.7256	-36682.00	3084450.00	0.012
	60.323 - 58.932					52.9995	-37054.20	3100470.00	0.012
	58.932 - 57.541					53.2735	-37428.50	3116500.00	0.012
	57.541 - 56.15					53.5474	-37804.70	3132530.00	0.012
	56.15 - 54.759					53.8214	-38183.00	3148550.00	0.012
	54.759 - 53.368					54.0953	-38557.10	3164580.00	0.012
	53.368 - 51.977					54.3693	-38939.30	3180600.00	0.012
	51.977 - 50.586					54.6432	-39323.60	3196630.00	0.012
	50.586 - 49.195					54.9172	-39709.80	3212660.00	0.012
	49.195 - 47.804					55.1911	-40098.10	3228680.00	0.012
	47.804 - 46.413					55.4651	-40488.40	3244710.00	0.012
	46.413 - 45.022					55.7390	-40880.70	3260730.00	0.013
	45.022 - 43.631					56.0130	-41275.00	3276760.00	0.013
	43.631 - 42.24					56.2869	-41671.30	3292780.00	0.013
L7	42.24 - 41.1811	TP45.064x43.95x0.4706	9.53	0.00	0.0	66.0733	-42018.30	3865290.00	0.011
	41.1811 - 40.1222					66.2609	-42360.90	3876260.00	0.011
	40.1222 - 39.0633					66.4484	-42704.60	3887230.00	0.011
	39.0633 - 38.0044					66.6360	-43049.30	3898200.00	0.011
	38.0044 - 36.9456					66.8235	-43395.10	3909180.00	0.011
	36.9456 - 35.8867					67.0111	-43742.00	3920150.00	0.011
	35.8867 -					67.1987	-44089.90	3931120.00	0.011

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
	34.8278								
	34.8278 - 33.7689					67.3862	-44438.90	3942100.00	0.011
	33.7689 - 32.71					67.5738	-44789.00	3953070.00	0.011
L8	32.71 - 31.0745	TP49.552x45.064x0.4906	32.71	0.00	0.0	70.7685	-45338.40	4139960.00	0.011
	31.0745 - 29.439					71.1230	-45896.00	4160700.00	0.011
	29.439 - 27.8035					71.4775	-46456.30	4181430.00	0.011
	27.8035 - 26.168					71.8320	-47019.50	4202170.00	0.011
	26.168 - 24.5325					72.1865	-47585.50	4222910.00	0.011
	24.5325 - 22.897					72.5410	-48154.40	4243650.00	0.011
	22.897 - 21.2615					72.8955	-48726.00	4264380.00	0.011
	21.2615 - 19.626					73.2500	-49300.40	4285120.00	0.012
	19.626 - 17.9905					73.6045	-49877.60	4305860.00	0.012
	17.9905 - 16.355					73.9589	-50457.60	4326600.00	0.012
	16.355 - 14.7195					74.3134	-51040.30	4347340.00	0.012
	14.7195 - 13.084					74.6679	-51625.90	4368070.00	0.012
	13.084 - 11.4485					75.0224	-52214.20	4388810.00	0.012
	11.4485 - 9.813					75.3769	-52805.30	4409550.00	0.012
	9.813 - 8.1775					75.7314	-53399.20	4430290.00	0.012
	8.1775 - 6.542					76.0859	-53995.80	4451020.00	0.012
	6.542 - 4.9065					76.4404	-54595.20	4471760.00	0.012
	4.9065 - 3.271					76.7949	-55197.30	4492500.00	0.012
	3.271 - 1.6355					77.1494	-55802.20	4513240.00	0.012
	1.6355 - 0					77.5039	-56409.90	4533980.00	0.012

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	151.5 - 150.45	TP17.7841x17.1872x0.24	5.470	333.605	0.016	0.000	333.605	0.000
	150.45 - 149.4		9.454	335.967	0.028	0.000	335.967	0.000
	149.4 - 148.35		13.508	338.337	0.040	0.000	338.337	0.000
	148.35 - 147.3		17.634	340.717	0.052	0.000	340.717	0.000
	147.3 - 146.25		21.830	343.103	0.064	0.000	343.103	0.000
	146.25 - 145.2		26.097	345.499	0.076	0.000	345.499	0.000
	145.2 - 144.15		30.435	347.903	0.087	0.000	347.903	0.000
	144.15 - 143.1		34.844	350.315	0.099	0.000	350.315	0.000
	143.1 - 142.05		39.324	352.736	0.111	0.000	352.736	0.000
	142.05 - 141		49.033	355.165	0.138	0.000	355.165	0.000
L2	141 - 139.966	TP31.557x17.7841x0.3059	58.914	483.887	0.122	0.000	483.887	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
	139.966 - 138.933		68.876	521.582	0.132	0.000	521.582	0.000
	138.933 - 137.899		78.919	560.692	0.141	0.000	560.692	0.000
	137.899 - 136.866		89.047	601.217	0.148	0.000	601.217	0.000
	136.866 - 135.833		99.263	643.154	0.154	0.000	643.154	0.000
	135.833 - 134.799		109.568	686.507	0.160	0.000	686.507	0.000
	134.799 - 133.766		119.968	731.273	0.164	0.000	731.273	0.000
	133.766 - 132.732		130.463	777.452	0.168	0.000	777.452	0.000
	132.732 - 131.698		141.163	825.047	0.171	0.000	825.047	0.000
	131.698 - 130.665		151.968	874.058	0.174	0.000	874.058	0.000
	130.665 - 129.631		162.878	924.475	0.176	0.000	924.475	0.000
	129.631 - 128.598		173.896	969.008	0.179	0.000	969.008	0.000
	128.598 - 127.564		185.025	1013.583	0.183	0.000	1013.583	0.000
	127.564 - 126.531		197.167	1058.692	0.186	0.000	1058.692	0.000
	126.531 - 125.498		210.505	1104.283	0.191	0.000	1104.283	0.000
	125.498 - 124.464		223.962	1150.333	0.195	0.000	1150.333	0.000
	124.464 - 123.43		237.540	1196.808	0.198	0.000	1196.808	0.000
	123.43 - 122.397		251.243	1243.675	0.202	0.000	1243.675	0.000
	122.397 - 121.364		265.073	1290.892	0.205	0.000	1290.892	0.000
	121.364 - 120.33		279.034	1338.433	0.208	0.000	1338.433	0.000
L3	120.33 - 119.314	TP33.028x31.557x0.3063	292.973	1352.175	0.217	0.000	1352.175	0.000
	119.314 - 118.299		307.181	1363.550	0.225	0.000	1363.550	0.000
	118.299 - 117.283		324.385	1374.933	0.236	0.000	1374.933	0.000
	117.283 - 116.268		342.730	1386.325	0.247	0.000	1386.325	0.000
	116.268 - 115.252		361.440	1397.742	0.259	0.000	1397.742	0.000
	115.252 - 114.237		380.158	1409.167	0.270	0.000	1409.167	0.000
	114.237 - 113.221		398.989	1420.608	0.281	0.000	1420.608	0.000
	113.221 - 112.206		417.934	1432.058	0.292	0.000	1432.058	0.000
	112.206 - 111.19		436.993	1443.525	0.303	0.000	1443.525	0.000
L4	111.19 - 109.734	TP38.347x33.028x0.3141	464.502	1514.267	0.307	0.000	1514.267	0.000
	109.734 - 108.279		492.228	1533.842	0.321	0.000	1533.842	0.000

Section No.	Elevation	Size	M_{ux}	ϕM_{nx}	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy}	ϕM_{ny}	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
	ft		kip-ft	kip-ft		kip-ft	kip-ft	
	108.279 - 106.823		520.172	1553.450	0.335	0.000	1553.450	0.000
	106.823 - 105.368		548.333	1573.092	0.349	0.000	1573.092	0.000
	105.368 - 103.912		579.744	1592.758	0.364	0.000	1592.758	0.000
	103.912 - 102.457		612.397	1612.458	0.380	0.000	1612.458	0.000
	102.457 - 101.001		645.263	1632.192	0.395	0.000	1632.192	0.000
	101.001 - 99.546		678.346	1651.942	0.411	0.000	1651.942	0.000
	99.546 - 98.0905		711.643	1671.725	0.426	0.000	1671.725	0.000
	98.0905 - 96.635		745.157	1691.525	0.441	0.000	1691.525	0.000
	96.635 - 95.1795		778.886	1711.342	0.455	0.000	1711.342	0.000
	95.1795 - 93.724		812.831	1731.175	0.470	0.000	1731.175	0.000
	93.724 - 92.2685		846.992	1751.033	0.484	0.000	1751.033	0.000
	92.2685 - 90.813		881.367	1770.892	0.498	0.000	1770.892	0.000
	90.813 - 89.3575		915.967	1790.775	0.511	0.000	1790.775	0.000
	89.3575 - 87.902		950.775	1810.658	0.525	0.000	1810.658	0.000
	87.902 - 86.4465		985.808	1830.558	0.539	0.000	1830.558	0.000
	86.4465 - 84.991		1021.058	1850.458	0.552	0.000	1850.458	0.000
	84.991 - 83.5355		1056.525	1870.367	0.565	0.000	1870.367	0.000
	83.5355 - 82.08		1092.208	1890.267	0.578	0.000	1890.267	0.000
L5	82.08 - 81.0783	TP39.711x38.347x0.3804	1116.892	2490.342	0.448	0.000	2490.342	0.000
	81.0783 - 80.0767		1141.675	2502.450	0.456	0.000	2502.450	0.000
	80.0767 - 79.075		1166.550	2514.567	0.464	0.000	2514.567	0.000
	79.075 - 78.0733		1191.533	2526.700	0.472	0.000	2526.700	0.000
	78.0733 - 77.0717		1216.608	2538.833	0.479	0.000	2538.833	0.000
	77.0717 - 76.07		1241.783	2550.983	0.487	0.000	2550.983	0.000
	76.07 - 75.0683		1267.058	2563.142	0.494	0.000	2563.142	0.000
	75.0683 - 74.0667		1292.433	2575.308	0.502	0.000	2575.308	0.000
	74.0667 - 73.065		1317.900	2587.492	0.509	0.000	2587.492	0.000
	73.065 - 72.0633		1343.467	2599.675	0.517	0.000	2599.675	0.000
	72.0633 - 71.0617		1369.125	2611.875	0.524	0.000	2611.875	0.000
	71.0617 - 70.06		1394.900	2624.083	0.532	0.000	2624.083	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L6	70.06 - 68.669	TP43.95x39.711x0.4014	1431.225	2847.817	0.503	0.000	2847.817	0.000
	68.669 - 67.278		1467.725	2872.833	0.511	0.000	2872.833	0.000
	67.278 - 65.887		1504.408	2897.892	0.519	0.000	2897.892	0.000
	65.887 - 64.496		1541.283	2923.000	0.527	0.000	2923.000	0.000
	64.496 - 63.105		1578.333	2948.133	0.535	0.000	2948.133	0.000
	63.105 - 61.714		1615.567	2973.317	0.543	0.000	2973.317	0.000
	61.714 - 60.323		1652.983	2998.533	0.551	0.000	2998.533	0.000
	60.323 - 58.932		1690.583	3023.792	0.559	0.000	3023.792	0.000
	58.932 - 57.541		1728.358	3049.075	0.567	0.000	3049.075	0.000
	57.541 - 56.15		1766.317	3074.400	0.575	0.000	3074.400	0.000
	56.15 - 54.759		1804.458	3099.758	0.582	0.000	3099.758	0.000
	54.759 - 53.368		1842.933	3125.150	0.590	0.000	3125.150	0.000
	53.368 - 51.977		1881.608	3150.575	0.597	0.000	3150.575	0.000
	51.977 - 50.586		1920.475	3176.025	0.605	0.000	3176.025	0.000
	50.586 - 49.195		1959.533	3201.508	0.612	0.000	3201.508	0.000
	49.195 - 47.804		1998.775	3227.017	0.619	0.000	3227.017	0.000
	47.804 - 46.413		2038.200	3252.558	0.627	0.000	3252.558	0.000
	46.413 - 45.022		2077.817	3278.125	0.634	0.000	3278.125	0.000
	45.022 - 43.631		2117.617	3303.717	0.641	0.000	3303.717	0.000
	43.631 - 42.24		2157.608	3329.325	0.648	0.000	3329.325	0.000
L7	42.24 - 41.1811	TP45.064x43.95x0.4706	2188.167	4150.825	0.527	0.000	4150.825	0.000
	41.1811 - 40.1222		2218.825	4170.475	0.532	0.000	4170.475	0.000
	40.1222 - 39.0633		2249.583	4190.150	0.537	0.000	4190.150	0.000
	39.0633 - 38.0044		2280.433	4209.850	0.542	0.000	4209.850	0.000
	38.0044 - 36.9456		2311.375	4229.567	0.546	0.000	4229.567	0.000
	36.9456 - 35.8867		2342.417	4249.300	0.551	0.000	4249.300	0.000
	35.8867 - 34.8278		2373.550	4269.058	0.556	0.000	4269.058	0.000
	34.8278 - 33.7689		2404.783	4288.833	0.561	0.000	4288.833	0.000
	33.7689 - 32.71		2436.108	4308.633	0.565	0.000	4308.633	0.000
L8	32.71 - 31.0745	TP49.552x45.064x0.4906	2484.658	4589.608	0.541	0.000	4589.608	0.000
	31.0745 - 29.439		2533.408	4628.125	0.547	0.000	4628.125	0.000
	29.439 - 27.8035		2582.342	4666.725	0.553	0.000	4666.725	0.000

Section No.	Elevation	Size	M_{ux}	ϕM_{nx}	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy}	ϕM_{ny}	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
	ft		kip-ft	kip-ft		kip-ft	kip-ft	
	27.8035 - 26.168		2631.467	4705.392	0.559	0.000	4705.392	0.000
	26.168 - 24.5325		2680.775	4744.133	0.565	0.000	4744.133	0.000
	24.5325 - 22.897		2730.283	4782.950	0.571	0.000	4782.950	0.000
	22.897 - 21.2615		2779.967	4821.833	0.577	0.000	4821.833	0.000
	21.2615 - 19.626		2829.842	4860.792	0.582	0.000	4860.792	0.000
	19.626 - 17.9905		2879.900	4899.817	0.588	0.000	4899.817	0.000
	17.9905 - 16.355		2930.142	4938.908	0.593	0.000	4938.908	0.000
	16.355 - 14.7195		2980.567	4978.058	0.599	0.000	4978.058	0.000
	14.7195 - 13.084		3031.175	5017.283	0.604	0.000	5017.283	0.000
	13.084 - 11.4485		3081.967	5056.567	0.609	0.000	5056.567	0.000
	11.4485 - 9.813		3132.933	5095.917	0.615	0.000	5095.917	0.000
	9.813 - 8.1775		3184.075	5135.325	0.620	0.000	5135.325	0.000
	8.1775 - 6.542		3235.400	5174.800	0.625	0.000	5174.800	0.000
	6.542 - 4.9065		3286.892	5214.325	0.630	0.000	5214.325	0.000
	4.9065 - 3.271		3338.567	5253.917	0.635	0.000	5253.917	0.000
	3.271 - 1.6355		3390.417	5293.558	0.640	0.000	5293.558	0.000
	1.6355 - 0		3442.433	5333.258	0.645	0.000	5333.258	0.000

Pole Shear Design Data

Section No.	Elevation	Size	Actual V_u	ϕV_n	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u	ϕT_n	Ratio $\frac{T_u}{\phi T_n}$
	ft		lb	lb		kip-ft	kip-ft	
L1	151.5 - 150.45	TP17.7841x17.1872x0.24	3761.16	230658.00	0.016	1.549	345.059	0.004
	150.45 - 149.4		3828.33	231468.00	0.017	1.549	347.486	0.004
	149.4 - 148.35		3895.62	232277.00	0.017	1.549	349.921	0.004
	148.35 - 147.3		3963.02	233087.00	0.017	1.549	352.364	0.004
	147.3 - 146.25		4030.52	233897.00	0.017	1.549	354.816	0.004
	146.25 - 145.2		4098.12	234706.00	0.017	1.549	357.277	0.004
	145.2 - 144.15		4165.79	235516.00	0.018	1.549	359.745	0.004
	144.15 - 143.1		4233.53	236325.00	0.018	1.549	362.223	0.004
	143.1 - 142.05		4301.34	237135.00	0.018	1.549	364.708	0.004
	142.05 - 141		9526.39	237944.00	0.040	3.529	367.203	0.010
L2	141 - 139.966	TP31.557x17.7841x0.3059	9601.58	314045.00	0.031	3.529	501.847	0.007
	139.966 - 138.933		9679.74	325949.00	0.030	3.529	540.615	0.007
	138.933 - 137.899		9760.54	337854.00	0.029	3.529	580.825	0.006
	137.899 - 136.866		9844.04	349758.00	0.028	3.529	622.477	0.006
	136.866 - 135.833		9930.27	361663.00	0.027	3.529	665.572	0.005
	135.833 - 134.799		10019.30	373567.00	0.027	3.529	710.108	0.005
	134.799 -		10111.10	385472.00	0.026	3.528	756.087	0.005

Section No.	Elevation ft	Size	Actual V_u lb	ϕV_n lb	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
	133.766							
	133.766 - 132.732		10205.70	397376.00	0.026	3.528	803.508	0.004
	132.732 - 131.698		10407.40	409280.00	0.025	3.528	852.375	0.004
	131.698 - 130.665		10507.60	421185.00	0.025	3.358	902.675	0.004
	130.665 - 129.631		10610.70	433089.00	0.025	3.358	954.425	0.004
	129.631 - 128.598		10716.70	444994.00	0.024	3.357	1007.617	0.003
	128.598 - 127.564		10825.60	456898.00	0.024	3.357	1062.250	0.003
	127.564 - 126.531		12852.50	468802.00	0.027	3.613	1118.325	0.003
	126.531 - 125.498		12965.90	480707.00	0.027	3.613	1175.842	0.003
	125.498 - 124.464		13082.10	492611.00	0.027	3.613	1234.800	0.003
	124.464 - 123.43		13201.10	504516.00	0.026	3.613	1295.200	0.003
	123.43 - 122.397		13323.10	516420.00	0.026	3.612	1357.042	0.003
	122.397 - 121.364		13447.90	528324.00	0.025	3.612	1420.325	0.003
	121.364 - 120.33		13575.60	540229.00	0.025	3.612	1485.058	0.002
L3	120.33 - 119.314	TP33.028x31.557x0.3063	13934.90	543757.00	0.026	3.769	1502.558	0.003
	119.314 - 118.299		14047.80	546587.00	0.026	3.769	1518.233	0.002
	118.299 - 117.283		18010.10	549416.00	0.033	4.890	1533.992	0.003
	117.283 - 116.268		18121.80	552245.00	0.033	4.890	1549.825	0.003
	116.268 - 115.252		18377.70	555074.00	0.033	4.890	1565.750	0.003
	115.252 - 114.237		18489.60	557903.00	0.033	4.783	1581.750	0.003
	114.237 - 113.221		18601.60	560732.00	0.033	4.783	1597.833	0.003
	113.221 - 112.206		18713.70	563561.00	0.033	4.783	1613.992	0.003
	112.206 - 111.19		18826.00	566390.00	0.033	4.782	1630.242	0.003
L4	111.19 - 109.734	TP38.347x33.028x0.3141	18977.40	585396.00	0.032	4.782	1698.233	0.003
	109.734 - 108.279		19127.10	590116.00	0.032	4.782	1725.733	0.003
	108.279 - 106.823		19277.10	594837.00	0.032	4.781	1753.458	0.003
	106.823 - 105.368		19427.50	599558.00	0.032	4.781	1781.400	0.003
	105.368 - 103.912		22365.70	604278.00	0.037	5.254	1809.558	0.003
	103.912 - 102.457		22513.70	608999.00	0.037	5.254	1837.942	0.003
	102.457 - 101.001		22661.90	613720.00	0.037	5.253	1866.550	0.003
	101.001 -		22810.30	618440.00	0.037	5.253	1895.375	0.003

Section No.	Elevation ft	Size	Actual V_u lb	ϕV_n lb	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
	99.546							
	99.546 - 98.0905		22958.80	623161.00	0.037	5.252	1924.417	0.003
	98.0905 - 96.635		23107.40	627882.00	0.037	5.252	1953.683	0.003
	96.635 - 95.1795		23256.30	632602.00	0.037	5.251	1983.175	0.003
	95.1795 - 93.724		23405.30	637323.00	0.037	5.251	2012.883	0.003
	93.724 - 92.2685		23554.40	642044.00	0.037	5.250	2042.808	0.003
	92.2685 - 90.813		23703.80	646764.00	0.037	5.250	2072.958	0.003
	90.813 - 89.3575		23853.40	651485.00	0.037	5.249	2103.333	0.002
	89.3575 - 87.902		24003.10	656205.00	0.037	5.248	2133.925	0.002
	87.902 - 86.4465		24153.10	660926.00	0.037	5.248	2164.733	0.002
	86.4465 - 84.991		24303.20	665647.00	0.037	5.247	2195.767	0.002
	84.991 - 83.5355		24453.60	670367.00	0.036	5.247	2227.025	0.002
	83.5355 - 82.08		24604.10	675088.00	0.036	5.246	2258.500	0.002
L5	82.08 - 81.0783	TP39.711x38.347x0.3804	24695.80	818603.00	0.030	5.246	2742.033	0.002
	81.0783 - 80.0767		24794.80	821047.00	0.030	5.245	2758.433	0.002
	80.0767 - 79.075		24893.50	823490.00	0.030	5.245	2774.875	0.002
	79.075 - 78.0733		24992.00	825934.00	0.030	5.245	2791.367	0.002
	78.0733 - 77.0717		25090.30	828377.00	0.030	5.244	2807.908	0.002
	77.0717 - 76.07		25188.30	830821.00	0.030	5.244	2824.492	0.002
	76.07 - 75.0683		25286.10	833264.00	0.030	5.244	2841.133	0.002
	75.0683 - 74.0667		25383.70	835708.00	0.030	5.243	2857.825	0.002
	74.0667 - 73.065		25481.00	838151.00	0.030	5.243	2874.558	0.002
	73.065 - 72.0633		25578.10	840594.00	0.030	5.243	2891.342	0.002
	72.0633 - 71.0617		25675.00	843038.00	0.030	5.242	2908.175	0.002
	71.0617 - 70.06		26060.00	845481.00	0.031	6.286	2925.058	0.002
L6	70.06 - 68.669	TP43.95x39.711x0.4014	26195.00	896488.00	0.029	6.286	3116.575	0.002
	68.669 - 67.278		26326.70	901295.00	0.029	6.285	3150.100	0.002
	67.278 - 65.887		26458.30	906103.00	0.029	6.285	3183.792	0.002
	65.887 - 64.496		26589.70	910911.00	0.029	6.284	3217.667	0.002
	64.496 - 63.105		26721.00	915719.00	0.029	6.284	3251.725	0.002
	63.105 - 61.714		26852.20	920527.00	0.029	6.283	3285.958	0.002

Section No.	Elevation ft	Size	Actual V_u lb	ϕV_n lb	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
	61.714 - 60.323		26983.30	925334.00	0.029	6.282	3320.375	0.002
	60.323 - 58.932		27114.20	930142.00	0.029	6.282	3354.967	0.002
	58.932 - 57.541		27244.90	934950.00	0.029	6.281	3389.742	0.002
	57.541 - 56.15		27375.60	939758.00	0.029	6.281	3424.692	0.002
	56.15 - 54.759		27506.00	944565.00	0.029	6.280	3459.817	0.002
	54.759 - 53.368		27754.20	949373.00	0.029	5.492	3495.133	0.002
	53.368 - 51.977		27889.40	954181.00	0.029	5.492	3530.617	0.002
	51.977 - 50.586		28024.50	958989.00	0.029	5.491	3566.292	0.002
	50.586 - 49.195		28159.40	963796.00	0.029	5.491	3602.133	0.002
	49.195 - 47.804		28294.20	968604.00	0.029	5.490	3638.167	0.002
	47.804 - 46.413		28428.90	973412.00	0.029	5.490	3674.367	0.001
	46.413 - 45.022		28563.30	978220.00	0.029	5.489	3710.758	0.001
	45.022 - 43.631		28697.70	983028.00	0.029	5.489	3747.325	0.001
	43.631 - 42.24		28831.90	987835.00	0.029	5.489	3784.067	0.001
L7	42.24 - 41.1811	TP45.064x43.95x0.4706	28915.90	1159590.00	0.025	5.488	4447.550	0.001
	41.1811 - 40.1222		29007.40	1162880.00	0.025	5.488	4472.842	0.001
	40.1222 - 39.0633		29098.50	1166170.00	0.025	5.488	4498.200	0.001
	39.0633 - 38.0044		29189.30	1169460.00	0.025	5.488	4523.625	0.001
	38.0044 - 36.9456		29279.80	1172750.00	0.025	5.487	4549.125	0.001
	36.9456 - 35.8867		29370.00	1176040.00	0.025	5.487	4574.700	0.001
	35.8867 - 34.8278		29459.90	1179340.00	0.025	5.487	4600.350	0.001
	34.8278 - 33.7689		29549.40	1182630.00	0.025	5.487	4626.067	0.001
	33.7689 - 32.71		29638.70	1185920.00	0.025	5.486	4651.850	0.001
L8	32.71 - 31.0745	TP49.552x45.064x0.4906	29764.70	1241990.00	0.024	5.486	4894.108	0.001
	31.0745 - 29.439		29882.10	1248210.00	0.024	5.486	4943.267	0.001
	29.439 - 27.8035		29998.90	1254430.00	0.024	5.486	4992.667	0.001
	27.8035 - 26.168		30115.10	1260650.00	0.024	5.485	5042.308	0.001
	26.168 - 24.5325		30230.70	1266870.00	0.024	5.485	5092.200	0.001
	24.5325 - 22.897		30345.70	1273090.00	0.024	5.485	5142.333	0.001
	22.897 - 21.2615		30460.00	1279320.00	0.024	5.485	5192.717	0.001
	21.2615 - 19.626		30573.70	1285540.00	0.024	5.484	5243.342	0.001
	19.626 -		30686.80	1291760.00	0.024	5.484	5294.217	0.001

Section No.	Elevation ft	Size	Actual V_u lb	ϕV_n lb	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
	17.9905							
	17.9905 - 16.355		30799.20	1297980.00	0.024	5.484	5345.333	0.001
	16.355 - 14.7195		30910.90	1304200.00	0.024	5.484	5396.700	0.001
	14.7195 - 13.084		31022.00	1310420.00	0.024	5.484	5448.308	0.001
	13.084 - 11.4485		31132.50	1316640.00	0.024	5.483	5500.167	0.001
	11.4485 - 9.813		31242.20	1322860.00	0.024	5.483	5552.267	0.001
	9.813 - 8.1775		31351.30	1329090.00	0.024	5.483	5604.608	0.001
	8.1775 - 6.542		31459.70	1335310.00	0.024	5.483	5657.208	0.001
	6.542 - 4.9065		31567.50	1341530.00	0.024	5.483	5710.041	0.001
	4.9065 - 3.271		31674.50	1347750.00	0.024	5.483	5763.125	0.001
	3.271 - 1.6355		31780.80	1353970.00	0.023	5.483	5816.459	0.001
	1.6355 - 0		31886.50	1360190.00	0.023	5.483	5870.033	0.001

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	151.5 - 150.45	0.003	0.016	0.000	0.016	0.004	0.020 ✔	1.000	✔
	150.45 - 149.4	0.003	0.028	0.000	0.017	0.004	0.032 ✔	1.000	✔
	149.4 - 148.35	0.003	0.040	0.000	0.017	0.004	0.043 ✔	1.000	✔
	148.35 - 147.3	0.003	0.052	0.000	0.017	0.004	0.055 ✔	1.000	✔
	147.3 - 146.25	0.003	0.064	0.000	0.017	0.004	0.067 ✔	1.000	✔
	146.25 - 145.2	0.003	0.076	0.000	0.017	0.004	0.079 ✔	1.000	✔
	145.2 - 144.15	0.003	0.087	0.000	0.018	0.004	0.091 ✔	1.000	✔
	144.15 - 143.1	0.003	0.099	0.000	0.018	0.004	0.103 ✔	1.000	✔
	143.1 - 142.05	0.004	0.111	0.000	0.018	0.004	0.116 ✔	1.000	✔
	142.05 - 141	0.013	0.138	0.000	0.040	0.010	0.154 ✔	1.000	✔
L2	141 - 139.966	0.010	0.122	0.000	0.031	0.007	0.133 ✔	1.000	✔
	139.966 - 138.933	0.010	0.132	0.000	0.030	0.007	0.143 ✔	1.000	✔
	138.933 - 137.899	0.010	0.141	0.000	0.029	0.006	0.152 ✔	1.000	✔
	137.899 - 136.866	0.009	0.148	0.000	0.028	0.006	0.159 ✔	1.000	✔

Section No.	Elevation ft	Ratio $P_u/\phi P_n$	Ratio $M_{ux}/\phi M_{nx}$	Ratio $M_{uy}/\phi M_{ny}$	Ratio $V_u/\phi V_n$	Ratio $T_u/\phi T_n$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	136.866 - 135.833	0.009	0.154	0.000	0.027	0.005	0.165 ✔	1.000	✔
	135.833 - 134.799	0.009	0.160	0.000	0.027	0.005	0.170 ✔	1.000	✔
	134.799 - 133.766	0.009	0.164	0.000	0.026	0.005	0.174 ✔	1.000	✔
	133.766 - 132.732	0.009	0.168	0.000	0.026	0.004	0.177 ✔	1.000	✔
	132.732 - 131.698	0.009	0.171	0.000	0.025	0.004	0.181 ✔	1.000	✔
	131.698 - 130.665	0.008	0.174	0.000	0.025	0.004	0.183 ✔	1.000	✔
	130.665 - 129.631	0.008	0.176	0.000	0.025	0.004	0.185 ✔	1.000	✔
	129.631 - 128.598	0.008	0.179	0.000	0.024	0.003	0.188 ✔	1.000	✔
	128.598 - 127.564	0.008	0.183	0.000	0.024	0.003	0.191 ✔	1.000	✔
	127.564 - 126.531	0.010	0.186	0.000	0.027	0.003	0.197 ✔	1.000	✔
	126.531 - 125.498	0.010	0.191	0.000	0.027	0.003	0.201 ✔	1.000	✔
	125.498 - 124.464	0.010	0.195	0.000	0.027	0.003	0.205 ✔	1.000	✔
	124.464 - 123.43	0.009	0.198	0.000	0.026	0.003	0.209 ✔	1.000	✔
	123.43 - 122.397	0.009	0.202	0.000	0.026	0.003	0.212 ✔	1.000	✔
	122.397 - 121.364	0.009	0.205	0.000	0.025	0.003	0.215 ✔	1.000	✔
	121.364 - 120.33	0.009	0.208	0.000	0.025	0.002	0.218 ✔	1.000	✔
L3	120.33 - 119.314	0.009	0.217	0.000	0.026	0.003	0.227 ✔	1.000	✔
	119.314 - 118.299	0.009	0.225	0.000	0.026	0.002	0.235 ✔	1.000	✔
	118.299 - 117.283	0.012	0.236	0.000	0.033	0.003	0.249 ✔	1.000	✔
	117.283 - 116.268	0.012	0.247	0.000	0.033	0.003	0.260 ✔	1.000	✔
	116.268 - 115.252	0.012	0.259	0.000	0.033	0.003	0.272 ✔	1.000	✔
	115.252 - 114.237	0.012	0.270	0.000	0.033	0.003	0.283 ✔	1.000	✔
	114.237 - 113.221	0.012	0.281	0.000	0.033	0.003	0.294 ✔	1.000	✔
	113.221 - 112.206	0.012	0.292	0.000	0.033	0.003	0.305 ✔	1.000	✔
	112.206 - 111.19	0.012	0.303	0.000	0.033	0.003	0.316 ✔	1.000	✔
L4	111.19 - 109.734	0.011	0.307	0.000	0.032	0.003	0.319 ✔	1.000	✔

Section No.	Elevation ft	Ratio P_u / ϕP_n	Ratio M_{ux} / ϕM_{nx}	Ratio M_{uy} / ϕM_{ny}	Ratio V_u / ϕV_n	Ratio T_u / ϕT_n	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	109.734 - 108.279	0.012	0.321	0.000	0.032	0.003	0.334	1.000	✔
	108.279 - 106.823	0.012	0.335	0.000	0.032	0.003	0.348	1.000	✔
	106.823 - 105.368	0.012	0.349	0.000	0.032	0.003	0.361	1.000	✔
	105.368 - 103.912	0.013	0.364	0.000	0.037	0.003	0.379	1.000	✔
	103.912 - 102.457	0.013	0.380	0.000	0.037	0.003	0.395	1.000	✔
	102.457 - 101.001	0.013	0.395	0.000	0.037	0.003	0.410	1.000	✔
	101.001 - 99.546	0.013	0.411	0.000	0.037	0.003	0.426	1.000	✔
	99.546 - 98.0905	0.014	0.426	0.000	0.037	0.003	0.441	1.000	✔
	98.0905 - 96.635	0.014	0.441	0.000	0.037	0.003	0.456	1.000	✔
	96.635 - 95.1795	0.014	0.455	0.000	0.037	0.003	0.470	1.000	✔
	95.1795 - 93.724	0.014	0.470	0.000	0.037	0.003	0.485	1.000	✔
	93.724 - 92.2685	0.014	0.484	0.000	0.037	0.003	0.499	1.000	✔
	92.2685 - 90.813	0.014	0.498	0.000	0.037	0.003	0.513	1.000	✔
	90.813 - 89.3575	0.014	0.511	0.000	0.037	0.002	0.527	1.000	✔
	89.3575 - 87.902	0.014	0.525	0.000	0.037	0.002	0.540	1.000	✔
	87.902 - 86.4465	0.014	0.539	0.000	0.037	0.002	0.554	1.000	✔
	86.4465 - 84.991	0.014	0.552	0.000	0.037	0.002	0.567	1.000	✔
	84.991 - 83.5355	0.014	0.565	0.000	0.036	0.002	0.580	1.000	✔
	83.5355 - 82.08	0.014	0.578	0.000	0.036	0.002	0.593	1.000	✔
L5	82.08 - 81.0783	0.012	0.448	0.000	0.030	0.002	0.461	1.000	✔
	81.0783 - 80.0767	0.012	0.456	0.000	0.030	0.002	0.469	1.000	✔
	80.0767 - 79.075	0.012	0.464	0.000	0.030	0.002	0.477	1.000	✔
	79.075 - 78.0733	0.012	0.472	0.000	0.030	0.002	0.484	1.000	✔
	78.0733 - 77.0717	0.012	0.479	0.000	0.030	0.002	0.492	1.000	✔
	77.0717 - 76.07	0.012	0.487	0.000	0.030	0.002	0.500	1.000	✔
	76.07 - 75.0683	0.012	0.494	0.000	0.030	0.002	0.507	1.000	✔

Section No.	Elevation ft	Ratio P_u / ϕP_n	Ratio M_{ux} / ϕM_{nx}	Ratio M_{uy} / ϕM_{ny}	Ratio V_u / ϕV_n	Ratio T_u / ϕT_n	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	75.0683 - 74.0667	0.012	0.502	0.000	0.030	0.002	0.515	1.000	✔
	74.0667 - 73.065	0.012	0.509	0.000	0.030	0.002	0.522	1.000	✔
	73.065 - 72.0633	0.012	0.517	0.000	0.030	0.002	0.530	1.000	✔
	72.0633 - 71.0617	0.012	0.524	0.000	0.030	0.002	0.537	1.000	✔
	71.0617 - 70.06	0.012	0.532	0.000	0.031	0.002	0.545	1.000	✔
L6	70.06 - 68.669	0.012	0.503	0.000	0.029	0.002	0.515	1.000	✔
	68.669 - 67.278	0.012	0.511	0.000	0.029	0.002	0.523	1.000	✔
	67.278 - 65.887	0.012	0.519	0.000	0.029	0.002	0.532	1.000	✔
	65.887 - 64.496	0.012	0.527	0.000	0.029	0.002	0.540	1.000	✔
	64.496 - 63.105	0.012	0.535	0.000	0.029	0.002	0.548	1.000	✔
	63.105 - 61.714	0.012	0.543	0.000	0.029	0.002	0.556	1.000	✔
	61.714 - 60.323	0.012	0.551	0.000	0.029	0.002	0.564	1.000	✔
	60.323 - 58.932	0.012	0.559	0.000	0.029	0.002	0.572	1.000	✔
	58.932 - 57.541	0.012	0.567	0.000	0.029	0.002	0.580	1.000	✔
	57.541 - 56.15	0.012	0.575	0.000	0.029	0.002	0.588	1.000	✔
	56.15 - 54.759	0.012	0.582	0.000	0.029	0.002	0.595	1.000	✔
	54.759 - 53.368	0.012	0.590	0.000	0.029	0.002	0.603	1.000	✔
	53.368 - 51.977	0.012	0.597	0.000	0.029	0.002	0.610	1.000	✔
	51.977 - 50.586	0.012	0.605	0.000	0.029	0.002	0.618	1.000	✔
	50.586 - 49.195	0.012	0.612	0.000	0.029	0.002	0.625	1.000	✔
	49.195 - 47.804	0.012	0.619	0.000	0.029	0.002	0.633	1.000	✔
	47.804 - 46.413	0.012	0.627	0.000	0.029	0.001	0.640	1.000	✔
	46.413 - 45.022	0.013	0.634	0.000	0.029	0.001	0.647	1.000	✔
	45.022 - 43.631	0.013	0.641	0.000	0.029	0.001	0.655	1.000	✔
	43.631 - 42.24	0.013	0.648	0.000	0.029	0.001	0.662	1.000	✔
L7	42.24 - 41.1811	0.011	0.527	0.000	0.025	0.001	0.539	1.000	✔

Section No.	Elevation ft	Ratio P_u / ϕP_n	Ratio M_{ux} / ϕM_{nx}	Ratio M_{uy} / ϕM_{ny}	Ratio V_u / ϕV_n	Ratio T_u / ϕT_n	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	41.1811 - 40.1222	0.011	0.532	0.000	0.025	0.001	0.544	1.000	✔
	40.1222 - 39.0633	0.011	0.537	0.000	0.025	0.001	0.549	1.000	✔
	39.0633 - 38.0044	0.011	0.542	0.000	0.025	0.001	0.553	1.000	✔
	38.0044 - 36.9456	0.011	0.546	0.000	0.025	0.001	0.558	1.000	✔
	36.9456 - 35.8867	0.011	0.551	0.000	0.025	0.001	0.563	1.000	✔
	35.8867 - 34.8278	0.011	0.556	0.000	0.025	0.001	0.568	1.000	✔
	34.8278 - 33.7689	0.011	0.561	0.000	0.025	0.001	0.573	1.000	✔
	33.7689 - 32.71	0.011	0.565	0.000	0.025	0.001	0.577	1.000	✔
L8	32.71 - 31.0745	0.011	0.541	0.000	0.024	0.001	0.553	1.000	✔
	31.0745 - 29.439	0.011	0.547	0.000	0.024	0.001	0.559	1.000	✔
	29.439 - 27.8035	0.011	0.553	0.000	0.024	0.001	0.565	1.000	✔
	27.8035 - 26.168	0.011	0.559	0.000	0.024	0.001	0.571	1.000	✔
	26.168 - 24.5325	0.011	0.565	0.000	0.024	0.001	0.577	1.000	✔
	24.5325 - 22.897	0.011	0.571	0.000	0.024	0.001	0.583	1.000	✔
	22.897 - 21.2615	0.011	0.577	0.000	0.024	0.001	0.589	1.000	✔
	21.2615 - 19.626	0.012	0.582	0.000	0.024	0.001	0.594	1.000	✔
	19.626 - 17.9905	0.012	0.588	0.000	0.024	0.001	0.600	1.000	✔
	17.9905 - 16.355	0.012	0.593	0.000	0.024	0.001	0.606	1.000	✔
	16.355 - 14.7195	0.012	0.599	0.000	0.024	0.001	0.611	1.000	✔
	14.7195 - 13.084	0.012	0.604	0.000	0.024	0.001	0.617	1.000	✔
	13.084 - 11.4485	0.012	0.609	0.000	0.024	0.001	0.622	1.000	✔
	11.4485 - 9.813	0.012	0.615	0.000	0.024	0.001	0.627	1.000	✔
	9.813 - 8.1775	0.012	0.620	0.000	0.024	0.001	0.633	1.000	✔
	8.1775 - 6.542	0.012	0.625	0.000	0.024	0.001	0.638	1.000	✔
	6.542 - 4.9065	0.012	0.630	0.000	0.024	0.001	0.643	1.000	✔
	4.9065 - 3.271	0.012	0.635	0.000	0.024	0.001	0.648	1.000	✔

Section No.	Elevation ft	Ratio $P_u/\phi P_n$	Ratio $M_{ux}/\phi M_{nx}$	Ratio $M_{uy}/\phi M_{ny}$	Ratio $V_u/\phi V_n$	Ratio $T_u/\phi T_n$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	3.271 - 1.6355	0.012	0.640	0.000	0.023	0.001	0.653 ✔	1.000	✔
	1.6355 - 0	0.012	0.645	0.000	0.023	0.001	0.659 ✔	1.000	✔

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
L1	151.5 - 141	Pole	TP17.7841x17.1872x0.24	1	-10440.00	793148.00	15.4	Pass
L2	141 - 120.33	Pole	TP31.557x17.7841x0.3059	2	-16286.80	1800760.00	21.8	Pass
L3	120.33 - 111.19	Pole	TP33.028x31.557x0.3063	3	-22178.50	1887970.00	31.6	Pass
L4	111.19 - 82.08	Pole	TP38.347x33.028x0.3141	4	-31252.70	2250290.00	59.3	Pass
L5	82.08 - 70.06	Pole	TP39.711x38.347x0.3804	5	-34136.30	2818270.00	54.5	Pass
L6	70.06 - 42.24	Pole	TP43.95x39.711x0.4014	6	-41671.30	3292780.00	66.2	Pass
L7	42.24 - 32.71	Pole	TP45.064x43.95x0.4706	7	-44789.00	3953070.00	57.7	Pass
L8	32.71 - 0	Pole	TP49.552x45.064x0.4906	8	-56409.90	4533980.00	65.9	Pass
							Summary	
						Pole (L6)	66.2	Pass
						RATING =	**66.2**	**Pass**

Base Plate & Anchor Rod Analysis

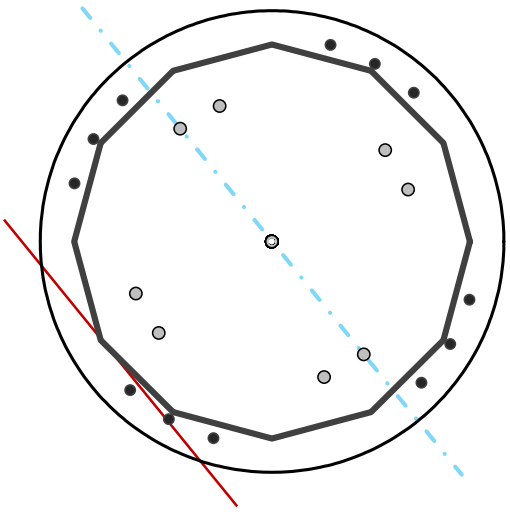
Pole Dimensions		
Number of Sides	12	-
Diameter	51	in
Thickness	3/4	in
Orientation Offset		°

Base Reactions		
Moment, Mu	3,709.0	k-ft
Axial, Pu	87.1	k
Shear, Vu	34.1	k
Neutral Axis	129	°

Report Capacities		
Component	Capacity	Result
Base Plate	21%	Pass
Anchor Rods	87%	Pass
Dwyidag	-	-

Base Plate		
Shape	Round	-
Diameter, ø	62	in
Thickness	2	in
Grade	A572-60	
Yield Strength, Fy	60	ksi
Tensile Strength, Fu	75	ksi
Clip	N/A	in
Orientation Offset		°
Anchor Rod Detail	c	η=0.55
Clear Distance	N/A	in
Applied Moment, Mu	328.1	k
Bending Stress, ϕMn	1589.2	k

Original Anchor Rods		
Arrangement	Cluster	-
Quantity	12	-
Diameter, ø	1 3/4	in
Bolt Circle	55	in
Grade	Other	
Yield Strength, Fy	128	ksi
Tensile Strength, Fu	150	ksi
Spacing	6.5	in
Orientation Offset	15	°
Applied Force, Pu	172.6	k
Anchor Rods, ϕPn	213.7	k



Additional Anchor Rods		
Quantity	8	-
Diameter, ø	2 1/4	in
Bolt Circle	39	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Bypass Base?	No	
Orientation Offset		°
Applied Force, Pu	208.8	k
Additional Rod, ϕPn	243.6	k

Calculations for Monopole Base Plate & Anchor Rod Analysis

Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
-	k	k-ft	-
Base Forces	34.1	3709.0	1.00
Anchor Rod Forces	30.8	2360.0	0.64
Additional Bolt (Grp1) Forces	3.3	1349.0	0.36
Additional Bolt (Grp2) Forces	0.0	0.0	0.00
Dywidag Forces	0.0	0.0	0.00
Stiffener Forces	0.0	0.0	0.00

Geometric Properties

Section	Gross Area	Net Area	Individual Inertia	Threads per Inch	Moment of Inertia
-	in^2	in^2	in^4	#	in^4
Pole	117.0509	9.7542	1.8426		36967.22
Bolt	2.4053	1.8995	0.2871	5	8653.61
Bolt1	3.9761	3.2477	0.8393	4.5	4946.45
Bolt2	0.0000	0.0000	0.0000	0	0.00
Dywidag	0.0000	0.0000	0.0000		0.00
Stiffener	0.0000	0.0000	0.0000		0.00

Base Plate		
Shape	Round	-
Diameter, D	62	in
Thickness, t	2	in
Yield Strength, Fy	60	ksi
Tensile Strength, Fu	75	ksi
Base Plate Chord	35.256	in
Detail Type	c	-
Detail Factor	0.55	-
Clear Distance	N/A	-

