Robinson+Cole

KENNETH C. BALDWIN

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Also admitted in Massachusetts and New York

October 4, 2021

Via Electronic Mail

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

Re: **Notice of Exempt Modification – Facility Modification**
130 Vernon Road, Bolton, Connecticut

Dear Attorney Bachman:

Mountaintop Enterprises currently owns and operates two (2) communications towers (a 280-foot guyed lattice tower and a 150-foot guyed lattice tower) at the above referenced address (the "Property"). Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains antennas and remote radio heads at the 120-foot level on the existing 280-foot tower. Equipment associated with Cellco's antennas is located in a shelter near the base of the 280-foot tower. Cellco now intends to modify and upgrade its existing facility and plans to relocate its antennas and remote radio heads ("RRHs") to the 120-foot level on adjacent 150-foot tower on the Property. Cellco will continue to utilize its existing equipment shelter and connect to the adjacent 150-fot tower via underground fiber optic antenna cables. The 150-foot tower was approved by the Town of Bolton ("Town") in October of 1980. A copy of the Town's approval of that is included in Attachment 1.

Cellco intends to install four (4) NHH-665B-R2B antennas, two (2) Samsung MT6407-77A antennas, two (2) CBRS antennas and six (6) RRHs behind its antennas on new mounts at the 120-foot level on the 150-foot tower. A set of project plans showing Cellco's proposed facility modifications and new antennas and RRH specifications are included in Attachment 2.

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

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

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

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

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

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

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

6. According to the attached Structural Analysis ("SA") and Mount Analysis ("MA"), the existing 150-foot tower, tower foundation and new antenna mounts can support Cellco's proposed modifications. Copies of the SA and MA are included in Attachment 4.

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

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

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:

Sandra W. Pierog, First Selectwoman for the Town of Bolton
Patrice Carson, AICP, Bolton Director of Community Development
Mountaintop Enterprises, Inc., Property Owner
Karla Hanna, Verizon Wireless

ATTACHMENT 1

PERMIT NO. 608

LICENSE NO.

APPLICATION FOR BUILDING PERMIT ✓

(Application must be **typed** or **printed**)

TOWN OF BOLTON
CONNECTICUT

LOCATION OF JOB R1 ZONE

Vernon Rd. (STREET) L4 (CARD NO.)

N (MAP) 21 (BLOCK) 9 (LOT)

Motorola Communications and Electronics Inc.
OWNER
85 Harristown Rd. (NO. / STREET)
Glen Rock N.J 07452 (TOWN OR CITY / STATE / ZIP)

Mountain Top Enterprises Inc.
APPLICANT
Vernon Rd. (NO. / STREET)
Bolton Conn. 06040 (TOWN OR CITY / STATE / ZIP)

Motorola Communications and Electronics Inc
BUILDER
85 Harristown Rd. (NO. / STREET)
Glen Rock N.J. 07452

FEE SCHEDULE

FEE	Estimated Cost
\$3	\$ 1 - 200
4	201 - 600
5	601-1000
5	per additional thousand or fraction thereof.

Building Official may demand affidavit of actual cost.

	COST	FEE
Estimated	5,000	25.
Actual	Co	3.
Difference		
Additional		28.

DEPARTMENT DECISION

Application is hereby
☑ Approved ☐ Disapproved

7-16-79 (DATE) C Hutchinson (INSPECTOR)

THIS PERMIT EXPIRES ONE YEAR FROM DATE OF ISSUE

FEE COVERS — PERMIT NUMBER

- ☑ BUILDING
- ☐ HEATING
- ☐ PLUMBING
- ☐ ELECTRICAL
- ☑ Certificate of Use and Occupancy

REQUIREMENTS

- ☐ TOWN PLANNING ☐ TOWN ZONING
- ☐ APPEALS BOARD ☑ PLOT PLAN
- ☑ BLUE PRINTS ☐ DRIVEWAY
- ☐ SANITATION APPLICATION

TYPE OF BUILDING

☐ Residential ☑ Commercial
☐ radio tower (OTHER)

TYPE OF JOB

- ☐ Original Construction ☐ Repair
- ☑ Alteration ☐ Demolition

SIZE OF BUILDING

NA
STORIES | NO. FAMILIES

HEIGHT | DEPTH | FRONT

GARAGE | HEIGHT | DEPTH | FRONT

DISTANCES FROM LOT LINE

approx, (Circle Front Lot Line)

E	W	N	S
500'	2000'	2000'	3000'

MATERIAL OF FOOTING
Cement

WIDTH 4' DEPTH 4'

Depth Below Grade 4'

MATERIAL OF FOUNDATION
Cement

Thickness:
Above Grade 4'
Below Grade 4'

MATERIAL OF CHIMNEY
N/A

HEIGHT | FLUE SIZE | NO. OF FLUES

MATERIAL OF PIERS

Distance Apart

Size of Footing

MEMBER	SIZE	MATERIAL OR SPECIES	LONGEST SPAN	CENTER
Sill				
Girder		120,		
Outside Stud		~~75~~ 0"	Tower	
Bearing Stud				
1st Floor Joist				
2nd Floor Joist		Stainless - as per plans		
3rd Floor Joist		filed town off. bldg.		
4th Floor Joist				
Rafter		site is approx 854' above sea		
Ridge		level -		
Hip or Valley		Stevens Bros only is on oldwood		
Headers		pole tower		
Sheathing				

FURTHER DETAILS Reed Const and a forestry Co are on subject tower at this time. Tower is owned by Motorola Co. Huntress Electronics maintains.

Final OK - 10 - 8 - 80 CH

All work covered by this application has been authorized by the (owner) or (agent) of this property and will be done according to local code and regulations.

7/16/79 (DATE) Milton R Hathaway (APPLICANT) 6467766

CERTIFICATE OF USE AND OCCUPANCY

BOLTON, CONNECTICUT

№ 1091

This is to certify that: RADIO TOWER ..... at

LOCATION ZONE

VERNON RD.
STREET CARD NO.

15 MAP | 21 BLOCK | 9 LOT

under Permit No. 608 .....conforms substantially to the requirements of the Building Code, Sanitation Code and the Zone Ordinance of the Town of Bolton and is hereby approved for occupancy as indicated below.

Approved for occupancy. 10/1/80

Date Oct 8, 1980 Calvin Hutchinson Jr. Building Official

Notice: — If this certificate is lost or destroyed, a duplicate should be immediately obtained from the Department of Buildings.

Any change or extension of the use herein approved requires a new certificate of occupancy.

Copies of this certificate may be obtained at the Department of Buildings at a charge of seventy-five cents each.

ATTACHMENT 2

LOCUS MAP SCALE: N.T.S.

NORTH

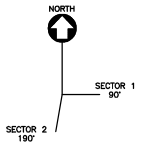
APPROXIMATE SITE COORDINATES: LAT: 41° 48' 10.0008" N LONG: 72° 26' 27.9996" W

NOTE:
EXISTING 150'± GUY TOWER
– REFER TO DETAILED STRUCTURAL ANALYSIS AND MODIFICATION OF AN EXISTING 150' GUYED TOWER FOR PROPOSED ANTENNA ARRANGEMENT BY AECOM
SITE NAME: BOLTON CT
PROJECT NUMBER: 60657286
VZ5-227
DATED MAY 10, 2021

DESIGN EXHIBIT

THIS PLAN IS DIAGRAMMATIC IN NATURE AND IS INTENDED TO PROVIDE GENERAL INFORMATION REGARDING THE LOCATION AND SIZE OF THE PROPOSED ANTENNA UPGRADE.

ANTENNA ORIENTATION

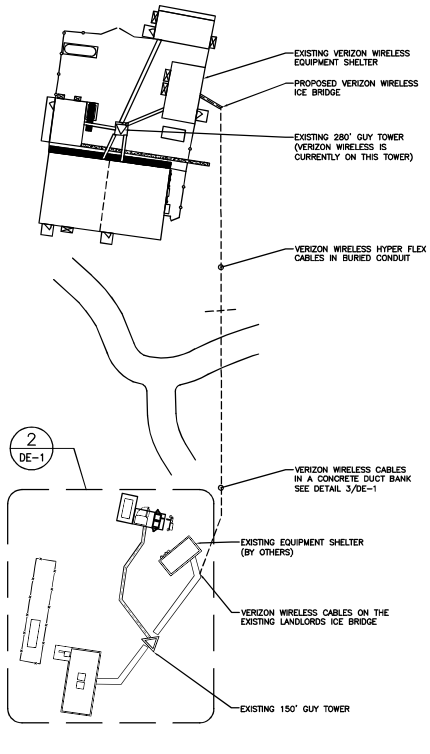


SCOPE

1. (8) EXISTING ANTENNAS TO BE REMOVED FROM THE EXISTING TOWER
2. INSTALL (4) NEW COMMSCOPE NHH-65B-R2B ANTENNAS
   INSTALL (2) NEW SAMSUNG MT6407-77A ANTENNAS
   INSTALL (2) NEW SAMSUNG XXDWMM-12.5-65 ANTENNAS
   INSTALL (2) NEW COMMSCOPE BASMNT-SBS-1-2 MOUNTS
   (2) EXISTING RRHs TO BE REMOVED
3. INSTALL (1) NEW OVP
   INSTALL (–) NEW DIPLEXERS
4. INSTALL (2) NEW HYBRID CABLE
5. (3) EXISTING 1x1 TOP JUMPERS TO REMAIN
   INSTALL (3) NEW 1x1 TOP JUMPERS
6. INSTALL (XX) NEW 1/2" COAX JUMPERS TO BE RELOCATED
7. (12) EXISTING 1/2" COAX JUMPERS TO REMAIN
8. ALL REPLACEMENT ANTENNAS TO MATCH EXISTING CONDITION & HEIGHTS
9. CONFIGURE ANTENNA MOUNTS AS NECESSARY TO ACCOMMODATE HORIZONTAL SEPARATION, PROPOSED AZIMUTHS, AND ANTENNA CONFIGURATION

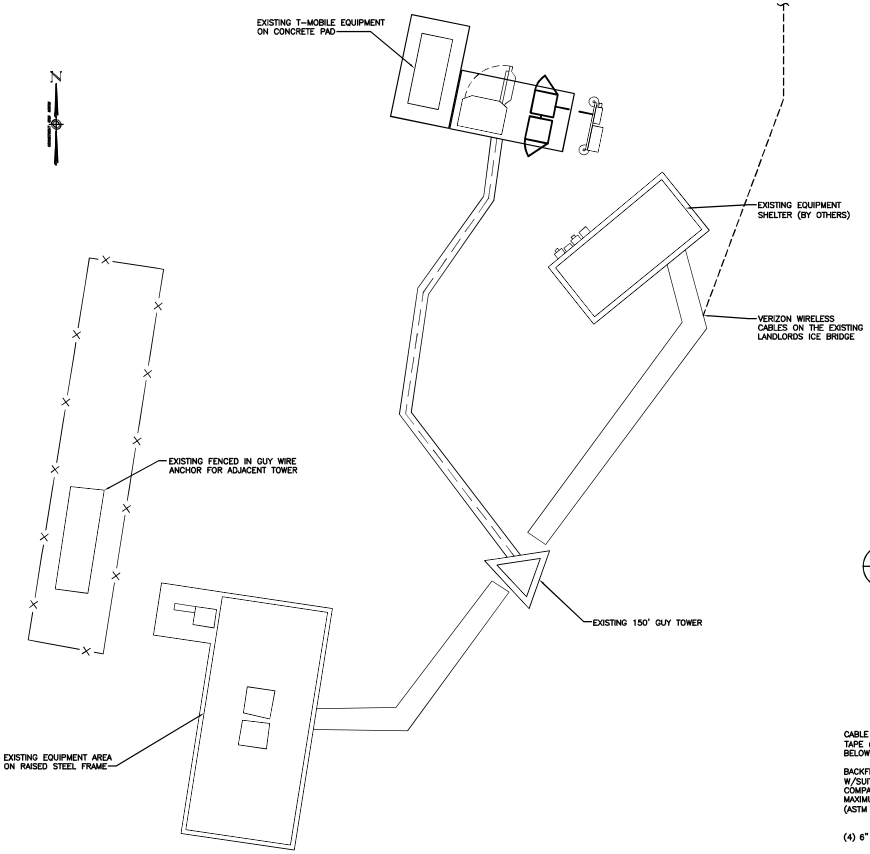
NOTES

1. NORTH ARROW IS APPROXIMATE.
2. SOME EXISTING & PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
3. PRIOR TO COMMENCEMENT OF ANY WORK, PROPOSED ANTENNA INSTALLATION IS PURSUANT TO FINDINGS DICTATED IN STRUCTURAL ANALYSIS, STRUCURAL ANALYSIS TO VERIFY CAPACITY OF EXISTING STRUCTURE TO ENSURE STRUCTURAL INTEGRITY FOLLOWING INSTALLATION OF PROPOSED ANTENNAS, COAX CABLES AND REQUIRED HARDWARE. COPY OF STRUCTURAL ANALYSIS TO BE SENT TO DESIGN ENGINEER.
4. CONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, VERIZON WIRELESS ANTENNA MOUNT LOCATION AND ANTENNAS TO BE INSTALLED.
5. CONTRACTOR SHALL NOTIFY ENGINEERS IF FILED CONDITIONS DIFFER FROM DESIGN.



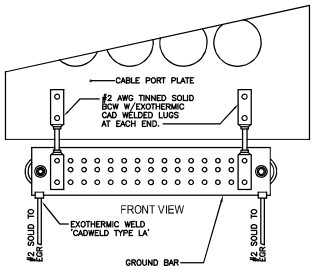
1 DE-1 SITE PLAN
SCALE: 1"=20'-0"

GRAPHIC SCALE
0 10 20 40 60 FEET

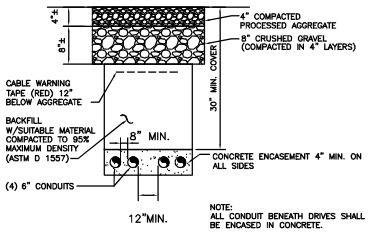


2 DE-1 COMPOUND PLAN
SCALE: 3/16"=1'-0"

GRAPHIC SCALE
0 2'-8" 5'-4" 10'-8" 16'-0"



4 DE-1 EXTERNAL GROUND BAR DETAIL
SCALE: N.T.S.



3 DE-1 CONCRETE DUCT BANK
SCALE: N.T.S.

verizon wireless

AECOM
500 ENTERPRISE DRIVE
ROCKY HILL, CONNECTICUT
(860)-529-8882

STATE OF CONNECTICUT
DOUGLAS J. ROBERTS
No. 43110
LICENSED ARCHITECT
Roberts, Doug

PROJECT NO: 60657286

VZ5-227

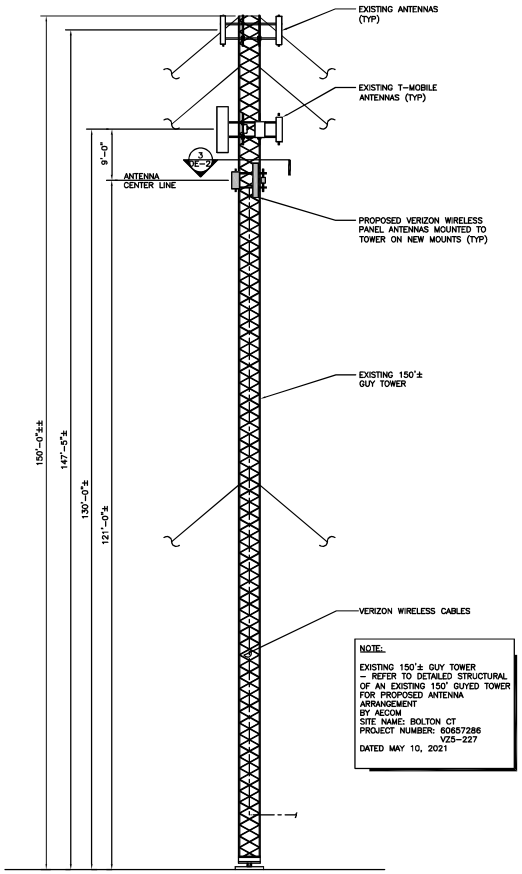
BOLTON CT

130 VERNON ROAD
BOLTON, CT 06043

AS NOTED

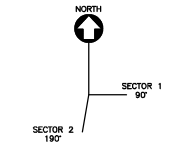
SITE PLAN AND COMPOUND PLAN

DE-1

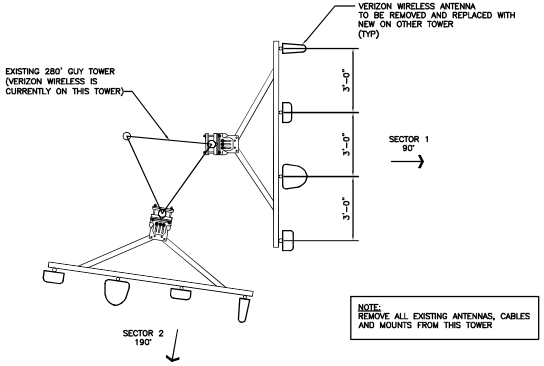


TOWER ELEVATION [redacted]

GRAPHIC SCALE
0 5 10 20 30 FEET

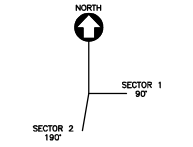


ANTENNA ORIENTATION KEY

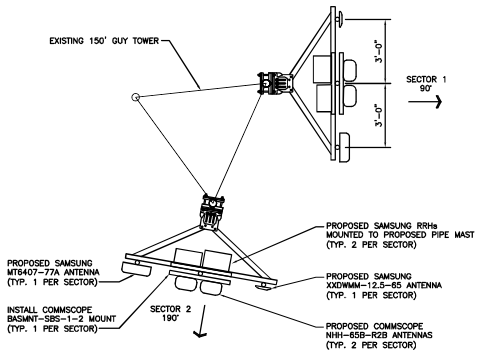


2 DE-2 **ANTENNA ORIENTATION PLAN (EXISTING)**
SCALE: 3/8"=1'-0"

GRAPHIC SCALE
0 1'-4" 2'-8" 5'-4" 8'-0"



ANTENNA ORIENTATION KEY



3 DE-2 **ANTENNA ORIENTATION PLAN (PROPOSED)**
SCALE: 3/8"=1'-0"

GRAPHIC SCALE
0 1'-4" 2'-8" 5'-4" 8'-0"

verizon wireless

AECOM
500 ENTERPRISE DRIVE
ROCKY HILL, CONNECTICUT
(860)-529-8882

STATE OF CONNECTICUT
DOUGLAS J. ROBERTS
No. 4310
LICENSED ARCHITECT
Roberts, Doug

PROJECT NO: 60657286

[redacted] VZ5-227

[redacted]

[redacted]

[redacted]

[redacted]

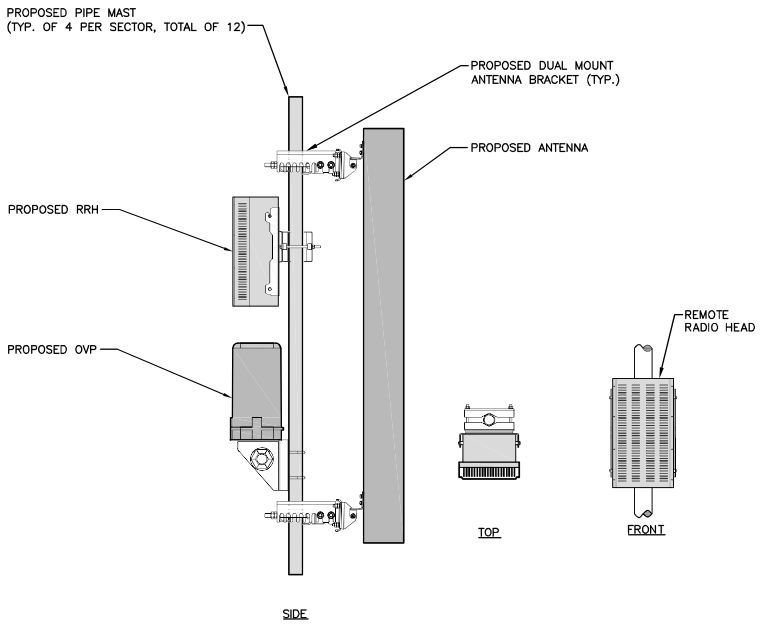
BOLTON CT

130 VERNON ROAD
BOLTON, CT 06043

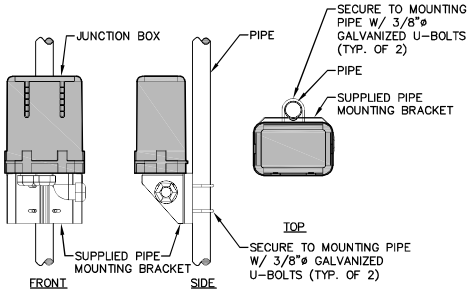
[redacted] AS NOTED

ELEVATION AND ANTENNA PLANS

DE-2



1 DE-3 REMOTE RADIO HEAD MOUNTING DETAIL
SCALE: N.T.S.



2 DE-3 JUNCTION BOX
SCALE: N.T.S.

verizon wireless

A&E FIRM
AECOM
500 ENTERPRISE DRIVE
ROCKY HILL, CONNECTICUT
(860)-529-8882

A&E SEAL
STATE OF CONNECTICUT
DOUGLAS J. ROBERTS
No. 43110
LICENSED ARCHITECT
Roberts, Doug

PROJECT NO:	60657286
JOB NO:	VZ5-227
DRAWN BY:	KAP
CHECKED BY:	MJE

ISSUED FOR

0	05-27-2021	REVIEW
1	09-10-2021	CONSTRUCTION

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO VERIZON WIRELESS IS STRICTLY PROHIBITED.

BOLTON CT

130 VERNON ROAD
BOLTON, CT 06043

SCALE: AS NOTED

RRH AND OVP
MOUNTING DETAILS

DE-3

STRUCTURAL NOTES:

1. DESIGN REQUIREMENTS ARE PER STATE BUILDING CODE AND APPLICABLE SUPPLEMENTS, INTERNATIONAL BUILDING CODE, EIA/TIA-222-H STRUCTURAL STANDARDS FOR STEEL ANTENNA, TOWERS AND ANTENNA SUPPORTING STRUCTURES.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND ENGINEER OF RECORD.
3. DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
4. STRUCTURAL STEEL SHALL CONFORM TO ASTM A992 (Fy=50 ksi), MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE INDICATED.
5. STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE B, OR ASTM A53 PIPE STEEL BLACK AND HOT-DIPPED ZINC-COATED WELDED AND SEAMLESS TYPE E OR S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.
6. STRUCTURAL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS (BEARING TYPE) AND CONFORM TO ASTM A325 TYPE-X "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS AND PLAIN HARDENED WASHERS". ALL BOLTS SHALL BE 3/4" DIA UON.
7. ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
8. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
9. FIELD WELDS, DRILL HOLES, SAW CUTS AND ALL DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED WITH AN ORGANIC ZINC REPAIR PAINT COMPLYING WITH REQUIREMENTS OF ASTM A780. GALVANIZING REPAIR PAINT SHALL HAVE 65 PERCENT ZINC BY WEIGHT, ZIRP BY DUNCAN GALVANIZING, GALVA BRIGHT PREMIUM BY CROWN OR EQUAL. THICKNESS OF APPLIED GALVANIZING REPAIR PAINT SHALL BE NOT NOT LESS THAN 4 COATS (ALLOW TIME TO DRY BETWEEN COATS) WITH A RESULTING COATING THICKNESS REQUIRED BY ASTM A123 OR A153 AS APPLICABLE.
10. CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND DI.I. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "STEEL CONSTRUCTION MANUAL". 14TH EDITION.
11. INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON-CONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE CONSTRUCTION MANAGER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE CONSTRUCTION MANAGER APPROVAL.
12. UNISTRUT SHALL BE FORMED STEEL CHANNEL STRUT FRAMING AS MANUFACTURED BY UNISTRUT CORP., WAYNE, MI OR EQUAL. STRUT MEMBERS SHALL BE 1 5/8"x1 5/8"x12GA, UNLESS OTHERWISE NOTED, AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
13. EPOXY ANCHOR ASSEMBLY SHALL CONSIST OF STAINLESS STEEL ANCHOR ROD WITH NUTS & WASHERS. AN INTERNALLY THREADED INSERT, A SCREEN TUBE AND A EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE THE HILTI-HIT HY-70 AND OR HY-200 SYSTEMS (AS SPECIFIED IN DWG.) OR ENGINEERS APPROVED EQUAL.
14. EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS I, HILTI KWIK BOLT III OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
15. LUMBER SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE NATIONAL FOREST PRODUCTS ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. ALL LUMBER SHALL BE PRESSURE TREATED AND SHALL BE STRUCTURAL GRADE NO. 2 OR BETTER.
16. WHERE ROOF PENETRATIONS ARE REQUIRED, THE CONTRACTOR SHALL CONTACT AND COORDINATE RELATED WORK WITH THE BUILDING OWNER AND THE EXISTING ROOF INSTALLER. WORK SHALL BE PERFORMED IN SUCH A MANNER AS TO NOT VOID THE EXISTING ROOF WARRANTY. ROOF SHALL BE WATERTIGHT.
17. ALL FIBERGLASS MEMBERS USED ARE AS MANUFACTURED BY STRONGWELL COMPANY OF BRISTOL, VA 24203. ALL DESIGN CRITERIA FOR THESE MEMBERS IS BASED ON INFORMATION PROVIDED IN THE DESIGN MANUAL. ALL REQUIREMENTS PUBLISHED IN SAID MANUAL MUST BE STRICTLY ADHERED TO.
18. NO MATERIALS TO BE ORDERED AND NO WORK TO BE COMPLETED UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED IN WRITING.
19. SUBCONTRACTOR SHALL FIREPROOF ALL STEEL TO PRE-EXISTING CONDITIONS.

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

GENERAL: WHERE APPLICATION IS MADE FOR CONSTRUCTION, THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN THE INSPECTION CHECKLIST ABOVE.

THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND ENGINEERS OF RECORD INVOLVED IN THE DESIGN OF THE PROJECT ARE PERMITTED TO ACT AS THE APPROVED AGENCY AND THEIR PERSONNEL ARE PERMITTED TO ACT AS THE SPECIAL INSPECTOR FOR THE WORK DESIGNED BY THEM, PROVIDED THOSE PERSONNEL MEET THE QUALIFICATION REQUIREMENTS.

STATEMENT OF SPECIAL INSPECTIONS: THE APPLICANT SHALL SUBMIT A STATEMENT OF SPECIAL INSPECTIONS PREPARED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE IN ACCORDANCE WITH SECTION 107.1 AS A CONDITION FOR ISSUANCE. THIS STATEMENT SHALL BE IN ACCORDANCE WITH SECTION 1705.

REPORT REQUIREMENT: SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS SHALL BE SUBMITTED.

SPECIAL INSPECTION CHECKLIST

BEFORE CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
N/A	ENGINEER OF RECORD APPROVED SHOP DRAWINGS 1
N/A	MATERIAL SPECIFICATIONS REPORT 2
N/A	FABRICATOR NDE INSPECTION
N/A	PACKING SLIPS 3
ADDITIONAL TESTING AND INSPECTIONS:	
DURING CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
N/A	STEEL INSPECTIONS
N/A	HIGH STRENGTH BOLT INSPECTIONS
N/A	HIGH WIND ZONE INSPECTIONS 4
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH, SLUMP TESTS AND PLACEMENT
N/A	POST INSTALLED ANCHOR VERIFICATION 5
N/A	GROUT VERIFICATION
N/A	CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
N/A	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT
ADDITIONAL TESTING AND INSPECTIONS:	
AFTER CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
N/A	MODIFICATION INSPECTOR REDLINE OR RECORD DRAWINGS 6
N/A	POST INSTALLED ANCHOR PULL-OUT TESTING
REQUIRED	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTES:

1. REQUIRED FOR ANY NEW SHOP FABRICATED FRP OR STEEL.
2. PROVIDED BY MANUFACTURER, REQUIRED IF HIGH STRENGTH BOLTS OR STEEL.
3. PROVIDED BY GENERAL CONTRACTOR; PROOF OF MATERIALS.
4. HIGH WIND ZONE INSPECTION CATB 120MPH OR CAT C,D 110MPH INSPECT FRAMING OF WALLS, ANCHORING, FASTENING SCHEDULE.
5. ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. DESIGN ADHESIVE BOND STRENGTH HAS BEEN BASED ON ACI 355.4 TEMPERATURE CATEGORY B WITH INSTALLATIONS INTO DRY HOLES DRILLED USING A CARBIDE BIT INTO CRACKED CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS. ADHESIVE ANCHORS REQUIRING CERTIFIED INSTALLATIONS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER PER ACI 318-11 D.9.2.2. INSTALLATIONS REQUIRING CERTIFIED INSTALLERS SHALL BE INSPECTED PER ACI 318-11 D.8.2.4.
6. AS REQUIRED; FOR ANY FIELD CHANGES TO THE ITEMS IN THIS TABLE.

NOTES:

1. ALL CONNECTIONS TO BE SHOP WELDED & FIELD BOLTED USING 3/4"ø A325-X BOLTS, UNLESS OTHERWISE NOTIFIED.
2. SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED BEFORE ORDERING MATERIAL.
3. SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED PRIOR TO STEEL FABRICATION.

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STATE OF CONNECTICUT
DOUGLAS J. ROBERTS
No. 43110
LICENSED ARCHITECT
Roberts, Doug

PROJECT NO:	60657286
JOB NO:	VZ5-227
DRAWN BY:	KAP
CHECKED BY:	MJE

ISSUED FOR

0	05-27-2021	REVIEW
1	09-10-2021	CONSTRUCTION

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BOLTON CT

130 VERNON ROAD
BOLTON, CT 06043

SCALE: AS NOTED

STRUCTURAL NOTES AND SPECIAL INSPECTIONS

DE-4

LOCUS MAP SCALE: N.T.S. NORTH

APPROXIMATE SITE COORDINATES:	LAT:	41° 48' 10.0008" N
	LONG:	72° 26' 27.9996" W

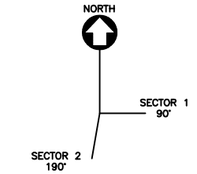
NOTE:

EXISTING 150'± GUY TOWER
– REFER TO DETAILED STRUCTURAL ANALYSIS AND MODIFICATION OF AN EXISTING 150' GUYED TOWER FOR PROPOSED ANTENNA ARRANGEMENT BY AECOM
SITE NAME: BOLTON CT
PROJECT NUMBER: 60657286
VZ5–227
DATED MAY 10, 2021

DESIGN EXHIBIT

THIS PLAN IS DIAGRAMMATIC IN NATURE AND IS INTENDED TO PROVIDE GENERAL INFORMATION REGARDING THE LOCATION AND SIZE OF THE PROPOSED ANTENNA UPGRADE.

ANTENNA ORIENTATION

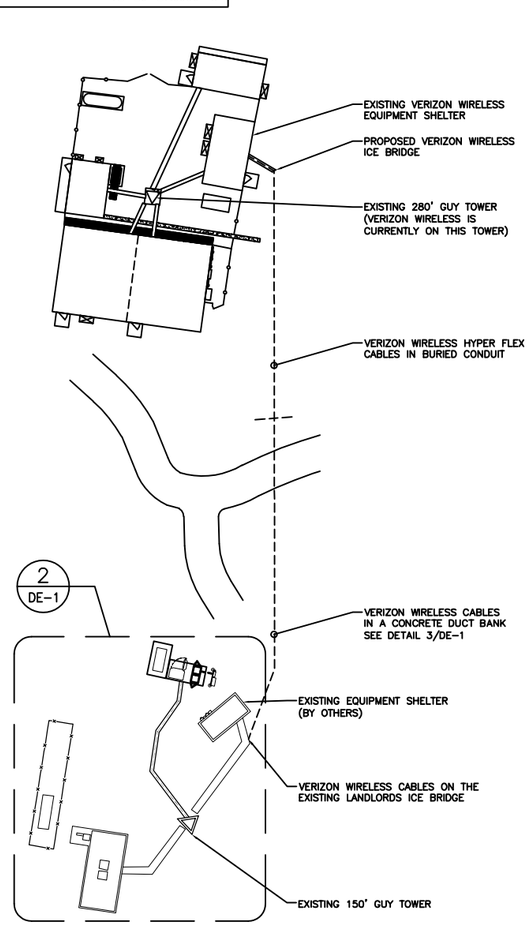


SCOPE

1. (8) EXISTING ANTENNAS TO BE REMOVED FROM THE EXISTING TOWER
2. INSTALL (4) NEW COMMSCOPE NHH–65B–R2B ANTENNAS
   INSTALL (2) NEW SAMSUNG MT6407–77A ANTENNAS
   INSTALL (2) NEW SAMSUNG XXDWMM–12.5–65 ANTENNAS
   INSTALL (2) NEW COMMSCOPE BASMNT–SBS–1–2 MOUNTS
   (2) EXISTING RRHs TO BE REMOVED
3. INSTALL (1) NEW OVP
   INSTALL (–) NEW DIPLEXERS
4. INSTALL (2) NEW HYBRID CABLE
5. (3) EXISTING 1x1 TOP JUMPERS TO REMAIN
   INSTALL (3) NEW 1x1 TOP JUMPERS
6. INSTALL (XX) NEW 1/2" COAX JUMPERS TO BE RELOCATED
7. (12) EXISTING 1/2" COAX JUMPERS TO REMAIN
8. ALL REPLACEMENT ANTENNAS TO MATCH EXISTING CONDITION & HEIGHTS
9. CONFIGURE ANTENNA MOUNTS AS NECESSARY TO ACCOMMODATE HORIZONTAL SEPARATION, PROPOSED AZIMUTHS, AND ANTENNA CONFIGURATION

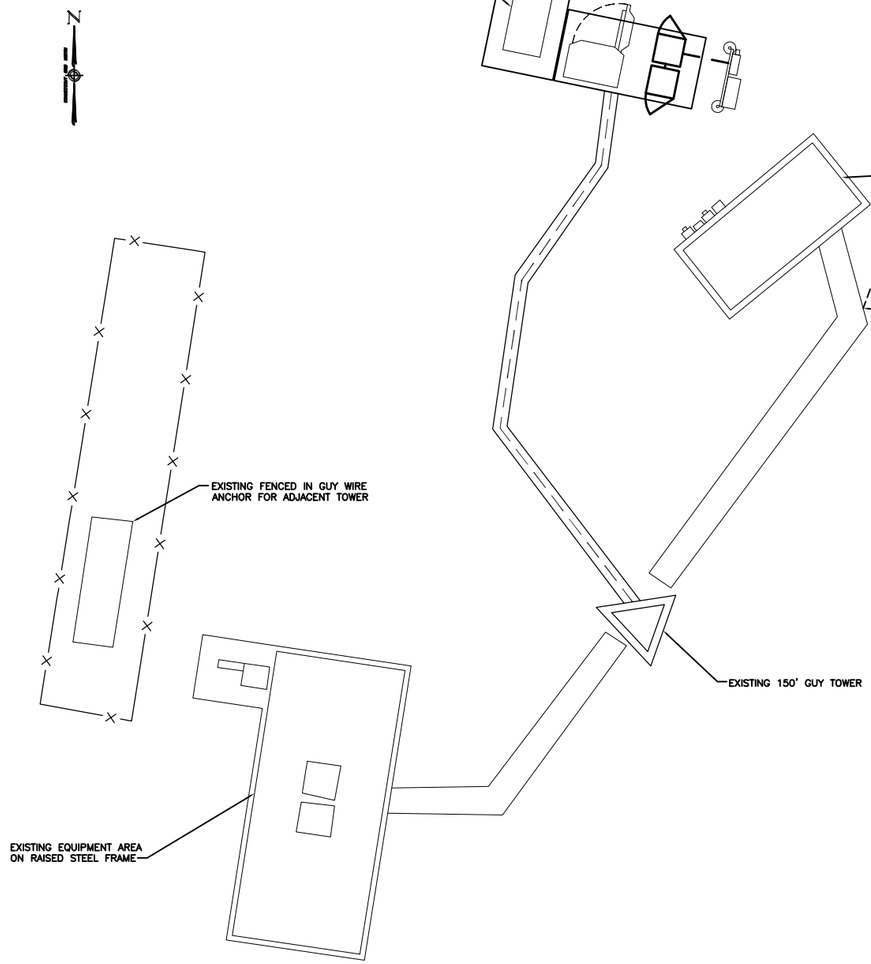
NOTES

1. NORTH ARROW IS APPROXIMATE.
2. SOME EXISTING & PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
3. PRIOR TO COMMENCEMENT OF ANY WORK, PROPOSED ANTENNA INSTALLATION IS PURSUANT TO FINDINGS DICTATED IN STRUCTURAL ANALYSIS, STRUCURAL ANALYSIS TO VERIFY CAPACITY OF EXISTING STRUCTURE TO ENSURE STRUCTURAL INTEGRITY FOLLOWING INSTALLATION OF PROPOSED ANTENNAS, COAX CABLES AND REQUIRED HARDWARE. COPY OF STRUCTURAL ANALYSIS TO BE SENT TO DESIGN ENGINEER.
4. CONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, VERIZON WIRELESS ANTENNA MOUNT LOCATION AND ANTENNAS TO BE INSTALLED.
5. CONTRACTOR SHALL NOTIFY ENGINEERS IF FILED CONDITIONS DIFFER FROM DESIGN.



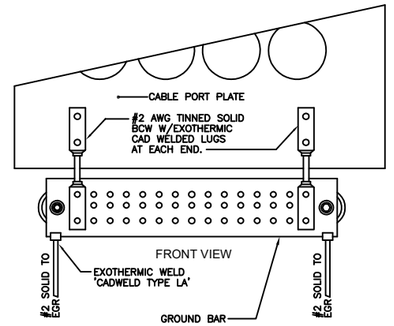
1 DE–1 SITE PLAN
SCALE: 1"=20'–0"

GRAPHIC SCALE
0 10 20 40 60 FEET

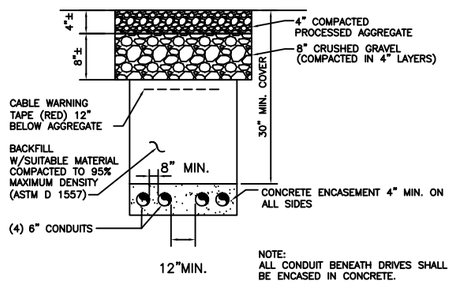


2 DE–1 COMPOUND PLAN
SCALE: 3/16"=1'–0"

GRAPHIC SCALE
0 2'–8" 5'–4" 10'–8" 16'–0"



4 DE–1 EXTERNAL GROUND BAR DETAIL
SCALE: N.T.S.



3 DE–1 CONCRETE DUCT BANK
SCALE: N.T.S.

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STATE OF CONNECTICUT
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PROJECT NO:	60657286
JOB NO:	VZ5–227
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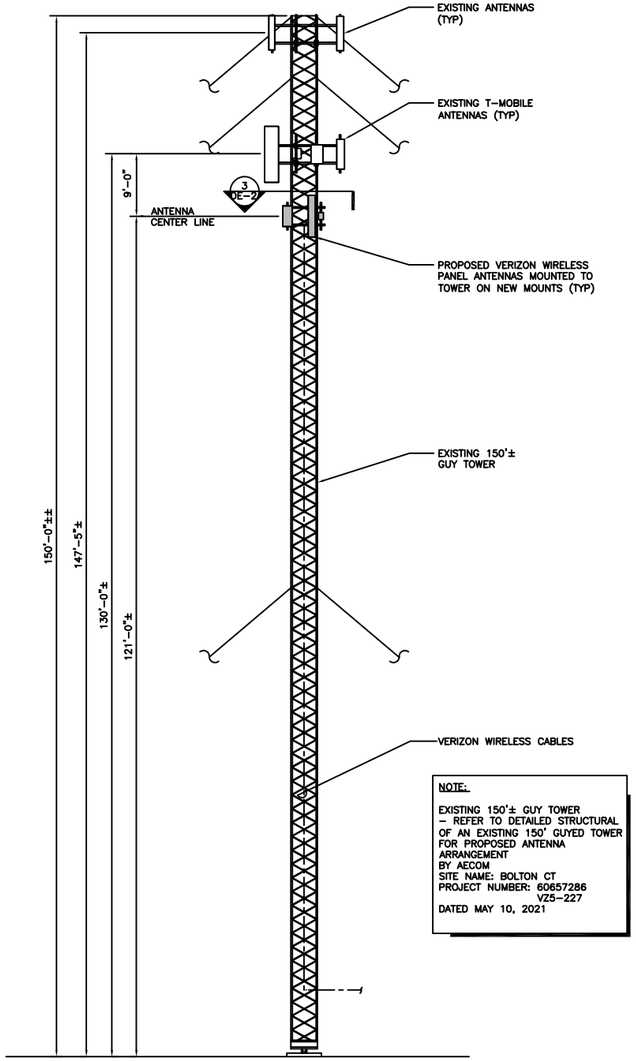
BOLTON CT

130 VERNON ROAD
BOLTON, CT 06043

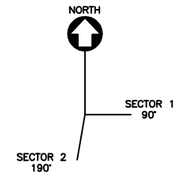
SCALE: AS NOTED

SITE PLAN AND COMPOUND PLAN

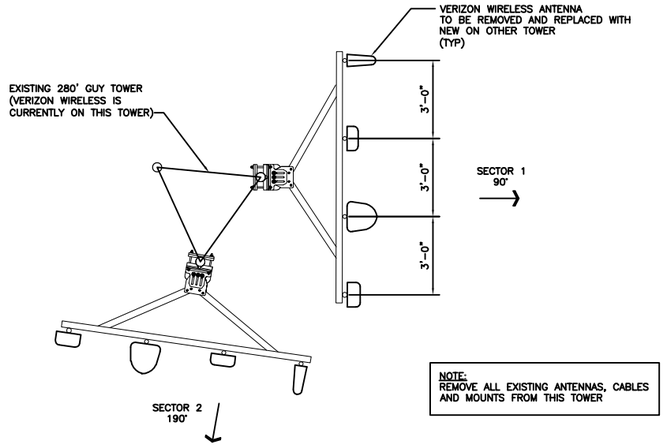
DE-1



1 DE-2 TOWER ELEVATION
SCALE: 1"=10'-0"

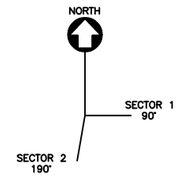


ANTENNA ORIENTATION KEY

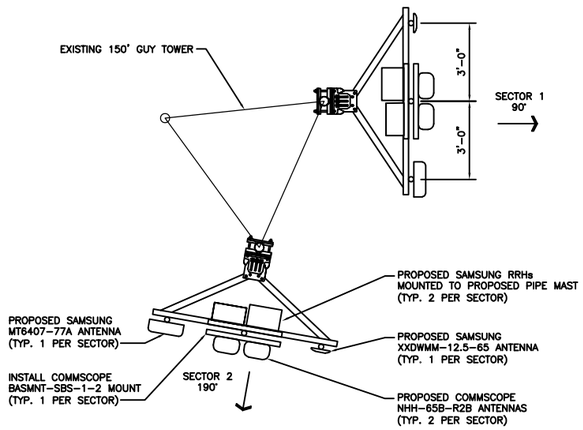


2 DE-2 ANTENNA ORIENTATION PLAN (EXISTING)
SCALE: 3/8"=1'-0"

GRAPHIC SCALE
0 1'-4" 2'-8" 5'-4" 8'-0"



ANTENNA ORIENTATION KEY



3 DE-2 ANTENNA ORIENTATION PLAN (PROPOSED)
SCALE: 3/8"=1'-0"

GRAPHIC SCALE
0 1'-4" 2'-8" 5'-4" 8'-0"

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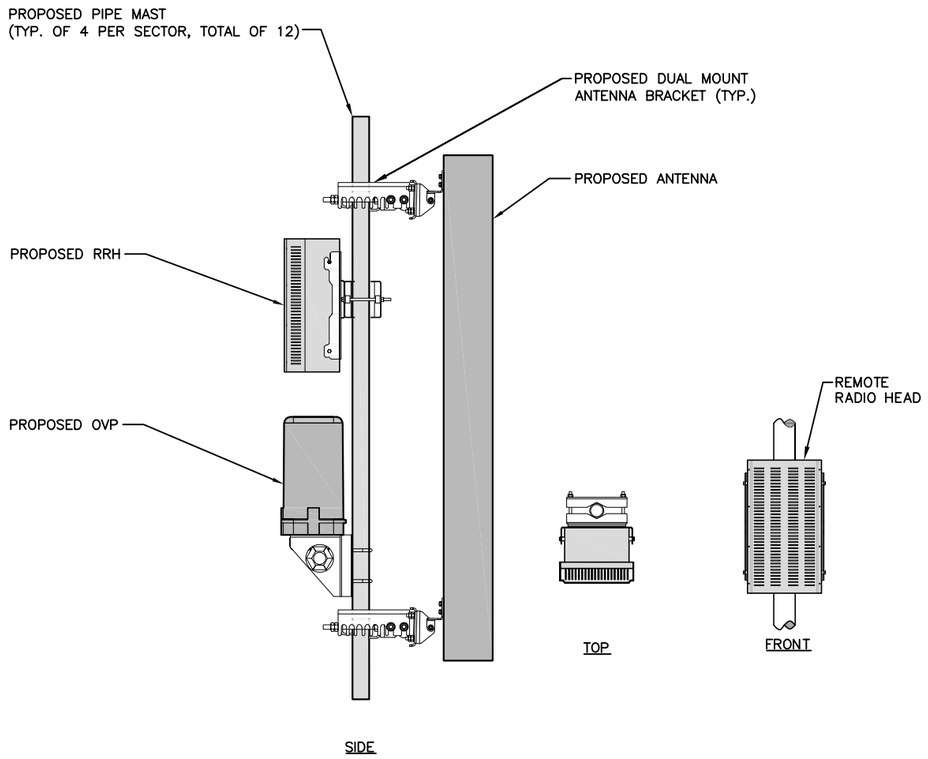
BOLTON CT

130 VERNON ROAD
BOLTON, CT 06043

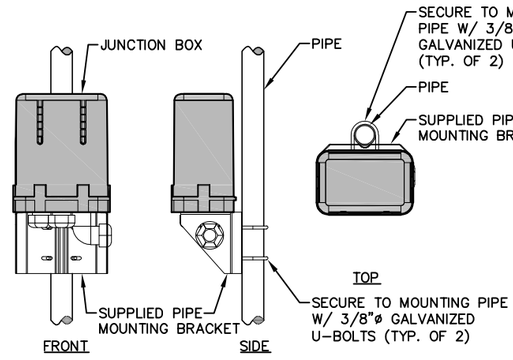
SCALE: AS NOTED

ELEVATION AND ANTENNA PLANS

DE-2



1 DE-3 REMOTE RADIO HEAD MOUNTING DETAIL
SCALE: N.T.S.



2 DE-3 JUNCTION BOX
SCALE: N.T.S.

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130 VERNON ROAD
BOLTON, CT 06043

SCALE: AS NOTED

RRH AND OVP MOUNTING DETAILS

DE-3

STRUCTURAL NOTES:

1. DESIGN REQUIREMENTS ARE PER STATE BUILDING CODE AND APPLICABLE SUPPLEMENTS, INTERNATIONAL BUILDING CODE, EIA/TIA-222-H STRUCTURAL STANDARDS FOR STEEL ANTENNA, TOWERS AND ANTENNA SUPPORTING STRUCTURES.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND ENGINEER OF RECORD.
3. DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
4. STRUCTURAL STEEL SHALL CONFORM TO ASTM A992 (Fy=50 ksi), MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE INDICATED.
5. STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE B, OR ASTM A53 PIPE STEEL BLACK AND HOT-DIPPED ZINC-COATED WELDED AND SEAMLESS TYPE E OR S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.
6. STRUCTURAL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS (BEARING TYPE) AND CONFORM TO ASTM A325 TYPE-X "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS AND PLAIN HARDENED WASHERS". ALL BOLTS SHALL BE 3/4" DIA UON.
7. ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
8. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
9. FIELD WELDS, DRILL HOLES, SAW CUTS AND ALL DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED WITH AN ORGANIC ZINC REPAIR PAINT COMPLYING WITH REQUIREMENTS OF ASTM A780. GALVANIZING REPAIR PAINT SHALL HAVE 65 PERCENT ZINC BY WEIGHT, ZIRP BY DUNCAN GALVANIZING, GALVA BRIGHT PREMIUM BY CROWN OR EQUAL. THICKNESS OF APPLIED GALVANIZING REPAIR PAINT SHALL BE NOT NOT LESS THAN 4 COATS (ALLOW TIME TO DRY BETWEEN COATS) WITH A RESULTING COATING THICKNESS REQUIRED BY ASTM A123 OR A153 AS APPLICABLE.
10. CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND DI.I. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "STEEL CONSTRUCTION MANUAL". 14TH EDITION.
11. INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON-CONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE CONSTRUCTION MANAGER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE CONSTRUCTION MANAGER APPROVAL.
12. UNISTRUT SHALL BE FORMED STEEL CHANNEL STRUT FRAMING AS MANUFACTURED BY UNISTRUT CORP., WAYNE, MI OR EQUAL. STRUT MEMBERS SHALL BE 1 5/8"x1 5/8"x12GA, UNLESS OTHERWISE NOTED, AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
13. EPOXY ANCHOR ASSEMBLY SHALL CONSIST OF STAINLESS STEEL ANCHOR ROD WITH NUTS & WASHERS. AN INTERNALLY THREADED INSERT, A SCREEN TUBE AND A EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE THE HILTI-HIT HY-70 AND OR HY-200 SYSTEMS (AS SPECIFIED IN DWG.) OR ENGINEERS APPROVED EQUAL.
14. EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS I, HILTI KWIK BOLT III OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
15. LUMBER SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE NATIONAL FOREST PRODUCTS ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. ALL LUMBER SHALL BE PRESSURE TREATED AND SHALL BE STRUCTURAL GRADE NO. 2 OR BETTER.
16. WHERE ROOF PENETRATIONS ARE REQUIRED, THE CONTRACTOR SHALL CONTACT AND COORDINATE RELATED WORK WITH THE BUILDING OWNER AND THE EXISTING ROOF INSTALLER. WORK SHALL BE PERFORMED IN SUCH A MANNER AS TO NOT VOID THE EXISTING ROOF WARRANTY. ROOF SHALL BE WATERTIGHT.
17. ALL FIBERGLASS MEMBERS USED ARE AS MANUFACTURED BY STRONGWELL COMPANY OF BRISTOL, VA 24203. ALL DESIGN CRITERIA FOR THESE MEMBERS IS BASED ON INFORMATION PROVIDED IN THE DESIGN MANUAL. ALL REQUIREMENTS PUBLISHED IN SAID MANUAL MUST BE STRICTLY ADHERED TO.
18. NO MATERIALS TO BE ORDERED AND NO WORK TO BE COMPLETED UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED IN WRITING.
19. SUBCONTRACTOR SHALL FIREPROOF ALL STEEL TO PRE-EXISTING CONDITIONS.

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

GENERAL: WHERE APPLICATION IS MADE FOR CONSTRUCTION, THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN THE INSPECTION CHECKLIST ABOVE.

THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND ENGINEERS OF RECORD INVOLVED IN THE DESIGN OF THE PROJECT ARE PERMITTED TO ACT AS THE APPROVED AGENCY AND THEIR PERSONNEL ARE PERMITTED TO ACT AS THE SPECIAL INSPECTOR FOR THE WORK DESIGNED BY THEM, PROVIDED THOSE PERSONNEL MEET THE QUALIFICATION REQUIREMENTS.

STATEMENT OF SPECIAL INSPECTIONS: THE APPLICANT SHALL SUBMIT A STATEMENT OF SPECIAL INSPECTIONS PREPARED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE IN ACCORDANCE WITH SECTION 107.1 AS A CONDITION FOR ISSUANCE. THIS STATEMENT SHALL BE IN ACCORDANCE WITH SECTION 1705.

REPORT REQUIREMENT: SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS SHALL BE SUBMITTED.

SPECIAL INSPECTION CHECKLIST

CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
BEFORE CONSTRUCTION	
N/A	ENGINEER OF RECORD APPROVED SHOP DRAWINGS 1
N/A	MATERIAL SPECIFICATIONS REPORT 2
N/A	FABRICATOR NDE INSPECTION
N/A	PACKING SLIPS 3
ADDITIONAL TESTING AND INSPECTIONS:	
DURING CONSTRUCTION	
N/A	STEEL INSPECTIONS
N/A	HIGH STRENGTH BOLT INSPECTIONS
N/A	HIGH WIND ZONE INSPECTIONS 4
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH, SLUMP TESTS AND PLACEMENT
N/A	POST INSTALLED ANCHOR VERIFICATION 5
N/A	GROUT VERIFICATION
N/A	CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
N/A	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT
ADDITIONAL TESTING AND INSPECTIONS:	
AFTER CONSTRUCTION	
N/A	MODIFICATION INSPECTOR REDLINE OR RECORD DRAWINGS 6
N/A	POST INSTALLED ANCHOR PULL-OUT TESTING
REQUIRED	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTES:

1. REQUIRED FOR ANY NEW SHOP FABRICATED FRP OR STEEL.
2. PROVIDED BY MANUFACTURER, REQUIRED IF HIGH STRENGTH BOLTS OR STEEL.
3. PROVIDED BY GENERAL CONTRACTOR; PROOF OF MATERIALS.
4. HIGH WIND ZONE INSPECTION CATB 120MPH OR CAT C,D 110MPH INSPECT FRAMING OF WALLS, ANCHORING, FASTENING SCHEDULE.
5. ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. DESIGN ADHESIVE BOND STRENGTH HAS BEEN BASED ON ACI 355.4 TEMPERATURE CATEGORY B WITH INSTALLATIONS INTO DRY HOLES DRILLED USING A CARBIDE BIT INTO CRACKED CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS. ADHESIVE ANCHORS REQUIRING CERTIFIED INSTALLATIONS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER PER ACI 318-11 D.9.2.2. INSTALLATIONS REQUIRING CERTIFIED INSTALLERS SHALL BE INSPECTED PER ACI 318-11 D.8.2.4.
6. AS REQUIRED; FOR ANY FIELD CHANGES TO THE ITEMS IN THIS TABLE.

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1. ALL CONNECTIONS TO BE SHOP WELDED & FIELD BOLTED USING 3/4"ø A325-X BOLTS, UNLESS OTHERWISE NOTIFIED.
2. SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED BEFORE ORDERING MATERIAL.
3. SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED PRIOR TO STEEL FABRICATION.

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A&E SEAL

PROJECT NO: 60657286

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BOLTON CT

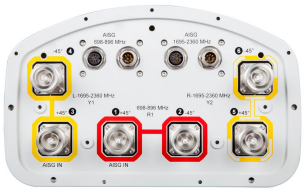
130 VERNON ROAD
BOLTON, CT 06043

SCALE: AS NOTED

STRUCTURAL NOTES AND SPECIAL INSPECTIONS

DE-4

NHH-65B-R2B



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

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

General Specifications

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

Remote Electrical Tilt (RET) Information, General

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

Dimensions

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

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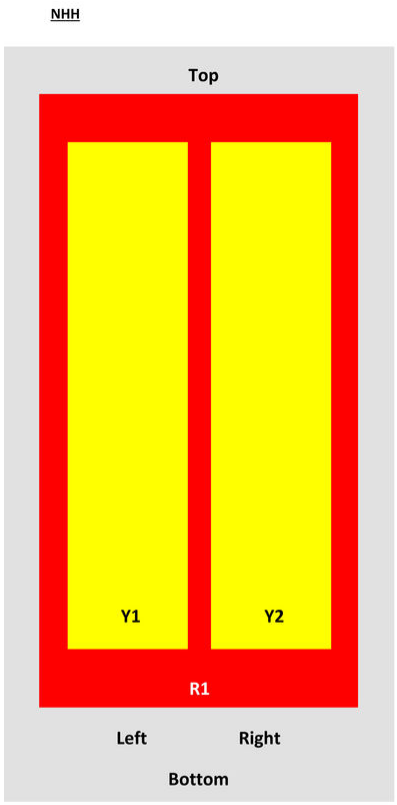
Depth	180 mm | 7.087 in

Array Layout



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

View from the front of the antenna

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

Electrical Specifications

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

Remote Electrical Tilt (RET) Information, Electrical

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

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NHH-65B-R2B

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

Electrical Specifications

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

Electrical Specifications, BASTA

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

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NHH-65B-R2B

CPR at Sector, dB	10	7	16	13	11	4

Mechanical Specifications

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

Packaging and Weights

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

Regulatory Compliance/Certifications

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

Included Products

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

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance

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[CBRS] Clip-on Antenna Specifications

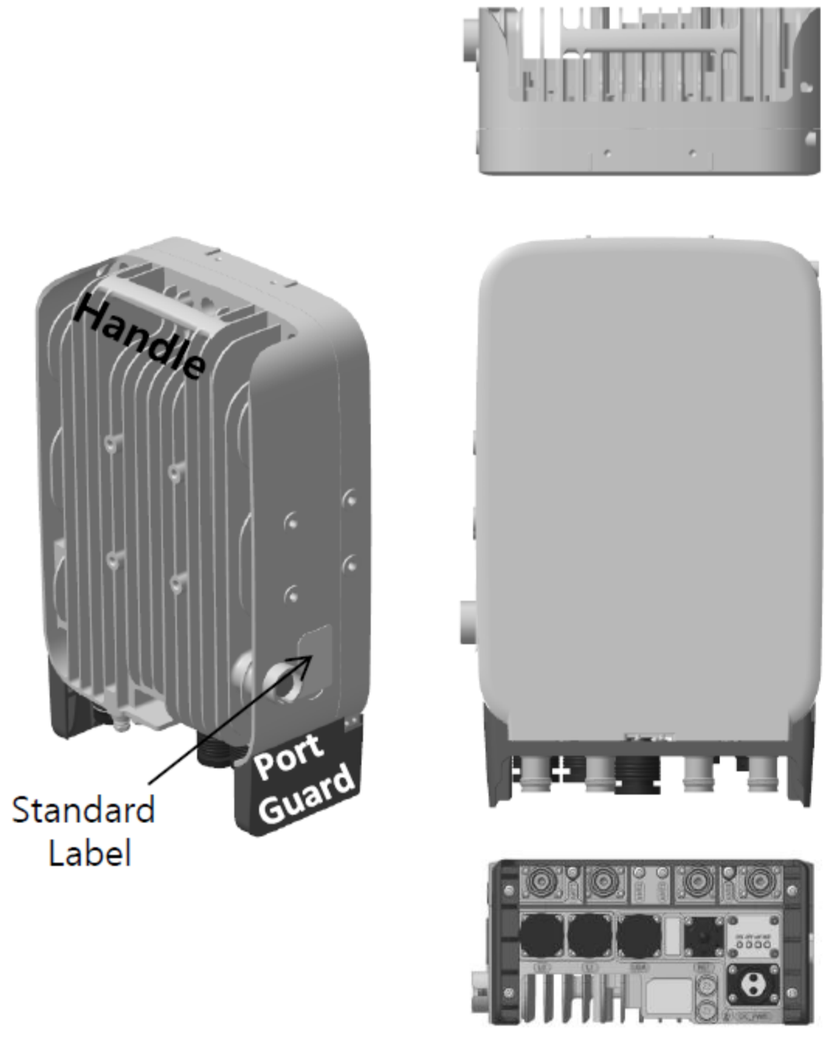
VzW accepted IP45 in FLD, but IP55 is Samsung Spec.

Items	Clip-on Antenna, BASTA**
Antenna Gain	12.5 ± 0.5 dBi (Max 13 dBi)
Horizontal BW (-3dB)	65° ± 5°
Vertical BW (-3dB)	17° ±3°
Electrical Tilt	8° (fixed) ±2°
Front-to-Back Ratio	> 25 dB
Port-to-Port Tracking	< 3 dB
VSWR	< 1.5
Isolation	> 25 dB
Ingress Protection	**IP55**
Size	220(W)×313(H)×34.3(D) mm (*) (8.7 x 12.3 x 1.4 inch.)
Weight	< **2.0** kg [Typ. 1.3 kg]
It is required that the radio should be weatherproofed properly with JMA WPS Boot with external antenna or with Weatherproof Boot for clip-on antennas.	

Antenna includes integrated cable with connector
* Design is subject to minor change

** Ant. spec. follows NGMN recommendations on Base Station Antenna Standards (BASTA). For example, 'mean ± tolerance of 86.6%' is applied to double-sided specification of statistical RF parameters.

[CBRS RRH] Spec.



Current Size: 216 x 307 x 105.5 mm (6.99L)
(8.5 x 12.1 x 4.1 inch., excluding Port Guard)
Design is subject to minor change

Item	Specification
Band	Band 48 (3.5 GHz)
Frequency	3550~3700 MHz
IBW	150 MHz
OBW	80 MHz
# of Carriers	5/10/15/20 MHz x 4 carriers
RF Chain	4TX / 4RX
RF Output Power & EIRP	4 path x 5 W (Total: 20 W = 43 dBm) (EIRP: 47 dBm / 10 MHz)
RX Sensitivity	Typical : -101.5 dBm @ 1 Rx (3GPP 36.104, Wide Area)
Modulation	256-QAM support (1024-QAM with 1~2dB power back-off)
Input Power	-48 VDC (-38 to -57 VDC, 1 SKU), with clip-on AC-DC converter (Option)
Power Consumption	About 160 Watt @ 100% RF load, typical conditions
Volume	**Under 7L** (w/o Antenna), Under 9.6L (with antenna)
Weight	**Under 8.0 kg** (**18.64** lb) (w/o Antenna), Under 10.5 Kg (with ant.)
Operating Temperature	-40°C (-40°F) ~ 55°C (131°F) (W/o solar load)
Cooling	Natural convection
Unwanted Emission	3GPP 36.104 Category A
	[B48] : FCC 47 CFR 96.41 e)
Optic Interface	20km, 2 ports (9.8Gbps x 2), SFP, single mode, duplex or Bi-Di
CPRI Cascade	Not supported
# of Antenna Port	4
External Alarm (UDA)	4
RET	AISG 2.2
TMA & built-in Bias-T I//F and PIM cancellation	Not supported
Mounting Options	Pole, wall, tower, back to back, side by side (for external ant), 3 RRH with Clip-on Antenna on the pole
Antenna Type	Integrated (Clip-on) antenna (Option), External antenna (Option)
NB-IoT	Not Supported (HW Resource reserved for 1 Guard Band NB-IoT per LTE carrier)
Spectrum Analyzer	TX/RX Support
External Alarm (UDA)	4
5G NR	Support with S/W upgrade
XRAN	Support with S/W upgrade

SAMSUNG

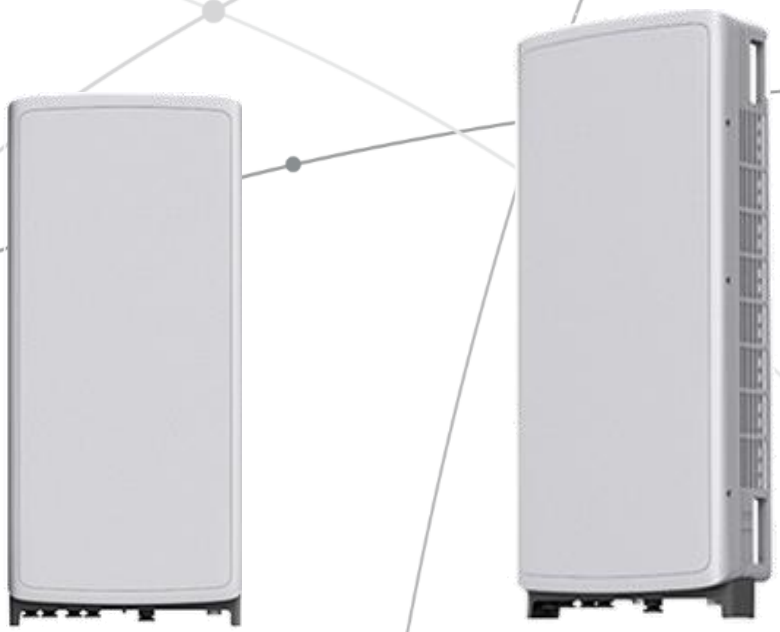
SAMSUNG

C-Band 64T64R Massive MIMO Radio

for High Capacity and Wide Coverage

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

Model Code : MT6407-77A

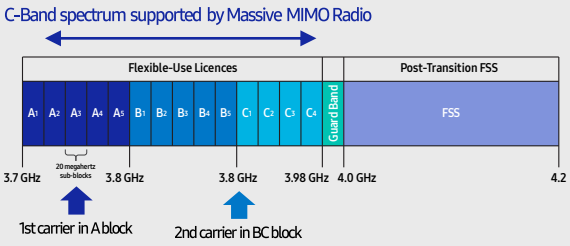


Points of Differentiation

Wide Bandwidth

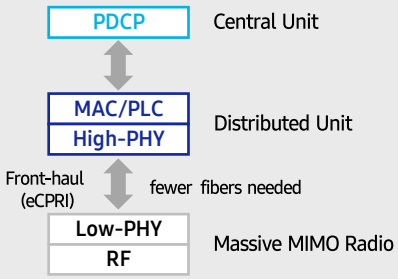
With capability to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

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



Future Proof Product

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



Enhanced Performance

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

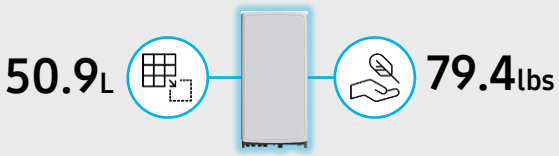
This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

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

Well Matched Design

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

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



Technical Specifications

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

SAMSUNG

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

129 Samsung-ro, Yeongtong-gu, Suwon-si Gyeonggi-do, Korea

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SAMSUNG

700/850MHZ MACRO RADIO

DUAL-BAND AND HIGH POWER FOR MACRO COVERAGE

Samsung's future proof dual-band radio is designed to help effectively increase the coverage areas in wireless networks. This 700/850MHz 4T4R dual-band radio has 4Tx/4Rx to 2Tx/2Rx RF chains options and a total output power of 320W, making it ideal for macro sites.

57196

Model Code	RF4440d-13A

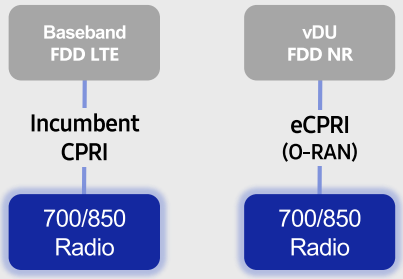
Homepage
samsungnetworks.com

Youtube
www.youtube.com/samsung5g

Points of Differentiation

Continuous Migration

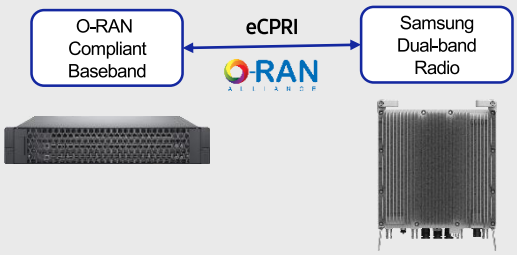
Samsung's 700/850MHz macro radio can support each incumbent CPRI interface as well as an advanced eCPRI interface. This feature provides installable options for both legacy LTE networks and added NR networks.



O-RAN Compliant

A standardized O-RAN radio can help when implementing cost-effective networks because it is capable of sending more data without compromising additional investments.

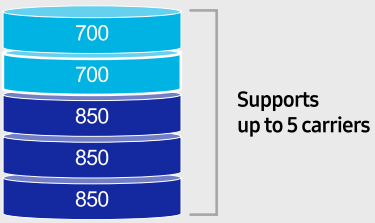
Samsung's state-of-the-art O-RAN technology will help accelerate the effort toward constructing a solid O-RAN ecosystem.



Optimum Spectrum Utilization

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

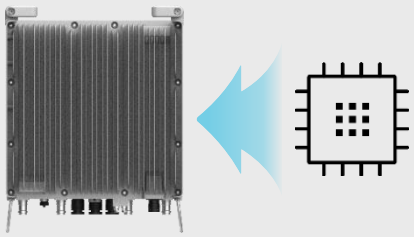
The new 700/850MHz dual-band radio can support up to 2 carriers in the B13 (700MHz) band and 3 carriers in the B5 (850MHz) band, respectively.



Secured Integrity

Access to sensitive data is allowed only to authorized software.

The Samsung radio's CPU can protect root of trust, which is credential information to verify SW integrity, and secure storage provides access control to sensitive data by using dedicated hardware (TPM).



Technical Specifications

Item	Specification
Tech	LTE / NR
Brand	B13(700MHz), B5(850MHz)
Frequency Band	DL: 746 – 756MHz, UL: 777 – 787MHz DL: 869 – 894MHz, UL: 824 – 849MHz
RF Power	(B13) 4 × 40W or 2 × 60W (B5) 4 × 40W or 2 × 60W
IBW/OBW	(B13) 10MHz / 10MHz (B5) 25MHz / 25MHz
Installation	Pole, Wall
Size/ Weight	14.96 x 14.96 x 9.05inch (33.2L) / 70.33 lb

SAMSUNG

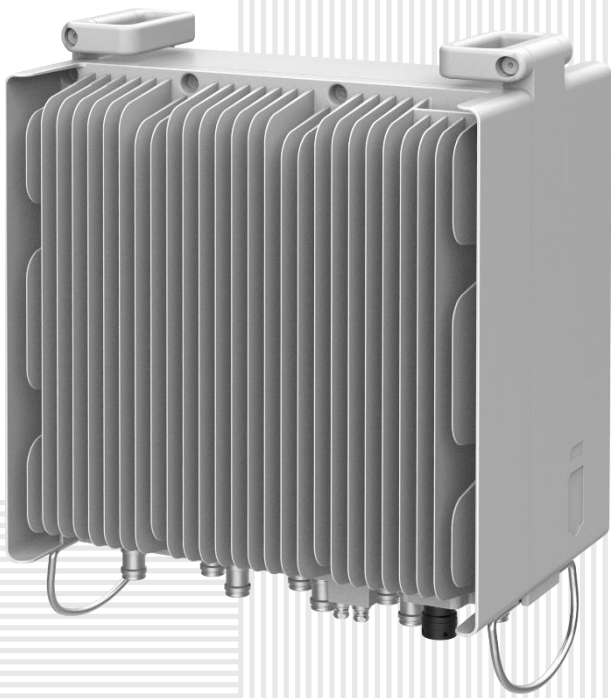
AWS/PCS MACRO RADIO

DUAL-BAND AND HIGH POWER FOR MACRO COVERAGE

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

57196

Model Code	RF4439d-25A



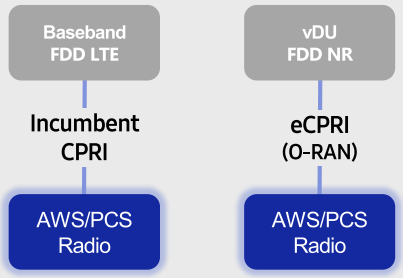
Homepage
samsungnetworks.com

Youtube
www.youtube.com/samsung5g

Points of Differentiation

Continuous Migration

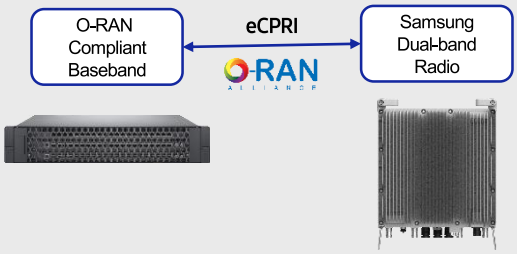
Samsung's AWS/PCS macro radio can support each incumbent CPRI interface as well as advanced eCPRI interfaces. This feature provides installable options for both legacy LTE networks and added NR networks.



O-RAN Compliant

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

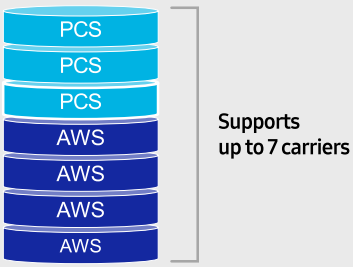
Samsung's state-of-the-art O-RAN technology will help accelerate the effort toward constructing a solid O-RAN ecosystem.



Optimum Spectrum Utilization

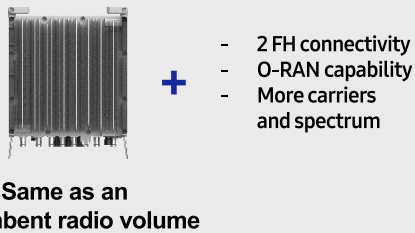
The number of required carriers varies according to site (region). Supporting many carriers is essential for using all frequencies that the operator has available.

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



Brand New Features in a Compact Size

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



Technical Specifications

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

ATTACHMENT 3

	General	Power	Density					
Site Name: Bolton								
Tower Height: Verizon @ 120ft								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**FREQ.**	**CALC. POWER DENS**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*AT&T	1	546	164	850	0.0079	0.5667	0.14%	
*AT&T	4	826	164	700	0.0476	0.4667	1.02%	
*AT&T	4	1340	164	2100	0.0772	1.0000	0.77%	
*AT&T	2	672	164	700	0.0194	0.4667	0.41%	
*AT&T	2	720	164	850	0.0207	0.5667	0.37%	
*AT&T	4	1040	164	1900	0.0599	1.0000	0.60%	
*T-Mobile	2	2057	130	1900	0.0962	1.0000	0.96%	
*T-Mobile	2	2308	130	2100	0.1080	1.0000	1.08%	
*T-Mobile	2	6413	130	2500	0.3000	1.0000	3.00%	
*T-Mobile	2	6413	130	2500	0.3000	1.0000	3.00%	
*T-Mobile	2	592	130	600	0.0277	0.4000	0.69%	
*T-Mobile	1	1578	130	600	0.0369	0.4000	0.92%	
*T-Mobile	2	649	130	700	0.0304	0.4667	0.65%	
*T-Mobile	2	2204	130	1900	0.1031	1.0000	1.03%	
*T-Mobile	2	1295	130	2100	0.0606	1.0000	0.61%	
*Sprint	1	438	148	850	0.0078	0.5667	0.14%	
*Sprint	2	438	148	850	0.0156	0.5667	0.28%	
*Sprint	5	623	148	1900	0.0556	1.0000	0.56%	
*Sprint	2	1556	148	1900	0.0555	1.0000	0.56%	
*Sprint	8	778	148	2500	0.1110	1.0000	1.11%	
*Nextel	24	100	223	869	0.0183	0.5793	0.32%	
*Bolton Radio Station	1	10	280	97.5	0.0000	0.2000	0.00%	
*Commsite Internat'l	2	300	285	929.1875	0.0028	0.6195	0.04%	
*Metrocall	1	300	125	929.5125	0.0076	0.6197	0.12%	
*Pagemart	1	3500	100	929.7125	0.1424	0.6198	2.30%	
*AirTouch	1	452	120	158.1	0.0125	0.2000	0.63%	
*Conn. Radio	1	258	120	462.15	0.0071	0.3081	0.23%	
*Eversource	1	3467	100	6785	0.1411	1.0000	1.41%	
*Eversource	1	2455	190	6685	0.0261	1.0000	0.26%	
*Eversource	1	12589	200	6765	0.1203	1.0000	1.20%	
*Eversource	1	174	200	6705	0.0017	1.0000	0.02%	
*Eversource	2	255	240	935	0.0033	0.6233	0.05%	
*Eversource	1	500	220	47.9	0.0039	0.2000	0.20%	
VZW 700	**4**	**697**	**120**	**751**	**0.0068**	**0.5007**	**1.35%**	
VZW Cellular	**4**	**825**	**120**	**869**	**0.0069**	**0.5793**	**1.19%**	
VZW PCS	**4**	**1052**	**120**	**1980**	**0.0146**	**1.0000**	**1.46%**	
VZW AWS	**4**	**2080**	**120**	**2125**	**0.0165**	**1.0000**	**1.65%**	
VZW CBAND	**4**	**6531**	**120**	**3730**	**0.0652**	**1.0000**	**6.52%**	
VZW CBRS	**4**	**12**	**120**	**3625**	**0.0001**	**1.0000**	**0.01%**	
								36.86%
* Source: Siting Council								

ATTACHMENT 4

Submitted to
Verizon Wireless
20 Alexander Drive
Wallingford, CT 06492

Submitted by
AECOM
500 Enterprise Drive,
Suite 3B
Rocky Hill, CT 06067
May 10, 2021

DETAILED STRUCTURAL ANALYSIS OF AN EXISTING 150’ GUYED TOWER AND FOUNDATION FOR PROPOSED ANTENNA ARRANGEMENT

Site ID : 323456
Site Address: 130 Vernon Road
Bolton, CT

60657286
VZ5-227

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY

This report summarizes the structural analysis of the existing 150' guyed tower structure located at 130 Vernon Road, Bolton, CT.

The structural analysis was conducted in accordance with the 2018 Connecticut State Building Code, the TIA-222-H[1] Standard, 2015 International Building Code, the 2018 Connecticut State Building Code Amendments, the AISC[2] Load Resistance Factor Design (LRFD), and the ASCE 7[3] design Code.

The antenna loading considered in the analysis consists of all the existing and proposed antennas, transmission lines and ancillary items as outlined in the Introduction Section of this Report.

The proposed Verizon antenna installation is listed below:

Antenna and Other Appurtenances	Carrier	Antenna Center Elevation
Install (Alpha and Beta Sectors): **(4) Commscope NHH-65B-R2B Antennas** **(2) Samsung MT6407-77A Antennas** **(2) Samsung XXDWWM-12.5-65 Antennas** **(2) Commscope BASMNT-SBS-1-2 Side By Side Mount** **(2) Commscope SFG22 Mount** **(2) Samsung B2/B66A RRU** **(2) Samsung B5/B13 RRU** **(2) Samsung CBRS RRU** **(2) Samsung MT6407-77A RRU** **(2) 6x12 LI Hybrid Cable** **(1) OVP-12 OVP Box**	**Verizon (proposed)**	**@ 120'**

1. TIA = Telecommunications Industry Association Structural Standard for Antenna Supporting Structures and Antennas (Version H)

2. AISC = American Institute of Steel Construction (15th Edition)

3. ASCE 7 = American Society of Civil Engineers Standard 7 (2016 Edition)

The results of this analysis indicate that:

1. The existing steel tower structure IS considered structurally adequate for the proposed antenna loading with the wind classification specified herein.
2. The existing foundation IS considered structurally adequate for the proposed antenna load classification with the wind classification specified herein.
3. The controlling structural capacity for all tower and foundation components for the proposed antenna loading is **71.6%**

This analysis is based on:

1) The tower structure's theoretical capacity, not including any assessment of the condition of the tower.
2) Geotechnical Study for Proposed Tower off Quarry Road, Bolton, CT, prepared by Dr. Clarence Welti, dated April 23, 2001.
3) Tower and foundation drawings prepared by PiROD Inc., engineering file no. A-118677, drawing no. 159234-B, revision F, signed and sealed October 17, 2001, supplemented by Bill of Materials and Detail Drawings on behalf of Mountaintop Enterprises, Inc. dated October 29, 2001.

4) Previous structural analysis and assessment performed by URS Corporation on behalf of Sprint, project number 36928701 / TWS-016, signed and sealed on July 6, 2014.
5) Previous structural analysis and assessment performed by Centek on behalf of T-Mobile, project no. 20074.29, signed and sealed June 10, 2020.
6) Proposed antenna upgrades for installation to tower provided by Verizon Wireless, obtained via RFDS dated April 27, 2021.
7) Site visit performed by AECOM on May 7, 2021.
8) Antenna and mount configuration as specified on the following page of this report.

This report is only valid as per the assumptions and data utilized in this report for antenna inventory, mounts and associated cables. The user of this report shall field verify the antenna, cabling and mount configurations used, as well as the physical condition of tower members, connections and foundations. Notify the engineer in writing immediately if any of the information in this report is found to be other than specified.

If you should have any questions, please contact Douglas Roberts at (860) 263-5819.

Sincerely,

AECOM,

John Hapkiewicz, P.E.
Vice President, Design Manager
JTH/kab

2. INTRODUCTION

The subject tower is located at 130 Vernon Road, Bolton, CT. The structure is a 150' guyed tower structure designed by PiROD Industries.

The inventory is summarized in the table below:

Antenna Type	*Carrier*	*Mount*	*Mount Elevation*	*Cable*
(3) Commscope DT465B-2XR Panel Antennas (3) APXVSPP18-C-A20 Panel Antennas (3) 1900 MHz RRH Units (6) 800 MHz RRH Units (3) TD-RRH8x20-25 RRH	Sprint (Existing)	(3) T-Frame Sector Mounts	148'	(4) 1 1/4" F.O. Cables
(3) AIR 32 Panel Antennas (3) RFS APXVAARR24_43 Panel Antennas (3) Ericsson AIR6449 Panel Antennas (3) Ericsson 4449 B71 B12 Remote Radio Units (6) Ericsson 4415 Remote Ratio Units (3) Commscope CBC1923Q-43 Diplexers	T-Mobile (Existing)	(3) T-Arm Mounts	130'	(6) 6x12 Fiber Cables
(4) Commscope NHH-65B-R2B Antennas (2) Samsung MT6407-77A Antennas (2) Samsung XXDWWM-12.5-65 Antennas (2) Samsung B2/B66A RRU (2) Samsung B5/B13 RRU (2) Samsung CBRS RRU (2) Samsung MT6407-77A RRU (1) OVP-12 OVP Box	**Verizon (Proposed)**	**(2) Commscope BASMNT-SBS-1-2 Side By Side Mount (2) Commscope SFG22 Mount**	**120'**	**(2) 6x12 LI Hybrid Cable**

This structural analysis and evaluation of the communications tower was performed by AECOM on behalf of Verizon. The purpose of this analysis was to investigate the structural integrity of the tower and foundation for existing and proposed antenna loads in compliance with the 2018 Connecticut State Building Code. The analysis was also conducted to evaluate stress on the tower and the effect of forces to the foundation of the tower resulting from existing and proposed antenna arrangements.

3. ANALYSIS METHODOLOGY AND LOADING CONDITIONS

The structural analysis was done in accordance with, the TIA-222-H–Structural Standard for Antenna Towers and Antenna Supporting Structures and Antennas, the 2015 International Building Code with 2018 Connecticut State Building Code Amendments and the American Institute of Steel Construction (AISC) Manual of Steel Construction – Load Resistance Factor Design (LRFD)

The structural analysis was conducted using TNX Tower version 8.0.7.0 and used the following conditions for this tower review (following the TIA/EIA-222-H Standard):

Risk Category 2 – (Substantial Communications)

- NOTE: ASCE 7 and CT State Building Code Applied Risk Category 2 for design wind loads (see below)

Topographic Category 1 (less than 1V:10H slope over 2 mile radius, TIA-H 2.6.6.1.2)

Exposure Class C

Load Conditions:

- Two load conditions were evaluated as shown which were compared to design stresses according to AISC and TIA-222-H Standard.

Basic Wind Speed:

IBC 2018 w/ 2018 CT State Building Code Amendment:

- (2018) IBC Section 1609.1.1 – Determination of Wind Loads – Exception 5 "Designs using TIA-222" applies for determination of Design Wind Load obtained as "V.ult" are to be converted to "V.asd" when applying the TIA-222-H design Standard (under Section 1609.3) for Basic Wind Speed.

  Due to tnxTower program options for TIA-222-H, the program appears to perform tower analysis with speeds according to ASCE 7-16 V.ult loads, therefore, V.ult speeds are to be used.

- (2018) CT State Building Code Amendment to the IBC Section 1609.3 wind loads are obtained from Appendix N of the State Building Code.

  V.ult = 125 mph (3-Second Gust) Wind Design Parameter for the Town of Bolton, Connecticut for Risk Category Two (II) for substantial communications

LOAD CONDITION 1 = 125 MPH (3-SECOND GUST) WIND LOAD (WITHOUT ICE) + TOWER DEAD LOAD
Load Condition 2 = 50 mph (3-second gust) Wind Load (with ice) + Ice Load + Tower Dead Load

Ice thickness used for this analysis is 1**.0 inch** (assumed to start at the base of the tower) and is considered to increase in thickness with height. The initial ice thickness for design is referenced in the Annex of TIA-222-H and follows the same design criteria as the ASCE 7 Standard.

3. ANALYSIS METHODOLOGY AND LOADING CONDITIONS (cont.)

Seismic event consideration factors/values for design:

S.s = 0.177 (2018 CT State Building Code – Location Specific Value)
S.1 = 0.063 (2018 CT State Building Code – Location Specific Value)
Site Classification = "D"
Seismic Design Category = "C" – (2015 International Building Code)
F.a = 1.6 (Obtained from TIA-222-H Table 2-11 Considering above conditions)
F.v = 2.4 (Obtained from TIA-222-H Table 2-12 Considering above conditions)

Strength Limit State Load Combinations (TIA-222-H Section 2.3.2):

The structural analysis herein has considered the following load combinations within the analysis:

1. ***1.2 Dead Load Tower structure + 1.0 Dead Load Guy Assemblies + 1.6 Wind load without ice***
2. 1.2 Dead Load Tower structure + 1.0 Dead Load Guy Assemblies + 1.0 Dead weight of ice due to factored ice thickness + 1.0 Concurrent wind load with factored ice thickness + 1.0 Load effects due to temperature
3. 1.2 Dead Load Tower structure + 1.0 Dead Load Guy Assemblies + 1.0 Earthquake Load

NOTE 1: The above **bolded** load combination is considered to create the governing design loads per the results of the analysis.

4. FINDINGS AND EVALUATION

The combined axial and bending stresses on the tower structure were evaluated to compare with the strength design in accordance with AISC (LRFD). The calculated stresses for the tower structure is within the required design strength under the proposed configuration and loading (stated herein). The calculated stresses for the anchor bolts and foundation were within the required design strength under the proposed configuration and loading (stated herein). Detailed analysis calculations for the proposed load condition are provided in Section 6 of this report.

Tower Base Reactions:

Description	Current
Base Compression (kips)	80.6
Base Shear (kips)	0.6
Anchor Uplift (kips)	22.0
Anchor Shear (kips)	31.9

Controlling Tower Component Stress vs. Capacity Summary:

Component / (Section No.)	Critical Component Size	Controlling Elevation	Stress (% capacity)	Pass/Fail
Leg (T5)	2 1/4" Solid Rod	60'-80'	33.2	Pass
Diagonal (T2)	3/4" Solid Rod	120'-140'	71.6	Pass
Top Girt (T2)	3/4" Solid Rod	120'-140'	29.3	Pass
Bottom Girt (T8)	3/4" Solid Rod	5'-20'	27.1	Pass
Guy Wire (T2)	9/16" EHS	138'	64.0	Pass
Top Guy Pull-Off (T1)	1 1/4" Solid Rod	138'	51.3	Pass
Torque Arm Top (T2)	(2) L3x3x1/4	138'	65.8	Pass
Torque Arm Bottom (T2)	(2) L3x3x1/4	138'	40.7	Pass
Tower Bolts (T2)	Member Bearing	120'-140'	65.8	Pass

Foundation Summary:

Component	Required	Computed	% Capacity	Pass/Fail
Base Foundation - Pad Flexure	Ratio < 1.0	0.323	32.3	Pass
Guy Anchor - Rock Anchor	Ratio < 1.0	0.346	34.6	Pass

Structure Rating (Maximum from all components) =	71.6 %	Pass

4. FINDINGS AND EVALUATION (cont.)

Maximum Deformations – Proposed Condition

ANSI/TIA-222-H Section 2.8.2 - Limit State Deformations

1. A rotation of 4 degrees about the vertical axis (twist) or any horizontal axis (sway) of the structure
2. A horizontal displacement (in feet) of 3% of the height of the structure.

Load Case Description	Current		Allowable	
	Sway (degree)	Displacement (Feet)	Sway (degree)	Displacement (Feet)
Service Wind Load	0.533	1.31	4.0	4.5

5. CONCLUSIONS

The results this analysis indicate that:

1. The existing steel tower structure IS considered structurally adequate for the proposed antenna loading with the wind classification specified herein.
2. The existing foundation IS considered structurally adequate for the proposed antenna load classification with the wind classification specified herein.
3. The controlling structural capacity for all tower and foundation components for the proposed antenna loading is **71.6%**

Limitations/Assumptions:

This report is based on the following:

1) Tower inventory as listed in this report.

2) Tower is properly installed and maintained.

3) All members are as specified in the original design documents and are in good condition.

4) All required members are in place.

5) All bolts are in place and are properly tightened.

6) Tower is in plumb condition.

7) All member protective coatings are in good condition.

8) All tower members were properly designed, detailed, fabricated, and installed and have been properly maintained since erection.

9) Foundations are in good condition without defects and were properly constructed to support original design loads as specified in the original design documents.

AECOM is not responsible for any modifications completed prior to or hereafter in which AECOM is not or was not directly involved. Modifications include but are not limited to:

A. Adding antennas
B. Removing/replacing antennas
C. Adding coaxial cables

AECOM hereby states that this document represents the entire report and that it assumes no liability for any factual changes that may occur after the date of this report. All representations, recommendations, and conclusions are based upon information contained and set forth herein. If you are aware of any information which conflicts with that which is contained herein, or you are aware of any defects arising from original design, material, fabrication, or erection deficiencies, you should disregard this report and immediately contact AECOM. AECOM disclaims all liability for any representation, recommendation, or conclusion not expressly stated herein.

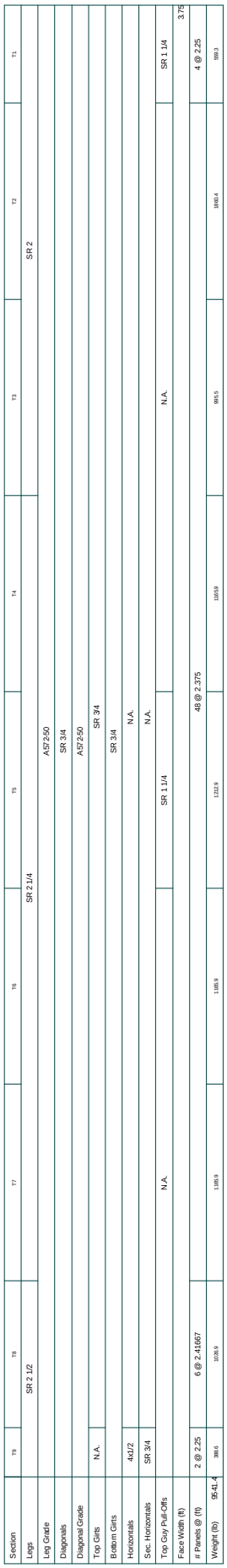
Ongoing and Periodic Inspection and Maintenance:

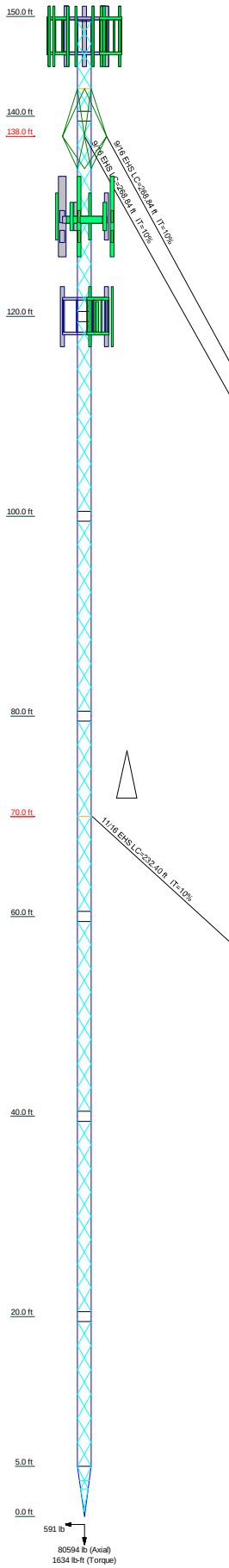
After the Contractor has successfully completed the installation and the work has been accepted, the tower owner will be responsible for the ongoing and periodic inspection and maintenance of the tower.