External Base Plate		
Chord Length AA	25.429	in
Additional AA	4.000	in
Section Modulus, Z	29.429	in^3
Applied Moment, Mu	328.1	k-ft
Bending Capacity, ϕMn	1589.2	k-ft
Capacity, Mu/ϕMn	0.206	OK
Chord Length AB	21.424	in
Additional AB	4.000	in
Section Modulus, Z	25.424	in^3
Applied Moment, Mu	146.9	k-ft
Bending Capacity, ϕMn	1372.9	k-ft
Capacity, Mu/ϕMn	0.107	OK
Bend Line Length	0.000	in
Additional Bend Line	0.000	in
Section Modulus, Z	0.000	in^3
Applied Moment, Mu	#N/A	k-ft
Bending Capacity, ϕMn	0.0	k-ft
Capacity, Mu/ϕMn		

Internal Base Plate		
Arc Length	0.000	in
Section Modulus, Z	0.000	in^3
Moment Arm	0.000	in
Applied Moment, Mu	0.0	k-ft
Bending Capacity, ϕMn	0.0	k-ft
Capacity, Mu/ϕMn		

Anchor Rods		
Anchor Rod Quantity, N	12	-
Rod Diameter, d	1.75	in
Bolt Circle, BC	55.1	in
Yield Strength, Fy	128	ksi
Tensile Strength, Fu	150	ksi
Applied Axial, Pu	172.6	k
Applied Shear, Vu	0.5	k
Compressive Capacity, ϕPn	213.7	k
Tensile Capacity, ϕRnt	0.808	OK
Interaction Capacity	0.812	OK

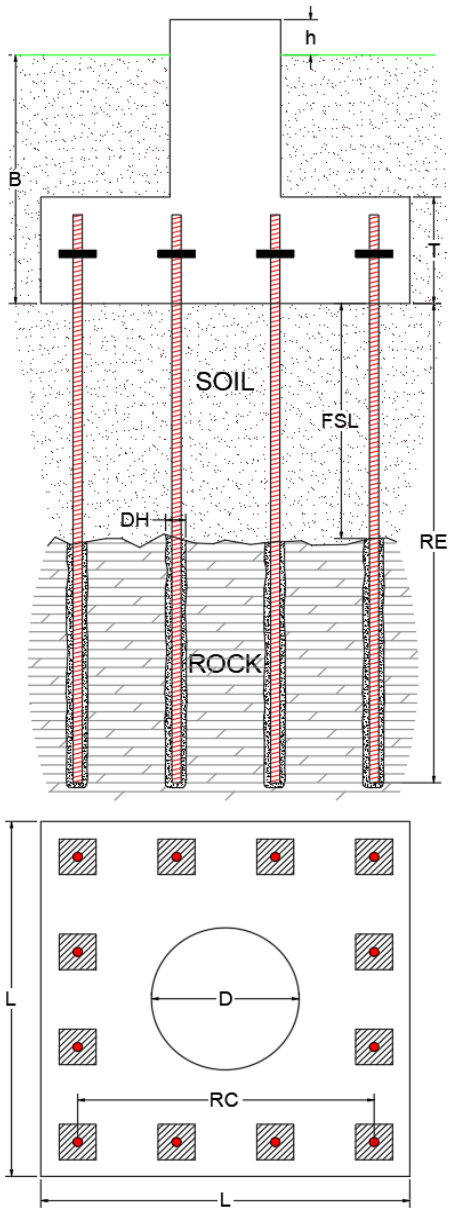
Additional Bolt Group 1		
Bolt Quantity, N	8	-
Bolt Diameter, d	2.25	in
Bolt Circle, BC	39	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	208.8	k
Applied Shear, Vu	2.1	k
Compressive Capacity, ϕPn	243.6	k
Compressive Capacity, ϕPn	0.857	OK
Interaction Capacity	0.873	OK

AMERICAN TOWER CORPORATION

Site Name: Brln-Berlin, CT
Site Number: 302483
Tower Type: MP
Design Base Loads (Factored) - Analysis per TIA-222-H Standards

Rock Anchor Group Foundation Analysis

Foundation Parameters		
Include Rebar Analysis?	N	
Include Bearing Plate Analysis?	Y	
Moment (Overturning) (M_u):	3442	k-ft
Shear/Leg (V_u):	31.9	k
Compression/Leg (P_u):	87.1	k
Uplift/Leg (T_u):	0.0	k
Mat/Pier Height Above Ground [h]:	0.83	ft
Pier Diameter [D]:	8	ft
Length / Width of Mat [L]:	11	ft
Mat Thickness [T]:	2.58	ft
Base Depth of Mat [B]:	8	ft
Water Table Depth (BGL):	99	ft
Unit Weight of Concrete:	150	pcf
Unit Weight of Soil at Mat/Pier:	135	pcf
Unit Weight of Water:	62.4	pcf
Unit Weight of Soil Below Water Table:	72.6	pcf
Ultimate Compressive Bearing Pressure at Mat:	26,000	psf
Bearing on Rock?	N	
Shear Friction Coefficient:	0.4	
Capacity Increase (Due to Transient Loads):	1	
Pullout Angle:	30	°
Rod Diameter, d:	1.750	in
Rod Yield Strength, Fy:	120	ksi
Rod Ultimate Strength, Fu:	150	ksi
Rod Gross Area, Ag:	2.41	in^2
Rod Net Area, An:	1.90	in^2
Number of Rods:	12	
Rod Arrangment:	Circular	
If Square: Grid or Border?		
Number of Rows:		
Number of Columns:		
Rod Group Circle [RC]:	55.5	in
Diameter of Cored Hole [DH]:	3.63	in
Overall Rod Embedment Length [RE]:	386	in
Free Stress Length [FSL]	182	in
Ultimate Rod-to-Grout Interface Bond Strength:	300	psi
Ultimate Grout-to-Rock Interface Bond Strength:	150	psi
Lock Off Load:	0	k
Rock Anchor Design Plastic or Elastic:	Elastic	
Ignore Pullout Weight Resistance (Y/N):	N	



Capacities & Results		
Soil Strength Reduction Factor (ϕ_s):	0.75	
Bearing Strength Reduction Factor (ϕ_b):	0.75	
Factored Moment Capacity per Leg ($\phi_s M_n$):	5062.7	k
Factored Uplift Capacity per Leg ($\phi_s T_n$):	2672.7	k
Applied Moment, M_u:	3723.2	k-ft
Applied Uplift, T_u:	0.0	k
$T_u/\phi_s T_n + M_u/\phi_s M_n$:	74%	Pass
Applied Axial, P_u:	238.1	k
Factored Compressive Capacity per Leg ($\phi_b P_n$):	1853.1	k
$P_u/\phi_b P_n$:	13%	Pass
Applied Shear, V_u:	31.9	k
Factored Shear Capacity per Leg ($\phi_s V_n$):	1538.6	k
$V_u/\phi_s V_n$:	2%	Pass

Unfactored Governing Strengths		
Total Pullout Weight:	3,932.6	k
Total Grout-to-Rock Bond Strength:	4,187.5	k
Total Rod-to-Grout Bond Strength:	4,037.6	k
Total Rod Yield Strength:	3,463.6	k
Total Rod Rupture Strength:	3,419.0	k
Pullout Weight per Rod:	3,043.3	k
Rock-to-Grout Bond Strength per Rod:	349.0	k
Rod-to-Grout Bond Strength per Rod:	336.5	k
Rod Yield Strength per Rod:	288.6	k
Rod Rupture Strength per Rod:	284.9	k

AMERICAN TOWER® CORPORATION

Rod Bearing Plate Design		
Concrete Compressive Strength (f'_c):	4,000	psi
Bearing Plate Width:	8.66	in
Bearing Plate Thickness:	1.377	in
Bearing Plate Yield Strength:	36	ksi
Critical Length:	6.79	in
Plastic Section Modulus:	3.22	in^3
Plate Design Moment (M_u):	45.23	k-in
Factored Plate Flexural Resistance ($\phi_B M_n$):	104.21	k-in
Flexure Result:	**43%**	**Pass**
Plate Shear Design Load (V_u):	157.2	k
Anchor Rod Nut Diameter:	2.66	in
Bearing Plate Pressure:	2.95	ksi
Factored Plate Shear Resistance ($\phi_V V_n$):	186.6	k
Shear Result:	**84%**	**Pass**
Plate Bearing Design Load (P_u):	117.9	k
Factored Bearing Plate Capacity of a Single Anchor ($\phi_B P_n$):	249.7	k
Factored Punch Shear Capacity Resisting Plate Load ($\phi_P P_n$):	563.4	k
Bearing Result:	**47%**	**Pass**

EXHIBIT 4

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

New/Replacement Antenna Mount Analysis Report and PMI Requirements

Mount ReAnalysis-VZW

SMART Tool Project #: 10211288
Colliers Engineering & Design Project #: 21777888 (Rev 4)

November 29, 2023

Site Information	*Site ID:*	*5000384280-VZW / BERLIN 2 CT*
	Site Name:	*BERLIN 2 CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*260 Beckley Rd* *Berlin, Connecticut 06037* *Hartford County*
	Latitude:	*41.631711°*
	Longitude:	*-72.729914°*
Structure Information	*Tower Type:*	*152-Ft Monopole*
	Mount Type:	*12.50-Ft Platform*

FUZE ID # 2552218

Analysis Results

Platform: **90.0% Pass w/ Mount Replacement***
(Site Pro 1 F4P-12 w/ F4P-HRK12)

***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: Cody Sherman

Executive Summary:

The objective of this report is to determine the capacity of the proposed antenna support mount at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards. The proposed mount was assumed to be installed properly to the existing tower per the manufacturer's instructions. Colliers Engineering & Design cannot verify that the proposed mount will fit properly and is not liable for any fit-up issues during installation.

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: 323437, dated September 25, 2023
Mount Specification	Site Pro 1 Part #: F4P-12
Support Rail Specification	Site Pro 1 Part #: F4P-HRK12
Pipe-to-Pipe Specification	VZWSMART-MSK3D

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:	0.993
Seismic Parameters:	S_S:	0.201 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 (V17)	

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
115.00	116.00	2	Commscope	NHH-65B-R2B	Added
		3	Samsung	MT6413-77A	
		4	Samsung	RT4423-48A	
		4	Samsung	RF4461d-13A	
		4	Samsung	RF4439d-25A	
		2	Commscope	NHHSS-45B-R2BT4	
		2	Commscope	2NN2HH-33B-R4	
		2	Commscope	NHHSS-65B-R2BT4	
		2	Raycap	RVZDC-3315-PF-48	Retained

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

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

Standard Conditions:

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

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

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

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
Threaded Rod	63.0%	Pass
Mount Pipe	37.0%	Pass
Support Rail Corner	8.0%	Pass
Support Rail	42.0%	Pass
Face Horizontal	55.0%	Pass
Secondary Standoff	16.0%	Pass
Standoff Struss Bracing	67.0%	Pass
Grating Bracing	51.0.0%	Pass
Side Bracing	86.0%	Pass
Standoff Horizontal	90.0%	Pass
Grating Support	38.0%	Pass

Structure Rating – ***(Controlling Utilization of all Components)***	**90.0%**

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	60.9	60.4	84.8	84.4
0.5	86.2	85.0	118.5	117.3
1	108.2	106.4	148.8	146.9

Notes:
- (EPA)a values listed above may be used in the absence of more precise information
- (EPA)a values in the table above include 4 sector(s).
- Ka factors included in (EPA)a calculations

Requirements:

The proposed antenna mount is **SUFFICIENT** for the final loading configuration (attachment 2) upon completion of the mount replacement (attachment 3) and requirements below.

Contractor shall replace existing mount with new fortress quad platform mount (Site Pro 1 Part #: F4P-12).

Contractor shall install new Support Rail kit (Site Pro 1 Part #: F4P-HRK12) 42'' above the proposed mount face members.

Contractor shall install (4) 96'' long P2.5 SCH 40 mount pipes spaced evenly along proposed mount face on all sectors.

Contractor shall install new (6) 96" long P2.5 SCH 40 secondary mount pipes in the proposed antenna loading locations on the Beta and Delta sectors. Connect dual pipes together using one (1) new pipe to pipe clamp set for each pipe (VZWSMART-MSK3D) with a maximum pipe to pipe spacing of 6'' C.C. Lower clamp set shall be installed 9'' above the lower face horizontal and the upper clamp set shall be installed 33'' above the lower face horizontal.

Contractor shall inspect climbing facilities and safety climb and ensure they are in good condition. Contractor shall install safety climb wire rope guides in locations where wire rope is rubbing against the mount or mount-to-tower connection steel. Wire brush clean any observed corrosion and protect with two (2) coats of cold galvanization (Zinga or Zinc Kote). Contractor shall provide photos of wire rope guide installation as part of PMI documents. Contact EOR if additional guidance is required.

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 Post Installation Inspection (PMI) Report Deliverables**
2. Antenna Placement Diagrams
3. Mount Manufacturer Drawings
4. Existing Mount Photos
5. Analysis Calculations

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – New Mount Passing MA

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 #: 5000384280 SMART Project #: 10211288 Fuze Project ID: 2552218

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

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

Base Requirements:

- If installation 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 mount drawings" showing contractor's name, contact information, 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 passing mount analysis (MA) contact the SMART Tool vendor immediately.
- Each photo should be time and date stamped.
- Photos should be high resolution.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope. 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.
  - Photos of the mount after installation; if the mounts are at different rad elevations, pictures must be provided for all elevations that equipment was installed.
- *Photos taken at Mount Elevation*
  - Photos showing the safety climb wire rope above and below the mount prior to installation.
  - Photos showing the climbing facility and safety climb if present.
  - Photos showing each individual sector after installation of mounts. Each entire sector shall 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 mount; pictures shall also include connection hardware (U-bolts, bolts, nuts, all-threaded rods, etc.)
    - Photos showing the installed mount elevation.

Antenna & Equipment Placement and Geometry Confirmation:

- The contractor shall certify that the antenna & equipment placement and geometry is in accordance with the sketch and table as included in the mount analysis and noted below.

☐ 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.

Special Instructions / Validation as required from the MA or any other information the contractor deems necessary to share that was identified:

Issue:

Refer to additional PMI Instructions included at the end of this report. Contact EOR if this document is not available.

Response:

Special Instruction Confirmation:

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

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:

New Mount Certification:

☐ The contractor certifies that the New Mount installed is as specified in the Passing Mount Analysis.
☐ The contractor notes that the New Mount installed is not as specified and engineering approval was received for the New Mount installed.

Certifying Individual:

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

MDG #: **5000384280**
Site Name: **BERLIN 2 CT**
Fuze ID #: **2552218**
Colliers Engineering & Design Project #: **21777888**

PMI INSTRUCTIONS:

1. Contractor shall replace existing mount with new fortress quad platform mount (Site Pro 1 Part #: F4P-12).

2. Contractor shall install new Support Rail kit (Site Pro 1 Part #: F4P-HRK12) 42” above the proposed mount face members.

3. Contractor shall install (4) 96” long P2.5 SCH 40 mount pipes spaced evenly along proposed mount face on all sectors.

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5. Contractor shall inspect climbing facilities and safety climb and ensure they are in good condition. Contractor shall install safety climb wire rope guides in locations where wire rope is rubbing against the mount or mount-to-tower connection steel. Wire brush clean any observed corrosion and protect with two (2) coats of cold galvanization (Zinga or Zinc Kote). Contractor shall provide photos of wire rope guide installation as part of PMI documents. Contact EOR if additional guidance is required.

Structure: 5000384280-VZW - BERLIN 2 CT

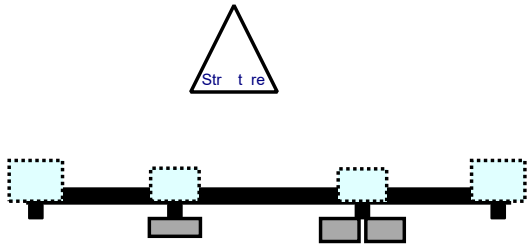
Se tor: **A** 11/29/2023

Str t re Type: Mo opole 10211288

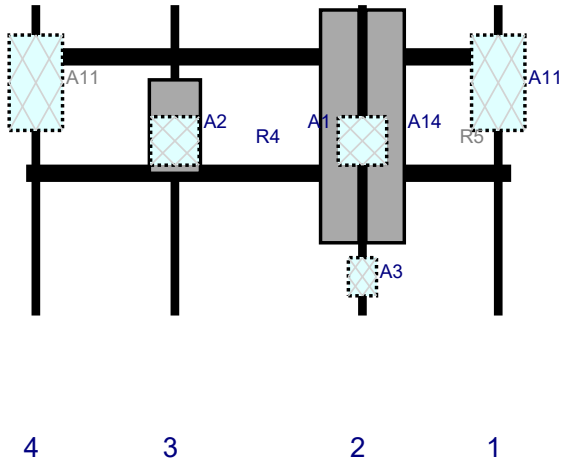
Mo t Elev: 115.00 P ge: 1

Colliers Engineering & Design

Plan View

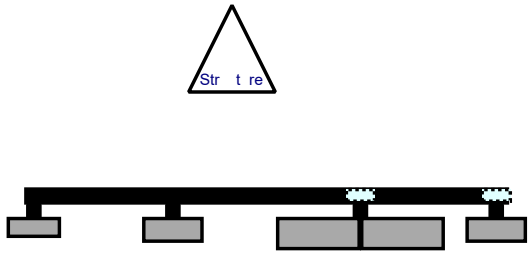


Front View - Loo i g t Str t re

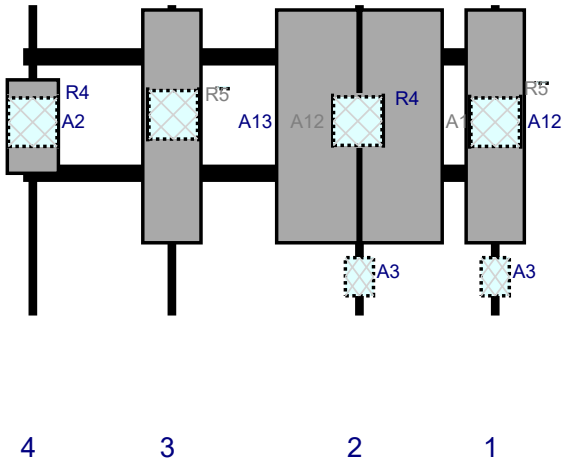


Re #	Model	Height (i)	Width (i)	H Dist Fr L.	Pipe #	Pipe Pos V	A t Pos	C. A t Fr T.	A t H O	St t s	V lid tio
A11	RVZDC-3315-PF-48	29.5	16.5	146	1		Behi d	24	0	Ret i ed	
A1	NHH-65B-R2B	72	11.9	104	2		Fro t	37.5	-7	Added	
A3	RT4423-48A	11.8	8.7	104	2		Behi d	84	0	Added	
A14	NHHSS-65B-R2BT4	72	11.9	104	2		Fro t	37.5	7	Added	
R5	RF4439d-25A	15	15	104	2		Behi d	42	0	Added	
A2	MT6413-77A	28.9	15.8	46	3		Fro t	37.56	0	Added	
R4	RF4461d-13A	15	15	46	3		Behi d	42	0	Added	
A11	RVZDC-3315-PF-48	29.5	16.5	3	4		Behi d	24	0	Ret i ed	
B1	RF4461d-13A	15	15		Me er					Added	
B2	RF4439d-25A	15	15		Me er					Added	
B3	RF4461d-13A	15	15		Me er					Added	
B4	RF4439d-25A	15	15		Me er					Added	
C1	RF4461d-13A	15	15		Me er					Added	

Plan View

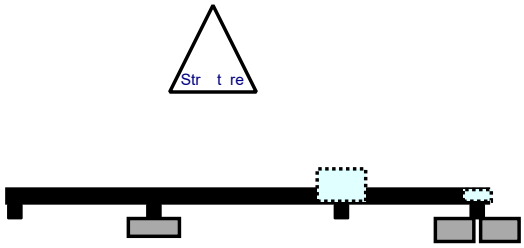


Front View - Loo i g t Str t re

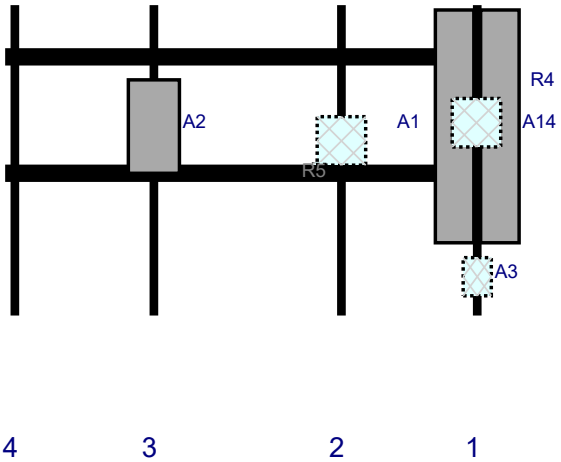


Re #	Model	Height (i)	Width (i)	H Dist Fr L.	Pipe #	Pipe Pos V	A t Pos	C. A t Fr T.	A t H O	St t s	V lid tio
A3	RT4423-48A	11.8	8.7	146	1		Behi d	84	0	Added	
A12	NHHSS-45B-R2BT4	72	18	146	1		Fro t	37.5	0	Added	
A3	RT4423-48A	11.8	8.7	104	2		Behi d	84	0	Added	
A13	2NN2HH-33B-R4	72	25.2	104	2		Fro t	37.5	13	Added	
A13	2NN2HH-33B-R4	72	25.2	104	2		Fro t	37.5	-13	Added	
A12	NHHSS-45B-R2BT4	72	18	46	3		Fro t	37.5	0	Added	
A2	MT6413-77A	28.9	15.8	3	4		Fro t	37.56	0	Added	

Plan View

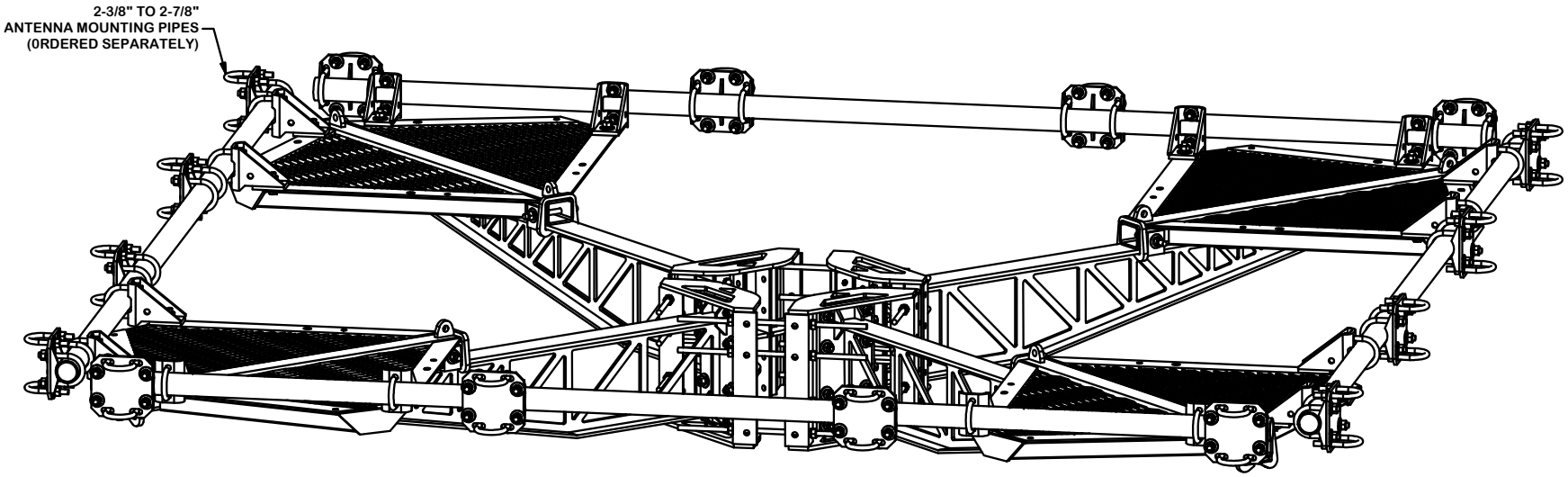


Front View - Loo i g t Str t re



Re #	Model	Height (i)	Width (i)	H Dist Fr L.	Pipe #	Pipe Pos V	A t Pos	C. A t Fr T.	A t H O	St t s	V lid tio
A1	NHH-65B-R2B	72	11.9	146	1		Fro t	37.5	-7	Added	
A3	RT4423-48A	11.8	8.7	146	1		Behi d	84	0	Added	
A14	NHHSS-65B-R2BT4	72	11.9	146	1		Fro t	37.5	7	Added	
R5	RF4439d-25A	15	15	104	2		Behi d	42	0	Added	
A2	MT6413-77A	28.9	15.8	46	3		Fro t	37.56	0	Added	

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	4	X-LPP-CW	LOW PROFILE PLATFORM CORNER WELDMENT		198.75	795.01
2	4	X-LPP-SA12	SIDE ARM WELDMENT FOR 12' LOW PROFILE PLATFORMS		119.21	476.84
3	4	X-RM4HD	WELDMENT FOR 4-SIDED HEAVY DUTY RING MOUNT		71.27	285.08
4	16	X-LPP-PC	FACE PIPE CONNECTION BRACKET FORTRESS PLATFORM		7.01	112.15
5	16	X-SCX3-FR	FORTRESS CROSSOVER PLATE		6.61	105.82
6	16	X-LPP-A7	CORNER WELDMENT ATTACHMENT ANGLE	2 1/2 in	1.27	20.33
7	4	P30150	2-7/8" X 150" (2-1/2" SCH. 40) GALVANIZED PIPE	150 in	76.94	307.75
8	16	G58R-48	5/8" x 48" THREADED ROD (HDG.)	48 in	0.40	6.38
8	16	G58R-24	5/8" x 24" THREADED ROD (HDG.)	24 in	0.40	6.38
9	8	G58R-8	5/8" x 8" THREADED ROD (HDG.)		0.70	5.58
10	64	X-UB5300	5/8" X 3" X 5-1/4" X 2-1/2" U-BOLT (HDG.)		1.15	73.56
11	32	X-UB5258	5/8" X 2-5/8" X 4-1/2" X 2" U-BOLT (HDG.)		1.00	32.00
12	16	X-UB5304	5/8" X 3" X 4-1/4" X 2-1/2" U-BOLT (HDG.)		0.98	15.60
13	48	G58214	5/8" x 2-1/4" HDG HEX BOLT GR5		0.29	13.99
14	224	G58FW	5/8" HDG USS FLATWASHER	1/8 in	0.07	15.78
15	256	G58LW	5/8" HDG LOCKWASHER		0.03	6.68
16	256	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	33.25
					TOTAL WT. #	2399.79



TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION
12' FORTRESS™
QUAD MOUNT PLATFORM

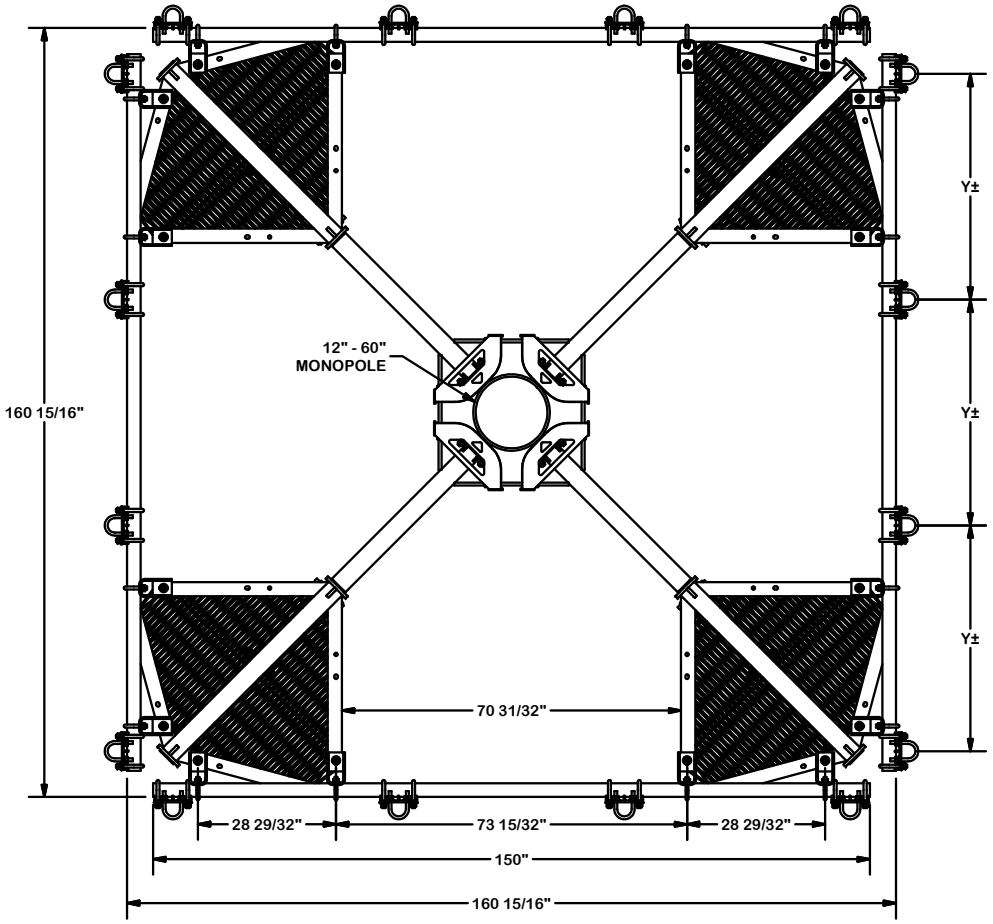
SITE PRO 1
A valmont COMPANY

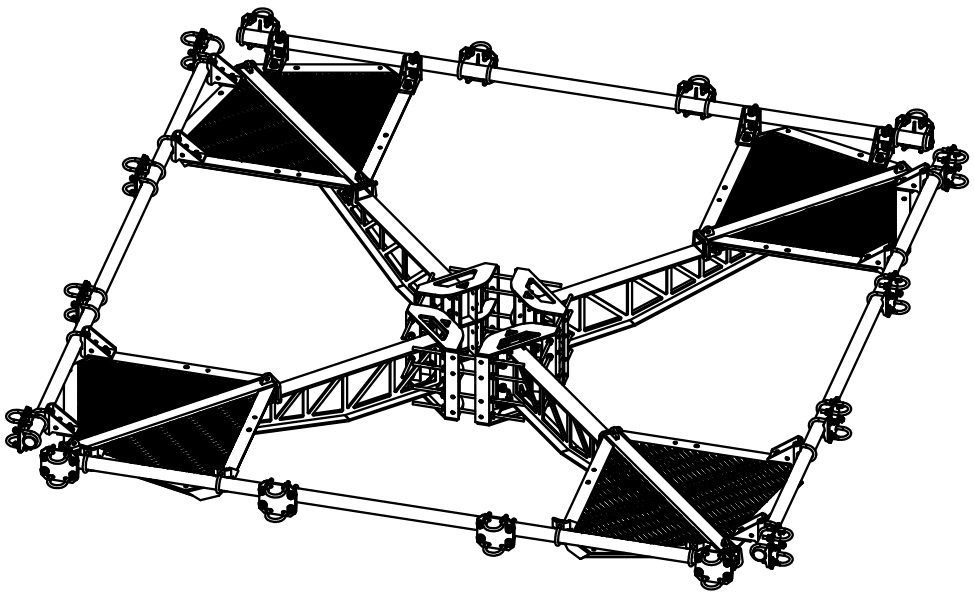
Engineering Support Team:
1-888-753-7446

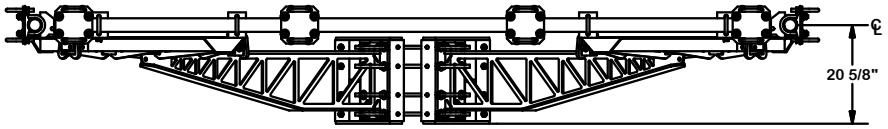
Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX

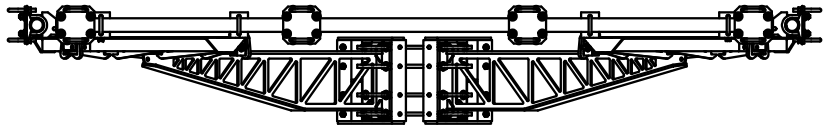
CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
	CEK 8/10/2017		F4P-12

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	02	CUSTOMER	BMC 8/30/2017	F4P-12









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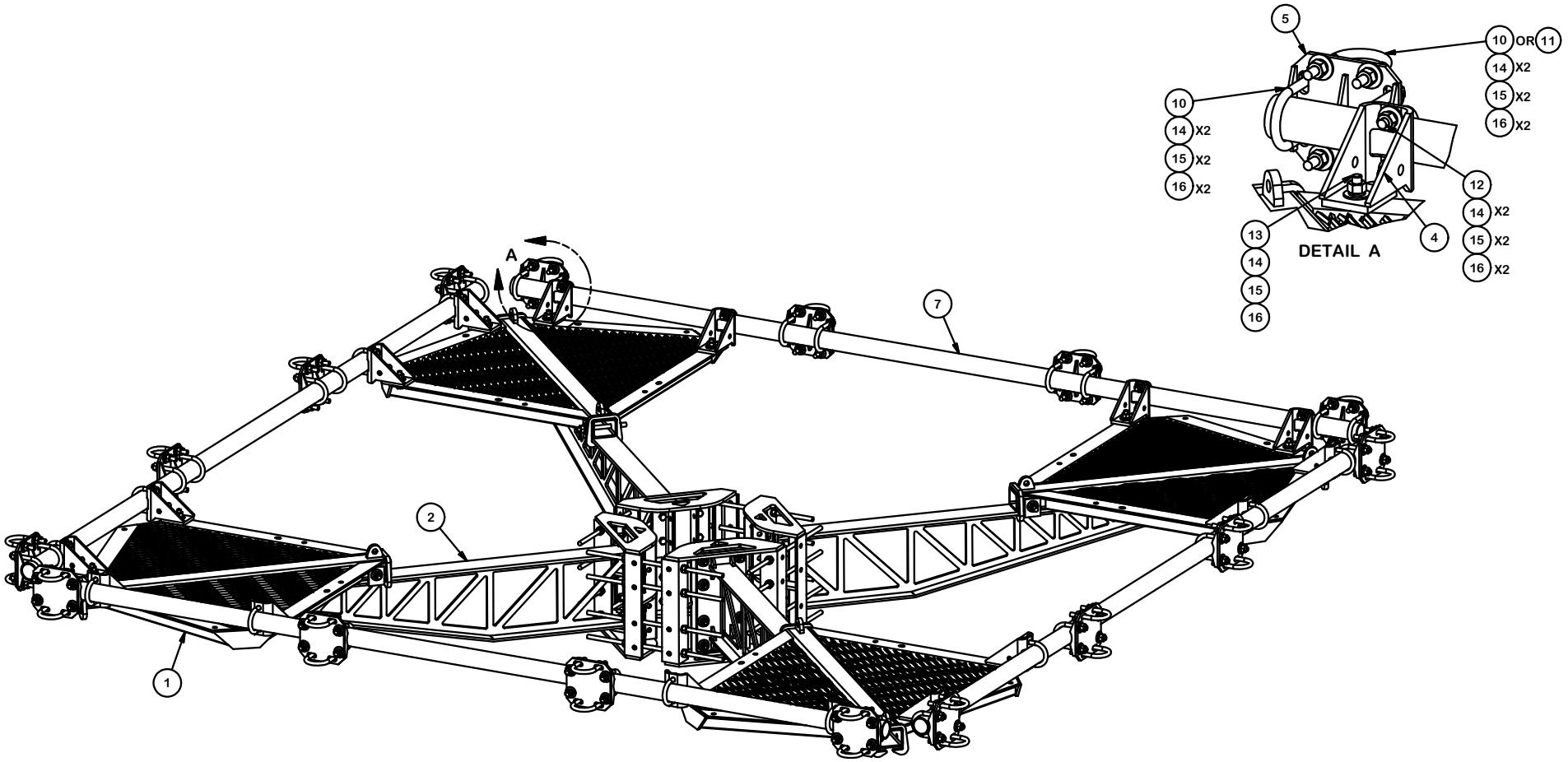
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION			
12' FORTRESS™ QUAD MOUNT PLATFORM			
CPD NO.	DRAWN BY: CEK 8/10/2017	ENG. APPROVAL	PART NO.: F4P-12
CLASS: 81 / SUB: 02	DRAWING USAGE: CUSTOMER	CHECKED BY: BMC 8/30/2017	DWG. NO.: F4P-12

SITE PRO 1 — A valmont COMPANY
Engineering Support Team: 1-888-753-7446
Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX



TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
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BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION
12' FORTRESS™
QUAD MOUNT PLATFORM

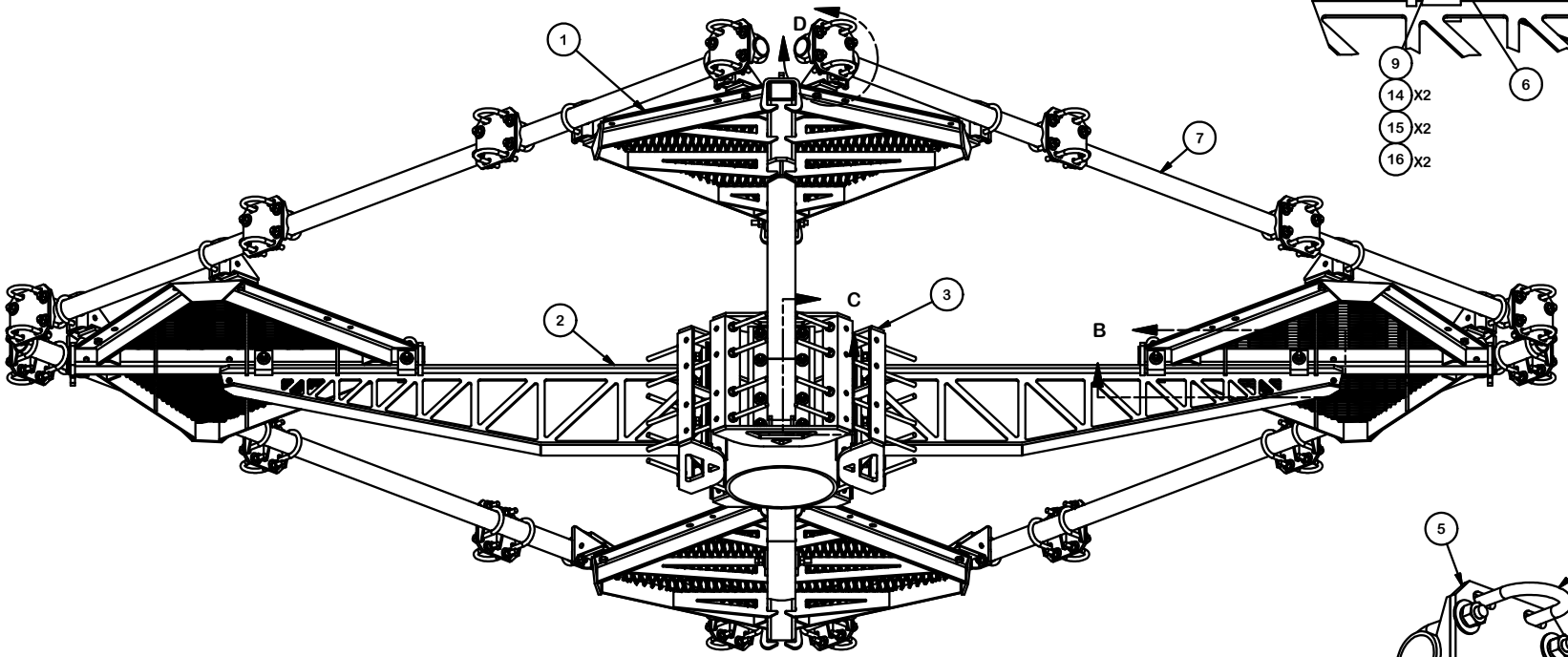
SITE PRO 1
A valmont COMPANY

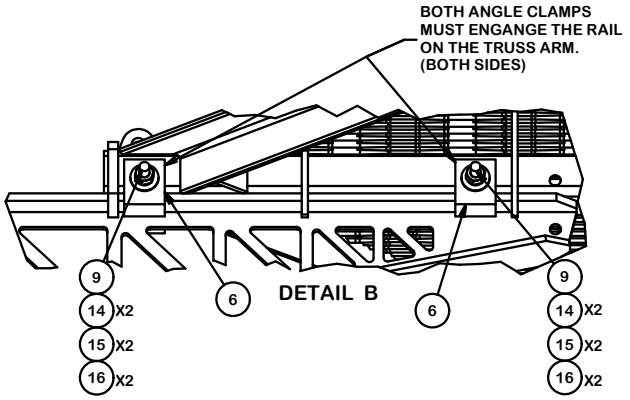
Engineering Support Team:
1-888-753-7446

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

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	PAGE
	CEK 8/10/2017		F4P-12	3 OF 4

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	02	CUSTOMER	BMC 8/30/2017	F4P-12





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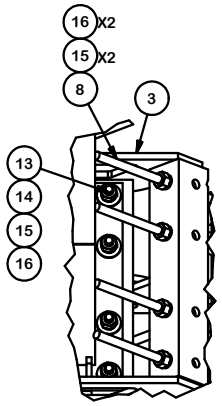

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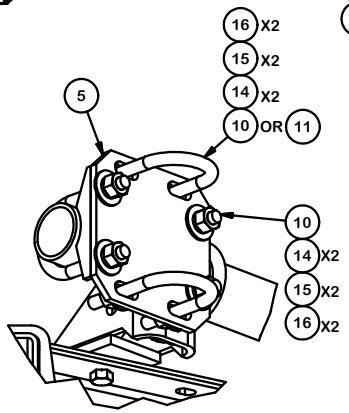

DETAIL D

TOLERANCE NOTES

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DESCRIPTION
12' FORTRESS™
QUAD MOUNT PLATFORM

SITE PRO 1
A valmont COMPANY

Engineering Support Team:
1-888-753-7446

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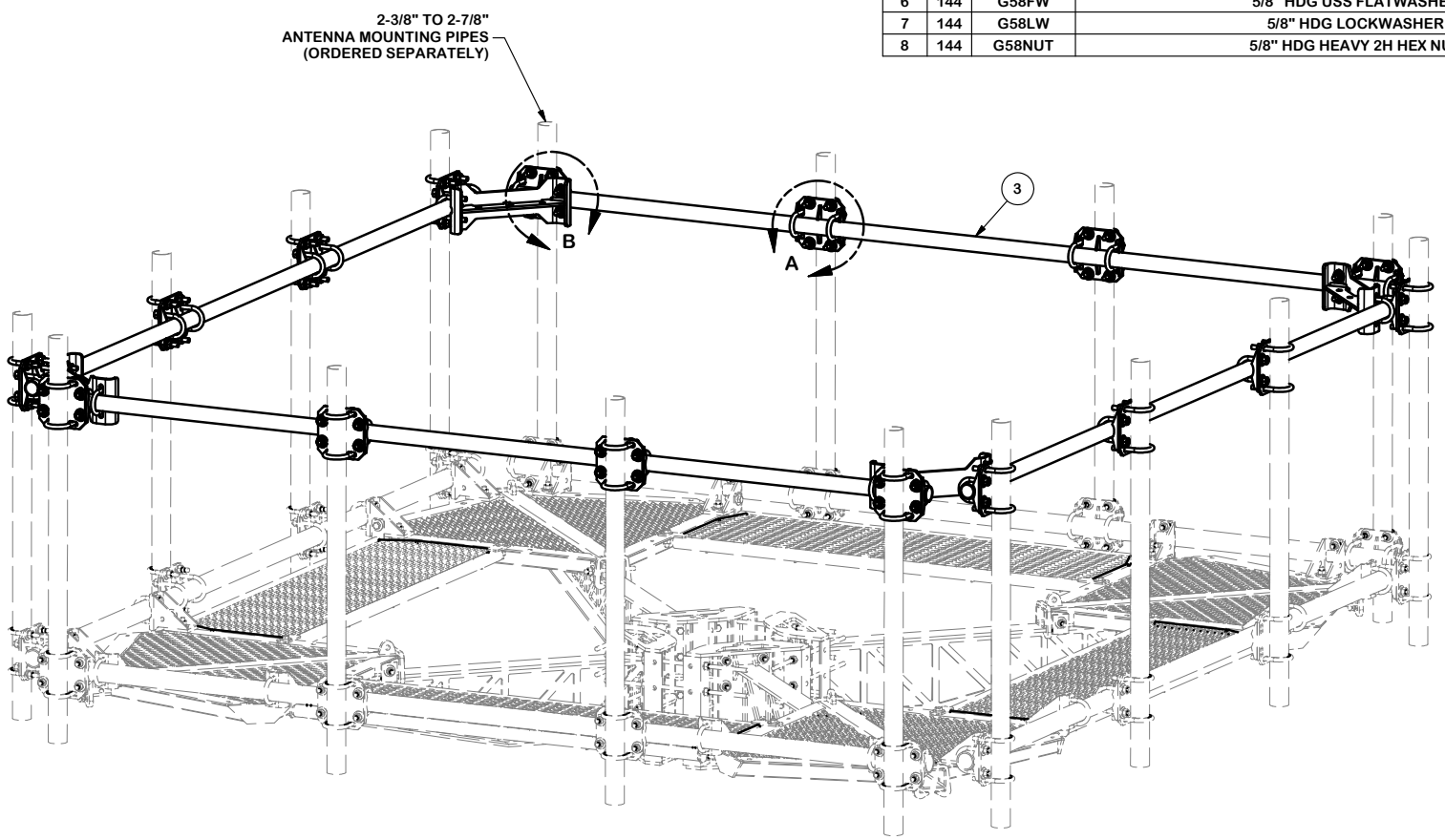
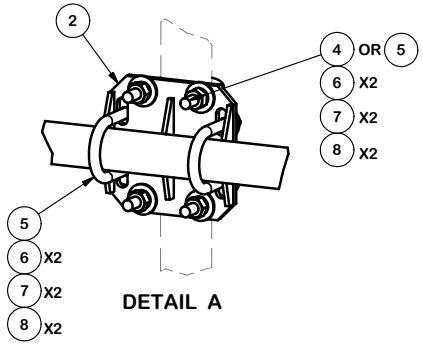
Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
	CEK 8/10/2017		F4P-12

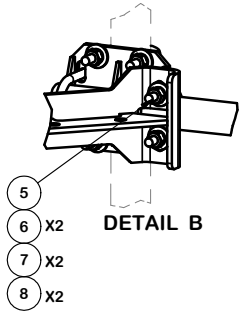
CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	02	CUSTOMER	BMC 8/30/2017	F4P-12

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	4	X-F4PHRW	CORNER WELDMENT FOR 4-SIDED FORTRESS PLATFORM HADNRAIL KITS		19.32	77.27
2	16	X-SCX3-FR	FORTRESS CROSSOVER PLATE		6.61	105.82
3	4	P2150	2-3/8" O.D. X 150" SCH 40 GALVANIZED PIPE	150 in	45.77	183.07
4	32	X-UB5300	5/8" X 3" X 5-1/4" X 2-1/2" U-BOLT (HDG.)		1.15	36.78
5	72	X-UB5258	5/8" X 2-5/8" X 4-1/2" X 2" U-BOLT (HDG.)		1.00	72.01
6	144	G58FW	5/8" HDG USS FLATWASHER	1/8 in	0.07	10.15
7	144	G58LW	5/8" HDG LOCKWASHER		0.03	3.76
8	144	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	18.70
					TOTAL WT. #	507.57





DETAIL A



DETAIL B

TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
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LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION
HANDRAIL KIT FOR
12' 4-SIDED FORTRESS™ PLATFORM

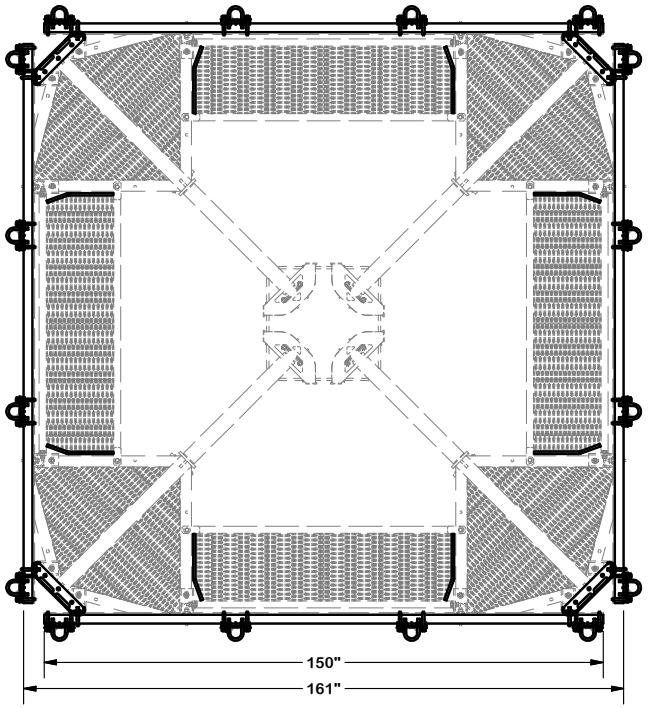
SITE PRO 1
A valmont COMPANY

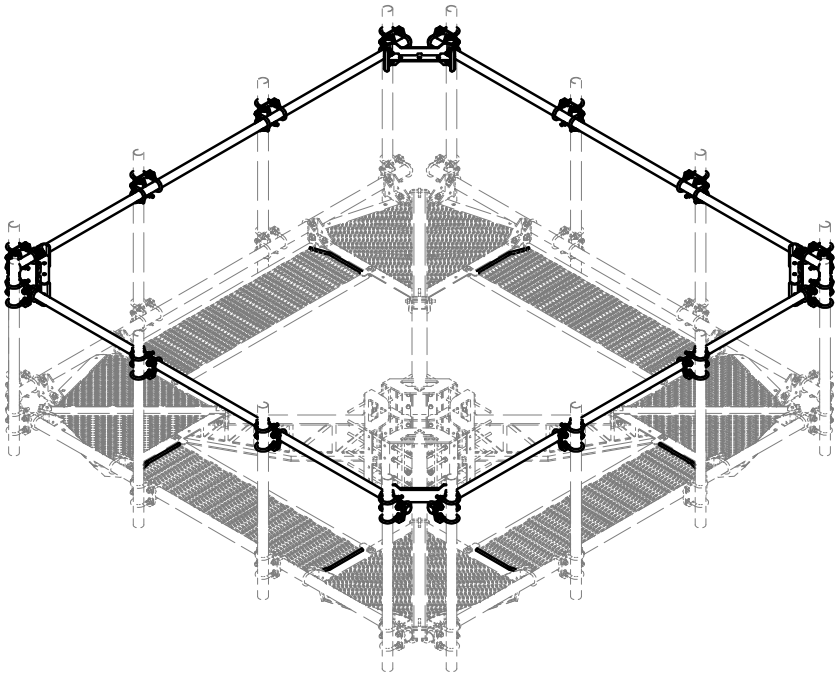
Engineering Support Team:
1-888-753-7446

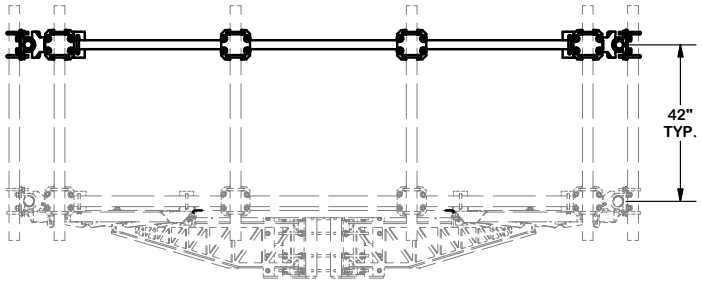
Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX

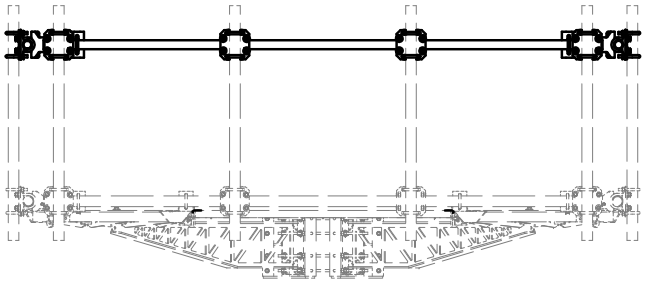
CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
	CEK 8/29/2017		F4P-HRK12

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	02	CUSTOMER		F4P-HRK12









TOLERANCE NOTES

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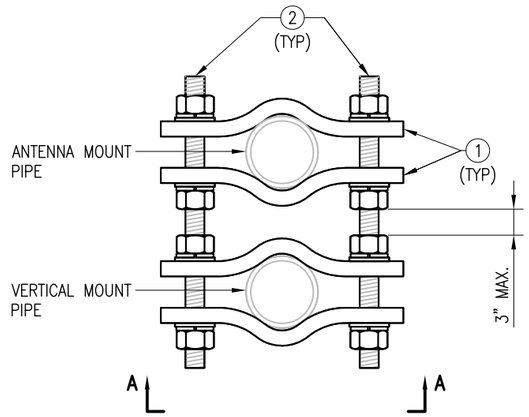
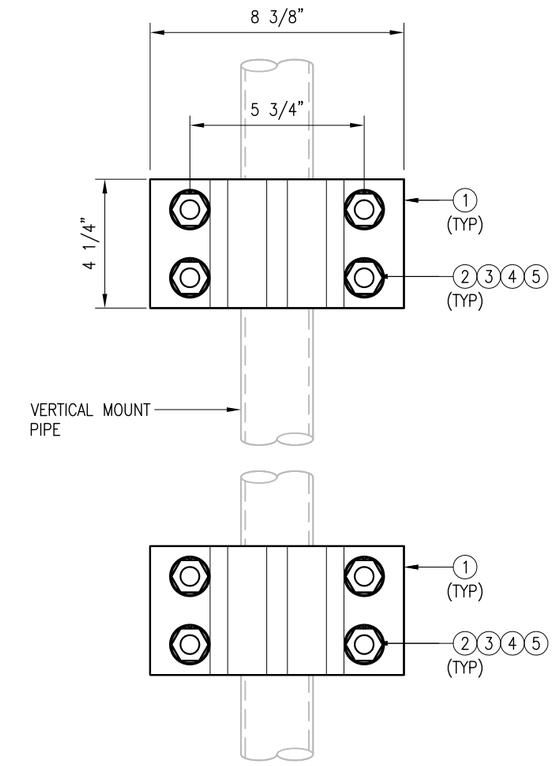
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION			
HANDRAIL KIT FOR 12' 4-SIDED FORTRESS™ PLATFORM			
CPD NO.	DRAWN BY: CEK 8/29/2017	ENG. APPROVAL	PART NO.: F4P-HRK12
CLASS: 81 / SUB: 02	DRAWING USAGE: CUSTOMER	CHECKED BY	DWG. NO.: F4P-HRK12

SITE PRO 1
A valmont COMPANY
Engineering Support Team: 1-888-753-7446
Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX



PIPE TO PIPE CLAMPS
PLAN VIEW



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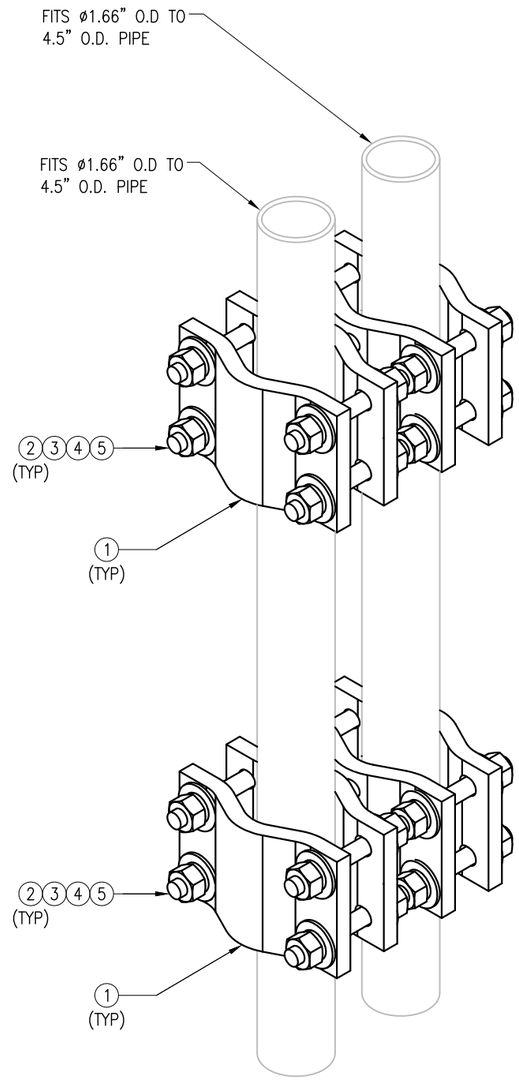


PIPE TO PIPE CLAMPS
ISOMETRIC VIEW

NOTES:
1. ALL HOLES ARE 11/16" DIA. U.N.O
2. HOT-DIPPED GALVANIZED PER ASTM A123.
3. FIT UP TO 4.5" O.D. PIPE

VZWSMART-MSK3D (PIPE TO PIPE CLAMPS)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	8	V-CLAMP	PL 1/2" X 4 1/4" X 8 5/8" A36 BEND PLATE	MSK3D-F1	42
2	8	---	THREADED ROD 5/8" DIA. X 1'-0" F1554-36 HDG	---	--
3	32	FW-625	5/8" HDG USS FLAT WASHER	---	3
4	32	LW-625	5/8" HDG LOCK WASHER	---	1
5	32	NUT-625	5/8" HDG HEX NUT	---	4
				GALVANIZED WT	42

VzW SMART Tool© Vendor

verizon

FOR REFERENCE ONLY

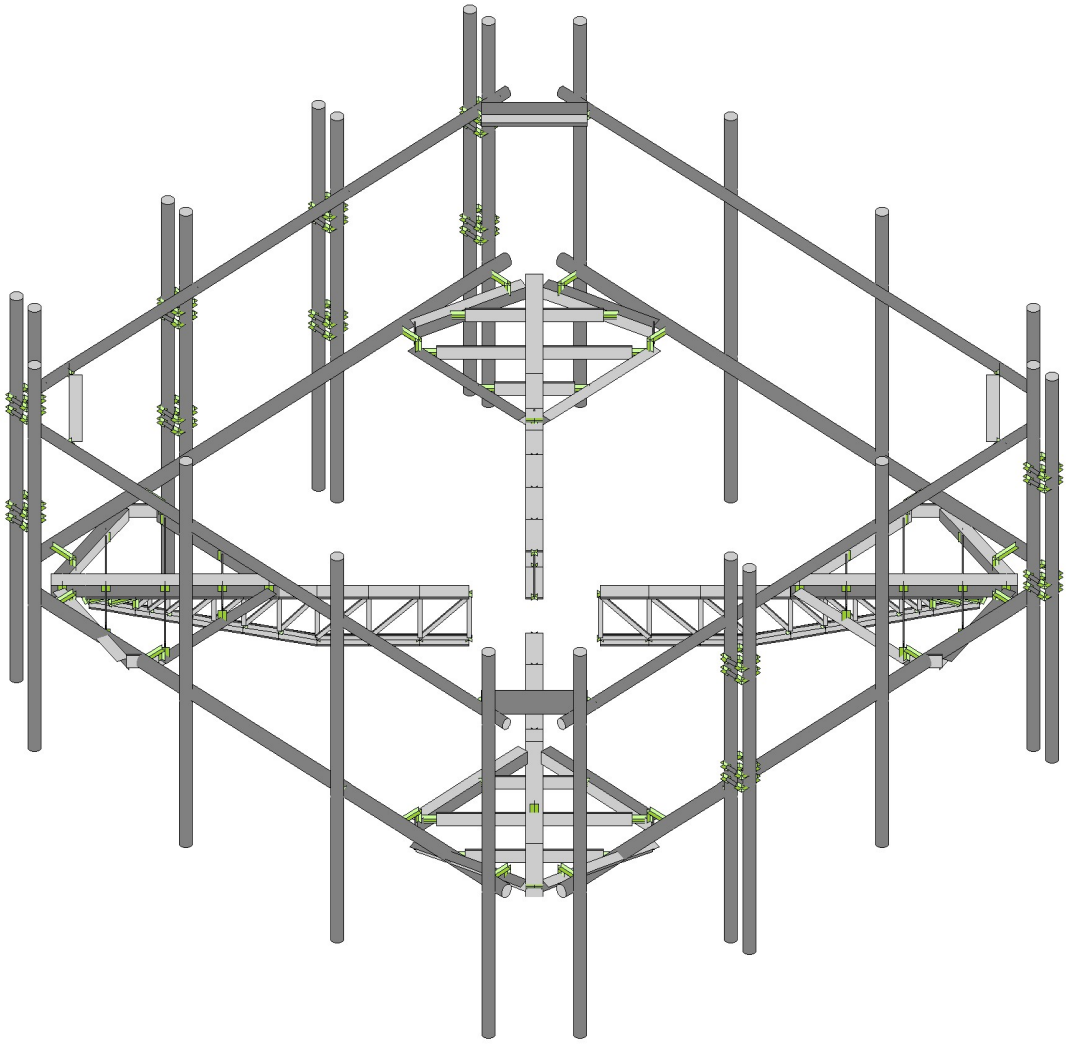
DRAWN BY: BT | CHECKED BY: HMA/KW

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

SHEET TITLE:
VZWSMART-MSK3D
PIPE TO PIPE CLAMPS

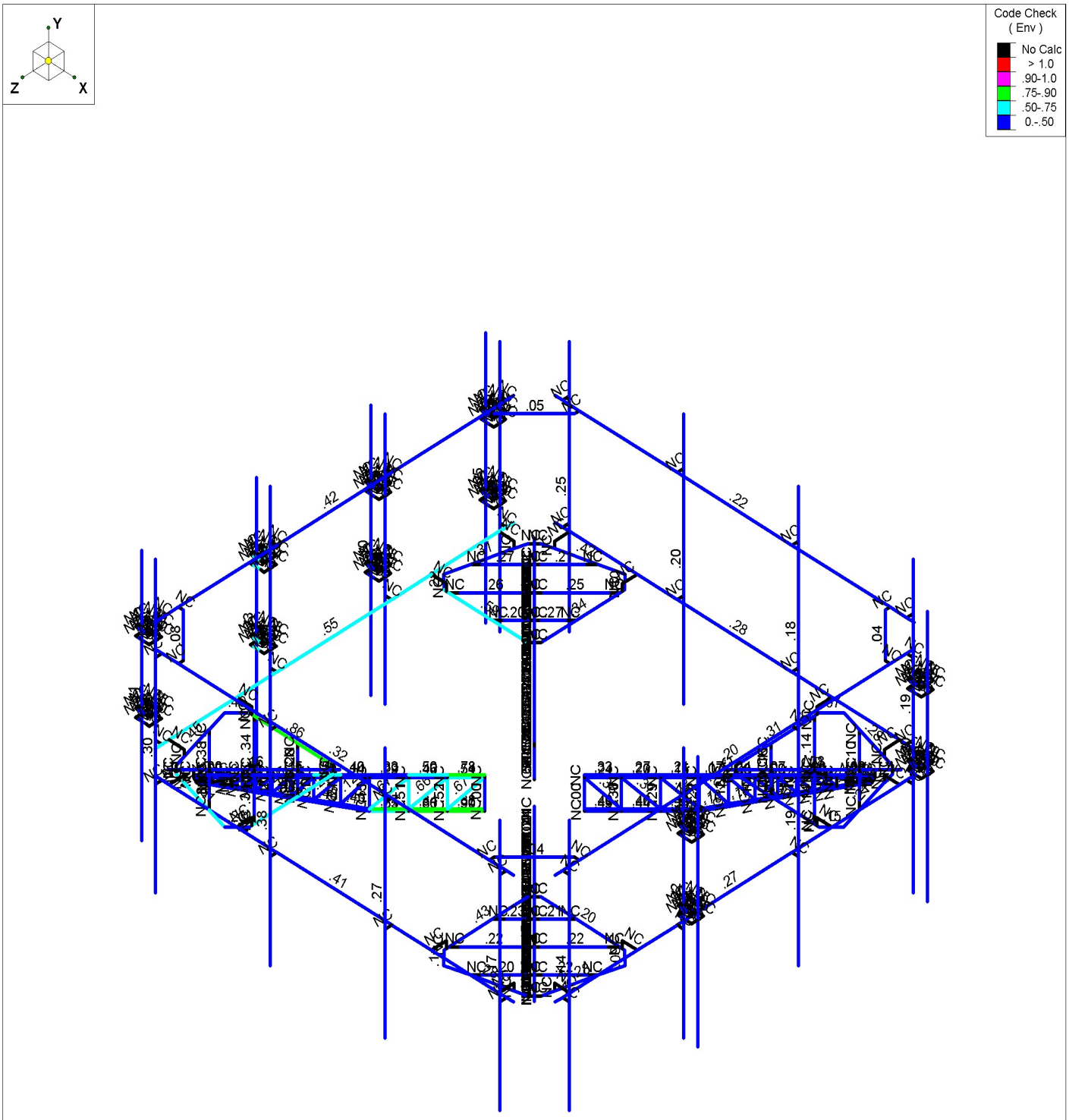
SHEET NUMBER: VZWSMART-MSK3D

REV #: 0



Envelope Only Solution

Colliers Engineering & Des...	5000384280-VZW_MT_LO_H	SK - 1
NL		Nov 29, 2023 at 12:09 PM
Project No. 10211288		5000384280-VZW_MT_LO_H.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

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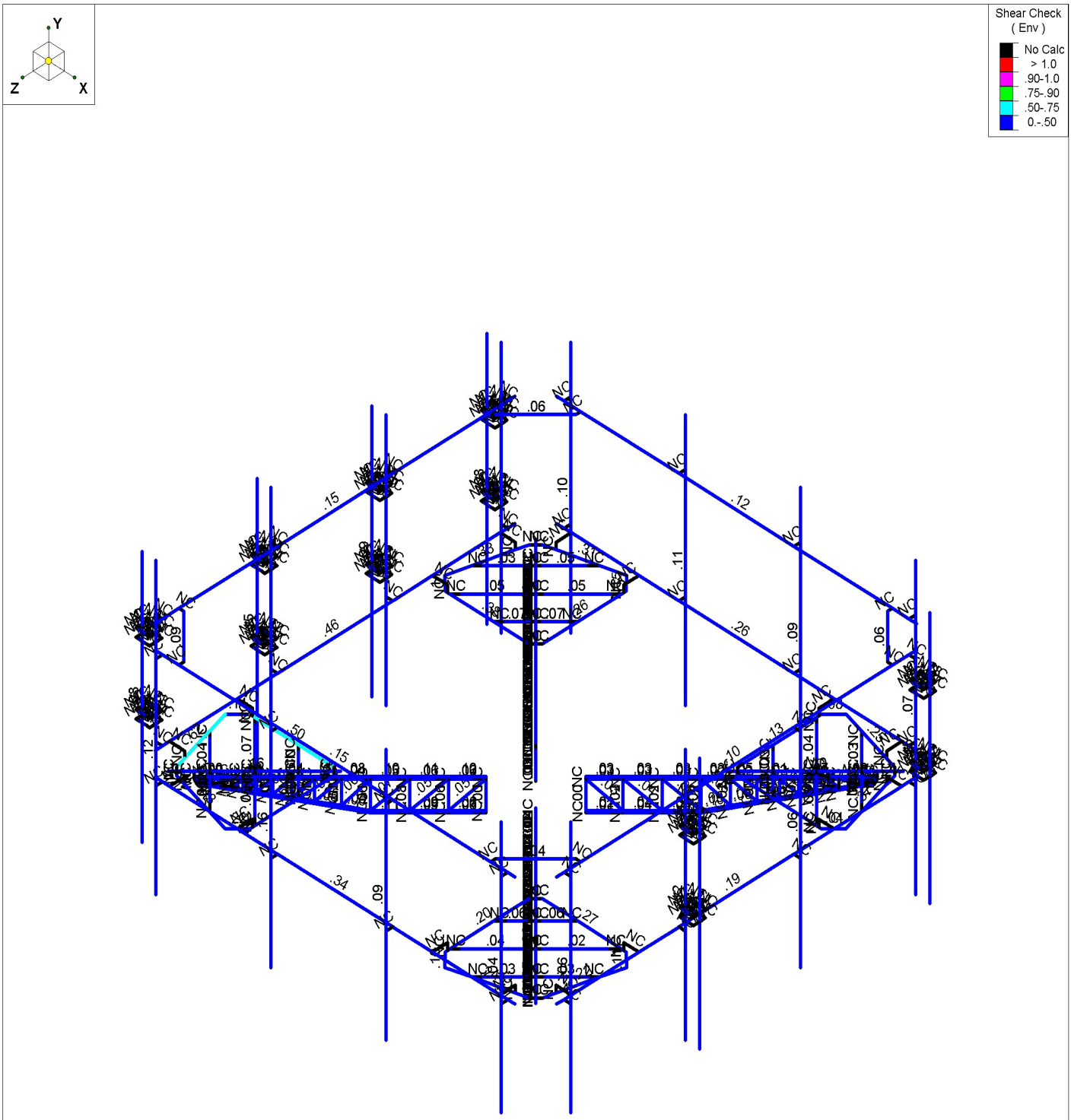
NL		Nov 29, 2023 at 12:09 PM
Project No. 10211288		5000384280-VZW_MT_LO_H.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Colliers Engineering & Des...		SK - 3
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Project No. 10211288		5000384280-VZW_MT_LO_H.r3d

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Antenna D	None					108			
2	Antenna Di	None					108			
3	Antenna Wo (0 Deg)	None					108			
4	Antenna Wo (30 Deg)	None					108			
5	Antenna Wo (60 Deg)	None					108			
6	Antenna Wo (90 Deg)	None					108			
7	Antenna Wo (120 Deg)	None					108			
8	Antenna Wo (150 Deg)	None					108			
9	Antenna Wo (180 Deg)	None					108			
10	Antenna Wo (210 Deg)	None					108			
11	Antenna Wo (240 Deg)	None					108			
12	Antenna Wo (270 Deg)	None					108			
13	Antenna Wo (300 Deg)	None					108			
14	Antenna Wo (330 Deg)	None					108			
15	Antenna Wi (0 Deg)	None					108			
16	Antenna Wi (30 Deg)	None					108			
17	Antenna Wi (60 Deg)	None					108			
18	Antenna Wi (90 Deg)	None					108			
19	Antenna Wi (120 Deg)	None					108			
20	Antenna Wi (150 Deg)	None					108			
21	Antenna Wi (180 Deg)	None					108			
22	Antenna Wi (210 Deg)	None					108			
23	Antenna Wi (240 Deg)	None					108			
24	Antenna Wi (270 Deg)	None					108			
25	Antenna Wi (300 Deg)	None					108			
26	Antenna Wi (330 Deg)	None					108			
27	Antenna Wm (0 Deg)	None					108			
28	Antenna Wm (30 Deg)	None					108			
29	Antenna Wm (60 Deg)	None					108			
30	Antenna Wm (90 Deg)	None					108			
31	Antenna Wm (120 De...	None					108			
32	Antenna Wm (150 De...	None					108			
33	Antenna Wm (180 De...	None					108			
34	Antenna Wm (210 De...	None					108			
35	Antenna Wm (240 De...	None					108			
36	Antenna Wm (270 De...	None					108			
37	Antenna Wm (300 De...	None					108			
38	Antenna Wm (330 De...	None					108			
39	Structure D	None		-1					8	
40	Structure Di	None						342	8	
41	Structure Wo (0 Deg)	None						684		
42	Structure Wo (30 Deg)	None						684		
43	Structure Wo (60 Deg)	None						684		
44	Structure Wo (90 Deg)	None						684		
45	Structure Wo (120 D...	None						684		
46	Structure Wo (150 D...	None						684		
47	Structure Wo (180 D...	None						684		
48	Structure Wo (210 D...	None						684		
49	Structure Wo (240 D...	None						684		
50	Structure Wo (270 D...	None						684		
51	Structure Wo (300 D...	None						684		
52	Structure Wo (330 D...	None						684		
53	Structure Wi (0 Deg)	None						684		
54	Structure Wi (30 Deg)	None						684		
55	Structure Wi (60 Deg)	None						684		

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
56	Structure Wi (90 Deg)	None						684		
57	Structure Wi (120 De...	None						684		
58	Structure Wi (150 De...	None						684		
59	Structure Wi (180 De...	None						684		
60	Structure Wi (210 De...	None						684		
61	Structure Wi (240 De...	None						684		
62	Structure Wi (270 De...	None						684		
63	Structure Wi (300 De...	None						684		
64	Structure Wi (330 De...	None						684		
65	Structure Wm (0 Deg)	None						684		
66	Structure Wm (30 De...	None						684		
67	Structure Wm (60 De...	None						684		
68	Structure Wm (90 De...	None						684		
69	Structure Wm (120 D...	None						684		
70	Structure Wm (150 D...	None						684		
71	Structure Wm (180 D...	None						684		
72	Structure Wm (210 D...	None						684		
73	Structure Wm (240 D...	None						684		
74	Structure Wm (270 D...	None						684		
75	Structure Wm (300 D...	None						684		
76	Structure Wm (330 D...	None						684		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			
81	Antenna Ev	None					108			
82	Antenna Eh (0 Deg)	None					72			
83	Antenna Eh (90 Deg)	None					72			
84	Structure Ev	ELY							8	
85	Structure Eh (0 Deg)	ELZ			-.03				8	
86	Structure Eh (90 Deg)	ELX	.03						8	
87	BLC 39 Transient Are...	None						348		
88	BLC 40 Transient Are...	None						348		
89	BLC 84 Transient Are...	None								
90	BLC 85 Transient Are...	None						348		
91	BLC 86 Transient Are...	None						348		

Load Combinations

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

Load Combinations (Continued)

	Description	Sol...	PDe..	S...	BLC	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...
19	1.2D + 1.0Di + 1.0Wi ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1								
20	1.2D + 1.0Di + 1.0Wi ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1								
21	1.2D + 1.0Di + 1.0Wi ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1								
22	1.2D + 1.0Di + 1.0Wi ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1								
23	1.2D + 1.0Di + 1.0Wi ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1								
24	1.2D + 1.0Di + 1.0Wi ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1								
25	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1										
26	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1										
27	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1										
28	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1										
29	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1										
30	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1										
31	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1										
32	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1										
33	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1										
34	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1										
35	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1										
36	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1										
37	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1										
38	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1										
39	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1										
40	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1										
41	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1										
42	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1										
43	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1										
44	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1										
45	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1										
46	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1										
47	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1										
48	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	38	1	76	1										
49	1.2D + 1.5Lv1	Yes	Y		1	1.2	39	1.2	79	1.5														
50	1.2D + 1.5Lv2	Yes	Y		1	1.2	39	1.2	80	1.5														
51	1.4D	Yes	Y		1	1.4	39	1.4																
52	1.2D + 1.0Ev + 1.0Eh ...	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 ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.866	83	.5	ELZ	.866	ELX	.5				
54	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.5	83	.866	ELZ	.5	ELX	.866				
55	1.2D + 1.0Ev + 1.0Eh ...	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 ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.5	83	.866	ELZ	-.5	ELX	.866				
57	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.866	83	.5	ELZ	-.866	ELX	.5				
58	1.2D + 1.0Ev + 1.0Eh ...	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 ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.866	83	-.5	ELZ	-.866	ELX	-.5				
60	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.5	83	-.866	ELZ	-.5	ELX	-.866				
61	1.2D + 1.0Ev + 1.0Eh ...	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 ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.5	83	-.866	ELZ	.5	ELX	-.866				
63	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.866	83	-.5	ELZ	.866	ELX	-.5				
64	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	1	83		ELZ	1	ELX					
65	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.866	83	.5	ELZ	.866	ELX	.5				
66	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.5	83	.866	ELZ	.5	ELX	.866				
67	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82		83	1	ELZ		ELX	1				
68	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.5	83	.866	ELZ	-.5	ELX	.866				
69	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.866	83	.5	ELZ	-.866	ELX	.5				
70	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-1	83		ELZ	-1	ELX					
71	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.866	83	-.5	ELZ	-.866	ELX	-.5				
72	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.5	83	-.866	ELZ	-.5	ELX	-.866				
73	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82		83	-1	ELZ		ELX	-1				
74	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.5	83	-.866	ELZ	.5	ELX	-.866				
75	0.9D - 1.0Ev + 1.0Eh ...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.866	83	-.5	ELZ	.866	ELX	-.5				

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Face Horizontal	PIPE_2.5	None	None	Q235	Typical	1.61	1.45	1.45	2.89
2	Mount Pipe	PIPE_2.5	None	None	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
3	Standoff Horizontal	HSS4X3X4	None	None	Q235	Typical	2.91	3.91	6.15	7.96
4	Connector Angle	L2x2x2	None	None	Q235	Typical	.491	.189	.189	.003
5	Grating Support	L3X3X6	None	None	Q235	Typical	2.11	1.75	1.75	.101
6	Secondary Standoff	PL1/2x4	None	None	Q235	Typical	2	.042	2.667	.154
7	Lower Standoff	PL3/8x4	None	None	Q235	Typical	1.5	.018	2	.066
8	Bracing	PL3/8X1	None	None	Q235	Typical	.375	.004	.031	.013
9	Grating Bracing	PL3/8X3	None	None	Q235	Typical	1.125	.013	.844	.049
10	Side Bracing	PL3/8X3	HBrace	RECT	Q235	Typical	1.125	.013	.844	.049
11	Support Rail	PIPE_2.0	None	None	Q235	Typical	1.02	.627	.627	1.25
12	Support Rail Corner	WT3X7.5	None	None	Q235	Typical	2.21	4.66	1.41	.05
13	Threaded Rod	SR_0.625	None	None	A36 Gr.36	Typical	.307	.007	.007	.015
14	TES Side Bracing	PL3/8X3	HBrace	RECT	A36 Gr.36	Typical	1.125	.013	.844	.049
15	True Grating Bracing	PL3/8X2.375	HBrace	RECT	A36 Gr.36	Typical	.891	.01	.419	.038
16	True Support Rail Cor...	WT3X7.5	None	None	A36 Gr.36	Typical	2.21	4.66	1.41	.05

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1...	Density[k/ft^3]	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3
8	Q235	29000	11154	.3	.65	.49	35	1.5	58	1.2

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	Y	-21.85	.75
2	MP1C	My	-.006	.75
3	MP1C	Mz	.016	.75
4	MP1C	Y	-21.85	5.5
5	MP1C	My	-.006	5.5
6	MP1C	Mz	.016	5.5
7	MP2A	Y	-21.85	.75
8	MP2A	My	-.011	.75
9	MP2A	Mz	-.013	.75
10	MP2A	Y	-21.85	5.5
11	MP2A	My	-.011	5.5
12	MP2A	Mz	-.013	5.5
13	MP1B	Y	-28.65	2.38
14	MP1B	My	.007	2.38
15	MP1B	Mz	-.012	2.38
16	MP1B	Y	-28.65	3.88
17	MP1B	My	.007	3.88
18	MP1B	Mz	-.012	3.88
19	MP3A	Y	-28.65	2.38
20	MP3A	My	-.014	2.38
21	MP3A	Mz	0	2.38
22	MP3A	Y	-28.65	3.88
23	MP3A	My	-.014	3.88
24	MP3A	Mz	0	3.88
25	MP3C	Y	-28.65	2.38

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
26	MP3C	My	.007	2.38
27	MP3C	Mz	.012	2.38
28	MP3C	Y	-28.65	3.88
29	MP3C	My	.007	3.88
30	MP3C	Mz	.012	3.88
31	MP1B	Y	-15.4	7
32	MP1B	My	-.004	7
33	MP1B	Mz	.007	7
34	MP2A	Y	-15.4	7
35	MP2A	My	.008	7
36	MP2A	Mz	0	7
37	MP2B	Y	-15.4	7
38	MP2B	My	-.004	7
39	MP2B	Mz	.007	7
40	MP2C	Y	-15.4	7
41	MP2C	My	-.004	7
42	MP2C	Mz	-.007	7
43	MP3A	Y	-79.1	3.5
44	MP3A	My	.026	3.5
45	MP3A	Mz	0	3.5
46	MP2A	Y	-74.7	3.5
47	MP2A	My	.025	3.5
48	MP2A	Mz	0	3.5
49	MP2C	Y	-74.7	3.5
50	MP2C	My	0	3.5
51	MP2C	Mz	-.025	3.5
52	MP1A	Y	-32	2
53	MP1A	My	.016	2
54	MP1A	Mz	0	2
55	MP4A	Y	-32	2
56	MP4A	My	.016	2
57	MP4A	Mz	0	2
58	MP1B	Y	-50.25	.75
59	MP1B	My	-.007	.75
60	MP1B	Mz	-.024	.75
61	MP1B	Y	-50.25	5.5
62	MP1B	My	-.007	5.5
63	MP1B	Mz	-.024	5.5
64	MP3B	Y	-50.25	.75
65	MP3B	My	.014	.75
66	MP3B	Mz	-.021	.75
67	MP3B	Y	-50.25	5.5
68	MP3B	My	.014	5.5
69	MP3B	Mz	-.021	5.5
70	MP2B	Y	-70	.75
71	MP2B	My	-.069	.75
72	MP2B	Mz	-.048	.75
73	MP2B	Y	-70	5.5
74	MP2B	My	-.069	5.5
75	MP2B	Mz	-.048	5.5
76	MP2B	Y	-70	.75
77	MP2B	My	.081	.75
78	MP2B	Mz	-.021	.75
79	MP2B	Y	-70	5.5
80	MP2B	My	.081	5.5
81	MP2B	Mz	-.021	5.5
82	MP1C	Y	-32.3	.75
83	MP1C	My	.024	.75
84	MP1C	Mz	.005	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
85	MP1C	Y	-32.3	5.5
86	MP1C	My	.024	5.5
87	MP1C	Mz	.005	5.5
88	MP2A	Y	-32.3	.75
89	MP2A	My	-.016	.75
90	MP2A	Mz	.019	.75
91	MP2A	Y	-32.3	5.5
92	MP2A	My	-.016	5.5
93	MP2A	Mz	.019	5.5
94	B1	Y	-79.1	3.5
95	B1	My	0	3.5
96	B1	Mz	.026	3.5
97	B2	Y	-74.7	3.5
98	B2	My	0	3.5
99	B2	Mz	.025	3.5
100	B3	Y	-79.1	3.5
101	B3	My	0	3.5
102	B3	Mz	.026	3.5
103	B4	Y	-74.7	3.5
104	B4	My	0	3.5
105	B4	Mz	.025	3.5
106	C1	Y	-79.1	3.5
107	C1	My	0	3.5
108	C1	Mz	-.026	3.5

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	Y	-93.708	.75
2	MP1C	My	-.024	.75
3	MP1C	Mz	.068	.75
4	MP1C	Y	-93.708	5.5
5	MP1C	My	-.024	5.5
6	MP1C	Mz	.068	5.5
7	MP2A	Y	-93.708	.75
8	MP2A	My	-.047	.75
9	MP2A	Mz	-.055	.75
10	MP2A	Y	-93.708	5.5
11	MP2A	My	-.047	5.5
12	MP2A	Mz	-.055	5.5
13	MP1B	Y	-46.402	2.38
14	MP1B	My	.012	2.38
15	MP1B	Mz	-.02	2.38
16	MP1B	Y	-46.402	3.88
17	MP1B	My	.012	3.88
18	MP1B	Mz	-.02	3.88
19	MP3A	Y	-46.402	2.38
20	MP3A	My	-.023	2.38
21	MP3A	Mz	0	2.38
22	MP3A	Y	-46.402	3.88
23	MP3A	My	-.023	3.88
24	MP3A	Mz	0	3.88
25	MP3C	Y	-46.402	2.38
26	MP3C	My	.012	2.38
27	MP3C	Mz	.02	2.38
28	MP3C	Y	-46.402	3.88
29	MP3C	My	.012	3.88
30	MP3C	Mz	.02	3.88
31	MP1B	Y	-27.19	7

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
32	MP1B	My	-.007	7
33	MP1B	Mz	.012	7
34	MP2A	Y	-27.19	7
35	MP2A	My	.014	7
36	MP2A	Mz	0	7
37	MP2B	Y	-27.19	7
38	MP2B	My	-.007	7
39	MP2B	Mz	.012	7
40	MP2C	Y	-27.19	7
41	MP2C	My	-.007	7
42	MP2C	Mz	-.012	7
43	MP3A	Y	-70.976	3.5
44	MP3A	My	.024	3.5
45	MP3A	Mz	0	3.5
46	MP2A	Y	-70.257	3.5
47	MP2A	My	.023	3.5
48	MP2A	Mz	0	3.5
49	MP2C	Y	-70.257	3.5
50	MP2C	My	0	3.5
51	MP2C	Mz	-.023	3.5
52	MP1A	Y	-135.356	2
53	MP1A	My	.068	2
54	MP1A	Mz	0	2
55	MP4A	Y	-135.356	2
56	MP4A	My	.068	2
57	MP4A	Mz	0	2
58	MP1B	Y	-120.669	.75
59	MP1B	My	-.016	.75
60	MP1B	Mz	-.058	.75
61	MP1B	Y	-120.669	5.5
62	MP1B	My	-.016	5.5
63	MP1B	Mz	-.058	5.5
64	MP3B	Y	-120.669	.75
65	MP3B	My	.035	.75
66	MP3B	Mz	-.049	.75
67	MP3B	Y	-120.669	5.5
68	MP3B	My	.035	5.5
69	MP3B	Mz	-.049	5.5
70	MP2B	Y	-165.705	.75
71	MP2B	My	-.162	.75
72	MP2B	Mz	-.113	.75
73	MP2B	Y	-165.705	5.5
74	MP2B	My	-.162	5.5
75	MP2B	Mz	-.113	5.5
76	MP2B	Y	-165.705	.75
77	MP2B	My	.191	.75
78	MP2B	Mz	-.05	.75
79	MP2B	Y	-165.705	5.5
80	MP2B	My	.191	5.5
81	MP2B	Mz	-.05	5.5
82	MP1C	Y	-93.708	.75
83	MP1C	My	.071	.75
84	MP1C	Mz	.013	.75
85	MP1C	Y	-93.708	5.5
86	MP1C	My	.071	5.5
87	MP1C	Mz	.013	5.5
88	MP2A	Y	-93.708	.75
89	MP2A	My	-.047	.75
90	MP2A	Mz	.055	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
91	MP2A	Y	-93.708	5.5
92	MP2A	My	-.047	5.5
93	MP2A	Mz	.055	5.5
94	B1	Y	-70.976	3.5
95	B1	My	0	3.5
96	B1	Mz	.024	3.5
97	B2	Y	-70.257	3.5
98	B2	My	0	3.5
99	B2	Mz	.023	3.5
100	B3	Y	-70.976	3.5
101	B3	My	0	3.5
102	B3	Mz	.024	3.5
103	B4	Y	-70.257	3.5
104	B4	My	0	3.5
105	B4	Mz	.023	3.5
106	C1	Y	-70.976	3.5
107	C1	My	0	3.5
108	C1	Mz	-.024	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	0	.75
2	MP1C	Z	-63.327	.75
3	MP1C	Mx	-.046	.75
4	MP1C	X	0	5.5
5	MP1C	Z	-63.327	5.5
6	MP1C	Mx	-.046	5.5
7	MP2A	X	0	.75
8	MP2A	Z	-110.745	.75
9	MP2A	Mx	.065	.75
10	MP2A	X	0	5.5
11	MP2A	Z	-110.745	5.5
12	MP2A	Mx	.065	5.5
13	MP1B	X	0	2.38
14	MP1B	Z	-41.653	2.38
15	MP1B	Mx	.018	2.38
16	MP1B	X	0	3.88
17	MP1B	Z	-41.653	3.88
18	MP1B	Mx	.018	3.88
19	MP3A	X	0	2.38
20	MP3A	Z	-77.297	2.38
21	MP3A	Mx	0	2.38
22	MP3A	X	0	3.88
23	MP3A	Z	-77.297	3.88
24	MP3A	Mx	0	3.88
25	MP3C	X	0	2.38
26	MP3C	Z	-41.653	2.38
27	MP3C	Mx	-.018	2.38
28	MP3C	X	0	3.88
29	MP3C	Z	-41.653	3.88
30	MP3C	Mx	-.018	3.88
31	MP1B	X	0	7
32	MP1B	Z	-19.912	7
33	MP1B	Mx	-.009	7
34	MP2A	X	0	7
35	MP2A	Z	-35.079	7
36	MP2A	Mx	0	7
37	MP2B	X	0	7