The owner shall refer to TIA-222-H Section 14.2 for recommendations for maintenance and inspection. The frequency of the inspection and maintenance intervals is to be determined by the owner based upon actual site and environmental conditions. It is recommended that a complete and thorough inspection of the entire tower structural system be performed at least yearly and more frequently as conditions warrant. It is also recommended that the structure be inspected after severe wind and/or ice storms or other extreme loading conditions.

6.) DRAWINGS AND DATA

TNX TOWER INPUT/OUTPUT SUMMARY





DESIGNED APPURTENANCE LOADING

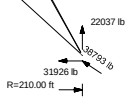
TYPE	ELEVATION	TYPE	ELEVATION
800 RRH (800 MHz) Unit (Sprint)	148	AIR 6449 (T-Mobile)	130
800 RRH (800 MHz) Unit (Sprint)	148	4449 RRU (T-Mobile)	130
800 RRH (800 MHz) Unit (Sprint)	148	4415 RRU (T-Mobile)	130
APXVSPP18-C-A20 w/ Mount Pipe (Sprint)	148	4415 RRU (T-Mobile)	130
APXVSPP18-C-A20 w/ Mount Pipe (Sprint)	148	CBC1923Q-43 Diplexer (T-Mobile)	130
APXVSPP18-C-A20 w/ Mount Pipe (Sprint)	148	RFS APXVAARR24_43 (T-Mobile)	130
Panasonic RRH 1900MHZ (Sprint)	148	AIR 32 (T-Mobile)	130
Panasonic RRH 1900MHZ (Sprint)	148	AIR 6449 (T-Mobile)	130
Panasonic RRH 1900MHZ (Sprint)	148	4449 RRU (T-Mobile)	130
Andrew 800MHz RRH (Sprint)	148	4415 RRU (T-Mobile)	130
Andrew 800MHz RRH (Sprint)	148	4415 RRU (T-Mobile)	130
Andrew 800MHz RRH (Sprint)	148	CBC1923Q-43 Diplexer (T-Mobile)	130
DT465b-2XR (Sprint)	148	Comscope NHH-65B-R2B (Verizon)	120
DT465b-2XR (Sprint)	148	Comscope NHH-65B-R2B (Verizon)	120
DT465b-2XR (Sprint)	148	Samsung MT6407-77A (Verizon)	120
TD-RRH8x20 (Sprint)	148	Samsung XXDWMM-12.5-65 (Verizon)	120
TD-RRH8x20 (Sprint)	148	Commscope BSAMNT-SBS-1-2 (side by side mount) (Verizon)	120
TD-RRH8x20 (Sprint)	148		
800 RRH (800 MHz) Unit (Sprint)	148	Commscope SFG22 (14' Sector Frame) (Verizon)	120
800 RRH (800 MHz) Unit (Sprint)	148	Samsung B2/B66 RRU (Verizon)	120
Pirod 12' T-Frame Sector Mount (1) (Sprint)	148	Samsung B5/B13 RRU (Verizon)	120
Pirod 12' T-Frame Sector Mount (1) (Sprint)	148	Samsung CBRS RRH (Verizon)	120
Pirod 12' T-Frame Sector Mount (1) (Sprint)	148	Samsung MT6407-77A (Verizon)	120
Pirod 12' T-Frame Sector Mount (1) (T-Mobile)	130	OVP-12 (OVP Box) (Verizon)	120
Pirod 12' T-Frame Sector Mount (1) (T-Mobile)	130	Comscope NHH-65B-R2B (Verizon)	120
Pirod 12' T-Frame Sector Mount (1) (T-Mobile)	130	Comscope NHH-65B-R2B (Verizon)	120
RFS APXVAARR24_43 (T-Mobile)	130	Samsung MT6407-77A (Verizon)	120
AIR 32 (T-Mobile)	130	Samsung XXDWMM-12.5-65 (Verizon)	120
AIR 6449 (T-Mobile)	130	Commscope BSAMNT-SBS-1-2 (side by side mount) (Verizon)	120
4449 RRU (T-Mobile)	130		
4415 RRU (T-Mobile)	130	Commscope SFG22 (14' Sector Frame) (Verizon)	120
4415 RRU (T-Mobile)	130	Samsung B2/B66 RRU (Verizon)	120
CBC1923Q-43 Diplexer (T-Mobile)	130	Samsung B5/B13 RRU (Verizon)	120
RFS APXVAARR24_43 (T-Mobile)	130	Samsung CBRS RRH (Verizon)	120
AIR 32 (T-Mobile)	130	Samsung MT6407-77A (Verizon)	120

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi			

TOWER DESIGN NOTES

1. Tower is located in Tolland County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-H Standard.
3. Tower designed for a 125 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. Weld together tower sections have flange connections.
9. Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications.
10. Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
11. Welds are fabricated with ER-70S-6 electrodes.
12. TOWER RATING: 71.6%



ALL REACTIONS ARE FACTORED

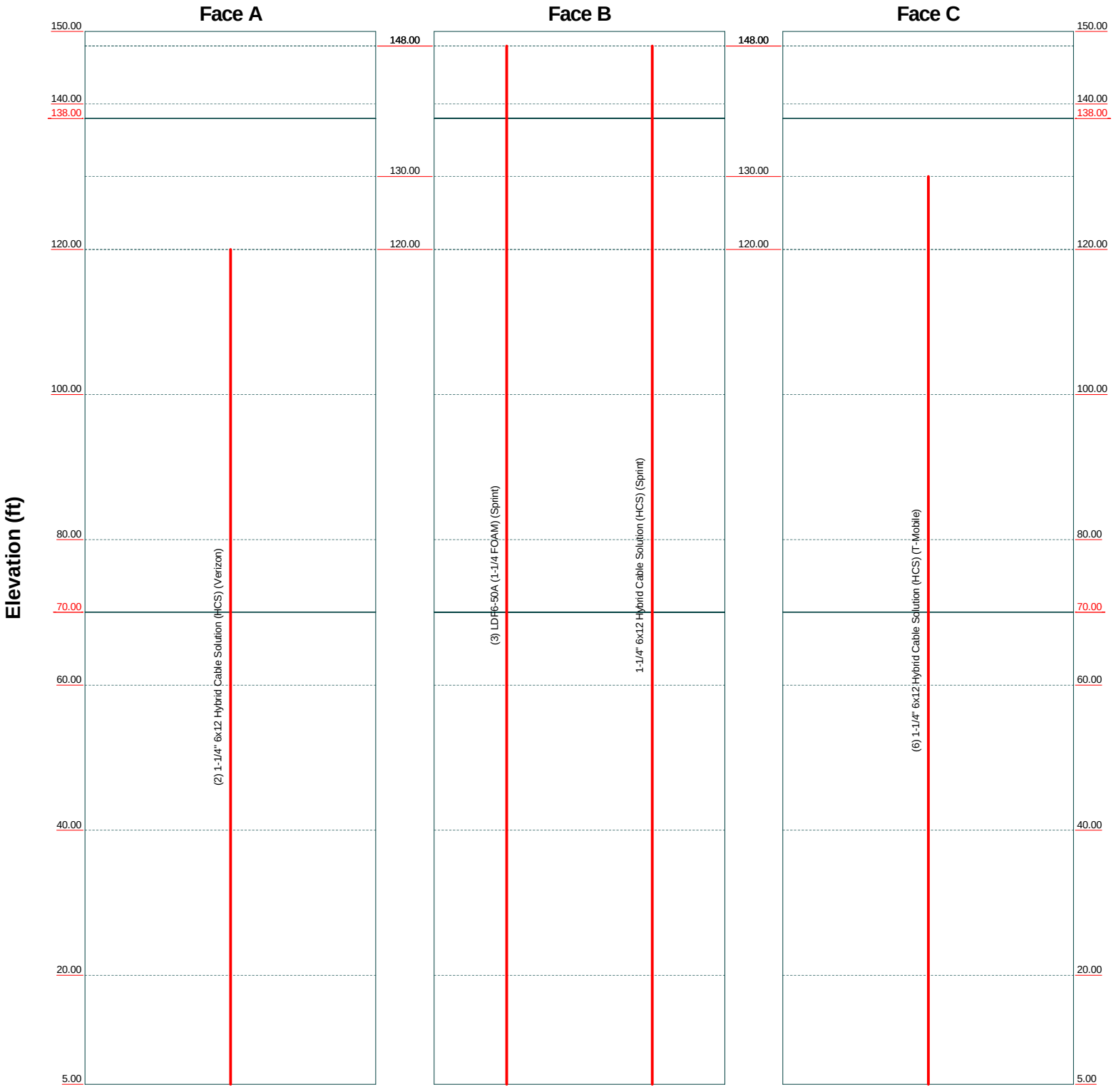
AECOM
500 Enterprise Drive
Rocky Hill, CT
Phone: (860) 529-8882
FAX:

Job:	MTS 150' Guyed Tower - Bolton, CT
Project:	VZ5-227
Client: Verizon	Drawn by: KAB / App'd:
Code: TIA-222-H	Date: 05/06/21 / Scale: NTS
Path:	Dwg No. E-1

TNX TOWER FEEDLINE DISTRIBUTION CHART

Feed Line Distribution Chart
5' - 150'

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



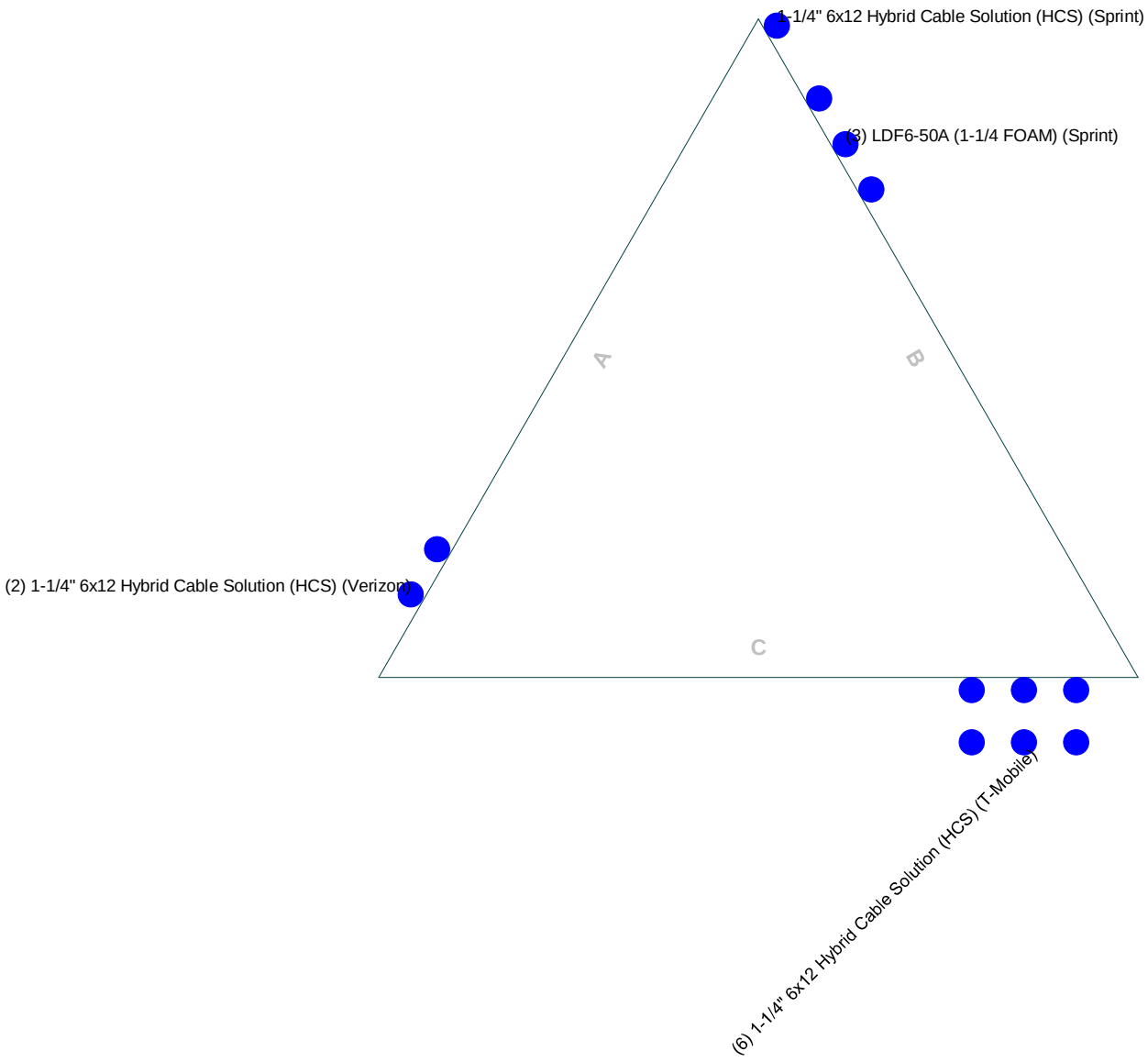
AECOM
500 Enterprise Drive
Rocky Hill, CT
Phone: (860) 529-8882
FAX:

Job: ***MTS 150' Guyed Tower - Bolton, CT***			
Project: ***VZ5-227***			
Client: Verizon	Drawn by: KAB	App'd:	
Code: TIA-222-H	Date: 05/06/21	Scale: NTS	
Path:		Dwg No. E-7	

TNX TOWER FEEDLINE PLAN

Feed Line Plan

Round Flat App In Face App Out Face



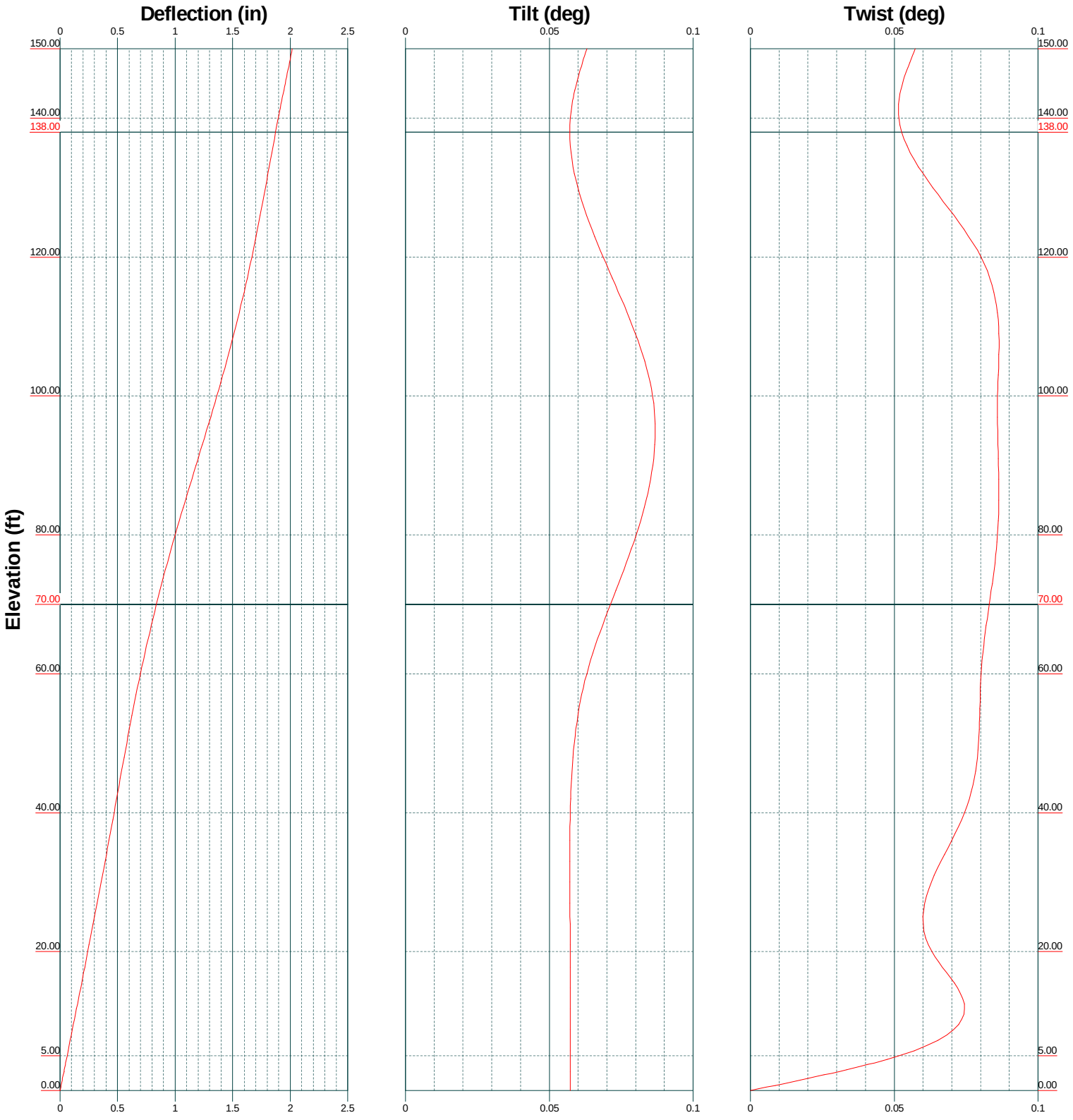
AECOM
500 Enterprise Drive
Rocky Hill, CT
Phone: (860) 529-8882
FAX:

Job: ***MTS 150' Guyed Tower - Bolton, CT***			
Project: ***VZ5-227***			
Client: Verizon	Drawn by: KAB	App'd:	
Code: TIA-222-H	Date: 05/06/21	Scale: NTS	
Path:		Dwg No. E-7	

TNX TOWER DEFLECTION, TILT, AND TWIST

TIA-222-H - Service - 60 mph

Maximum Values



AECOM
500 Enterprise Drive
Rocky Hill, CT
Phone: (860) 529-8882
FAX:

Job: ***MTS 150' Guyed Tower - Bolton, CT***			
Project: ***VZ5-227***			
Client: Verizon	Drawn by: KAB	App'd:	
Code: TIA-222-H	Date: 05/06/21	Scale: NTS	
Path:		Dwg No. E-5	

TNX TOWER DETAILED OUTPUT

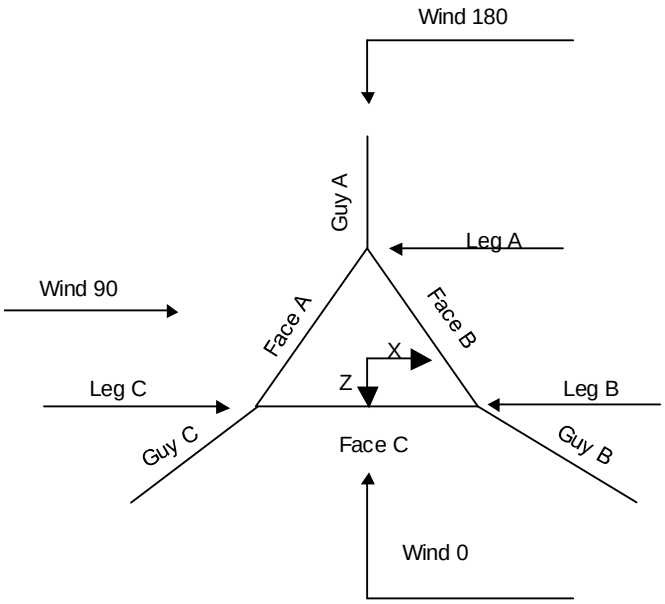
Tower Input Data

The main tower is a 3x guyed tower with an overall height of 150.00 ft above the ground line.
The base of the tower is set at an elevation of 0.00 ft above the ground line.
The face width of the tower is 3.75 ft at the top and tapered at the base.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

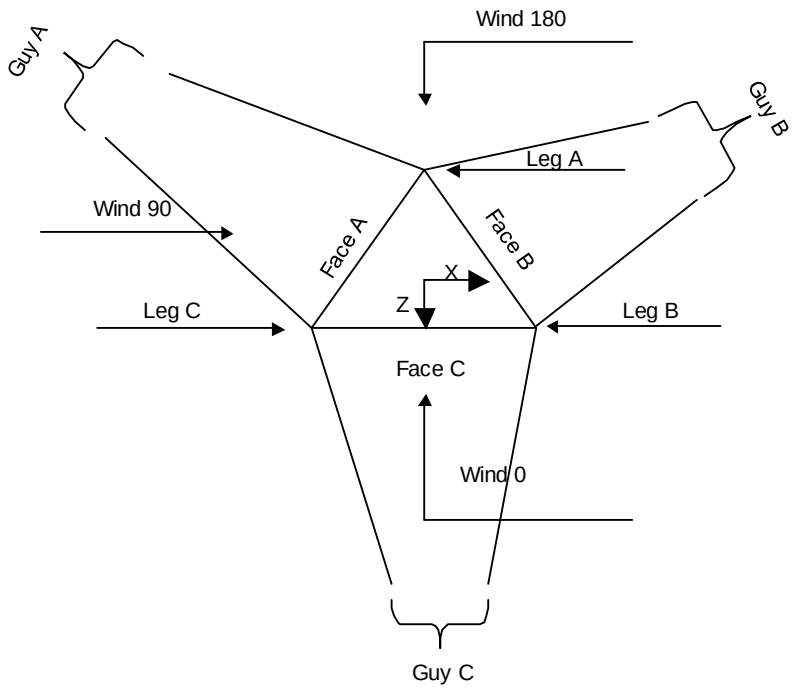
Tower is located in Tolland County, Connecticut.
Tower base elevation above sea level: 0.00 ft.
Basic wind speed of 125 mph.
Risk Category II.
Exposure Category C.
Simplified Topographic Factor Procedure for wind speed-up calculations is used.
Topographic Category: 1.
Crest Height: 0.00 ft.
Nominal ice thickness of 1.0000 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
Weld together tower sections have flange connections..
Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications..
Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards..
Welds are fabricated with ER-70S-6 electrodes..
Pressures are calculated at each section.
Safety factor used in guy design is 1.
Stress ratio used in tower member design is 1.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

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



Corner & Starmount Guyed Tower



Face Guyed

Tower Section Geometry

Tower Section	Tower Elevation ft	Assembly Database	Description	Section Width ft	Number of Sections	Section Length ft
T1	150.00-140.00			3.75	1	10.00
T2	140.00-120.00			3.75	1	20.00
T3	120.00-100.00			3.75	1	20.00
T4	100.00-80.00			3.75	1	20.00
T5	80.00-60.00			3.75	1	20.00
T6	60.00-40.00			3.75	1	20.00
T7	40.00-20.00			3.75	1	20.00
T8	20.00-5.00			3.75	1	15.00
T9	5.00-0.00			3.75	1	5.00

Tower Section Geometry *(cont'd)*

Tower Section	Tower Elevation ft	Diagonal Spacing ft	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset in	Bottom Girt Offset in
T1	150.00-140.00	2.25	X Brace	No	Steps	6.0000	6.0000
T2	140.00-120.00	2.38	X Brace	No	Steps	6.0000	6.0000
T3	120.00-100.00	2.38	X Brace	No	Steps	6.0000	6.0000
T4	100.00-80.00	2.38	X Brace	No	Steps	6.0000	6.0000
T5	80.00-60.00	2.38	X Brace	No	Steps	6.0000	6.0000
T6	60.00-40.00	2.38	X Brace	No	Steps	6.0000	6.0000
T7	40.00-20.00	2.38	X Brace	No	Steps	6.0000	6.0000
T8	20.00-5.00	2.42	X Brace	No	Steps	6.0000	0.0000
T9	5.00-0.00	2.25	X Brace	No	Yes	0.0000	6.0000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 150.00-140.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T2 140.00-120.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T3 120.00-100.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T4 100.00-80.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T5 80.00-60.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T6 60.00-40.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T7 40.00-20.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T8 20.00-5.00	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T9 5.00-0.00	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 150.00-140.00	Solid Round	3/4	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T2 140.00-120.00	Solid Round	3/4	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T3 120.00-100.00	Solid Round	3/4	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T4 100.00-80.00	Solid Round	3/4	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T5 80.00-60.00	Solid Round	3/4	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T6 60.00-40.00	Solid Round	3/4	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T7 40.00-20.00	Solid Round	3/4	A572-50	Solid Round	3/4	A572-50

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T8 20.00-5.00	Solid Round	3/4	(50 ksi) A572-50 (50 ksi)	Solid Round	3/4	(50 ksi) A572-50 (50 ksi)
T9 5.00-0.00	Solid Round		A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T9 5.00-0.00	None	Flat Bar		A36 (36 ksi)	Flat Bar	4x1/2	A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Secondary Horizontal Type	Secondary Horizontal Size	Secondary Horizontal Grade	Inner Bracing Type	Inner Bracing Size	Inner Bracing Grade
T9 5.00-0.00	Solid Round	3/4	A572-50 (50 ksi)	Solid Round		A572-50 (50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
T1 150.00-140.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T2 140.00-120.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T3 120.00-100.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T4 100.00-80.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T5 80.00-60.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T6 60.00-40.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T7 40.00-20.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T8 20.00-5.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000

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
T9 5.00-0.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X Y	K Brace Diags X Y	Single Diags X Y	Girts X Y	Horiz. X Y	Sec. Horiz. X Y	Inner Brace X Y
T1	Yes	Yes	1	1	1	1	1	1	1	1
150.00-140.00				1	1	1	1	1	1	1
T2	Yes	Yes	1	1	1	1	1	1	1	1
140.00-120.00				1	1	1	1	1	1	1
T3	Yes	Yes	1	1	1	1	1	1	1	1
120.00-100.00				1	1	1	1	1	1	1
T4	Yes	Yes	1	1	1	1	1	1	1	1
100.00-80.00				1	1	1	1	1	1	1
T5	Yes	Yes	1	1	1	1	1	1	1	1
80.00-60.00				1	1	1	1	1	1	1
T6	Yes	Yes	1	1	1	1	1	1	1	1
60.00-40.00				1	1	1	1	1	1	1
T7	Yes	Yes	1	1	1	1	1	1	1	1
40.00-20.00				1	1	1	1	1	1	1
T8 20.00-5.00	Yes	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T9 5.00-0.00	Yes	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1

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

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T1	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
150.00-140.00														
T2	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
140.00-120.00														
T3	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
120.00-100.00														
T4	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
100.00-80.00														
T5 80.00-60.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T6 60.00-40.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

Tower Elevation ft	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T7 40.00-20.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T8 20.00-5.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T9 5.00-0.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T1 150.00-140.00	Sleeve DS	0.7500 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T2 140.00-120.00	Sleeve DS	0.6250 A325N	5	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T3 120.00-100.00	Sleeve DS	0.6250 A325N	5	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T4 100.00-80.00	Sleeve DS	0.7500 A325N	5	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T5 80.00-60.00	Sleeve DS	0.7500 A325N	5	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T6 60.00-40.00	Sleeve DS	0.7500 A325N	5	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T7 40.00-20.00	Sleeve DS	0.7500 A325N	5	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T8 20.00-5.00	Sleeve DS	0.7500 A325N	5	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T9 5.00-0.00	Sleeve DS	0.7500 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0

Guy Data

Guy Elevation ft	Guy Grade		Guy Size	Initial Tension lb	%	Guy Modulus ksi	Guy Weight plf	L_u ft	Anchor Radius ft	Anchor Azimuth Adj. °	Anchor Elevation ft	End Fitting Efficiency %
138	EHS	A	9/16	3500.00	10%	21000	0.671	256.30	210.00	0.0000	-14.00	100%
		B	9/16	3500.00	10%	21000	0.671	268.63	210.00	0.0000	-34.00	100%
		C	9/16	3500.00	10%	21000	0.671	271.20	210.00	0.0000	-38.00	100%
70	EHS	A	11/16	5000.00	10%	21000	0.813	223.99	210.00	0.0000	-14.00	100%
		B	11/16	5000.00	10%	21000	0.813	232.22	210.00	0.0000	-34.00	100%
		C	11/16	5000.00	10%	21000	0.813	234.03	210.00	0.0000	-38.00	100%

Guy Data*(cont'd)*

Guy Elevation ft	Mount Type	Torque-Arm Spread ft	Torque-Arm Leg Angle °	Torque-Arm Style	Torque-Arm Grade	Torque-Arm Type	Torque-Arm Size
138	Torque Arm	12.00	30.0000	Wing	A36 (36 ksi)	Double Angle	2L3x3x1/4
70	Corner						

Guy Data *(cont'd)*

Guy Elevation ft	Diagonal Grade	Diagonal Type	Upper Diagonal Size	Lower Diagonal Size	Is Strap.	Pull-Off Grade	Pull-Off Type	Pull-Off Size
138.00	A572-50 (50 ksi)	Solid Round			No	A572-50 (50 ksi)	Solid Round	1 1/4
70.00	A572-50 (50 ksi)	Solid Round			No	A572-50 (50 ksi)	Solid Round	1 1/4

Guy Data *(cont'd)*

Guy Elevation ft	Cable Weight A lb	Cable Weight B lb	Cable Weight C lb	Cable Weight D lb	Tower Intercept A ft	Tower Intercept B ft	Tower Intercept C ft	Tower Intercept D ft
138	171.98	180.25	181.98		6.21 4.3 sec/pulse	6.81 4.5 sec/pulse	6.94 4.5 sec/pulse	
70	182.10	188.79	190.27		4.06 3.5 sec/pulse	4.35 3.6 sec/pulse	4.42 3.6 sec/pulse	

Guy Data *(cont'd)*

Guy Elevation ft	Calc K Single Angles	Calc K Solid Rounds	Torque Arm K_x	Torque Arm K_y	Pull Off K_x	Pull Off K_y	Diagonal K_x	Diagonal K_y
138	No	No	1	1	1	1	1	1
70	No	No			1	1	1	1

Guy Data *(cont'd)*

Guy Elevation ft	Torque-Arm Bolt Size in	Torque-Arm Number	Torque-Arm Net Width Deduct in	Torque-Arm U	Pull Off Bolt Size in	Pull Off Number	Pull Off Net Width Deduct in	Pull Off U	Diagonal Bolt Size in	Diagonal Number	Diagonal Net Width Deduct in	Diagonal U
138	0.6250 A325N	1	0.0000	1	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75

Guy Elevation ft	Torque-Arm Bolt Size in	Torque-Arm Number	Torque-Arm Net Width Deduct in	Torque-Arm U	Pull Off Bolt Size in	Pull Off Number	Pull Off Net Width Deduct in	Pull Off U	Diagonal Bolt Size in	Diagonal Number	Diagonal Net Width Deduct in	Diagonal U
70	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75

Guy Pressures

Guy Elevation ft	Guy Location	z ft	q_z psf	q_z Ice psf	Ice Thickness in
138	A	62.00	39	6	1.0651
	B	52.00	37	6	1.0465
	C	50.00	37	6	1.0424
70	A	28.00	33	5	0.9837
	B	18.00	30	5	0.9412
	C	16.00	29	5	0.9302

Guy-Mast Forces (Excluding Wind) - No Ice

Guy Elevation ft	Guy Location	Chord Angle °	Guy Tension Top / Bottom lb	F_x lb	F_y lb	F_z lb	M_x lb-ft	M_y lb-ft	M_z lb-ft
138	A	36.3397	3601.90 3500.00	-83.04	2190.05	-2858.41	-7586.54	17438.12	-13140.28
	A	36.3397	3601.90 3500.00	83.04	2190.05	-2858.41	-7586.54	-17438.12	13140.28
	B	39.7751	3615.31 3500.00	2405.99	2366.08	1297.44	16392.71	16669.17	0.00
	B	39.7751	3615.31 3500.00	2326.61	2366.08	1434.93	-8196.36	-16669.17	-14196.50
	C	40.4241	3617.99 3500.00	-2305.38	2398.64	1421.83	-8309.13	16517.09	14391.84
	C	40.4241	3617.99 3500.00	-2384.04	2398.64	1285.60	16618.26	-16517.09	0.00
			Sum:	**43.18**	13909.54	**-277.02**	**1332.40**	0.00	**195.33**
70	A	22.0069	5068.23 5000.00	0.00	1977.34	-4666.60	-4281.06	0.00	0.00
	B	26.5833	5084.48 5000.00	3904.45	2350.68	2254.23	2544.68	0.00	-4407.52
	C	27.4583	5087.73 5000.00	-3875.39	2420.77	2237.46	2620.56	-0.00	4538.94
			Sum:	**29.05**	6748.78	**-174.91**	**884.18**	0.00	**131.42**

Guy-Mast Forces (Excluding Wind) - Ice

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top / Bottom	F_x	F_y	F_z	M_x	M_y	M_z
ft		°	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft
138	A	36.3397	6341.04 5917.63	-143.16	3988.13	-4927.80	-13815.27	30062.69	-23928.75
	A	36.3397	6341.04 5917.63	143.16	3988.13	-4927.80	-13815.27	-30062.69	23928.75
	B	39.7751	6325.03 5856.32	4113.72	4261.71	2218.35	29526.00	28500.71	0.00
	B	39.7751	6325.03 5856.32	3978.01	4261.71	2453.42	-14763.00	-28500.71	-25570.27
	C	40.4241	6320.76 5843.48	-3934.67	4310.64	2426.69	-14932.51	28190.20	25863.87
	C	40.4241	6320.76 5843.48	-4068.91	4310.64	2194.18	29865.02	-28190.20	0.00
			Sum:	**88.16**	25120.96	**-562.97**	**2064.97**	0.00	**293.60**
70	A	22.0069	8141.06 7904.30	0.00	3321.55	-7432.64	-7191.37	0.00	0.00
	B	26.5833	8074.04 7795.00	6140.65	3861.77	3545.31	4180.49	0.00	-7240.83
	C	27.4583	8054.93 7768.87	-6075.67	3957.70	3507.79	4284.34	-0.00	7420.69
			Sum:	**64.98**	11141.03	**-379.54**	**1273.46**	0.00	**179.86**

Guy-Mast Forces (Excluding Wind) - Service

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top / Bottom	F_x	F_y	F_z	M_x	M_y	M_z
ft		°	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft
138	A	36.3397	3601.90 3500.00	-83.04	2190.05	-2858.41	-7586.54	17438.12	-13140.28
	A	36.3397	3601.90 3500.00	83.04	2190.05	-2858.41	-7586.54	-17438.12	13140.28
	B	39.7751	3615.31 3500.00	2405.99	2366.08	1297.44	16392.71	16669.17	0.00
	B	39.7751	3615.31 3500.00	2326.61	2366.08	1434.93	-8196.36	-16669.17	-14196.50
	C	40.4241	3617.99 3500.00	-2305.38	2398.64	1421.83	-8309.13	16517.09	14391.84
	C	40.4241	3617.99 3500.00	-2384.04	2398.64	1285.60	16618.26	-16517.09	0.00
			Sum:	**43.18**	13909.54	**-277.02**	**1332.40**	0.00	**195.33**
70	A	22.0069	5068.23 5000.00	0.00	1977.34	-4666.60	-4281.06	0.00	0.00
	B	26.5833	5084.48 5000.00	3904.45	2350.68	2254.23	2544.68	0.00	-4407.52
	C	27.4583	5087.73 5000.00	-3875.39	2420.77	2237.46	2620.56	-0.00	4538.94
			Sum:	**29.05**	6748.78	**-174.91**	**884.18**	0.00	**131.42**

Guy-Tensioning Information

Guy Elevation ft		H ft	V ft	Temperature At Time Of Tensioning: 0 F Initial Tension lb	0 F Intercept ft	20 F Initial Tension lb	20 F Intercept ft	40 F Initial Tension lb	40 F Intercept ft	60 F Initial Tension lb	60 F Intercept ft	80 F Initial Tension lb	80 F Intercept ft	100 F Initial Tension lb	100 F Intercept ft	120 F Initial Tension lb	120 F Intercept ft
138	A	206.62	152.00	4437	4.91	4118	5.29	3805	5.72	3500	6.21	3205	6.78	2922	7.42	2654	8.16
	B	206.62	172.00	4351	5.49	4062	5.88	3778	6.32	3500	6.81	3231	7.37	2971	8.00	2724	8.72
	C	206.62	176.00	4335	5.62	4051	6.01	3772	6.45	3500	6.94	3235	7.50	2981	8.13	2737	8.84
70	A	207.83	84.00	6871	2.96	6235	3.26	5610	3.62	5000	4.06	4412	4.59	3855	5.25	3341	6.05
	B	207.83	104.00	6738	3.23	6148	3.54	5567	3.91	5000	4.35	4452	4.88	3929	5.53	3443	6.30
	C	207.83	108.00	6710	3.30	6130	3.61	5558	3.98	5000	4.42	4460	4.95	3945	5.59	3465	6.36

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
LDF6-50A (1-1/4 FOAM) (Sprint)	B	No	No	Ar (CaAa)	148.00 - 0.00	0.0000	-0.3	3	3	1.5500	1.5500		0.66
1-1/4" 6x12 Hybrid Cable Solution (HCS) (Sprint)	B	No	No	Ar (CaAa)	148.00 - 0.00	0.0000	-0.48	1	1	1.5400	1.5400		1.70
1-1/4" 6x12 Hybrid Cable Solution (HCS) (T-Mobile)	C	No	No	Ar (CaAa)	130.00 - 0.00	0.0000	-0.35	6	3	1.5400	1.5400		1.70
1-1/4" 6x12 Hybrid Cable Solution (HCS) (Verizon)	A	No	No	Ar (CaAa)	120.00 - 0.00	0.0000	-0.35	2	2	1.5400	1.5400		1.70

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
T1	150.00-140.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	4.952	0.000	29.44
		C	0.000	0.000	0.000	0.000	0.00
T2	140.00-120.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	12.380	0.000	73.60
		C	0.000	0.000	9.240	0.000	102.00
T3	120.00-100.00	A	0.000	0.000	6.160	0.000	68.00
		B	0.000	0.000	12.380	0.000	73.60
		C	0.000	0.000	18.480	0.000	204.00
T4	100.00-80.00	A	0.000	0.000	6.160	0.000	68.00
		B	0.000	0.000	12.380	0.000	73.60
		C	0.000	0.000	18.480	0.000	204.00
T5	80.00-60.00	A	0.000	0.000	6.160	0.000	68.00
		B	0.000	0.000	12.380	0.000	73.60

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
		C	0.000	0.000	18.480	0.000	204.00
T6	60.00-40.00	A	0.000	0.000	6.160	0.000	68.00
		B	0.000	0.000	12.380	0.000	73.60
		C	0.000	0.000	18.480	0.000	204.00
T7	40.00-20.00	A	0.000	0.000	6.160	0.000	68.00
		B	0.000	0.000	12.380	0.000	73.60
		C	0.000	0.000	18.480	0.000	204.00
T8	20.00-5.00	A	0.000	0.000	4.620	0.000	51.00
		B	0.000	0.000	9.285	0.000	55.20
		C	0.000	0.000	13.860	0.000	153.00
T9	5.00-0.00	A	0.000	0.000	1.540	0.000	17.00
		B	0.000	0.000	3.095	0.000	18.40
		C	0.000	0.000	4.620	0.000	51.00

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
T1	150.00-140.00	A	1.160	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	13.874	0.000	153.63
		C		0.000	0.000	0.000	0.000	0.00
T2	140.00-120.00	A	1.147	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	34.554	0.000	380.49
		C		0.000	0.000	15.190	0.000	314.98
T3	120.00-100.00	A	1.128	0.000	0.000	19.635	0.000	217.98
		B		0.000	0.000	34.355	0.000	375.11
		C		0.000	0.000	30.249	0.000	625.46
T4	100.00-80.00	A	1.106	0.000	0.000	19.483	0.000	214.84
		B		0.000	0.000	34.121	0.000	368.81
		C		0.000	0.000	30.093	0.000	620.17
T5	80.00-60.00	A	1.078	0.000	0.000	19.297	0.000	211.03
		B		0.000	0.000	33.834	0.000	361.17
		C		0.000	0.000	29.902	0.000	613.73
T6	60.00-40.00	A	1.042	0.000	0.000	19.055	0.000	206.13
		B		0.000	0.000	33.462	0.000	351.34
		C		0.000	0.000	29.654	0.000	605.41
T7	40.00-20.00	A	0.991	0.000	0.000	18.703	0.000	199.11
		B		0.000	0.000	32.922	0.000	337.26
		C		0.000	0.000	29.293	0.000	593.42
T8	20.00-5.00	A	0.907	0.000	0.000	13.607	0.000	141.12
		B		0.000	0.000	24.044	0.000	236.46
		C		0.000	0.000	21.538	0.000	430.88
T9	5.00-0.00	A	0.773	0.000	0.000	4.309	0.000	42.77
		B		0.000	0.000	6.185	0.000	62.20
		C		0.000	0.000	6.945	0.000	136.13

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
T1	150.00-140.00	0.9747	-4.7580	1.0164	-4.7938
T2	140.00-120.00	3.8217	-2.1365	3.1366	-3.7553

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
T3	120.00-100.00	3.2954	1.0878	1.4986	-0.6118
T4	100.00-80.00	3.2101	1.0597	1.4938	-0.6006
T5	80.00-60.00	3.1734	1.0476	1.4813	-0.5844
T6	60.00-40.00	3.2101	1.0597	1.5308	-0.5889
T7	40.00-20.00	3.2101	1.0597	1.5588	-0.5772
T8	20.00-5.00	3.1147	1.0282	1.5778	-0.5480
T9	5.00-0.00	1.8355	1.2951	0.6947	0.3917

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T1	4	LDF6-50A (1-1/4 FOAM)	140.00 - 148.00	0.6000	0.5463
T1	5	1-1/4" 6x12 Hybrid Cable Solution (HCS)	140.00 - 148.00	0.6000	0.5463
T2	4	LDF6-50A (1-1/4 FOAM)	120.00 - 140.00	0.6000	0.5941
T2	5	1-1/4" 6x12 Hybrid Cable Solution (HCS)	120.00 - 140.00	0.6000	0.5941
T2	7	1-1/4" 6x12 Hybrid Cable Solution (HCS)	120.00 - 130.00	0.6000	0.5941
T3	4	LDF6-50A (1-1/4 FOAM)	100.00 - 120.00	0.6000	0.5982
T3	5	1-1/4" 6x12 Hybrid Cable Solution (HCS)	100.00 - 120.00	0.6000	0.5982
T3	7	1-1/4" 6x12 Hybrid Cable Solution (HCS)	100.00 - 120.00	0.6000	0.5982
T3	8	1-1/4" 6x12 Hybrid Cable Solution (HCS)	100.00 - 120.00	0.6000	0.5982
T4	4	LDF6-50A (1-1/4 FOAM)	80.00 - 100.00	0.6000	0.5963
T4	5	1-1/4" 6x12 Hybrid Cable Solution (HCS)	80.00 - 100.00	0.6000	0.5963
T4	7	1-1/4" 6x12 Hybrid Cable Solution (HCS)	80.00 - 100.00	0.6000	0.5963
T4	8	1-1/4" 6x12 Hybrid Cable Solution (HCS)	80.00 - 100.00	0.6000	0.5963
T5	4	LDF6-50A (1-1/4 FOAM)	60.00 - 80.00	0.6000	0.5900
T5	5	1-1/4" 6x12 Hybrid Cable Solution (HCS)	60.00 - 80.00	0.6000	0.5900
T5	7	1-1/4" 6x12 Hybrid Cable Solution (HCS)	60.00 - 80.00	0.6000	0.5900
T5	8	1-1/4" 6x12 Hybrid Cable Solution (HCS)	60.00 - 80.00	0.6000	0.5900
T6	4	LDF6-50A (1-1/4 FOAM)	40.00 - 60.00	0.6000	0.6000
T6	5	1-1/4" 6x12 Hybrid Cable Solution (HCS)	40.00 - 60.00	0.6000	0.6000
T6	7	1-1/4" 6x12 Hybrid Cable Solution (HCS)	40.00 - 60.00	0.6000	0.6000
T6	8	1-1/4" 6x12 Hybrid Cable Solution (HCS)	40.00 - 60.00	0.6000	0.6000
T7	4	LDF6-50A (1-1/4 FOAM)	20.00 - 40.00	0.6000	0.6000
T7	5	1-1/4" 6x12 Hybrid Cable Solution (HCS)	20.00 - 40.00	0.6000	0.6000
T7	7	1-1/4" 6x12 Hybrid Cable	20.00 - 40.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
		Solution (HCS)			
T7	8	1-1/4" 6x12 Hybrid Cable Solution (HCS)	20.00 - 40.00	0.6000	0.6000
T8	4	LDF6-50A (1-1/4 FOAM)	5.00 - 20.00	0.6000	0.6000
T8	5	1-1/4" 6x12 Hybrid Cable Solution (HCS)	5.00 - 20.00	0.6000	0.6000
T8	7	1-1/4" 6x12 Hybrid Cable Solution (HCS)	5.00 - 20.00	0.6000	0.6000
T8	8	1-1/4" 6x12 Hybrid Cable Solution (HCS)	5.00 - 20.00	0.6000	0.6000
T9	4	LDF6-50A (1-1/4 FOAM)	0.00 - 5.00	0.6000	0.3495
T9	5	1-1/4" 6x12 Hybrid Cable Solution (HCS)	0.00 - 5.00	0.6000	0.3495
T9	7	1-1/4" 6x12 Hybrid Cable Solution (HCS)	0.00 - 5.00	0.6000	0.3495
T9	8	1-1/4" 6x12 Hybrid Cable Solution (HCS)	0.00 - 5.00	0.6000	0.3495