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
38	MP2B	Z	-19.912	7
39	MP2B	Mx	-.009	7
40	MP2C	X	0	7
41	MP2C	Z	-19.912	7
42	MP2C	Mx	.009	7
43	MP3A	X	0	3.5
44	MP3A	Z	-76.278	3.5
45	MP3A	Mx	0	3.5
46	MP2A	X	0	3.5
47	MP2A	Z	-63.225	3.5
48	MP2A	Mx	0	3.5
49	MP2C	X	0	3.5
50	MP2C	Z	-42.422	3.5
51	MP2C	Mx	.014	3.5
52	MP1A	X	0	2
53	MP1A	Z	-129.305	2
54	MP1A	Mx	0	2
55	MP4A	X	0	2
56	MP4A	Z	-129.305	2
57	MP4A	Mx	0	2
58	MP1B	X	0	.75
59	MP1B	Z	-116.097	.75
60	MP1B	Mx	.056	.75
61	MP1B	X	0	5.5
62	MP1B	Z	-116.097	5.5
63	MP1B	Mx	.056	5.5
64	MP3B	X	0	.75
65	MP3B	Z	-148.728	.75
66	MP3B	Mx	.061	.75
67	MP3B	X	0	5.5
68	MP3B	Z	-148.728	5.5
69	MP3B	Mx	.061	5.5
70	MP2B	X	0	.75
71	MP2B	Z	-140.458	.75
72	MP2B	Mx	.096	.75
73	MP2B	X	0	5.5
74	MP2B	Z	-140.458	5.5
75	MP2B	Mx	.096	5.5
76	MP2B	X	0	.75
77	MP2B	Z	-140.458	.75
78	MP2B	Mx	.043	.75
79	MP2B	X	0	5.5
80	MP2B	Z	-140.458	5.5
81	MP2B	Mx	.043	5.5
82	MP1C	X	0	.75
83	MP1C	Z	-122.753	.75
84	MP1C	Mx	-.017	.75
85	MP1C	X	0	5.5
86	MP1C	Z	-122.753	5.5
87	MP1C	Mx	-.017	5.5
88	MP2A	X	0	.75
89	MP2A	Z	-164.18	.75
90	MP2A	Mx	-.096	.75
91	MP2A	X	0	5.5
92	MP2A	Z	-164.18	5.5
93	MP2A	Mx	-.096	5.5
94	B1	X	0	3.5
95	B1	Z	-52.007	3.5
96	B1	Mx	-.017	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
97	B2	X	0	3.5
98	B2	Z	-42.422	3.5
99	B2	Mx	-.014	3.5
100	B3	X	0	3.5
101	B3	Z	-52.007	3.5
102	B3	Mx	-.017	3.5
103	B4	X	0	3.5
104	B4	Z	-42.422	3.5
105	B4	Mx	-.014	3.5
106	C1	X	0	3.5
107	C1	Z	-52.007	3.5
108	C1	Mx	.017	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	47.469	.75
2	MP1C	Z	-82.22	.75
3	MP1C	Mx	-.072	.75
4	MP1C	X	47.469	5.5
5	MP1C	Z	-82.22	5.5
6	MP1C	Mx	-.072	5.5
7	MP2A	X	47.469	.75
8	MP2A	Z	-82.22	.75
9	MP2A	Mx	.024	.75
10	MP2A	X	47.469	5.5
11	MP2A	Z	-82.22	5.5
12	MP2A	Mx	.024	5.5
13	MP1B	X	14.886	2.38
14	MP1B	Z	-25.782	2.38
15	MP1B	Mx	.015	2.38
16	MP1B	X	14.886	3.88
17	MP1B	Z	-25.782	3.88
18	MP1B	Mx	.015	3.88
19	MP3A	X	32.708	2.38
20	MP3A	Z	-56.652	2.38
21	MP3A	Mx	-.016	2.38
22	MP3A	X	32.708	3.88
23	MP3A	Z	-56.652	3.88
24	MP3A	Mx	-.016	3.88
25	MP3C	X	32.708	2.38
26	MP3C	Z	-56.652	2.38
27	MP3C	Mx	-.016	2.38
28	MP3C	X	32.708	3.88
29	MP3C	Z	-56.652	3.88
30	MP3C	Mx	-.016	3.88
31	MP1B	X	7.428	7
32	MP1B	Z	-12.865	7
33	MP1B	Mx	-.007	7
34	MP2A	X	15.012	7
35	MP2A	Z	-26.001	7
36	MP2A	Mx	.008	7
37	MP2B	X	7.428	7
38	MP2B	Z	-12.865	7
39	MP2B	Mx	-.007	7
40	MP2C	X	15.012	7
41	MP2C	Z	-26.001	7
42	MP2C	Mx	.008	7
43	MP3A	X	35.105	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
44	MP3A	Z	-60.804	3.5
45	MP3A	Mx	.012	3.5
46	MP2A	X	29.012	3.5
47	MP2A	Z	-50.25	3.5
48	MP2A	Mx	.01	3.5
49	MP2C	X	23.811	3.5
50	MP2C	Z	-41.242	3.5
51	MP2C	Mx	.014	3.5
52	MP1A	X	60.777	2
53	MP1A	Z	-105.269	2
54	MP1A	Mx	.03	2
55	MP4A	X	60.777	2
56	MP4A	Z	-105.269	2
57	MP4A	Mx	.03	2
58	MP1B	X	85.013	.75
59	MP1B	Z	-147.248	.75
60	MP1B	Mx	.06	.75
61	MP1B	X	85.013	5.5
62	MP1B	Z	-147.248	5.5
63	MP1B	Mx	.06	5.5
64	MP3B	X	54.35	.75
65	MP3B	Z	-94.137	.75
66	MP3B	Mx	.054	.75
67	MP3B	X	54.35	5.5
68	MP3B	Z	-94.137	5.5
69	MP3B	Mx	.054	5.5
70	MP2B	X	77.919	.75
71	MP2B	Z	-134.959	.75
72	MP2B	Mx	.015	.75
73	MP2B	X	77.919	5.5
74	MP2B	Z	-134.959	5.5
75	MP2B	Mx	.015	5.5
76	MP2B	X	77.919	.75
77	MP2B	Z	-134.959	.75
78	MP2B	Mx	.131	.75
79	MP2B	X	77.919	5.5
80	MP2B	Z	-134.959	5.5
81	MP2B	Mx	.131	5.5
82	MP1C	X	75.186	.75
83	MP1C	Z	-130.225	.75
84	MP1C	Mx	.038	.75
85	MP1C	X	75.186	5.5
86	MP1C	Z	-130.225	5.5
87	MP1C	Mx	.038	5.5
88	MP2A	X	75.186	.75
89	MP2A	Z	-130.225	.75
90	MP2A	Mx	-.114	.75
91	MP2A	X	75.186	5.5
92	MP2A	Z	-130.225	5.5
93	MP2A	Mx	-.114	5.5
94	B1	X	29.037	3.5
95	B1	Z	-50.294	3.5
96	B1	Mx	-.017	3.5
97	B2	X	23.811	3.5
98	B2	Z	-41.242	3.5
99	B2	Mx	-.014	3.5
100	B3	X	29.037	3.5
101	B3	Z	-50.294	3.5
102	B3	Mx	-.017	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
103	B4	X	23.811	3.5
104	B4	Z	-41.242	3.5
105	B4	Mx	-.014	3.5
106	C1	X	29.037	3.5
107	C1	Z	-50.294	3.5
108	C1	Mx	.017	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	95.908	.75
2	MP1C	Z	-55.373	.75
3	MP1C	Mx	-.065	.75
4	MP1C	X	95.908	5.5
5	MP1C	Z	-55.373	5.5
6	MP1C	Mx	-.065	5.5
7	MP2A	X	54.842	.75
8	MP2A	Z	-31.663	.75
9	MP2A	Mx	-.009	.75
10	MP2A	X	54.842	5.5
11	MP2A	Z	-31.663	5.5
12	MP2A	Mx	-.009	5.5
13	MP1B	X	36.072	2.38
14	MP1B	Z	-20.826	2.38
15	MP1B	Mx	.018	2.38
16	MP1B	X	36.072	3.88
17	MP1B	Z	-20.826	3.88
18	MP1B	Mx	.018	3.88
19	MP3A	X	36.072	2.38
20	MP3A	Z	-20.826	2.38
21	MP3A	Mx	-.018	2.38
22	MP3A	X	36.072	3.88
23	MP3A	Z	-20.826	3.88
24	MP3A	Mx	-.018	3.88
25	MP3C	X	66.941	2.38
26	MP3C	Z	-38.649	2.38
27	MP3C	Mx	0	2.38
28	MP3C	X	66.941	3.88
29	MP3C	Z	-38.649	3.88
30	MP3C	Mx	0	3.88
31	MP1B	X	17.244	7
32	MP1B	Z	-9.956	7
33	MP1B	Mx	-.009	7
34	MP2A	X	17.244	7
35	MP2A	Z	-9.956	7
36	MP2A	Mx	.009	7
37	MP2B	X	17.244	7
38	MP2B	Z	-9.956	7
39	MP2B	Mx	-.009	7
40	MP2C	X	30.38	7
41	MP2C	Z	-17.54	7
42	MP2C	Mx	0	7
43	MP3A	X	50.294	3.5
44	MP3A	Z	-29.037	3.5
45	MP3A	Mx	.017	3.5
46	MP2A	X	41.242	3.5
47	MP2A	Z	-23.811	3.5
48	MP2A	Mx	.014	3.5
49	MP2C	X	50.25	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
50	MP2C	Z	-29.012	3.5
51	MP2C	Mx	.01	3.5
52	MP1A	X	91.846	2
53	MP1A	Z	-53.027	2
54	MP1A	Mx	.046	2
55	MP4A	X	91.846	2
56	MP4A	Z	-53.027	2
57	MP4A	Mx	.046	2
58	MP1B	X	193.952	.75
59	MP1B	Z	-111.978	.75
60	MP1B	Mx	.029	.75
61	MP1B	X	193.952	5.5
62	MP1B	Z	-111.978	5.5
63	MP1B	Mx	.029	5.5
64	MP3B	X	112.582	.75
65	MP3B	Z	-64.999	.75
66	MP3B	Mx	.059	.75
67	MP3B	X	112.582	5.5
68	MP3B	Z	-64.999	5.5
69	MP3B	Mx	.059	5.5
70	MP2B	X	207.034	.75
71	MP2B	Z	-119.531	.75
72	MP2B	Mx	-.122	.75
73	MP2B	X	207.034	5.5
74	MP2B	Z	-119.531	5.5
75	MP2B	Mx	-.122	5.5
76	MP2B	X	207.034	.75
77	MP2B	Z	-119.531	.75
78	MP2B	Mx	.275	.75
79	MP2B	X	207.034	5.5
80	MP2B	Z	-119.531	5.5
81	MP2B	Mx	.275	5.5
82	MP1C	X	142.184	.75
83	MP1C	Z	-82.09	.75
84	MP1C	Mx	.096	.75
85	MP1C	X	142.184	5.5
86	MP1C	Z	-82.09	5.5
87	MP1C	Mx	.096	5.5
88	MP2A	X	106.307	.75
89	MP2A	Z	-61.376	.75
90	MP2A	Mx	-.089	.75
91	MP2A	X	106.307	5.5
92	MP2A	Z	-61.376	5.5
93	MP2A	Mx	-.089	5.5
94	B1	X	60.804	3.5
95	B1	Z	-35.105	3.5
96	B1	Mx	-.012	3.5
97	B2	X	50.25	3.5
98	B2	Z	-29.012	3.5
99	B2	Mx	-.01	3.5
100	B3	X	60.804	3.5
101	B3	Z	-35.105	3.5
102	B3	Mx	-.012	3.5
103	B4	X	50.25	3.5
104	B4	Z	-29.012	3.5
105	B4	Mx	-.01	3.5
106	C1	X	60.804	3.5
107	C1	Z	-35.105	3.5
108	C1	Mx	.012	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	94.939	.75
2	MP1C	Z	0	.75
3	MP1C	Mx	-.024	.75
4	MP1C	X	94.939	5.5
5	MP1C	Z	0	5.5
6	MP1C	Mx	-.024	5.5
7	MP2A	X	47.52	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	-.024	.75
10	MP2A	X	47.52	5.5
11	MP2A	Z	0	5.5
12	MP2A	Mx	-.024	5.5
13	MP1B	X	65.416	2.38
14	MP1B	Z	0	2.38
15	MP1B	Mx	.016	2.38
16	MP1B	X	65.416	3.88
17	MP1B	Z	0	3.88
18	MP1B	Mx	.016	3.88
19	MP3A	X	29.771	2.38
20	MP3A	Z	0	2.38
21	MP3A	Mx	-.015	2.38
22	MP3A	X	29.771	3.88
23	MP3A	Z	0	3.88
24	MP3A	Mx	-.015	3.88
25	MP3C	X	65.416	2.38
26	MP3C	Z	0	2.38
27	MP3C	Mx	.016	2.38
28	MP3C	X	65.416	3.88
29	MP3C	Z	0	3.88
30	MP3C	Mx	.016	3.88
31	MP1B	X	30.024	7
32	MP1B	Z	0	7
33	MP1B	Mx	-.008	7
34	MP2A	X	14.856	7
35	MP2A	Z	0	7
36	MP2A	Mx	.007	7
37	MP2B	X	30.024	7
38	MP2B	Z	0	7
39	MP2B	Mx	-.008	7
40	MP2C	X	30.024	7
41	MP2C	Z	0	7
42	MP2C	Mx	-.008	7
43	MP3A	X	52.007	3.5
44	MP3A	Z	0	3.5
45	MP3A	Mx	.017	3.5
46	MP2A	X	42.422	3.5
47	MP2A	Z	0	3.5
48	MP2A	Mx	.014	3.5
49	MP2C	X	63.225	3.5
50	MP2C	Z	0	3.5
51	MP2C	Mx	0	3.5
52	MP1A	X	98.304	2
53	MP1A	Z	0	2
54	MP1A	Mx	.049	2
55	MP4A	X	98.304	2
56	MP4A	Z	0	2
57	MP4A	Mx	.049	2
58	MP1B	X	223.957	.75
59	MP1B	Z	0	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
60	MP1B	Mx	-.029	.75
61	MP1B	X	223.957	5.5
62	MP1B	Z	0	5.5
63	MP1B	Mx	-.029	5.5
64	MP3B	X	191.325	.75
65	MP3B	Z	0	.75
66	MP3B	Mx	.055	.75
67	MP3B	X	191.325	5.5
68	MP3B	Z	0	5.5
69	MP3B	Mx	.055	5.5
70	MP2B	X	306.907	.75
71	MP2B	Z	0	.75
72	MP2B	Mx	-.301	.75
73	MP2B	X	306.907	5.5
74	MP2B	Z	0	5.5
75	MP2B	Mx	-.301	5.5
76	MP2B	X	306.907	.75
77	MP2B	Z	0	.75
78	MP2B	Mx	.354	.75
79	MP2B	X	306.907	5.5
80	MP2B	Z	0	5.5
81	MP2B	Mx	.354	5.5
82	MP1C	X	150.371	.75
83	MP1C	Z	0	.75
84	MP1C	Mx	.114	.75
85	MP1C	X	150.371	5.5
86	MP1C	Z	0	5.5
87	MP1C	Mx	.114	5.5
88	MP2A	X	108.944	.75
89	MP2A	Z	0	.75
90	MP2A	Mx	-.054	.75
91	MP2A	X	108.944	5.5
92	MP2A	Z	0	5.5
93	MP2A	Mx	-.054	5.5
94	B1	X	76.278	3.5
95	B1	Z	0	3.5
96	B1	Mx	0	3.5
97	B2	X	63.225	3.5
98	B2	Z	0	3.5
99	B2	Mx	0	3.5
100	B3	X	76.278	3.5
101	B3	Z	0	3.5
102	B3	Mx	0	3.5
103	B4	X	63.225	3.5
104	B4	Z	0	3.5
105	B4	Mx	0	3.5
106	C1	X	76.278	3.5
107	C1	Z	0	3.5
108	C1	Mx	0	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	54.842	.75
2	MP1C	Z	31.663	.75
3	MP1C	Mx	.009	.75
4	MP1C	X	54.842	5.5
5	MP1C	Z	31.663	5.5
6	MP1C	Mx	.009	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
7	MP2A	X	54.842	.75
8	MP2A	Z	31.663	.75
9	MP2A	Mx	-.046	.75
10	MP2A	X	54.842	5.5
11	MP2A	Z	31.663	5.5
12	MP2A	Mx	-.046	5.5
13	MP1B	X	66.941	2.38
14	MP1B	Z	38.649	2.38
15	MP1B	Mx	0	2.38
16	MP1B	X	66.941	3.88
17	MP1B	Z	38.649	3.88
18	MP1B	Mx	0	3.88
19	MP3A	X	36.072	2.38
20	MP3A	Z	20.826	2.38
21	MP3A	Mx	-.018	2.38
22	MP3A	X	36.072	3.88
23	MP3A	Z	20.826	3.88
24	MP3A	Mx	-.018	3.88
25	MP3C	X	36.072	2.38
26	MP3C	Z	20.826	2.38
27	MP3C	Mx	.018	2.38
28	MP3C	X	36.072	3.88
29	MP3C	Z	20.826	3.88
30	MP3C	Mx	.018	3.88
31	MP1B	X	30.38	7
32	MP1B	Z	17.54	7
33	MP1B	Mx	0	7
34	MP2A	X	17.244	7
35	MP2A	Z	9.956	7
36	MP2A	Mx	.009	7
37	MP2B	X	30.38	7
38	MP2B	Z	17.54	7
39	MP2B	Mx	0	7
40	MP2C	X	17.244	7
41	MP2C	Z	9.956	7
42	MP2C	Mx	-.009	7
43	MP3A	X	50.294	3.5
44	MP3A	Z	29.037	3.5
45	MP3A	Mx	.017	3.5
46	MP2A	X	41.242	3.5
47	MP2A	Z	23.811	3.5
48	MP2A	Mx	.014	3.5
49	MP2C	X	50.25	3.5
50	MP2C	Z	29.012	3.5
51	MP2C	Mx	-.01	3.5
52	MP1A	X	91.846	2
53	MP1A	Z	53.027	2
54	MP1A	Mx	.046	2
55	MP4A	X	91.846	2
56	MP4A	Z	53.027	2
57	MP4A	Mx	.046	2
58	MP1B	X	147.248	.75
59	MP1B	Z	85.013	.75
60	MP1B	Mx	-.06	.75
61	MP1B	X	147.248	5.5
62	MP1B	Z	85.013	5.5
63	MP1B	Mx	-.06	5.5
64	MP3B	X	200.358	.75
65	MP3B	Z	115.677	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
66	MP3B	Mx	.01	.75
67	MP3B	X	200.358	5.5
68	MP3B	Z	115.677	5.5
69	MP3B	Mx	.01	5.5
70	MP2B	X	252.471	.75
71	MP2B	Z	145.764	.75
72	MP2B	Mx	-.347	.75
73	MP2B	X	252.471	5.5
74	MP2B	Z	145.764	5.5
75	MP2B	Mx	-.347	5.5
76	MP2B	X	252.471	.75
77	MP2B	Z	145.764	.75
78	MP2B	Mx	.247	.75
79	MP2B	X	252.471	5.5
80	MP2B	Z	145.764	5.5
81	MP2B	Mx	.247	5.5
82	MP1C	X	106.307	.75
83	MP1C	Z	61.376	.75
84	MP1C	Mx	.089	.75
85	MP1C	X	106.307	5.5
86	MP1C	Z	61.376	5.5
87	MP1C	Mx	.089	5.5
88	MP2A	X	106.307	.75
89	MP2A	Z	61.376	.75
90	MP2A	Mx	-.017	.75
91	MP2A	X	106.307	5.5
92	MP2A	Z	61.376	5.5
93	MP2A	Mx	-.017	5.5
94	B1	X	60.804	3.5
95	B1	Z	35.105	3.5
96	B1	Mx	.012	3.5
97	B2	X	50.25	3.5
98	B2	Z	29.012	3.5
99	B2	Mx	.01	3.5
100	B3	X	60.804	3.5
101	B3	Z	35.105	3.5
102	B3	Mx	.012	3.5
103	B4	X	50.25	3.5
104	B4	Z	29.012	3.5
105	B4	Mx	.01	3.5
106	C1	X	60.804	3.5
107	C1	Z	35.105	3.5
108	C1	Mx	-.012	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	23.76	.75
2	MP1C	Z	41.154	.75
3	MP1C	Mx	.024	.75
4	MP1C	X	23.76	5.5
5	MP1C	Z	41.154	5.5
6	MP1C	Mx	.024	5.5
7	MP2A	X	47.469	.75
8	MP2A	Z	82.22	.75
9	MP2A	Mx	-.072	.75
10	MP2A	X	47.469	5.5
11	MP2A	Z	82.22	5.5
12	MP2A	Mx	-.072	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP1B	X	32.708	2.38
14	MP1B	Z	56.652	2.38
15	MP1B	Mx	-.016	2.38
16	MP1B	X	32.708	3.88
17	MP1B	Z	56.652	3.88
18	MP1B	Mx	-.016	3.88
19	MP3A	X	32.708	2.38
20	MP3A	Z	56.652	2.38
21	MP3A	Mx	-.016	2.38
22	MP3A	X	32.708	3.88
23	MP3A	Z	56.652	3.88
24	MP3A	Mx	-.016	3.88
25	MP3C	X	14.886	2.38
26	MP3C	Z	25.782	2.38
27	MP3C	Mx	.015	2.38
28	MP3C	X	14.886	3.88
29	MP3C	Z	25.782	3.88
30	MP3C	Mx	.015	3.88
31	MP1B	X	15.012	7
32	MP1B	Z	26.001	7
33	MP1B	Mx	.008	7
34	MP2A	X	15.012	7
35	MP2A	Z	26.001	7
36	MP2A	Mx	.008	7
37	MP2B	X	15.012	7
38	MP2B	Z	26.001	7
39	MP2B	Mx	.008	7
40	MP2C	X	7.428	7
41	MP2C	Z	12.865	7
42	MP2C	Mx	-.007	7
43	MP3A	X	35.105	3.5
44	MP3A	Z	60.804	3.5
45	MP3A	Mx	.012	3.5
46	MP2A	X	29.012	3.5
47	MP2A	Z	50.25	3.5
48	MP2A	Mx	.01	3.5
49	MP2C	X	23.811	3.5
50	MP2C	Z	41.242	3.5
51	MP2C	Mx	-.014	3.5
52	MP1A	X	60.777	2
53	MP1A	Z	105.269	2
54	MP1A	Mx	.03	2
55	MP4A	X	60.777	2
56	MP4A	Z	105.269	2
57	MP4A	Mx	.03	2
58	MP1B	X	58.048	.75
59	MP1B	Z	100.543	.75
60	MP1B	Mx	-.056	.75
61	MP1B	X	58.048	5.5
62	MP1B	Z	100.543	5.5
63	MP1B	Mx	-.056	5.5
64	MP3B	X	105.028	.75
65	MP3B	Z	181.913	.75
66	MP3B	Mx	-.044	.75
67	MP3B	X	105.028	5.5
68	MP3B	Z	181.913	5.5
69	MP3B	Mx	-.044	5.5
70	MP2B	X	104.152	.75
71	MP2B	Z	180.396	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
72	MP2B	Mx	-.225	.75
73	MP2B	X	104.152	5.5
74	MP2B	Z	180.396	5.5
75	MP2B	Mx	-.225	5.5
76	MP2B	X	104.152	.75
77	MP2B	Z	180.396	.75
78	MP2B	Mx	.065	.75
79	MP2B	X	104.152	5.5
80	MP2B	Z	180.396	5.5
81	MP2B	Mx	.065	5.5
82	MP1C	X	54.472	.75
83	MP1C	Z	94.348	.75
84	MP1C	Mx	.054	.75
85	MP1C	X	54.472	5.5
86	MP1C	Z	94.348	5.5
87	MP1C	Mx	.054	5.5
88	MP2A	X	75.186	.75
89	MP2A	Z	130.225	.75
90	MP2A	Mx	.038	.75
91	MP2A	X	75.186	5.5
92	MP2A	Z	130.225	5.5
93	MP2A	Mx	.038	5.5
94	B1	X	29.037	3.5
95	B1	Z	50.294	3.5
96	B1	Mx	.017	3.5
97	B2	X	23.811	3.5
98	B2	Z	41.242	3.5
99	B2	Mx	.014	3.5
100	B3	X	29.037	3.5
101	B3	Z	50.294	3.5
102	B3	Mx	.017	3.5
103	B4	X	23.811	3.5
104	B4	Z	41.242	3.5
105	B4	Mx	.014	3.5
106	C1	X	29.037	3.5
107	C1	Z	50.294	3.5
108	C1	Mx	-.017	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	0	.75
2	MP1C	Z	63.327	.75
3	MP1C	Mx	.046	.75
4	MP1C	X	0	5.5
5	MP1C	Z	63.327	5.5
6	MP1C	Mx	.046	5.5
7	MP2A	X	0	.75
8	MP2A	Z	110.745	.75
9	MP2A	Mx	-.065	.75
10	MP2A	X	0	5.5
11	MP2A	Z	110.745	5.5
12	MP2A	Mx	-.065	5.5
13	MP1B	X	0	2.38
14	MP1B	Z	41.653	2.38
15	MP1B	Mx	-.018	2.38
16	MP1B	X	0	3.88
17	MP1B	Z	41.653	3.88
18	MP1B	Mx	-.018	3.88

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
19	MP3A	X	0	2.38
20	MP3A	Z	77.297	2.38
21	MP3A	Mx	0	2.38
22	MP3A	X	0	3.88
23	MP3A	Z	77.297	3.88
24	MP3A	Mx	0	3.88
25	MP3C	X	0	2.38
26	MP3C	Z	41.653	2.38
27	MP3C	Mx	.018	2.38
28	MP3C	X	0	3.88
29	MP3C	Z	41.653	3.88
30	MP3C	Mx	.018	3.88
31	MP1B	X	0	7
32	MP1B	Z	19.912	7
33	MP1B	Mx	.009	7
34	MP2A	X	0	7
35	MP2A	Z	35.079	7
36	MP2A	Mx	0	7
37	MP2B	X	0	7
38	MP2B	Z	19.912	7
39	MP2B	Mx	.009	7
40	MP2C	X	0	7
41	MP2C	Z	19.912	7
42	MP2C	Mx	-.009	7
43	MP3A	X	0	3.5
44	MP3A	Z	76.278	3.5
45	MP3A	Mx	0	3.5
46	MP2A	X	0	3.5
47	MP2A	Z	63.225	3.5
48	MP2A	Mx	0	3.5
49	MP2C	X	0	3.5
50	MP2C	Z	42.422	3.5
51	MP2C	Mx	-.014	3.5
52	MP1A	X	0	2
53	MP1A	Z	129.305	2
54	MP1A	Mx	0	2
55	MP4A	X	0	2
56	MP4A	Z	129.305	2
57	MP4A	Mx	0	2
58	MP1B	X	0	.75
59	MP1B	Z	116.097	.75
60	MP1B	Mx	-.056	.75
61	MP1B	X	0	5.5
62	MP1B	Z	116.097	5.5
63	MP1B	Mx	-.056	5.5
64	MP3B	X	0	.75
65	MP3B	Z	148.728	.75
66	MP3B	Mx	-.061	.75
67	MP3B	X	0	5.5
68	MP3B	Z	148.728	5.5
69	MP3B	Mx	-.061	5.5
70	MP2B	X	0	.75
71	MP2B	Z	140.458	.75
72	MP2B	Mx	-.096	.75
73	MP2B	X	0	5.5
74	MP2B	Z	140.458	5.5
75	MP2B	Mx	-.096	5.5
76	MP2B	X	0	.75
77	MP2B	Z	140.458	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
78	MP2B	Mx	-.043	.75
79	MP2B	X	0	5.5
80	MP2B	Z	140.458	5.5
81	MP2B	Mx	-.043	5.5
82	MP1C	X	0	.75
83	MP1C	Z	122.753	.75
84	MP1C	Mx	.017	.75
85	MP1C	X	0	5.5
86	MP1C	Z	122.753	5.5
87	MP1C	Mx	.017	5.5
88	MP2A	X	0	.75
89	MP2A	Z	164.18	.75
90	MP2A	Mx	.096	.75
91	MP2A	X	0	5.5
92	MP2A	Z	164.18	5.5
93	MP2A	Mx	.096	5.5
94	B1	X	0	3.5
95	B1	Z	52.007	3.5
96	B1	Mx	.017	3.5
97	B2	X	0	3.5
98	B2	Z	42.422	3.5
99	B2	Mx	.014	3.5
100	B3	X	0	3.5
101	B3	Z	52.007	3.5
102	B3	Mx	.017	3.5
103	B4	X	0	3.5
104	B4	Z	42.422	3.5
105	B4	Mx	.014	3.5
106	C1	X	0	3.5
107	C1	Z	52.007	3.5
108	C1	Mx	-.017	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	-47.469	.75
2	MP1C	Z	82.22	.75
3	MP1C	Mx	.072	.75
4	MP1C	X	-47.469	5.5
5	MP1C	Z	82.22	5.5
6	MP1C	Mx	.072	5.5
7	MP2A	X	-47.469	.75
8	MP2A	Z	82.22	.75
9	MP2A	Mx	-.024	.75
10	MP2A	X	-47.469	5.5
11	MP2A	Z	82.22	5.5
12	MP2A	Mx	-.024	5.5
13	MP1B	X	-14.886	2.38
14	MP1B	Z	25.782	2.38
15	MP1B	Mx	-.015	2.38
16	MP1B	X	-14.886	3.88
17	MP1B	Z	25.782	3.88
18	MP1B	Mx	-.015	3.88
19	MP3A	X	-32.708	2.38
20	MP3A	Z	56.652	2.38
21	MP3A	Mx	.016	2.38
22	MP3A	X	-32.708	3.88
23	MP3A	Z	56.652	3.88
24	MP3A	Mx	.016	3.88

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP3C	X	-32.708	2.38
26	MP3C	Z	56.652	2.38
27	MP3C	Mx	.016	2.38
28	MP3C	X	-32.708	3.88
29	MP3C	Z	56.652	3.88
30	MP3C	Mx	.016	3.88
31	MP1B	X	-7.428	7
32	MP1B	Z	12.865	7
33	MP1B	Mx	.007	7
34	MP2A	X	-15.012	7
35	MP2A	Z	26.001	7
36	MP2A	Mx	-.008	7
37	MP2B	X	-7.428	7
38	MP2B	Z	12.865	7
39	MP2B	Mx	.007	7
40	MP2C	X	-15.012	7
41	MP2C	Z	26.001	7
42	MP2C	Mx	-.008	7
43	MP3A	X	-35.105	3.5
44	MP3A	Z	60.804	3.5
45	MP3A	Mx	-.012	3.5
46	MP2A	X	-29.012	3.5
47	MP2A	Z	50.25	3.5
48	MP2A	Mx	-.01	3.5
49	MP2C	X	-23.811	3.5
50	MP2C	Z	41.242	3.5
51	MP2C	Mx	-.014	3.5
52	MP1A	X	-60.777	2
53	MP1A	Z	105.269	2
54	MP1A	Mx	-.03	2
55	MP4A	X	-60.777	2
56	MP4A	Z	105.269	2
57	MP4A	Mx	-.03	2
58	MP1B	X	-85.013	.75
59	MP1B	Z	147.248	.75
60	MP1B	Mx	-.06	.75
61	MP1B	X	-85.013	5.5
62	MP1B	Z	147.248	5.5
63	MP1B	Mx	-.06	5.5
64	MP3B	X	-54.35	.75
65	MP3B	Z	94.137	.75
66	MP3B	Mx	-.054	.75
67	MP3B	X	-54.35	5.5
68	MP3B	Z	94.137	5.5
69	MP3B	Mx	-.054	5.5
70	MP2B	X	-77.919	.75
71	MP2B	Z	134.959	.75
72	MP2B	Mx	-.015	.75
73	MP2B	X	-77.919	5.5
74	MP2B	Z	134.959	5.5
75	MP2B	Mx	-.015	5.5
76	MP2B	X	-77.919	.75
77	MP2B	Z	134.959	.75
78	MP2B	Mx	-.131	.75
79	MP2B	X	-77.919	5.5
80	MP2B	Z	134.959	5.5
81	MP2B	Mx	-.131	5.5
82	MP1C	X	-75.186	.75
83	MP1C	Z	130.225	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
84	MP1C	Mx	-.038	.75
85	MP1C	X	-75.186	5.5
86	MP1C	Z	130.225	5.5
87	MP1C	Mx	-.038	5.5
88	MP2A	X	-75.186	.75
89	MP2A	Z	130.225	.75
90	MP2A	Mx	.114	.75
91	MP2A	X	-75.186	5.5
92	MP2A	Z	130.225	5.5
93	MP2A	Mx	.114	5.5
94	B1	X	-29.037	3.5
95	B1	Z	50.294	3.5
96	B1	Mx	.017	3.5
97	B2	X	-23.811	3.5
98	B2	Z	41.242	3.5
99	B2	Mx	.014	3.5
100	B3	X	-29.037	3.5
101	B3	Z	50.294	3.5
102	B3	Mx	.017	3.5
103	B4	X	-23.811	3.5
104	B4	Z	41.242	3.5
105	B4	Mx	.014	3.5
106	C1	X	-29.037	3.5
107	C1	Z	50.294	3.5
108	C1	Mx	-.017	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	-95.908	.75
2	MP1C	Z	55.373	.75
3	MP1C	Mx	.065	.75
4	MP1C	X	-95.908	5.5
5	MP1C	Z	55.373	5.5
6	MP1C	Mx	.065	5.5
7	MP2A	X	-54.842	.75
8	MP2A	Z	31.663	.75
9	MP2A	Mx	.009	.75
10	MP2A	X	-54.842	5.5
11	MP2A	Z	31.663	5.5
12	MP2A	Mx	.009	5.5
13	MP1B	X	-36.072	2.38
14	MP1B	Z	20.826	2.38
15	MP1B	Mx	-.018	2.38
16	MP1B	X	-36.072	3.88
17	MP1B	Z	20.826	3.88
18	MP1B	Mx	-.018	3.88
19	MP3A	X	-36.072	2.38
20	MP3A	Z	20.826	2.38
21	MP3A	Mx	.018	2.38
22	MP3A	X	-36.072	3.88
23	MP3A	Z	20.826	3.88
24	MP3A	Mx	.018	3.88
25	MP3C	X	-66.941	2.38
26	MP3C	Z	38.649	2.38
27	MP3C	Mx	0	2.38
28	MP3C	X	-66.941	3.88
29	MP3C	Z	38.649	3.88
30	MP3C	Mx	0	3.88

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
31	MP1B	X	-17.244	7
32	MP1B	Z	9.956	7
33	MP1B	Mx	.009	7
34	MP2A	X	-17.244	7
35	MP2A	Z	9.956	7
36	MP2A	Mx	-.009	7
37	MP2B	X	-17.244	7
38	MP2B	Z	9.956	7
39	MP2B	Mx	.009	7
40	MP2C	X	-30.38	7
41	MP2C	Z	17.54	7
42	MP2C	Mx	0	7
43	MP3A	X	-50.294	3.5
44	MP3A	Z	29.037	3.5
45	MP3A	Mx	-.017	3.5
46	MP2A	X	-41.242	3.5
47	MP2A	Z	23.811	3.5
48	MP2A	Mx	-.014	3.5
49	MP2C	X	-50.25	3.5
50	MP2C	Z	29.012	3.5
51	MP2C	Mx	-.01	3.5
52	MP1A	X	-91.846	2
53	MP1A	Z	53.027	2
54	MP1A	Mx	-.046	2
55	MP4A	X	-91.846	2
56	MP4A	Z	53.027	2
57	MP4A	Mx	-.046	2
58	MP1B	X	-193.952	.75
59	MP1B	Z	111.978	.75
60	MP1B	Mx	-.029	.75
61	MP1B	X	-193.952	5.5
62	MP1B	Z	111.978	5.5
63	MP1B	Mx	-.029	5.5
64	MP3B	X	-112.582	.75
65	MP3B	Z	64.999	.75
66	MP3B	Mx	-.059	.75
67	MP3B	X	-112.582	5.5
68	MP3B	Z	64.999	5.5
69	MP3B	Mx	-.059	5.5
70	MP2B	X	-207.034	.75
71	MP2B	Z	119.531	.75
72	MP2B	Mx	.122	.75
73	MP2B	X	-207.034	5.5
74	MP2B	Z	119.531	5.5
75	MP2B	Mx	.122	5.5
76	MP2B	X	-207.034	.75
77	MP2B	Z	119.531	.75
78	MP2B	Mx	-.275	.75
79	MP2B	X	-207.034	5.5
80	MP2B	Z	119.531	5.5
81	MP2B	Mx	-.275	5.5
82	MP1C	X	-142.184	.75
83	MP1C	Z	82.09	.75
84	MP1C	Mx	-.096	.75
85	MP1C	X	-142.184	5.5
86	MP1C	Z	82.09	5.5
87	MP1C	Mx	-.096	5.5
88	MP2A	X	-106.307	.75
89	MP2A	Z	61.376	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
90	MP2A	Mx	.089	.75
91	MP2A	X	-106.307	5.5
92	MP2A	Z	61.376	5.5
93	MP2A	Mx	.089	5.5
94	B1	X	-60.804	3.5
95	B1	Z	35.105	3.5
96	B1	Mx	.012	3.5
97	B2	X	-50.25	3.5
98	B2	Z	29.012	3.5
99	B2	Mx	.01	3.5
100	B3	X	-60.804	3.5
101	B3	Z	35.105	3.5
102	B3	Mx	.012	3.5
103	B4	X	-50.25	3.5
104	B4	Z	29.012	3.5
105	B4	Mx	.01	3.5
106	C1	X	-60.804	3.5
107	C1	Z	35.105	3.5
108	C1	Mx	-.012	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	-94.939	.75
2	MP1C	Z	0	.75
3	MP1C	Mx	.024	.75
4	MP1C	X	-94.939	5.5
5	MP1C	Z	0	5.5
6	MP1C	Mx	.024	5.5
7	MP2A	X	-47.52	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	.024	.75
10	MP2A	X	-47.52	5.5
11	MP2A	Z	0	5.5
12	MP2A	Mx	.024	5.5
13	MP1B	X	-65.416	2.38
14	MP1B	Z	0	2.38
15	MP1B	Mx	-.016	2.38
16	MP1B	X	-65.416	3.88
17	MP1B	Z	0	3.88
18	MP1B	Mx	-.016	3.88
19	MP3A	X	-29.771	2.38
20	MP3A	Z	0	2.38
21	MP3A	Mx	.015	2.38
22	MP3A	X	-29.771	3.88
23	MP3A	Z	0	3.88
24	MP3A	Mx	.015	3.88
25	MP3C	X	-65.416	2.38
26	MP3C	Z	0	2.38
27	MP3C	Mx	-.016	2.38
28	MP3C	X	-65.416	3.88
29	MP3C	Z	0	3.88
30	MP3C	Mx	-.016	3.88
31	MP1B	X	-30.024	7
32	MP1B	Z	0	7
33	MP1B	Mx	.008	7
34	MP2A	X	-14.856	7
35	MP2A	Z	0	7
36	MP2A	Mx	-.007	7

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
37	MP2B	X	-30.024	7
38	MP2B	Z	0	7
39	MP2B	Mx	.008	7
40	MP2C	X	-30.024	7
41	MP2C	Z	0	7
42	MP2C	Mx	.008	7
43	MP3A	X	-52.007	3.5
44	MP3A	Z	0	3.5
45	MP3A	Mx	-.017	3.5
46	MP2A	X	-42.422	3.5
47	MP2A	Z	0	3.5
48	MP2A	Mx	-.014	3.5
49	MP2C	X	-63.225	3.5
50	MP2C	Z	0	3.5
51	MP2C	Mx	0	3.5
52	MP1A	X	-98.304	2
53	MP1A	Z	0	2
54	MP1A	Mx	-.049	2
55	MP4A	X	-98.304	2
56	MP4A	Z	0	2
57	MP4A	Mx	-.049	2
58	MP1B	X	-223.957	.75
59	MP1B	Z	0	.75
60	MP1B	Mx	.029	.75
61	MP1B	X	-223.957	5.5
62	MP1B	Z	0	5.5
63	MP1B	Mx	.029	5.5
64	MP3B	X	-191.325	.75
65	MP3B	Z	0	.75
66	MP3B	Mx	-.055	.75
67	MP3B	X	-191.325	5.5
68	MP3B	Z	0	5.5
69	MP3B	Mx	-.055	5.5
70	MP2B	X	-306.907	.75
71	MP2B	Z	0	.75
72	MP2B	Mx	.301	.75
73	MP2B	X	-306.907	5.5
74	MP2B	Z	0	5.5
75	MP2B	Mx	.301	5.5
76	MP2B	X	-306.907	.75
77	MP2B	Z	0	.75
78	MP2B	Mx	-.354	.75
79	MP2B	X	-306.907	5.5
80	MP2B	Z	0	5.5
81	MP2B	Mx	-.354	5.5
82	MP1C	X	-150.371	.75
83	MP1C	Z	0	.75
84	MP1C	Mx	-.114	.75
85	MP1C	X	-150.371	5.5
86	MP1C	Z	0	5.5
87	MP1C	Mx	-.114	5.5
88	MP2A	X	-108.944	.75
89	MP2A	Z	0	.75
90	MP2A	Mx	.054	.75
91	MP2A	X	-108.944	5.5
92	MP2A	Z	0	5.5
93	MP2A	Mx	.054	5.5
94	B1	X	-76.278	3.5
95	B1	Z	0	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
96	B1	Mx	0	3.5
97	B2	X	-63.225	3.5
98	B2	Z	0	3.5
99	B2	Mx	0	3.5
100	B3	X	-76.278	3.5
101	B3	Z	0	3.5
102	B3	Mx	0	3.5
103	B4	X	-63.225	3.5
104	B4	Z	0	3.5
105	B4	Mx	0	3.5
106	C1	X	-76.278	3.5
107	C1	Z	0	3.5
108	C1	Mx	0	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	-54.842	.75
2	MP1C	Z	-31.663	.75
3	MP1C	Mx	-.009	.75
4	MP1C	X	-54.842	5.5
5	MP1C	Z	-31.663	5.5
6	MP1C	Mx	-.009	5.5
7	MP2A	X	-54.842	.75
8	MP2A	Z	-31.663	.75
9	MP2A	Mx	.046	.75
10	MP2A	X	-54.842	5.5
11	MP2A	Z	-31.663	5.5
12	MP2A	Mx	.046	5.5
13	MP1B	X	-66.941	2.38
14	MP1B	Z	-38.649	2.38
15	MP1B	Mx	0	2.38
16	MP1B	X	-66.941	3.88
17	MP1B	Z	-38.649	3.88
18	MP1B	Mx	0	3.88
19	MP3A	X	-36.072	2.38
20	MP3A	Z	-20.826	2.38
21	MP3A	Mx	.018	2.38
22	MP3A	X	-36.072	3.88
23	MP3A	Z	-20.826	3.88
24	MP3A	Mx	.018	3.88
25	MP3C	X	-36.072	2.38
26	MP3C	Z	-20.826	2.38
27	MP3C	Mx	-.018	2.38
28	MP3C	X	-36.072	3.88
29	MP3C	Z	-20.826	3.88
30	MP3C	Mx	-.018	3.88
31	MP1B	X	-30.38	7
32	MP1B	Z	-17.54	7
33	MP1B	Mx	0	7
34	MP2A	X	-17.244	7
35	MP2A	Z	-9.956	7
36	MP2A	Mx	-.009	7
37	MP2B	X	-30.38	7
38	MP2B	Z	-17.54	7
39	MP2B	Mx	0	7
40	MP2C	X	-17.244	7
41	MP2C	Z	-9.956	7
42	MP2C	Mx	.009	7

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
43	MP3A	X	-50.294	3.5
44	MP3A	Z	-29.037	3.5
45	MP3A	Mx	-.017	3.5
46	MP2A	X	-41.242	3.5
47	MP2A	Z	-23.811	3.5
48	MP2A	Mx	-.014	3.5
49	MP2C	X	-50.25	3.5
50	MP2C	Z	-29.012	3.5
51	MP2C	Mx	.01	3.5
52	MP1A	X	-91.846	2
53	MP1A	Z	-53.027	2
54	MP1A	Mx	-.046	2
55	MP4A	X	-91.846	2
56	MP4A	Z	-53.027	2
57	MP4A	Mx	-.046	2
58	MP1B	X	-147.248	.75
59	MP1B	Z	-85.013	.75
60	MP1B	Mx	.06	.75
61	MP1B	X	-147.248	5.5
62	MP1B	Z	-85.013	5.5
63	MP1B	Mx	.06	5.5
64	MP3B	X	-200.358	.75
65	MP3B	Z	-115.677	.75
66	MP3B	Mx	-.01	.75
67	MP3B	X	-200.358	5.5
68	MP3B	Z	-115.677	5.5
69	MP3B	Mx	-.01	5.5
70	MP2B	X	-252.471	.75
71	MP2B	Z	-145.764	.75
72	MP2B	Mx	.347	.75
73	MP2B	X	-252.471	5.5
74	MP2B	Z	-145.764	5.5
75	MP2B	Mx	.347	5.5
76	MP2B	X	-252.471	.75
77	MP2B	Z	-145.764	.75
78	MP2B	Mx	-.247	.75
79	MP2B	X	-252.471	5.5
80	MP2B	Z	-145.764	5.5
81	MP2B	Mx	-.247	5.5
82	MP1C	X	-106.307	.75
83	MP1C	Z	-61.376	.75
84	MP1C	Mx	-.089	.75
85	MP1C	X	-106.307	5.5
86	MP1C	Z	-61.376	5.5
87	MP1C	Mx	-.089	5.5
88	MP2A	X	-106.307	.75
89	MP2A	Z	-61.376	.75
90	MP2A	Mx	.017	.75
91	MP2A	X	-106.307	5.5
92	MP2A	Z	-61.376	5.5
93	MP2A	Mx	.017	5.5
94	B1	X	-60.804	3.5
95	B1	Z	-35.105	3.5
96	B1	Mx	-.012	3.5
97	B2	X	-50.25	3.5
98	B2	Z	-29.012	3.5
99	B2	Mx	-.01	3.5
100	B3	X	-60.804	3.5
101	B3	Z	-35.105	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
102	B3	Mx	-.012	3.5
103	B4	X	-50.25	3.5
104	B4	Z	-29.012	3.5
105	B4	Mx	-.01	3.5
106	C1	X	-60.804	3.5
107	C1	Z	-35.105	3.5
108	C1	Mx	.012	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	-23.76	.75
2	MP1C	Z	-41.154	.75
3	MP1C	Mx	-.024	.75
4	MP1C	X	-23.76	5.5
5	MP1C	Z	-41.154	5.5
6	MP1C	Mx	-.024	5.5
7	MP2A	X	-47.469	.75
8	MP2A	Z	-82.22	.75
9	MP2A	Mx	.072	.75
10	MP2A	X	-47.469	5.5
11	MP2A	Z	-82.22	5.5
12	MP2A	Mx	.072	5.5
13	MP1B	X	-32.708	2.38
14	MP1B	Z	-56.652	2.38
15	MP1B	Mx	.016	2.38
16	MP1B	X	-32.708	3.88
17	MP1B	Z	-56.652	3.88
18	MP1B	Mx	.016	3.88
19	MP3A	X	-32.708	2.38
20	MP3A	Z	-56.652	2.38
21	MP3A	Mx	.016	2.38
22	MP3A	X	-32.708	3.88
23	MP3A	Z	-56.652	3.88
24	MP3A	Mx	.016	3.88
25	MP3C	X	-14.886	2.38
26	MP3C	Z	-25.782	2.38
27	MP3C	Mx	-.015	2.38
28	MP3C	X	-14.886	3.88
29	MP3C	Z	-25.782	3.88
30	MP3C	Mx	-.015	3.88
31	MP1B	X	-15.012	7
32	MP1B	Z	-26.001	7
33	MP1B	Mx	-.008	7
34	MP2A	X	-15.012	7
35	MP2A	Z	-26.001	7
36	MP2A	Mx	-.008	7
37	MP2B	X	-15.012	7
38	MP2B	Z	-26.001	7
39	MP2B	Mx	-.008	7
40	MP2C	X	-7.428	7
41	MP2C	Z	-12.865	7
42	MP2C	Mx	.007	7
43	MP3A	X	-35.105	3.5
44	MP3A	Z	-60.804	3.5
45	MP3A	Mx	-.012	3.5
46	MP2A	X	-29.012	3.5
47	MP2A	Z	-50.25	3.5
48	MP2A	Mx	-.01	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
49	MP2C	X	-23.811	3.5
50	MP2C	Z	-41.242	3.5
51	MP2C	Mx	.014	3.5
52	MP1A	X	-60.777	2
53	MP1A	Z	-105.269	2
54	MP1A	Mx	-.03	2
55	MP4A	X	-60.777	2
56	MP4A	Z	-105.269	2
57	MP4A	Mx	-.03	2
58	MP1B	X	-58.048	.75
59	MP1B	Z	-100.543	.75
60	MP1B	Mx	.056	.75
61	MP1B	X	-58.048	5.5
62	MP1B	Z	-100.543	5.5
63	MP1B	Mx	.056	5.5
64	MP3B	X	-105.028	.75
65	MP3B	Z	-181.913	.75
66	MP3B	Mx	.044	.75
67	MP3B	X	-105.028	5.5
68	MP3B	Z	-181.913	5.5
69	MP3B	Mx	.044	5.5
70	MP2B	X	-104.152	.75
71	MP2B	Z	-180.396	.75
72	MP2B	Mx	.225	.75
73	MP2B	X	-104.152	5.5
74	MP2B	Z	-180.396	5.5
75	MP2B	Mx	.225	5.5
76	MP2B	X	-104.152	.75
77	MP2B	Z	-180.396	.75
78	MP2B	Mx	-.065	.75
79	MP2B	X	-104.152	5.5
80	MP2B	Z	-180.396	5.5
81	MP2B	Mx	-.065	5.5
82	MP1C	X	-54.472	.75
83	MP1C	Z	-94.348	.75
84	MP1C	Mx	-.054	.75
85	MP1C	X	-54.472	5.5
86	MP1C	Z	-94.348	5.5
87	MP1C	Mx	-.054	5.5
88	MP2A	X	-75.186	.75
89	MP2A	Z	-130.225	.75
90	MP2A	Mx	-.038	.75
91	MP2A	X	-75.186	5.5
92	MP2A	Z	-130.225	5.5
93	MP2A	Mx	-.038	5.5
94	B1	X	-29.037	3.5
95	B1	Z	-50.294	3.5
96	B1	Mx	-.017	3.5
97	B2	X	-23.811	3.5
98	B2	Z	-41.242	3.5
99	B2	Mx	-.014	3.5
100	B3	X	-29.037	3.5
101	B3	Z	-50.294	3.5
102	B3	Mx	-.017	3.5
103	B4	X	-23.811	3.5
104	B4	Z	-41.242	3.5
105	B4	Mx	-.014	3.5
106	C1	X	-29.037	3.5
107	C1	Z	-50.294	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
108	C1	Mx	.017	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	0	.75
2	MP1C	Z	-25.677	.75
3	MP1C	Mx	-.019	.75
4	MP1C	X	0	5.5
5	MP1C	Z	-25.677	5.5
6	MP1C	Mx	-.019	5.5
7	MP2A	X	0	.75
8	MP2A	Z	-33.056	.75
9	MP2A	Mx	.019	.75
10	MP2A	X	0	5.5
11	MP2A	Z	-33.056	5.5
12	MP2A	Mx	.019	5.5
13	MP1B	X	0	2.38
14	MP1B	Z	-9.455	2.38
15	MP1B	Mx	.004	2.38
16	MP1B	X	0	3.88
17	MP1B	Z	-9.455	3.88
18	MP1B	Mx	.004	3.88
19	MP3A	X	0	2.38
20	MP3A	Z	-16.287	2.38
21	MP3A	Mx	0	2.38
22	MP3A	X	0	3.88
23	MP3A	Z	-16.287	3.88
24	MP3A	Mx	0	3.88
25	MP3C	X	0	2.38
26	MP3C	Z	-9.455	2.38
27	MP3C	Mx	-.004	2.38
28	MP3C	X	0	3.88
29	MP3C	Z	-9.455	3.88
30	MP3C	Mx	-.004	3.88
31	MP1B	X	0	7
32	MP1B	Z	-5.744	7
33	MP1B	Mx	-.002	7
34	MP2A	X	0	7
35	MP2A	Z	-8.855	7
36	MP2A	Mx	0	7
37	MP2B	X	0	7
38	MP2B	Z	-5.744	7
39	MP2B	Mx	-.002	7
40	MP2C	X	0	7
41	MP2C	Z	-5.744	7
42	MP2C	Mx	.002	7
43	MP3A	X	0	3.5
44	MP3A	Z	-17.186	3.5
45	MP3A	Mx	0	3.5
46	MP2A	X	0	3.5
47	MP2A	Z	-17.186	3.5
48	MP2A	Mx	0	3.5
49	MP2C	X	0	3.5
50	MP2C	Z	-12.175	3.5
51	MP2C	Mx	.004	3.5
52	MP1A	X	0	2
53	MP1A	Z	-34.505	2
54	MP1A	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
55	MP4A	X	0	2
56	MP4A	Z	-34.505	2
57	MP4A	Mx	0	2
58	MP1B	X	0	.75
59	MP1B	Z	-24.497	.75
60	MP1B	Mx	.012	.75
61	MP1B	X	0	5.5
62	MP1B	Z	-24.497	5.5
63	MP1B	Mx	.012	5.5
64	MP3B	X	0	.75
65	MP3B	Z	-30.348	.75
66	MP3B	Mx	.012	.75
67	MP3B	X	0	5.5
68	MP3B	Z	-30.348	5.5
69	MP3B	Mx	.012	5.5
70	MP2B	X	0	.75
71	MP2B	Z	-28.732	.75
72	MP2B	Mx	.02	.75
73	MP2B	X	0	5.5
74	MP2B	Z	-28.732	5.5
75	MP2B	Mx	.02	5.5
76	MP2B	X	0	.75
77	MP2B	Z	-28.732	.75
78	MP2B	Mx	.009	.75
79	MP2B	X	0	5.5
80	MP2B	Z	-28.732	5.5
81	MP2B	Mx	.009	5.5
82	MP1C	X	0	.75
83	MP1C	Z	-25.677	.75
84	MP1C	Mx	-.004	.75
85	MP1C	X	0	5.5
86	MP1C	Z	-25.677	5.5
87	MP1C	Mx	-.004	5.5
88	MP2A	X	0	.75
89	MP2A	Z	-33.056	.75
90	MP2A	Mx	-.019	.75
91	MP2A	X	0	5.5
92	MP2A	Z	-33.056	5.5
93	MP2A	Mx	-.019	5.5
94	B1	X	0	3.5
95	B1	Z	-12.375	3.5
96	B1	Mx	-.004	3.5
97	B2	X	0	3.5
98	B2	Z	-12.175	3.5
99	B2	Mx	-.004	3.5
100	B3	X	0	3.5
101	B3	Z	-12.375	3.5
102	B3	Mx	-.004	3.5
103	B4	X	0	3.5
104	B4	Z	-12.175	3.5
105	B4	Mx	-.004	3.5
106	C1	X	0	3.5
107	C1	Z	-12.375	3.5
108	C1	Mx	.004	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	15.298	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
2	MP1C	Z	-26.497	.75
3	MP1C	Mx	-.023	.75
4	MP1C	X	15.298	5.5
5	MP1C	Z	-26.497	5.5
6	MP1C	Mx	-.023	5.5
7	MP2A	X	15.298	.75
8	MP2A	Z	-26.497	.75
9	MP2A	Mx	.008	.75
10	MP2A	X	15.298	5.5
11	MP2A	Z	-26.497	5.5
12	MP2A	Mx	.008	5.5
13	MP1B	X	3.588	2.38
14	MP1B	Z	-6.215	2.38
15	MP1B	Mx	.004	2.38
16	MP1B	X	3.588	3.88
17	MP1B	Z	-6.215	3.88
18	MP1B	Mx	.004	3.88
19	MP3A	X	7.005	2.38
20	MP3A	Z	-12.133	2.38
21	MP3A	Mx	-.004	2.38
22	MP3A	X	7.005	3.88
23	MP3A	Z	-12.133	3.88
24	MP3A	Mx	-.004	3.88
25	MP3C	X	7.005	2.38
26	MP3C	Z	-12.133	2.38
27	MP3C	Mx	-.004	2.38
28	MP3C	X	7.005	3.88
29	MP3C	Z	-12.133	3.88
30	MP3C	Mx	-.004	3.88
31	MP1B	X	2.353	7
32	MP1B	Z	-4.076	7
33	MP1B	Mx	-.002	7
34	MP2A	X	3.909	7
35	MP2A	Z	-6.77	7
36	MP2A	Mx	.002	7
37	MP2B	X	2.353	7
38	MP2B	Z	-4.076	7
39	MP2B	Mx	-.002	7
40	MP2C	X	3.909	7
41	MP2C	Z	-6.77	7
42	MP2C	Mx	.002	7
43	MP3A	X	7.992	3.5
44	MP3A	Z	-13.842	3.5
45	MP3A	Mx	.003	3.5
46	MP2A	X	7.967	3.5
47	MP2A	Z	-13.799	3.5
48	MP2A	Mx	.003	3.5
49	MP2C	X	6.714	3.5
50	MP2C	Z	-11.629	3.5
51	MP2C	Mx	.004	3.5
52	MP1A	X	16.347	2
53	MP1A	Z	-28.313	2
54	MP1A	Mx	.008	2
55	MP4A	X	16.347	2
56	MP4A	Z	-28.313	2
57	MP4A	Mx	.008	2
58	MP1B	X	17.083	.75
59	MP1B	Z	-29.589	.75
60	MP1B	Mx	.012	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
61	MP1B	X	17.083	5.5
62	MP1B	Z	-29.589	5.5
63	MP1B	Mx	.012	5.5
64	MP3B	X	11.585	.75
65	MP3B	Z	-20.066	.75
66	MP3B	Mx	.012	.75
67	MP3B	X	11.585	5.5
68	MP3B	Z	-20.066	5.5
69	MP3B	Mx	.012	5.5
70	MP2B	X	15.753	.75
71	MP2B	Z	-27.285	.75
72	MP2B	Mx	.003	.75
73	MP2B	X	15.753	5.5
74	MP2B	Z	-27.285	5.5
75	MP2B	Mx	.003	5.5
76	MP2B	X	15.753	.75
77	MP2B	Z	-27.285	.75
78	MP2B	Mx	.026	.75
79	MP2B	X	15.753	5.5
80	MP2B	Z	-27.285	5.5
81	MP2B	Mx	.026	5.5
82	MP1C	X	15.298	.75
83	MP1C	Z	-26.497	.75
84	MP1C	Mx	.008	.75
85	MP1C	X	15.298	5.5
86	MP1C	Z	-26.497	5.5
87	MP1C	Mx	.008	5.5
88	MP2A	X	15.298	.75
89	MP2A	Z	-26.497	.75
90	MP2A	Mx	-.023	.75
91	MP2A	X	15.298	5.5
92	MP2A	Z	-26.497	5.5
93	MP2A	Mx	-.023	5.5
94	B1	X	6.789	3.5
95	B1	Z	-11.759	3.5
96	B1	Mx	-.004	3.5
97	B2	X	6.714	3.5
98	B2	Z	-11.629	3.5
99	B2	Mx	-.004	3.5
100	B3	X	6.789	3.5
101	B3	Z	-11.759	3.5
102	B3	Mx	-.004	3.5
103	B4	X	6.714	3.5
104	B4	Z	-11.629	3.5
105	B4	Mx	-.004	3.5
106	C1	X	6.789	3.5
107	C1	Z	-11.759	3.5
108	C1	Mx	.004	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	28.627	.75
2	MP1C	Z	-16.528	.75
3	MP1C	Mx	-.019	.75
4	MP1C	X	28.627	5.5
5	MP1C	Z	-16.528	5.5
6	MP1C	Mx	-.019	5.5
7	MP2A	X	22.237	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
8	MP2A	Z	-12.839	.75
9	MP2A	Mx	-.004	.75
10	MP2A	X	22.237	5.5
11	MP2A	Z	-12.839	5.5
12	MP2A	Mx	-.004	5.5
13	MP1B	X	8.188	2.38
14	MP1B	Z	-4.727	2.38
15	MP1B	Mx	.004	2.38
16	MP1B	X	8.188	3.88
17	MP1B	Z	-4.727	3.88
18	MP1B	Mx	.004	3.88
19	MP3A	X	8.188	2.38
20	MP3A	Z	-4.727	2.38
21	MP3A	Mx	-.004	2.38
22	MP3A	X	8.188	3.88
23	MP3A	Z	-4.727	3.88
24	MP3A	Mx	-.004	3.88
25	MP3C	X	14.105	2.38
26	MP3C	Z	-8.144	2.38
27	MP3C	Mx	0	2.38
28	MP3C	X	14.105	3.88
29	MP3C	Z	-8.144	3.88
30	MP3C	Mx	0	3.88
31	MP1B	X	4.974	7
32	MP1B	Z	-2.872	7
33	MP1B	Mx	-.002	7
34	MP2A	X	4.974	7
35	MP2A	Z	-2.872	7
36	MP2A	Mx	.002	7
37	MP2B	X	4.974	7
38	MP2B	Z	-2.872	7
39	MP2B	Mx	-.002	7
40	MP2C	X	7.668	7
41	MP2C	Z	-4.427	7
42	MP2C	Mx	0	7
43	MP3A	X	11.759	3.5
44	MP3A	Z	-6.789	3.5
45	MP3A	Mx	.004	3.5
46	MP2A	X	11.629	3.5
47	MP2A	Z	-6.714	3.5
48	MP2A	Mx	.004	3.5
49	MP2C	X	13.799	3.5
50	MP2C	Z	-7.967	3.5
51	MP2C	Mx	.003	3.5
52	MP1A	X	25.176	2
53	MP1A	Z	-14.535	2
54	MP1A	Mx	.013	2
55	MP4A	X	25.176	2
56	MP4A	Z	-14.535	2
57	MP4A	Mx	.013	2
58	MP1B	X	37.963	.75
59	MP1B	Z	-21.918	.75
60	MP1B	Mx	.006	.75
61	MP1B	X	37.963	5.5
62	MP1B	Z	-21.918	5.5
63	MP1B	Mx	.006	5.5
64	MP3B	X	23.374	.75
65	MP3B	Z	-13.495	.75
66	MP3B	Mx	.012	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
67	MP3B	X	23.374	5.5
68	MP3B	Z	-13.495	5.5
69	MP3B	Mx	.012	5.5
70	MP2B	X	40.285	.75
71	MP2B	Z	-23.259	.75
72	MP2B	Mx	-.024	.75
73	MP2B	X	40.285	5.5
74	MP2B	Z	-23.259	5.5
75	MP2B	Mx	-.024	5.5
76	MP2B	X	40.285	.75
77	MP2B	Z	-23.259	.75
78	MP2B	Mx	.054	.75
79	MP2B	X	40.285	5.5
80	MP2B	Z	-23.259	5.5
81	MP2B	Mx	.054	5.5
82	MP1C	X	28.627	.75
83	MP1C	Z	-16.528	.75
84	MP1C	Mx	.019	.75
85	MP1C	X	28.627	5.5
86	MP1C	Z	-16.528	5.5
87	MP1C	Mx	.019	5.5
88	MP2A	X	22.237	.75
89	MP2A	Z	-12.839	.75
90	MP2A	Mx	-.019	.75
91	MP2A	X	22.237	5.5
92	MP2A	Z	-12.839	5.5
93	MP2A	Mx	-.019	5.5
94	B1	X	13.842	3.5
95	B1	Z	-7.992	3.5
96	B1	Mx	-.003	3.5
97	B2	X	13.799	3.5
98	B2	Z	-7.967	3.5
99	B2	Mx	-.003	3.5
100	B3	X	13.842	3.5
101	B3	Z	-7.992	3.5
102	B3	Mx	-.003	3.5
103	B4	X	13.799	3.5
104	B4	Z	-7.967	3.5
105	B4	Mx	-.003	3.5
106	C1	X	13.842	3.5
107	C1	Z	-7.992	3.5
108	C1	Mx	.003	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	30.597	.75
2	MP1C	Z	0	.75
3	MP1C	Mx	-.008	.75
4	MP1C	X	30.597	5.5
5	MP1C	Z	0	5.5
6	MP1C	Mx	-.008	5.5
7	MP2A	X	23.218	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	-.012	.75
10	MP2A	X	23.218	5.5
11	MP2A	Z	0	5.5
12	MP2A	Mx	-.012	5.5
13	MP1B	X	14.01	2.38

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
14	MP1B	Z	0	2.38
15	MP1B	Mx	.004	2.38
16	MP1B	X	14.01	3.88
17	MP1B	Z	0	3.88
18	MP1B	Mx	.004	3.88
19	MP3A	X	7.177	2.38
20	MP3A	Z	0	2.38
21	MP3A	Mx	-.004	2.38
22	MP3A	X	7.177	3.88
23	MP3A	Z	0	3.88
24	MP3A	Mx	-.004	3.88
25	MP3C	X	14.01	2.38
26	MP3C	Z	0	2.38
27	MP3C	Mx	.004	2.38
28	MP3C	X	14.01	3.88
29	MP3C	Z	0	3.88
30	MP3C	Mx	.004	3.88
31	MP1B	X	7.818	7
32	MP1B	Z	0	7
33	MP1B	Mx	-.002	7
34	MP2A	X	4.706	7
35	MP2A	Z	0	7
36	MP2A	Mx	.002	7
37	MP2B	X	7.818	7
38	MP2B	Z	0	7
39	MP2B	Mx	-.002	7
40	MP2C	X	7.818	7
41	MP2C	Z	0	7
42	MP2C	Mx	-.002	7
43	MP3A	X	12.375	3.5
44	MP3A	Z	0	3.5
45	MP3A	Mx	.004	3.5
46	MP2A	X	12.175	3.5
47	MP2A	Z	0	3.5
48	MP2A	Mx	.004	3.5
49	MP2C	X	17.186	3.5
50	MP2C	Z	0	3.5
51	MP2C	Mx	0	3.5
52	MP1A	X	27.259	2
53	MP1A	Z	0	2
54	MP1A	Mx	.014	2
55	MP4A	X	27.259	2
56	MP4A	Z	0	2
57	MP4A	Mx	.014	2
58	MP1B	X	43.836	.75
59	MP1B	Z	0	.75
60	MP1B	Mx	-.006	.75
61	MP1B	X	43.836	5.5
62	MP1B	Z	0	5.5
63	MP1B	Mx	-.006	5.5
64	MP3B	X	37.985	.75
65	MP3B	Z	0	.75
66	MP3B	Mx	.011	.75
67	MP3B	X	37.985	5.5
68	MP3B	Z	0	5.5
69	MP3B	Mx	.011	5.5
70	MP2B	X	58.755	.75
71	MP2B	Z	0	.75
72	MP2B	Mx	-.058	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
73	MP2B	X	58.755	5.5
74	MP2B	Z	0	5.5
75	MP2B	Mx	-.058	5.5
76	MP2B	X	58.755	.75
77	MP2B	Z	0	.75
78	MP2B	Mx	.068	.75
79	MP2B	X	58.755	5.5
80	MP2B	Z	0	5.5
81	MP2B	Mx	.068	5.5
82	MP1C	X	30.597	.75
83	MP1C	Z	0	.75
84	MP1C	Mx	.023	.75
85	MP1C	X	30.597	5.5
86	MP1C	Z	0	5.5
87	MP1C	Mx	.023	5.5
88	MP2A	X	23.218	.75
89	MP2A	Z	0	.75
90	MP2A	Mx	-.012	.75
91	MP2A	X	23.218	5.5
92	MP2A	Z	0	5.5
93	MP2A	Mx	-.012	5.5
94	B1	X	17.186	3.5
95	B1	Z	0	3.5
96	B1	Mx	0	3.5
97	B2	X	17.186	3.5
98	B2	Z	0	3.5
99	B2	Mx	0	3.5
100	B3	X	17.186	3.5
101	B3	Z	0	3.5
102	B3	Mx	0	3.5
103	B4	X	17.186	3.5
104	B4	Z	0	3.5
105	B4	Mx	0	3.5
106	C1	X	17.186	3.5
107	C1	Z	0	3.5
108	C1	Mx	0	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	22.237	.75
2	MP1C	Z	12.839	.75
3	MP1C	Mx	.004	.75
4	MP1C	X	22.237	5.5
5	MP1C	Z	12.839	5.5
6	MP1C	Mx	.004	5.5
7	MP2A	X	22.237	.75
8	MP2A	Z	12.839	.75
9	MP2A	Mx	-.019	.75
10	MP2A	X	22.237	5.5
11	MP2A	Z	12.839	5.5
12	MP2A	Mx	-.019	5.5
13	MP1B	X	14.105	2.38
14	MP1B	Z	8.144	2.38
15	MP1B	Mx	0	2.38
16	MP1B	X	14.105	3.88
17	MP1B	Z	8.144	3.88
18	MP1B	Mx	0	3.88
19	MP3A	X	8.188	2.38

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	MP3A	Z	4.727	2.38
21	MP3A	Mx	-.004	2.38
22	MP3A	X	8.188	3.88
23	MP3A	Z	4.727	3.88
24	MP3A	Mx	-.004	3.88
25	MP3C	X	8.188	2.38
26	MP3C	Z	4.727	2.38
27	MP3C	Mx	.004	2.38
28	MP3C	X	8.188	3.88
29	MP3C	Z	4.727	3.88
30	MP3C	Mx	.004	3.88
31	MP1B	X	7.668	7
32	MP1B	Z	4.427	7
33	MP1B	Mx	0	7
34	MP2A	X	4.974	7
35	MP2A	Z	2.872	7
36	MP2A	Mx	.002	7
37	MP2B	X	7.668	7
38	MP2B	Z	4.427	7
39	MP2B	Mx	0	7
40	MP2C	X	4.974	7
41	MP2C	Z	2.872	7
42	MP2C	Mx	-.002	7
43	MP3A	X	11.759	3.5
44	MP3A	Z	6.789	3.5
45	MP3A	Mx	.004	3.5
46	MP2A	X	11.629	3.5
47	MP2A	Z	6.714	3.5
48	MP2A	Mx	.004	3.5
49	MP2C	X	13.799	3.5
50	MP2C	Z	7.967	3.5
51	MP2C	Mx	-.003	3.5
52	MP1A	X	25.176	2
53	MP1A	Z	14.535	2
54	MP1A	Mx	.013	2
55	MP4A	X	25.176	2
56	MP4A	Z	14.535	2
57	MP4A	Mx	.013	2
58	MP1B	X	29.589	.75
59	MP1B	Z	17.083	.75
60	MP1B	Mx	-.012	.75
61	MP1B	X	29.589	5.5
62	MP1B	Z	17.083	5.5
63	MP1B	Mx	-.012	5.5
64	MP3B	X	39.112	.75
65	MP3B	Z	22.581	.75
66	MP3B	Mx	.002	.75
67	MP3B	X	39.112	5.5
68	MP3B	Z	22.581	5.5
69	MP3B	Mx	.002	5.5
70	MP2B	X	48.481	.75
71	MP2B	Z	27.99	.75
72	MP2B	Mx	-.067	.75
73	MP2B	X	48.481	5.5
74	MP2B	Z	27.99	5.5
75	MP2B	Mx	-.067	5.5
76	MP2B	X	48.481	.75
77	MP2B	Z	27.99	.75
78	MP2B	Mx	.047	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
79	MP2B	X	48.481	5.5
80	MP2B	Z	27.99	5.5
81	MP2B	Mx	.047	5.5
82	MP1C	X	22.237	.75
83	MP1C	Z	12.839	.75
84	MP1C	Mx	.019	.75
85	MP1C	X	22.237	5.5
86	MP1C	Z	12.839	5.5
87	MP1C	Mx	.019	5.5
88	MP2A	X	22.237	.75
89	MP2A	Z	12.839	.75
90	MP2A	Mx	-.004	.75
91	MP2A	X	22.237	5.5
92	MP2A	Z	12.839	5.5
93	MP2A	Mx	-.004	5.5
94	B1	X	13.842	3.5
95	B1	Z	7.992	3.5
96	B1	Mx	.003	3.5
97	B2	X	13.799	3.5
98	B2	Z	7.967	3.5
99	B2	Mx	.003	3.5
100	B3	X	13.842	3.5
101	B3	Z	7.992	3.5
102	B3	Mx	.003	3.5
103	B4	X	13.799	3.5
104	B4	Z	7.967	3.5
105	B4	Mx	.003	3.5
106	C1	X	13.842	3.5
107	C1	Z	7.992	3.5
108	C1	Mx	-.003	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	11.609	.75
2	MP1C	Z	20.107	.75
3	MP1C	Mx	.012	.75
4	MP1C	X	11.609	5.5
5	MP1C	Z	20.107	5.5
6	MP1C	Mx	.012	5.5
7	MP2A	X	15.298	.75
8	MP2A	Z	26.497	.75
9	MP2A	Mx	-.023	.75
10	MP2A	X	15.298	5.5
11	MP2A	Z	26.497	5.5
12	MP2A	Mx	-.023	5.5
13	MP1B	X	7.005	2.38
14	MP1B	Z	12.133	2.38
15	MP1B	Mx	-.004	2.38
16	MP1B	X	7.005	3.88
17	MP1B	Z	12.133	3.88
18	MP1B	Mx	-.004	3.88
19	MP3A	X	7.005	2.38
20	MP3A	Z	12.133	2.38
21	MP3A	Mx	-.004	2.38
22	MP3A	X	7.005	3.88
23	MP3A	Z	12.133	3.88
24	MP3A	Mx	-.004	3.88
25	MP3C	X	3.588	2.38

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
26	MP3C	Z	6.215	2.38
27	MP3C	Mx	.004	2.38
28	MP3C	X	3.588	3.88
29	MP3C	Z	6.215	3.88
30	MP3C	Mx	.004	3.88
31	MP1B	X	3.909	7
32	MP1B	Z	6.77	7
33	MP1B	Mx	.002	7
34	MP2A	X	3.909	7
35	MP2A	Z	6.77	7
36	MP2A	Mx	.002	7
37	MP2B	X	3.909	7
38	MP2B	Z	6.77	7
39	MP2B	Mx	.002	7
40	MP2C	X	2.353	7
41	MP2C	Z	4.076	7
42	MP2C	Mx	-.002	7
43	MP3A	X	7.992	3.5
44	MP3A	Z	13.842	3.5
45	MP3A	Mx	.003	3.5
46	MP2A	X	7.967	3.5
47	MP2A	Z	13.799	3.5
48	MP2A	Mx	.003	3.5
49	MP2C	X	6.714	3.5
50	MP2C	Z	11.629	3.5
51	MP2C	Mx	-.004	3.5
52	MP1A	X	16.347	2
53	MP1A	Z	28.313	2
54	MP1A	Mx	.008	2
55	MP4A	X	16.347	2
56	MP4A	Z	28.313	2
57	MP4A	Mx	.008	2
58	MP1B	X	12.248	.75
59	MP1B	Z	21.215	.75
60	MP1B	Mx	-.012	.75
61	MP1B	X	12.248	5.5
62	MP1B	Z	21.215	5.5
63	MP1B	Mx	-.012	5.5
64	MP3B	X	20.672	.75
65	MP3B	Z	35.805	.75
66	MP3B	Mx	-.009	.75
67	MP3B	X	20.672	5.5
68	MP3B	Z	35.805	5.5
69	MP3B	Mx	-.009	5.5
70	MP2B	X	20.485	.75
71	MP2B	Z	35.481	.75
72	MP2B	Mx	-.044	.75
73	MP2B	X	20.485	5.5
74	MP2B	Z	35.481	5.5
75	MP2B	Mx	-.044	5.5
76	MP2B	X	20.485	.75
77	MP2B	Z	35.481	.75
78	MP2B	Mx	.013	.75
79	MP2B	X	20.485	5.5
80	MP2B	Z	35.481	5.5
81	MP2B	Mx	.013	5.5
82	MP1C	X	11.609	.75
83	MP1C	Z	20.107	.75
84	MP1C	Mx	.012	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
85	MP1C	X	11.609	5.5
86	MP1C	Z	20.107	5.5
87	MP1C	Mx	.012	5.5
88	MP2A	X	15.298	.75
89	MP2A	Z	26.497	.75
90	MP2A	Mx	.008	.75
91	MP2A	X	15.298	5.5
92	MP2A	Z	26.497	5.5
93	MP2A	Mx	.008	5.5
94	B1	X	6.789	3.5
95	B1	Z	11.759	3.5
96	B1	Mx	.004	3.5
97	B2	X	6.714	3.5
98	B2	Z	11.629	3.5
99	B2	Mx	.004	3.5
100	B3	X	6.789	3.5
101	B3	Z	11.759	3.5
102	B3	Mx	.004	3.5
103	B4	X	6.714	3.5
104	B4	Z	11.629	3.5
105	B4	Mx	.004	3.5
106	C1	X	6.789	3.5
107	C1	Z	11.759	3.5
108	C1	Mx	-.004	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	0	.75
2	MP1C	Z	25.677	.75
3	MP1C	Mx	.019	.75
4	MP1C	X	0	5.5
5	MP1C	Z	25.677	5.5
6	MP1C	Mx	.019	5.5
7	MP2A	X	0	.75
8	MP2A	Z	33.056	.75
9	MP2A	Mx	-.019	.75
10	MP2A	X	0	5.5
11	MP2A	Z	33.056	5.5
12	MP2A	Mx	-.019	5.5
13	MP1B	X	0	2.38
14	MP1B	Z	9.455	2.38
15	MP1B	Mx	-.004	2.38
16	MP1B	X	0	3.88
17	MP1B	Z	9.455	3.88
18	MP1B	Mx	-.004	3.88
19	MP3A	X	0	2.38
20	MP3A	Z	16.287	2.38
21	MP3A	Mx	0	2.38
22	MP3A	X	0	3.88
23	MP3A	Z	16.287	3.88
24	MP3A	Mx	0	3.88
25	MP3C	X	0	2.38
26	MP3C	Z	9.455	2.38
27	MP3C	Mx	.004	2.38
28	MP3C	X	0	3.88
29	MP3C	Z	9.455	3.88
30	MP3C	Mx	.004	3.88
31	MP1B	X	0	7

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
32	MP1B	Z	5.744	7
33	MP1B	Mx	.002	7
34	MP2A	X	0	7
35	MP2A	Z	8.855	7
36	MP2A	Mx	0	7
37	MP2B	X	0	7
38	MP2B	Z	5.744	7
39	MP2B	Mx	.002	7
40	MP2C	X	0	7
41	MP2C	Z	5.744	7
42	MP2C	Mx	-.002	7
43	MP3A	X	0	3.5
44	MP3A	Z	17.186	3.5
45	MP3A	Mx	0	3.5
46	MP2A	X	0	3.5
47	MP2A	Z	17.186	3.5
48	MP2A	Mx	0	3.5
49	MP2C	X	0	3.5
50	MP2C	Z	12.175	3.5
51	MP2C	Mx	-.004	3.5
52	MP1A	X	0	2
53	MP1A	Z	34.505	2
54	MP1A	Mx	0	2
55	MP4A	X	0	2
56	MP4A	Z	34.505	2
57	MP4A	Mx	0	2
58	MP1B	X	0	.75
59	MP1B	Z	24.497	.75
60	MP1B	Mx	-.012	.75
61	MP1B	X	0	5.5
62	MP1B	Z	24.497	5.5
63	MP1B	Mx	-.012	5.5
64	MP3B	X	0	.75
65	MP3B	Z	30.348	.75
66	MP3B	Mx	-.012	.75
67	MP3B	X	0	5.5
68	MP3B	Z	30.348	5.5
69	MP3B	Mx	-.012	5.5
70	MP2B	X	0	.75
71	MP2B	Z	28.732	.75
72	MP2B	Mx	-.02	.75
73	MP2B	X	0	5.5
74	MP2B	Z	28.732	5.5
75	MP2B	Mx	-.02	5.5
76	MP2B	X	0	.75
77	MP2B	Z	28.732	.75
78	MP2B	Mx	-.009	.75
79	MP2B	X	0	5.5
80	MP2B	Z	28.732	5.5
81	MP2B	Mx	-.009	5.5
82	MP1C	X	0	.75
83	MP1C	Z	25.677	.75
84	MP1C	Mx	.004	.75
85	MP1C	X	0	5.5
86	MP1C	Z	25.677	5.5
87	MP1C	Mx	.004	5.5
88	MP2A	X	0	.75
89	MP2A	Z	33.056	.75
90	MP2A	Mx	.019	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
91	MP2A	X	0	5.5
92	MP2A	Z	33.056	5.5
93	MP2A	Mx	.019	5.5
94	B1	X	0	3.5
95	B1	Z	12.375	3.5
96	B1	Mx	.004	3.5
97	B2	X	0	3.5
98	B2	Z	12.175	3.5
99	B2	Mx	.004	3.5
100	B3	X	0	3.5
101	B3	Z	12.375	3.5
102	B3	Mx	.004	3.5
103	B4	X	0	3.5
104	B4	Z	12.175	3.5
105	B4	Mx	.004	3.5
106	C1	X	0	3.5
107	C1	Z	12.375	3.5
108	C1	Mx	-.004	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	-15.298	.75
2	MP1C	Z	26.497	.75
3	MP1C	Mx	.023	.75
4	MP1C	X	-15.298	5.5
5	MP1C	Z	26.497	5.5
6	MP1C	Mx	.023	5.5
7	MP2A	X	-15.298	.75
8	MP2A	Z	26.497	.75
9	MP2A	Mx	-.008	.75
10	MP2A	X	-15.298	5.5
11	MP2A	Z	26.497	5.5
12	MP2A	Mx	-.008	5.5
13	MP1B	X	-3.588	2.38
14	MP1B	Z	6.215	2.38
15	MP1B	Mx	-.004	2.38
16	MP1B	X	-3.588	3.88
17	MP1B	Z	6.215	3.88
18	MP1B	Mx	-.004	3.88
19	MP3A	X	-7.005	2.38
20	MP3A	Z	12.133	2.38
21	MP3A	Mx	.004	2.38
22	MP3A	X	-7.005	3.88
23	MP3A	Z	12.133	3.88
24	MP3A	Mx	.004	3.88
25	MP3C	X	-7.005	2.38
26	MP3C	Z	12.133	2.38
27	MP3C	Mx	.004	2.38
28	MP3C	X	-7.005	3.88
29	MP3C	Z	12.133	3.88
30	MP3C	Mx	.004	3.88
31	MP1B	X	-2.353	7
32	MP1B	Z	4.076	7
33	MP1B	Mx	.002	7
34	MP2A	X	-3.909	7
35	MP2A	Z	6.77	7
36	MP2A	Mx	-.002	7
37	MP2B	X	-2.353	7

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
38	MP2B	Z	4.076	7
39	MP2B	Mx	.002	7
40	MP2C	X	-3.909	7
41	MP2C	Z	6.77	7
42	MP2C	Mx	-.002	7
43	MP3A	X	-7.992	3.5
44	MP3A	Z	13.842	3.5
45	MP3A	Mx	-.003	3.5
46	MP2A	X	-7.967	3.5
47	MP2A	Z	13.799	3.5
48	MP2A	Mx	-.003	3.5
49	MP2C	X	-6.714	3.5
50	MP2C	Z	11.629	3.5
51	MP2C	Mx	-.004	3.5
52	MP1A	X	-16.347	2
53	MP1A	Z	28.313	2
54	MP1A	Mx	-.008	2
55	MP4A	X	-16.347	2
56	MP4A	Z	28.313	2
57	MP4A	Mx	-.008	2
58	MP1B	X	-17.083	.75
59	MP1B	Z	29.589	.75
60	MP1B	Mx	-.012	.75
61	MP1B	X	-17.083	5.5
62	MP1B	Z	29.589	5.5
63	MP1B	Mx	-.012	5.5
64	MP3B	X	-11.585	.75
65	MP3B	Z	20.066	.75
66	MP3B	Mx	-.012	.75
67	MP3B	X	-11.585	5.5
68	MP3B	Z	20.066	5.5
69	MP3B	Mx	-.012	5.5
70	MP2B	X	-15.753	.75
71	MP2B	Z	27.285	.75
72	MP2B	Mx	-.003	.75
73	MP2B	X	-15.753	5.5
74	MP2B	Z	27.285	5.5
75	MP2B	Mx	-.003	5.5
76	MP2B	X	-15.753	.75
77	MP2B	Z	27.285	.75
78	MP2B	Mx	-.026	.75
79	MP2B	X	-15.753	5.5
80	MP2B	Z	27.285	5.5
81	MP2B	Mx	-.026	5.5
82	MP1C	X	-15.298	.75
83	MP1C	Z	26.497	.75
84	MP1C	Mx	-.008	.75
85	MP1C	X	-15.298	5.5
86	MP1C	Z	26.497	5.5
87	MP1C	Mx	-.008	5.5
88	MP2A	X	-15.298	.75
89	MP2A	Z	26.497	.75
90	MP2A	Mx	.023	.75
91	MP2A	X	-15.298	5.5
92	MP2A	Z	26.497	5.5
93	MP2A	Mx	.023	5.5
94	B1	X	-6.789	3.5
95	B1	Z	11.759	3.5
96	B1	Mx	.004	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
97	B2	X	-6.714	3.5
98	B2	Z	11.629	3.5
99	B2	Mx	.004	3.5
100	B3	X	-6.789	3.5
101	B3	Z	11.759	3.5
102	B3	Mx	.004	3.5
103	B4	X	-6.714	3.5
104	B4	Z	11.629	3.5
105	B4	Mx	.004	3.5
106	C1	X	-6.789	3.5
107	C1	Z	11.759	3.5
108	C1	Mx	-.004	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	-28.627	.75
2	MP1C	Z	16.528	.75
3	MP1C	Mx	.019	.75
4	MP1C	X	-28.627	5.5
5	MP1C	Z	16.528	5.5
6	MP1C	Mx	.019	5.5
7	MP2A	X	-22.237	.75
8	MP2A	Z	12.839	.75
9	MP2A	Mx	.004	.75
10	MP2A	X	-22.237	5.5
11	MP2A	Z	12.839	5.5
12	MP2A	Mx	.004	5.5
13	MP1B	X	-8.188	2.38
14	MP1B	Z	4.727	2.38
15	MP1B	Mx	-.004	2.38
16	MP1B	X	-8.188	3.88
17	MP1B	Z	4.727	3.88
18	MP1B	Mx	-.004	3.88
19	MP3A	X	-8.188	2.38
20	MP3A	Z	4.727	2.38
21	MP3A	Mx	.004	2.38
22	MP3A	X	-8.188	3.88
23	MP3A	Z	4.727	3.88
24	MP3A	Mx	.004	3.88
25	MP3C	X	-14.105	2.38
26	MP3C	Z	8.144	2.38
27	MP3C	Mx	0	2.38
28	MP3C	X	-14.105	3.88
29	MP3C	Z	8.144	3.88
30	MP3C	Mx	0	3.88
31	MP1B	X	-4.974	7
32	MP1B	Z	2.872	7
33	MP1B	Mx	.002	7
34	MP2A	X	-4.974	7
35	MP2A	Z	2.872	7
36	MP2A	Mx	-.002	7
37	MP2B	X	-4.974	7
38	MP2B	Z	2.872	7
39	MP2B	Mx	.002	7
40	MP2C	X	-7.668	7
41	MP2C	Z	4.427	7
42	MP2C	Mx	0	7
43	MP3A	X	-11.759	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
44	MP3A	Z	6.789	3.5
45	MP3A	Mx	-.004	3.5
46	MP2A	X	-11.629	3.5
47	MP2A	Z	6.714	3.5
48	MP2A	Mx	-.004	3.5
49	MP2C	X	-13.799	3.5
50	MP2C	Z	7.967	3.5
51	MP2C	Mx	-.003	3.5
52	MP1A	X	-25.176	2
53	MP1A	Z	14.535	2
54	MP1A	Mx	-.013	2
55	MP4A	X	-25.176	2
56	MP4A	Z	14.535	2
57	MP4A	Mx	-.013	2
58	MP1B	X	-37.963	.75
59	MP1B	Z	21.918	.75
60	MP1B	Mx	-.006	.75
61	MP1B	X	-37.963	5.5
62	MP1B	Z	21.918	5.5
63	MP1B	Mx	-.006	5.5
64	MP3B	X	-23.374	.75
65	MP3B	Z	13.495	.75
66	MP3B	Mx	-.012	.75
67	MP3B	X	-23.374	5.5
68	MP3B	Z	13.495	5.5
69	MP3B	Mx	-.012	5.5
70	MP2B	X	-40.285	.75
71	MP2B	Z	23.259	.75
72	MP2B	Mx	.024	.75
73	MP2B	X	-40.285	5.5
74	MP2B	Z	23.259	5.5
75	MP2B	Mx	.024	5.5
76	MP2B	X	-40.285	.75
77	MP2B	Z	23.259	.75
78	MP2B	Mx	-.054	.75
79	MP2B	X	-40.285	5.5
80	MP2B	Z	23.259	5.5
81	MP2B	Mx	-.054	5.5
82	MP1C	X	-28.627	.75
83	MP1C	Z	16.528	.75
84	MP1C	Mx	-.019	.75
85	MP1C	X	-28.627	5.5
86	MP1C	Z	16.528	5.5
87	MP1C	Mx	-.019	5.5
88	MP2A	X	-22.237	.75
89	MP2A	Z	12.839	.75
90	MP2A	Mx	.019	.75
91	MP2A	X	-22.237	5.5
92	MP2A	Z	12.839	5.5
93	MP2A	Mx	.019	5.5
94	B1	X	-13.842	3.5
95	B1	Z	7.992	3.5
96	B1	Mx	.003	3.5
97	B2	X	-13.799	3.5
98	B2	Z	7.967	3.5
99	B2	Mx	.003	3.5
100	B3	X	-13.842	3.5
101	B3	Z	7.992	3.5
102	B3	Mx	.003	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
103	B4	X	-13.799	3.5
104	B4	Z	7.967	3.5
105	B4	Mx	.003	3.5
106	C1	X	-13.842	3.5
107	C1	Z	7.992	3.5
108	C1	Mx	-.003	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	-30.597	.75
2	MP1C	Z	0	.75
3	MP1C	Mx	.008	.75
4	MP1C	X	-30.597	5.5
5	MP1C	Z	0	5.5
6	MP1C	Mx	.008	5.5
7	MP2A	X	-23.218	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	.012	.75
10	MP2A	X	-23.218	5.5
11	MP2A	Z	0	5.5
12	MP2A	Mx	.012	5.5
13	MP1B	X	-14.01	2.38
14	MP1B	Z	0	2.38
15	MP1B	Mx	-.004	2.38
16	MP1B	X	-14.01	3.88
17	MP1B	Z	0	3.88
18	MP1B	Mx	-.004	3.88
19	MP3A	X	-7.177	2.38
20	MP3A	Z	0	2.38
21	MP3A	Mx	.004	2.38
22	MP3A	X	-7.177	3.88
23	MP3A	Z	0	3.88
24	MP3A	Mx	.004	3.88
25	MP3C	X	-14.01	2.38
26	MP3C	Z	0	2.38
27	MP3C	Mx	-.004	2.38
28	MP3C	X	-14.01	3.88
29	MP3C	Z	0	3.88
30	MP3C	Mx	-.004	3.88
31	MP1B	X	-7.818	7
32	MP1B	Z	0	7
33	MP1B	Mx	.002	7
34	MP2A	X	-4.706	7
35	MP2A	Z	0	7
36	MP2A	Mx	-.002	7
37	MP2B	X	-7.818	7
38	MP2B	Z	0	7
39	MP2B	Mx	.002	7
40	MP2C	X	-7.818	7
41	MP2C	Z	0	7
42	MP2C	Mx	.002	7
43	MP3A	X	-12.375	3.5
44	MP3A	Z	0	3.5
45	MP3A	Mx	-.004	3.5
46	MP2A	X	-12.175	3.5
47	MP2A	Z	0	3.5
48	MP2A	Mx	-.004	3.5
49	MP2C	X	-17.186	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
50	MP2C	Z	0	3.5
51	MP2C	Mx	0	3.5
52	MP1A	X	-27.259	2
53	MP1A	Z	0	2
54	MP1A	Mx	-.014	2
55	MP4A	X	-27.259	2
56	MP4A	Z	0	2
57	MP4A	Mx	-.014	2
58	MP1B	X	-43.836	.75
59	MP1B	Z	0	.75
60	MP1B	Mx	.006	.75
61	MP1B	X	-43.836	5.5
62	MP1B	Z	0	5.5
63	MP1B	Mx	.006	5.5
64	MP3B	X	-37.985	.75
65	MP3B	Z	0	.75
66	MP3B	Mx	-.011	.75
67	MP3B	X	-37.985	5.5
68	MP3B	Z	0	5.5
69	MP3B	Mx	-.011	5.5
70	MP2B	X	-58.755	.75
71	MP2B	Z	0	.75
72	MP2B	Mx	.058	.75
73	MP2B	X	-58.755	5.5
74	MP2B	Z	0	5.5
75	MP2B	Mx	.058	5.5
76	MP2B	X	-58.755	.75
77	MP2B	Z	0	.75
78	MP2B	Mx	-.068	.75
79	MP2B	X	-58.755	5.5
80	MP2B	Z	0	5.5
81	MP2B	Mx	-.068	5.5
82	MP1C	X	-30.597	.75
83	MP1C	Z	0	.75
84	MP1C	Mx	-.023	.75
85	MP1C	X	-30.597	5.5
86	MP1C	Z	0	5.5
87	MP1C	Mx	-.023	5.5
88	MP2A	X	-23.218	.75
89	MP2A	Z	0	.75
90	MP2A	Mx	.012	.75
91	MP2A	X	-23.218	5.5
92	MP2A	Z	0	5.5
93	MP2A	Mx	.012	5.5
94	B1	X	-17.186	3.5
95	B1	Z	0	3.5
96	B1	Mx	0	3.5
97	B2	X	-17.186	3.5
98	B2	Z	0	3.5
99	B2	Mx	0	3.5
100	B3	X	-17.186	3.5
101	B3	Z	0	3.5
102	B3	Mx	0	3.5
103	B4	X	-17.186	3.5
104	B4	Z	0	3.5
105	B4	Mx	0	3.5
106	C1	X	-17.186	3.5
107	C1	Z	0	3.5
108	C1	Mx	0	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	-22.237	.75
2	MP1C	Z	-12.839	.75
3	MP1C	Mx	-.004	.75
4	MP1C	X	-22.237	5.5
5	MP1C	Z	-12.839	5.5
6	MP1C	Mx	-.004	5.5
7	MP2A	X	-22.237	.75
8	MP2A	Z	-12.839	.75
9	MP2A	Mx	.019	.75
10	MP2A	X	-22.237	5.5
11	MP2A	Z	-12.839	5.5
12	MP2A	Mx	.019	5.5
13	MP1B	X	-14.105	2.38
14	MP1B	Z	-8.144	2.38
15	MP1B	Mx	0	2.38
16	MP1B	X	-14.105	3.88
17	MP1B	Z	-8.144	3.88
18	MP1B	Mx	0	3.88
19	MP3A	X	-8.188	2.38
20	MP3A	Z	-4.727	2.38
21	MP3A	Mx	.004	2.38
22	MP3A	X	-8.188	3.88
23	MP3A	Z	-4.727	3.88
24	MP3A	Mx	.004	3.88
25	MP3C	X	-8.188	2.38
26	MP3C	Z	-4.727	2.38
27	MP3C	Mx	-.004	2.38
28	MP3C	X	-8.188	3.88
29	MP3C	Z	-4.727	3.88
30	MP3C	Mx	-.004	3.88
31	MP1B	X	-7.668	7
32	MP1B	Z	-4.427	7
33	MP1B	Mx	0	7
34	MP2A	X	-4.974	7
35	MP2A	Z	-2.872	7
36	MP2A	Mx	-.002	7
37	MP2B	X	-7.668	7
38	MP2B	Z	-4.427	7
39	MP2B	Mx	0	7
40	MP2C	X	-4.974	7
41	MP2C	Z	-2.872	7
42	MP2C	Mx	.002	7
43	MP3A	X	-11.759	3.5
44	MP3A	Z	-6.789	3.5
45	MP3A	Mx	-.004	3.5
46	MP2A	X	-11.629	3.5
47	MP2A	Z	-6.714	3.5
48	MP2A	Mx	-.004	3.5
49	MP2C	X	-13.799	3.5
50	MP2C	Z	-7.967	3.5
51	MP2C	Mx	.003	3.5
52	MP1A	X	-25.176	2
53	MP1A	Z	-14.535	2
54	MP1A	Mx	-.013	2
55	MP4A	X	-25.176	2
56	MP4A	Z	-14.535	2
57	MP4A	Mx	-.013	2
58	MP1B	X	-29.589	.75
59	MP1B	Z	-17.083	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
60	MP1B	Mx	.012	.75
61	MP1B	X	-29.589	5.5
62	MP1B	Z	-17.083	5.5
63	MP1B	Mx	.012	5.5
64	MP3B	X	-39.112	.75
65	MP3B	Z	-22.581	.75
66	MP3B	Mx	-.002	.75
67	MP3B	X	-39.112	5.5
68	MP3B	Z	-22.581	5.5
69	MP3B	Mx	-.002	5.5
70	MP2B	X	-48.481	.75
71	MP2B	Z	-27.99	.75
72	MP2B	Mx	.067	.75
73	MP2B	X	-48.481	5.5
74	MP2B	Z	-27.99	5.5
75	MP2B	Mx	.067	5.5
76	MP2B	X	-48.481	.75
77	MP2B	Z	-27.99	.75
78	MP2B	Mx	-.047	.75
79	MP2B	X	-48.481	5.5
80	MP2B	Z	-27.99	5.5
81	MP2B	Mx	-.047	5.5
82	MP1C	X	-22.237	.75
83	MP1C	Z	-12.839	.75
84	MP1C	Mx	-.019	.75
85	MP1C	X	-22.237	5.5
86	MP1C	Z	-12.839	5.5
87	MP1C	Mx	-.019	5.5
88	MP2A	X	-22.237	.75
89	MP2A	Z	-12.839	.75
90	MP2A	Mx	.004	.75
91	MP2A	X	-22.237	5.5
92	MP2A	Z	-12.839	5.5
93	MP2A	Mx	.004	5.5
94	B1	X	-13.842	3.5
95	B1	Z	-7.992	3.5
96	B1	Mx	-.003	3.5
97	B2	X	-13.799	3.5
98	B2	Z	-7.967	3.5
99	B2	Mx	-.003	3.5
100	B3	X	-13.842	3.5
101	B3	Z	-7.992	3.5
102	B3	Mx	-.003	3.5
103	B4	X	-13.799	3.5
104	B4	Z	-7.967	3.5
105	B4	Mx	-.003	3.5
106	C1	X	-13.842	3.5
107	C1	Z	-7.992	3.5
108	C1	Mx	.003	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	-11.609	.75
2	MP1C	Z	-20.107	.75
3	MP1C	Mx	-.012	.75
4	MP1C	X	-11.609	5.5
5	MP1C	Z	-20.107	5.5
6	MP1C	Mx	-.012	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
7	MP2A	X	-15.298	.75
8	MP2A	Z	-26.497	.75
9	MP2A	Mx	.023	.75
10	MP2A	X	-15.298	5.5
11	MP2A	Z	-26.497	5.5
12	MP2A	Mx	.023	5.5
13	MP1B	X	-7.005	2.38
14	MP1B	Z	-12.133	2.38
15	MP1B	Mx	.004	2.38
16	MP1B	X	-7.005	3.88
17	MP1B	Z	-12.133	3.88
18	MP1B	Mx	.004	3.88
19	MP3A	X	-7.005	2.38
20	MP3A	Z	-12.133	2.38
21	MP3A	Mx	.004	2.38
22	MP3A	X	-7.005	3.88
23	MP3A	Z	-12.133	3.88
24	MP3A	Mx	.004	3.88
25	MP3C	X	-3.588	2.38
26	MP3C	Z	-6.215	2.38
27	MP3C	Mx	-.004	2.38
28	MP3C	X	-3.588	3.88
29	MP3C	Z	-6.215	3.88
30	MP3C	Mx	-.004	3.88
31	MP1B	X	-3.909	7
32	MP1B	Z	-6.77	7
33	MP1B	Mx	-.002	7
34	MP2A	X	-3.909	7
35	MP2A	Z	-6.77	7
36	MP2A	Mx	-.002	7
37	MP2B	X	-3.909	7
38	MP2B	Z	-6.77	7
39	MP2B	Mx	-.002	7
40	MP2C	X	-2.353	7
41	MP2C	Z	-4.076	7
42	MP2C	Mx	.002	7
43	MP3A	X	-7.992	3.5
44	MP3A	Z	-13.842	3.5
45	MP3A	Mx	-.003	3.5
46	MP2A	X	-7.967	3.5
47	MP2A	Z	-13.799	3.5
48	MP2A	Mx	-.003	3.5
49	MP2C	X	-6.714	3.5
50	MP2C	Z	-11.629	3.5
51	MP2C	Mx	.004	3.5
52	MP1A	X	-16.347	2
53	MP1A	Z	-28.313	2
54	MP1A	Mx	-.008	2
55	MP4A	X	-16.347	2
56	MP4A	Z	-28.313	2
57	MP4A	Mx	-.008	2
58	MP1B	X	-12.248	.75
59	MP1B	Z	-21.215	.75
60	MP1B	Mx	.012	.75
61	MP1B	X	-12.248	5.5
62	MP1B	Z	-21.215	5.5
63	MP1B	Mx	.012	5.5
64	MP3B	X	-20.672	.75
65	MP3B	Z	-35.805	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
66	MP3B	Mx	.009	.75
67	MP3B	X	-20.672	5.5
68	MP3B	Z	-35.805	5.5
69	MP3B	Mx	.009	5.5
70	MP2B	X	-20.485	.75
71	MP2B	Z	-35.481	.75
72	MP2B	Mx	.044	.75
73	MP2B	X	-20.485	5.5
74	MP2B	Z	-35.481	5.5
75	MP2B	Mx	.044	5.5
76	MP2B	X	-20.485	.75
77	MP2B	Z	-35.481	.75
78	MP2B	Mx	-.013	.75
79	MP2B	X	-20.485	5.5
80	MP2B	Z	-35.481	5.5
81	MP2B	Mx	-.013	5.5
82	MP1C	X	-11.609	.75
83	MP1C	Z	-20.107	.75
84	MP1C	Mx	-.012	.75
85	MP1C	X	-11.609	5.5
86	MP1C	Z	-20.107	5.5
87	MP1C	Mx	-.012	5.5
88	MP2A	X	-15.298	.75
89	MP2A	Z	-26.497	.75
90	MP2A	Mx	-.008	.75
91	MP2A	X	-15.298	5.5
92	MP2A	Z	-26.497	5.5
93	MP2A	Mx	-.008	5.5
94	B1	X	-6.789	3.5
95	B1	Z	-11.759	3.5
96	B1	Mx	-.004	3.5
97	B2	X	-6.714	3.5
98	B2	Z	-11.629	3.5
99	B2	Mx	-.004	3.5
100	B3	X	-6.789	3.5
101	B3	Z	-11.759	3.5
102	B3	Mx	-.004	3.5
103	B4	X	-6.714	3.5
104	B4	Z	-11.629	3.5
105	B4	Mx	-.004	3.5
106	C1	X	-6.789	3.5
107	C1	Z	-11.759	3.5
108	C1	Mx	.004	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	0	.75
2	MP1C	Z	-3.958	.75
3	MP1C	Mx	-.003	.75
4	MP1C	X	0	5.5
5	MP1C	Z	-3.958	5.5
6	MP1C	Mx	-.003	5.5
7	MP2A	X	0	.75
8	MP2A	Z	-6.922	.75
9	MP2A	Mx	.004	.75
10	MP2A	X	0	5.5
11	MP2A	Z	-6.922	5.5
12	MP2A	Mx	.004	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP1B	X	0	2.38
14	MP1B	Z	-2.603	2.38
15	MP1B	Mx	.001	2.38
16	MP1B	X	0	3.88
17	MP1B	Z	-2.603	3.88
18	MP1B	Mx	.001	3.88
19	MP3A	X	0	2.38
20	MP3A	Z	-4.831	2.38
21	MP3A	Mx	0	2.38
22	MP3A	X	0	3.88
23	MP3A	Z	-4.831	3.88
24	MP3A	Mx	0	3.88
25	MP3C	X	0	2.38
26	MP3C	Z	-2.603	2.38
27	MP3C	Mx	-.001	2.38
28	MP3C	X	0	3.88
29	MP3C	Z	-2.603	3.88
30	MP3C	Mx	-.001	3.88
31	MP1B	X	0	7
32	MP1B	Z	-1.244	7
33	MP1B	Mx	-.000539	7
34	MP2A	X	0	7
35	MP2A	Z	-2.192	7
36	MP2A	Mx	0	7
37	MP2B	X	0	7
38	MP2B	Z	-1.244	7
39	MP2B	Mx	-.000539	7
40	MP2C	X	0	7
41	MP2C	Z	-1.244	7
42	MP2C	Mx	.000539	7
43	MP3A	X	0	3.5
44	MP3A	Z	-4.767	3.5
45	MP3A	Mx	0	3.5
46	MP2A	X	0	3.5
47	MP2A	Z	-3.952	3.5
48	MP2A	Mx	0	3.5
49	MP2C	X	0	3.5
50	MP2C	Z	-2.651	3.5
51	MP2C	Mx	.000884	3.5
52	MP1A	X	0	2
53	MP1A	Z	-8.082	2
54	MP1A	Mx	0	2
55	MP4A	X	0	2
56	MP4A	Z	-8.082	2
57	MP4A	Mx	0	2
58	MP1B	X	0	.75
59	MP1B	Z	-7.256	.75
60	MP1B	Mx	.004	.75
61	MP1B	X	0	5.5
62	MP1B	Z	-7.256	5.5
63	MP1B	Mx	.004	5.5
64	MP3B	X	0	.75
65	MP3B	Z	-9.296	.75
66	MP3B	Mx	.004	.75
67	MP3B	X	0	5.5
68	MP3B	Z	-9.296	5.5
69	MP3B	Mx	.004	5.5
70	MP2B	X	0	.75
71	MP2B	Z	-8.779	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
72	MP2B	Mx	.006	.75
73	MP2B	X	0	5.5
74	MP2B	Z	-8.779	5.5
75	MP2B	Mx	.006	5.5
76	MP2B	X	0	.75
77	MP2B	Z	-8.779	.75
78	MP2B	Mx	.003	.75
79	MP2B	X	0	5.5
80	MP2B	Z	-8.779	5.5
81	MP2B	Mx	.003	5.5
82	MP1C	X	0	.75
83	MP1C	Z	-7.672	.75
84	MP1C	Mx	-.001	.75
85	MP1C	X	0	5.5
86	MP1C	Z	-7.672	5.5
87	MP1C	Mx	-.001	5.5
88	MP2A	X	0	.75
89	MP2A	Z	-10.261	.75
90	MP2A	Mx	-.006	.75
91	MP2A	X	0	5.5
92	MP2A	Z	-10.261	5.5
93	MP2A	Mx	-.006	5.5
94	B1	X	0	3.5
95	B1	Z	-3.25	3.5
96	B1	Mx	-.001	3.5
97	B2	X	0	3.5
98	B2	Z	-2.651	3.5
99	B2	Mx	-.000884	3.5
100	B3	X	0	3.5
101	B3	Z	-3.25	3.5
102	B3	Mx	-.001	3.5
103	B4	X	0	3.5
104	B4	Z	-2.651	3.5
105	B4	Mx	-.000884	3.5
106	C1	X	0	3.5
107	C1	Z	-3.25	3.5
108	C1	Mx	.001	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	2.967	.75
2	MP1C	Z	-5.139	.75
3	MP1C	Mx	-.004	.75
4	MP1C	X	2.967	5.5
5	MP1C	Z	-5.139	5.5
6	MP1C	Mx	-.004	5.5
7	MP2A	X	2.967	.75
8	MP2A	Z	-5.139	.75
9	MP2A	Mx	.002	.75
10	MP2A	X	2.967	5.5
11	MP2A	Z	-5.139	5.5
12	MP2A	Mx	.002	5.5
13	MP1B	X	.93	2.38
14	MP1B	Z	-1.611	2.38
15	MP1B	Mx	.00093	2.38
16	MP1B	X	.93	3.88
17	MP1B	Z	-1.611	3.88
18	MP1B	Mx	.00093	3.88