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
*3rd Party Antennas Check - 12/2017									
800 RRH (800 MHz) Unit (Sprint)	A	From Leg	4.00 6.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	6.34 6.72 7.10	5.58 5.94 6.31	60.00 109.72 164.80
800 RRH (800 MHz) Unit (Sprint)	B	From Leg	4.00 6.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	6.34 6.72 7.10	5.58 5.94 6.31	60.00 109.72 164.80
800 RRH (800 MHz) Unit (Sprint)	C	From Leg	4.00 6.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	6.34 6.72 7.10	5.58 5.94 6.31	60.00 109.72 164.80
APXVSPP18-C-A20 w/ Mount Pipe (Sprint)	A	From Leg	4.00 0.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	8.02 8.48 8.94	7.23 8.19 9.02	111.90 179.78 255.47
APXVSPP18-C-A20 w/ Mount Pipe (Sprint)	B	From Leg	4.00 0.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	8.02 8.48 8.94	7.23 8.19 9.02	111.90 179.78 255.47
APXVSPP18-C-A20 w/ Mount Pipe (Sprint)	C	From Leg	4.00 -6.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	8.02 8.48 8.94	7.23 8.19 9.02	111.90 179.78 255.47
Panasonic RRH 1900MHZ (Sprint)	A	From Leg	4.00 -2.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	2.49 2.71 2.93	3.06 3.30 3.54	90.00 116.87 147.08
Panasonic RRH 1900MHZ (Sprint)	A	From Leg	4.00 -2.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	2.49 2.71 2.93	3.06 3.30 3.54	90.00 116.87 147.08
Panasonic RRH 1900MHZ (Sprint)	A	From Leg	4.00 -2.00	0.0000	148.00	No Ice 1/2" Ice	2.49 2.71	3.06 3.30	90.00 116.87

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
			0.00			1" Ice	2.93	3.54	147.08
Andrew 800MHz RRH (Sprint)	A	From Leg	4.00 -2.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	2.36 2.57 2.79	1.97 2.17 2.37	57.00 77.36 100.68
Andrew 800MHz RRH (Sprint)	B	From Leg	4.00 -2.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	2.36 2.57 2.79	1.97 2.17 2.37	57.00 77.36 100.68
Andrew 800MHz RRH (Sprint)	C	From Leg	4.00 -2.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	2.36 2.57 2.79	1.97 2.17 2.37	57.00 77.36 100.68
DT465b-2XR (Sprint)	A	From Leg	4.00 6.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	9.90 10.47 11.06	8.44 9.00 9.58	110.00 177.14 249.60
DT465b-2XR (Sprint)	B	From Leg	4.00 6.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	9.90 10.47 11.06	8.44 9.00 9.58	110.00 177.14 249.60
DT465b-2XR (Sprint)	C	From Leg	4.00 6.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	9.90 10.47 11.06	8.44 9.00 9.58	110.00 177.14 249.60
TD-RRH8x20 (Sprint)	A	From Leg	4.00 -2.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	4.05 4.30 4.56	1.53 1.71 1.90	70.00 93.27 123.93
TD-RRH8x20 (Sprint)	B	From Leg	4.00 -2.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	4.05 4.30 4.56	1.53 1.71 1.90	70.00 93.27 123.93
TD-RRH8x20 (Sprint)	C	From Leg	4.00 -2.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	4.05 4.30 4.56	1.53 1.71 1.90	70.00 93.27 123.93
800 RRH (800 MHz) Unit (Sprint)	A	From Leg	4.00 6.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	6.34 6.72 7.10	5.58 5.94 6.31	60.00 109.72 164.80
800 RRH (800 MHz) Unit (Sprint)	B	From Leg	4.00 6.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	6.34 6.72 7.10	5.58 5.94 6.31	60.00 109.72 164.80
Pirod 12' T-Frame Sector Mount (1) (Sprint)	A	From Leg	0.00 0.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	13.60 18.40 23.20	13.60 18.40 23.20	465.00 600.00 735.00
Pirod 12' T-Frame Sector Mount (1) (Sprint)	B	From Leg	0.00 0.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	13.60 18.40 23.20	13.60 18.40 23.20	465.00 600.00 735.00
Pirod 12' T-Frame Sector Mount (1) (Sprint)	C	From Leg	0.00 0.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	13.60 18.40 23.20	13.60 18.40 23.20	465.00 600.00 735.00
Pirod 12' T-Frame Sector Mount (1) (T-Mobile)	A	From Leg	0.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	13.60 18.40 23.20	13.60 18.40 23.20	465.00 600.00 735.00
Pirod 12' T-Frame Sector Mount (1) (T-Mobile)	B	From Leg	0.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	13.60 18.40 23.20	13.60 18.40 23.20	465.00 600.00 735.00
Pirod 12' T-Frame Sector Mount (1) (T-Mobile)	C	From Leg	0.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	13.60 18.40 23.20	13.60 18.40 23.20	465.00 600.00 735.00
RFS APXVAARR24_43 (T-Mobile)	A	From Leg	3.00 -6.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	20.24 20.89 21.54	8.89 9.49 10.09	128.00 240.59 361.72
AIR 32 (T-Mobile)	A	From Leg	3.00 6.00	0.0000	130.00	No Ice 1/2" Ice	6.51 6.89	4.71 5.07	132.20 178.02

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
			0.00			1" Ice	7.27	5.43	229.11
AIR 6449	A	From Leg	3.00	0.0000	130.00	No Ice	5.68	2.42	103.60
(T-Mobile)			-2.00			1/2" Ice	5.98	2.64	142.18
			0.00			1" Ice	6.29	2.87	184.98
4449 RRU	A	From Leg	2.00	0.0000	130.00	No Ice	1.65	1.16	80.00
(T-Mobile)			-2.00			1/2" Ice	1.81	1.98	100.00
			0.00			1" Ice	1.97	2.80	120.00
4415 RRU	A	From Leg	3.00	0.0000	130.00	No Ice	1.64	0.68	46.00
(T-Mobile)			-6.00			1/2" Ice	1.80	0.79	58.41
			-2.00			1" Ice	1.97	0.91	73.18
4415 RRU	A	From Leg	3.00	0.0000	130.00	No Ice	1.64	0.68	46.00
(T-Mobile)			-6.00			1/2" Ice	1.80	0.79	58.41
			0.00			1" Ice	1.97	0.91	73.18
CBC1923Q-43 Diplexer	A	From Leg	3.00	0.0000	130.00	No Ice	0.32	0.13	10.00
(T-Mobile)			-6.00			1/2" Ice	0.40	0.17	15.00
			0.00			1" Ice	0.48	0.23	20.00
RFS APXVAARR24_43	B	From Leg	3.00	0.0000	130.00	No Ice	20.24	8.89	128.00
(T-Mobile)			-6.00			1/2" Ice	20.89	9.49	240.59
			0.00			1" Ice	21.54	10.09	361.72
AIR 32	B	From Leg	3.00	0.0000	130.00	No Ice	6.51	4.71	132.20
(T-Mobile)			6.00			1/2" Ice	6.89	5.07	178.02
			0.00			1" Ice	7.27	5.43	229.11
AIR 6449	B	From Leg	3.00	0.0000	130.00	No Ice	5.68	2.42	103.60
(T-Mobile)			-2.00			1/2" Ice	5.98	2.64	142.18
			0.00			1" Ice	6.29	2.87	184.98
4449 RRU	B	From Leg	2.00	0.0000	130.00	No Ice	1.65	1.16	80.00
(T-Mobile)			-2.00			1/2" Ice	1.81	1.98	100.00
			0.00			1" Ice	1.97	2.80	120.00
4415 RRU	B	From Leg	3.00	0.0000	130.00	No Ice	1.64	0.68	46.00
(T-Mobile)			-6.00			1/2" Ice	1.80	0.79	58.41
			-2.00			1" Ice	1.97	0.91	73.18
4415 RRU	B	From Leg	3.00	0.0000	130.00	No Ice	1.64	0.68	46.00
(T-Mobile)			-6.00			1/2" Ice	1.80	0.79	58.41
			0.00			1" Ice	1.97	0.91	73.18
CBC1923Q-43 Diplexer	B	From Leg	3.00	0.0000	130.00	No Ice	0.32	0.13	10.00
(T-Mobile)			-6.00			1/2" Ice	0.40	0.17	15.00
			0.00			1" Ice	0.48	0.23	20.00
RFS APXVAARR24_43	C	From Leg	3.00	0.0000	130.00	No Ice	20.24	8.89	128.00
(T-Mobile)			-6.00			1/2" Ice	20.89	9.49	240.59
			0.00			1" Ice	21.54	10.09	361.72
AIR 32	C	From Leg	3.00	0.0000	130.00	No Ice	6.51	4.71	132.20
(T-Mobile)			6.00			1/2" Ice	6.89	5.07	178.02
			0.00			1" Ice	7.27	5.43	229.11
AIR 6449	C	From Leg	3.00	0.0000	130.00	No Ice	5.68	2.42	103.60
(T-Mobile)			-2.00			1/2" Ice	5.98	2.64	142.18
			0.00			1" Ice	6.29	2.87	184.98
4449 RRU	C	From Leg	2.00	0.0000	130.00	No Ice	1.65	1.16	80.00
(T-Mobile)			-2.00			1/2" Ice	1.81	1.98	100.00
			0.00			1" Ice	1.97	2.80	120.00
4415 RRU	C	From Leg	3.00	0.0000	130.00	No Ice	1.64	0.68	46.00
(T-Mobile)			-6.00			1/2" Ice	1.80	0.79	58.41
			-2.00			1" Ice	1.97	0.91	73.18
4415 RRU	C	From Leg	3.00	0.0000	130.00	No Ice	1.64	0.68	46.00
(T-Mobile)			-6.00			1/2" Ice	1.80	0.79	58.41
			0.00			1" Ice	1.97	0.91	73.18
CBC1923Q-43 Diplexer	C	From Leg	3.00	0.0000	130.00	No Ice	0.32	0.13	10.00
(T-Mobile)			-6.00			1/2" Ice	0.40	0.17	15.00

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
			0.00					1" Ice	0.48	0.23	20.00
Comscope NHH-65B-R2B (Verizon)	A	From Leg	3.00			0.0000	120.00	No Ice	8.05	5.33	44.00
			-6.00					1/2" Ice	8.50	5.78	93.87
			0.00					1" Ice	8.97	6.24	149.82
Comscope NHH-65B-R2B (Verizon)	A	From Leg	3.00			0.0000	120.00	No Ice	8.05	5.33	44.00
			6.00					1/2" Ice	8.50	5.78	93.87
			0.00					1" Ice	8.97	6.24	149.82
Samsung MT6407-77A (Verizon)	A	From Leg	3.00			0.0000	120.00	No Ice	4.70	1.84	87.10
			2.00					1/2" Ice	4.99	2.07	116.39
			0.00					1" Ice	5.28	2.30	149.54
Samsung XXDWMM-12.5-65 (Verizon)	A	From Leg	3.00			0.0000	120.00	No Ice	4.80	2.40	20.00
			-2.00					1/2" Ice	5.07	2.60	59.31
			0.00					1" Ice	5.35	2.81	102.70
Commscope BSAMNT-SBS-1-2 (side by side mount) (Verizon)	A	From Leg	3.00			0.0000	120.00	No Ice	0.60	0.13	25.00
			0.00					1/2" Ice	0.73	0.18	31.06
			0.00					1" Ice	0.86	0.24	39.00
Commscope SFG22 (14' Sector Frame) (Verizon)	A	From Leg	2.00			0.0000	120.00	No Ice	10.50	2.50	515.00
			0.00					1/2" Ice	14.30	3.00	669.50
			0.00					1" Ice	18.10	3.50	824.00
Samsung B2/B66 RRU (Verizon)	A	From Leg	3.00			0.0000	120.00	No Ice	1.88	1.25	84.50
			0.00					1/2" Ice	2.05	1.39	102.84
			0.00					1" Ice	2.22	1.54	123.97
Samsung B5/B13 RRU (Verizon)	A	From Leg	3.00			0.0000	120.00	No Ice	1.88	1.02	88.00
			0.00					1/2" Ice	2.05	1.15	104.48
			0.00					1" Ice	2.22	1.29	123.64
Samsung CBRS RRH (Verizon)	A	From Leg	3.00			0.0000	120.00	No Ice	0.86	0.29	18.64
			0.00					1/2" Ice	0.98	0.36	25.54
			0.00					1" Ice	1.10	0.45	34.24
Samsung MT6407-77A (Verizon)	A	From Leg	3.00			0.0000	120.00	No Ice	4.70	1.84	87.10
			0.00					1/2" Ice	4.99	2.07	116.39
			0.00					1" Ice	5.28	2.30	149.54
OVP-12 (OVP Box) (Verizon)	A	From Leg	3.00			0.0000	120.00	No Ice	3.11	4.07	32.00
			0.00					1/2" Ice	3.35	4.33	68.59
			0.00					1" Ice	3.59	4.60	109.17
Comscope NHH-65B-R2B (Verizon)	B	From Leg	3.00			0.0000	120.00	No Ice	8.05	5.33	44.00
			-6.00					1/2" Ice	8.50	5.78	93.87
			0.00					1" Ice	8.97	6.24	149.82
Comscope NHH-65B-R2B (Verizon)	B	From Leg	3.00			0.0000	120.00	No Ice	8.05	5.33	44.00
			6.00					1/2" Ice	8.50	5.78	93.87
			0.00					1" Ice	8.97	6.24	149.82
Samsung MT6407-77A (Verizon)	B	From Leg	3.00			0.0000	120.00	No Ice	4.70	1.84	87.10
			2.00					1/2" Ice	4.99	2.07	116.39
			0.00					1" Ice	5.28	2.30	149.54
Samsung XXDWMM-12.5-65 (Verizon)	B	From Leg	3.00			0.0000	120.00	No Ice	4.80	2.40	20.00
			-2.00					1/2" Ice	5.07	2.60	59.31
			0.00					1" Ice	5.35	2.81	102.70
Commscope BSAMNT-SBS-1-2 (side by side mount) (Verizon)	B	From Leg	3.00			0.0000	120.00	No Ice	0.60	0.13	25.00
			0.00					1/2" Ice	0.73	0.18	31.06
			0.00					1" Ice	0.86	0.24	39.00
Commscope SFG22 (14' Sector Frame) (Verizon)	B	From Leg	2.00			0.0000	120.00	No Ice	10.50	2.50	515.00
			0.00					1/2" Ice	14.30	3.00	669.50
			0.00					1" Ice	18.10	3.50	824.00
Samsung B2/B66 RRU (Verizon)	B	From Leg	3.00			0.0000	120.00	No Ice	1.88	1.25	84.50
			0.00					1/2" Ice	2.05	1.39	102.84
			0.00					1" Ice	2.22	1.54	123.97

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
Samsung B5/B13 RRU (Verizon)	B	From Leg	3.00 0.00 0.00	0.0000	120.00	No Ice 1/2" Ice 1" Ice	1.88 2.05 2.22	1.02 1.15 1.29	88.00 104.48 123.64
Samsung CBRS RRH (Verizon)	B	From Leg	3.00 0.00 0.00	0.0000	120.00	No Ice 1/2" Ice 1" Ice	0.86 0.98 1.10	0.29 0.36 0.45	18.64 25.54 34.24
Samsung MT6407-77A (Verizon)	B	From Leg	3.00 0.00 0.00	0.0000	120.00	No Ice 1/2" Ice 1" Ice	4.70 4.99 5.28	1.84 2.07 2.30	87.10 116.39 149.54

222-H Verification Constants

Constant	Value
K_d	0.85
Ice Thickness Importance Factor	1
Z_g	900
	9.5
K_{zmin}	0.85
K_c	n/a
K_t	1
f	1
K_e	1

222-H Section Verification ArRr By Element

Section Elevation ft	Elem. Num.	Size	C	C w/Ice	Face	e	e w/Ice	A_r ft^2	A_r w/Ice ft^2	A_rR_r ft^2	A_rR_r w/Ice ft^2
T1 150.00-140.00	1	2	24.372	21.053	C	0.159	0.454	1.667	3.599	0.948	2.379
	1	2	24.372	21.053	A	0.159	0.454	1.667	3.599	0.948	2.379
	2	2	24.372	21.053	C	0.159	0.454	1.667	3.599	0.948	2.379
	2	2	24.372	21.053	B	0.159	0.454	1.667	3.599	0.948	2.379
	3	2	24.372	21.053	B	0.159	0.454	1.667	3.599	0.948	2.379
	3	2	24.372	21.053	A	0.159	0.454	1.667	3.599	0.948	2.379
	4	3/4	9.14	14.96	C	0.159	0.454	0.224	0.916	0.127	0.606
	5	3/4	9.14	14.96	B	0.159	0.454	0.224	0.916	0.127	0.606
	6	3/4	9.14	14.96	A	0.159	0.454	0.224	0.916	0.127	0.606
	7	3/4	9.14	14.96	C	0.159	0.454	0.224	0.916	0.127	0.606
	8	3/4	9.14	14.96	B	0.159	0.454	0.224	0.916	0.127	0.606
	9	3/4	9.14	14.96	A	0.159	0.454	0.224	0.916	0.127	0.606
	10	3/4	9.14	14.96	C	0.159	0.454	0.261	1.069	0.148	0.707
	11	3/4	9.14	14.96	C	0.159	0.454	0.261	1.069	0.148	0.707
	12	3/4	9.14	14.96	B	0.159	0.454	0.261	1.069	0.148	0.707
	13	3/4	9.14	14.96	B	0.159	0.454	0.261	1.069	0.148	0.707
	14	3/4	9.14	14.96	A	0.159	0.454	0.261	1.069	0.148	0.707
	15	3/4	9.14	14.96	A	0.159	0.454	0.261	1.069	0.148	0.707

Section Elevation ft	Elem. Num.	Size	C	C w/Ice	Face	e	e w/Ice	A_r ft^2	A_r w/Ice ft^2	A_rR_r ft^2	A_rR_r w/Ice ft^2
	16	3/4	9.14	14.96	C	0.159	0.454	0.261	1.069	0.148	0.707
	17	3/4	9.14	14.96	C	0.159	0.454	0.261	1.069	0.148	0.707
	18	3/4	9.14	14.96	B	0.159	0.454	0.261	1.069	0.148	0.707
	19	3/4	9.14	14.96	B	0.159	0.454	0.261	1.069	0.148	0.707
	20	3/4	9.14	14.96	A	0.159	0.454	0.261	1.069	0.148	0.707
	21	3/4	9.14	14.96	A	0.159	0.454	0.261	1.069	0.148	0.707
	22	3/4	9.14	14.96	C	0.159	0.454	0.261	1.069	0.148	0.707
	23	3/4	9.14	14.96	C	0.159	0.454	0.261	1.069	0.148	0.707
	24	3/4	9.14	14.96	B	0.159	0.454	0.261	1.069	0.148	0.707
	25	3/4	9.14	14.96	B	0.159	0.454	0.261	1.069	0.148	0.707
	26	3/4	9.14	14.96	A	0.159	0.454	0.261	1.069	0.148	0.707
	27	3/4	9.14	14.96	A	0.159	0.454	0.261	1.069	0.148	0.707
	28	3/4	9.14	14.96	C	0.159	0.454	0.261	1.069	0.148	0.707
	29	3/4	9.14	14.96	C	0.159	0.454	0.261	1.069	0.148	0.707
	30	3/4	9.14	14.96	B	0.159	0.454	0.261	1.069	0.148	0.707
	31	3/4	9.14	14.96	B	0.159	0.454	0.261	1.069	0.148	0.707
	32	3/4	9.14	14.96	A	0.159	0.454	0.261	1.069	0.148	0.707
	33	3/4	9.14	14.96	A	0.159	0.454	0.261	1.069	0.148	0.707
	452	1 1/4	15.233	17.397	C	0.159	0.454	0.373	1.066	0.212	0.705
	453	1 1/4	15.233	17.397	B	0.159	0.454	0.373	1.066	0.212	0.705
	454	1 1/4	15.233	17.397	A	0.159	0.454	0.373	1.066	0.212	0.705
					A		Sum:	6.244	18.647	3.550	12.328
					B			6.244	18.647	3.550	12.328
					C			6.244	18.647	3.550	12.328
T2	34	2	24.094	20.691	C	0.145	0.406	3.333	7.156	1.890	4.572
140.00-120.00											
	34	2	24.094	20.691	A	0.145	0.406	3.333	7.156	1.890	4.572
	35	2	24.094	20.691	C	0.145	0.406	3.333	7.156	1.890	4.572
	35	2	24.094	20.691	B	0.145	0.406	3.333	7.156	1.890	4.572
	36	2	24.094	20.691	B	0.145	0.406	3.333	7.156	1.890	4.572
	36	2	24.094	20.691	A	0.145	0.406	3.333	7.156	1.890	4.572
	37	3/4	9.035	14.668	C	0.145	0.406	0.224	0.909	0.127	0.581
	38	3/4	9.035	14.668	B	0.145	0.406	0.224	0.909	0.127	0.581
	39	3/4	9.035	14.668	A	0.145	0.406	0.224	0.909	0.127	0.581
	40	3/4	9.035	14.668	C	0.145	0.406	0.224	0.909	0.127	0.581
	41	3/4	9.035	14.668	B	0.145	0.406	0.224	0.909	0.127	0.581
	42	3/4	9.035	14.668	A	0.145	0.406	0.224	0.909	0.127	0.581
	43	3/4	9.035	14.668	C	0.145	0.406	0.265	1.076	0.150	0.687
	44	3/4	9.035	14.668	C	0.145	0.406	0.265	1.076	0.150	0.687
	45	3/4	9.035	14.668	B	0.145	0.406	0.265	1.076	0.150	0.687
	46	3/4	9.035	14.668	B	0.145	0.406	0.265	1.076	0.150	0.687
	47	3/4	9.035	14.668	A	0.145	0.406	0.265	1.076	0.150	0.687
	48	3/4	9.035	14.668	A	0.145	0.406	0.265	1.076	0.150	0.687
	49	3/4	9.035	14.668	C	0.145	0.406	0.265	1.076	0.150	0.687
	50	3/4	9.035	14.668	C	0.145	0.406	0.265	1.076	0.150	0.687
	51	3/4	9.035	14.668	B	0.145	0.406	0.265	1.076	0.150	0.687
	52	3/4	9.035	14.668	B	0.145	0.406	0.265	1.076	0.150	0.687
	53	3/4	9.035	14.668	A	0.145	0.406	0.265	1.076	0.150	0.687
	54	3/4	9.035	14.668	A	0.145	0.406	0.265	1.076	0.150	0.687
	55	3/4	9.035	14.668	C	0.145	0.406	0.265	1.076	0.150	0.687
	56	3/4	9.035	14.668	C	0.145	0.406	0.265	1.076	0.150	0.687
	57	3/4	9.035	14.668	B	0.145	0.406	0.265	1.076	0.150	0.687
	58	3/4	9.035	14.668	B	0.145	0.406	0.265	1.076	0.150	0.687
	59	3/4	9.035	14.668	A	0.145	0.406	0.265	1.076	0.150	0.687
	60	3/4	9.035	14.668	A	0.145	0.406	0.265	1.076	0.150	0.687
	61	3/4	9.035	14.668	C	0.145	0.406	0.265	1.076	0.150	0.687
	62	3/4	9.035	14.668	C	0.145	0.406	0.265	1.076	0.150	0.687
	63	3/4	9.035	14.668	B	0.145	0.406	0.265	1.076	0.150	0.687
	64	3/4	9.035	14.668	B	0.145	0.406	0.265	1.076	0.150	0.687
	65	3/4	9.035	14.668	A	0.145	0.406	0.265	1.076	0.150	0.687

Section Elevation ft	Elem. Num.	Size	C	C w/Ice	Face	e	e w/Ice	A_r ft^2	A_r w/Ice ft^2	A_rR_r ft^2	A_rR_r w/Ice ft^2
	66	3/4	9.035	14.668	A	0.145	0.406	0.265	1.076	0.150	0.687
	67	3/4	9.035	14.668	C	0.145	0.406	0.265	1.076	0.150	0.687
	68	3/4	9.035	14.668	C	0.145	0.406	0.265	1.076	0.150	0.687
	69	3/4	9.035	14.668	B	0.145	0.406	0.265	1.076	0.150	0.687
	70	3/4	9.035	14.668	B	0.145	0.406	0.265	1.076	0.150	0.687
	71	3/4	9.035	14.668	A	0.145	0.406	0.265	1.076	0.150	0.687
	72	3/4	9.035	14.668	A	0.145	0.406	0.265	1.076	0.150	0.687
	73	3/4	9.035	14.668	C	0.145	0.406	0.265	1.076	0.150	0.687
	74	3/4	9.035	14.668	C	0.145	0.406	0.265	1.076	0.150	0.687
	75	3/4	9.035	14.668	B	0.145	0.406	0.265	1.076	0.150	0.687
	76	3/4	9.035	14.668	B	0.145	0.406	0.265	1.076	0.150	0.687
	77	3/4	9.035	14.668	A	0.145	0.406	0.265	1.076	0.150	0.687
	78	3/4	9.035	14.668	A	0.145	0.406	0.265	1.076	0.150	0.687
	79	3/4	9.035	14.668	C	0.145	0.406	0.265	1.076	0.150	0.687
	80	3/4	9.035	14.668	C	0.145	0.406	0.265	1.076	0.150	0.687
	81	3/4	9.035	14.668	B	0.145	0.406	0.265	1.076	0.150	0.687
	82	3/4	9.035	14.668	B	0.145	0.406	0.265	1.076	0.150	0.687
	83	3/4	9.035	14.668	A	0.145	0.406	0.265	1.076	0.150	0.687
	84	3/4	9.035	14.668	A	0.145	0.406	0.265	1.076	0.150	0.687
	85	3/4	9.035	14.668	C	0.145	0.406	0.265	1.076	0.150	0.687
	86	3/4	9.035	14.668	C	0.145	0.406	0.265	1.076	0.150	0.687
	87	3/4	9.035	14.668	B	0.145	0.406	0.265	1.076	0.150	0.687
	88	3/4	9.035	14.668	B	0.145	0.406	0.265	1.076	0.150	0.687
	89	3/4	9.035	14.668	A	0.145	0.406	0.265	1.076	0.150	0.687
	90	3/4	9.035	14.668	A	0.145	0.406	0.265	1.076	0.150	0.687
					A		Sum:	11.356	33.345	6.439	21.301
					B			11.356	33.345	6.439	21.301
					C			11.356	33.345	6.439	21.301
T3	91	2	23.674	20.151	C	0.145	0.402	3.333	7.093	1.890	4.518
120.00-100.00											
	91	2	23.674	20.151	A	0.145	0.402	3.333	7.093	1.890	4.518
	92	2	23.674	20.151	C	0.145	0.402	3.333	7.093	1.890	4.518
	92	2	23.674	20.151	B	0.145	0.402	3.333	7.093	1.890	4.518
	93	2	23.674	20.151	B	0.145	0.402	3.333	7.093	1.890	4.518
	93	2	23.674	20.151	A	0.145	0.402	3.333	7.093	1.890	4.518
	94	3/4	8.878	14.232	C	0.145	0.402	0.224	0.898	0.127	0.572
	95	3/4	8.878	14.232	B	0.145	0.402	0.224	0.898	0.127	0.572
	96	3/4	8.878	14.232	A	0.145	0.402	0.224	0.898	0.127	0.572
	97	3/4	8.878	14.232	C	0.145	0.402	0.224	0.898	0.127	0.572
	98	3/4	8.878	14.232	B	0.145	0.402	0.224	0.898	0.127	0.572
	99	3/4	8.878	14.232	A	0.145	0.402	0.224	0.898	0.127	0.572
	100	3/4	8.878	14.232	C	0.145	0.402	0.265	1.062	0.150	0.677
	101	3/4	8.878	14.232	C	0.145	0.402	0.265	1.062	0.150	0.677
	102	3/4	8.878	14.232	B	0.145	0.402	0.265	1.062	0.150	0.677
	103	3/4	8.878	14.232	B	0.145	0.402	0.265	1.062	0.150	0.677
	104	3/4	8.878	14.232	A	0.145	0.402	0.265	1.062	0.150	0.677
	105	3/4	8.878	14.232	A	0.145	0.402	0.265	1.062	0.150	0.677
	106	3/4	8.878	14.232	C	0.145	0.402	0.265	1.062	0.150	0.677
	107	3/4	8.878	14.232	C	0.145	0.402	0.265	1.062	0.150	0.677
	108	3/4	8.878	14.232	B	0.145	0.402	0.265	1.062	0.150	0.677
	109	3/4	8.878	14.232	B	0.145	0.402	0.265	1.062	0.150	0.677
	110	3/4	8.878	14.232	A	0.145	0.402	0.265	1.062	0.150	0.677
	111	3/4	8.878	14.232	A	0.145	0.402	0.265	1.062	0.150	0.677
	112	3/4	8.878	14.232	C	0.145	0.402	0.265	1.062	0.150	0.677
	113	3/4	8.878	14.232	C	0.145	0.402	0.265	1.062	0.150	0.677
	114	3/4	8.878	14.232	B	0.145	0.402	0.265	1.062	0.150	0.677
	115	3/4	8.878	14.232	B	0.145	0.402	0.265	1.062	0.150	0.677
	116	3/4	8.878	14.232	A	0.145	0.402	0.265	1.062	0.150	0.677
	117	3/4	8.878	14.232	A	0.145	0.402	0.265	1.062	0.150	0.677
	118	3/4	8.878	14.232	C	0.145	0.402	0.265	1.062	0.150	0.677

Section Elevation ft	Elem. Num.	Size	C	C w/Ice	Face	e	e w/Ice	A_r ft^2	A_r w/Ice ft^2	A_rR_r ft^2	A_rR_r w/Ice ft^2
	119	3/4	8.878	14.232	C	0.145	0.402	0.265	1.062	0.150	0.677
	120	3/4	8.878	14.232	B	0.145	0.402	0.265	1.062	0.150	0.677
	121	3/4	8.878	14.232	B	0.145	0.402	0.265	1.062	0.150	0.677
	122	3/4	8.878	14.232	A	0.145	0.402	0.265	1.062	0.150	0.677
	123	3/4	8.878	14.232	A	0.145	0.402	0.265	1.062	0.150	0.677
	124	3/4	8.878	14.232	C	0.145	0.402	0.265	1.062	0.150	0.677
	125	3/4	8.878	14.232	C	0.145	0.402	0.265	1.062	0.150	0.677
	126	3/4	8.878	14.232	B	0.145	0.402	0.265	1.062	0.150	0.677
	127	3/4	8.878	14.232	B	0.145	0.402	0.265	1.062	0.150	0.677
	128	3/4	8.878	14.232	A	0.145	0.402	0.265	1.062	0.150	0.677
	129	3/4	8.878	14.232	A	0.145	0.402	0.265	1.062	0.150	0.677
	130	3/4	8.878	14.232	C	0.145	0.402	0.265	1.062	0.150	0.677
	131	3/4	8.878	14.232	C	0.145	0.402	0.265	1.062	0.150	0.677
	132	3/4	8.878	14.232	B	0.145	0.402	0.265	1.062	0.150	0.677
	133	3/4	8.878	14.232	B	0.145	0.402	0.265	1.062	0.150	0.677
	134	3/4	8.878	14.232	A	0.145	0.402	0.265	1.062	0.150	0.677
	135	3/4	8.878	14.232	A	0.145	0.402	0.265	1.062	0.150	0.677
	136	3/4	8.878	14.232	C	0.145	0.402	0.265	1.062	0.150	0.677
	137	3/4	8.878	14.232	C	0.145	0.402	0.265	1.062	0.150	0.677
	138	3/4	8.878	14.232	B	0.145	0.402	0.265	1.062	0.150	0.677
	139	3/4	8.878	14.232	B	0.145	0.402	0.265	1.062	0.150	0.677
	140	3/4	8.878	14.232	A	0.145	0.402	0.265	1.062	0.150	0.677
	141	3/4	8.878	14.232	A	0.145	0.402	0.265	1.062	0.150	0.677
	142	3/4	8.878	14.232	C	0.145	0.402	0.265	1.062	0.150	0.677
	143	3/4	8.878	14.232	C	0.145	0.402	0.265	1.062	0.150	0.677
	144	3/4	8.878	14.232	B	0.145	0.402	0.265	1.062	0.150	0.677
	145	3/4	8.878	14.232	B	0.145	0.402	0.265	1.062	0.150	0.677
	146	3/4	8.878	14.232	A	0.145	0.402	0.265	1.062	0.150	0.677
	147	3/4	8.878	14.232	A	0.145	0.402	0.265	1.062	0.150	0.677
					A		Sum:	11.356	32.981	6.439	21.009
					B			11.356	32.981	6.439	21.009
					C			11.356	32.981	6.439	21.009
T4 100.00-80.00	148	2 1/4	26.076	20.681	C	0.154	0.404	3.750	7.435	2.130	4.742
	148	2 1/4	26.076	20.681	A	0.154	0.404	3.750	7.435	2.130	4.742
	149	2 1/4	26.076	20.681	C	0.154	0.404	3.750	7.435	2.130	4.742
	149	2 1/4	26.076	20.681	B	0.154	0.404	3.750	7.435	2.130	4.742
	150	2 1/4	26.076	20.681	B	0.154	0.404	3.750	7.435	2.130	4.742
	150	2 1/4	26.076	20.681	A	0.154	0.404	3.750	7.435	2.130	4.742
	151	3/4	8.692	13.727	C	0.154	0.404	0.223	0.879	0.126	0.561
	152	3/4	8.692	13.727	B	0.154	0.404	0.223	0.879	0.126	0.561
	153	3/4	8.692	13.727	A	0.154	0.404	0.223	0.879	0.126	0.561
	154	3/4	8.692	13.727	C	0.154	0.404	0.223	0.879	0.126	0.561
	155	3/4	8.692	13.727	B	0.154	0.404	0.223	0.879	0.126	0.561
	156	3/4	8.692	13.727	A	0.154	0.404	0.223	0.879	0.126	0.561
	157	3/4	8.692	13.727	C	0.154	0.404	0.264	1.041	0.150	0.664
	158	3/4	8.692	13.727	C	0.154	0.404	0.264	1.041	0.150	0.664
	159	3/4	8.692	13.727	B	0.154	0.404	0.264	1.041	0.150	0.664
	160	3/4	8.692	13.727	B	0.154	0.404	0.264	1.041	0.150	0.664
	161	3/4	8.692	13.727	A	0.154	0.404	0.264	1.041	0.150	0.664
	162	3/4	8.692	13.727	A	0.154	0.404	0.264	1.041	0.150	0.664
	163	3/4	8.692	13.727	C	0.154	0.404	0.264	1.041	0.150	0.664
	164	3/4	8.692	13.727	C	0.154	0.404	0.264	1.041	0.150	0.664
	165	3/4	8.692	13.727	B	0.154	0.404	0.264	1.041	0.150	0.664
	166	3/4	8.692	13.727	B	0.154	0.404	0.264	1.041	0.150	0.664
	167	3/4	8.692	13.727	A	0.154	0.404	0.264	1.041	0.150	0.664
	168	3/4	8.692	13.727	A	0.154	0.404	0.264	1.041	0.150	0.664
	169	3/4	8.692	13.727	C	0.154	0.404	0.264	1.041	0.150	0.664
	170	3/4	8.692	13.727	C	0.154	0.404	0.264	1.041	0.150	0.664
	171	3/4	8.692	13.727	B	0.154	0.404	0.264	1.041	0.150	0.664
	172	3/4	8.692	13.727	B	0.154	0.404	0.264	1.041	0.150	0.664

Section Elevation ft	Elem. Num.	Size	C	C w/Ice	Face	e	e w/Ice	A_r ft^2	A_r w/Ice ft^2	A_rR_r ft^2	A_rR_r w/Ice ft^2
	173	3/4	8.692	13.727	A	0.154	0.404	0.264	1.041	0.150	0.664
	174	3/4	8.692	13.727	A	0.154	0.404	0.264	1.041	0.150	0.664
	175	3/4	8.692	13.727	C	0.154	0.404	0.264	1.041	0.150	0.664
	176	3/4	8.692	13.727	C	0.154	0.404	0.264	1.041	0.150	0.664
	177	3/4	8.692	13.727	B	0.154	0.404	0.264	1.041	0.150	0.664
	178	3/4	8.692	13.727	B	0.154	0.404	0.264	1.041	0.150	0.664
	179	3/4	8.692	13.727	A	0.154	0.404	0.264	1.041	0.150	0.664
	180	3/4	8.692	13.727	A	0.154	0.404	0.264	1.041	0.150	0.664
	181	3/4	8.692	13.727	C	0.154	0.404	0.264	1.041	0.150	0.664
	182	3/4	8.692	13.727	C	0.154	0.404	0.264	1.041	0.150	0.664
	183	3/4	8.692	13.727	B	0.154	0.404	0.264	1.041	0.150	0.664
	184	3/4	8.692	13.727	B	0.154	0.404	0.264	1.041	0.150	0.664
	185	3/4	8.692	13.727	A	0.154	0.404	0.264	1.041	0.150	0.664
	186	3/4	8.692	13.727	A	0.154	0.404	0.264	1.041	0.150	0.664
	187	3/4	8.692	13.727	C	0.154	0.404	0.264	1.041	0.150	0.664
	188	3/4	8.692	13.727	C	0.154	0.404	0.264	1.041	0.150	0.664
	189	3/4	8.692	13.727	B	0.154	0.404	0.264	1.041	0.150	0.664
	190	3/4	8.692	13.727	B	0.154	0.404	0.264	1.041	0.150	0.664
	191	3/4	8.692	13.727	A	0.154	0.404	0.264	1.041	0.150	0.664
	192	3/4	8.692	13.727	A	0.154	0.404	0.264	1.041	0.150	0.664
	193	3/4	8.692	13.727	C	0.154	0.404	0.264	1.041	0.150	0.664
	194	3/4	8.692	13.727	C	0.154	0.404	0.264	1.041	0.150	0.664
	195	3/4	8.692	13.727	B	0.154	0.404	0.264	1.041	0.150	0.664
	196	3/4	8.692	13.727	B	0.154	0.404	0.264	1.041	0.150	0.664
	197	3/4	8.692	13.727	A	0.154	0.404	0.264	1.041	0.150	0.664
	198	3/4	8.692	13.727	A	0.154	0.404	0.264	1.041	0.150	0.664
	199	3/4	8.692	13.727	C	0.154	0.404	0.264	1.041	0.150	0.664
	200	3/4	8.692	13.727	C	0.154	0.404	0.264	1.041	0.150	0.664
	201	3/4	8.692	13.727	B	0.154	0.404	0.264	1.041	0.150	0.664
	202	3/4	8.692	13.727	B	0.154	0.404	0.264	1.041	0.150	0.664
	203	3/4	8.692	13.727	A	0.154	0.404	0.264	1.041	0.150	0.664
	204	3/4	8.692	13.727	A	0.154	0.404	0.264	1.041	0.150	0.664
					A		Sum:	12.162	33.277	6.908	21.225
					B			12.162	33.277	6.908	21.225
					C			12.162	33.277	6.908	21.225
T5 80.00-60.00	205	2 1/4	25.396	19.893	C	0.159	0.41	3.750	7.344	2.132	4.705
	205	2 1/4	25.396	19.893	A	0.159	0.41	3.750	7.344	2.132	4.705
	206	2 1/4	25.396	19.893	C	0.159	0.41	3.750	7.344	2.132	4.705
	206	2 1/4	25.396	19.893	B	0.159	0.41	3.750	7.344	2.132	4.705
	207	2 1/4	25.396	19.893	B	0.159	0.41	3.750	7.344	2.132	4.705
	207	2 1/4	25.396	19.893	A	0.159	0.41	3.750	7.344	2.132	4.705
	208	3/4	8.465	13.121	C	0.159	0.41	0.223	0.863	0.127	0.553
	209	3/4	8.465	13.121	B	0.159	0.41	0.223	0.863	0.127	0.553
	210	3/4	8.465	13.121	A	0.159	0.41	0.223	0.863	0.127	0.553
	211	3/4	8.465	13.121	C	0.159	0.41	0.223	0.863	0.127	0.553
	212	3/4	8.465	13.121	B	0.159	0.41	0.223	0.863	0.127	0.553
	213	3/4	8.465	13.121	A	0.159	0.41	0.223	0.863	0.127	0.553
	214	3/4	8.465	13.121	C	0.159	0.41	0.264	1.021	0.150	0.654
	215	3/4	8.465	13.121	C	0.159	0.41	0.264	1.021	0.150	0.654
	216	3/4	8.465	13.121	B	0.159	0.41	0.264	1.021	0.150	0.654
	217	3/4	8.465	13.121	B	0.159	0.41	0.264	1.021	0.150	0.654
	218	3/4	8.465	13.121	A	0.159	0.41	0.264	1.021	0.150	0.654
	219	3/4	8.465	13.121	A	0.159	0.41	0.264	1.021	0.150	0.654
	220	3/4	8.465	13.121	C	0.159	0.41	0.264	1.021	0.150	0.654
	221	3/4	8.465	13.121	C	0.159	0.41	0.264	1.021	0.150	0.654
	222	3/4	8.465	13.121	B	0.159	0.41	0.264	1.021	0.150	0.654
	223	3/4	8.465	13.121	B	0.159	0.41	0.264	1.021	0.150	0.654
	224	3/4	8.465	13.121	A	0.159	0.41	0.264	1.021	0.150	0.654
	225	3/4	8.465	13.121	A	0.159	0.41	0.264	1.021	0.150	0.654
	226	3/4	8.465	13.121	C	0.159	0.41	0.264	1.021	0.150	0.654

Section Elevation ft	Elem. Num.	Size	C	C w/Ice	Face	e	e w/Ice	A_r ft^2	A_r w/Ice ft^2	A_rR_r ft^2	A_rR_r w/Ice ft^2
	227	3/4	8.465	13.121	C	0.159	0.41	0.264	1.021	0.150	0.654
	228	3/4	8.465	13.121	B	0.159	0.41	0.264	1.021	0.150	0.654
	229	3/4	8.465	13.121	B	0.159	0.41	0.264	1.021	0.150	0.654
	230	3/4	8.465	13.121	A	0.159	0.41	0.264	1.021	0.150	0.654
	231	3/4	8.465	13.121	A	0.159	0.41	0.264	1.021	0.150	0.654
	232	3/4	8.465	13.121	C	0.159	0.41	0.264	1.021	0.150	0.654
	233	3/4	8.465	13.121	C	0.159	0.41	0.264	1.021	0.150	0.654
	234	3/4	8.465	13.121	B	0.159	0.41	0.264	1.021	0.150	0.654
	235	3/4	8.465	13.121	B	0.159	0.41	0.264	1.021	0.150	0.654
	236	3/4	8.465	13.121	A	0.159	0.41	0.264	1.021	0.150	0.654
	237	3/4	8.465	13.121	A	0.159	0.41	0.264	1.021	0.150	0.654
	238	3/4	8.465	13.121	C	0.159	0.41	0.264	1.021	0.150	0.654
	239	3/4	8.465	13.121	C	0.159	0.41	0.264	1.021	0.150	0.654
	240	3/4	8.465	13.121	B	0.159	0.41	0.264	1.021	0.150	0.654
	241	3/4	8.465	13.121	B	0.159	0.41	0.264	1.021	0.150	0.654
	242	3/4	8.465	13.121	A	0.159	0.41	0.264	1.021	0.150	0.654
	243	3/4	8.465	13.121	A	0.159	0.41	0.264	1.021	0.150	0.654
	244	3/4	8.465	13.121	C	0.159	0.41	0.264	1.021	0.150	0.654
	245	3/4	8.465	13.121	C	0.159	0.41	0.264	1.021	0.150	0.654
	246	3/4	8.465	13.121	B	0.159	0.41	0.264	1.021	0.150	0.654
	247	3/4	8.465	13.121	B	0.159	0.41	0.264	1.021	0.150	0.654
	248	3/4	8.465	13.121	A	0.159	0.41	0.264	1.021	0.150	0.654
	249	3/4	8.465	13.121	A	0.159	0.41	0.264	1.021	0.150	0.654
	250	3/4	8.465	13.121	C	0.159	0.41	0.264	1.021	0.150	0.654
	251	3/4	8.465	13.121	C	0.159	0.41	0.264	1.021	0.150	0.654
	252	3/4	8.465	13.121	B	0.159	0.41	0.264	1.021	0.150	0.654
	253	3/4	8.465	13.121	B	0.159	0.41	0.264	1.021	0.150	0.654
	254	3/4	8.465	13.121	A	0.159	0.41	0.264	1.021	0.150	0.654
	255	3/4	8.465	13.121	A	0.159	0.41	0.264	1.021	0.150	0.654
	256	3/4	8.465	13.121	C	0.159	0.41	0.264	1.021	0.150	0.654
	257	3/4	8.465	13.121	C	0.159	0.41	0.264	1.021	0.150	0.654
	258	3/4	8.465	13.121	B	0.159	0.41	0.264	1.021	0.150	0.654
	259	3/4	8.465	13.121	B	0.159	0.41	0.264	1.021	0.150	0.654
	260	3/4	8.465	13.121	A	0.159	0.41	0.264	1.021	0.150	0.654
	261	3/4	8.465	13.121	A	0.159	0.41	0.264	1.021	0.150	0.654
	470	1 1/4	14.109	15.378	C	0.159	0.41	0.371	1.011	0.211	0.648
	471	1 1/4	14.109	15.378	B	0.159	0.41	0.371	1.011	0.211	0.648
	472	1 1/4	14.109	15.378	A	0.159	0.41	0.371	1.011	0.211	0.648
					A		Sum:	12.533	33.764	7.126	21.631
					B			12.533	33.764	7.126	21.631
					C			12.533	33.764	7.126	21.631
T6 60.00-40.00	262	2 1/4	24.512	18.89	C	0.154	0.39	3.750	7.225	2.130	4.566
	262	2 1/4	24.512	18.89	A	0.154	0.39	3.750	7.225	2.130	4.566
	263	2 1/4	24.512	18.89	C	0.154	0.39	3.750	7.225	2.130	4.566
	263	2 1/4	24.512	18.89	B	0.154	0.39	3.750	7.225	2.130	4.566
	264	2 1/4	24.512	18.89	B	0.154	0.39	3.750	7.225	2.130	4.566
	264	2 1/4	24.512	18.89	A	0.154	0.39	3.750	7.225	2.130	4.566
	265	3/4	8.171	12.353	C	0.154	0.39	0.223	0.842	0.126	0.532
	266	3/4	8.171	12.353	B	0.154	0.39	0.223	0.842	0.126	0.532
	267	3/4	8.171	12.353	A	0.154	0.39	0.223	0.842	0.126	0.532
	268	3/4	8.171	12.353	C	0.154	0.39	0.223	0.842	0.126	0.532
	269	3/4	8.171	12.353	B	0.154	0.39	0.223	0.842	0.126	0.532
	270	3/4	8.171	12.353	A	0.154	0.39	0.223	0.842	0.126	0.532
	271	3/4	8.171	12.353	C	0.154	0.39	0.264	0.996	0.150	0.630
	272	3/4	8.171	12.353	C	0.154	0.39	0.264	0.996	0.150	0.630
	273	3/4	8.171	12.353	B	0.154	0.39	0.264	0.996	0.150	0.630
	274	3/4	8.171	12.353	B	0.154	0.39	0.264	0.996	0.150	0.630
	275	3/4	8.171	12.353	A	0.154	0.39	0.264	0.996	0.150	0.630
	276	3/4	8.171	12.353	A	0.154	0.39	0.264	0.996	0.150	0.630
	277	3/4	8.171	12.353	C	0.154	0.39	0.264	0.996	0.150	0.630