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
19	MP3A	X	2.044	2.38
20	MP3A	Z	-3.541	2.38
21	MP3A	Mx	-.001	2.38
22	MP3A	X	2.044	3.88
23	MP3A	Z	-3.541	3.88
24	MP3A	Mx	-.001	3.88
25	MP3C	X	2.044	2.38
26	MP3C	Z	-3.541	2.38
27	MP3C	Mx	-.001	2.38
28	MP3C	X	2.044	3.88
29	MP3C	Z	-3.541	3.88
30	MP3C	Mx	-.001	3.88
31	MP1B	X	.464	7
32	MP1B	Z	-.804	7
33	MP1B	Mx	-.000464	7
34	MP2A	X	.938	7
35	MP2A	Z	-1.625	7
36	MP2A	Mx	.000469	7
37	MP2B	X	.464	7
38	MP2B	Z	-.804	7
39	MP2B	Mx	-.000464	7
40	MP2C	X	.938	7
41	MP2C	Z	-1.625	7
42	MP2C	Mx	.000469	7
43	MP3A	X	2.194	3.5
44	MP3A	Z	-3.8	3.5
45	MP3A	Mx	.000731	3.5
46	MP2A	X	1.813	3.5
47	MP2A	Z	-3.141	3.5
48	MP2A	Mx	.000604	3.5
49	MP2C	X	1.488	3.5
50	MP2C	Z	-2.578	3.5
51	MP2C	Mx	.000859	3.5
52	MP1A	X	3.799	2
53	MP1A	Z	-6.579	2
54	MP1A	Mx	.002	2
55	MP4A	X	3.799	2
56	MP4A	Z	-6.579	2
57	MP4A	Mx	.002	2
58	MP1B	X	5.313	.75
59	MP1B	Z	-9.203	.75
60	MP1B	Mx	.004	.75
61	MP1B	X	5.313	5.5
62	MP1B	Z	-9.203	5.5
63	MP1B	Mx	.004	5.5
64	MP3B	X	3.397	.75
65	MP3B	Z	-5.884	.75
66	MP3B	Mx	.003	.75
67	MP3B	X	3.397	5.5
68	MP3B	Z	-5.884	5.5
69	MP3B	Mx	.003	5.5
70	MP2B	X	4.87	.75
71	MP2B	Z	-8.435	.75
72	MP2B	Mx	.000967	.75
73	MP2B	X	4.87	5.5
74	MP2B	Z	-8.435	5.5
75	MP2B	Mx	.000967	5.5
76	MP2B	X	4.87	.75
77	MP2B	Z	-8.435	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
78	MP2B	Mx	.008	.75
79	MP2B	X	4.87	5.5
80	MP2B	Z	-8.435	5.5
81	MP2B	Mx	.008	5.5
82	MP1C	X	4.699	.75
83	MP1C	Z	-8.139	.75
84	MP1C	Mx	.002	.75
85	MP1C	X	4.699	5.5
86	MP1C	Z	-8.139	5.5
87	MP1C	Mx	.002	5.5
88	MP2A	X	4.699	.75
89	MP2A	Z	-8.139	.75
90	MP2A	Mx	-.007	.75
91	MP2A	X	4.699	5.5
92	MP2A	Z	-8.139	5.5
93	MP2A	Mx	-.007	5.5
94	B1	X	1.815	3.5
95	B1	Z	-3.143	3.5
96	B1	Mx	-.001	3.5
97	B2	X	1.488	3.5
98	B2	Z	-2.578	3.5
99	B2	Mx	-.000859	3.5
100	B3	X	1.815	3.5
101	B3	Z	-3.143	3.5
102	B3	Mx	-.001	3.5
103	B4	X	1.488	3.5
104	B4	Z	-2.578	3.5
105	B4	Mx	-.000859	3.5
106	C1	X	1.815	3.5
107	C1	Z	-3.143	3.5
108	C1	Mx	.001	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	5.994	.75
2	MP1C	Z	-3.461	.75
3	MP1C	Mx	-.004	.75
4	MP1C	X	5.994	5.5
5	MP1C	Z	-3.461	5.5
6	MP1C	Mx	-.004	5.5
7	MP2A	X	3.428	.75
8	MP2A	Z	-1.979	.75
9	MP2A	Mx	-.00056	.75
10	MP2A	X	3.428	5.5
11	MP2A	Z	-1.979	5.5
12	MP2A	Mx	-.00056	5.5
13	MP1B	X	2.255	2.38
14	MP1B	Z	-1.302	2.38
15	MP1B	Mx	.001	2.38
16	MP1B	X	2.255	3.88
17	MP1B	Z	-1.302	3.88
18	MP1B	Mx	.001	3.88
19	MP3A	X	2.255	2.38
20	MP3A	Z	-1.302	2.38
21	MP3A	Mx	-.001	2.38
22	MP3A	X	2.255	3.88
23	MP3A	Z	-1.302	3.88
24	MP3A	Mx	-.001	3.88

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP3C	X	4.184	2.38
26	MP3C	Z	-2.416	2.38
27	MP3C	Mx	0	2.38
28	MP3C	X	4.184	3.88
29	MP3C	Z	-2.416	3.88
30	MP3C	Mx	0	3.88
31	MP1B	X	1.078	7
32	MP1B	Z	-.622	7
33	MP1B	Mx	-.000539	7
34	MP2A	X	1.078	7
35	MP2A	Z	-.622	7
36	MP2A	Mx	.000539	7
37	MP2B	X	1.078	7
38	MP2B	Z	-.622	7
39	MP2B	Mx	-.000539	7
40	MP2C	X	1.899	7
41	MP2C	Z	-1.096	7
42	MP2C	Mx	0	7
43	MP3A	X	3.143	3.5
44	MP3A	Z	-1.815	3.5
45	MP3A	Mx	.001	3.5
46	MP2A	X	2.578	3.5
47	MP2A	Z	-1.488	3.5
48	MP2A	Mx	.000859	3.5
49	MP2C	X	3.141	3.5
50	MP2C	Z	-1.813	3.5
51	MP2C	Mx	.000604	3.5
52	MP1A	X	5.74	2
53	MP1A	Z	-3.314	2
54	MP1A	Mx	.003	2
55	MP4A	X	5.74	2
56	MP4A	Z	-3.314	2
57	MP4A	Mx	.003	2
58	MP1B	X	12.122	.75
59	MP1B	Z	-6.999	.75
60	MP1B	Mx	.002	.75
61	MP1B	X	12.122	5.5
62	MP1B	Z	-6.999	5.5
63	MP1B	Mx	.002	5.5
64	MP3B	X	7.036	.75
65	MP3B	Z	-4.062	.75
66	MP3B	Mx	.004	.75
67	MP3B	X	7.036	5.5
68	MP3B	Z	-4.062	5.5
69	MP3B	Mx	.004	5.5
70	MP2B	X	12.94	.75
71	MP2B	Z	-7.471	.75
72	MP2B	Mx	-.008	.75
73	MP2B	X	12.94	5.5
74	MP2B	Z	-7.471	5.5
75	MP2B	Mx	-.008	5.5
76	MP2B	X	12.94	.75
77	MP2B	Z	-7.471	.75
78	MP2B	Mx	.017	.75
79	MP2B	X	12.94	5.5
80	MP2B	Z	-7.471	5.5
81	MP2B	Mx	.017	5.5
82	MP1C	X	8.887	.75
83	MP1C	Z	-5.131	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
84	MP1C	Mx	.006	.75
85	MP1C	X	8.887	5.5
86	MP1C	Z	-5.131	5.5
87	MP1C	Mx	.006	5.5
88	MP2A	X	6.644	.75
89	MP2A	Z	-3.836	.75
90	MP2A	Mx	-.006	.75
91	MP2A	X	6.644	5.5
92	MP2A	Z	-3.836	5.5
93	MP2A	Mx	-.006	5.5
94	B1	X	3.8	3.5
95	B1	Z	-2.194	3.5
96	B1	Mx	-.000731	3.5
97	B2	X	3.141	3.5
98	B2	Z	-1.813	3.5
99	B2	Mx	-.000604	3.5
100	B3	X	3.8	3.5
101	B3	Z	-2.194	3.5
102	B3	Mx	-.000731	3.5
103	B4	X	3.141	3.5
104	B4	Z	-1.813	3.5
105	B4	Mx	-.000604	3.5
106	C1	X	3.8	3.5
107	C1	Z	-2.194	3.5
108	C1	Mx	.000731	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	5.934	.75
2	MP1C	Z	0	.75
3	MP1C	Mx	-.002	.75
4	MP1C	X	5.934	5.5
5	MP1C	Z	0	5.5
6	MP1C	Mx	-.002	5.5
7	MP2A	X	2.97	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	-.001	.75
10	MP2A	X	2.97	5.5
11	MP2A	Z	0	5.5
12	MP2A	Mx	-.001	5.5
13	MP1B	X	4.088	2.38
14	MP1B	Z	0	2.38
15	MP1B	Mx	.001	2.38
16	MP1B	X	4.088	3.88
17	MP1B	Z	0	3.88
18	MP1B	Mx	.001	3.88
19	MP3A	X	1.861	2.38
20	MP3A	Z	0	2.38
21	MP3A	Mx	-.00093	2.38
22	MP3A	X	1.861	3.88
23	MP3A	Z	0	3.88
24	MP3A	Mx	-.00093	3.88
25	MP3C	X	4.088	2.38
26	MP3C	Z	0	2.38
27	MP3C	Mx	.001	2.38
28	MP3C	X	4.088	3.88
29	MP3C	Z	0	3.88
30	MP3C	Mx	.001	3.88

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
31	MP1B	X	1.876	7
32	MP1B	Z	0	7
33	MP1B	Mx	-.000469	7
34	MP2A	X	.928	7
35	MP2A	Z	0	7
36	MP2A	Mx	.000464	7
37	MP2B	X	1.876	7
38	MP2B	Z	0	7
39	MP2B	Mx	-.000469	7
40	MP2C	X	1.876	7
41	MP2C	Z	0	7
42	MP2C	Mx	-.000469	7
43	MP3A	X	3.25	3.5
44	MP3A	Z	0	3.5
45	MP3A	Mx	.001	3.5
46	MP2A	X	2.651	3.5
47	MP2A	Z	0	3.5
48	MP2A	Mx	.000884	3.5
49	MP2C	X	3.952	3.5
50	MP2C	Z	0	3.5
51	MP2C	Mx	0	3.5
52	MP1A	X	6.144	2
53	MP1A	Z	0	2
54	MP1A	Mx	.003	2
55	MP4A	X	6.144	2
56	MP4A	Z	0	2
57	MP4A	Mx	.003	2
58	MP1B	X	13.997	.75
59	MP1B	Z	0	.75
60	MP1B	Mx	-.002	.75
61	MP1B	X	13.997	5.5
62	MP1B	Z	0	5.5
63	MP1B	Mx	-.002	5.5
64	MP3B	X	11.958	.75
65	MP3B	Z	0	.75
66	MP3B	Mx	.003	.75
67	MP3B	X	11.958	5.5
68	MP3B	Z	0	5.5
69	MP3B	Mx	.003	5.5
70	MP2B	X	19.182	.75
71	MP2B	Z	0	.75
72	MP2B	Mx	-.019	.75
73	MP2B	X	19.182	5.5
74	MP2B	Z	0	5.5
75	MP2B	Mx	-.019	5.5
76	MP2B	X	19.182	.75
77	MP2B	Z	0	.75
78	MP2B	Mx	.022	.75
79	MP2B	X	19.182	5.5
80	MP2B	Z	0	5.5
81	MP2B	Mx	.022	5.5
82	MP1C	X	9.398	.75
83	MP1C	Z	0	.75
84	MP1C	Mx	.007	.75
85	MP1C	X	9.398	5.5
86	MP1C	Z	0	5.5
87	MP1C	Mx	.007	5.5
88	MP2A	X	6.809	.75
89	MP2A	Z	0	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
90	MP2A	Mx	-.003	.75
91	MP2A	X	6.809	5.5
92	MP2A	Z	0	5.5
93	MP2A	Mx	-.003	5.5
94	B1	X	4.767	3.5
95	B1	Z	0	3.5
96	B1	Mx	0	3.5
97	B2	X	3.952	3.5
98	B2	Z	0	3.5
99	B2	Mx	0	3.5
100	B3	X	4.767	3.5
101	B3	Z	0	3.5
102	B3	Mx	0	3.5
103	B4	X	3.952	3.5
104	B4	Z	0	3.5
105	B4	Mx	0	3.5
106	C1	X	4.767	3.5
107	C1	Z	0	3.5
108	C1	Mx	0	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	3.428	.75
2	MP1C	Z	1.979	.75
3	MP1C	Mx	.000559	.75
4	MP1C	X	3.428	5.5
5	MP1C	Z	1.979	5.5
6	MP1C	Mx	.000559	5.5
7	MP2A	X	3.428	.75
8	MP2A	Z	1.979	.75
9	MP2A	Mx	-.003	.75
10	MP2A	X	3.428	5.5
11	MP2A	Z	1.979	5.5
12	MP2A	Mx	-.003	5.5
13	MP1B	X	4.184	2.38
14	MP1B	Z	2.416	2.38
15	MP1B	Mx	0	2.38
16	MP1B	X	4.184	3.88
17	MP1B	Z	2.416	3.88
18	MP1B	Mx	0	3.88
19	MP3A	X	2.255	2.38
20	MP3A	Z	1.302	2.38
21	MP3A	Mx	-.001	2.38
22	MP3A	X	2.255	3.88
23	MP3A	Z	1.302	3.88
24	MP3A	Mx	-.001	3.88
25	MP3C	X	2.255	2.38
26	MP3C	Z	1.302	2.38
27	MP3C	Mx	.001	2.38
28	MP3C	X	2.255	3.88
29	MP3C	Z	1.302	3.88
30	MP3C	Mx	.001	3.88
31	MP1B	X	1.899	7
32	MP1B	Z	1.096	7
33	MP1B	Mx	0	7
34	MP2A	X	1.078	7
35	MP2A	Z	.622	7
36	MP2A	Mx	.000539	7

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
37	MP2B	X	1.899	7
38	MP2B	Z	1.096	7
39	MP2B	Mx	0	7
40	MP2C	X	1.078	7
41	MP2C	Z	.622	7
42	MP2C	Mx	-.000539	7
43	MP3A	X	3.143	3.5
44	MP3A	Z	1.815	3.5
45	MP3A	Mx	.001	3.5
46	MP2A	X	2.578	3.5
47	MP2A	Z	1.488	3.5
48	MP2A	Mx	.000859	3.5
49	MP2C	X	3.141	3.5
50	MP2C	Z	1.813	3.5
51	MP2C	Mx	-.000604	3.5
52	MP1A	X	5.74	2
53	MP1A	Z	3.314	2
54	MP1A	Mx	.003	2
55	MP4A	X	5.74	2
56	MP4A	Z	3.314	2
57	MP4A	Mx	.003	2
58	MP1B	X	9.203	.75
59	MP1B	Z	5.313	.75
60	MP1B	Mx	-.004	.75
61	MP1B	X	9.203	5.5
62	MP1B	Z	5.313	5.5
63	MP1B	Mx	-.004	5.5
64	MP3B	X	12.522	.75
65	MP3B	Z	7.23	.75
66	MP3B	Mx	.00063	.75
67	MP3B	X	12.522	5.5
68	MP3B	Z	7.23	5.5
69	MP3B	Mx	.00063	5.5
70	MP2B	X	15.779	.75
71	MP2B	Z	9.11	.75
72	MP2B	Mx	-.022	.75
73	MP2B	X	15.779	5.5
74	MP2B	Z	9.11	5.5
75	MP2B	Mx	-.022	5.5
76	MP2B	X	15.779	.75
77	MP2B	Z	9.11	.75
78	MP2B	Mx	.015	.75
79	MP2B	X	15.779	5.5
80	MP2B	Z	9.11	5.5
81	MP2B	Mx	.015	5.5
82	MP1C	X	6.644	.75
83	MP1C	Z	3.836	.75
84	MP1C	Mx	.006	.75
85	MP1C	X	6.644	5.5
86	MP1C	Z	3.836	5.5
87	MP1C	Mx	.006	5.5
88	MP2A	X	6.644	.75
89	MP2A	Z	3.836	.75
90	MP2A	Mx	-.001	.75
91	MP2A	X	6.644	5.5
92	MP2A	Z	3.836	5.5
93	MP2A	Mx	-.001	5.5
94	B1	X	3.8	3.5
95	B1	Z	2.194	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
96	B1	Mx	.000731	3.5
97	B2	X	3.141	3.5
98	B2	Z	1.813	3.5
99	B2	Mx	.000604	3.5
100	B3	X	3.8	3.5
101	B3	Z	2.194	3.5
102	B3	Mx	.000731	3.5
103	B4	X	3.141	3.5
104	B4	Z	1.813	3.5
105	B4	Mx	.000604	3.5
106	C1	X	3.8	3.5
107	C1	Z	2.194	3.5
108	C1	Mx	-.000731	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	1.485	.75
2	MP1C	Z	2.572	.75
3	MP1C	Mx	.001	.75
4	MP1C	X	1.485	5.5
5	MP1C	Z	2.572	5.5
6	MP1C	Mx	.001	5.5
7	MP2A	X	2.967	.75
8	MP2A	Z	5.139	.75
9	MP2A	Mx	-.004	.75
10	MP2A	X	2.967	5.5
11	MP2A	Z	5.139	5.5
12	MP2A	Mx	-.004	5.5
13	MP1B	X	2.044	2.38
14	MP1B	Z	3.541	2.38
15	MP1B	Mx	-.001	2.38
16	MP1B	X	2.044	3.88
17	MP1B	Z	3.541	3.88
18	MP1B	Mx	-.001	3.88
19	MP3A	X	2.044	2.38
20	MP3A	Z	3.541	2.38
21	MP3A	Mx	-.001	2.38
22	MP3A	X	2.044	3.88
23	MP3A	Z	3.541	3.88
24	MP3A	Mx	-.001	3.88
25	MP3C	X	.93	2.38
26	MP3C	Z	1.611	2.38
27	MP3C	Mx	.00093	2.38
28	MP3C	X	.93	3.88
29	MP3C	Z	1.611	3.88
30	MP3C	Mx	.00093	3.88
31	MP1B	X	.938	7
32	MP1B	Z	1.625	7
33	MP1B	Mx	.000469	7
34	MP2A	X	.938	7
35	MP2A	Z	1.625	7
36	MP2A	Mx	.000469	7
37	MP2B	X	.938	7
38	MP2B	Z	1.625	7
39	MP2B	Mx	.000469	7
40	MP2C	X	.464	7
41	MP2C	Z	.804	7
42	MP2C	Mx	-.000464	7

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
43	MP3A	X	2.194	3.5
44	MP3A	Z	3.8	3.5
45	MP3A	Mx	.000731	3.5
46	MP2A	X	1.813	3.5
47	MP2A	Z	3.141	3.5
48	MP2A	Mx	.000604	3.5
49	MP2C	X	1.488	3.5
50	MP2C	Z	2.578	3.5
51	MP2C	Mx	-.000859	3.5
52	MP1A	X	3.799	2
53	MP1A	Z	6.579	2
54	MP1A	Mx	.002	2
55	MP4A	X	3.799	2
56	MP4A	Z	6.579	2
57	MP4A	Mx	.002	2
58	MP1B	X	3.628	.75
59	MP1B	Z	6.284	.75
60	MP1B	Mx	-.004	.75
61	MP1B	X	3.628	5.5
62	MP1B	Z	6.284	5.5
63	MP1B	Mx	-.004	5.5
64	MP3B	X	6.564	.75
65	MP3B	Z	11.37	.75
66	MP3B	Mx	-.003	.75
67	MP3B	X	6.564	5.5
68	MP3B	Z	11.37	5.5
69	MP3B	Mx	-.003	5.5
70	MP2B	X	6.509	.75
71	MP2B	Z	11.275	.75
72	MP2B	Mx	-.014	.75
73	MP2B	X	6.509	5.5
74	MP2B	Z	11.275	5.5
75	MP2B	Mx	-.014	5.5
76	MP2B	X	6.509	.75
77	MP2B	Z	11.275	.75
78	MP2B	Mx	.004	.75
79	MP2B	X	6.509	5.5
80	MP2B	Z	11.275	5.5
81	MP2B	Mx	.004	5.5
82	MP1C	X	3.404	.75
83	MP1C	Z	5.897	.75
84	MP1C	Mx	.003	.75
85	MP1C	X	3.404	5.5
86	MP1C	Z	5.897	5.5
87	MP1C	Mx	.003	5.5
88	MP2A	X	4.699	.75
89	MP2A	Z	8.139	.75
90	MP2A	Mx	.002	.75
91	MP2A	X	4.699	5.5
92	MP2A	Z	8.139	5.5
93	MP2A	Mx	.002	5.5
94	B1	X	1.815	3.5
95	B1	Z	3.143	3.5
96	B1	Mx	.001	3.5
97	B2	X	1.488	3.5
98	B2	Z	2.578	3.5
99	B2	Mx	.000859	3.5
100	B3	X	1.815	3.5
101	B3	Z	3.143	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
102	B3	Mx	.001	3.5
103	B4	X	1.488	3.5
104	B4	Z	2.578	3.5
105	B4	Mx	.000859	3.5
106	C1	X	1.815	3.5
107	C1	Z	3.143	3.5
108	C1	Mx	-.001	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	0	.75
2	MP1C	Z	3.958	.75
3	MP1C	Mx	.003	.75
4	MP1C	X	0	5.5
5	MP1C	Z	3.958	5.5
6	MP1C	Mx	.003	5.5
7	MP2A	X	0	.75
8	MP2A	Z	6.922	.75
9	MP2A	Mx	-.004	.75
10	MP2A	X	0	5.5
11	MP2A	Z	6.922	5.5
12	MP2A	Mx	-.004	5.5
13	MP1B	X	0	2.38
14	MP1B	Z	2.603	2.38
15	MP1B	Mx	-.001	2.38
16	MP1B	X	0	3.88
17	MP1B	Z	2.603	3.88
18	MP1B	Mx	-.001	3.88
19	MP3A	X	0	2.38
20	MP3A	Z	4.831	2.38
21	MP3A	Mx	0	2.38
22	MP3A	X	0	3.88
23	MP3A	Z	4.831	3.88
24	MP3A	Mx	0	3.88
25	MP3C	X	0	2.38
26	MP3C	Z	2.603	2.38
27	MP3C	Mx	.001	2.38
28	MP3C	X	0	3.88
29	MP3C	Z	2.603	3.88
30	MP3C	Mx	.001	3.88
31	MP1B	X	0	7
32	MP1B	Z	1.244	7
33	MP1B	Mx	.000539	7
34	MP2A	X	0	7
35	MP2A	Z	2.192	7
36	MP2A	Mx	0	7
37	MP2B	X	0	7
38	MP2B	Z	1.244	7
39	MP2B	Mx	.000539	7
40	MP2C	X	0	7
41	MP2C	Z	1.244	7
42	MP2C	Mx	-.000539	7
43	MP3A	X	0	3.5
44	MP3A	Z	4.767	3.5
45	MP3A	Mx	0	3.5
46	MP2A	X	0	3.5
47	MP2A	Z	3.952	3.5
48	MP2A	Mx	0	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
49	MP2C	X	0	3.5
50	MP2C	Z	2.651	3.5
51	MP2C	Mx	-.000884	3.5
52	MP1A	X	0	2
53	MP1A	Z	8.082	2
54	MP1A	Mx	0	2
55	MP4A	X	0	2
56	MP4A	Z	8.082	2
57	MP4A	Mx	0	2
58	MP1B	X	0	.75
59	MP1B	Z	7.256	.75
60	MP1B	Mx	-.004	.75
61	MP1B	X	0	5.5
62	MP1B	Z	7.256	5.5
63	MP1B	Mx	-.004	5.5
64	MP3B	X	0	.75
65	MP3B	Z	9.296	.75
66	MP3B	Mx	-.004	.75
67	MP3B	X	0	5.5
68	MP3B	Z	9.296	5.5
69	MP3B	Mx	-.004	5.5
70	MP2B	X	0	.75
71	MP2B	Z	8.779	.75
72	MP2B	Mx	-.006	.75
73	MP2B	X	0	5.5
74	MP2B	Z	8.779	5.5
75	MP2B	Mx	-.006	5.5
76	MP2B	X	0	.75
77	MP2B	Z	8.779	.75
78	MP2B	Mx	-.003	.75
79	MP2B	X	0	5.5
80	MP2B	Z	8.779	5.5
81	MP2B	Mx	-.003	5.5
82	MP1C	X	0	.75
83	MP1C	Z	7.672	.75
84	MP1C	Mx	.001	.75
85	MP1C	X	0	5.5
86	MP1C	Z	7.672	5.5
87	MP1C	Mx	.001	5.5
88	MP2A	X	0	.75
89	MP2A	Z	10.261	.75
90	MP2A	Mx	.006	.75
91	MP2A	X	0	5.5
92	MP2A	Z	10.261	5.5
93	MP2A	Mx	.006	5.5
94	B1	X	0	3.5
95	B1	Z	3.25	3.5
96	B1	Mx	.001	3.5
97	B2	X	0	3.5
98	B2	Z	2.651	3.5
99	B2	Mx	.000884	3.5
100	B3	X	0	3.5
101	B3	Z	3.25	3.5
102	B3	Mx	.001	3.5
103	B4	X	0	3.5
104	B4	Z	2.651	3.5
105	B4	Mx	.000884	3.5
106	C1	X	0	3.5
107	C1	Z	3.25	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
108	C1	Mx	-.001	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	-2.967	.75
2	MP1C	Z	5.139	.75
3	MP1C	Mx	.004	.75
4	MP1C	X	-2.967	5.5
5	MP1C	Z	5.139	5.5
6	MP1C	Mx	.004	5.5
7	MP2A	X	-2.967	.75
8	MP2A	Z	5.139	.75
9	MP2A	Mx	-.002	.75
10	MP2A	X	-2.967	5.5
11	MP2A	Z	5.139	5.5
12	MP2A	Mx	-.002	5.5
13	MP1B	X	-.93	2.38
14	MP1B	Z	1.611	2.38
15	MP1B	Mx	-.00093	2.38
16	MP1B	X	-.93	3.88
17	MP1B	Z	1.611	3.88
18	MP1B	Mx	-.00093	3.88
19	MP3A	X	-2.044	2.38
20	MP3A	Z	3.541	2.38
21	MP3A	Mx	.001	2.38
22	MP3A	X	-2.044	3.88
23	MP3A	Z	3.541	3.88
24	MP3A	Mx	.001	3.88
25	MP3C	X	-2.044	2.38
26	MP3C	Z	3.541	2.38
27	MP3C	Mx	.001	2.38
28	MP3C	X	-2.044	3.88
29	MP3C	Z	3.541	3.88
30	MP3C	Mx	.001	3.88
31	MP1B	X	-.464	7
32	MP1B	Z	.804	7
33	MP1B	Mx	.000464	7
34	MP2A	X	-.938	7
35	MP2A	Z	1.625	7
36	MP2A	Mx	-.000469	7
37	MP2B	X	-.464	7
38	MP2B	Z	.804	7
39	MP2B	Mx	.000464	7
40	MP2C	X	-.938	7
41	MP2C	Z	1.625	7
42	MP2C	Mx	-.000469	7
43	MP3A	X	-2.194	3.5
44	MP3A	Z	3.8	3.5
45	MP3A	Mx	-.000731	3.5
46	MP2A	X	-1.813	3.5
47	MP2A	Z	3.141	3.5
48	MP2A	Mx	-.000604	3.5
49	MP2C	X	-1.488	3.5
50	MP2C	Z	2.578	3.5
51	MP2C	Mx	-.000859	3.5
52	MP1A	X	-3.799	2
53	MP1A	Z	6.579	2
54	MP1A	Mx	-.002	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
55	MP4A	X	-3.799	2
56	MP4A	Z	6.579	2
57	MP4A	Mx	-.002	2
58	MP1B	X	-5.313	.75
59	MP1B	Z	9.203	.75
60	MP1B	Mx	-.004	.75
61	MP1B	X	-5.313	5.5
62	MP1B	Z	9.203	5.5
63	MP1B	Mx	-.004	5.5
64	MP3B	X	-3.397	.75
65	MP3B	Z	5.884	.75
66	MP3B	Mx	-.003	.75
67	MP3B	X	-3.397	5.5
68	MP3B	Z	5.884	5.5
69	MP3B	Mx	-.003	5.5
70	MP2B	X	-4.87	.75
71	MP2B	Z	8.435	.75
72	MP2B	Mx	-.000967	.75
73	MP2B	X	-4.87	5.5
74	MP2B	Z	8.435	5.5
75	MP2B	Mx	-.000967	5.5
76	MP2B	X	-4.87	.75
77	MP2B	Z	8.435	.75
78	MP2B	Mx	-.008	.75
79	MP2B	X	-4.87	5.5
80	MP2B	Z	8.435	5.5
81	MP2B	Mx	-.008	5.5
82	MP1C	X	-4.699	.75
83	MP1C	Z	8.139	.75
84	MP1C	Mx	-.002	.75
85	MP1C	X	-4.699	5.5
86	MP1C	Z	8.139	5.5
87	MP1C	Mx	-.002	5.5
88	MP2A	X	-4.699	.75
89	MP2A	Z	8.139	.75
90	MP2A	Mx	.007	.75
91	MP2A	X	-4.699	5.5
92	MP2A	Z	8.139	5.5
93	MP2A	Mx	.007	5.5
94	B1	X	-1.815	3.5
95	B1	Z	3.143	3.5
96	B1	Mx	.001	3.5
97	B2	X	-1.488	3.5
98	B2	Z	2.578	3.5
99	B2	Mx	.000859	3.5
100	B3	X	-1.815	3.5
101	B3	Z	3.143	3.5
102	B3	Mx	.001	3.5
103	B4	X	-1.488	3.5
104	B4	Z	2.578	3.5
105	B4	Mx	.000859	3.5
106	C1	X	-1.815	3.5
107	C1	Z	3.143	3.5
108	C1	Mx	-.001	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	-5.994	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
2	MP1C	Z	3.461	.75
3	MP1C	Mx	.004	.75
4	MP1C	X	-5.994	5.5
5	MP1C	Z	3.461	5.5
6	MP1C	Mx	.004	5.5
7	MP2A	X	-3.428	.75
8	MP2A	Z	1.979	.75
9	MP2A	Mx	.00056	.75
10	MP2A	X	-3.428	5.5
11	MP2A	Z	1.979	5.5
12	MP2A	Mx	.00056	5.5
13	MP1B	X	-2.255	2.38
14	MP1B	Z	1.302	2.38
15	MP1B	Mx	-.001	2.38
16	MP1B	X	-2.255	3.88
17	MP1B	Z	1.302	3.88
18	MP1B	Mx	-.001	3.88
19	MP3A	X	-2.255	2.38
20	MP3A	Z	1.302	2.38
21	MP3A	Mx	.001	2.38
22	MP3A	X	-2.255	3.88
23	MP3A	Z	1.302	3.88
24	MP3A	Mx	.001	3.88
25	MP3C	X	-4.184	2.38
26	MP3C	Z	2.416	2.38
27	MP3C	Mx	0	2.38
28	MP3C	X	-4.184	3.88
29	MP3C	Z	2.416	3.88
30	MP3C	Mx	0	3.88
31	MP1B	X	-1.078	7
32	MP1B	Z	.622	7
33	MP1B	Mx	.000539	7
34	MP2A	X	-1.078	7
35	MP2A	Z	.622	7
36	MP2A	Mx	-.000539	7
37	MP2B	X	-1.078	7
38	MP2B	Z	.622	7
39	MP2B	Mx	.000539	7
40	MP2C	X	-1.899	7
41	MP2C	Z	1.096	7
42	MP2C	Mx	0	7
43	MP3A	X	-3.143	3.5
44	MP3A	Z	1.815	3.5
45	MP3A	Mx	-.001	3.5
46	MP2A	X	-2.578	3.5
47	MP2A	Z	1.488	3.5
48	MP2A	Mx	-.000859	3.5
49	MP2C	X	-3.141	3.5
50	MP2C	Z	1.813	3.5
51	MP2C	Mx	-.000604	3.5
52	MP1A	X	-5.74	2
53	MP1A	Z	3.314	2
54	MP1A	Mx	-.003	2
55	MP4A	X	-5.74	2
56	MP4A	Z	3.314	2
57	MP4A	Mx	-.003	2
58	MP1B	X	-12.122	.75
59	MP1B	Z	6.999	.75
60	MP1B	Mx	-.002	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
61	MP1B	X	-12.122	5.5
62	MP1B	Z	6.999	5.5
63	MP1B	Mx	-.002	5.5
64	MP3B	X	-7.036	.75
65	MP3B	Z	4.062	.75
66	MP3B	Mx	-.004	.75
67	MP3B	X	-7.036	5.5
68	MP3B	Z	4.062	5.5
69	MP3B	Mx	-.004	5.5
70	MP2B	X	-12.94	.75
71	MP2B	Z	7.471	.75
72	MP2B	Mx	.008	.75
73	MP2B	X	-12.94	5.5
74	MP2B	Z	7.471	5.5
75	MP2B	Mx	.008	5.5
76	MP2B	X	-12.94	.75
77	MP2B	Z	7.471	.75
78	MP2B	Mx	-.017	.75
79	MP2B	X	-12.94	5.5
80	MP2B	Z	7.471	5.5
81	MP2B	Mx	-.017	5.5
82	MP1C	X	-8.887	.75
83	MP1C	Z	5.131	.75
84	MP1C	Mx	-.006	.75
85	MP1C	X	-8.887	5.5
86	MP1C	Z	5.131	5.5
87	MP1C	Mx	-.006	5.5
88	MP2A	X	-6.644	.75
89	MP2A	Z	3.836	.75
90	MP2A	Mx	.006	.75
91	MP2A	X	-6.644	5.5
92	MP2A	Z	3.836	5.5
93	MP2A	Mx	.006	5.5
94	B1	X	-3.8	3.5
95	B1	Z	2.194	3.5
96	B1	Mx	.000731	3.5
97	B2	X	-3.141	3.5
98	B2	Z	1.813	3.5
99	B2	Mx	.000604	3.5
100	B3	X	-3.8	3.5
101	B3	Z	2.194	3.5
102	B3	Mx	.000731	3.5
103	B4	X	-3.141	3.5
104	B4	Z	1.813	3.5
105	B4	Mx	.000604	3.5
106	C1	X	-3.8	3.5
107	C1	Z	2.194	3.5
108	C1	Mx	-.000731	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	-5.934	.75
2	MP1C	Z	0	.75
3	MP1C	Mx	.002	.75
4	MP1C	X	-5.934	5.5
5	MP1C	Z	0	5.5
6	MP1C	Mx	.002	5.5
7	MP2A	X	-2.97	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
8	MP2A	Z	0	.75
9	MP2A	Mx	.001	.75
10	MP2A	X	-2.97	5.5
11	MP2A	Z	0	5.5
12	MP2A	Mx	.001	5.5
13	MP1B	X	-4.088	2.38
14	MP1B	Z	0	2.38
15	MP1B	Mx	-.001	2.38
16	MP1B	X	-4.088	3.88
17	MP1B	Z	0	3.88
18	MP1B	Mx	-.001	3.88
19	MP3A	X	-1.861	2.38
20	MP3A	Z	0	2.38
21	MP3A	Mx	.00093	2.38
22	MP3A	X	-1.861	3.88
23	MP3A	Z	0	3.88
24	MP3A	Mx	.00093	3.88
25	MP3C	X	-4.088	2.38
26	MP3C	Z	0	2.38
27	MP3C	Mx	-.001	2.38
28	MP3C	X	-4.088	3.88
29	MP3C	Z	0	3.88
30	MP3C	Mx	-.001	3.88
31	MP1B	X	-1.876	7
32	MP1B	Z	0	7
33	MP1B	Mx	.000469	7
34	MP2A	X	-.928	7
35	MP2A	Z	0	7
36	MP2A	Mx	-.000464	7
37	MP2B	X	-1.876	7
38	MP2B	Z	0	7
39	MP2B	Mx	.000469	7
40	MP2C	X	-1.876	7
41	MP2C	Z	0	7
42	MP2C	Mx	.000469	7
43	MP3A	X	-3.25	3.5
44	MP3A	Z	0	3.5
45	MP3A	Mx	-.001	3.5
46	MP2A	X	-2.651	3.5
47	MP2A	Z	0	3.5
48	MP2A	Mx	-.000884	3.5
49	MP2C	X	-3.952	3.5
50	MP2C	Z	0	3.5
51	MP2C	Mx	0	3.5
52	MP1A	X	-6.144	2
53	MP1A	Z	0	2
54	MP1A	Mx	-.003	2
55	MP4A	X	-6.144	2
56	MP4A	Z	0	2
57	MP4A	Mx	-.003	2
58	MP1B	X	-13.997	.75
59	MP1B	Z	0	.75
60	MP1B	Mx	.002	.75
61	MP1B	X	-13.997	5.5
62	MP1B	Z	0	5.5
63	MP1B	Mx	.002	5.5
64	MP3B	X	-11.958	.75
65	MP3B	Z	0	.75
66	MP3B	Mx	-.003	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
67	MP3B	X	-11.958	5.5
68	MP3B	Z	0	5.5
69	MP3B	Mx	-.003	5.5
70	MP2B	X	-19.182	.75
71	MP2B	Z	0	.75
72	MP2B	Mx	.019	.75
73	MP2B	X	-19.182	5.5
74	MP2B	Z	0	5.5
75	MP2B	Mx	.019	5.5
76	MP2B	X	-19.182	.75
77	MP2B	Z	0	.75
78	MP2B	Mx	-.022	.75
79	MP2B	X	-19.182	5.5
80	MP2B	Z	0	5.5
81	MP2B	Mx	-.022	5.5
82	MP1C	X	-9.398	.75
83	MP1C	Z	0	.75
84	MP1C	Mx	-.007	.75
85	MP1C	X	-9.398	5.5
86	MP1C	Z	0	5.5
87	MP1C	Mx	-.007	5.5
88	MP2A	X	-6.809	.75
89	MP2A	Z	0	.75
90	MP2A	Mx	.003	.75
91	MP2A	X	-6.809	5.5
92	MP2A	Z	0	5.5
93	MP2A	Mx	.003	5.5
94	B1	X	-4.767	3.5
95	B1	Z	0	3.5
96	B1	Mx	0	3.5
97	B2	X	-3.952	3.5
98	B2	Z	0	3.5
99	B2	Mx	0	3.5
100	B3	X	-4.767	3.5
101	B3	Z	0	3.5
102	B3	Mx	0	3.5
103	B4	X	-3.952	3.5
104	B4	Z	0	3.5
105	B4	Mx	0	3.5
106	C1	X	-4.767	3.5
107	C1	Z	0	3.5
108	C1	Mx	0	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	-3.428	.75
2	MP1C	Z	-1.979	.75
3	MP1C	Mx	-.000559	.75
4	MP1C	X	-3.428	5.5
5	MP1C	Z	-1.979	5.5
6	MP1C	Mx	-.000559	5.5
7	MP2A	X	-3.428	.75
8	MP2A	Z	-1.979	.75
9	MP2A	Mx	.003	.75
10	MP2A	X	-3.428	5.5
11	MP2A	Z	-1.979	5.5
12	MP2A	Mx	.003	5.5
13	MP1B	X	-4.184	2.38

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
14	MP1B	Z	-2.416	2.38
15	MP1B	Mx	0	2.38
16	MP1B	X	-4.184	3.88
17	MP1B	Z	-2.416	3.88
18	MP1B	Mx	0	3.88
19	MP3A	X	-2.255	2.38
20	MP3A	Z	-1.302	2.38
21	MP3A	Mx	.001	2.38
22	MP3A	X	-2.255	3.88
23	MP3A	Z	-1.302	3.88
24	MP3A	Mx	.001	3.88
25	MP3C	X	-2.255	2.38
26	MP3C	Z	-1.302	2.38
27	MP3C	Mx	-.001	2.38
28	MP3C	X	-2.255	3.88
29	MP3C	Z	-1.302	3.88
30	MP3C	Mx	-.001	3.88
31	MP1B	X	-1.899	7
32	MP1B	Z	-1.096	7
33	MP1B	Mx	0	7
34	MP2A	X	-1.078	7
35	MP2A	Z	-.622	7
36	MP2A	Mx	-.000539	7
37	MP2B	X	-1.899	7
38	MP2B	Z	-1.096	7
39	MP2B	Mx	0	7
40	MP2C	X	-1.078	7
41	MP2C	Z	-.622	7
42	MP2C	Mx	.000539	7
43	MP3A	X	-3.143	3.5
44	MP3A	Z	-1.815	3.5
45	MP3A	Mx	-.001	3.5
46	MP2A	X	-2.578	3.5
47	MP2A	Z	-1.488	3.5
48	MP2A	Mx	-.000859	3.5
49	MP2C	X	-3.141	3.5
50	MP2C	Z	-1.813	3.5
51	MP2C	Mx	.000604	3.5
52	MP1A	X	-5.74	2
53	MP1A	Z	-3.314	2
54	MP1A	Mx	-.003	2
55	MP4A	X	-5.74	2
56	MP4A	Z	-3.314	2
57	MP4A	Mx	-.003	2
58	MP1B	X	-9.203	.75
59	MP1B	Z	-5.313	.75
60	MP1B	Mx	.004	.75
61	MP1B	X	-9.203	5.5
62	MP1B	Z	-5.313	5.5
63	MP1B	Mx	.004	5.5
64	MP3B	X	-12.522	.75
65	MP3B	Z	-7.23	.75
66	MP3B	Mx	-.00063	.75
67	MP3B	X	-12.522	5.5
68	MP3B	Z	-7.23	5.5
69	MP3B	Mx	-.00063	5.5
70	MP2B	X	-15.779	.75
71	MP2B	Z	-9.11	.75
72	MP2B	Mx	.022	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
73	MP2B	X	-15.779	5.5
74	MP2B	Z	-9.11	5.5
75	MP2B	Mx	.022	5.5
76	MP2B	X	-15.779	.75
77	MP2B	Z	-9.11	.75
78	MP2B	Mx	-.015	.75
79	MP2B	X	-15.779	5.5
80	MP2B	Z	-9.11	5.5
81	MP2B	Mx	-.015	5.5
82	MP1C	X	-6.644	.75
83	MP1C	Z	-3.836	.75
84	MP1C	Mx	-.006	.75
85	MP1C	X	-6.644	5.5
86	MP1C	Z	-3.836	5.5
87	MP1C	Mx	-.006	5.5
88	MP2A	X	-6.644	.75
89	MP2A	Z	-3.836	.75
90	MP2A	Mx	.001	.75
91	MP2A	X	-6.644	5.5
92	MP2A	Z	-3.836	5.5
93	MP2A	Mx	.001	5.5
94	B1	X	-3.8	3.5
95	B1	Z	-2.194	3.5
96	B1	Mx	-.000731	3.5
97	B2	X	-3.141	3.5
98	B2	Z	-1.813	3.5
99	B2	Mx	-.000604	3.5
100	B3	X	-3.8	3.5
101	B3	Z	-2.194	3.5
102	B3	Mx	-.000731	3.5
103	B4	X	-3.141	3.5
104	B4	Z	-1.813	3.5
105	B4	Mx	-.000604	3.5
106	C1	X	-3.8	3.5
107	C1	Z	-2.194	3.5
108	C1	Mx	.000731	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	-1.485	.75
2	MP1C	Z	-2.572	.75
3	MP1C	Mx	-.001	.75
4	MP1C	X	-1.485	5.5
5	MP1C	Z	-2.572	5.5
6	MP1C	Mx	-.001	5.5
7	MP2A	X	-2.967	.75
8	MP2A	Z	-5.139	.75
9	MP2A	Mx	.004	.75
10	MP2A	X	-2.967	5.5
11	MP2A	Z	-5.139	5.5
12	MP2A	Mx	.004	5.5
13	MP1B	X	-2.044	2.38
14	MP1B	Z	-3.541	2.38
15	MP1B	Mx	.001	2.38
16	MP1B	X	-2.044	3.88
17	MP1B	Z	-3.541	3.88
18	MP1B	Mx	.001	3.88
19	MP3A	X	-2.044	2.38

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	MP3A	Z	-3.541	2.38
21	MP3A	Mx	.001	2.38
22	MP3A	X	-2.044	3.88
23	MP3A	Z	-3.541	3.88
24	MP3A	Mx	.001	3.88
25	MP3C	X	-.93	2.38
26	MP3C	Z	-1.611	2.38
27	MP3C	Mx	-.00093	2.38
28	MP3C	X	-.93	3.88
29	MP3C	Z	-1.611	3.88
30	MP3C	Mx	-.00093	3.88
31	MP1B	X	-.938	7
32	MP1B	Z	-1.625	7
33	MP1B	Mx	-.000469	7
34	MP2A	X	-.938	7
35	MP2A	Z	-1.625	7
36	MP2A	Mx	-.000469	7
37	MP2B	X	-.938	7
38	MP2B	Z	-1.625	7
39	MP2B	Mx	-.000469	7
40	MP2C	X	-.464	7
41	MP2C	Z	-.804	7
42	MP2C	Mx	.000464	7
43	MP3A	X	-2.194	3.5
44	MP3A	Z	-3.8	3.5
45	MP3A	Mx	-.000731	3.5
46	MP2A	X	-1.813	3.5
47	MP2A	Z	-3.141	3.5
48	MP2A	Mx	-.000604	3.5
49	MP2C	X	-1.488	3.5
50	MP2C	Z	-2.578	3.5
51	MP2C	Mx	.000859	3.5
52	MP1A	X	-3.799	2
53	MP1A	Z	-6.579	2
54	MP1A	Mx	-.002	2
55	MP4A	X	-3.799	2
56	MP4A	Z	-6.579	2
57	MP4A	Mx	-.002	2
58	MP1B	X	-3.628	.75
59	MP1B	Z	-6.284	.75
60	MP1B	Mx	.004	.75
61	MP1B	X	-3.628	5.5
62	MP1B	Z	-6.284	5.5
63	MP1B	Mx	.004	5.5
64	MP3B	X	-6.564	.75
65	MP3B	Z	-11.37	.75
66	MP3B	Mx	.003	.75
67	MP3B	X	-6.564	5.5
68	MP3B	Z	-11.37	5.5
69	MP3B	Mx	.003	5.5
70	MP2B	X	-6.509	.75
71	MP2B	Z	-11.275	.75
72	MP2B	Mx	.014	.75
73	MP2B	X	-6.509	5.5
74	MP2B	Z	-11.275	5.5
75	MP2B	Mx	.014	5.5
76	MP2B	X	-6.509	.75
77	MP2B	Z	-11.275	.75
78	MP2B	Mx	-.004	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
79	MP2B	X	-6.509	5.5
80	MP2B	Z	-11.275	5.5
81	MP2B	Mx	-.004	5.5
82	MP1C	X	-3.404	.75
83	MP1C	Z	-5.897	.75
84	MP1C	Mx	-.003	.75
85	MP1C	X	-3.404	5.5
86	MP1C	Z	-5.897	5.5
87	MP1C	Mx	-.003	5.5
88	MP2A	X	-4.699	.75
89	MP2A	Z	-8.139	.75
90	MP2A	Mx	-.002	.75
91	MP2A	X	-4.699	5.5
92	MP2A	Z	-8.139	5.5
93	MP2A	Mx	-.002	5.5
94	B1	X	-1.815	3.5
95	B1	Z	-3.143	3.5
96	B1	Mx	-.001	3.5
97	B2	X	-1.488	3.5
98	B2	Z	-2.578	3.5
99	B2	Mx	-.000859	3.5
100	B3	X	-1.815	3.5
101	B3	Z	-3.143	3.5
102	B3	Mx	-.001	3.5
103	B4	X	-1.488	3.5
104	B4	Z	-2.578	3.5
105	B4	Mx	-.000859	3.5
106	C1	X	-1.815	3.5
107	C1	Z	-3.143	3.5
108	C1	Mx	.001	3.5

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M524	Y	-500	0

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M500A	Y	-500	0

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M700A	Y	-250	%50

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M700A	Y	-250	0

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	Y	0	.75
2	MP1C	My	0	.75
3	MP1C	Mz	0	.75
4	MP1C	Y	0	5.5
5	MP1C	My	0	5.5
6	MP1C	Mz	0	5.5
7	MP2A	Y	0	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
8	MP2A	My	0	.75
9	MP2A	Mz	0	.75
10	MP2A	Y	0	5.5
11	MP2A	My	0	5.5
12	MP2A	Mz	0	5.5
13	MP1B	Y	0	2.38
14	MP1B	My	0	2.38
15	MP1B	Mz	0	2.38
16	MP1B	Y	0	3.88
17	MP1B	My	0	3.88
18	MP1B	Mz	0	3.88
19	MP3A	Y	0	2.38
20	MP3A	My	0	2.38
21	MP3A	Mz	0	2.38
22	MP3A	Y	0	3.88
23	MP3A	My	0	3.88
24	MP3A	Mz	0	3.88
25	MP3C	Y	0	2.38
26	MP3C	My	0	2.38
27	MP3C	Mz	0	2.38
28	MP3C	Y	0	3.88
29	MP3C	My	0	3.88
30	MP3C	Mz	0	3.88
31	MP1B	Y	0	7
32	MP1B	My	0	7
33	MP1B	Mz	0	7
34	MP2A	Y	0	7
35	MP2A	My	0	7
36	MP2A	Mz	0	7
37	MP2B	Y	0	7
38	MP2B	My	0	7
39	MP2B	Mz	0	7
40	MP2C	Y	0	7
41	MP2C	My	0	7
42	MP2C	Mz	0	7
43	MP3A	Y	0	3.5
44	MP3A	My	0	3.5
45	MP3A	Mz	0	3.5
46	MP2A	Y	0	3.5
47	MP2A	My	0	3.5
48	MP2A	Mz	0	3.5
49	MP2C	Y	0	3.5
50	MP2C	My	0	3.5
51	MP2C	Mz	0	3.5
52	MP1A	Y	0	2
53	MP1A	My	0	2
54	MP1A	Mz	0	2
55	MP4A	Y	0	2
56	MP4A	My	0	2
57	MP4A	Mz	0	2
58	MP1B	Y	0	.75
59	MP1B	My	0	.75
60	MP1B	Mz	0	.75
61	MP1B	Y	0	5.5
62	MP1B	My	0	5.5
63	MP1B	Mz	0	5.5
64	MP3B	Y	0	.75
65	MP3B	My	0	.75
66	MP3B	Mz	0	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
67	MP3B	Y	0	5.5
68	MP3B	My	0	5.5
69	MP3B	Mz	0	5.5
70	MP2B	Y	0	.75
71	MP2B	My	0	.75
72	MP2B	Mz	0	.75
73	MP2B	Y	0	5.5
74	MP2B	My	0	5.5
75	MP2B	Mz	0	5.5
76	MP2B	Y	0	.75
77	MP2B	My	0	.75
78	MP2B	Mz	0	.75
79	MP2B	Y	0	5.5
80	MP2B	My	0	5.5
81	MP2B	Mz	0	5.5
82	MP1C	Y	0	.75
83	MP1C	My	0	.75
84	MP1C	Mz	0	.75
85	MP1C	Y	0	5.5
86	MP1C	My	0	5.5
87	MP1C	Mz	0	5.5
88	MP2A	Y	0	.75
89	MP2A	My	0	.75
90	MP2A	Mz	0	.75
91	MP2A	Y	0	5.5
92	MP2A	My	0	5.5
93	MP2A	Mz	0	5.5
94	B1	Y	0	3.5
95	B1	My	0	3.5
96	B1	Mz	0	3.5
97	B2	Y	0	3.5
98	B2	My	0	3.5
99	B2	Mz	0	3.5
100	B3	Y	0	3.5
101	B3	My	0	3.5
102	B3	Mz	0	3.5
103	B4	Y	0	3.5
104	B4	My	0	3.5
105	B4	Mz	0	3.5
106	C1	Y	0	3.5
107	C1	My	0	3.5
108	C1	Mz	0	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	Z	-.655	.75
2	MP1C	Mx	-.000475	.75
3	MP1C	Z	-.655	5.5
4	MP1C	Mx	-.000475	5.5
5	MP2A	Z	-.655	.75
6	MP2A	Mx	.000382	.75
7	MP2A	Z	-.655	5.5
8	MP2A	Mx	.000382	5.5
9	MP1B	Z	-.86	2.38
10	MP1B	Mx	.000372	2.38
11	MP1B	Z	-.86	3.88
12	MP1B	Mx	.000372	3.88
13	MP3A	Z	-.86	2.38

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
14	MP3A	Mx	0	2.38
15	MP3A	Z	-.86	3.88
16	MP3A	Mx	0	3.88
17	MP3C	Z	-.86	2.38
18	MP3C	Mx	-.000372	2.38
19	MP3C	Z	-.86	3.88
20	MP3C	Mx	-.000372	3.88
21	MP1B	Z	-.462	7
22	MP1B	Mx	-.0002	7
23	MP2A	Z	-.462	7
24	MP2A	Mx	0	7
25	MP2B	Z	-.462	7
26	MP2B	Mx	-.0002	7
27	MP2C	Z	-.462	7
28	MP2C	Mx	.0002	7
29	MP3A	Z	-2.373	3.5
30	MP3A	Mx	0	3.5
31	MP2A	Z	-2.241	3.5
32	MP2A	Mx	0	3.5
33	MP2C	Z	-2.241	3.5
34	MP2C	Mx	.000747	3.5
35	MP1A	Z	-.96	2
36	MP1A	Mx	0	2
37	MP4A	Z	-.96	2
38	MP4A	Mx	0	2
39	MP1B	Z	-1.508	.75
40	MP1B	Mx	.000728	.75
41	MP1B	Z	-1.508	5.5
42	MP1B	Mx	.000728	5.5
43	MP3B	Z	-1.508	.75
44	MP3B	Mx	.000617	.75
45	MP3B	Z	-1.508	5.5
46	MP3B	Mx	.000617	5.5
47	MP2B	Z	-2.1	.75
48	MP2B	Mx	.001	.75
49	MP2B	Z	-2.1	5.5
50	MP2B	Mx	.001	5.5
51	MP2B	Z	-2.1	.75
52	MP2B	Mx	.000639	.75
53	MP2B	Z	-2.1	5.5
54	MP2B	Mx	.000639	5.5
55	MP1C	Z	-.969	.75
56	MP1C	Mx	-.000137	.75
57	MP1C	Z	-.969	5.5
58	MP1C	Mx	-.000137	5.5
59	MP2A	Z	-.969	.75
60	MP2A	Mx	-.000565	.75
61	MP2A	Z	-.969	5.5
62	MP2A	Mx	-.000565	5.5
63	B1	Z	-2.373	3.5
64	B1	Mx	-.000791	3.5
65	B2	Z	-2.241	3.5
66	B2	Mx	-.000747	3.5
67	B3	Z	-2.373	3.5
68	B3	Mx	-.000791	3.5
69	B4	Z	-2.241	3.5
70	B4	Mx	-.000747	3.5
71	C1	Z	-2.373	3.5
72	C1	Mx	.000791	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1C	X	.655	.75
2	MP1C	Mx	-.000167	.75
3	MP1C	X	.655	5.5
4	MP1C	Mx	-.000167	5.5
5	MP2A	X	.655	.75
6	MP2A	Mx	-.000328	.75
7	MP2A	X	.655	5.5
8	MP2A	Mx	-.000328	5.5
9	MP1B	X	.86	2.38
10	MP1B	Mx	.000215	2.38
11	MP1B	X	.86	3.88
12	MP1B	Mx	.000215	3.88
13	MP3A	X	.86	2.38
14	MP3A	Mx	-.00043	2.38
15	MP3A	X	.86	3.88
16	MP3A	Mx	-.00043	3.88
17	MP3C	X	.86	2.38
18	MP3C	Mx	.000215	2.38
19	MP3C	X	.86	3.88
20	MP3C	Mx	.000215	3.88
21	MP1B	X	.462	7
22	MP1B	Mx	-.000116	7
23	MP2A	X	.462	7
24	MP2A	Mx	.000231	7
25	MP2B	X	.462	7
26	MP2B	Mx	-.000116	7
27	MP2C	X	.462	7
28	MP2C	Mx	-.000116	7
29	MP3A	X	2.373	3.5
30	MP3A	Mx	.000791	3.5
31	MP2A	X	2.241	3.5
32	MP2A	Mx	.000747	3.5
33	MP2C	X	2.241	3.5
34	MP2C	Mx	0	3.5
35	MP1A	X	.96	2
36	MP1A	Mx	.00048	2
37	MP4A	X	.96	2
38	MP4A	Mx	.00048	2
39	MP1B	X	1.508	.75
40	MP1B	Mx	-.000195	.75
41	MP1B	X	1.508	5.5
42	MP1B	Mx	-.000195	5.5
43	MP3B	X	1.508	.75
44	MP3B	Mx	.000432	.75
45	MP3B	X	1.508	5.5
46	MP3B	Mx	.000432	5.5
47	MP2B	X	2.1	.75
48	MP2B	Mx	-.002	.75
49	MP2B	X	2.1	5.5
50	MP2B	Mx	-.002	5.5
51	MP2B	X	2.1	.75
52	MP2B	Mx	.002	.75
53	MP2B	X	2.1	5.5
54	MP2B	Mx	.002	5.5
55	MP1C	X	.969	.75
56	MP1C	Mx	.000732	.75
57	MP1C	X	.969	5.5
58	MP1C	Mx	.000732	5.5
59	MP2A	X	.969	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
60	MP2A	Mx	-.000485	.75
61	MP2A	X	.969	5.5
62	MP2A	Mx	-.000485	5.5
63	B1	X	2.373	3.5
64	B1	Mx	0	3.5
65	B2	X	2.241	3.5
66	B2	Mx	0	3.5
67	B3	X	2.373	3.5
68	B3	Mx	0	3.5
69	B4	X	2.241	3.5
70	B4	Mx	0	3.5
71	C1	X	2.373	3.5
72	C1	Mx	0	3.5

Member Area Loads (BLC 39 : Structure D)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N47	N52	N62	N49	Y	Two Way	-.005
2	N47	N79A	N60	N49	Y	Two Way	-.005
3	N100	N115	N121	N101	Y	Two Way	-.005
4	N100	N103	N122	N101	Y	Two Way	-.005
5	N165	N180	N186	N166	Y	Two Way	-.005
6	N165	N168	N187	N166	Y	Two Way	-.005
7	N230	N245	N251	N231	Y	Two Way	-.005
8	N230	N233	N252	N231	Y	Two Way	-.005

Member Area Loads (BLC 40 : Structure Di)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N47	N52	N62	N49	Y	Two Way	-.013
2	N47	N79A	N60	N49	Y	Two Way	-.013
3	N100	N115	N121	N101	Y	Two Way	-.013
4	N100	N103	N122	N101	Y	Two Way	-.013
5	N165	N180	N186	N166	Y	Two Way	-.013
6	N165	N168	N187	N166	Y	Two Way	-.013
7	N230	N245	N251	N231	Y	Two Way	-.013
8	N230	N233	N252	N231	Y	Two Way	-.013

Member Area Loads (BLC 84 : Structure Ev)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N47	N52	N62	N49	Y	Two Way	0
2	N47	N79A	N60	N49	Y	Two Way	0
3	N100	N115	N121	N101	Y	Two Way	0
4	N100	N103	N122	N101	Y	Two Way	0
5	N165	N180	N186	N166	Y	Two Way	0
6	N165	N168	N187	N166	Y	Two Way	0
7	N230	N245	N251	N231	Y	Two Way	0
8	N230	N233	N252	N231	Y	Two Way	0

Member Area Loads (BLC 85 : Structure Eh (0 Deg))

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N47	N52	N62	N49	Z	Two Way	-.000156
2	N47	N79A	N60	N49	Z	Two Way	-.000156
3	N100	N115	N121	N101	Z	Two Way	-.000156
4	N100	N103	N122	N101	Z	Two Way	-.000156
5	N165	N180	N186	N166	Z	Two Way	-.000156
6	N165	N168	N187	N166	Z	Two Way	-.000156
7	N230	N245	N251	N231	Z	Two Way	-.000156

Member Area Loads (BLC 85 : Structure Eh (0 Deg)) (Continued)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
8	N230	N233	N252	N231	Z	Two Way	-.000156

Member Area Loads (BLC 86 : Structure Eh (90 Deg))

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N47	N52	N62	N49	X	Two Way	.000156
2	N47	N79A	N60	N49	X	Two Way	.000156
3	N100	N115	N121	N101	X	Two Way	.000156
4	N100	N103	N122	N101	X	Two Way	.000156
5	N165	N180	N186	N166	X	Two Way	.000156
6	N165	N168	N187	N166	X	Two Way	.000156
7	N230	N245	N251	N231	X	Two Way	.000156
8	N230	N233	N252	N231	X	Two Way	.000156

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	R4	max	12497.838	23	3296.1	23	12402.077	24	.014	5	1.634	12	.113	24
2		min	-1377.64	5	650.144	5	-1725.142	6	-.138	23	-1.754	6	-.013	6
3	R4A	max	-1230.577	5	124.941	23	-1347.627	5	-.011	5	1.153	12	.112	24
4		min	-14063.471	23	31.998	5	-13843.405	23	-.116	23	-.829	6	.003	6
5	R1	max	21529.346	21	4998.75	21	-1306.871	3	.223	21	3.407	11	.201	20
6		min	594.33	3	1228.103	3	-21222.752	20	.009	3	-3.307	5	.014	2
7	R1A	max	-3952.888	3	157.136	21	22823.669	21	.195	21	.905	12	.189	20
8		min	-22984.081	21	53.649	3	3812.938	3	.027	3	-1.181	6	.031	3
9	R2	max	2821.003	11	2966.04	17	2220.994	11	.108	17	1.674	11	.024	11
10		min	-10684.661	17	454.448	11	-10536.178	17	-.02	11	-1.655	5	-.107	17
11	R2A	max	12141.887	17	116.845	17	12155.135	17	.099	17	.947	11	-.005	11
12		min	539.218	11	24.532	11	272.952	11	-.006	11	-.927	5	-.097	17
13	R3	max	1717.819	9	2841.115	15	10807.041	14	.014	9	1.346	12	.013	9
14		min	-11034.545	15	557.819	9	-1425.725	9	-.116	15	-1.24	6	-.102	14
15	R3A	max	12514.406	15	112.033	15	-1234.826	9	-.007	9	.699	12	-.009	9
16		min	1306.032	9	28.539	9	-12411.929	15	-.104	15	-.882	6	-.101	14
17	Totals:	max	7645.776	10	14010.211	16	6776.027	1						
18		min	-7645.282	4	3946.928	73	-6775.964	7						

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

	Member	Shape	Code C...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [l...	phi*Pnt [lb]	phi*Mn y-...	phi*Mn z-...	Cb	Eqn
1	M148	L3X3X6	.449	0	22	.616	0	y	10	66373.078	66465	2.243	5.174	1....	H2-1
2	M144	L3X3X6	.864	2.761	10	.504	2.914	z	22	66460.728	66465	2.243	5.174	1....	H2-1
3	M632	SR 0.625	.601	0	23	.481	0		23	9749.147	9940.196	.104	.104	1....	H1-1b
4	M633	SR 0.625	.628	0	24	.474	0		22	9749.147	9940.196	.104	.104	1....	H1-1b
5	M767	SR 0.625	.578	0	22	.471	0		23	9749.147	9940.196	.104	.104	1....	H1-1b
6	M768	SR 0.625	.581	0	22	.469	0		22	9749.147	9940.196	.104	.104	1....	H1-1b
7	M698A	PIPE 2.5	.547	9.539	4	.464	9.539		10	29547.045	50715	3.596	3.596	2....	H3-6
8	M708A	SR 0.625	.538	0	16	.440	0		16	9749.147	9940.196	.104	.104	1....	H1-1b
9	M707B	SR 0.625	.538	0	16	.440	0		16	9749.147	9940.196	.104	.104	1....	H1-1b
10	M622	SR 0.625	.540	0	17	.436	0		16	9749.147	9940.196	.104	.104	1....	H1-1b
11	M623	SR 0.625	.541	0	16	.436	0		17	9749.147	9940.196	.104	.104	1....	H1-1b
12	M150	L3X3X6	.507	.377	22	.427	0	y	11	66373.078	66465	2.243	5.174	2....	H2-1
13	M45A	L3X3X6	.586	2.761	10	.380	2.761	z	10	66460.728	66465	2.243	5.174	1	H2-1
14	M304	L3X3X6	.211	0	17	.371	0	y	16	66373.078	66465	2.243	5.174	1....	H2-1
15	M110	L3X3X6	.541	2.761	12	.365	2.761	y	19	66460.728	66465	2.243	5.174	2....	H2-1
16	M700A	PIPE 2.5	.413	2.961	12	.336	.329		10	29547.045	50715	3.596	3.596	2....	H3-6
17	M75B	L3X3X6	.309	0	22	.329	0	z	11	66373.078	66465	2.243	5.174	1....	H2-1
18	M643	SR 0.625	.394	0	18	.318	0		17	9749.147	9940.196	.104	.104	1....	H1-1b
19	M642	SR 0.625	.391	0	18	.317	0		18	9749.147	9940.196	.104	.104	1....	H1-1b

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

	Member	Shape	Code C...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [l...	phi*Pnt [lb]	phi*Mn y-...	phi*Mn z-...	Cb	Eqn
20	M718A	SR 0.625	.386	0	18	.308	0		17	9749.147	9940.196	.104	.104	1....	H1-1b
21	M74B	L3X3X6	.424	.377	22	.307	.377	z	10	66373.078	66465	2.243	5.174	1....	H2-1
22	M717A	SR 0.625	.389	0	18	.306	0		17	9749.147	9940.196	.104	.104	1....	H1-1b
23	M707	SR 0.625	.361	0	13	.282	0		13	9749.147	9940.196	.104	.104	1....	H1-1b
24	M706	SR 0.625	.349	0	23	.277	0		24	9749.147	9940.196	.104	.104	1....	H1-1b
25	M188	L3X3X6	.197	2.761	3	.272	2.761	z	16	66460.728	66465	2.243	5.174	1	H2-1
26	M728	SR 0.625	.332	0	13	.269	0		22	9749.147	9940.196	.104	.104	1....	H1-1b
27	M727	SR 0.625	.336	0	13	.268	0		22	9749.147	9940.196	.104	.104	1....	H1-1b
28	M68	L3X3X6	.339	2.684	19	.259	2.761	z	22	65062.918	66465	2.243	5.174	1....	H2-1
29	B2	PIPE 2.5	.375	4.842	10	.258	4.842		6	30038.461	50715	3.596	3.596	2....	H1-1b
30	M696A	PIPE 2.5	.276	9.868	21	.255	9.868		22	29547.045	50715	3.596	3.596	2....	H3-6
31	M306	L3X3X6	.275	.377	24	.250	.377	z	16	66373.078	66465	2.243	5.174	2....	H2-1
32	M652	SR 0.625	.310	0	24	.239	0		23	9749.147	9940.196	.104	.104	1....	H1-1b
33	M653	SR 0.625	.305	0	24	.238	0		23	9749.147	9940.196	.104	.104	1....	H1-1b
34	M226	L3X3X6	.279	0	19	.237	.377	y	1	66373.078	66465	2.243	5.174	1....	H2-1
35	M777	SR 0.625	.351	0	22	.230	0		23	9749.147	9940.196	.104	.104	1....	H1-1b
36	M778	SR 0.625	.352	0	22	.229	0		23	9749.147	9940.196	.104	.104	1....	H1-1b
37	M612	SR 0.625	.298	0	22	.227	0		22	9749.147	9940.196	.104	.104	1....	H1-1b
38	M228	L3X3X6	.281	0	15	.224	.377	y	1	66373.078	66465	2.243	5.174	2....	H2-1
39	M149	PL3/8X3	.226	.605	11	.220	.605	y	22	32108.513	35437.5	.276	2.216	2....	H1-1b
40	M716	SR 0.625	.291	0	19	.219	0		17	9749.147	9940.196	.104	.104	1....	H1-1b
41	M757	SR 0.625	.285	0	23	.215	0		22	9749.147	9940.196	.104	.104	1....	H1-1b
42	M758	SR 0.625	.282	0	23	.214	0		22	9749.147	9940.196	.104	.104	1....	H1-1b
43	M613	SR 0.625	.321	0	22	.214	0		22	9749.147	9940.196	.104	.104	1....	H1-1b
44	M787	SR 0.625	.287	0	16	.210	0		17	9749.147	9940.196	.104	.104	1....	H1-1b
45	M717	SR 0.625	.283	0	19	.209	0		17	9749.147	9940.196	.104	.104	1....	H1-1b
46	M788	SR 0.625	.292	0	16	.209	0		16	9749.147	9940.196	.104	.104	1....	H1-1b
47	M222	L3X3X6	.434	2.761	1	.205	2.761	y	6	66460.728	66465	2.243	5.174	1	H2-1
48	M300	L3X3X6	.297	2.761	3	.204	2.914	z	3	66460.728	66465	2.243	5.174	1....	H2-1
49	M698B	SR 0.625	.232	0	16	.188	0		16	9749.147	9940.196	.104	.104	1....	H1-1b
50	M697A	SR 0.625	.231	0	16	.188	0		16	9749.147	9940.196	.104	.104	1....	H1-1b
51	M603	SR 0.625	.261	0	12	.187	0		16	9749.147	9940.196	.104	.104	1....	H1-1b
52	M504A	PIPE 2.5	.267	2.632	11	.186	11.842		17	29547.045	50715	3.596	3.596	2....	H1-1b
53	M602	SR 0.625	.264	0	6	.184	0		16	9749.147	9940.196	.104	.104	1....	H1-1b
54	B3	PIPE 2.5	.333	4.842	12	.180	4.842		12	30038.461	50715	3.596	3.596	2....	H1-1b
55	M130	HSS4X3X4	.159	4.021	22	.157	3.686	z	22	83040.402	91665	8.19	10.001	2....	H1-1b
56	MP3A	PIPE 2.5	.383	4.842	11	.156	4.842		10	30038.461	50715	3.596	3.596	2....	H1-1b
57	C1	PIPE 2.5	.196	4.842	24	.154	4.842		6	30038.461	50715	3.596	3.596	2....	H1-1b
58	MP2B	PIPE 2.5	.229	1.895	10	.153	2.105		11	30038.461	50715	3.596	3.596	1....	H1-1b
59	M529	PIPE 2.0	.316	4.276	10	.151	.329		10	14559.939	32130	1.872	1.872	3....	H1-1b
60	M66	PL3/8X3	.098	0	10	.150	.605	y	22	32108.513	35437.5	.276	2.216	2....	H1-1b
61	M550	PIPE 2.0	.422	12.171	21	.150	.987		10	14559.939	32130	1.872	1.872	2....	H1-1b
62	M142	PL3/8X3	.403	0	11	.141	.605	y	19	32108.513	35437.5	.276	2.216	1....	H1-1b
63	B1	PIPE 2.5	.333	4.842	19	.138	4.842		8	30038.461	50715	3.596	3.596	2....	H1-1b
64	M358	PL1/2x4	.079	.26	11	.133	.26	y	11	54436.945	63000	.656	5.25	1....	H1-1b
65	M266	L3X3X6	.306	2.761	19	.132	2.761	z	5	66460.728	66465	2.243	5.174	2....	H2-1
66	M275	PL1/2x4	.136	.286	21	.127	0	y	11	54436.945	63000	.656	5.25	1....	H1-1b
67	M277	PL1/2x4	.576	.483	10	.125	.655	y	5	59083.058	63000	.656	5.25	1....	H1-1b
68	M689	SR 0.625	.162	0	20	.124	0		20	9749.147	9940.196	.104	.104	1....	H1-1b
69	M543	PIPE 2.0	.220	8.224	10	.124	12.171		10	14559.939	32130	1.872	1.872	3....	H1-1b
70	M688	SR 0.625	.159	0	20	.123	0		20	9749.147	9940.196	.104	.104	1....	H1-1b
71	M738	SR 0.625	.150	0	20	.121	0		21	9749.147	9940.196	.104	.104	1....	H1-1b
72	M737	SR 0.625	.152	0	20	.121	0		21	9749.147	9940.196	.104	.104	1....	H1-1b
73	MP4A	PIPE 2.5	.302	4.842	23	.120	1.684		22	30038.461	50715	3.596	3.596	2....	H1-1b
74	MP3D	PIPE 2.5	.217	4.842	8	.117	4.842		7	30038.461	50715	3.596	3.596	2....	H1-1b
75	MT31	PL3/8x4	.273	.742	23	.117	0	y	11	40816.383	47250	.369	3.938	2....	H1-1a
76	B4	PIPE 2.5	.263	4.842	13	.115	1.684		10	30038.461	50715	3.596	3.596	2....	H1-1b
77	M74C	PL3/8X3	.218	0	10	.113	.605	y	23	32108.513	35437.5	.276	2.216	1....	H1-1b
78	M227	PL3/8X3	.089	0	15	.113	.605	y	18	32108.513	35437.5	.276	2.216	1....	H1-1b

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

	Member	Shape	Code C...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [l...	phi*Pnt [lb]	phi*Mn y-...	phi*Mn z-...	Cb	Eqn
79	M316A	PL3/8x4	.645	.958	19	.113	.958	y	11	37018.285	47250	.369	3.938	1....	H1-1a
80	M312A	PL3/8X1	.769	.958	21	.113	.958	y	11	9254.828	11812.5	.092	.246	2....	H1-1a
81	M698	SR 0.625	.151	0	15	.111	0		15	9749.147	9940.196	.104	.104	1....	H1-1b
82	M797	SR 0.625	.163	0	19	.111	0		16	9749.147	9940.196	.104	.104	1....	H1-1b
83	M798	SR 0.625	.166	0	19	.111	0		16	9749.147	9940.196	.104	.104	1....	H1-1b
84	M320	PL1/2x4	.503	.958	11	.111	.958	y	11	54919.19	63000	.656	5.25	1....	H1-1b
85	M368	PL3/8X1	.133	.286	17	.110	.26	y	11	9110.863	11812.5	.092	.246	2....	H1-1b
86	2C	PIPE 2.5	.200	4.842	10	.109	4.842		10	30038.461	50715	3.596	3.596	2....	H1-1b
87	M699	SR 0.625	.149	0	15	.109	0		14	9749.147	9940.196	.104	.104	1....	H1-1b
88	MT41	PL3/8X1	.217	.731	23	.106	.731	y	11	10249.195	11812.5	.092	.246	2....	H1-1b
89	MT24	PL1/2x4	.092	.286	23	.105	.26	y	6	54436.945	63000	.656	5.25	1....	H1-1b
90	M220	PL3/8X3	.110	0	5	.105	.605	y	16	32108.513	35437.5	.276	2.216	1....	H1-1b
91	M321	PL1/2x4	.784	.917	11	.104	.917	y	11	55564.251	63000	.656	5.25	1....	H1-1b
92	M319	PL1/2x4	.334	0	22	.103	.958	y	11	54919.19	63000	.656	5.25	1....	H1-1a
93	M286	HSS4X3X4	.076	4.021	16	.101	3.686	z	15	83040.402	91665	8.19	10.001	2....	H1-1b
94	M365	PL3/8x4	.195	.742	6	.100	0	y	6	40816.383	47250	.369	3.938	1....	H1-1b
95	M448	PL3/8x4	.194	.742	15	.097	0	y	6	40816.383	47250	.369	3.938	2....	H1-1b*
96	MT34	PL3/8X1	.156	.26	6	.097	.26	y	6	9110.863	11812.5	.092	.246	2....	H1-1b
97	M138	PL3/8X3	.275	0	17	.096	0	y	19	33128.772	35437.5	.276	2.216	1....	H1-1b
98	M536	PIPE 2.0	.193	12.171	14	.096	.329		6	14559.939	32130	1.872	1.872	2....	H1-1b
99	MP1C	PIPE 2.5	.104	1.895	3	.095	2.105		4	30038.461	50715	3.596	3.596	1....	H1-1b
100	1C	PIPE 2.5	.247	4.842	22	.095	1.684		22	30038.461	50715	3.596	3.596	2....	H1-1b
101	M375	PL3/8X1	.189	.731	18	.091	.731	y	6	10249.195	11812.5	.092	.246	2....	H1-1b
102	M557	WT3X7.5	.079	1.975	10	.091	0	z	10	58771.549	69615	6.221	1.516	2....	H1-1b
103	M54	HSS4X3X4	.114	4.021	22	.090	3.686	z	11	83040.402	91665	8.19	10.001	3....	H1-1b
104	MP3B	PIPE 2.5	.100	4.211	4	.090	2.105		11	30038.461	50715	3.596	3.596	1....	H1-1b
105	M105	PL3/8X3	.364	0	23	.090	0	y	22	33128.772	35437.5	.276	2.216	1....	H1-1b
106	M458	PL3/8X1	.185	.731	15	.089	.731	y	5	10249.195	11812.5	.092	.246	2....	H1-1b
107	MP2A	PIPE 2.5	.268	4.842	11	.089	3.368		10	30038.461	50715	3.596	3.596	1....	H1-1b
108	M583	SR 0.625	.115	0	14	.088	0		14	9749.147	9940.196	.104	.104	1....	H1-1b
109	MT65	PL3/8x4	.428	.958	24	.087	.958	y	6	37018.285	47250	.369	3.938	1....	H1-1a
110	M582	SR 0.625	.112	0	13	.087	0		15	9749.147	9940.196	.104	.104	1....	H1-1b
111	3C	PIPE 2.5	.182	4.842	10	.087	4.842		4	30038.461	50715	3.596	3.596	1....	H1-1b
112	M313A	PL3/8X1	.841	.958	21	.086	.958	y	11	9254.828	11812.5	.092	.246	2....	H1-1a
113	MT71	PL3/8X1	.445	1.295	23	.086	1.295	y	11	7566.368	11812.5	.092	.246	2....	H1-1a
114	M317	PL3/8x4	.796	.958	18	.086	.958	y	11	37018.285	47250	.369	3.938	1....	H1-1a
115	M688A	SR 0.625	.114	0	14	.085	0		14	9749.147	9940.196	.104	.104	1....	H1-1b
116	M687	SR 0.625	.115	0	14	.085	0		14	9749.147	9940.196	.104	.104	1....	H1-1b
117	M289A	PL3/8X1	.397	1.006	21	.084	.582	y	18	9029.527	11812.5	.092	.246	1....	H1-1a
118	MT26	PL1/2x4	.390	.483	10	.084	.655	y	15	59083.058	63000	.656	5.25	1....	H1-1b
119	M285	PL3/8X1	.235	.286	21	.084	.26	y	22	9110.863	11812.5	.092	.246	2....	H1-1b
120	M278	PL1/2x4	.399	0	10	.082	.718	y	11	58324.492	63000	.656	5.25	1....	H1-1b
121	MT61	PL3/8X1	.474	.958	24	.082	.958	y	6	9254.828	11812.5	.092	.246	2....	H1-1a
122	M405	PL3/8X1	.401	0	18	.081	1.295	y	12	7566.368	11812.5	.092	.246	2....	H1-1a
123	M478	PL3/8X1	.420	.958	14	.081	.958	y	12	9254.828	11812.5	.092	.246	2....	H1-1a
124	M482	PL3/8x4	.357	.958	17	.081	0	y	12	37018.285	47250	.369	3.938	1....	H1-1a
125	M399	PL3/8x4	.340	.958	17	.080	.958	y	11	37018.285	47250	.369	3.938	1....	H1-1a
126	M323	PL3/8X1	.509	.871	20	.079	.871	y	11	9657.416	11812.5	.092	.246	1....	H1-1a
127	M305	PL3/8X3	.074	0	3	.079	.605	y	16	32108.513	35437.5	.276	2.216	2....	H1-1b
128	M451	PL3/8X1	.126	.286	15	.078	.26	y	16	9110.863	11812.5	.092	.246	2....	H1-1b
129	MP1B	PIPE 2.5	.110	4.421	4	.077	4.421		9	30038.461	50715	3.596	3.596	1....	H1-1b
130	M395	PL3/8X1	.414	.958	17	.076	.958	y	5	9254.828	11812.5	.092	.246	2....	H1-1a
131	M488	PL3/8X1	.384	0	24	.076	1.295	y	6	7566.368	11812.5	.092	.246	2....	H1-1a
132	MP4B	PIPE 2.5	.051	4.211	15	.075	4.421		22	30038.461	50715	3.596	3.596	1....	H1-1b
133	MT30	PL3/8x4	.178	.667	23	.074	0	y	11	41988.622	47250	.369	3.938	1....	H1-1b*
134	M136	PL3/8X3	.340	0	20	.074	1.659	y	10	33128.772	35437.5	.276	2.216	1....	H1-1b
135	M297A	PL3/8X1	.257	0	18	.073	.898	y	5	9536.081	11812.5	.092	.246	2....	H1-1a
136	M34A	PL3/8X3	.201	0	15	.073	0	y	24	33128.772	35437.5	.276	2.216	1....	H1-1b
137	M322	PL3/8X1	.672	1.295	21	.072	1.295	y	6	7566.368	11812.5	.092	.246	2....	H1-1a