Section Elevation ft	Elem. Num.	Size	C	C w/Ice	Face	e	e w/Ice	A_r ft^2	A_r w/Ice ft^2	A_rR_r ft^2	A_rR_r w/Ice ft^2
	278	3/4	8.171	12.353	C	0.154	0.39	0.264	0.996	0.150	0.630
	279	3/4	8.171	12.353	B	0.154	0.39	0.264	0.996	0.150	0.630
	280	3/4	8.171	12.353	B	0.154	0.39	0.264	0.996	0.150	0.630
	281	3/4	8.171	12.353	A	0.154	0.39	0.264	0.996	0.150	0.630
	282	3/4	8.171	12.353	A	0.154	0.39	0.264	0.996	0.150	0.630
	283	3/4	8.171	12.353	C	0.154	0.39	0.264	0.996	0.150	0.630
	284	3/4	8.171	12.353	C	0.154	0.39	0.264	0.996	0.150	0.630
	285	3/4	8.171	12.353	B	0.154	0.39	0.264	0.996	0.150	0.630
	286	3/4	8.171	12.353	B	0.154	0.39	0.264	0.996	0.150	0.630
	287	3/4	8.171	12.353	A	0.154	0.39	0.264	0.996	0.150	0.630
	288	3/4	8.171	12.353	A	0.154	0.39	0.264	0.996	0.150	0.630
	289	3/4	8.171	12.353	C	0.154	0.39	0.264	0.996	0.150	0.630
	290	3/4	8.171	12.353	C	0.154	0.39	0.264	0.996	0.150	0.630
	291	3/4	8.171	12.353	B	0.154	0.39	0.264	0.996	0.150	0.630
	292	3/4	8.171	12.353	B	0.154	0.39	0.264	0.996	0.150	0.630
	293	3/4	8.171	12.353	A	0.154	0.39	0.264	0.996	0.150	0.630
	294	3/4	8.171	12.353	A	0.154	0.39	0.264	0.996	0.150	0.630
	295	3/4	8.171	12.353	C	0.154	0.39	0.264	0.996	0.150	0.630
	296	3/4	8.171	12.353	C	0.154	0.39	0.264	0.996	0.150	0.630
	297	3/4	8.171	12.353	B	0.154	0.39	0.264	0.996	0.150	0.630
	298	3/4	8.171	12.353	B	0.154	0.39	0.264	0.996	0.150	0.630
	299	3/4	8.171	12.353	A	0.154	0.39	0.264	0.996	0.150	0.630
	300	3/4	8.171	12.353	A	0.154	0.39	0.264	0.996	0.150	0.630
	301	3/4	8.171	12.353	C	0.154	0.39	0.264	0.996	0.150	0.630
	302	3/4	8.171	12.353	C	0.154	0.39	0.264	0.996	0.150	0.630
	303	3/4	8.171	12.353	B	0.154	0.39	0.264	0.996	0.150	0.630
	304	3/4	8.171	12.353	B	0.154	0.39	0.264	0.996	0.150	0.630
	305	3/4	8.171	12.353	A	0.154	0.39	0.264	0.996	0.150	0.630
	306	3/4	8.171	12.353	A	0.154	0.39	0.264	0.996	0.150	0.630
	307	3/4	8.171	12.353	C	0.154	0.39	0.264	0.996	0.150	0.630
	308	3/4	8.171	12.353	C	0.154	0.39	0.264	0.996	0.150	0.630
	309	3/4	8.171	12.353	B	0.154	0.39	0.264	0.996	0.150	0.630
	310	3/4	8.171	12.353	B	0.154	0.39	0.264	0.996	0.150	0.630
	311	3/4	8.171	12.353	A	0.154	0.39	0.264	0.996	0.150	0.630
	312	3/4	8.171	12.353	A	0.154	0.39	0.264	0.996	0.150	0.630
	313	3/4	8.171	12.353	C	0.154	0.39	0.264	0.996	0.150	0.630
	314	3/4	8.171	12.353	C	0.154	0.39	0.264	0.996	0.150	0.630
	315	3/4	8.171	12.353	B	0.154	0.39	0.264	0.996	0.150	0.630
	316	3/4	8.171	12.353	B	0.154	0.39	0.264	0.996	0.150	0.630
	317	3/4	8.171	12.353	A	0.154	0.39	0.264	0.996	0.150	0.630
	318	3/4	8.171	12.353	A	0.154	0.39	0.264	0.996	0.150	0.630
					A		Sum:	12.162	32.072	6.908	20.269
					B			12.162	32.072	6.908	20.269
					C			12.162	32.072	6.908	20.269
T7 40.00-20.00	319	2 1/4	23.229	17.472	C	0.154	0.379	3.750	7.052	2.130	4.424
	319	2 1/4	23.229	17.472	A	0.154	0.379	3.750	7.052	2.130	4.424
	320	2 1/4	23.229	17.472	C	0.154	0.379	3.750	7.052	2.130	4.424
	320	2 1/4	23.229	17.472	B	0.154	0.379	3.750	7.052	2.130	4.424
	321	2 1/4	23.229	17.472	B	0.154	0.379	3.750	7.052	2.130	4.424
	321	2 1/4	23.229	17.472	A	0.154	0.379	3.750	7.052	2.130	4.424
	322	3/4	7.743	11.278	C	0.154	0.379	0.223	0.811	0.126	0.509
	323	3/4	7.743	11.278	B	0.154	0.379	0.223	0.811	0.126	0.509
	324	3/4	7.743	11.278	A	0.154	0.379	0.223	0.811	0.126	0.509
	325	3/4	7.743	11.278	C	0.154	0.379	0.223	0.811	0.126	0.509
	326	3/4	7.743	11.278	B	0.154	0.379	0.223	0.811	0.126	0.509
	327	3/4	7.743	11.278	A	0.154	0.379	0.223	0.811	0.126	0.509
	328	3/4	7.743	11.278	C	0.154	0.379	0.264	0.960	0.150	0.602
	329	3/4	7.743	11.278	C	0.154	0.379	0.264	0.960	0.150	0.602
	330	3/4	7.743	11.278	B	0.154	0.379	0.264	0.960	0.150	0.602
	331	3/4	7.743	11.278	B	0.154	0.379	0.264	0.960	0.150	0.602

Section Elevation ft	Elem. Num.	Size	C	C w/Ice	Face	e	e w/Ice	A_r ft^2	A_r w/Ice ft^2	A_rR_r ft^2	A_rR_r w/Ice ft^2
	332	3/4	7.743	11.278	A	0.154	0.379	0.264	0.960	0.150	0.602
	333	3/4	7.743	11.278	A	0.154	0.379	0.264	0.960	0.150	0.602
	334	3/4	7.743	11.278	C	0.154	0.379	0.264	0.960	0.150	0.602
	335	3/4	7.743	11.278	C	0.154	0.379	0.264	0.960	0.150	0.602
	336	3/4	7.743	11.278	B	0.154	0.379	0.264	0.960	0.150	0.602
	337	3/4	7.743	11.278	B	0.154	0.379	0.264	0.960	0.150	0.602
	338	3/4	7.743	11.278	A	0.154	0.379	0.264	0.960	0.150	0.602
	339	3/4	7.743	11.278	A	0.154	0.379	0.264	0.960	0.150	0.602
	340	3/4	7.743	11.278	C	0.154	0.379	0.264	0.960	0.150	0.602
	341	3/4	7.743	11.278	C	0.154	0.379	0.264	0.960	0.150	0.602
	342	3/4	7.743	11.278	B	0.154	0.379	0.264	0.960	0.150	0.602
	343	3/4	7.743	11.278	B	0.154	0.379	0.264	0.960	0.150	0.602
	344	3/4	7.743	11.278	A	0.154	0.379	0.264	0.960	0.150	0.602
	345	3/4	7.743	11.278	A	0.154	0.379	0.264	0.960	0.150	0.602
	346	3/4	7.743	11.278	C	0.154	0.379	0.264	0.960	0.150	0.602
	347	3/4	7.743	11.278	C	0.154	0.379	0.264	0.960	0.150	0.602
	348	3/4	7.743	11.278	B	0.154	0.379	0.264	0.960	0.150	0.602
	349	3/4	7.743	11.278	B	0.154	0.379	0.264	0.960	0.150	0.602
	350	3/4	7.743	11.278	A	0.154	0.379	0.264	0.960	0.150	0.602
	351	3/4	7.743	11.278	A	0.154	0.379	0.264	0.960	0.150	0.602
	352	3/4	7.743	11.278	C	0.154	0.379	0.264	0.960	0.150	0.602
	353	3/4	7.743	11.278	C	0.154	0.379	0.264	0.960	0.150	0.602
	354	3/4	7.743	11.278	B	0.154	0.379	0.264	0.960	0.150	0.602
	355	3/4	7.743	11.278	B	0.154	0.379	0.264	0.960	0.150	0.602
	356	3/4	7.743	11.278	A	0.154	0.379	0.264	0.960	0.150	0.602
	357	3/4	7.743	11.278	A	0.154	0.379	0.264	0.960	0.150	0.602
	358	3/4	7.743	11.278	C	0.154	0.379	0.264	0.960	0.150	0.602
	359	3/4	7.743	11.278	C	0.154	0.379	0.264	0.960	0.150	0.602
	360	3/4	7.743	11.278	B	0.154	0.379	0.264	0.960	0.150	0.602
	361	3/4	7.743	11.278	B	0.154	0.379	0.264	0.960	0.150	0.602
	362	3/4	7.743	11.278	A	0.154	0.379	0.264	0.960	0.150	0.602
	363	3/4	7.743	11.278	A	0.154	0.379	0.264	0.960	0.150	0.602
	364	3/4	7.743	11.278	C	0.154	0.379	0.264	0.960	0.150	0.602
	365	3/4	7.743	11.278	C	0.154	0.379	0.264	0.960	0.150	0.602
	366	3/4	7.743	11.278	B	0.154	0.379	0.264	0.960	0.150	0.602
	367	3/4	7.743	11.278	B	0.154	0.379	0.264	0.960	0.150	0.602
	368	3/4	7.743	11.278	A	0.154	0.379	0.264	0.960	0.150	0.602
	369	3/4	7.743	11.278	A	0.154	0.379	0.264	0.960	0.150	0.602
	370	3/4	7.743	11.278	C	0.154	0.379	0.264	0.960	0.150	0.602
	371	3/4	7.743	11.278	C	0.154	0.379	0.264	0.960	0.150	0.602
	372	3/4	7.743	11.278	B	0.154	0.379	0.264	0.960	0.150	0.602
	373	3/4	7.743	11.278	B	0.154	0.379	0.264	0.960	0.150	0.602
	374	3/4	7.743	11.278	A	0.154	0.379	0.264	0.960	0.150	0.602
	375	3/4	7.743	11.278	A	0.154	0.379	0.264	0.960	0.150	0.602
					A		Sum:	12.162	31.080	6.908	19.497
					B			12.162	31.080	6.908	19.497
					C			12.162	31.080	6.908	19.497
T8 20.00-5.00	376	2 1/2	24.009	16.576	C	0.166	0.375	3.125	5.394	1.779	3.375
	376	2 1/2	24.009	16.576	A	0.166	0.375	3.125	5.394	1.779	3.375
	377	2 1/2	24.009	16.576	C	0.166	0.375	3.125	5.394	1.779	3.375
	377	2 1/2	24.009	16.576	B	0.166	0.375	3.125	5.394	1.779	3.375
	378	2 1/2	24.009	16.576	B	0.166	0.375	3.125	5.394	1.779	3.375
	378	2 1/2	24.009	16.576	A	0.166	0.375	3.125	5.394	1.779	3.375
	379	3/4	7.203	9.853	C	0.166	0.375	0.221	0.757	0.126	0.474
	380	3/4	7.203	9.853	B	0.166	0.375	0.221	0.757	0.126	0.474
	381	3/4	7.203	9.853	A	0.166	0.375	0.221	0.757	0.126	0.474
	382	3/4	7.203	9.853	C	0.166	0.375	0.221	0.757	0.126	0.474
	383	3/4	7.203	9.853	B	0.166	0.375	0.221	0.757	0.126	0.474
	384	3/4	7.203	9.853	A	0.166	0.375	0.221	0.757	0.126	0.474
	385	3/4	7.203	9.853	C	0.166	0.375	0.263	0.901	0.150	0.564

Section Elevation ft	Elem. Num.	Size	C	C w/Ice	Face	e	e w/Ice	A_r ft^2	A_r w/Ice ft^2	A_rR_r ft^2	A_rR_r w/Ice ft^2
	386	3/4	7.203	9.853	C	0.166	0.375	0.263	0.901	0.150	0.564
	387	3/4	7.203	9.853	B	0.166	0.375	0.263	0.901	0.150	0.564
	388	3/4	7.203	9.853	B	0.166	0.375	0.263	0.901	0.150	0.564
	389	3/4	7.203	9.853	A	0.166	0.375	0.263	0.901	0.150	0.564
	390	3/4	7.203	9.853	A	0.166	0.375	0.263	0.901	0.150	0.564
	391	3/4	7.203	9.853	C	0.166	0.375	0.263	0.901	0.150	0.564
	392	3/4	7.203	9.853	C	0.166	0.375	0.263	0.901	0.150	0.564
	393	3/4	7.203	9.853	B	0.166	0.375	0.263	0.901	0.150	0.564
	394	3/4	7.203	9.853	B	0.166	0.375	0.263	0.901	0.150	0.564
	395	3/4	7.203	9.853	A	0.166	0.375	0.263	0.901	0.150	0.564
	396	3/4	7.203	9.853	A	0.166	0.375	0.263	0.901	0.150	0.564
	397	3/4	7.203	9.853	C	0.166	0.375	0.263	0.901	0.150	0.564
	398	3/4	7.203	9.853	C	0.166	0.375	0.263	0.901	0.150	0.564
	399	3/4	7.203	9.853	B	0.166	0.375	0.263	0.901	0.150	0.564
	400	3/4	7.203	9.853	B	0.166	0.375	0.263	0.901	0.150	0.564
	401	3/4	7.203	9.853	A	0.166	0.375	0.263	0.901	0.150	0.564
	402	3/4	7.203	9.853	A	0.166	0.375	0.263	0.901	0.150	0.564
	403	3/4	7.203	9.853	C	0.166	0.375	0.263	0.901	0.150	0.564
	404	3/4	7.203	9.853	C	0.166	0.375	0.263	0.901	0.150	0.564
	405	3/4	7.203	9.853	B	0.166	0.375	0.263	0.901	0.150	0.564
	406	3/4	7.203	9.853	B	0.166	0.375	0.263	0.901	0.150	0.564
	407	3/4	7.203	9.853	A	0.166	0.375	0.263	0.901	0.150	0.564
	408	3/4	7.203	9.853	A	0.166	0.375	0.263	0.901	0.150	0.564
	409	3/4	7.203	9.853	C	0.166	0.375	0.263	0.901	0.150	0.564
	410	3/4	7.203	9.853	C	0.166	0.375	0.263	0.901	0.150	0.564
	411	3/4	7.203	9.853	B	0.166	0.375	0.263	0.901	0.150	0.564
	412	3/4	7.203	9.853	B	0.166	0.375	0.263	0.901	0.150	0.564
	413	3/4	7.203	9.853	A	0.166	0.375	0.263	0.901	0.150	0.564
	414	3/4	7.203	9.853	A	0.166	0.375	0.263	0.901	0.150	0.564
	415	3/4	7.203	9.853	C	0.166	0.375	0.263	0.901	0.150	0.564
	416	3/4	7.203	9.853	C	0.166	0.375	0.263	0.901	0.150	0.564
	417	3/4	7.203	9.853	B	0.166	0.375	0.263	0.901	0.150	0.564
	418	3/4	7.203	9.853	B	0.166	0.375	0.263	0.901	0.150	0.564
	419	3/4	7.203	9.853	A	0.166	0.375	0.263	0.901	0.150	0.564
	420	3/4	7.203	9.853	A	0.166	0.375	0.263	0.901	0.150	0.564
					A		Sum:	9.853	23.109	5.610	14.460
					B			9.853	23.109	5.610	14.460
					C			9.853	23.109	5.610	14.460
T9 5.00-0.00	421	2 1/2	24.009	15.539	C	0.361	0.65	1.135	1.837	0.704	1.427
	421	2 1/2	24.009	15.539	A	0.361	0.65	1.135	1.837	0.704	1.427
	422	2 1/2	24.009	15.539	C	0.361	0.65	1.135	1.837	0.704	1.427
	422	2 1/2	24.009	15.539	B	0.361	0.65	1.135	1.837	0.704	1.427
	423	2 1/2	24.009	15.539	B	0.361	0.65	1.135	1.837	0.704	1.427
	423	2 1/2	24.009	15.539	A	0.361	0.65	1.135	1.837	0.704	1.427
	424	3/4	7.203	8.817	C	0.361	0.65	0.010	0.032	0.006	0.025
	425	3/4	7.203	8.817	B	0.361	0.65	0.010	0.032	0.006	0.025
	426	3/4	7.203	8.817	A	0.361	0.65	0.010	0.032	0.006	0.025
	427	3/4	7.203	8.817	C	0.361	0.65	0.137	0.419	0.085	0.326
	428	3/4	7.203	8.817	C	0.361	0.65	0.137	0.419	0.085	0.326
	429	3/4	7.203	8.817	B	0.361	0.65	0.137	0.419	0.085	0.326
	430	3/4	7.203	8.817	B	0.361	0.65	0.137	0.419	0.085	0.326
	431	3/4	7.203	8.817	A	0.361	0.65	0.137	0.419	0.085	0.326
	432	3/4	7.203	8.817	A	0.361	0.65	0.137	0.419	0.085	0.326
	436	3/4	7.203	8.817	C	0.361	0.65	0.027	0.082	0.017	0.063
	437	3/4	7.203	8.817	B	0.361	0.65	0.027	0.082	0.017	0.063
	438	3/4	7.203	8.817	A	0.361	0.65	0.027	0.082	0.017	0.063
	439	3/4	7.203	8.817	C	0.361	0.65	0.215	0.659	0.134	0.512
	440	3/4	7.203	8.817	C	0.361	0.65	0.215	0.659	0.134	0.512
	441	3/4	7.203	8.817	B	0.361	0.65	0.215	0.659	0.134	0.512
	442	3/4	7.203	8.817	B	0.361	0.65	0.215	0.659	0.134	0.512

Section Elevation ft	Elem. Num.	Size	C	C w/Ice	Face	e	e w/Ice	A_r ft^2	A_r w/Ice ft^2	A_rR_r ft^2	A_rR_r w/Ice ft^2
	443	3/4	7.203	8.817	A	0.361	0.65	0.215	0.659	0.134	0.512
	444	3/4	7.203	8.817	A	0.361	0.65	0.215	0.659	0.134	0.512
	445	3/4	7.203	8.817	C	0.361	0.65	0.153	0.469	0.095	0.364
	446	3/4	7.203	8.817	B	0.361	0.65	0.153	0.469	0.095	0.364
	447	3/4	7.203	8.817	A	0.361	0.65	0.153	0.469	0.095	0.364
					A		Sum:	3.165	6.412	1.963	4.981
					B			3.165	6.412	1.963	4.981
					C			3.165	6.412	1.963	4.981

222-H Section Verification Tables - No Ice

Section Elevation ft	z_{wind} ft	z_{ice} ft	K_z	K_h	K_{zt}	t_z in	q_z psf	Face	e	A_rR_r ft^2
T1 150.00-140.00	145.00		1.369	1	1		47	A	0.159	3.550
								B	0.159	3.550
								C	0.159	3.550
T2 140.00-120.00	130.00		1.337	1	1		45	A	0.145	6.439
								B	0.145	6.439
								C	0.145	6.439
T3 120.00-100.00	110.00		1.291	1	1		44	A	0.145	6.439
								B	0.145	6.439
								C	0.145	6.439
T4 100.00-80.00	90.00		1.238	1	1		42	A	0.154	6.908
								B	0.154	6.908
								C	0.154	6.908
T5 80.00-60.00	70.00		1.174	1	1		40	A	0.159	7.126
								B	0.159	7.126
								C	0.159	7.126
T6 60.00-40.00	50.00		1.094	1	1		37	A	0.154	6.908
								B	0.154	6.908
								C	0.154	6.908
T7 40.00-20.00	30.00		0.982	1	1		33	A	0.154	6.908
								B	0.154	6.908
								C	0.154	6.908
T8 20.00-5.00	12.50		0.85	1	1		29	A	0.166	5.610
								B	0.166	5.610
								C	0.166	5.610
T9 5.00-0.00	2.50		0.85	1	1		29	A	0.361	1.963
								B	0.361	1.963
								C	0.361	1.963

222-H Section Verification Tables - Ice

Section Elevation ft	z_{wind} ft	z_{ice} ft	K_z	K_h	K_{zt}	t_z in	q_z psf	Face	e	A_rR_r ft^2
T1 150.00-140.00	145.00	145.00	1.369	1	1	1.1595	7	A	0.454	12.328

Section Elevation ft	z_{wind} ft	z_{ice} ft	K_z	K_h	K_{zt}	t_z in	q_z psf	Face	e	A_rR_r ft^2
								B	0.454	12.328
								C	0.454	12.328
T2 140.00-120.00	130.00	130.00	1.337	1	1	1.1469	7	A	0.406	21.301
								B	0.406	21.301
								C	0.406	21.301
T3 120.00-100.00	110.00	110.00	1.291	1	1	1.1279	7	A	0.402	21.009
								B	0.402	21.009
								C	0.402	21.009
T4 100.00-80.00	90.00	90.00	1.238	1	1	1.1055	7	A	0.404	21.225
								B	0.404	21.225
								C	0.404	21.225
T5 80.00-60.00	70.00	70.00	1.174	1	1	1.0781	6	A	0.41	21.631
								B	0.41	21.631
								C	0.41	21.631
T6 60.00-40.00	50.00	50.00	1.094	1	1	1.0424	6	A	0.39	20.269
								B	0.39	20.269
								C	0.39	20.269
T7 40.00-20.00	30.00	30.00	0.982	1	1	0.9905	5	A	0.379	19.497
								B	0.379	19.497
								C	0.379	19.497
T8 20.00-5.00	12.50	12.50	0.85	1	1	0.9075	5	A	0.375	14.460
								B	0.375	14.460
								C	0.375	14.460
T9 5.00-0.00	2.50	2.50	0.85	1	1	0.7726	5	A	0.65	5.166
								B	0.65	5.166
								C	0.65	5.166

222-H Section Verification Tables - Service

Section Elevation ft	z_{wind} ft	z_{ice} ft	K_z	K_h	K_{zt}	t_z in	q_z psf	Face	e	A_rR_r ft^2
T1 150.00-140.00	145.00		1.369	1	1		11	A	0.159	3.550
								B	0.159	3.550
								C	0.159	3.550
T2 140.00-120.00	130.00		1.337	1	1		10	A	0.145	6.439
								B	0.145	6.439
								C	0.145	6.439
T3 120.00-100.00	110.00		1.291	1	1		10	A	0.145	6.439
								B	0.145	6.439
								C	0.145	6.439
T4 100.00-80.00	90.00		1.238	1	1		10	A	0.154	6.908
								B	0.154	6.908
								C	0.154	6.908
T5 80.00-60.00	70.00		1.174	1	1		9	A	0.159	7.126
								B	0.159	7.126
								C	0.159	7.126
T6 60.00-40.00	50.00		1.094	1	1		9	A	0.154	6.908
								B	0.154	6.908
								C	0.154	6.908
T7 40.00-20.00	30.00		0.982	1	1		8	A	0.154	6.908
								B	0.154	6.908
								C	0.154	6.908
T8 20.00-5.00	12.50		0.85	1	1		7	A	0.166	5.610
								B	0.166	5.610
								C	0.166	5.610

Section Elevation ft	z_{wind} ft	z_{ice} ft	K_z	K_h	K_{zt}	t_z in	q_z psf	Face	e	A_rR_r ft²
T9 5.00-0.00	2.50		0.85	1	1		7	A	0.361	1.963
								B	0.361	1.963
								C	0.361	1.963

Tower Pressures - No Ice

G_H = 0.850

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T1	145.00	1.369	47	39.167	A	0.000	6.244	3.333	53.39	0.000	0.000
150.00-140.00					B	0.000	6.244		53.39	4.952	0.000
					C	0.000	6.244		53.39	0.000	0.000
T2	130.00	1.337	45	78.333	A	0.000	11.356	6.667	58.71	0.000	0.000
140.00-120.00					B	0.000	11.356		58.71	12.380	0.000
					C	0.000	11.356		58.71	9.240	0.000
T3	110.00	1.291	44	78.333	A	0.000	11.356	6.667	58.71	6.160	0.000
120.00-100.00					B	0.000	11.356		58.71	12.380	0.000
					C	0.000	11.356		58.71	18.480	0.000
T4	90.00	1.238	42	78.750	A	0.000	12.162	7.500	61.67	6.160	0.000
100.00-80.00					B	0.000	12.162		61.67	12.380	0.000
					C	0.000	12.162		61.67	18.480	0.000
T5 80.00-60.00	70.00	1.174	40	78.750	A	0.000	12.533	7.500	59.84	6.160	0.000
					B	0.000	12.533		59.84	12.380	0.000
					C	0.000	12.533		59.84	18.480	0.000
T6 60.00-40.00	50.00	1.094	37	78.750	A	0.000	12.162	7.500	61.67	6.160	0.000
					B	0.000	12.162		61.67	12.380	0.000
					C	0.000	12.162		61.67	18.480	0.000
T7 40.00-20.00	30.00	0.982	33	78.750	A	0.000	12.162	7.500	61.67	6.160	0.000
					B	0.000	12.162		61.67	12.380	0.000
					C	0.000	12.162		61.67	18.480	0.000
T8 20.00-5.00	12.50	0.85	29	59.375	A	0.000	9.853	6.250	63.43	4.620	0.000
					B	0.000	9.853		63.43	9.285	0.000
					C	0.000	9.853		63.43	13.860	0.000
T9 5.00-0.00	2.50	0.85	29	10.488	A	0.618	3.165	2.270	60.01	1.540	0.000
					B	0.618	3.165		60.01	3.095	0.000
					C	0.618	3.165		60.01	4.620	0.000

Tower Pressure - With Ice

G_H = 0.850

Section Elevation ft	z ft	K_Z	q_z psf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T1	145.00	1.369	7	1.1595	41.099	A	0.000	18.647	7.198	38.60	0.000	0.000
150.00-140.00						B	0.000	18.647		38.60	13.874	0.000
						C	0.000	18.647		38.60	0.000	0.000
T2	130.00	1.337	7	1.1469	82.156	A	0.000	33.345	14.313	42.92	0.000	0.000
140.00-120.00						B	0.000	33.345		42.92	34.554	0.000

Section Elevation ft	z ft	K_Z	q_z psf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
						C	0.000	33.345		42.92	15.190	0.000
T3	110.00	1.291	7	1.1279	82.093	A	0.000	32.981	14.186	43.01	19.635	0.000
120.00-100.00						B	0.000	32.981		43.01	34.355	0.000
						C	0.000	32.981		43.01	30.249	0.000
T4 100.00-80.00	90.00	1.238	7	1.1055	82.435	A	0.000	33.277	14.870	44.69	19.483	0.000
						B	0.000	33.277		44.69	34.121	0.000
						C	0.000	33.277		44.69	30.093	0.000
T5 80.00-60.00	70.00	1.174	6	1.0781	82.344	A	0.000	33.764	14.687	43.50	19.297	0.000
						B	0.000	33.764		43.50	33.834	0.000
						C	0.000	33.764		43.50	29.902	0.000
T6 60.00-40.00	50.00	1.094	6	1.0424	82.225	A	0.000	32.072	14.450	45.05	19.055	0.000
						B	0.000	32.072		45.05	33.462	0.000
						C	0.000	32.072		45.05	29.654	0.000
T7 40.00-20.00	30.00	0.982	5	0.9905	82.052	A	0.000	31.080	14.103	45.38	18.703	0.000
						B	0.000	31.080		45.38	32.922	0.000
						C	0.000	31.080		45.38	29.293	0.000
T8 20.00-5.00	12.50	0.85	5	0.9075	61.644	A	0.000	23.109	10.787	46.68	13.607	0.000
						B	0.000	23.109		46.68	24.044	0.000
						C	0.000	23.109		46.68	21.538	0.000
T9 5.00-0.00	2.50	0.85	5	0.7726	11.175	A	0.618	6.651	3.673	50.54	4.309	0.000
						B	0.618	6.651		50.54	6.185	0.000
						C	0.618	6.651		50.54	6.945	0.000

Tower Pressure - Service

$G_H = 0.850$

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T1	145.00	1.369	11	39.167	A	0.000	6.244	3.333	53.39	0.000	0.000
150.00-140.00					B	0.000	6.244		53.39	4.952	0.000
					C	0.000	6.244		53.39	0.000	0.000
T2	130.00	1.337	10	78.333	A	0.000	11.356	6.667	58.71	0.000	0.000
140.00-120.00					B	0.000	11.356		58.71	12.380	0.000
					C	0.000	11.356		58.71	9.240	0.000
T3	110.00	1.291	10	78.333	A	0.000	11.356	6.667	58.71	6.160	0.000
120.00-100.00					B	0.000	11.356		58.71	12.380	0.000
					C	0.000	11.356		58.71	18.480	0.000
T4	90.00	1.238	10	78.750	A	0.000	12.162	7.500	61.67	6.160	0.000
100.00-80.00					B	0.000	12.162		61.67	12.380	0.000
					C	0.000	12.162		61.67	18.480	0.000
T5 80.00-60.00	70.00	1.174	9	78.750	A	0.000	12.533	7.500	59.84	6.160	0.000
					B	0.000	12.533		59.84	12.380	0.000
					C	0.000	12.533		59.84	18.480	0.000
T6 60.00-40.00	50.00	1.094	9	78.750	A	0.000	12.162	7.500	61.67	6.160	0.000
					B	0.000	12.162		61.67	12.380	0.000
					C	0.000	12.162		61.67	18.480	0.000
T7 40.00-20.00	30.00	0.982	8	78.750	A	0.000	12.162	7.500	61.67	6.160	0.000
					B	0.000	12.162		61.67	12.380	0.000
					C	0.000	12.162		61.67	18.480	0.000
T8 20.00-5.00	12.50	0.85	7	59.375	A	0.000	9.853	6.250	63.43	4.620	0.000
					B	0.000	9.853		63.43	9.285	0.000
					C	0.000	9.853		63.43	13.860	0.000

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T9 5.00-0.00	2.50	0.85	7	10.488	A	0.618	3.165	2.270	60.01	1.540	0.000
					B	0.618	3.165		60.01	3.095	0.000
					C	0.618	3.165		60.01	4.620	0.000

Tower Forces - No Ice - Wind Normal To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
T1	29.44	559.29	A	0.159	2.737	47	1	1	3.550	501.85	50.19	C
150.00-140.00			B	0.159	2.737		1	1	3.550			
			C	0.159	2.737		1	1	3.550			
T2	175.60	995.54	A	0.145	2.79	45	1	1	6.439	1195.89	59.79	C
140.00-120.00		TA 864.85	B	0.145	2.79		1	1	6.439			
			C	0.145	2.79		1	1	6.439			
T3	345.60	995.54	A	0.145	2.79	44	1	1	6.439	1499.38	74.97	C
120.00-100.00			B	0.145	2.79		1	1	6.439			
			C	0.145	2.79		1	1	6.439			
T4	345.60	1165.91	A	0.154	2.755	42	1	1	6.908	1475.52	73.78	C
100.00-80.00			B	0.154	2.755		1	1	6.908			
			C	0.154	2.755		1	1	6.908			
T5	345.60	1212.89	A	0.159	2.738	40	1	1	7.126	1415.67	70.78	C
80.00-60.00			B	0.159	2.738		1	1	7.126			
			C	0.159	2.738		1	1	7.126			
T6	345.60	1165.91	A	0.154	2.755	37	1	1	6.908	1303.78	65.19	C
60.00-40.00			B	0.154	2.755		1	1	6.908			
			C	0.154	2.755		1	1	6.908			
T7	345.60	1165.91	A	0.154	2.755	33	1	1	6.908	1170.85	58.54	C
40.00-20.00			B	0.154	2.755		1	1	6.908			
			C	0.154	2.755		1	1	6.908			
T8 20.00-5.00	259.20	1026.92	A	0.166	2.714	29	1	1	5.610	783.18	52.21	C
			B	0.166	2.714		1	1	5.610			
			C	0.166	2.714		1	1	5.610			
T9 5.00-0.00	86.40	388.63	A	0.361	2.147	29	1	1	2.581	272.53	54.51	C
			B	0.361	2.147		1	1	2.581			
			C	0.361	2.147		1	1	2.581			
Sum Weight:	2278.64	9541.38								9618.64		

Tower Forces - No Ice - Wind 60 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft²	F lb	w plf	Ctrl. Face
T1	29.44	559.29	A	0.159	2.737	47	0.8	1	3.550	501.85	50.19	C
150.00-140.00			B	0.159	2.737		0.8	1	3.550			
			C	0.159	2.737		0.8	1	3.550			
T2	175.60	995.54	A	0.145	2.79	45	0.8	1	6.439	1195.89	59.79	C
140.00-120.00		TA 864.85	B	0.145	2.79		0.8	1	6.439			
			C	0.145	2.79		0.8	1	6.439			

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
T3	345.60	995.54	A	0.145	2.79	44	0.8	1	6.439	1499.38	74.97	C
120.00-100.00			B	0.145	2.79		0.8	1	6.439			
			C	0.145	2.79		0.8	1	6.439			
T4	345.60	1165.91	A	0.154	2.755	42	0.8	1	6.908	1475.52	73.78	C
100.00-80.00			B	0.154	2.755		0.8	1	6.908			
			C	0.154	2.755		0.8	1	6.908			
T5	345.60	1212.89	A	0.159	2.738	40	0.8	1	7.126	1415.67	70.78	C
80.00-60.00			B	0.159	2.738		0.8	1	7.126			
			C	0.159	2.738		0.8	1	7.126			
T6	345.60	1165.91	A	0.154	2.755	37	0.8	1	6.908	1303.78	65.19	C
60.00-40.00			B	0.154	2.755		0.8	1	6.908			
			C	0.154	2.755		0.8	1	6.908			
T7	345.60	1165.91	A	0.154	2.755	33	0.8	1	6.908	1170.85	58.54	C
40.00-20.00			B	0.154	2.755		0.8	1	6.908			
			C	0.154	2.755		0.8	1	6.908			
T8 20.00-5.00	259.20	1026.92	A	0.166	2.714	29	0.8	1	5.610	783.18	52.21	C
			B	0.166	2.714		0.8	1	5.610			
			C	0.166	2.714		0.8	1	5.610			
T9 5.00-0.00	86.40	388.63	A	0.361	2.147	29	0.8	1	2.457	266.01	53.20	C
			B	0.361	2.147		0.8	1	2.457			
			C	0.361	2.147		0.8	1	2.457			
Sum Weight:	2278.64	9541.38								9612.13		

Tower Forces - No Ice - Wind 90 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
T1	29.44	559.29	A	0.159	2.737	47	0.85	1	3.550	501.85	50.19	C
150.00-140.00			B	0.159	2.737		0.85	1	3.550			
			C	0.159	2.737		0.85	1	3.550			
T2	175.60	995.54	A	0.145	2.79	45	0.85	1	6.439	1195.89	59.79	C
140.00-120.00		TA 864.85	B	0.145	2.79		0.85	1	6.439			
			C	0.145	2.79		0.85	1	6.439			
T3	345.60	995.54	A	0.145	2.79	44	0.85	1	6.439	1499.38	74.97	C
120.00-100.00			B	0.145	2.79		0.85	1	6.439			
			C	0.145	2.79		0.85	1	6.439			
T4	345.60	1165.91	A	0.154	2.755	42	0.85	1	6.908	1475.52	73.78	C
100.00-80.00			B	0.154	2.755		0.85	1	6.908			
			C	0.154	2.755		0.85	1	6.908			
T5	345.60	1212.89	A	0.159	2.738	40	0.85	1	7.126	1415.67	70.78	C
80.00-60.00			B	0.159	2.738		0.85	1	7.126			
			C	0.159	2.738		0.85	1	7.126			
T6	345.60	1165.91	A	0.154	2.755	37	0.85	1	6.908	1303.78	65.19	C
60.00-40.00			B	0.154	2.755		0.85	1	6.908			
			C	0.154	2.755		0.85	1	6.908			
T7	345.60	1165.91	A	0.154	2.755	33	0.85	1	6.908	1170.85	58.54	C
40.00-20.00			B	0.154	2.755		0.85	1	6.908			
			C	0.154	2.755		0.85	1	6.908			
T8 20.00-5.00	259.20	1026.92	A	0.166	2.714	29	0.85	1	5.610	783.18	52.21	C
			B	0.166	2.714		0.85	1	5.610			
			C	0.166	2.714		0.85	1	5.610			
T9 5.00-0.00	86.40	388.63	A	0.361	2.147	29	0.85	1	2.488	267.64	53.53	C

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
			B	0.361	2.147		0.85	1	2.488			
			C	0.361	2.147		0.85	1	2.488			
Sum Weight:	2278.64	9541.38								9613.76		

Tower Forces - With Ice - Wind Normal To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
T1	153.63	1076.76	A	0.454	1.967	7	1	1	12.328	201.45	20.15	C
150.00-140.00			B	0.454	1.967		1	1	12.328			
			C	0.454	1.967		1	1	12.328			
T2	695.47	1886.27	A	0.406	2.052	7	1	1	21.301	453.17	22.66	C
140.00-120.00		TA	B	0.406	2.052		1	1	21.301			
		1748.65	C	0.406	2.052		1	1	21.301			
T3	1218.55	1863.77	A	0.402	2.061	7	1	1	21.009	559.38	27.97	C
120.00-100.00			B	0.402	2.061		1	1	21.009			
			C	0.402	2.061		1	1	21.009			
T4	1203.82	2028.21	A	0.404	2.057	7	1	1	21.225	535.56	26.78	C
100.00-80.00			B	0.404	2.057		1	1	21.225			
			C	0.404	2.057		1	1	21.225			
T5	1185.93	2077.61	A	0.41	2.044	6	1	1	21.631	506.02	25.30	C
80.00-60.00			B	0.41	2.044		1	1	21.631			
			C	0.41	2.044		1	1	21.631			
T6	1162.88	1955.23	A	0.39	2.084	6	1	1	20.269	463.00	23.15	C
60.00-40.00			B	0.39	2.084		1	1	20.269			
			C	0.39	2.084		1	1	20.269			
T7	1129.78	1897.36	A	0.379	2.108	5	1	1	19.497	407.15	20.36	C
40.00-20.00			B	0.379	2.108		1	1	19.497			
			C	0.379	2.108		1	1	19.497			
T8 20.00-5.00	808.46	1533.41	A	0.375	2.116	5	1	1	14.460	259.83	17.32	C
			B	0.375	2.116		1	1	14.460			
			C	0.375	2.116		1	1	14.460			
T9 5.00-0.00	241.09	537.44	A	0.65	1.781	5	1	1	5.784	64.46	12.89	C
			B	0.65	1.781		1	1	5.784			
			C	0.65	1.781		1	1	5.784			
Sum Weight:	7799.61	16604.71								3450.02		

Tower Forces - With Ice - Wind 60 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
T1	153.63	1076.76	A	0.454	1.967	7	0.8	1	12.328	201.45	20.15	C
150.00-140.00			B	0.454	1.967		0.8	1	12.328			
			C	0.454	1.967		0.8	1	12.328			
T2	695.47	1886.27	A	0.406	2.052	7	0.8	1	21.301	453.17	22.66	C

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
140.00-120.00		TA	B	0.406	2.052		0.8	1	21.301			
		1748.65	C	0.406	2.052		0.8	1	21.301			
T3	1218.55	1863.77	A	0.402	2.061	7	0.8	1	21.009	559.38	27.97	C
120.00-100.00			B	0.402	2.061		0.8	1	21.009			
			C	0.402	2.061		0.8	1	21.009			
T4	1203.82	2028.21	A	0.404	2.057	7	0.8	1	21.225	535.56	26.78	C
100.00-80.00			B	0.404	2.057		0.8	1	21.225			
			C	0.404	2.057		0.8	1	21.225			
T5	1185.93	2077.61	A	0.41	2.044	6	0.8	1	21.631	506.02	25.30	C
80.00-60.00			B	0.41	2.044		0.8	1	21.631			
			C	0.41	2.044		0.8	1	21.631			
T6	1162.88	1955.23	A	0.39	2.084	6	0.8	1	20.269	463.00	23.15	C
60.00-40.00			B	0.39	2.084		0.8	1	20.269			
			C	0.39	2.084		0.8	1	20.269			
T7	1129.78	1897.36	A	0.379	2.108	5	0.8	1	19.497	407.15	20.36	C
40.00-20.00			B	0.379	2.108		0.8	1	19.497			
			C	0.379	2.108		0.8	1	19.497			
T8 20.00-5.00	808.46	1533.41	A	0.375	2.116	5	0.8	1	14.460	259.83	17.32	C
			B	0.375	2.116		0.8	1	14.460			
			C	0.375	2.116		0.8	1	14.460			
T9 5.00-0.00	241.09	537.44	A	0.65	1.781	5	0.8	1	5.661	63.59	12.72	C
			B	0.65	1.781		0.8	1	5.661			
			C	0.65	1.781		0.8	1	5.661			
Sum Weight:	7799.61	16604.71								3449.15		

Tower Forces - With Ice - Wind 90 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
T1	153.63	1076.76	A	0.454	1.967	7	0.85	1	12.328	201.45	20.15	C
150.00-140.00			B	0.454	1.967		0.85	1	12.328			
			C	0.454	1.967		0.85	1	12.328			
T2	695.47	1886.27	A	0.406	2.052	7	0.85	1	21.301	453.17	22.66	C
140.00-120.00		TA	B	0.406	2.052		0.85	1	21.301			
		1748.65	C	0.406	2.052		0.85	1	21.301			
T3	1218.55	1863.77	A	0.402	2.061	7	0.85	1	21.009	559.38	27.97	C
120.00-100.00			B	0.402	2.061		0.85	1	21.009			
			C	0.402	2.061		0.85	1	21.009			
T4	1203.82	2028.21	A	0.404	2.057	7	0.85	1	21.225	535.56	26.78	C
100.00-80.00			B	0.404	2.057		0.85	1	21.225			
			C	0.404	2.057		0.85	1	21.225			
T5	1185.93	2077.61	A	0.41	2.044	6	0.85	1	21.631	506.02	25.30	C
80.00-60.00			B	0.41	2.044		0.85	1	21.631			
			C	0.41	2.044		0.85	1	21.631			
T6	1162.88	1955.23	A	0.39	2.084	6	0.85	1	20.269	463.00	23.15	C
60.00-40.00			B	0.39	2.084		0.85	1	20.269			
			C	0.39	2.084		0.85	1	20.269			
T7	1129.78	1897.36	A	0.379	2.108	5	0.85	1	19.497	407.15	20.36	C
40.00-20.00			B	0.379	2.108		0.85	1	19.497			
			C	0.379	2.108		0.85	1	19.497			
T8 20.00-5.00	808.46	1533.41	A	0.375	2.116	5	0.85	1	14.460	259.83	17.32	C
			B	0.375	2.116		0.85	1	14.460			

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
			C	0.375	2.116		0.85	1	14.460			
T9 5.00-0.00	241.09	537.44	A	0.65	1.781	5	0.85	1	5.692	63.81	12.76	C
			B	0.65	1.781		0.85	1	5.692			
			C	0.65	1.781		0.85	1	5.692			
Sum Weight:	7799.61	16604.71								3449.37		