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

	Member	Shape	Code C...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [l...	phi*Pnt [lb]	phi*Mn y-...	phi*Mn z-...	Cb	Eqn
138	M441	PL1/2x4	.076	.26	15	.072	.26	y	17	54436.945	63000	.656	5.25	1....	H1-1b
139	MT44	PL3/8X1	.096	1.028	17	.068	0	y	12	8921.838	11812.5	.092	.246	1....	H1-1b
140	M104	PL3/8X3	.304	0	19	.068	0	y	22	33128.772	35437.5	.276	2.216	1....	H1-1b
141	M299A	PL3/8X1	.254	.756	19	.067	.756	y	5	10146.905	11812.5	.092	.246	2....	H1-1a
142	M290A	PL3/8X1	.442	1.045	21	.066	.468	y	18	8836.412	11812.5	.092	.246	2....	H1-1a
143	M390	PL3/8X1	.188	.353	11	.066	.353	y	11	11426.997	11812.5	.092	.246	2....	H1-1b
144	4C	PIPE_2.5	.186	4.842	16	.066	4.842		4	30038.461	50715	3.596	3.596	2....	H1-1b
145	M62	PL3/8X3	.275	0	22	.066	0	y	22	33128.772	35437.5	.276	2.216	1....	H1-1b
146	MP3C	PIPE_2.5	.041	4.211	8	.066	4.421		7	30038.461	50715	3.596	3.596	1....	H1-1b
147	MT27	PL1/2x4	.289	0	10	.064	.718	y	21	58324.492	63000	.656	5.25	1....	H1-1b
148	M183	PL3/8X3	.214	0	19	.064	0	y	19	33128.772	35437.5	.276	2.216	1....	H1-1b
149	MT40	PL3/8X1	.186	.667	23	.064	.667	y	11	10497.297	11812.5	.092	.246	2....	H1-1b
150	MT38	PL3/8X1	.195	1.006	24	.064	.582	y	24	9029.527	11812.5	.092	.246	1....	H1-1b
151	M103	PL3/8X3	.343	0	23	.064	0	y	11	33128.772	35437.5	.276	2.216	1....	H1-1b
152	M378	PL3/8X1	.088	1.028	12	.063	0	y	12	8921.838	11812.5	.092	.246	1....	H1-1b
153	MP4C	PIPE_2.5	.143	4.842	8	.063	1.684		6	30038.461	50715	3.596	3.596	2....	H1-1b
154	MT29	PL3/8x4	.198	0	24	.062	1.045	y	12	35344.479	47250	.369	3.938	1....	H1-1b
155	M216	PL3/8X3	.225	0	14	.062	0	y	16	33128.772	35437.5	.276	2.216	1....	H1-1b
156	M293A	PL3/8X1	.152	.871	16	.061	0	y	11	9657.416	11812.5	.092	.246	1....	H1-1b
157	M380	PL3/8X1	.088	0	11	.061	.898	y	11	9536.081	11812.5	.092	.246	2....	H1-1b
158	MT69	PL1/2x4	.360	.958	12	.060	.958	y	9	54919.19	63000	.656	5.25	1....	H1-1b
159	MT46	PL3/8X1	.104	0	24	.060	0	y	12	9536.081	11812.5	.092	.246	1....	H1-1b
160	M304A	PL3/8X1	.343	.349	22	.060	.349	y	18	11436.264	11812.5	.092	.246	2....	H1-1a
161	MT56	PL3/8X1	.192	.353	6	.060	.353	y	6	11426.997	11812.5	.092	.246	2....	H1-1b
162	M325	PL3/8X1	.524	.871	21	.059	.871	y	11	9657.416	11812.5	.092	.246	1....	H1-1a
163	MT68	PL1/2x4	.273	.958	12	.059	.958	y	21	54919.19	63000	.656	5.25	1....	H1-1b
164	M208	HSS4X3X4	.117	1.675	11	.059	3.686	z	6	83040.402	91665	8.19	10.001	1....	H1-1b
165	M282	PL3/8x4	.427	.742	21	.059	.742	y	6	40816.383	47250	.369	3.938	1....	H1-1a
166	M447	PL3/8x4	.168	.667	15	.058	0	y	6	41988.622	47250	.369	3.938	1....	H1-1b*
167	M364	PL3/8x4	.147	.667	17	.058	0	y	6	41988.622	47250	.369	3.938	1....	H1-1b*
168	MP2C	PIPE_2.5	.191	4.842	1	.058	4.842		3	30038.461	50715	3.596	3.596	2....	H1-1b
169	M295A	PL3/8X1	.123	0	4	.057	1.028	y	6	8921.838	11812.5	.092	.246	1....	H1-1b
170	M318	PL3/8x4	.899	.917	18	.057	.917	y	11	37794.803	47250	.369	3.938	1....	H1-1a
171	M314A	PL3/8X1	.879	.917	21	.057	.917	y	11	9448.941	11812.5	.092	.246	2....	H1-1a
172	M559	WT3X7.5	.042	1.975	4	.057	0	z	16	58771.549	69615	6.221	1.516	1....	H1-1b
173	MT39	PL3/8X1	.191	1.045	24	.056	.468	y	24	8836.412	11812.5	.092	.246	2....	H1-1b
174	M558	WT3X7.5	.052	0	10	.056	1.975	z	22	58771.549	69615	6.221	1.516	1....	H1-1b
175	M310A	PL3/8X1	.458	.958	20	.056	.958	y	23	9254.828	11812.5	.092	.246	2....	H1-1a
176	M311A	PL3/8X1	.537	.917	21	.055	.917	y	22	9448.941	11812.5	.092	.246	2....	H1-1a
177	M360	PL1/2x4	.307	.483	1	.055	.655	y	11	59083.058	63000	.656	5.25	1....	H1-1b
178	MT70	PL1/2x4	.449	.917	12	.055	.917	y	9	55564.251	63000	.656	5.25	1....	H1-1b
179	M280	PL3/8x4	.430	.495	20	.054	1.045	y	6	35344.479	47250	.369	3.938	1....	H1-1a
180	M461	PL3/8X1	.071	1.028	23	.054	0	y	6	8921.838	11812.5	.092	.246	1....	H1-1b
181	M309A	PL3/8X1	.287	.958	21	.053	.958	y	23	9254.828	11812.5	.092	.246	2....	H1-1b
182	M302A	PL3/8X1	.205	.422	22	.052	.422	y	18	11265.531	11812.5	.092	.246	2....	H1-1b
183	MT28	PL3/8x4	.214	0	12	.052	1.006	y	12	36117.002	47250	.369	3.938	1....	H1-1b
184	M281	PL3/8x4	.400	0	20	.051	.667	y	6	41988.622	47250	.369	3.938	1....	H1-1a
185	MT66	PL3/8x4	.542	.958	24	.051	.958	y	6	37018.285	47250	.369	3.938	1....	H1-1a
186	MT73	PL3/8X1	.432	1.295	23	.050	1.295	y	12	7566.368	11812.5	.092	.246	2....	H1-1a
187	M291A	PL3/8X1	.422	.667	21	.050	.667	y	18	10497.297	11812.5	.092	.246	2....	H1-1a
188	M374	PL3/8X1	.151	.667	17	.050	.667	y	6	10497.297	11812.5	.092	.246	2....	H1-1b
189	M372	PL3/8X1	.146	1.006	17	.050	0	y	11	9029.527	11812.5	.092	.246	1....	H1-1b
190	M362	PL3/8x4	.157	0	5	.049	.265	y	11	36117.002	47250	.369	3.938	1....	H1-1b
191	M382	PL3/8X1	.085	.756	17	.049	.756	y	11	10146.905	11812.5	.092	.246	2....	H1-1b
192	M31	PL3/8X3	.257	0	23	.048	0	y	10	33128.772	35437.5	.276	2.216	1....	H1-1b
193	MT58	PL3/8X1	.183	.958	24	.048	.958	y	22	9254.828	11812.5	.092	.246	2....	H1-1b
194	M292A	PL3/8X1	.455	.731	21	.048	.731	y	6	10249.195	11812.5	.092	.246	2....	H1-1a
195	MT53	PL3/8X1	.161	.349	22	.048	.349	y	24	11436.264	11812.5	.092	.246	2....	H1-1b
196	M457	PL3/8X1	.155	.667	15	.048	.667	y	5	10497.297	11812.5	.092	.246	2....	H1-1b

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

	Member	Shape	Code C...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [l...	phi*Pnt [lb]	phi*Mn y-...	phi*Mn z-...	Cb	Eqn
197	MT59	PL3/8X1	.233	.958	24	.048	.958	y	22	9254.828	11812.5	.092	.246	2....	H1-1b
198	M301A	PL3/8X1	.262	.631	22	.048	.631	y	5	10626.842	11812.5	.092	.246	2....	H1-1a
199	M279	PL3/8x4	.373	.609	19	.048	1.006	y	6	36117.002	47250	.369	3.938	1....	H1-1a
200	M400	PL3/8x4	.422	.958	5	.048	.958	y	11	37018.285	47250	.369	3.938	1....	H1-1a
201	M332	PL3/8X1	.672	1.264	21	.047	1.264	y	5	7725.066	11812.5	.092	.246	2....	H1-1a
202	MT62	PL3/8X1	.529	.958	24	.047	.958	y	6	9254.828	11812.5	.092	.246	2....	H1-1a
203	M388	PL3/8X1	.078	0	17	.047	0	y	11	11220.726	11812.5	.092	.246	1....	H1-1b
204	M324	PL3/8X1	.656	0	21	.046	1.295	y	6	7566.368	11812.5	.092	.246	2....	H1-1a
205	M61	PL3/8X3	.208	0	23	.046	0	y	22	33128.772	35437.5	.276	2.216	1....	H1-1b
206	M60	PL3/8X3	.248	0	22	.046	0	y	22	33128.772	35437.5	.276	2.216	1....	H1-1b
207	MT60	PL3/8X1	.278	.917	24	.046	.917	y	22	9448.941	11812.5	.092	.246	2....	H1-1b
208	MT48	PL3/8X1	.113	.756	24	.045	.756	y	12	10146.905	11812.5	.092	.246	2....	H1-1b
209	M407	PL3/8X1	.388	1.295	17	.045	1.295	y	12	7566.368	11812.5	.092	.246	2....	H1-1a
210	M446	PL3/8x4	.178	1.045	15	.045	.495	y	6	35344.479	47250	.369	3.938	1....	H1-1b*
211	MP1A	PIPE_2.5	.172	4.842	13	.045	1.895		4	30038.461	50715	3.596	3.596	2....	H1-1b
212	M363	PL3/8x4	.149	1.045	17	.045	1.045	y	5	35344.479	47250	.369	3.938	1....	H1-1b*
213	M396	PL3/8X1	.461	.958	17	.044	.958	y	5	9254.828	11812.5	.092	.246	2....	H1-1a
214	M300A	PL3/8X1	.182	.51	18	.044	0	y	17	11025.158	11812.5	.092	.246	2....	H1-1b
215	MT51	PL3/8X1	.132	0	24	.044	.422	y	24	11265.531	11812.5	.092	.246	2....	H1-1b
216	MT37	PL3/8X1	.093	.718	23	.044	.718	y	14	10299.381	11812.5	.092	.246	2....	H1-1b
217	M479	PL3/8X1	.463	.958	15	.043	.958	y	12	9254.828	11812.5	.092	.246	2....	H1-1a
218	M592	SR_0.625	.108	.25	22	.043	0		10	9749.147	9940.196	.104	.104	1....	H1-1b
219	M490	PL3/8X1	.371	0	14	.041	1.295	y	6	7566.368	11812.5	.092	.246	2....	H1-1a
220	M214	PL3/8X3	.219	0	15	.041	0	y	1	33128.772	35437.5	.276	2.216	1....	H1-1b
221	M483	PL3/8x4	.437	.958	17	.041	0	y	12	37018.285	47250	.369	3.938	1....	H1-1a
222	M443	PL1/2x4	.242	.483	4	.041	.483	y	13	59083.058	63000	.656	5.25	1....	H1-1b
223	M747	SR_0.625	.131	0	24	.041	0		22	9749.147	9940.196	.104	.104	1....	H1-1b
224	M384	PL3/8X1	.078	.631	17	.040	0	y	11	10626.842	11812.5	.092	.246	2....	H1-1b
225	M288	PL3/8X1	.136	.718	21	.040	.718	y	24	10299.381	11812.5	.092	.246	2....	H1-1b
226	M137	PL3/8X3	.379	0	22	.040	0	y	23	33128.772	35437.5	.276	2.216	1....	H1-1b
227	M403	PL1/2x4	.343	.958	5	.040	.958	y	2	54919.19	63000	.656	5.25	1....	H1-1b
228	M748	SR_0.625	.133	0	24	.040	0		22	9749.147	9940.196	.104	.104	1....	H1-1b
229	M455	PL3/8X1	.158	1.006	14	.040	.582	y	17	9029.527	11812.5	.092	.246	1....	H1-1b
230	M373	PL3/8X1	.148	1.045	17	.040	1.045	y	5	8836.412	11812.5	.092	.246	2....	H1-1b
231	M307A	PL3/8X1	.159	.353	22	.040	0	y	10	11426.997	11812.5	.092	.246	2....	H1-1b
232	M386	PL3/8X1	.078	.527	17	.039	0	y	11	10972.087	11812.5	.092	.246	2....	H1-1b
233	M560	WT3X7.5	.037	1.663	7	.039	1.975	z	1	58771.549	69615	6.221	1.516	1....	H1-1b
234	MT49	PL3/8X1	.130	.51	24	.039	.51	y	24	11025.158	11812.5	.092	.246	2....	H1-1b
235	MT72	PL3/8X1	.348	.871	24	.039	.871	y	9	9657.416	11812.5	.092	.246	1....	H1-1a
236	M286A	PL3/8X1	.178	1.028	21	.039	.46	y	21	8922.461	11812.5	.092	.246	2....	H1-1b
237	M463	PL3/8X1	.066	.898	13	.039	.898	y	6	9536.081	11812.5	.092	.246	1....	H1-1b
238	M259	PL3/8X3	.144	0	16	.039	0	y	16	33128.772	35437.5	.276	2.216	1....	H1-1b
239	M473	PL3/8X1	.144	.353	15	.038	.353	y	16	11426.997	11812.5	.092	.246	2....	H1-1b
240	M445	PL3/8x4	.148	0	17	.038	.609	y	6	36117.002	47250	.369	3.938	1....	H1-1b
241	M298	PL3/8X3	.150	0	16	.037	.605	y	1	32108.513	35437.5	.276	2.216	1....	H1-1b
242	M404	PL1/2x4	.441	.917	5	.037	.917	y	2	55564.251	63000	.656	5.25	1....	H1-1b
243	M287	PL3/8X1	.188	.655	21	.036	.655	y	11	10538.698	11812.5	.092	.246	2....	H1-1b
244	M402	PL1/2x4	.253	.958	6	.036	.958	y	2	54919.19	63000	.656	5.25	1....	H1-1b
245	MT54	PL3/8X1	.105	.44	23	.036	0	y	6	11220.726	11812.5	.092	.246	1....	H1-1b
246	M276	PL1/2x4	.147	1.028	22	.036	.487	y	11	53800.783	63000	.656	5.25	1....	H1-1b
247	M456	PL3/8X1	.159	1.045	14	.036	.468	y	17	8836.412	11812.5	.092	.246	2....	H1-1b
248	M303A	PL3/8X1	.282	.527	21	.035	.527	y	5	10972.087	11812.5	.092	.246	2....	H1-1a
249	M294	PL3/8X3	.089	0	17	.035	0	y	14	33128.772	35437.5	.276	2.216	1....	H1-1b
250	MT81	PL3/8X1	.447	1.264	24	.035	1.264	y	12	7725.066	11812.5	.092	.246	2....	H1-1a
251	M296A	PL3/8X1	.243	.735	5	.035	0	y	24	10232.577	11812.5	.092	.246	2....	H1-1b
252	M444	PL1/2x4	.170	.718	5	.034	.718	y	15	58324.492	63000	.656	5.25	1....	H1-1b
253	M261	PL3/8X3	.163	0	16	.034	0	y	16	33128.772	35437.5	.276	2.216	1....	H1-1b
254	M292	PL3/8X3	.136	0	15	.034	0	y	16	33128.772	35437.5	.276	2.216	1....	H1-1b
255	M298A	PL3/8X1	.200	0	21	.034	0	y	17	10688.698	11812.5	.092	.246	2....	H1-1b*

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

	Member	Shape	Code C...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [l...	phi*Pnt [lb]	phi*Mn y-...	phi*Mn z-...	Cb	Eqn
256	M305A	PL3/8X1	.282	.44	21	.034	.44	y	11	11220.726	11812.5	.092	.246	1....	H1-1a
257	M470	PL3/8X1	.139	.349	15	.033	.349	y	17	11436.264	11812.5	.092	.246	2....	H1-1b
258	M485	PL1/2x4	.211	.958	12	.033	.958	y	16	54919.19	63000	.656	5.25	1....	H1-1b
259	M182	PL3/8X3	.215	0	16	.033	0	y	19	33128.772	35437.5	.276	2.216	1.5	H1-1b
260	MT42	PL3/8X1	.243	0	5	.033	.871	y	21	9657.416	11812.5	.092	.246	1....	H1-1b
261	M215	PL3/8X3	.197	0	18	.032	0	y	16	33128.772	35437.5	.276	2.216	1....	H1-1b
262	MT67	PL3/8x4	.623	.917	24	.032	.917	y	6	37794.803	47250	.369	3.938	1....	H1-1a
263	M476	PL3/8X1	.196	.958	15	.032	.958	y	16	9254.828	11812.5	.092	.246	2....	H1-1b
264	M415	PL3/8X1	.403	1.264	17	.032	1.264	y	5	7725.066	11812.5	.092	.246	2....	H1-1a
265	M401	PL3/8x4	.476	.917	5	.032	.917	y	11	37794.803	47250	.369	3.938	1....	H1-1a
266	M477	PL3/8X1	.236	.917	15	.032	.917	y	16	9448.941	11812.5	.092	.246	2....	H1-1b
267	MT45	PL3/8X1	.194	.735	15	.032	.735	y	22	10232.577	11812.5	.092	.246	2....	H1-1b
268	M387	PL3/8X1	.129	.349	16	.032	.349	y	5	11436.264	11812.5	.092	.246	2....	H1-1b
269	MT47	PL3/8X1	.142	.613	13	.032	.613	y	24	10688.698	11812.5	.092	.246	2....	H1-1b
270	M306A	PL3/8X1	.305	.287	22	.032	.287	y	18	11556.566	11812.5	.092	.246	2....	H1-1a
271	MT63	PL3/8X1	.557	.917	24	.031	.917	y	21	9448.941	11812.5	.092	.246	2....	H1-1a
272	M593	SR 0.625	.092	.25	19	.031	0		10	9749.147	9940.196	.104	.104	1....	H1-1b
273	M33	PL3/8X3	.275	0	22	.031	0	y	13	33128.772	35437.5	.276	2.216	1....	H1-1b
274	M475	PL3/8X1	.152	.958	15	.031	.958	y	16	9254.828	11812.5	.092	.246	2....	H1-1b
275	M486	PL1/2x4	.271	.958	12	.031	.958	y	16	54919.19	63000	.656	5.25	1....	H1-1b
276	MT50	PL3/8X1	.097	0	24	.030	.631	y	12	10626.842	11812.5	.092	.246	2....	H1-1b
277	MT35	PL3/8X1	.113	1.028	23	.030	.46	y	23	8922.461	11812.5	.092	.246	2....	H1-1b
278	MT74	PL3/8X1	.357	.871	23	.030	.871	y	9	9657.416	11812.5	.092	.246	1....	H1-1a
279	M468	PL3/8X1	.104	.422	15	.029	.422	y	17	11265.531	11812.5	.092	.246	2....	H1-1b
280	M385	PL3/8X1	.110	.422	17	.029	.422	y	5	11265.531	11812.5	.092	.246	2....	H1-1b
281	MT55	PL3/8X1	.249	.287	6	.029	.287	y	6	11556.566	11812.5	.092	.246	2....	H1-1b
282	MT52	PL3/8X1	.099	0	23	.029	0	y	6	10972.087	11812.5	.092	.246	2....	H1-1b
283	M397	PL3/8X1	.483	.917	17	.028	.917	y	5	9448.941	11812.5	.092	.246	2....	H1-1a
284	M498	PL3/8X1	.384	1.264	15	.027	1.264	y	6	7725.066	11812.5	.092	.246	2....	H1-1a
285	M260	PL3/8X3	.102	0	13	.027	0	y	16	33128.772	35437.5	.276	2.216	1....	H1-1b
286	M465	PL3/8X1	.069	.756	17	.027	.756	y	6	10146.905	11812.5	.092	.246	2....	H1-1b
287	M487	PL1/2x4	.331	.917	12	.027	.917	y	16	55564.251	63000	.656	5.25	1....	H1-1b
288	M389	PL3/8X1	.265	.287	11	.025	.287	y	11	11556.566	11812.5	.092	.246	2....	H1-1b
289	M361	PL1/2x4	.227	0	7	.025	.718	y	11	58324.492	63000	.656	5.25	1....	H1-1b
290	M466	PL3/8X1	.085	0	15	.025	.51	y	17	11025.158	11812.5	.092	.246	2....	H1-1b*
291	M406	PL3/8X1	.292	0	18	.025	0	y	2	9657.416	11812.5	.092	.246	1....	H1-1a
292	M480	PL3/8X1	.486	.917	15	.024	.917	y	12	9448.941	11812.5	.092	.246	2....	H1-1a
293	M454	PL3/8X1	.068	.718	15	.024	.718	y	23	10299.381	11812.5	.092	.246	2....	H1-1b
294	M293	PL3/8X3	.149	0	16	.024	0	y	17	33128.772	35437.5	.276	2.216	1....	H1-1b
295	MT36	PL3/8X1	.114	.655	23	.024	.655	y	22	10538.698	11812.5	.092	.246	2....	H1-1b
296	M383	PL3/8X1	.101	0	17	.023	.51	y	5	11025.158	11812.5	.092	.246	2....	H1-1b*
297	M181	PL3/8X3	.217	0	18	.023	0	y	1	33128.772	35437.5	.276	2.216	1....	H1-1b
298	M394	PL3/8X1	.243	.917	17	.023	.917	y	13	9448.941	11812.5	.092	.246	2....	H1-1b
299	M489	PL3/8X1	.286	.871	14	.022	.871	y	15	9657.416	11812.5	.092	.246	1....	H1-1a
300	M484	PL3/8x4	.489	.917	17	.022	0	y	12	37794.803	47250	.369	3.938	1....	H1-1a
301	MT25	PL1/2x4	.093	1.028	22	.021	0	y	11	53800.783	63000	.656	5.25	2....	H1-1b
302	M393	PL3/8X1	.200	.958	17	.021	.958	y	14	9254.828	11812.5	.092	.246	2....	H1-1b
303	M462	PL3/8X1	.122	.735	21	.021	.735	y	24	10232.577	11812.5	.092	.246	2....	H1-1b
304	M459	PL3/8X1	.220	0	6	.021	0	y	12	9657.416	11812.5	.092	.246	1....	H1-1b
305	M472	PL3/8X1	.158	.287	15	.020	0	y	5	11556.566	11812.5	.092	.246	1....	H1-1b
306	M376	PL3/8X1	.237	0	12	.020	0	y	11	9657.416	11812.5	.092	.246	1....	H1-1b
307	M408	PL3/8X1	.297	.871	17	.019	0	y	2	9657.416	11812.5	.092	.246	1....	H1-1a
308	M452	PL3/8X1	.085	1.028	15	.019	.46	y	16	8922.461	11812.5	.092	.246	2....	H1-1b
309	M464	PL3/8X1	.096	0	15	.019	.613	y	17	10688.698	11812.5	.092	.246	2....	H1-1b*
310	M392	PL3/8X1	.152	.958	17	.018	.958	y	14	9254.828	11812.5	.092	.246	2....	H1-1b
311	M370	PL3/8X1	.087	0	17	.017	0	y	11	10538.698	11812.5	.092	.246	2....	H1-1b
312	M453	PL3/8X1	.084	.655	15	.017	.655	y	15	10538.698	11812.5	.092	.246	2....	H1-1b
313	M467	PL3/8X1	.070	.631	15	.017	.631	y	6	10626.842	11812.5	.092	.246	2....	H1-1b
314	M471	PL3/8X1	.083	.44	15	.016	.44	y	16	11220.726	11812.5	.092	.246	1....	H1-1b

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

	Member	Shape	Code C...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [l...	phi*Pnt [lb]	phi*Mn y-...	phi*Mn z-...	Cb	Eqn
315	M491	PL3/8X1	.299	.871	15	.016	.871	y	15	9657.416	11812.5	.092	.246	1....	H1-1a
316	M369	PL3/8X1	.095	1.028	17	.016	.46	y	19	8922.461	11812.5	.092	.246	2....	H1-1b
317	M371	PL3/8X1	.082	.718	11	.015	.718	y	40	10299.381	11812.5	.092	.246	2....	H1-1b*
318	M359	PL1/2x4	.075	1.028	19	.014	.487	y	12	53800.783	63000	.656	5.25	1....	H1-1b
319	M442	PL1/2x4	.072	1.028	16	.012	0	y	17	53800.783	63000	.656	5.25	1....	H1-1b
320	M381	PL3/8X1	.114	0	17	.012	.613	y	5	10688.698	11812.5	.092	.246	2....	H1-1b*
321	M469	PL3/8X1	.077	.527	15	.010	.527	y	8	10972.087	11812.5	.092	.246	2....	H1-1b
322	M379	PL3/8X1	.138	0	24	.010	0	y	12	10232.577	11812.5	.092	.246	2....	H1-1b*
323	M315A	PL3/8X1	.003	0	10	.000	0	y	9	9657.416	11812.5	.092	.246	2....	H1-1b
324	MT64	PL3/8X1	.003	0	10	.000	0	y	12	9657.416	11812.5	.092	.246	2....	H1-1b
325	M481	PL3/8X1	.003	0	10	.000	.871	y	9	9657.416	11812.5	.092	.246	2....	H1-1b
326	M398	PL3/8X1	.003	0	10	.000	0	y	12	9657.416	11812.5	.092	.246	2....	H1-1b
327	M284	PL3/8X1	.001	.872	11	.000	.872	y	22	9649.585	11812.5	.092	.246	2....	H1-1b
328	M450	PL3/8X1	.001	.872	12	.000	.872	y	16	9649.585	11812.5	.092	.246	2....	H1-1b
329	MT33	PL3/8X1	.001	.872	9	.000	.872	y	22	9649.585	11812.5	.092	.246	2....	H1-1b
330	M367	PL3/8X1	.001	.872	8	.000	.872	y	19	9649.585	11812.5	.092	.246	2....	H1-1b
331	M283	PL3/8X1	.001	.943	12	.000	.943	y	24	9324.721	11812.5	.092	.246	1....	H1-1b
332	MT32	PL3/8X1	.001	.943	8	.000	.943	y	24	9324.721	11812.5	.092	.246	1....	H1-1b
333	M366	PL3/8X1	.001	.943	9	.000	.943	y	24	9324.721	11812.5	.092	.246	1....	H1-1b
334	M449	PL3/8X1	.001	.943	11	.000	.943	y	24	9324.721	11812.5	.092	.246	1....	H1-1b
335	M274	PL3/8x4	.001	.874	23	.000	.874	z	22	38573.215	47250	.369	3.938	2....	H1-1b
336	M440	PL3/8x4	.001	.874	17	.000	.874	z	16	38573.215	47250	.369	3.938	2....	H1-1b
337	MT23	PL3/8x4	.001	.874	21	.000	.874	z	22	38573.215	47250	.369	3.938	2....	H1-1b
338	M357	PL3/8x4	.001	.874	20	.000	.874	z	19	38573.215	47250	.369	3.938	2....	H1-1b
339	M273	PL1/2x4	.001	.943	24	.000	.943	z	24	55152.127	63000	.656	5.25	1....	H1-1b
340	MT22	PL1/2x4	.001	.943	20	.000	.943	z	24	55152.127	63000	.656	5.25	1....	H1-1b
341	M356	PL1/2x4	.001	.943	21	.000	.943	z	24	55152.127	63000	.656	5.25	1....	H1-1b
342	M439	PL1/2x4	.001	.943	18	.000	.943	z	24	55152.127	63000	.656	5.25	1....	H1-1b

EXHIBIT 5

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Non-Ionizing Electromagnetic Radiation (NIER) Study

Site Number:
302483

Site Name:
Brln - Berlin

Location:
Berlin, Connecticut

Tenants:
T-Mobile, Dish Wireless, AT&T Mobility, & Verizon Wireless

Prepared For:

American Tower, Inc.
Woburn, Massachusetts

January 8th, 2024

68520 P-415412

Prepared By:

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

Approved By:

TOWER ENGINEERING PROFESSIONALS

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Non-Ionizing Electromagnetic Radiation (NIER) Study

302483 Brln - Berlin
Berlin, 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 302483 Brln - Berlin is located at 286 Beckly Rd., in Berlin, Connecticut at coordinates 41.631707, -72.729913. The support structure is a 150' monopole. An aerial view of the tower can be found in Appendix 1, Site Photos. The tenants are T-Mobile (T-Mobile) Dish Wireless (Dish) AT&T Mobility (AT&T), & Verizon Wireless (VZW). A table listing all antennae and effective radiated power (ERP) levels that were used in this study may be found in Appendix 2, Antenna Inventory.

POWER DENSITY CALCULATIONS

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

For the purpose of this study, a radius of 80' from the base of the tower with a height of 6' above ground level was used, beyond 80' the MPE levels become *di minimus*. This study utilized FCC recognized and accepted software programs using the maximum ERP levels for the antenna models provided by ATC. Diagrams depicting the predicted spatial average power density level at any specific location may be found in Appendix 3, MPE Limit Study. A discussion regarding the FCC limits may be found in Appendix 4, Information Pertaining to MPE Studies. Study methodology describing Non-ionizing Radiation Prediction Models used in this study may be found in Appendix 5, MPE Standards Methodology.

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

- ATC furnished data and does not include other unidentified communication facilities.
- Load List at 302483 Brln - Berlin.RF NIER Study 12/21/23.
- FCC databases.
- Carrier standard configurations.
- Empirical data collected by TEP.

SITE MITIGATION & CONTROL

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

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

COMPLIANCE DETERMINATION

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

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APPENDIX 1 Site Photos

Aerial View of Site

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Appendix 2.1 Antenna Inventory

302483 Brln - Berlin

Antenna Inventory

Antenna #	Carrier	Antenna Manufacturer	Antenna Model	Frequency Band (MHz)	Azmiuth (°)	Effective Radiated Power (W)	Radiation Center (ft)
1	AT&T	CCI	DMP65R-BU8DA	700/800	040	159261	152.0
2	AT&T	CCI	DMP65R-BU6DA	700/800	150	159261	152.0
3	AT&T	CCI	DMP65R-BU6DA	700/800	270	159261	152.0
4	AT&T	Ericsson	Air 6449	3600-3900	040	70300	152.0
5	AT&T	Ericsson	Air 6449	3600-3900	150	70300	152.0
6	AT&T	Ericsson	Air 6449	3600-3900	270	70300	152.0
7	AT&T	Quintel	QD6616-7	700/1700/2100	000	42370	152.0
8	AT&T	Quintel	QD6616-7	700/1700/2100	150	42370	152.0
9	AT&T	Quintel	QD6616-7	700/1700/2100	270	42370	152.0
10	AT&T	Ericsson	Air 6419	3600-3900	040	70300	152.0
11	AT&T	Ericsson	Air 6419	3600-3900	150	70300	152.0
12	AT&T	Ericsson	Air 6419	3600-3900	270	70300	152.0
13	T-Mobile	Ericsson	AIR32 B66Aa	700/1800/1900/2100	090	12222	142.0
14	T-Mobile	Ericsson	AIR32 B66Aa	700/1800/1900/2100	210	12222	142.0
15	T-Mobile	Ericsson	AIR32 B66Aa	700/1800/1900/2100	330	12222	142.0
16	T-Mobile	Ericsson	Air6449 B41	700/2100	090	12222	142.0
17	T-Mobile	Ericsson	Air6449 B41	700/2100	210	12222	142.0
18	T-Mobile	Ericsson	Air6449 B41	700/2100	330	12222	142.0
19	T-Mobile	JMA	APXVAARR24	700/2100	090	12222	142.0
20	T-Mobile	JMA	APXVAARR24	700/2100	210	12222	142.0
21	T-Mobile	JMA	APXVAARR24	700/2100	330	12222	142.0
22	Verizon	Commscope	NHHSS-45B-R2BT4	600/700/800/900/1900/2100/2200/2300	105	70018	118.0
23	Verizon	Commscope	NHHSS-45B-R2BT4	600/700/800/900/1900/2100/2200/2300	155	70018	118.0
24	Verizon	Commscope	2NN2HH-33B-R4	600/700/800/900/1900/2100/2200/2300	130	70018	118.0
25	Verizon	Commscope	2NN2HH-33B-R4	600/700/800/900/1900/2100/2200/2300	130	70018	118.0

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Appendix 2.1 Antenna Inventory

302483 Brln - Berlin

Antenna Inventory

Antenna #	Carrier	Antenna Manufacturer	Antenna Model	Frequency Band (MHz)	Azmiuth (°)	Effective Radiated Power (W)	Radiation Center (ft)
25	Verizon	Commscope	2NN2HH-33B-R4	600/700/800/900/1900/2100/2200/2300	130	70018	118.0
26	Verizon	Commscope	NHH-65B-R2B	600/700/800/900/1900/2100/2200/2300	270	70018	118.0
27	Verizon	Commscope	NHH-65B-R2B	600/700/800/900/1900/2100/2200/2300	030	70018	118.0
28	Verizon	Commscope	NHHSS-65B-R2BT4	600/700/800/900/1900/2100/2200/2300	270	70018	118.0
29	Verizon	Commscope	NHHSS-65B-R2BT4	600/700/800/900/1900/2100/2200/2300	030	70018	118.0
30	Verizon	Samsung	MT6407-77A	3700-3900	030	18286	118.0
31	Verizon	Samsung	MT6407-77A	3700-3900	150	18286	118.0
32	Verizon	Samsung	MT6407-77A	3700-3900	270	18286	118.0
33	Verizon	Samsung	CBRS 20W	3700-3900	030	243	118.0
34	Verizon	Samsung	CBRS 20W	3700-3900	150	243	118.0
35	Verizon	Samsung	CBRS 20W	3700-3900	270	243	118.0
36	Verizon	Samsung	MT6407-77A	3700-3900	030	18286	118.0
37	Verizon	Samsung	MT6407-77A	3700-3900	150	18286	118.0
38	Verizon	Samsung	MT6407-77A	3700-3900	270	18286	118.0
39	Verizon	Commscope	SBNHH-1D65B	1900/2100	030	22080	118.0
40	Verizon	Commscope	SBNHH-1D65B	1900/2100	150	22080	118.0
41	Verizon	Commscope	SBNHH-1D65B	1900/2100	270	22080	118.0
42	Verizon	Commscope	SBNHH-1D65B	1900/2100	030	22080	118.0
43	Verizon	Commscope	SBNHH-1D65B	1900/2100	150	22080	118.0
44	Verizon	Commscope	SBNHH-1D65B	1900/2100	270	22080	118.0
45	Verizon	Antel	BXA-70063	3700-3900	030	46238	118.0
46	Verizon	Antel	BXA-70063	3700-3900	150	46238	118.0
47	Verizon	Antel	BXA-70063	3700-3900	270	46238	118.0
48	Dish	JMA	MX08FRO665-21	600/1900/2000/2100	000	40000	105.0
49	Dish	JMA	MX08FRO665-21	600/1900/2000/2100	120	40000	105.0
50	Dish	JMA	MX08FRO665-21	600/1900/2000/2100	240	40000	105.0

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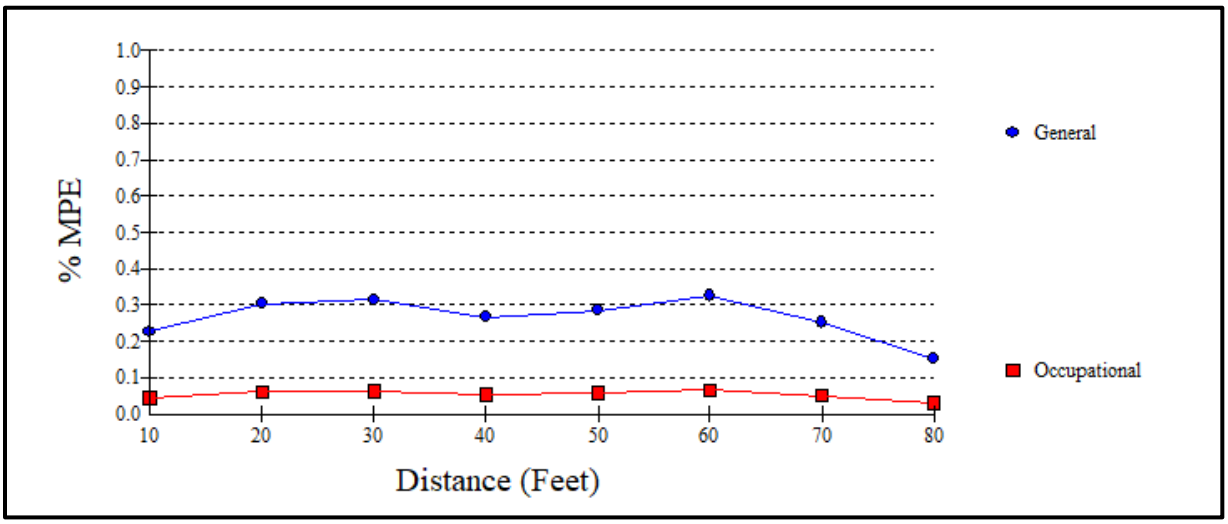
Appendix 3.1 MPE Limit Study



Maximum Power Density (@30'):	0.0020 mW/cm²
General Population MPE (@30'):	0.3141%
Occupational MPE (@30'):	0.0628%

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Appendix 3.2 MPE Limit Study

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Appendix 4 Information Pertaining to MPE Studies

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

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

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

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

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

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

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

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Appendix 5 MPE Standards Methodology

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

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

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

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

f = frequency

* = Plane-wave equivalent power density

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

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

f = frequency

* = Plane-wave equivalent power density

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

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

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

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

Cylindrical Model (Near Field Predictions)

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

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

Where:

S = Power Density

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

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

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

Where:

S = Power Density

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

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

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

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Spherical Model (Far Field Predictions)

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

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

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

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

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

Where:

S = Power Density

EIRP = Effective Radiated Power from antenna

Rc = Reflection Coefficient (2.56)

R = Distance from the antenna

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

EXHIBIT 6

DOCKET NO. 40

ORIGINAL

AN APPLICATION SUBMITTED BY THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE, AND OPERATION OF FACILITIES TO PROVIDE CELLULAR SERVICE IN THE HARTFORD AND MIDDLESEX COUNTIES.	:	CONNECTICUT SITING COUNCIL
	:	May 15, 1984

D E C I S I O N A N D O R D E R

Pursuant to the foregoing opinion, the Council hereby directs that a certificate of environmental compatibility and public need as required by section 16-50k of the General Statutes of Connecticut, revisions of 1958, revised to 1983, as amended, be issued to Southern New England Telephone for the construction, operation, and maintenance of a telecommunications tower and associated equipment to provide cellular service at each of the following sites:

Shuttle Meadow Road, Southington, Connecticut;
Mountain Street, Hartford, Connecticut;
Prestige Park Road, East Hartford, Connecticut;
Beckley Road, Berlin, Connecticut;
Slicer tract, Niederwerfer Road, South Windsor, Connecticut; and
Kikapoo Road, Middlefield, Connecticut.

The facilities shall be constructed, operated, and maintained as specified in the Council's record on this matter, and subject to the following conditions.

1. The towers shall be no taller than necessary to provide the proposed service and in no event shall exceed

   a) 150 feet at the Southington site,
   b) 100 feet at the Hartford site,
   c) 150 feet at the East Hartford site,
   d) 150 feet at the Berlin site,
   e) 75 feet at the South Windsor site, and
   f) 75 feet at the Middlefield site.

2. A fence not lower than eight feet shall surround each tower and its associated equipment.

3. The applicant or its successor shall notify the Council if and when directional antennas or any other equipment is added to any of these facilities.
4. The applicant or its successor shall permit in accordance with representations made by it during the proceeding public or private entities to share space on the facilities, for due consideration received, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.
5. Unless necessary to comply with condition number seven, below, no lights shall be installed on any of these towers.
6. The facility construction shall be conducted in accordance with all applicable federal, state, and municipal laws and regulations.
7. The applicant shall submit a development and management plan (D&M) for the South Windsor, Southington, and Berlin sites pursuant to sections 16-50j-85 through 16-50j-87 of the regulations of state agencies, except that irrelevant items in section 16-50j-86 need only be identified as such. The D&M plans shall include appropriate evergreen screening of the sites. The applicant shall comply with the reporting requirements of section 16-50j-87 for all sites. The applicant shall consult with Mrs. Claire Aubin and the Town of South Windsor in the preparation of the South Windsor site D&M.
8. Construction activities shall take place during daylight working hours.
9. This decision and order shall be void and the towers and associated equipment approved herein shall be dismantled and removed,

or reapplication for any new use shall be made to the Connecticut Siting Council before any such new use is made, if the towers do not provide or permanently cease to provide cellular service following completion of construction.

10. This decision and order shall be void if all construction authorized is not completed within three years of the issuance of this decision.

Pursuant to section 16-50p(c) of the General Statutes, we hereby direct that a copy of the opinion and decision and order be served on each person listed below. A notice of the issuance shall be published in the Hartford Courant, Journal Inquirer, and the Middletown Press.

The parties to this proceeding are

Southern New England Telephone Company Room 314 227 Church Street New Haven, Connecticut 06506	(Applicant)
ATTN: Mr. Peter J. Tyrrell, Esquire	(its attorney)
Town of South Windsor 1540 Sullivan Avenue South Windsor, Connecticut 06074	represented by: Mr. Richard M. Rittenband Town Attorney 1734 Ellington Road South Windsor, Connecticut 06074
Frank Niederwerfer 260 Niederwerfer Road South Windsor, Connecticut 06074	(service waived)
Claire Aubin 407 Niederwerfer Road South Windsor, Connecticut 06074	(service waived)

Betty S. Kleiner
Chairman
Hartford Audubon Society, Inc.
5 Flintlock Ridge
Simsbury, Connecticut 06070

(service waived)

Roger Thorpe
2916 Ellington Road
South Windsor, Connecticut 06074

Intervenors in this proceeding are

Dwight A. Johnson
Murtha, Cullina, Richter
and Pinney
101 Pearl Street
P.O. Box 3197
Hartford, Connecticut 06103-0197

representing:

Metromedia TeleCommunications
Nutmeg Telecommunications, Inc.
CSI of New Haven
CSI of Stamford
Cellular Communications, Inc.
LIN Cellular Corp.
Cellular Mobile Services
Maxcell TeleCommunications, Inc.
Mobile Cellular Telephone, Inc.
Cellular Dynamics
Connecticut Corridor Cellular
Chase/Post Cellular

CERTIFICATION

The undersigned members of the Connecticut Siting Council hereby certify that they have heard this case or read the record thereof, and that we voted as follows:

Dated at New Britain, Connecticut, this 15th day of May, 1984.

Council Members	Vote Cast
Gloria Dibble Pond Chairperson	Yes
Commissioner John Downey Designee: Commissioner Peter G. Boucher	Yes
Commissioner Stanley Pac Designee: Christopher Cooper	Yes
Owen L. Clark	Yes
Fred J. Doocy	~~Yes~~ Abstain
Mortimer A. Gelston	Yes
James G. Horsfall	Absent
Janet Sitty	Yes
Colin C. Tait	Absent

STATE OF CONNECTICUT)
: ss. New Britain, May 15, 1984
COUNTY OF HARTFORD)

I hereby certify that the foregoing is a true and correct copy of the decision and order issued by the Connecticut Siting Council, State of Connecticut.

ATTEST:

Christopher S. Wood, Executive Director
Connecticut Siting Council

EXHIBIT 7

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Delivery Time: 1:05 PM
Signed by: LONG

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Ship To:	AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 018011053 US
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UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	14529771

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Delivery Time: 11:08 AM
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Signed by: ahern

CENTERLINE SITE ACQUISITION

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Ship To:	BERLIN TOWN HALL 240 KENSINGTON RD BERLIN, CT 06037 US
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Delivery Time: 11:08 AM
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Signed by: ahern

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Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	14529771

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