Tower Forces - Service - Wind Normal To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
T1	29.44	559.29	A	0.159	2.737	11	1	1	3.550	115.63	11.56	C
150.00-140.00			B	0.159	2.737		1	1	3.550			
			C	0.159	2.737		1	1	3.550			
T2	175.60	995.54	A	0.145	2.79	10	1	1	6.439	275.53	13.78	C
140.00-120.00		TA 864.85	B	0.145	2.79		1	1	6.439			
			C	0.145	2.79		1	1	6.439			
T3	345.60	995.54	A	0.145	2.79	10	1	1	6.439	345.46	17.27	C
120.00-100.00			B	0.145	2.79		1	1	6.439			
			C	0.145	2.79		1	1	6.439			
T4	345.60	1165.91	A	0.154	2.755	10	1	1	6.908	339.96	17.00	C
100.00-80.00			B	0.154	2.755		1	1	6.908			
			C	0.154	2.755		1	1	6.908			
T5	345.60	1212.89	A	0.159	2.738	9	1	1	7.126	326.17	16.31	C
80.00-60.00			B	0.159	2.738		1	1	7.126			
			C	0.159	2.738		1	1	7.126			
T6	345.60	1165.91	A	0.154	2.755	9	1	1	6.908	300.39	15.02	C
60.00-40.00			B	0.154	2.755		1	1	6.908			
			C	0.154	2.755		1	1	6.908			
T7	345.60	1165.91	A	0.154	2.755	8	1	1	6.908	269.76	13.49	C
40.00-20.00			B	0.154	2.755		1	1	6.908			
			C	0.154	2.755		1	1	6.908			
T8 20.00-5.00	259.20	1026.92	A	0.166	2.714	7	1	1	5.610	180.45	12.03	C
			B	0.166	2.714		1	1	5.610			
			C	0.166	2.714		1	1	5.610			
T9 5.00-0.00	86.40	388.63	A	0.361	2.147	7	1	1	2.581	62.79	12.56	C
			B	0.361	2.147		1	1	2.581			
			C	0.361	2.147		1	1	2.581			
Sum Weight:	2278.64	9541.38								2216.14		

Tower Forces - Service - Wind 60 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
T1	29.44	559.29	A	0.159	2.737	11	0.8	1	3.550	115.63	11.56	C
150.00-140.00			B	0.159	2.737		0.8	1	3.550			

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
			C	0.159	2.737		0.8	1	3.550			
T2	175.60	995.54	A	0.145	2.79	10	0.8	1	6.439	275.53	13.78	C
140.00-120.00		TA 864.85	B	0.145	2.79		0.8	1	6.439			
			C	0.145	2.79		0.8	1	6.439			
T3	345.60	995.54	A	0.145	2.79	10	0.8	1	6.439	345.46	17.27	C
120.00-100.00			B	0.145	2.79		0.8	1	6.439			
			C	0.145	2.79		0.8	1	6.439			
T4	345.60	1165.91	A	0.154	2.755	10	0.8	1	6.908	339.96	17.00	C
100.00-80.00			B	0.154	2.755		0.8	1	6.908			
			C	0.154	2.755		0.8	1	6.908			
T5	345.60	1212.89	A	0.159	2.738	9	0.8	1	7.126	326.17	16.31	C
80.00-60.00			B	0.159	2.738		0.8	1	7.126			
			C	0.159	2.738		0.8	1	7.126			
T6	345.60	1165.91	A	0.154	2.755	9	0.8	1	6.908	300.39	15.02	C
60.00-40.00			B	0.154	2.755		0.8	1	6.908			
			C	0.154	2.755		0.8	1	6.908			
T7	345.60	1165.91	A	0.154	2.755	8	0.8	1	6.908	269.76	13.49	C
40.00-20.00			B	0.154	2.755		0.8	1	6.908			
			C	0.154	2.755		0.8	1	6.908			
T8 20.00-5.00	259.20	1026.92	A	0.166	2.714	7	0.8	1	5.610	180.45	12.03	C
			B	0.166	2.714		0.8	1	5.610			
			C	0.166	2.714		0.8	1	5.610			
T9 5.00-0.00	86.40	388.63	A	0.361	2.147	7	0.8	1	2.457	61.29	12.26	C
			B	0.361	2.147		0.8	1	2.457			
			C	0.361	2.147		0.8	1	2.457			
Sum Weight:	2278.64	9541.38								2214.63		

Tower Forces - Service - Wind 90 To Face

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
T1	29.44	559.29	A	0.159	2.737	11	0.85	1	3.550	115.63	11.56	C
150.00-140.00			B	0.159	2.737		0.85	1	3.550			
			C	0.159	2.737		0.85	1	3.550			
T2	175.60	995.54	A	0.145	2.79	10	0.85	1	6.439	275.53	13.78	C
140.00-120.00		TA 864.85	B	0.145	2.79		0.85	1	6.439			
			C	0.145	2.79		0.85	1	6.439			
T3	345.60	995.54	A	0.145	2.79	10	0.85	1	6.439	345.46	17.27	C
120.00-100.00			B	0.145	2.79		0.85	1	6.439			
			C	0.145	2.79		0.85	1	6.439			
T4	345.60	1165.91	A	0.154	2.755	10	0.85	1	6.908	339.96	17.00	C
100.00-80.00			B	0.154	2.755		0.85	1	6.908			
			C	0.154	2.755		0.85	1	6.908			
T5	345.60	1212.89	A	0.159	2.738	9	0.85	1	7.126	326.17	16.31	C
80.00-60.00			B	0.159	2.738		0.85	1	7.126			
			C	0.159	2.738		0.85	1	7.126			
T6	345.60	1165.91	A	0.154	2.755	9	0.85	1	6.908	300.39	15.02	C
60.00-40.00			B	0.154	2.755		0.85	1	6.908			
			C	0.154	2.755		0.85	1	6.908			
T7	345.60	1165.91	A	0.154	2.755	8	0.85	1	6.908	269.76	13.49	C
40.00-20.00			B	0.154	2.755		0.85	1	6.908			
			C	0.154	2.755		0.85	1	6.908			

Section Elevation ft	Add Weight lb	Self Weight lb	Face	e	C_F	q_z psf	D_F	D_R	A_E ft^2	F lb	w plf	Ctrl. Face
T8 20.00-5.00	259.20	1026.92	A	0.166	2.714	7	0.85	1	5.610	180.45	12.03	C
			B	0.166	2.714		0.85	1	5.610			
			C	0.166	2.714		0.85	1	5.610			
T9 5.00-0.00	86.40	388.63	A	0.361	2.147	7	0.85	1	2.488	61.66	12.33	C
			B	0.361	2.147		0.85	1	2.488			
			C	0.361	2.147		0.85	1	2.488			
Sum Weight:	2278.64	9541.38								2215.01		

Force Totals (Does not include forces on guys)

Load Case	Vertical Forces lb	Sum of Forces X lb	Sum of Forces Z lb	Sum of Torques lb-ft
Leg Weight	5875.36			
Bracing Weight	3666.02			
Total Member Self-Weight	9541.38			
Guy Weight	1629.57			
Total Weight	21552.37			
Wind 0 deg - No Ice		-409.15	-24388.40	8455.18
Wind 30 deg - No Ice		11653.72	-20912.16	6028.30
Wind 60 deg - No Ice		20592.57	-11836.61	1986.13
Wind 90 deg - No Ice		24016.10	409.15	-2588.21
Wind 120 deg - No Ice		21007.36	12548.53	-6469.05
Wind 150 deg - No Ice		12362.38	21321.31	-8616.51
Wind 180 deg - No Ice		409.15	24381.88	-8455.18
Wind 210 deg - No Ice		-11653.72	20912.16	-6028.30
Wind 240 deg - No Ice		-20598.21	11839.87	-1986.13
Wind 270 deg - No Ice		-24016.10	-409.15	2588.21
Wind 300 deg - No Ice		-21001.72	-12545.27	6469.05
Wind 330 deg - No Ice		-12362.38	-21321.31	8616.51
Member Ice	7063.33			
Guy Ice	4614.59			
Total Weight Ice	46662.48			
Wind 0 deg - Ice		-87.66	-6642.43	1631.10
Wind 30 deg - Ice		3203.35	-5708.13	943.55
Wind 60 deg - Ice		5635.84	-3244.87	3.18
Wind 90 deg - Ice		6558.53	87.66	-938.04
Wind 120 deg - Ice		5724.25	3397.13	-1627.92
Wind 150 deg - Ice		3355.18	5795.78	-1881.59
Wind 180 deg - Ice		87.66	6641.57	-1631.10
Wind 210 deg - Ice		-3203.35	5708.13	-943.55
Wind 240 deg - Ice		-5636.59	3245.30	-3.18
Wind 270 deg - Ice		-6558.53	-87.66	938.04
Wind 300 deg - Ice		-5723.50	-3396.70	1627.92
Wind 330 deg - Ice		-3355.18	-5795.78	1881.59
Total Weight	21552.37			
Wind 0 deg - Service		-94.27	-5619.09	1948.07
Wind 30 deg - Service		2685.02	-4818.16	1388.92
Wind 60 deg - Service		4744.53	-2727.15	457.60
Wind 90 deg - Service		5533.31	94.27	-596.32
Wind 120 deg - Service		4840.10	2891.18	-1490.47
Wind 150 deg - Service		2848.29	4912.43	-1985.24
Wind 180 deg - Service		94.27	5617.58	-1948.07

Load Case	Vertical Forces lb	Sum of Forces X lb	Sum of Forces Z lb	Sum of Torques lb-ft
Wind 210 deg - Service		-2685.02	4818.16	-1388.92
Wind 240 deg - Service		-4745.83	2727.91	-457.60
Wind 270 deg - Service		-5533.31	-94.27	596.32
Wind 300 deg - Service		-4838.80	-2890.43	1490.47
Wind 330 deg - Service		-2848.29	-4912.43	1985.24

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice+1.0 Guy
3	1.2 Dead+1.0 Wind 30 deg - No Ice+1.0 Guy
4	1.2 Dead+1.0 Wind 60 deg - No Ice+1.0 Guy
5	1.2 Dead+1.0 Wind 90 deg - No Ice+1.0 Guy
6	1.2 Dead+1.0 Wind 120 deg - No Ice+1.0 Guy
7	1.2 Dead+1.0 Wind 150 deg - No Ice+1.0 Guy
8	1.2 Dead+1.0 Wind 180 deg - No Ice+1.0 Guy
9	1.2 Dead+1.0 Wind 210 deg - No Ice+1.0 Guy
10	1.2 Dead+1.0 Wind 240 deg - No Ice+1.0 Guy
11	1.2 Dead+1.0 Wind 270 deg - No Ice+1.0 Guy
12	1.2 Dead+1.0 Wind 300 deg - No Ice+1.0 Guy
13	1.2 Dead+1.0 Wind 330 deg - No Ice+1.0 Guy
14	1.2 Dead+1.0 Ice+1.0 Temp+Guy
15	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp+1.0 Guy
16	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp+1.0 Guy
17	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp+1.0 Guy
18	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp+1.0 Guy
19	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp+1.0 Guy
20	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp+1.0 Guy
21	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp+1.0 Guy
22	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp+1.0 Guy
23	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp+1.0 Guy
24	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp+1.0 Guy
25	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp+1.0 Guy
26	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp+1.0 Guy
27	Dead+Wind 0 deg - Service+Guy
28	Dead+Wind 30 deg - Service+Guy
29	Dead+Wind 60 deg - Service+Guy
30	Dead+Wind 90 deg - Service+Guy
31	Dead+Wind 120 deg - Service+Guy
32	Dead+Wind 150 deg - Service+Guy
33	Dead+Wind 180 deg - Service+Guy
34	Dead+Wind 210 deg - Service+Guy
35	Dead+Wind 240 deg - Service+Guy
36	Dead+Wind 270 deg - Service+Guy
37	Dead+Wind 300 deg - Service+Guy
38	Dead+Wind 330 deg - Service+Guy

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
T1	150 - 140	Leg	Max Tension	4	6971.63	49.99	-15.12
			Max. Compression	2	-23549.45	24.60	1412.43
			Max. Mx	6	-20520.08	-1200.63	-688.61
			Max. My	2	-20557.65	24.60	1412.43
			Max. Vy	6	-2297.00	-1200.63	-688.61
			Max. Vx	2	2700.66	24.60	1412.43
		Diagonal	Max Tension	2	2967.64	0.00	0.00
			Max. Compression	13	-3027.68	0.00	0.00
			Max. Mx	17	-17.69	-2.89	0.01
			Max. My	7	-2635.19	-0.37	-1.62
			Max. Vy	17	5.55	-2.89	0.01
			Max. Vx	7	0.75	-0.53	-1.62
		Top Girt	Max Tension	4	126.07	0.00	0.00
			Max. Compression	10	-147.96	0.00	0.00
			Max. Mx	14	-30.91	7.93	0.00
			Max. My	2	22.54	0.00	-0.00
			Max. Vy	14	-8.45	0.00	0.00
			Max. Vx	2	0.00	0.00	0.00
		Bottom Girt	Max Tension	2	1310.67	0.00	0.00
			Max. Compression	13	-711.05	0.00	0.00
			Max. Mx	14	90.15	7.93	0.00
			Max. My	2	-590.72	0.00	-0.00
			Max. Vy	14	-8.45	0.00	0.00
			Max. Vx	2	0.00	0.00	0.00
		Top Guy Pull-Off	Max Tension	8	7724.52	0.00	0.00
			Max. Compression	6	-7515.21	0.00	0.00
			Max. Mx	14	1115.45	14.81	0.00
			Max. My	2	5543.45	0.00	-0.00
			Max. Vy	14	-15.80	0.00	0.00
			Max. Vx	2	0.00	0.00	0.00
T2	140 - 120	Leg	Max Tension	2	5944.54	175.84	30.69
			Max. Compression	12	-30939.94	-124.41	-280.97
			Max. Mx	6	-17525.01	1095.94	624.62
			Max. My	2	-20570.96	-22.70	-1286.96
			Max. Vy	6	-2298.38	-52.69	-31.79
			Max. Vx	2	2701.55	0.74	62.96
		Diagonal	Max Tension	8	4499.05	0.00	0.00
			Max. Compression	8	-4788.56	0.00	0.00
			Max. Mx	2	-1847.22	-16.44	185.47
			Max. My	2	-1213.56	13.39	-201.45
			Max. Vy	2	-9.10	-16.44	185.47
			Max. Vx	2	90.82	13.39	-201.45
		Top Girt	Max Tension	4	1426.73	0.00	0.00
			Max. Compression	2	-1135.09	0.00	0.00
			Max. Mx	14	-40.83	7.84	0.00
			Max. My	2	726.11	0.00	-0.00
			Max. Vy	14	-8.37	0.00	0.00
			Max. Vx	2	0.00	0.00	0.00
		Bottom Girt	Max Tension	6	480.84	0.00	0.00
			Max. Compression	8	-373.60	0.00	0.00
			Max. Mx	17	-72.49	7.84	0.00
			Max. My	13	99.13	0.00	0.00
			Max. Vy	17	-8.37	0.00	0.00
			Max. Vx	13	-0.00	0.00	0.00
		Guy A	Bottom Tension	8	13014.68		
			Top Tension	8	13116.05		
			Top Cable Vert	8	7876.68		
			Top Cable Norm	8	10487.54		
			Top Cable Tan	8	5.96		
			Bot Cable Vert	8	-7569.79		
			Bot Cable Norm	8	10586.79		

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
			Bot Cable Tan	8	2.25		
		Guy B	Bottom Tension	12	13322.71		
			Top Tension	12	13437.33		
			Top Cable Vert	12	8704.68		
			Top Cable Norm	12	10236.72		
			Top Cable Tan	12	5.76		
			Bot Cable Vert	12	-8372.91		
			Bot Cable Norm	12	10362.86		
			Bot Cable Tan	12	3.19		
		Guy C	Bottom Tension	3	13032.45		
			Top Tension	3	13149.31		
			Top Cable Vert	3	8637.54		
			Top Cable Norm	3	9914.30		
			Top Cable Tan	3	62.23		
			Bot Cable Vert	3	-8301.25		
			Bot Cable Norm	3	10045.74		
			Bot Cable Tan	3	130.57		
		Torque Arm Top	Max Tension	7	13732.43	0.00	0.00
			Max. Compression	6	-3586.79	0.00	0.00
			Max. Mx	17	6905.83	129.79	0.00
			Max. My	2	11811.18	0.00	0.54
			Max. Vy	17	66.88	0.00	0.00
			Max. Vx	2	-0.28	0.00	0.00
		Torque Arm Bottom	Max Tension	12	6236.63	0.00	0.00
			Max. Compression	12	-11244.97	0.00	0.00
			Max. Mx	17	-1739.90	116.14	0.00
			Max. My	2	4591.34	0.00	-0.21
			Max. Vy	17	-66.88	0.00	0.00
			Max. Vx	2	0.12	0.00	0.00
T3	120 - 100	Leg	Max Tension	2	5937.74	-154.08	-208.13
			Max. Compression	12	-32650.83	38.56	-110.72
			Max. Mx	11	-18749.79	-449.34	-93.78
			Max. My	2	-10351.19	-40.76	-487.42
			Max. Vy	11	-1054.07	107.78	-30.10
			Max. Vx	2	-1227.04	9.08	125.26
		Diagonal	Max Tension	13	1543.79	0.00	0.00
			Max. Compression	13	-1729.68	0.00	0.00
			Max. Mx	24	-292.43	-3.41	0.02
			Max. My	12	-1455.06	-2.05	0.65
			Max. Vy	24	5.65	-3.41	0.02
			Max. Vx	12	-0.30	-2.05	0.65
		Top Girt	Max Tension	2	446.10	0.00	0.00
			Max. Compression	12	-264.91	0.00	0.00
			Max. Mx	17	83.75	7.72	0.00
			Max. My	13	36.66	0.00	0.00
			Max. Vy	17	-8.23	0.00	0.00
			Max. Vx	13	-0.00	0.00	0.00
		Bottom Girt	Max Tension	12	528.59	0.00	0.00
			Max. Compression	6	-430.22	0.00	0.00
			Max. Mx	17	170.29	7.72	0.00
			Max. My	13	107.06	0.00	0.00
			Max. Vy	17	-8.23	0.00	0.00
			Max. Vx	13	-0.00	0.00	0.00
T4	100 - 80	Leg	Max Tension	4	2311.40	686.58	-413.78
			Max. Compression	6	-34855.58	-41.37	-23.84
			Max. Mx	11	384.22	-800.28	-137.35
			Max. My	2	-34711.70	-82.35	-868.49
			Max. Vy	11	-1617.28	37.26	-21.40
			Max. Vx	2	-1834.02	0.21	47.62
		Diagonal	Max Tension	13	2422.10	0.00	0.00
			Max. Compression	13	-2590.51	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
			Max. Mx	22	211.71	-3.08	-0.04
			Max. My	13	-2580.40	-1.25	0.77
			Max. Vy	24	5.43	-3.08	0.05
			Max. Vx	13	-0.36	-1.25	0.77
		Top Girt	Max Tension	2	654.20	0.00	0.00
			Max. Compression	12	-502.00	0.00	0.00
			Max. Mx	17	-14.81	7.58	0.00
			Max. My	13	65.79	0.00	0.00
			Max. Vy	17	-8.08	0.00	0.00
			Max. Vx	13	-0.00	0.00	0.00
		Bottom Girt	Max Tension	12	827.40	0.00	0.00
			Max. Compression	6	-725.86	0.00	0.00
			Max. Mx	14	110.22	7.58	0.00
			Max. My	2	535.22	0.00	-0.00
			Max. Vy	14	8.08	0.00	0.00
			Max. Vx	2	0.00	0.00	0.00
T5	80 - 60	Leg	Max Tension	12	13842.78	-58.46	-32.09
			Max. Compression	6	-49249.71	25.03	14.17
			Max. Mx	11	-31438.47	845.58	-180.85
			Max. My	2	-34724.97	83.52	963.75
			Max. Vy	11	-1618.46	845.58	-180.85
			Max. Vx	2	-1833.97	83.52	963.75
		Diagonal	Max Tension	13	2444.28	0.00	0.00
			Max. Compression	13	-2702.99	0.00	0.00
			Max. Mx	17	-157.54	-3.18	0.00
			Max. My	13	-2693.73	-0.64	1.16
			Max. Vy	21	5.38	-3.18	-0.03
			Max. Vx	13	-0.53	-0.64	1.16
		Top Girt	Max Tension	2	767.23	0.00	0.00
			Max. Compression	12	-582.31	0.00	0.00
			Max. Mx	14	93.80	7.40	0.00
			Max. My	2	-239.56	0.00	0.00
			Max. Vy	14	7.90	0.00	0.00
			Max. Vx	2	-0.00	0.00	0.00
		Bottom Girt	Max Tension	6	527.17	0.00	0.00
			Max. Compression	8	-287.21	0.00	0.00
			Max. Mx	14	132.34	7.40	0.00
			Max. My	2	-110.79	0.00	0.00
			Max. Vy	14	7.90	0.00	0.00
			Max. Vx	2	-0.00	0.00	0.00
		Guy A	Bottom Tension	8	12509.36		
			Top Tension	8	12577.48		
			Top Cable Vert	8	4813.35		
			Top Cable Norm	8	11620.01		
			Top Cable Tan	8	1.48		
			Bot Cable Vert	8	-4575.16		
			Bot Cable Norm	8	11642.68		
			Bot Cable Tan	8	1.48		
		Guy B	Bottom Tension	12	13048.55		
			Top Tension	12	13132.87		
			Top Cable Vert	12	5980.93		
			Top Cable Norm	12	11691.91		
			Top Cable Tan	12	1.39		
			Bot Cable Vert	12	-5719.25		
			Bot Cable Norm	12	11728.38		
			Bot Cable Tan	12	1.39		
		Guy C	Bottom Tension	4	12809.38		
			Top Tension	4	12896.94		
			Top Cable Vert	4	6051.66		
			Top Cable Norm	4	11388.96		
			Top Cable Tan	4	0.32		

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
			Bot Cable Vert	4	-5785.91		
			Bot Cable Norm	4	11428.19		
			Bot Cable Tan	4	0.32		
		Top Guy Pull-Off	Max Tension	2	5123.50	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	3818.24	14.20	0.00
			Max. My	2	2929.10	0.00	0.00
			Max. Vy	14	15.15	0.00	0.00
			Max. Vx	2	-0.00	0.00	0.00
T6	60 - 40	Leg	Max Tension	12	40.09	0.95	0.71
			Max. Compression	6	-40611.19	507.56	226.06
			Max. Mx	5	-2986.20	569.56	-0.30
			Max. My	8	-166.46	-46.42	541.96
			Max. Vy	5	-1163.43	-46.48	-26.51
			Max. Vx	2	1197.61	0.39	56.73
		Diagonal	Max Tension	5	1478.63	0.00	0.00
			Max. Compression	5	-1691.04	0.00	0.00
			Max. Mx	15	-66.62	-3.10	0.03
			Max. My	2	-1115.40	-1.99	0.40
			Max. Vy	15	5.23	-3.10	0.03
			Max. Vx	2	-0.19	-1.99	0.40
		Top Girt	Max Tension	12	578.71	0.00	0.00
			Max. Compression	6	-471.95	0.00	0.00
			Max. Mx	14	120.66	7.18	0.00
			Max. My	2	388.70	0.00	-0.00
			Max. Vy	14	-7.66	0.00	0.00
			Max. Vx	2	0.00	0.00	0.00
		Bottom Girt	Max Tension	6	367.27	0.00	0.00
			Max. Compression	8	-134.99	0.00	0.00
			Max. Mx	14	127.58	7.18	0.00
			Max. My	2	-29.54	0.00	0.00
			Max. Vy	14	-7.66	0.00	0.00
			Max. Vx	2	-0.00	0.00	0.00
T7	40 - 20	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	25	-27430.96	45.67	30.86
			Max. Mx	5	-14689.10	345.13	18.95
			Max. My	2	-16300.52	24.36	-351.98
			Max. Vy	5	-682.90	-32.55	-17.94
			Max. Vx	2	689.28	0.34	38.45
		Diagonal	Max Tension	3	887.41	0.00	0.00
			Max. Compression	3	-1103.99	0.00	0.00
			Max. Mx	24	-209.22	-3.08	0.04
			Max. My	2	-1079.65	-1.26	0.35
			Max. Vy	15	5.05	-3.08	0.03
			Max. Vx	2	-0.16	-1.26	0.35
		Top Girt	Max Tension	12	331.05	0.00	0.00
			Max. Compression	6	-216.85	0.00	0.00
			Max. Mx	14	123.13	6.87	0.00
			Max. My	2	251.20	0.00	-0.00
			Max. Vy	14	-7.33	0.00	0.00
			Max. Vx	2	0.00	0.00	0.00
		Bottom Girt	Max Tension	6	197.94	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	136.31	6.87	0.00
			Max. My	2	67.29	0.00	0.00
			Max. Vy	14	-7.33	0.00	0.00
			Max. Vx	2	-0.00	0.00	0.00
T8	20 - 5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-27992.44	453.35	213.36
			Max. Mx	15	-27877.86	453.82	209.70
			Max. My	20	-27689.09	41.25	-495.69

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
			Max. Vy	15	-306.57	-286.59	-153.01
			Max. Vx	2	350.45	20.17	-40.71
		Diagonal	Max Tension	8	1125.87	0.00	0.00
			Max. Compression	2	-661.03	0.00	0.00
			Max. Mx	15	-375.13	-3.08	0.01
			Max. My	8	-48.34	-0.34	-0.37
			Max. Vy	15	4.80	-3.08	0.01
			Max. Vx	8	0.17	-0.34	-0.37
		Top Girt	Max Tension	23	173.51	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	129.78	6.40	0.00
			Max. My	2	141.44	0.00	0.00
			Max. Vy	14	-6.83	0.00	0.00
			Max. Vx	2	-0.00	0.00	0.00
		Bottom Girt	Max Tension	15	5386.31	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	5207.76	6.40	0.00
			Max. My	2	4074.80	0.00	0.00
			Max. Vy	14	-6.83	0.00	0.00
			Max. Vx	2	-0.00	0.00	0.00
T9	5 - 0	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-30252.42	10.85	-29.89
			Max. Mx	26	-29727.22	499.29	-38.48
			Max. My	8	-18931.83	-202.63	-1143.87
			Max. Vy	15	883.76	-314.94	202.56
			Max. Vx	8	1397.22	-202.63	-1143.87
		Diagonal	Max Tension	8	908.57	-0.42	-0.19
			Max. Compression	2	-3224.27	0.00	0.00
			Max. Mx	2	144.04	6.16	7.22
			Max. My	8	-3064.46	-2.85	-9.53
			Max. Vy	2	15.56	0.00	0.00
			Max. Vx	8	-23.78	0.00	0.00
		Horizontal	Max Tension	1	0.00	0.00	0.00
			Max. Compression	15	-296.43	0.00	0.00
			Max. Mx	25	-295.04	6.60	0.00
			Max. My	15	-294.42	0.00	1.43
			Max. Vy	15	12.80	0.00	0.00
			Max. Vx	15	-2.77	0.00	0.00
		Secondary Horizontal	Max Tension	2	855.16	0.00	0.00
			Max. Compression	26	-558.07	0.00	0.00
			Max. Mx	8	531.78	3.66	2.65
			Max. My	2	410.61	-2.75	-2.93
			Max. Vy	8	11.81	0.00	0.00
			Max. Vx	2	-9.23	0.00	0.00
		Bottom Girt	Max Tension	15	746.83	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	727.41	0.06	0.00
			Max. My	2	571.37	0.00	0.00
			Max. Vy	14	-0.61	0.00	0.00
			Max. Vx	2	-0.00	0.00	0.00

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Mast	Max. Vert	15	80593.86	46.31	392.38
	Max. H_x	12	55858.79	476.21	225.10
	Max. H_z	15	80593.86	46.31	392.38
	Max. M_x	1	0.00	14.93	15.38
	Max. M_z	1	0.00	14.93	15.38
	Max. Torsion	8	1634.18	92.04	-583.39
	Min. Vert	1	40575.80	14.93	15.38
	Min. H_x	4	55849.42	-432.01	315.65
	Min. H_z	8	54186.15	92.04	-583.39
	Min. M_x	1	0.00	14.93	15.38
	Min. M_z	1	0.00	14.93	15.38
	Min. Torsion	2	-1567.78	-3.71	99.74
Guy C @ 210 ft Elev -38 ft Azimuth 240 deg	Max. Vert	10	-527.53	-655.73	378.85
	Max. H_x	10	-527.53	-655.73	378.85
	Max. H_z	4	-22173.60	-27077.60	15626.68
	Min. Vert	4	-22173.60	-27077.60	15626.68
	Min. H_x	4	-22173.60	-27077.60	15626.68
	Min. H_z	10	-527.53	-655.73	378.85
Guy B @ 210 ft Elev -34 ft Azimuth 120 deg	Max. Vert	6	-460.18	609.05	351.59
	Max. H_x	12	-22036.73	27638.06	15981.62
	Max. H_z	13	-21743.40	27130.10	16058.02
	Min. Vert	12	-22036.73	27638.06	15981.62
	Min. H_x	6	-460.18	609.05	351.59
	Min. H_z	6	-460.18	609.05	351.59
Guy A @ 210 ft Elev -14 ft Azimuth 0 deg	Max. Vert	2	-259.27	0.16	-624.79
	Max. H_x	11	-9600.20	753.86	-16275.99
	Max. H_z	2	-259.27	0.16	-624.79
	Min. Vert	8	-19227.10	-26.72	-32138.85
	Min. H_x	5	-10108.53	-760.31	-17099.15
	Min. H_z	8	-19227.10	-26.72	-32138.85

Tower Mast Reaction Summary

Load Combination	Vertical lb	$Shear_x$ lb	$Shear_z$ lb	Overturning Moment, M_x lb-ft	Overturning Moment, M_z lb-ft	Torque lb-ft
Dead Only	40575.80	-14.93	-15.38	0.00	0.00	0.05
1.2 Dead+1.0 Wind 0 deg - No Ice+1.0 Guy	62369.16	3.71	-99.74	0.00	0.00	1567.78
1.2 Dead+1.0 Wind 30 deg - No Ice+1.0 Guy	59965.36	352.86	-62.22	0.00	0.00	1393.32
1.2 Dead+1.0 Wind 60 deg - No Ice+1.0 Guy	55849.42	432.01	-315.65	0.00	0.00	679.18
1.2 Dead+1.0 Wind 90 deg - No Ice+1.0 Guy	59024.04	198.84	-309.77	0.00	0.00	-245.24
1.2 Dead+1.0 Wind 120 deg - No Ice+1.0 Guy	60405.59	61.84	57.89	0.00	0.00	-876.12
1.2 Dead+1.0 Wind 150 deg - No Ice+1.0 Guy	57980.32	-154.75	374.10	0.00	0.00	-1304.80
1.2 Dead+1.0 Wind 180 deg - No Ice+1.0 Guy	54186.15	-92.04	583.39	0.00	0.00	-1634.18

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
1.2 Dead+1.0 Wind 210 deg - No Ice+1.0 Guy	56721.17	10.98	426.77	0.00	0.00	-1367.77
1.2 Dead+1.0 Wind 240 deg - No Ice+1.0 Guy	58964.32	-181.87	128.16	0.00	0.00	-648.64
1.2 Dead+1.0 Wind 270 deg - No Ice+1.0 Guy	58027.54	-287.84	-233.58	0.00	0.00	238.61
1.2 Dead+1.0 Wind 300 deg - No Ice+1.0 Guy	55858.79	-476.21	-225.10	0.00	0.00	1047.34
1.2 Dead+1.0 Wind 330 deg - No Ice+1.0 Guy	60270.59	-352.93	-24.94	0.00	0.00	1378.87
1.2 Dead+1.0 Ice+1.0 Temp+Guy	79038.58	-53.97	-8.50	0.00	0.00	1.16
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp+1.0 Guy	80593.86	-46.31	-392.38	0.00	0.00	291.91
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp+1.0 Guy	80260.60	93.28	-342.70	0.00	0.00	232.09
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp+1.0 Guy	79945.28	226.14	-174.30	0.00	0.00	13.08
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp+1.0 Guy	79960.32	307.96	27.71	0.00	0.00	-208.83
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp+1.0 Guy	80022.84	285.05	180.93	0.00	0.00	-275.61
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp+1.0 Guy	79623.47	158.00	276.86	0.00	0.00	-264.90
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp+1.0 Guy	79373.37	-65.98	310.05	0.00	0.00	-282.90
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp+1.0 Guy	79563.81	-287.12	285.56	0.00	0.00	-225.83
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp+1.0 Guy	79901.27	-407.41	197.96	0.00	0.00	-8.18
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp+1.0 Guy	79849.31	-419.12	47.72	0.00	0.00	212.16
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp+1.0 Guy	79858.68	-328.32	-156.59	0.00	0.00	277.54
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp+1.0 Guy	80211.10	-188.71	-332.17	0.00	0.00	271.06
Dead+Wind 0 deg - Service+Guy	41125.46	-9.82	-207.32	0.00	0.00	337.14
Dead+Wind 30 deg - Service+Guy	41030.30	79.19	-183.49	0.00	0.00	296.73
Dead+Wind 60 deg - Service+Guy	40960.92	146.05	-110.78	0.00	0.00	143.36
Dead+Wind 90 deg - Service+Guy	40915.93	174.96	-13.56	0.00	0.00	-47.87
Dead+Wind 120 deg - Service+Guy	40909.37	152.03	82.22	0.00	0.00	-190.20
Dead+Wind 150 deg - Service+Guy	40814.26	79.01	150.54	0.00	0.00	-280.09
Dead+Wind 180 deg - Service+Guy	40777.00	-22.84	176.48	0.00	0.00	-330.36
Dead+Wind 210 deg - Service+Guy	40789.64	-123.77	157.35	0.00	0.00	-291.90
Dead+Wind 240 deg - Service+Guy	40864.32	-192.34	94.02	0.00	0.00	-141.47
Dead+Wind 270 deg - Service+Guy	40884.33	-208.53	-0.08	0.00	0.00	47.53
Dead+Wind 300 deg - Service+Guy	40944.33	-172.71	-99.20	0.00	0.00	191.07
Dead+Wind 330 deg - Service+Guy	41025.53	-100.73	-176.75	0.00	0.00	284.71

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	% Error
1	-0.00	-21552.33	-0.00	2.87	21552.32	-1.38	0.015%
2	-401.71	-25795.44	-26709.21	402.54	25794.46	26642.26	0.180%
3	12833.08	-25577.89	-22918.26	-12838.10	25577.15	22858.15	0.165%
4	22672.56	-25355.50	-12998.48	-22714.61	25355.76	12977.91	0.129%
5	26418.74	-25542.28	405.39	-26367.62	25541.56	-373.16	0.164%
6	23080.66	-25728.60	13697.95	-23021.70	25727.68	-13668.78	0.177%
7	13530.00	-25501.28	23314.57	-13478.73	25500.66	-23294.71	0.148%
8	401.71	-25278.34	26702.70	-361.97	25278.38	-26710.95	0.110%
9	-12833.08	-25495.89	22918.26	12784.44	25495.34	-22899.77	0.142%
10	-22678.21	-25718.28	13001.74	22623.95	25717.47	-12974.06	0.166%
11	-26418.74	-25531.50	-405.39	26370.40	25530.84	437.87	0.159%
12	-23075.02	-25345.18	-13694.69	23098.69	25345.16	13655.96	0.123%
13	-13530.00	-25572.50	-23314.57	13536.30	25571.75	23254.20	0.163%
14	-0.00	-50646.87	0.00	2.22	50646.86	-17.49	0.035%
15	-81.49	-50823.15	-8300.10	81.60	50823.09	8280.02	0.039%
16	4051.80	-50670.03	-7143.04	-4054.46	50669.98	7124.10	0.037%
17	7133.70	-50515.25	-4076.87	-7127.75	50515.20	4058.23	0.038%
18	8290.02	-50649.52	84.24	-8272.56	50649.49	-75.64	0.038%
19	7216.03	-50783.80	4218.50	-7198.13	50783.76	-4209.66	0.039%
20	4193.53	-50626.37	7220.04	-4174.68	50626.34	-7213.26	0.039%
21	81.49	-50470.60	8299.24	-72.12	50470.56	-8283.24	0.036%
22	-4051.80	-50623.72	7143.04	4034.67	50623.69	-7135.42	0.037%
23	-7134.45	-50778.50	4077.31	7117.45	50778.46	-4068.93	0.037%
24	-8290.02	-50644.22	-84.24	8271.88	50644.18	90.29	0.037%
25	-7215.28	-50509.95	-4218.07	7213.30	50509.90	4198.12	0.039%
26	-4193.53	-50667.38	-7220.04	4196.69	50667.33	7199.96	0.040%
27	-92.55	-21611.90	-6153.80	92.55	21611.85	6133.11	0.092%
28	2956.74	-21561.78	-5280.37	-2965.31	21561.75	5262.34	0.089%
29	5223.76	-21510.54	-2994.85	-5242.10	21510.57	2990.06	0.085%
30	6086.88	-21553.57	93.40	-6076.93	21553.56	-75.26	0.092%
31	5317.79	-21596.50	3156.01	-5300.74	21596.47	-3146.52	0.087%
32	3117.31	-21544.13	5371.68	-3096.71	21544.11	-5371.92	0.092%
33	92.55	-21492.76	6152.30	-87.24	21492.79	-6169.98	0.083%
34	-2956.74	-21542.88	5280.37	2938.28	21542.87	-5282.30	0.083%
35	-5225.06	-21594.12	2995.60	5207.78	21594.09	-2985.78	0.089%
36	-6086.88	-21551.09	-93.40	6079.39	21551.08	110.69	0.084%
37	-5316.48	-21508.16	-3155.26	5332.25	21508.18	3147.13	0.079%
38	-3117.31	-21560.53	-5371.68	3125.96	21560.51	5352.68	0.093%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	7	0.00000001	0.00017200
2	Yes	102	0.00019142	0.00015335
3	Yes	98	0.00019566	0.00013728
4	Yes	35	0.00019963	0.00014536
5	Yes	90	0.00019727	0.00014882
6	Yes	94	0.00019782	0.00016427
7	Yes	91	0.00019277	0.00013472
8	Yes	46	0.00019830	0.00008361

9	Yes	88	0.00019648	0.00012986
10	Yes	92	0.00019612	0.00015947
11	Yes	88	0.00019998	0.00014511
12	Yes	59	0.00019442	0.00006066
13	Yes	99	0.00019339	0.00013716
14	Yes	17	0.00000001	0.00005343
15	Yes	45	0.00000001	0.00005850
16	Yes	41	0.00000001	0.00005610
17	Yes	29	0.00000001	0.00005761
18	Yes	34	0.00000001	0.00005726
19	Yes	40	0.00000001	0.00005950
20	Yes	36	0.00000001	0.00005843
21	Yes	23	0.00000001	0.00005493
22	Yes	33	0.00000001	0.00005865
23	Yes	38	0.00000001	0.00005938
24	Yes	31	0.00000001	0.00006053
25	Yes	31	0.00000001	0.00005685
26	Yes	41	0.00000001	0.00005929
27	Yes	27	0.00000001	0.00013878
28	Yes	24	0.00000001	0.00013282
29	Yes	11	0.00000001	0.00010889
30	Yes	20	0.00000001	0.00013268
31	Yes	24	0.00000001	0.00012905
32	Yes	21	0.00000001	0.00012676
33	Yes	12	0.00000001	0.00013999
34	Yes	20	0.00000001	0.00011821
35	Yes	22	0.00000001	0.00013289
36	Yes	19	0.00000001	0.00012215
37	Yes	14	0.00000001	0.00011130
38	Yes	24	0.00000001	0.00013602

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	150 - 140	2.019	29	0.0627	0.0561
T2	140 - 120	1.897	29	0.0584	0.0525
T3	120 - 100	1.667	29	0.0699	0.0802
T4	100 - 80	1.363	37	0.0834	0.0857
T5	80 - 60	1.000	37	0.0801	0.0840
T6	60 - 40	0.698	37	0.0616	0.0795
T7	40 - 20	0.469	37	0.0548	0.0723
T8	20 - 5	0.241	37	0.0563	0.0621
T9	5 - 0	0.061	37	0.0578	0.0528

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
148.00	800 RRH (800 MHz) Unit	29	1.994	0.0615	0.0546	96832
138.00	Guy	29	1.875	0.0584	0.0537	72535
130.00	Pirod 12' T-Frame Sector Mount (1)	29	1.788	0.0617	0.0644	87002
120.00	Comscope NHH-65B-R2B	29	1.667	0.0699	0.0802	25853

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
70.00	Guy	37	0.838	0.0711	0.0817	52851

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	150 - 140	15.726	2	0.5330	0.3305
T2	140 - 120	14.669	2	0.5136	0.3153
T3	120 - 100	12.598	2	0.5616	0.4281
T4	100 - 80	10.021	2	0.6292	0.4400
T5	80 - 60	7.320	2	0.5954	0.4216
T6	60 - 40	5.064	2	0.4722	0.3928
T7	40 - 20	3.301	2	0.4091	0.3541
T8	20 - 5	1.656	2	0.3952	0.3023
T9	5 - 0	0.416	2	0.3967	0.2565

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
148.00	800 RRH (800 MHz) Unit	2	15.512	0.5278	0.3245	22969
138.00	Guy	2	14.466	0.5133	0.3202	17316
130.00	Pirod 12' T-Frame Sector Mount (1)	2	13.663	0.5260	0.3642	20762
120.00	Comscope NHH-65B-R2B	2	12.598	0.5616	0.4281	6315
70.00	Guy	2	6.121	0.5316	0.4064	8233

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt lb	Allowable Load per Bolt lb	Ratio Load / Allowable	Allowable Ratio	Criteria
T2	140	Leg	A325N	0.6250	5	701.72	27611.70	0.025 ✔	1	Bolt DS
		Torque Arm Top@138	A325N	0.6250	1	13732.40	20880.00	0.658 ✔	1	Member Bearing
		Torque Arm Bottom@138	A325N	0.6250	1	11245.00	27611.70	0.407 ✔	1	Bolt Shear
T3	120	Leg	A325N	0.6250	5	1187.55	27611.70	0.043 ✔	1	Bolt DS
T4	100	Leg	A325N	0.7500	5	0.00	39760.80	0.000 ✔	1	Bolt DS
T5	80	Leg	A325N	0.7500	5	460.79	39760.80	0.012 ✔	1	Bolt DS
T6	60	Leg	A325N	0.7500	5	8.02	39760.80	0.000 ✔	1	Bolt DS
T7	40	Leg	A325N	0.7500	5	0.00	39760.80	0.000 ✔	1	Bolt DS
T8	20	Leg	A325N	0.7500	5	0.00	39760.80	0.000 ✔	1	Bolt DS

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt lb	Allowable Load per Bolt lb	Ratio Load / Allowable	Allowable Ratio	Criteria

Guy Design Data

Section No.	Elevation ft	Size	Initial Tension lb	Breaking Load lb	Actual T_u lb	Allowable T_n lb	Required S.F.	Actual S.F.
T2	138.00 (A) (463)	9/16 EHS	3500.00	35000.04	13116.00	21000.00	1.000	1.601 ✔
	138.00 (A) (464)	9/16 EHS	3500.00	35000.04	12288.20	21000.00	1.000	1.709 ✔
	138.00 (B) (457)	9/16 EHS	3500.00	35000.04	12763.80	21000.00	1.000	1.645 ✔
	138.00 (B) (458)	9/16 EHS	3500.00	35000.04	13437.30	21000.00	1.000	1.563 ✔
	138.00 (C) (448)	9/16 EHS	3500.00	35000.04	13140.00	21000.00	1.000	1.598 ✔
	138.00 (C) (449)	9/16 EHS	3500.00	35000.04	13149.30	21000.00	1.000	1.597 ✔
T5	70.00 (A) (474)	11/16 EHS	5000.00	49999.91	12577.50	30000.00	1.000	2.385 ✔
	70.00 (B) (473)	11/16 EHS	5000.00	49999.91	13132.90	30000.00	1.000	2.284 ✔
	70.00 (C) (469)	11/16 EHS	5000.00	49999.91	12896.90	30000.00	1.000	2.326 ✔

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	P_n lb	Ratio P_u / P_n
T1	150 - 140	2	10.00	2.25	54.0 K=1.00	3.1416	-23549.50	114226.00	0.206 [1] ✔
T2	140 - 120	2	20.00	2.38	57.0 K=1.00	3.1416	-30939.90	111479.00	0.278 [1] ✔
T3	120 - 100	2	20.00	2.38	57.0 K=1.00	3.1416	-32650.80	111479.00	0.293 [1] ✔
T4	100 - 80	2 1/4	20.00	2.38	50.7 K=1.00	3.9761	-34855.60	148303.00	0.235 [1] ✔
T5	80 - 60	2 1/4	20.00	2.38	50.7 K=1.00	3.9761	-49249.70	148303.00	0.332 [1] ✔
T6	60 - 40	2 1/4	20.00	2.38	50.7 K=1.00	3.9761	-40611.20	148303.00	0.274 [1] ✔
T7	40 - 20	2 1/4	20.00	2.38	50.7 K=1.00	3.9761	-27431.00	148303.00	0.185 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	P_n lb	Ratio $\frac{P_u}{P_n}$
T8	20 - 5	2 1/2	15.00	2.42	46.4 K=1.00	4.9087	-27992.40	188719.00	0.148 [1]
T9	5 - 0	2 1/2	5.45	2.07	39.8 K=1.00	4.9087	-30252.40	196697.00	0.154 [1]

[1] P_u / P_n controls

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	P_n lb	Ratio $\frac{P_u}{P_n}$
T1	150 - 140	3/4	4.37	2.09	120.4 K=0.90	0.4418	-3027.68	6890.55	0.439 [1]
T2	140 - 120	3/4	4.44	2.12	122.2 K=0.90	0.4418	-4788.56	6688.37	0.716 [1]
T3	120 - 100	3/4	4.44	2.12	122.2 K=0.90	0.4418	-1729.68	6688.37	0.259 [1]
T4	100 - 80	3/4	4.44	2.11	121.4 K=0.90	0.4418	-2590.51	6766.83	0.383 [1]
T5	80 - 60	3/4	4.44	2.11	121.4 K=0.90	0.4418	-2702.99	6766.83	0.399 [1]
T6	60 - 40	3/4	4.44	2.11	121.4 K=0.90	0.4418	-1691.04	6766.83	0.250 [1]
T7	40 - 20	3/4	4.44	2.11	121.4 K=0.90	0.4418	-1103.99	6766.83	0.163 [1]
T8	20 - 5	3/4	4.46	2.11	121.3 K=0.90	0.4418	-661.03	6777.99	0.098 [1]
T9	5 - 0	3/4	2.60	2.00	115.0 K=0.90	0.4418	-3224.27	7540.43	0.428 [1]

[1] P_u / P_n controls

Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	P_n lb	Ratio $\frac{P_u}{P_n}$
T9	5 - 0	4x1/2	2.06	1.85	154.2 K=1.00	2.0000	-296.43	19013.80	0.016 [1]

[1] P_u / P_n controls

Secondary Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	P_n lb	Ratio $\frac{P_u}{P_n}$
T9	5 - 0	3/4	2.66	2.45	109.9 K=0.70	0.4418	-558.07	8221.43	0.068 [1] ✔

[1] P_u / P_n controls

Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	P_n lb	Ratio $\frac{P_u}{P_n}$
T1	150 - 140	3/4	3.75	3.58	160.5 K=0.70	0.4418	-147.96	3872.77	0.038 [1] ✔
T2	140 - 120	3/4	3.75	3.58	160.5 K=0.70	0.4418	-1135.09	3872.77	0.293 [1] ✔
T3	120 - 100	3/4	3.75	3.58	160.5 K=0.70	0.4418	-264.91	3872.77	0.068 [1] ✔
T4	100 - 80	3/4	3.75	3.56	159.6 K=0.70	0.4418	-502.00	3918.20	0.128 [1] ✔
T5	80 - 60	3/4	3.75	3.56	159.6 K=0.70	0.4418	-582.31	3918.20	0.149 [1] ✔
T6	60 - 40	3/4	3.75	3.56	159.6 K=0.70	0.4418	-471.95	3918.20	0.120 [1] ✔
T7	40 - 20	3/4	3.75	3.56	159.6 K=0.70	0.4418	-216.85	3918.20	0.055 [1] ✔

[1] P_u / P_n controls

Bottom Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	P_n lb	Ratio $\frac{P_u}{P_n}$
T1	150 - 140	3/4	3.75	3.58	160.5 K=0.70	0.4418	-711.05	3872.77	0.184 [1] ✔
T2	140 - 120	3/4	3.75	3.58	160.5 K=0.70	0.4418	-373.60	3872.77	0.096 [1] ✔
T3	120 - 100	3/4	3.75	3.58	160.5 K=0.70	0.4418	-430.22	3872.77	0.111 [1] ✔
T4	100 - 80	3/4	3.75	3.56	159.6 K=0.70	0.4418	-725.86	3918.20	0.185 [1] ✔
T5	80 - 60	3/4	3.75	3.56	159.6 K=0.70	0.4418	-287.21	3918.20	0.073 [1] ✔
T6	60 - 40	3/4	3.75	3.56	159.6 K=0.70	0.4418	-134.99	3918.20	0.034 [1] ✔

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

[1] P_u / P_n controls

Top Guy Pull-Off Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	P_n lb	Ratio $\frac{P_u}{P_n}$
T1	150 - 140	1 1/4	3.75	3.58	137.6 K=1.00	1.2272	-7515.21	14642.40	0.513 [1] ✔

[1] P_u / P_n controls

Torque-Arm Top Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	P_n lb	Ratio $\frac{P_u}{P_n}$
T2	140 - 120 (450)	2L3x3x1/4	7.76	7.76	100.2 K=1.00	2.8800	-2943.48	70976.60	0.041 [1] ✔
T2	140 - 120 (451)	2L3x3x1/4	7.76	7.76	100.2 K=1.00	2.8800	-3325.58	70976.60	0.047 [1] ✔
T2	140 - 120 (459)	2L3x3x1/4	7.76	7.76	100.2 K=1.00	2.8800	-2661.57	70976.60	0.037 [1] ✔
T2	140 - 120 (460)	2L3x3x1/4	7.76	7.76	100.2 K=1.00	2.8800	-2879.08	70976.60	0.041 [1] ✔
T2	140 - 120 (465)	2L3x3x1/4	7.76	7.76	100.2 K=1.00	2.8800	-2927.76	70976.60	0.041 [1] ✔
T2	140 - 120 (466)	2L3x3x1/4	7.76	7.76	100.2 K=1.00	2.8800	-3586.79	70976.60	0.051 [1] ✔

[1] P_u / P_n controls

Torque-Arm Bottom Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	P_n lb	Ratio $\frac{P_u}{P_n}$
T2	140 - 120 (455)	2L3x3x1/4	6.95	6.85	88.4 K=1.00	2.8800	-10759.20	78196.30	0.138 [1] ✔
T2	140 - 120 (456)	2L3x3x1/4	6.95	6.85	88.4 K=1.00	2.8800	-9579.41	78196.30	0.123 [1] ✔
T2	140 - 120 (461)	2L3x3x1/4	6.95	6.85	88.4 K=1.00	2.8800	-10353.10	78196.30	0.132 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	P_n lb	Ratio $\frac{P_u}{P_n}$
T2	140 - 120 (462)	2L3x3x1/4	6.95	6.85	88.4 K=1.00	2.8800	-10820.70	78196.30	0.138 [1]
T2	140 - 120 (467)	2L3x3x1/4	6.95	6.85	88.4 K=1.00	2.8800	-11245.00	78196.30	0.144 [1]
T2	140 - 120 (468)	2L3x3x1/4	6.95	6.85	88.4 K=1.00	2.8800	-10569.50	78196.30	0.135 [1]

[1] P_u / P_n controls

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	P_n lb	Ratio $\frac{P_u}{P_n}$
T1	150 - 140	2	10.00	2.25	54.0	3.1416	6971.63	141372.00	0.049 [1]
T2	140 - 120	2	20.00	2.38	57.0	3.1416	5944.54	141372.00	0.042 [1]
T3	120 - 100	2	20.00	2.38	57.0	1.7942	5937.74	87466.00	0.068 [1]
T4	100 - 80	2 1/4	20.00	2.38	50.7	3.9761	2311.40	178924.00	0.013 [1]
T5	80 - 60	2 1/4	20.00	2.38	50.7	3.9761	13842.80	178924.00	0.077 [1]
T6	60 - 40	2 1/4	20.00	2.38	50.7	2.1885	40.09	106689.00	0.000 [1]

[1] P_u / P_n controls

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	P_n lb	Ratio $\frac{P_u}{P_n}$
T1	150 - 140	3/4	4.37	2.09	133.7	0.4418	2967.64	19880.40	0.149 [1]
T2	140 - 120	3/4	4.44	2.12	135.7	0.4418	4499.05	19880.40	0.226 [1]
T3	120 - 100	3/4	4.44	2.12	135.7	0.4418	1543.79	19880.40	0.078 [1]
T4	100 - 80	3/4	4.44	2.11	134.9	0.4418	2422.10	19880.40	0.122 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	P_n lb	Ratio $\frac{P_u}{P_n}$
T5	80 - 60	3/4	4.44	2.11	134.9	0.4418	2444.28	19880.40	0.123 [1] ✔
T6	60 - 40	3/4	4.44	2.11	134.9	0.4418	1478.63	19880.40	0.074 [1] ✔
T7	40 - 20	3/4	4.44	2.11	134.9	0.4418	887.41	19880.40	0.045 [1] ✔
T8	20 - 5	3/4	4.46	2.11	134.8	0.4418	1125.87	19880.40	0.057 [1] ✔
T9	5 - 0	3/4	3.71	2.19	139.9	0.4418	908.57	19880.40	0.046 [1] ✔

[1] P_u / P_n controls

Secondary Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	P_n lb	Ratio $\frac{P_u}{P_n}$
T9	5 - 0	3/4	2.66	2.45	157.0	0.4418	855.16	19880.40	0.043 [1] ✔

[1] P_u / P_n controls

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	P_n lb	Ratio $\frac{P_u}{P_n}$
T1	150 - 140	3/4	3.75	3.58	229.3	0.4418	126.07	19880.40	0.006 [1] ✔
T2	140 - 120	3/4	3.75	3.58	229.3	0.4418	1426.73	19880.40	0.072 [1] ✔
T3	120 - 100	3/4	3.75	3.58	229.3	0.4418	446.10	19880.40	0.022 [1] ✔
T4	100 - 80	3/4	3.75	3.56	228.0	0.4418	654.21	19880.40	0.033 [1] ✔
T5	80 - 60	3/4	3.75	3.56	228.0	0.4418	767.23	19880.40	0.039 [1] ✔
T6	60 - 40	3/4	3.75	3.56	228.0	0.4418	578.71	19880.40	0.029 [1] ✔
T7	40 - 20	3/4	3.75	3.56	228.0	0.4418	331.05	19880.40	0.017 [1] ✔
T8	20 - 5	3/4	3.75	3.54	226.7	0.4418	173.51	19880.40	0.009 [1] ✔

[1] P_u / P_n controls

Bottom Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	P_n lb	Ratio $\frac{P_u}{P_n}$
T1	150 - 140	3/4	3.75	3.58	229.3	0.4418	1310.67	19880.40	0.066 [1] ✔
T2	140 - 120	3/4	3.75	3.58	229.3	0.4418	480.84	19880.40	0.024 [1] ✔
T3	120 - 100	3/4	3.75	3.58	229.3	0.4418	528.59	19880.40	0.027 [1] ✔
T4	100 - 80	3/4	3.75	3.56	228.0	0.4418	827.40	19880.40	0.042 [1] ✔
T5	80 - 60	3/4	3.75	3.56	228.0	0.4418	527.17	19880.40	0.027 [1] ✔
T6	60 - 40	3/4	3.75	3.56	228.0	0.4418	367.27	19880.40	0.018 [1] ✔
T7	40 - 20	3/4	3.75	3.56	228.0	0.4418	197.95	19880.40	0.010 [1] ✔
T8	20 - 5	3/4	3.75	3.54	226.7	0.4418	5386.31	19880.40	0.271 [1] ✔
T9	5 - 0	3/4	0.38	0.17	10.7	0.4418	746.83	19880.40	0.038 [1] ✔

[1] P_u / P_n controls

Top Guy Pull-Off Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	P_n lb	Ratio $\frac{P_u}{P_n}$
T1	150 - 140	1 1/4	3.75	3.58	137.6	1.2272	7724.52	55223.30	0.140 [1] ✔
T5	80 - 60	1 1/4	3.75	3.56	136.8	1.2272	5123.50	55223.30	0.093 [1] ✔

[1] P_u / P_n controls

Torque-Arm Top Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	P_n lb	Ratio $\frac{P_u}{P_n}$
T2	140 - 120 (450)	2L3x3x1/4	7.76	7.76	100.2	2.8800	12658.30	93312.00	0.136 [1] ✔
T2	140 - 120 (451)	2L3x3x1/4	7.76	7.76	100.2	2.8800	12675.30	93312.00	0.136 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	P_n lb	Ratio $\frac{P_u}{P_n}$
T2	140 - 120 (459)	2L3x3x1/4	7.76	7.76	100.2	2.8800	13043.90	93312.00	0.140 [1] ✔
T2	140 - 120 (460)	2L3x3x1/4	7.76	7.76	100.2	2.8800	12837.90	93312.00	0.138 [1] ✔
T2	140 - 120 (465)	2L3x3x1/4	7.76	7.76	100.2	2.8800	13732.40	93312.00	0.147 [1] ✔
T2	140 - 120 (466)	2L3x3x1/4	7.76	7.76	100.2	2.8800	13510.40	93312.00	0.145 [1] ✔

[1] P_u / P_n controls

Torque-Arm Bottom Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	P_n lb	Ratio $\frac{P_u}{P_n}$
T2	140 - 120 (455)	2L3x3x1/4	6.95	6.85	88.4	2.8800	5601.98	93312.00	0.060 [1] ✔
T2	140 - 120 (456)	2L3x3x1/4	6.95	6.85	88.4	2.8800	5754.37	93312.00	0.062 [1] ✔
T2	140 - 120 (461)	2L3x3x1/4	6.95	6.85	88.4	2.8800	5618.09	93312.00	0.060 [1] ✔
T2	140 - 120 (462)	2L3x3x1/4	6.95	6.85	88.4	2.8800	5563.25	93312.00	0.060 [1] ✔
T2	140 - 120 (467)	2L3x3x1/4	6.95	6.85	88.4	2.8800	6221.40	93312.00	0.067 [1] ✔
T2	140 - 120 (468)	2L3x3x1/4	6.95	6.85	88.4	2.8800	6236.63	93312.00	0.067 [1] ✔

[1] P_u / P_n controls

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
T1	150 - 140	Leg	2	1	-22770.50	114226.00	19.9	Pass
		Leg	2	2	-23450.10	114226.00	20.5	Pass
		Leg	2	3	-23549.50	114226.00	20.6	Pass
T2	140 - 120	Leg	2	34	-28937.60	111479.00	26.0	Pass
		Leg	2	35	-30939.90	111479.00	27.8	Pass
		Leg	2	36	-29824.80	111479.00	26.8	Pass
T3	120 - 100	Leg	2	91	-28937.80	111479.00	26.0	Pass
		Leg	2	92	-32650.80	111479.00	29.3	Pass
		Leg	2	93	-31539.00	111479.00	28.3	Pass
T4	100 - 80	Leg	2 1/4	148	-32998.60	148303.00	22.3	Pass
		Leg	2 1/4	149	-34855.60	148303.00	23.5	Pass
		Leg	2 1/4	150	-34718.30	148303.00	23.4	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
T5	80 - 60	Leg	2 1/4	205	-46908.60	148303.00	31.6	Pass
		Leg	2 1/4	206	-49249.70	148303.00	33.2	Pass
		Leg	2 1/4	207	-49091.80	148303.00	33.1	Pass
T6	60 - 40	Leg	2 1/4	262	-38482.10	148303.00	25.9	Pass
		Leg	2 1/4	263	-40611.20	148303.00	27.4	Pass
		Leg	2 1/4	264	-40553.10	148303.00	27.3	Pass
T7	40 - 20	Leg	2 1/4	319	-27174.10	148303.00	18.3	Pass
		Leg	2 1/4	320	-27431.00	148303.00	18.5	Pass
		Leg	2 1/4	321	-26998.80	148303.00	18.2	Pass
T8	20 - 5	Leg	2 1/2	376	-27889.20	188719.00	14.8	Pass
		Leg	2 1/2	377	-27992.40	188719.00	14.8	Pass
		Leg	2 1/2	378	-27689.50	188719.00	14.7	Pass
T9	5 - 0	Leg	2 1/2	421	-30149.50	196697.00	15.3	Pass
		Leg	2 1/2	422	-30252.40	196697.00	15.4	Pass
		Leg	2 1/2	423	-29919.80	196697.00	15.2	Pass
T1	150 - 140	Diagonal	3/4	10	-2839.04	6890.55	41.2	Pass
		Diagonal	3/4	11	-2717.75	6890.55	39.4	Pass
		Diagonal	3/4	12	-3027.68	6890.55	43.9	Pass
		Diagonal	3/4	13	-2903.39	6890.55	42.1	Pass
		Diagonal	3/4	14	-2643.11	6890.55	38.4	Pass
		Diagonal	3/4	15	-2887.72	6890.55	41.9	Pass
		Diagonal	3/4	16	-2293.88	6890.55	33.3	Pass
		Diagonal	3/4	17	-2570.16	6890.55	37.3	Pass
		Diagonal	3/4	18	-2772.94	6890.55	40.2	Pass
		Diagonal	3/4	19	-2644.52	6890.55	38.4	Pass
		Diagonal	3/4	20	-2200.55	6890.55	31.9	Pass
		Diagonal	3/4	21	-1989.18	6890.55	28.9	Pass
		Diagonal	3/4	22	-2796.94	6890.55	40.6	Pass
		Diagonal	3/4	23	-2612.73	6890.55	37.9	Pass
		Diagonal	3/4	24	-3018.36	6890.55	43.8	Pass
		Diagonal	3/4	25	-3025.06	6890.55	43.9	Pass
		Diagonal	3/4	26	-2200.04	6890.55	31.9	Pass
		Diagonal	3/4	27	-2344.08	6890.55	34.0	Pass
		Diagonal	3/4	28	-790.72	6890.55	11.5	Pass
		Diagonal	3/4	29	-654.49	6890.55	9.5	Pass
		Diagonal	3/4	30	-774.33	6890.55	11.2	Pass
		Diagonal	3/4	31	-811.08	6890.55	11.8	Pass
		Diagonal	3/4	32	-605.98	6890.55	8.8	Pass
		Diagonal	3/4	33	-715.42	6890.55	10.4	Pass
T2	140 - 120	Diagonal	3/4	43	-1039.29	6688.37	15.5	Pass
		Diagonal	3/4	44	-678.77	6688.37	10.1	Pass
		Diagonal	3/4	45	-1646.17	6688.37	24.6	Pass
		Diagonal	3/4	46	-1732.35	6688.37	25.9	Pass
		Diagonal	3/4	47	-669.17	6688.37	10.0	Pass
		Diagonal	3/4	48	-924.26	6688.37	13.8	Pass
		Diagonal	3/4	49	-523.87	6688.37	7.8	Pass
		Diagonal	3/4	50	-615.73	6688.37	9.2	Pass
		Diagonal	3/4	51	-1515.84	6688.37	22.7	Pass
		Diagonal	3/4	52	-1578.38	6688.37	23.6	Pass
		Diagonal	3/4	53	-573.32	6688.37	8.6	Pass
		Diagonal	3/4	54	-467.56	6688.37	7.0	Pass
		Diagonal	3/4	55	-1117.61	6688.37	16.7	Pass
		Diagonal	3/4	56	-627.87	6688.37	9.4	Pass
		Diagonal	3/4	57	-1490.57	6688.37	22.3	Pass
		Diagonal	3/4	58	-1564.99	6688.37	23.4	Pass
		Diagonal	3/4	59	-576.40	6688.37	8.6	Pass
		Diagonal	3/4	60	-1036.84	6688.37	15.5	Pass
		Diagonal	3/4	61	-838.39	6688.37	12.5	Pass
		Diagonal	3/4	62	-671.29	6688.37	10.0	Pass
		Diagonal	3/4	63	-1942.09	6688.37	29.0	Pass
		Diagonal	3/4	64	-1993.56	6688.37	29.8	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
		Diagonal	3/4	65	-630.17	6688.37	9.4	Pass
		Diagonal	3/4	66	-766.66	6688.37	11.5	Pass
		Diagonal	3/4	67	-2212.48	6688.37	33.1	Pass
		Diagonal	3/4	68	-3099.13	6688.37	46.3	Pass
		Diagonal	3/4	69	-3707.67	6688.37	55.4	Pass
		Diagonal	3/4	70	-3728.98	6688.37	55.8	Pass
		Diagonal	3/4	71	-3037.57	6688.37	45.4	Pass
		Diagonal	3/4	72	-2173.85	6688.37	32.5	Pass
		Diagonal	3/4	73	-3971.56	6688.37	59.4	Pass
		Diagonal	3/4	74	-3390.53	6688.37	50.7	Pass
		Diagonal	3/4	75	-4718.59	6688.37	70.5	Pass
		Diagonal	3/4	76	-4788.56	6688.37	71.6	Pass
		Diagonal	3/4	77	-3385.46	6688.37	50.6	Pass
		Diagonal	3/4	78	-3896.59	6688.37	58.3	Pass
		Diagonal	3/4	79	-2788.26	6688.37	41.7	Pass
		Diagonal	3/4	80	-2874.29	6688.37	43.0	Pass
		Diagonal	3/4	81	-2921.64	6688.37	43.7	Pass
		Diagonal	3/4	82	-2790.82	6688.37	41.7	Pass
		Diagonal	3/4	83	-2806.02	6688.37	42.0	Pass
		Diagonal	3/4	84	-2837.71	6688.37	42.4	Pass
		Diagonal	3/4	85	-3078.91	6688.37	46.0	Pass
		Diagonal	3/4	86	-2855.54	6688.37	42.7	Pass
		Diagonal	3/4	87	-2975.40	6688.37	44.5	Pass
		Diagonal	3/4	88	-2912.16	6688.37	43.5	Pass
		Diagonal	3/4	89	-2795.18	6688.37	41.8	Pass
		Diagonal	3/4	90	-3071.77	6688.37	45.9	Pass
T3	120 - 100	Diagonal	3/4	100	-1331.96	6688.37	19.9	Pass
		Diagonal	3/4	101	-1281.46	6688.37	19.2	Pass
		Diagonal	3/4	102	-1640.33	6688.37	24.5	Pass
		Diagonal	3/4	103	-1729.68	6688.37	25.9	Pass
		Diagonal	3/4	104	-1498.05	6688.37	22.4	Pass
		Diagonal	3/4	105	-1486.61	6688.37	22.2	Pass
		Diagonal	3/4	106	-832.71	6688.37	12.5	Pass
		Diagonal	3/4	107	-804.00	6688.37	12.0	Pass
		Diagonal	3/4	108	-1062.77	6688.37	15.9	Pass
		Diagonal	3/4	109	-1126.98	6688.37	16.8	Pass
		Diagonal	3/4	110	-988.45	6688.37	14.8	Pass
		Diagonal	3/4	111	-973.39	6688.37	14.6	Pass
		Diagonal	3/4	112	-895.08	6688.37	13.4	Pass
		Diagonal	3/4	113	-849.05	6688.37	12.7	Pass
		Diagonal	3/4	114	-1135.35	6688.37	17.0	Pass
		Diagonal	3/4	115	-1210.53	6688.37	18.1	Pass
		Diagonal	3/4	116	-1053.48	6688.37	15.8	Pass
		Diagonal	3/4	117	-1046.89	6688.37	15.7	Pass
		Diagonal	3/4	118	-774.97	6688.37	11.6	Pass
		Diagonal	3/4	119	-739.00	6688.37	11.0	Pass
		Diagonal	3/4	120	-1010.45	6688.37	15.1	Pass
		Diagonal	3/4	121	-1080.00	6688.37	16.1	Pass
		Diagonal	3/4	122	-955.77	6688.37	14.3	Pass
		Diagonal	3/4	123	-943.94	6688.37	14.1	Pass
		Diagonal	3/4	124	-687.46	6688.37	10.3	Pass
		Diagonal	3/4	125	-648.57	6688.37	9.7	Pass
		Diagonal	3/4	126	-920.76	6688.37	13.8	Pass
		Diagonal	3/4	127	-993.04	6688.37	14.8	Pass
		Diagonal	3/4	128	-874.99	6688.37	13.1	Pass
		Diagonal	3/4	129	-863.65	6688.37	12.9	Pass
		Diagonal	3/4	130	-663.72	6688.37	9.9	Pass
		Diagonal	3/4	131	-623.09	6688.37	9.3	Pass
		Diagonal	3/4	132	-885.10	6688.37	13.2	Pass
		Diagonal	3/4	133	-956.17	6688.37	14.3	Pass
		Diagonal	3/4	134	-867.69	6688.37	13.0	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
		Diagonal	3/4	135	-859.30	6688.37	12.8	Pass
		Diagonal	3/4	136	-469.31	6688.37	7.0	Pass
		Diagonal	3/4	137	-446.30	6688.37	6.7	Pass
		Diagonal	3/4	138	-744.47	6688.37	11.1	Pass
		Diagonal	3/4	139	-791.74	6688.37	11.8	Pass
		Diagonal	3/4	140	-677.25	6688.37	10.1	Pass
		Diagonal	3/4	141	-665.58	6688.37	10.0	Pass
		Diagonal	3/4	142	-600.87	6688.37	9.0	Pass
		Diagonal	3/4	143	-584.72	6688.37	8.7	Pass
		Diagonal	3/4	144	-731.05	6688.37	10.9	Pass
		Diagonal	3/4	145	-784.83	6688.37	11.7	Pass
		Diagonal	3/4	146	-860.73	6688.37	12.9	Pass
		Diagonal	3/4	147	-844.98	6688.37	12.6	Pass
T4	100 - 80	Diagonal	3/4	157	-2145.51	6766.83	31.7	Pass
		Diagonal	3/4	158	-2096.21	6766.83	31.0	Pass
		Diagonal	3/4	159	-2500.51	6766.83	37.0	Pass
		Diagonal	3/4	160	-2590.51	6766.83	38.3	Pass
		Diagonal	3/4	161	-2194.68	6766.83	32.4	Pass
		Diagonal	3/4	162	-2181.91	6766.83	32.2	Pass
		Diagonal	3/4	163	-1401.69	6766.83	20.7	Pass
		Diagonal	3/4	164	-1368.51	6766.83	20.2	Pass
		Diagonal	3/4	165	-1655.75	6766.83	24.5	Pass
		Diagonal	3/4	166	-1720.57	6766.83	25.4	Pass
		Diagonal	3/4	167	-1457.67	6766.83	21.5	Pass
		Diagonal	3/4	168	-1446.61	6766.83	21.4	Pass
		Diagonal	3/4	169	-1517.26	6766.83	22.4	Pass
		Diagonal	3/4	170	-1470.07	6766.83	21.7	Pass
		Diagonal	3/4	171	-1786.16	6766.83	26.4	Pass
		Diagonal	3/4	172	-1861.08	6766.83	27.5	Pass
		Diagonal	3/4	173	-1574.01	6766.83	23.3	Pass
		Diagonal	3/4	174	-1568.95	6766.83	23.2	Pass
		Diagonal	3/4	175	-1391.22	6766.83	20.6	Pass
		Diagonal	3/4	176	-1353.23	6766.83	20.0	Pass
		Diagonal	3/4	177	-1655.82	6766.83	24.5	Pass
		Diagonal	3/4	178	-1726.28	6766.83	25.5	Pass
		Diagonal	3/4	179	-1469.15	6766.83	21.7	Pass
		Diagonal	3/4	180	-1458.64	6766.83	21.6	Pass
		Diagonal	3/4	181	-1316.62	6766.83	19.5	Pass
		Diagonal	3/4	182	-1271.67	6766.83	18.8	Pass
		Diagonal	3/4	183	-1573.74	6766.83	23.3	Pass
		Diagonal	3/4	184	-1646.76	6766.83	24.3	Pass
		Diagonal	3/4	185	-1397.74	6766.83	20.7	Pass
		Diagonal	3/4	186	-1391.85	6766.83	20.6	Pass
		Diagonal	3/4	187	-1290.52	6766.83	19.1	Pass
		Diagonal	3/4	188	-1255.34	6766.83	18.6	Pass
		Diagonal	3/4	189	-1556.38	6766.83	23.0	Pass
		Diagonal	3/4	190	-1627.53	6766.83	24.1	Pass
		Diagonal	3/4	191	-1398.06	6766.83	20.7	Pass
		Diagonal	3/4	192	-1384.37	6766.83	20.5	Pass
		Diagonal	3/4	193	-1051.82	6766.83	15.5	Pass
		Diagonal	3/4	194	-1006.37	6766.83	14.9	Pass
		Diagonal	3/4	195	-1280.63	6766.83	18.9	Pass
		Diagonal	3/4	196	-1349.54	6766.83	19.9	Pass
		Diagonal	3/4	197	-1143.88	6766.83	16.9	Pass
		Diagonal	3/4	198	-1141.17	6766.83	16.9	Pass
		Diagonal	3/4	199	-1511.25	6766.83	22.3	Pass
		Diagonal	3/4	200	-1451.86	6766.83	21.5	Pass
		Diagonal	3/4	201	-1842.62	6766.83	27.2	Pass
		Diagonal	3/4	202	-1940.07	6766.83	28.7	Pass
		Diagonal	3/4	203	-1666.84	6766.83	24.6	Pass
		Diagonal	3/4	204	-1658.06	6766.83	24.5	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
T5	80 - 60	Diagonal	3/4	214	-1776.94	6766.83	26.3	Pass
		Diagonal	3/4	215	-1736.89	6766.83	25.7	Pass
		Diagonal	3/4	216	-1461.97	6766.83	21.6	Pass
		Diagonal	3/4	217	-1481.29	6766.83	21.9	Pass
		Diagonal	3/4	218	-1679.39	6766.83	24.8	Pass
		Diagonal	3/4	219	-1721.45	6766.83	25.4	Pass
		Diagonal	3/4	220	-1211.89	6766.83	17.9	Pass
		Diagonal	3/4	221	-1189.14	6766.83	17.6	Pass
		Diagonal	3/4	222	-980.29	6766.83	14.5	Pass
		Diagonal	3/4	223	-996.02	6766.83	14.7	Pass
		Diagonal	3/4	224	-1137.37	6766.83	16.8	Pass
		Diagonal	3/4	225	-1160.19	6766.83	17.1	Pass
		Diagonal	3/4	226	-1535.63	6766.83	22.7	Pass
		Diagonal	3/4	227	-1511.33	6766.83	22.3	Pass
		Diagonal	3/4	228	-1295.85	6766.83	19.2	Pass
		Diagonal	3/4	229	-1313.42	6766.83	19.4	Pass
		Diagonal	3/4	230	-1442.32	6766.83	21.3	Pass
		Diagonal	3/4	231	-1465.59	6766.83	21.7	Pass
		Diagonal	3/4	232	-1402.95	6766.83	20.7	Pass
		Diagonal	3/4	233	-1367.54	6766.83	20.2	Pass
		Diagonal	3/4	234	-1154.05	6766.83	17.1	Pass
		Diagonal	3/4	235	-1171.52	6766.83	17.3	Pass
		Diagonal	3/4	236	-1292.47	6766.83	19.1	Pass
		Diagonal	3/4	237	-1327.78	6766.83	19.6	Pass
		Diagonal	3/4	238	-1779.66	6766.83	26.3	Pass
		Diagonal	3/4	239	-1742.47	6766.83	25.8	Pass
		Diagonal	3/4	240	-2067.25	6766.83	30.5	Pass
		Diagonal	3/4	241	-2136.63	6766.83	31.6	Pass
		Diagonal	3/4	242	-1776.31	6766.83	26.3	Pass
		Diagonal	3/4	243	-1765.57	6766.83	26.1	Pass
		Diagonal	3/4	244	-1936.73	6766.83	28.6	Pass
		Diagonal	3/4	245	-1894.54	6766.83	28.0	Pass
		Diagonal	3/4	246	-2226.27	6766.83	32.9	Pass
		Diagonal	3/4	247	-2297.52	6766.83	34.0	Pass
		Diagonal	3/4	248	-1936.41	6766.83	28.6	Pass
		Diagonal	3/4	249	-1930.00	6766.83	28.5	Pass
		Diagonal	3/4	250	-1591.85	6766.83	23.5	Pass
		Diagonal	3/4	251	-1543.91	6766.83	22.8	Pass
		Diagonal	3/4	252	-1848.74	6766.83	27.3	Pass
		Diagonal	3/4	253	-1918.37	6766.83	28.3	Pass
		Diagonal	3/4	254	-1592.34	6766.83	23.5	Pass
		Diagonal	3/4	255	-1591.67	6766.83	23.5	Pass
		Diagonal	3/4	256	-2251.53	6766.83	33.3	Pass
		Diagonal	3/4	257	-2198.20	6766.83	32.5	Pass
		Diagonal	3/4	258	-2611.46	6766.83	38.6	Pass
		Diagonal	3/4	259	-2702.99	6766.83	39.9	Pass
		Diagonal	3/4	260	-2281.23	6766.83	33.7	Pass
		Diagonal	3/4	261	-2271.40	6766.83	33.6	Pass
T6	60 - 40	Diagonal	3/4	271	-1098.29	6766.83	16.2	Pass
		Diagonal	3/4	272	-1057.18	6766.83	15.6	Pass
		Diagonal	3/4	273	-754.51	6766.83	11.2	Pass
		Diagonal	3/4	274	-771.22	6766.83	11.4	Pass
		Diagonal	3/4	275	-1109.60	6766.83	16.4	Pass
		Diagonal	3/4	276	-1155.48	6766.83	17.1	Pass
		Diagonal	3/4	277	-739.03	6766.83	10.9	Pass
		Diagonal	3/4	278	-716.32	6766.83	10.6	Pass
		Diagonal	3/4	279	-487.01	6766.83	7.2	Pass
		Diagonal	3/4	280	-502.81	6766.83	7.4	Pass
		Diagonal	3/4	281	-746.84	6766.83	11.0	Pass
		Diagonal	3/4	282	-769.43	6766.83	11.4	Pass
		Diagonal	3/4	283	-968.75	6766.83	14.3	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
		Diagonal	3/4	284	-937.39	6766.83	13.9	Pass
		Diagonal	3/4	285	-700.23	6766.83	10.3	Pass
		Diagonal	3/4	286	-715.52	6766.83	10.6	Pass
		Diagonal	3/4	287	-957.39	6766.83	14.1	Pass
		Diagonal	3/4	288	-990.40	6766.83	14.6	Pass
		Diagonal	3/4	289	-971.16	6766.83	14.4	Pass
		Diagonal	3/4	290	-943.80	6766.83	13.9	Pass
		Diagonal	3/4	291	-709.25	6766.83	10.5	Pass
		Diagonal	3/4	292	-724.94	6766.83	10.7	Pass
		Diagonal	3/4	293	-954.78	6766.83	14.1	Pass
		Diagonal	3/4	294	-983.14	6766.83	14.5	Pass
		Diagonal	3/4	295	-1040.07	6766.83	15.4	Pass
		Diagonal	3/4	296	-1011.61	6766.83	14.9	Pass
		Diagonal	3/4	297	-780.91	6766.83	11.5	Pass
		Diagonal	3/4	298	-797.35	6766.83	11.8	Pass
		Diagonal	3/4	299	-1011.93	6766.83	15.0	Pass
		Diagonal	3/4	300	-1040.61	6766.83	15.4	Pass
		Diagonal	3/4	301	-1157.92	6766.83	17.1	Pass
		Diagonal	3/4	302	-1129.12	6766.83	16.7	Pass
		Diagonal	3/4	303	-898.15	6766.83	13.3	Pass
		Diagonal	3/4	304	-912.76	6766.83	13.5	Pass
		Diagonal	3/4	305	-1118.46	6766.83	16.5	Pass
		Diagonal	3/4	306	-1149.58	6766.83	17.0	Pass
		Diagonal	3/4	307	-1037.88	6766.83	15.3	Pass
		Diagonal	3/4	308	-1013.60	6766.83	15.0	Pass
		Diagonal	3/4	309	-797.76	6766.83	11.8	Pass
		Diagonal	3/4	310	-815.37	6766.83	12.0	Pass
		Diagonal	3/4	311	-996.71	6766.83	14.7	Pass
		Diagonal	3/4	312	-1019.06	6766.83	15.1	Pass
		Diagonal	3/4	313	-1691.04	6766.83	25.0	Pass
		Diagonal	3/4	314	-1649.42	6766.83	24.4	Pass
		Diagonal	3/4	315	-1375.01	6766.83	20.3	Pass
		Diagonal	3/4	316	-1393.13	6766.83	20.6	Pass
		Diagonal	3/4	317	-1605.57	6766.83	23.7	Pass
		Diagonal	3/4	318	-1650.19	6766.83	24.4	Pass
T7	40 - 20	Diagonal	3/4	328	-616.05	6766.83	9.1	Pass
		Diagonal	3/4	329	-450.47	6766.83	6.7	Pass
		Diagonal	3/4	330	-291.63	6766.83	4.3	Pass
		Diagonal	3/4	331	-291.53	6766.83	4.3	Pass
		Diagonal	3/4	332	-581.79	6766.83	8.6	Pass
		Diagonal	3/4	333	-665.45	6766.83	9.8	Pass
		Diagonal	3/4	334	-371.67	6766.83	5.5	Pass
		Diagonal	3/4	335	-267.68	6766.83	4.0	Pass
		Diagonal	3/4	336	228.29	19880.40	1.1	Pass
		Diagonal	3/4	337	-119.79	6766.83	1.8	Pass
		Diagonal	3/4	338	-362.57	6766.83	5.4	Pass
		Diagonal	3/4	339	-412.28	6766.83	6.1	Pass
		Diagonal	3/4	340	-541.31	6766.83	8.0	Pass
		Diagonal	3/4	341	-438.45	6766.83	6.5	Pass
		Diagonal	3/4	342	-179.96	6766.83	2.7	Pass
		Diagonal	3/4	343	-260.08	6766.83	3.8	Pass
		Diagonal	3/4	344	-540.12	6766.83	8.0	Pass
		Diagonal	3/4	345	-595.53	6766.83	8.8	Pass
		Diagonal	3/4	346	-529.37	6766.83	7.8	Pass
		Diagonal	3/4	347	-444.46	6766.83	6.6	Pass
		Diagonal	3/4	348	-188.98	6766.83	2.8	Pass
		Diagonal	3/4	349	-230.57	6766.83	3.4	Pass
		Diagonal	3/4	350	-536.89	6766.83	7.9	Pass
		Diagonal	3/4	351	-576.59	6766.83	8.5	Pass
		Diagonal	3/4	352	-590.86	6766.83	8.7	Pass
		Diagonal	3/4	353	-508.61	6766.83	7.5	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
		Diagonal	3/4	354	-256.47	6766.83	3.8	Pass
		Diagonal	3/4	355	-295.15	6766.83	4.4	Pass
		Diagonal	3/4	356	-591.33	6766.83	8.7	Pass
		Diagonal	3/4	357	-632.40	6766.83	9.3	Pass
		Diagonal	3/4	358	-667.57	6766.83	9.9	Pass
		Diagonal	3/4	359	-613.68	6766.83	9.1	Pass
		Diagonal	3/4	360	-361.04	6766.83	5.3	Pass
		Diagonal	3/4	361	-374.95	6766.83	5.5	Pass
		Diagonal	3/4	362	-687.73	6766.83	10.2	Pass
		Diagonal	3/4	363	-720.49	6766.83	10.6	Pass
		Diagonal	3/4	364	-599.16	6766.83	8.9	Pass
		Diagonal	3/4	365	-532.22	6766.83	7.9	Pass
		Diagonal	3/4	366	-296.39	6766.83	4.4	Pass
		Diagonal	3/4	367	-325.12	6766.83	4.8	Pass
		Diagonal	3/4	368	-594.63	6766.83	8.8	Pass
		Diagonal	3/4	369	-626.70	6766.83	9.3	Pass
		Diagonal	3/4	370	-1052.18	6766.83	15.5	Pass
		Diagonal	3/4	371	-992.47	6766.83	14.7	Pass
		Diagonal	3/4	372	-688.22	6766.83	10.2	Pass
		Diagonal	3/4	373	-704.91	6766.83	10.4	Pass
		Diagonal	3/4	374	-1057.25	6766.83	15.6	Pass
		Diagonal	3/4	375	-1103.99	6766.83	16.3	Pass
T8	20 - 5	Diagonal	3/4	385	1088.83	19880.40	5.5	Pass
		Diagonal	3/4	386	964.15	19880.40	4.8	Pass
		Diagonal	3/4	387	1073.61	19880.40	5.4	Pass
		Diagonal	3/4	388	1125.87	19880.40	5.7	Pass
		Diagonal	3/4	389	969.51	19880.40	4.9	Pass
		Diagonal	3/4	390	909.01	19880.40	4.6	Pass
		Diagonal	3/4	391	-588.57	6777.99	8.7	Pass
		Diagonal	3/4	392	-612.15	6777.99	9.0	Pass
		Diagonal	3/4	393	-637.80	6777.99	9.4	Pass
		Diagonal	3/4	394	-617.41	6777.99	9.1	Pass
		Diagonal	3/4	395	-524.11	6777.99	7.7	Pass
		Diagonal	3/4	396	-602.43	6777.99	8.9	Pass
		Diagonal	3/4	397	-204.03	6777.99	3.0	Pass
		Diagonal	3/4	398	469.49	19880.40	2.4	Pass
		Diagonal	3/4	399	-201.35	6777.99	3.0	Pass
		Diagonal	3/4	400	497.73	19880.40	2.5	Pass
		Diagonal	3/4	401	478.95	19880.40	2.4	Pass
		Diagonal	3/4	402	-201.37	6777.99	3.0	Pass
		Diagonal	3/4	403	-453.74	6777.99	6.7	Pass
		Diagonal	3/4	404	-368.17	6777.99	5.4	Pass
		Diagonal	3/4	405	-371.79	6777.99	5.5	Pass
		Diagonal	3/4	406	-307.74	6777.99	4.5	Pass
		Diagonal	3/4	407	-345.03	6777.99	5.1	Pass
		Diagonal	3/4	408	-460.60	6777.99	6.8	Pass
		Diagonal	3/4	409	-294.66	6777.99	4.3	Pass
		Diagonal	3/4	410	410.03	19880.40	2.1	Pass
		Diagonal	3/4	411	-143.73	6777.99	2.1	Pass
		Diagonal	3/4	412	337.22	19880.40	1.7	Pass
		Diagonal	3/4	413	-204.80	6777.99	3.0	Pass
		Diagonal	3/4	414	-294.32	6777.99	4.3	Pass
		Diagonal	3/4	415	-629.70	6777.99	9.3	Pass
		Diagonal	3/4	416	-424.97	6777.99	6.3	Pass
		Diagonal	3/4	417	-352.89	6777.99	5.2	Pass
		Diagonal	3/4	418	-327.37	6777.99	4.8	Pass
		Diagonal	3/4	419	-563.76	6777.99	8.3	Pass
		Diagonal	3/4	420	-661.03	6777.99	9.8	Pass
T9	5 - 0	Diagonal	3/4	427	-3030.05	7540.43	40.2	Pass
		Diagonal	3/4	428	-3224.27	7540.43	42.8	Pass
		Diagonal	3/4	429	-3112.41	7540.43	41.3	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
		Diagonal	3/4	430	-3200.29	7540.43	42.4	Pass
		Diagonal	3/4	431	-3065.09	7540.43	40.6	Pass
		Diagonal	3/4	432	-3181.51	7540.43	42.2	Pass
		Diagonal	3/4	439	-452.18	6299.49	7.2	Pass
		Diagonal	3/4	440	-371.15	6299.49	5.9	Pass
		Diagonal	3/4	441	-382.63	6299.49	6.1	Pass
		Diagonal	3/4	442	-343.33	6299.49	5.5	Pass
		Diagonal	3/4	443	-486.88	6299.49	7.7	Pass
		Diagonal	3/4	444	-432.60	6299.49	6.9	Pass
T9	5 - 0	Horizontal	4x1/2	433	-290.49	19013.80	1.5	Pass
		Horizontal	4x1/2	434	-294.42	19013.80	1.5	Pass
		Horizontal	4x1/2	435	-296.43	19013.80	1.6	Pass
T9	5 - 0	Secondary Horizontal	3/4	436	-558.07	18827.40	3.0	Pass
		Secondary Horizontal	3/4	437	-558.07	18827.40	3.0	Pass
		Secondary Horizontal	3/4	438	-556.17	18827.40	3.0	Pass
		Secondary Horizontal	3/4	445	-558.07	8221.43	6.8	Pass
		Secondary Horizontal	3/4	446	-558.07	8221.43	6.8	Pass
		Secondary Horizontal	3/4	447	-556.17	8221.43	6.8	Pass
T1	150 - 140	Top Girt	3/4	4	-140.28	3872.77	3.6	Pass
		Top Girt	3/4	5	-147.96	3872.77	3.8	Pass
		Top Girt	3/4	6	-141.54	3872.77	3.7	Pass
T2	140 - 120	Top Girt	3/4	37	-1135.09	3872.77	29.3	Pass
		Top Girt	3/4	38	-1083.39	3872.77	28.0	Pass
		Top Girt	3/4	39	-1108.05	3872.77	28.6	Pass
T3	120 - 100	Top Girt	3/4	94	-227.40	3872.77	5.9	Pass
		Top Girt	3/4	95	-188.08	3872.77	4.9	Pass
		Top Girt	3/4	96	-264.91	3872.77	6.8	Pass
T4	100 - 80	Top Girt	3/4	151	-469.24	3918.20	12.0	Pass
		Top Girt	3/4	152	-428.84	3918.20	10.9	Pass
		Top Girt	3/4	153	-502.00	3918.20	12.8	Pass
T5	80 - 60	Top Girt	3/4	208	-557.33	3918.20	14.2	Pass
		Top Girt	3/4	209	-524.31	3918.20	13.4	Pass
		Top Girt	3/4	210	-582.31	3918.20	14.9	Pass
T6	60 - 40	Top Girt	3/4	265	-456.41	3918.20	11.6	Pass
		Top Girt	3/4	266	-451.94	3918.20	11.5	Pass
		Top Girt	3/4	267	-471.95	3918.20	12.0	Pass
T7	40 - 20	Top Girt	3/4	322	-201.71	3918.20	5.1	Pass
		Top Girt	3/4	323	-197.69	3918.20	5.0	Pass
		Top Girt	3/4	324	-216.85	3918.20	5.5	Pass
T8	20 - 5	Top Girt	3/4	379	168.63	19880.40	0.8	Pass
		Top Girt	3/4	380	173.51	19880.40	0.9	Pass
		Top Girt	3/4	381	154.10	19880.40	0.8	Pass
T1	150 - 140	Bottom Girt	3/4	7	-669.20	3872.77	17.3	Pass
		Bottom Girt	3/4	8	-664.38	3872.77	17.2	Pass
		Bottom Girt	3/4	9	-711.05	3872.77	18.4	Pass
T2	140 - 120	Bottom Girt	3/4	40	-373.60	3872.77	9.6	Pass
		Bottom Girt	3/4	41	-273.53	3872.77	7.1	Pass
		Bottom Girt	3/4	42	-342.75	3872.77	8.9	Pass
T3	120 - 100	Bottom Girt	3/4	97	-430.17	3872.77	11.1	Pass
		Bottom Girt	3/4	98	-403.49	3872.77	10.4	Pass
		Bottom Girt	3/4	99	-430.22	3872.77	11.1	Pass
T4	100 - 80	Bottom Girt	3/4	154	-725.85	3918.20	18.5	Pass
		Bottom Girt	3/4	155	-696.63	3918.20	17.8	Pass
		Bottom Girt	3/4	156	-725.86	3918.20	18.5	Pass
T5	80 - 60	Bottom Girt	3/4	211	-287.21	3918.20	7.3	Pass
		Bottom Girt	3/4	212	-286.63	3918.20	7.3	Pass
		Bottom Girt	3/4	213	-284.56	3918.20	7.3	Pass
T6	60 - 40	Bottom Girt	3/4	268	-134.99	3918.20	3.4	Pass
		Bottom Girt	3/4	269	-133.79	3918.20	3.4	Pass
		Bottom Girt	3/4	270	-133.00	3918.20	3.4	Pass
T7	40 - 20	Bottom Girt	3/4	325	192.97	19880.40	1.0	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
		Bottom Girt	3/4	326	181.63	19880.40	0.9	Pass
		Bottom Girt	3/4	327	197.95	19880.40	1.0	Pass
T8	20 - 5	Bottom Girt	3/4	382	5386.31	19880.40	27.1	Pass
		Bottom Girt	3/4	383	5346.80	19880.40	26.9	Pass
		Bottom Girt	3/4	384	5339.96	19880.40	26.9	Pass
T9	5 - 0	Bottom Girt	3/4	424	746.83	19880.40	3.8	Pass
		Bottom Girt	3/4	425	740.16	19880.40	3.7	Pass
		Bottom Girt	3/4	426	740.68	19880.40	3.7	Pass
T2	140 - 120	Guy A@138	9/16	463	13116.00	21000.00	62.5	Pass
		Guy A@138	9/16	464	12288.20	21000.00	58.5	Pass
T5	80 - 60	Guy A@70	11/16	474	12577.50	30000.00	41.9	Pass
T2	140 - 120	Guy B@138	9/16	457	12763.80	21000.00	60.8	Pass
		Guy B@138	9/16	458	13437.30	21000.00	64.0	Pass
T5	80 - 60	Guy B@70	11/16	473	13132.90	30000.00	43.8	Pass
T2	140 - 120	Guy C@138	9/16	448	13140.00	21000.00	62.6	Pass
		Guy C@138	9/16	449	13149.30	21000.00	62.6	Pass
T5	80 - 60	Guy C@70	11/16	469	12896.90	30000.00	43.0	Pass
T1	150 - 140	Top Guy Pull-Off@138	1 1/4	452	-7459.71	14642.40	50.9	Pass
		Top Guy Pull-Off@138	1 1/4	453	-7100.50	14642.40	48.5	Pass
		Top Guy Pull-Off@138	1 1/4	454	-7515.21	14642.40	51.3	Pass
T5	80 - 60	Top Guy Pull-Off@70	1 1/4	470	5123.50	55223.30	9.3	Pass
		Top Guy Pull-Off@70	1 1/4	471	4991.38	55223.30	9.0	Pass
		Top Guy Pull-Off@70	1 1/4	472	5101.40	55223.30	9.2	Pass
T2	140 - 120	Torque Arm Top@138	2L3x3x1/4	450	12658.30	93312.00	13.6 60.6 (b)	Pass
		Torque Arm Top@138	2L3x3x1/4	451	12675.30	93312.00	13.6 60.7 (b)	Pass
		Torque Arm Top@138	2L3x3x1/4	459	13043.90	93312.00	14.0 62.5 (b)	Pass
		Torque Arm Top@138	2L3x3x1/4	460	12837.90	93312.00	13.8 61.5 (b)	Pass
		Torque Arm Top@138	2L3x3x1/4	465	13732.40	93312.00	14.7 65.8 (b)	Pass
		Torque Arm Top@138	2L3x3x1/4	466	13510.40	93312.00	14.5 64.7 (b)	Pass
T2	140 - 120	Torque Arm Bottom@138	2L3x3x1/4	455	-10759.20	78196.30	13.8 39.0 (b)	Pass
		Torque Arm Bottom@138	2L3x3x1/4	456	-9579.41	78196.30	12.3 34.7 (b)	Pass
		Torque Arm Bottom@138	2L3x3x1/4	461	-10353.10	78196.30	13.2 37.5 (b)	Pass
		Torque Arm Bottom@138	2L3x3x1/4	462	-10820.70	78196.30	13.8 39.2 (b)	Pass
		Torque Arm Bottom@138	2L3x3x1/4	467	-11245.00	78196.30	14.4 40.7 (b)	Pass
		Torque Arm Bottom@138	2L3x3x1/4	468	-10569.50	78196.30	13.5 38.3 (b)	Pass
							Summary	
						Leg (T5)	33.2	Pass
						Diagonal (T2)	71.6	Pass
						Horizontal (T9)	1.6	Pass
						Secondary Horizontal	6.8	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
						(T9) Top Girt (T2)	29.3	Pass
						Bottom Girt (T8)	27.1	Pass
						Guy A (T2)	62.5	Pass
						Guy B (T2)	64.0	Pass
						Guy C (T2)	62.6	Pass
						Top Guy Pull-Off (T1)	51.3	Pass
						Torque Arm Top (T2)	65.8	Pass
						Torque Arm Bottom (T2)	40.7	Pass
						Bolt Checks	65.8	Pass
						RATING =	**71.6**	**Pass**

BASE FOUNDATION ANALYSIS

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Legend

Input | Design Check | Output

TNX Output / Max Leg Reactions

Tower Moment	M 0ft kip
Tower Axial	P 80.6kip
Tower Shear	V 0.6kip

Soil Data

Unit Weight Soil	γ 120pcf
Ultimate Gross Bearing Capacity	Q_{ult} 20ksf 2
Cohesion	Cu 0ksf
Friction Angle	ϕ 32deg
Base Friction	μ 0
Neglected Depth	N 0ft
Foundation Bearing on	Bear "Rock"
Depth to Groundwater	gw 999ft
Coefficient of Lateral Soil Pressure	$K_p \frac{1 \sin(\phi)}{1 \sin(\phi)}$ 3.255

Load Factors/Resistance Factors

Min Dead Load Factor	$\gamma_{DL.min}$ 0.9
Max Dead Load Factor	$\gamma_{DL.max}$ 1.2
Resistance Factor for Bearing on Rock/Soil	ϕ_s 0.75

Rebar Data

Redefine Origin for Programming ORIGIN 1

Rebar Size No_Bar_Size $(1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18)^T$

Rebar Diameter d_{bar} $(0\ 0\ 0.375\ 0.5\ 0.625\ 0.75\ 0.875\ 1.00\ 1.128\ 1.27\ 1.41\ 0\ 0\ 1.693\ 0\ 0\ 0\ 2.257$

Rebar Area A_{bar} $(0\ 0\ 0.11\ 0.20\ 0.31\ 0.44\ 0.60\ 0.79\ 1.00\ 1.27\ 1.56\ 0\ 0\ 2.25\ 0\ 0\ 0\ 4.00)^T$ in^2

Tower Data

Height of Tower	H 150ft
Base PL Dist to Foundation	bp_{dist} 2in

Pier Data

Dia of Pier	d_{pier} 2.5ft
Extension above Grade	E 0.5ft
Pier Rebar Size	Sc 6
Pier Rebar Quantity	mc 9
Pier Confinement Bar Size	St 4
Pier Confinement Bar Count	mt 3
Pier Confinement Type	Type "Tie"
Pier Rebar Clear Cover	cc_{pier} 3in
Number of Piers	N_{pier} 1
Position of Tower Relative to Center of Pad (1=Offset, 2=Not Offset)	Pos_{tower} 2

Pad Data

Total Depth	D 3ft
Pad Width	W 7ft
Pad Thickness	T 1.25ft
Pad Rebar Size	Sp 4
Pad Rebar Count	mp 12
Pad Rebar Clear Cover	cc_{pad} 3in

Material Properties

Rebar Yield Strength	F_y 60ksi
Concrete Comp Strength	f_c 4ksi
Concrete Density	δ_c 150pcf
Water Density	δ_w 62.4pcf
Modulus of Elasticity - Steel	E_s 29000ksi

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Global Stability

Pier Height Above Water Table $h_{pier.above} \quad \min(gw \quad D \quad T) \quad E \quad 2.25\ ft$

Pier Height Below Water Table $h_{pier.below} \quad D \quad T \quad \min(gw \quad D \quad T) \quad 0\ ft$

Bouyant Weight of Pier $W_{pier} \quad \frac{\pi}{4} d_{pier}^{2} h_{pier.above} \delta_c \quad \frac{\pi}{4} d_{pier}^{2} h_{pier.below} (\delta_c \quad \delta_w) \quad 1.657\ kip$

Pad Height Above Water Table $h_{pad.above} \quad if[gw \quad D \quad T \quad 0 \quad if[gw \quad D \quad T \quad T \quad (D \quad gw)]] \quad 1.25\ ft$

Pad Height Below Water Table $h_{pad.below} \quad T \quad h_{pad.above} \quad 0\ ft$

Bouyant Weight of Pad $W_{pad} \quad W^2 h_{pad.above} \delta_c \quad W^2 h_{pad.below} (\delta_c \quad \delta_w) \quad 9.187\ kip$

Concrete Weight $W_c \quad N_{pier} W_{pier} \quad W_{pad} \quad 10.844\ kip$

Soil Weight Above Pad $W_s \quad (D \quad T) \quad W^2 \quad N_{pier} \frac{\pi d_{pier}^{2}}{4} \quad \gamma \quad 9.259\ kip$

Lateral Resistance

Passive Pressure at Depth to Neglect $P_{pn} \quad K_p \gamma N \quad Cu \ 2\sqrt{K_p} \quad 0\ ksf$

Passive Pressure at Bottom of Pier/TOF $P_{p.TOF} \quad K_p \gamma (D \quad T) \quad Cu \ 2\sqrt{K_p} \quad 0.683\ ksf$

Passive Pressure at Bottom of Footing $P_{p.BOF} \quad K_p \gamma (D) \quad Cu \ 2\sqrt{K_p} \quad 1.172\ ksf$

Average Passive Pressure on Pier $P_{p.pier} \quad \frac{P_{pn} \quad P_{p.TOF}}{2} \quad 0.342\ ksf$

Average Passive Pressure on Pad $P_{p.pad} \quad \frac{P_{p.TOF} \quad P_{p.BOF}}{2} \quad 0.928\ ksf$

Pier Passive Resistance per Pier $P_{pr.pier} \quad \max(D \quad T \quad N \quad 0) \ d_{pier} P_{p.pier} \quad 1.495\ kip$

Pad Passive Resistance $P_{pr.pad} \quad \min(T \quad D \quad N) \ W \ P_{p.pad} \quad 8.116\ kip$

Total Passive Resistance $P_{pr.total} \quad P_{pr.pier} N_{pier} \quad P_{pr.pad} \quad 9.611\ kip$

Factored Total Weight for Compression $P_{fact.comp} \quad \gamma_{DL.min} \ W_c \quad W_s \quad \frac{P}{\gamma_{DL.max}} \quad 78.543\ kip$

Nominal Base Friction Resistance $R_{s.comp} \quad Cu \ W^2 \quad 0\ kip$

Lateral Resistance $\phi V_n \quad \phi_s (P_{pr.total} \quad R_{s.comp}) \quad 7.208\ kip$

Lateral Check $Check_{lat} \quad if(\phi V_n \quad V \quad "OK" \quad "NG") \quad "OK"$

$\frac{V}{\phi V_n} \quad 8.324\ \%$

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Overturning Resistance

Overturning Moment

$M_{o.0.9} \quad M \quad V\left(D \quad E \quad bp_{dist}\right) \quad 2\ \text{ft kip}$

$M_{o.1.2} \quad M \quad V\left(D \quad E \quad bp_{dist}\right) \quad 2\ \text{ft kip}$

Axial Load

$P_{0.9} \quad \gamma_{DL.min} \quad W_c \quad W_s \quad \frac{P}{\gamma_{DL.max}} \quad 78.543\ \text{kip}$

$P_{1.2} \quad \gamma_{DL.max}\left(W_c \quad W_s\right) \quad P \quad 104.724\ \text{kip}$

Eccentricity

$e_{0.9} \quad \frac{M_{o.0.9}}{P_{0.9}} \quad 0.028\ \text{ft} \qquad e_{1.2} \quad \frac{M_{o.1.2}}{P_{1.2}} \quad 0.021\ \text{ft}$

Eccentricity Limit [9.4.1]

$e_{limit} \quad 0.45\ W \quad 3.15\ \text{ft}$

Eccentricity Check

$\text{Check}_e \quad \text{if}\left(\max\left(e_{0.9} \quad e_{1.2}\right) \quad e_{limit} \quad \text{"OK"} \quad \text{"NG"}\right) \quad \text{"OK"}$

$\frac{\max\left(e_{0.9} \quad e_{1.2}\right)}{e_{limit}} \quad 0.889\ \%$

Bearing Pressure

Area of Pad

$A_{pad} \quad W^2 \quad 49\ \text{ft}^2$

Section Modulus of Pad

$S_{pad} \quad \frac{W^3}{6} \quad 57.167\ \text{ft}^3$

Max Pressure (Min Load Factor)

$P_{max.0.9} \quad \frac{P_{0.9}}{A_{pad}} \quad \frac{M_{o.0.9}}{S_{pad}} \quad 1.641\ \text{ksf}$

Min Pressure (Min Load Factor)

$P_{min.0.9} \quad \frac{P_{0.9}}{A_{pad}} \quad \frac{M_{o.0.9}}{S_{pad}} \quad 1.564\ \text{ksf}$

Adjusted Max Pressure

$P_{adj.0.9} \quad \frac{2\ P_{0.9}}{3\ W \quad \frac{W}{2} \quad e_{0.9}} \quad 2.154\ \text{ksf}$

Note: Applicable only if $P_{min} < 0$

Max Pressure (Max Load Factor) $P_{max.1.2} \quad \frac{P_{1.2}}{A_{pad}} \quad \frac{M_{o.1.2}}{S_{pad}} \quad 2.176 \text{ ksf}$

Min Pressure (Max Load Factor) $P_{min.1.2} \quad \frac{P_{1.2}}{A_{pad}} \quad \frac{M_{o.1.2}}{S_{pad}} \quad 2.099 \text{ ksf}$

Adjusted Max Pressure $P_{adj.1.2} \quad \frac{2\ P_{1.2}}{3\ W \quad \frac{W}{2} \quad e_{1.2}} \quad 2.867 \text{ ksf}$ Note: Applicable only if $P_{min} < 0$

Maximum Pressure $q_{u.0.9} \quad if\left(P_{min.0.9} \quad 0 \quad P_{adj.0.9} \quad P_{max.0.9}\right) \quad 1.641 \text{ ksf}$

$q_{u.1.2} \quad if\left(P_{min.1.2} \quad 0 \quad P_{adj.1.2} \quad P_{max.1.2}\right) \quad 2.176 \text{ ksf}$

$q_u \quad max\left(q_{u.0.9} \quad q_{u.1.2}\right) \quad 2.176 \text{ ksf}$

Bearing Capacity $q_n \quad \phi_s \ Q_{ult} \quad 30 \text{ ksf}$

Bearing Capacity Check $Check_{bp} \quad if\left(q_u \quad q_n \quad \text{"OK"} \quad \text{"NG"}\right) \quad \text{"OK"}$ $\frac{q_u}{q_n} \quad 7.252\ \%$

Pad Design

One-Way Shear

Effective Depth $d_c \quad T \quad cc_{pad} \quad 1.5\ d_{bar_{Sp}} \quad 11.25 \text{ in}$

Dist Edge of Pad to Column Face $d' \quad \frac{W}{2} \quad \frac{d_{pier}}{2} \quad 2.25 \text{ ft}$

Dist Edge of Pad to dc from Col Face $d'' \quad d' \quad d_c \quad 1.312 \text{ ft}$

Distance to qs $L'_{0.9} \quad \frac{W}{2} \quad e_{0.9} \quad 3 \quad 10.416 \text{ ft}$

$L'_{1.2} \quad \frac{W}{2} \quad e_{1.2} \quad 3 \quad 10.437 \text{ ft}$

Slope of qs $sq_{s.0.9} \quad if \ L'_{0.9} \quad W \quad \frac{P_{max.0.9} \quad P_{min.0.9}}{W} \quad \frac{q_{u.0.9}}{L'_{0.9}} \quad 0.011 \ \frac{ksf}{ft}$

$sq_{s.1.2} \quad if \ L'_{1.2} \quad W \quad \frac{P_{max.1.2} \quad P_{min.1.2}}{W} \quad \frac{q_{u.1.2}}{L'_{1.2}} \quad 0.011 \ \frac{ksf}{ft}$

Bearing Pressure at d" $q_{u.d''.0.9} \quad q_{u.0.9} \quad d'' \ sq_{s.0.9} \quad 1.627 \text{ ksf}$

$q_{u.d''.1.2} \quad q_{u.1.2} \quad d'' \ sq_{s.1.2} \quad 2.161 \text{ ksf}$

$V_{n1} \quad 2\ W\ \sqrt{f_c\ psi}\ d_c \quad 119.534\ kip$

Resistance Factor - Shear

$\phi_v \quad 0.75$

Design Shear Strength

$\phi V_{n1} \quad \phi_v\ V_{n1} \quad 89.651\ kip$

Applied Shear

$$V_{u1.0.9} \quad \frac{W\ d''\ q_{u.0.9}\ q_{u.d''.0.9}\ \frac{W_s}{W^2}}{2} \quad 14.146\ kip$$

$$V_{u1.1.2} \quad \frac{W\ d''\ q_{u.1.2}\ q_{u.d''.1.2}\ \frac{W_s}{W^2}}{2} \quad 19.055\ kip$$

Check

$Check_{V1} \quad if\left(max\left(V_{u1.0.9}\ V_{u1.1.2}\right)\ \phi V_{n1}\ "OK"\ "NG"\right) \quad "OK"$

$$\frac{max\left(V_{u1.0.9}\ V_{u1.1.2}\right)}{\phi V_{n1}} \quad 21.255\ \%$$

Two-Way Shear (Compression)

Average Effective Depth

$d_{c.2} \quad T \quad cc_{pad} \quad d_{bar_{Sp}} \quad 11.5\ in$

Radius of Two-Way Shear Plane

$r_{2way} \quad 0.5\ \left(d_{pier} \quad d_{c.2}\right) \quad 1.729\ ft$

Length to Edge of Pad from Pier Centroid

$L_{edge.2} \quad \frac{W}{2} \quad 3.5\ ft$

Critical Perimeter

$P_{crit.cir} \quad \left(d_{pier} \quad d_{c.2}\right)\ \pi \quad 130.376\ in$

Area of Conc in Shear

$A_c \quad P_{crit.cir}\ d_{c.2} \quad 1499.325\ in^2$

Polar Moment if Inertia of Critical Section

$$J_{c.cir} \quad \frac{\pi\ \left(d_{pier} \quad d_{c.2}\right)^4}{32} \quad 291200.611\ in^4$$

Applied Share Force

$V_{u.1.2} \quad 1.2\ W_{pier} \quad P \quad 82.588\ kip$

Total Moment to Pier

$M_{u.comp} \quad V\ \left(D \quad E \quad bp_{dist} \quad T\right) \quad 1.45\ ft\ kip$

Controlling Shear Stress

$$v_{u.1.2} \quad \frac{V_{u.1.2}}{A_c} \quad 0.4\ M_{u.comp}\ \frac{\frac{d_{pier} \quad d_{c.2}}{2}}{J_{c.cir}} \quad 0.056\ ksi$$

Shear Stress Capacity

$\phi v_n \quad \phi_s\ 4\ \sqrt{f_c\ psi} \quad 189.737\ psi$

Two-Way Shear Check

$Check_{v2.comp} \quad if\left(v_{u.1.2} \quad \phi v_n\ "OK"\ "NG"\right) \quad "OK"$

$$\frac{v_{u.1.2}}{\phi v_n} \quad 29.293\ \%$$

Two-Way Shear (Compression, Flexure)

Distance to Outside Edge

$dist_{outside} \quad \frac{W}{2} \quad 3.5\,ft$

Effective Pad Width

$b_{pad} \quad min\left(d_{pier} \quad 3\,T \quad W \quad dist_{outside}\right) \quad 3.5\,ft$

Bar Spacing in Pad

$B_{s.pad} \quad \frac{W \quad 2\,cc_{pad} \quad d_{bar_{Sp}}}{mp \quad 1} \quad 7.045\,in$

Fraction of Bars in Effective Width

$m_{eff} \quad if\ b_{pad} = W \quad mp \quad \frac{b_{pad}}{B_{s.pad}} \quad 5.961$

Area of Steel in Effective Width

$A_{s.eff} \quad m_{eff}\,A_{bar_{Sp}} \quad 1.192\,in^2$

Depth of Equivalent Rectangular Stress Block

$a_{eff} \quad \frac{A_{s.eff}\,F_y}{0.85\,f_c\,b_{pad}} \quad 0.501\,in$

$\beta_{pad} \quad if\ f_c \quad 4ksi \quad 0.85 \quad if\ f_c \quad 8ksi \quad 0.65 \quad 0.85 \quad \frac{f_c}{ksi} \quad 4 \quad 0.05 \quad 0.85$

Dist from Top to Neutral Axis

$c_{eff} \quad \frac{a_{eff}}{\beta_{pad}} \quad 0.589\,in$

Strain in Steel

$\varepsilon_{s.eff} \quad 0.003 \quad \frac{d_c \quad c_{eff}}{c_{eff}} \quad 0.054\,\frac{in}{in}$

Compression-Controlled Strain Limit

$\varepsilon_c \quad \frac{F_y}{E_s} \quad 2.069 \quad 10^{-3}\,\frac{in}{in}$

Resistance Factor

$\phi_{flex.eff} \quad if\ \varepsilon_{s.eff} \quad 0.005 \quad 0.9 \quad if\ \varepsilon_{s.eff} \quad \varepsilon_c \quad 0.65 \quad 0.65 \quad (0.9 \quad 0.65)\,\frac{\left(\varepsilon_{s.eff} \quad \varepsilon_c\right)}{\left(0.005 \quad \varepsilon_c\right)} \quad 0.9$

Nominal Flexural Strength

$M_{n.eff} \quad A_{s.eff}\,F_y \quad d_c \quad \frac{a_{eff}}{2} \quad 65.571\,ft\,kip$

Design Flexural Strength

$\phi M_{n.eff} \quad \phi_{flex.eff}\,M_{n.eff} \quad 59.014\,ft\,kip$

$\frac{0.6M_{u.comp}}{\phi M_{n.eff}^{\ 2}} \quad 0.737\,\%$

Since top and bottom reinforcement in pad is the same, the total moment capacity will be 2x.

Two-Way Shear Check

$Check_{v2.comp.flex} \quad if\left(0.6M_{u.comp} \quad \phi M_{n.eff}^{\ 2} \quad "OK" \quad "NG"\right) \quad "OK"$

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Pad Flexure

Area of Steel in Pad

$A_{s.pad} \quad A_{bar_{Sp}} \cdot mp \quad 2.4\ in^2$

Depth to Equivalent Stress Block

$a_{pad} \quad \frac{A_{s.pad} \cdot F_y}{0.85 \cdot f_c \cdot W} \quad 0.504\ in$

Dist from Top to Neutral Axis

$c_{pad} \quad \frac{a_{pad}}{\beta_{pad}} \quad 0.593\ in$

Strain in Steel

$\varepsilon_s \quad 0.003 \cdot \frac{d_c - c_{pad}}{c_{pad}} \quad 0.054\ \frac{in}{in}$

Resistance Factor

$\phi_{flex.pad} \quad \text{if } \varepsilon_s \geq 0.005,\ 0.9,\ \text{if } \varepsilon_s \leq \varepsilon_c,\ 0.65,\ 0.65 + (0.9 - 0.65) \cdot \frac{(\varepsilon_s - \varepsilon_c)}{(0.005 - \varepsilon_c)} \quad 0.9$

Nominal Flexural Strength

$M_n \quad A_{s.pad} \cdot F_y \cdot \left(d_c - \frac{a_{pad}}{2}\right) \quad 131.975\ ft\ kip$

Design Flexural Strength

$\phi M_n \quad \phi_{flex.pad} \cdot M_n \quad 118.777\ ft\ kip$

Bearing Pressure at Critical Section

$qmid_{0.9} \quad q_{u.0.9} - sq_{s.0.9} \cdot d' \quad 1.617\ ksf$

$qmid_{1.2} \quad q_{u.1.2} - sq_{s.1.2} \cdot d' \quad 2.151\ ksf$

Factored Bending Moment

$M_{u.pad.0.9} \quad \frac{qmid_{0.9} \cdot d'^2}{2} + \frac{(q_{u.0.9} - qmid_{0.9}) \cdot d'^2}{3} \cdot W \quad 28.937\ ft\ kip$

$M_{u.pad.1.2} \quad \frac{qmid_{1.2} \cdot d'^2}{2} + \frac{(q_{u.1.2} - qmid_{1.2}) \cdot d'^2}{3} \cdot W \quad 38.405\ ft\ kip$

Check

$Check_{Mu.pad} \quad \text{if}(\max(M_{u.pad.0.9}, M_{u.pad.1.2}) \leq \phi M_n, \text{"OK"}, \text{"NG"}) \quad \text{"OK"}$

$\frac{\max(M_{u.pad.0.9}, M_{u.pad.1.2})}{\phi M_n} \quad 32.333\ \%$

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Pier Design

Compute Axial Loads to Pier

$P_{pier.c.1.2} := 1 \left(P \quad \gamma_{DL.max} \, W_{pier} \right) = 82.588 \text{ kip}$

$P_{pier.c.0.9} := 1 \quad P \, \frac{\gamma_{DL.min}}{\gamma_{DL.max}} \quad 0.9 \, W_{pier} = 61.941 \text{ kip}$

Compute Moments to Base of Pier (Passive resistance of soil neglected due to movement required to develop resistance)

$M_{pier.c} := \left(D \quad T \quad E \quad bp_{dist} \right) V = 1.45 \text{ ft kip}$

Format Data for Graphing

$P_{pier} := \begin{matrix} P_{pier.c.1.2} \\ P_{pier.c.0.9} \\ 0 \text{ kip} \\ 0 \text{ kip} \end{matrix}$ $M_{pier} := \begin{matrix} M_{pier.c} \\ M_{pier.c} \\ 0 \text{ ft kip} \\ 0 \text{ ft kip} \end{matrix}$

CSiBridge Version 22.0 has been utilized to compute PM-curves for the pier in accordance with ACI 318-14. The following inputs were used:

Pier Diameter $d_{pier} := 30 \text{ in}$

Pier Rebar Size $Sc := 6$

No of Pier Rebar $mc := 9$

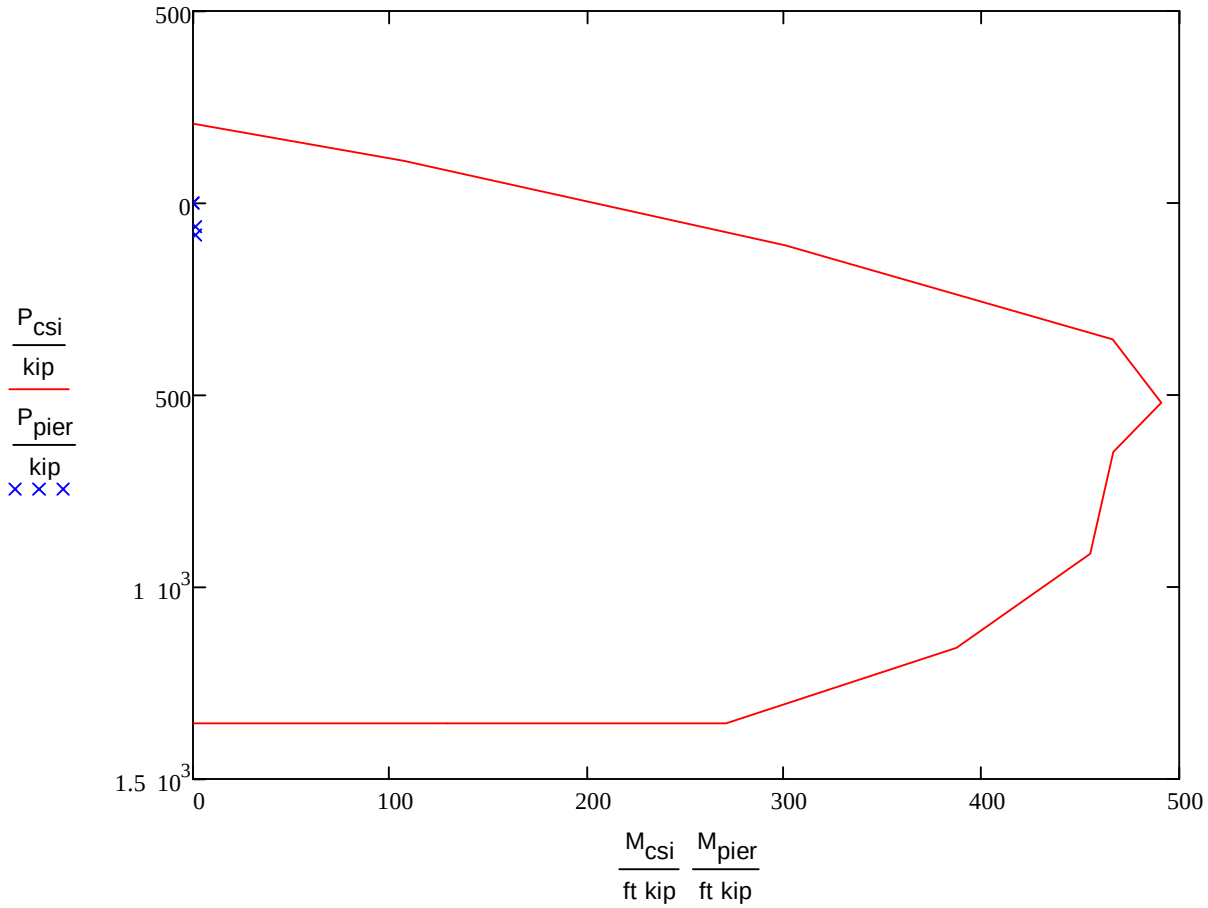
Dist to Center of Pier Rebar $cc_{pier} := d_{bar_{St}} \quad 0.5 \, d_{bar_{Sc}} = 3.875 \text{ in}$

Concrete Compressive Strength $f_c := 4000 \text{ psi}$

P-M Curve Data from CSiBridge

Note: Negative P is compression and Positive P is tension

P_{csi}		M_{csi}	
	1354174		0
	1354174		1547286
	1354174		3244797
	1157806		4645010
	912780		5459357
lbf	647558	in lbf	5600744
	519727		5892890
	355628		5593123
	110425		3603132
	109765		1279592
	206766		0



As shown graphically, the plotted axial and moments applied to the pier are within the graphed capacity, therefore the pier is structurally adequate for the applied loading.

Rebar Detail Checks

Minimum Longitudinal Rebar in Pier $A_{st.c} \quad \frac{\pi}{4} d_{pier}^{2} \; 0.005 \quad 3.534 \; in^2$

Longitduinal Rebar in Pier $A_{s.pier} \quad A_{bar_{Sc}} \; mc \quad 3.96 \; in^2$

Check $check_{min.pier} \quad if\left(A_{st.c} \quad A_{s.pier} \; "OK" \; "NG"\right) \quad "OK"$

Diameter of Long Rebar Cage $d_{cage} \quad d_{pier} \quad 2 \quad cc_{pier} \quad d_{bar_{St}} \quad d_{bar_{Sc}} \quad 1.854 \; ft$

Max Longitudinal Bar Spacing in Pier $B_{s.pier} \quad \frac{d_{cage} \; \pi}{mc} \quad d_{bar_{Sc}} \quad 7.017 \; in$

Check $check_{max.spa.pier} \quad if\left(B_{s.pier} \quad 18in \; "OK" \; "NG"\right) \quad "OK"$

Minimum Transverse Pier Bar Size $s_{t.min} \quad if(Sc \quad 10 \; 3 \; 4) \quad 3$

Check $check_{trans.pier.size} \quad if\left(s_{t.min} \quad St \; "OK" \; "NG"\right) \quad "OK"$

Max Transverse Pier Bar Spacing $B_{s.t.max1} \quad \frac{8}{0.5} d_{bar_{Sc}} \quad 12 \; in$

$B_{s.t.max2} \quad \frac{24}{0.5} d_{bar_{St}} \quad 24 \; in$

Transverse Bar Spacing $B_{s.t} \quad \frac{D \quad T \quad E \quad 2 \; cc_{pier}}{mt \quad 1} \quad 10.5 \; in$

Check $check_{trans.pier.pa} \quad if\left(B_{s.t} \quad min\left(B_{s.t.max1} \quad B_{s.t.max2}\right) \; "OK" \; "NG"\right) \quad "OK"$

Min Rebar Density for Shrinkage $\rho_{sh} \quad if\left(F_y \quad 60ksi \; 0.0018 \; 0.002\right) \quad 0.0018$

Min Temp/Shrink Rebar in Pad $A_{st.p.sh} \quad \rho_{sh} \; W \; T \quad 2.268 \; in^2$

Area of Steel Provided $A_{s.p} \quad A_{bar_{Sp}} \; mp \quad 2.4 \; in^2$

Check $check_{shrink.pad} \quad if\left(A_{st.p.sh} \quad A_{s.p} \; "OK" \; "NG"\right) \quad "OK"$

ANCHORAGE ANALYSIS

JOB TITLE Guy Rock Anchor Analysis - TIA-H - 150' Guyed Bolton

JOB NO. VZ5-227 CALCULATION NO. _____ ORIGINATOR K.Barker DATE 05/06/2021

SHEET _____ OF _____ REVIEWER _____ DATE _____

Legend

Input | Design Check | Output

TNX Output / Max Reactions to Anchors

Note: Tower was designed to be extendable to 300' utilizing one set of guy anchorages.

Shear	Shear 29kip
Uplift	Uplift 18kip

Rock Anchor Properties

Number of Anchors	N_{anchor} 2
Hole Diameter	$hole_d$ 3in
Anchor Length	L_{anchor} 39ft
Bonded Length	L_{bond} 29ft
Ultimate Bond Stress Between Rock and Grout	γ_{bond} 50psi
Rock Anchor Ultimate Strength	F_u 150ksi
Rock Anchor Yield Strength	F_y 127.7ksi
Rock Anchor Diameter	d_{ra} 1.375in
Threads per Inch	n 6
Friction Between Rock and Conc	ϕ 0.75
Resistance Factor for Pullout on Rock/Soil	μ_s 0.55
Unit Weight of Rock	δ 170pcf

JOB TITLE Guy Rock Anchor Analysis - TIA-H - 150' Guyed Bolton

JOB NO. VZ5-227 CALCULATION NO. _____ ORIGINATOR K.Barker DATE 05/06/2021

SHEET _____ OF _____ REVIEWER _____ DATE _____

Rock Anchor Steel Tension/Shear Check

Net Area of Bolt $A_n \quad \frac{\pi}{4} \quad d_{ra} \quad \frac{0.9743\,in}{n}^2 \quad 1.155\ in^2$

Max Direct Tensile Demand per Anchor $T_{max} \quad \frac{Uplift}{N_{anchor}} \quad 9\ kip$

Max Shear Demand per Anchor $V_{max} \quad \frac{Shear}{N_{anchor}} \quad 14.5\ kip$

Total Tensile Demand per Anchor $T_{anchor} \quad T_{max} \quad \frac{V_{max}}{\phi} \quad 28.333\ kip$

Design Tensile Capacity $\mu R_{nt} \quad 0.8\ F_u\ A_n \quad 138.586\ kip$

Tensile Check $Check_{tens} \quad if(\mu R_{nt} \quad T_{anchor} \quad "OK" \quad "NG") \quad "OK"$

$\frac{T_{anchor}}{\mu R_{nt}} \quad 20.4\ \%$

Rock Anchor Bond to Rock Check

Required Bond Length $L_{bond.req} \quad \frac{T_{anchor}}{0.5\ \pi\ hole_d\ \gamma_{bond}} \quad 10.021\ ft$

Bond Length Check $Check_{bond} \quad if(L_{bond} \quad L_{bond.req} \quad "OK" \quad "NG") \quad "OK"$

$\frac{L_{bond.req}}{L_{bond}} \quad 34.6\ \%$

Rock Cone Failure Check

Nominal Rock Failure Cone Resistance $R_{s.up.cone} \quad \frac{(L_{anchor})\ \tan(30deg)^2\ \pi\ \frac{L_{anchor}}{3}\ \delta}{N_{anchor}} \quad 1760\ kip$

Note: Conservatively neglect soil above rock and space between anchors.

Design Rock Failure Cone Resistance $\mu R_{s.up.cone} \quad \mu_s\ R_{s.up.cone} \quad 968\ kip$

Rock Cone Failure Check $Check_{cone} \quad if(\mu R_{s.up.cone} \quad T_{max} \quad "OK" \quad "NG") \quad "OK"$

$\frac{T_{max}}{\mu R_{s.up.cone}} \quad 0.9\ \%$

About AECOM

AECOM (NYSE: ACM) is a global provider of professional technical and management support services to a broad range of markets, including transportation, facilities, environmental, energy, water and government. With approximately 45,000 employees around the world, AECOM is a leader in all of the key markets that it serves. AECOM provides a blend of global reach, local knowledge, innovation, and collaborative technical excellence in delivering solutions that enhance and sustain the world's built, natural, and social environments. A Fortune 500 company, AECOM serves clients in more than 100 countries and has annual revenue in excess of $6 billion.

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Antenna Mount Analysis Report and PMI Requirements

Mount Analysis

SMART Tool Project #: 10090271
Maser Consulting Connecticut Project #: 21781125A

August 23, 2021

Site Information	*Site ID:*	*467254-VZW / BOLTON CT*
	Site Name:	*BOLTON CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*130 Vernon Rd.* *Vernon Rockville, Connecticut 06066* *Tolland County*
	Latitude:	*41.802778°*
	Longitude:	*-72.441111°*
Structure Information	*Tower Type:*	*150-ft Guyed*
	Mount Type:	*14.50-ft Sector Frame*

FUZE ID # 16244102

Analysis Results

Sector Frame: **39.6% Pass**

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

Report Prepared By: Erin Towler

Executive Summary:

The objective of this report is to determine the capacity of the antenna support mount at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

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: 323456, dated March 27, 2021*
Desktop Mount Mapping	*Colliers Engineering & Design, Project #: 21781125A, dated July 26, 2021*
Mount Specification Drawings	*CommScope Inc., SFG22 Series Drawing*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	118 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:	0.971
Seismic Parameters:	S_S:	0.187
	S_1:	0.055
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Live Load, Lv:	250 lbs.
	Maintenance Live Load, Lm:	500 lbs.
Analysis Software:	RISA-3D (V17)	

Final Loading Configuration:

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
121.00	121.00	1	Raycap	RVZDC-6627-PF-48	Added
		2	Samsung	XXDWMM-12.5-65-8T-CBRS	
		4	Commscope	NHH-65B-R2B	
		2	Samsung	MT6407-77A	
		2	Samsung	B2/B66A RRH-BR049	
		2	Samsung	B5/B13 RRH-BR04C	

Any proposed antennas not currently installed should be mounted such that the centerline of the antennas does not exceed 6 inches vertically from the center of the antenna mounts.

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

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

Standard Conditions:

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

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

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

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

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

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

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

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

Analysis Results:

Component	Utilization %	Pass/Fail
Face Horizontal	32.3 %	Pass
Standoff Horizontal	11.5 %	Pass
Standoff Vertical	16.9 %	Pass
Standoff Diagonal	9.8 %	Pass
Mast Pipe	15.6 %	Pass
Standoff Plate	27.9 %	Pass
Tieback	6.4 %	Pass
Antenna Pipe	36.7 %	Pass
Mount Connection	39.6 %	Pass

Structure Rating – *(Controlling Utilization of all Components)*	**39.6%**

Recommendation:

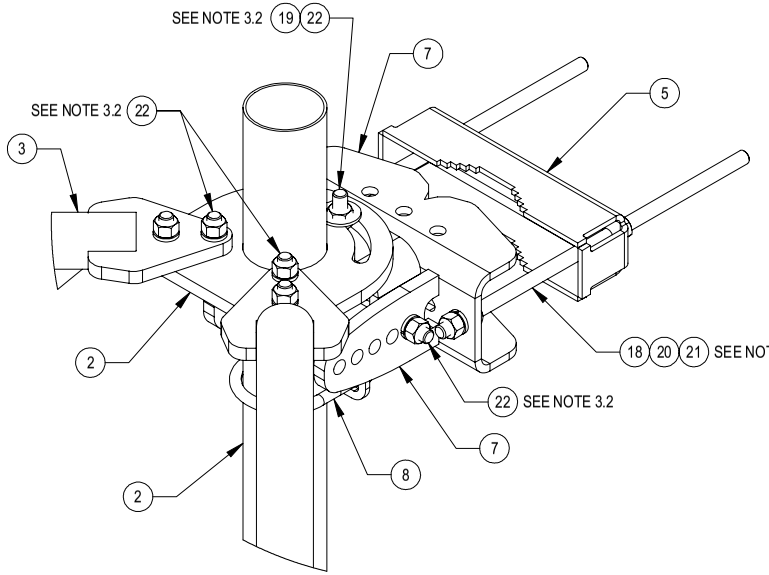
The existing mounts are **SUFFICIENT** for the final loading configuration and do not require modifications.

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.

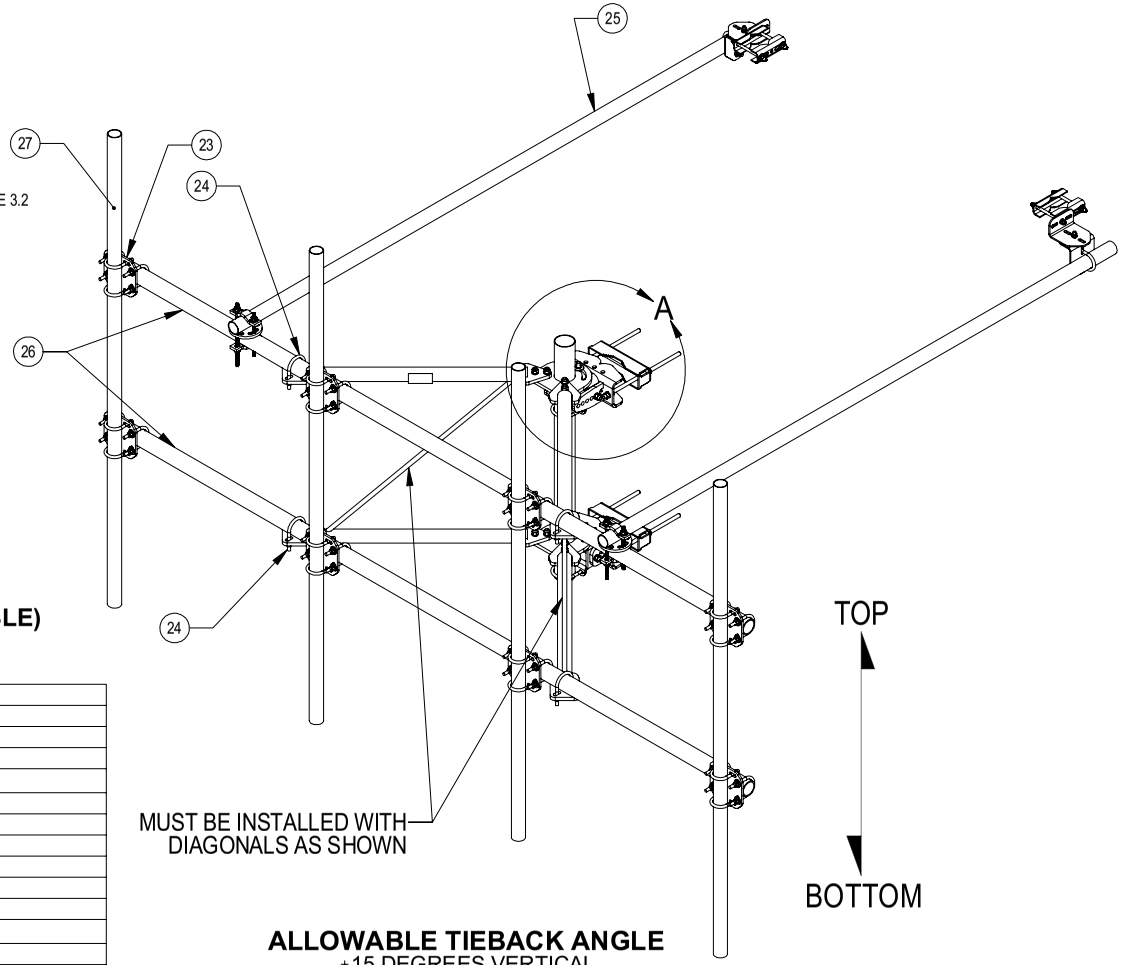
Attachments:

1. Mount Spec Drawings
2. Desktop Mount Mapping (for reference only)
3. Analysis Calculations
4. **Contractor Required Post Installation Inspection (PMI) Report Deliverables**
5. Antenna Placement Diagrams
6. TIA Adoption and Wind Speed Usage Letter

NOTES:



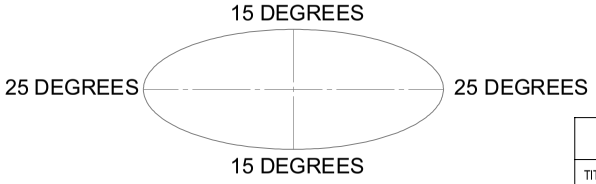
DETAIL A
SCALE 1 : 4



SFG22HD-12-4-96 SHOWN FOR REFERENCE
(NOT ALL CONFIGURATIONS INCLUDE ALL ITEMS SEE NOTES IN TABLE)

ITEM	PART NO.	DESCRIPTION	QTY.	NOTE NO.
1	SFG2237	WELDMENT, AZIMUTH/TAPER BRACKET	2	
2	SFG2270	BACK VERTICAL ARM MOUNT	1	
3	SFG2278	ARM, STANDOFF - SFG22	2	
4	SFG2250	LABEL, SFG22	1	
5	SFG2283	BACK TOWER LEG CLAMP	2	
6	SFG2343	WELDMENT, LOWER, TOWER LEG BRACKET	1	
7	SFG2345	WELDMENT, TOP TAPER BRACKET	1	
8	GUB-4355	1/2" X 3-5/8" X 5" GALV U-BOLT	2	
9	XAU01	ANGLE, CROSSOVER, 1.9-3.5" X 1.9-3.5" OD	4	
10	GUB-4240	1/2" X 2-1/2" X 4" GALV U-BOLT	2	
11	XP-R	CROSSOVER PLATE, ROUND, UP TO 3.5" OD	2	
12	SAB01	FORMED CLAMP	4	
13	MT-379-8	1/2" X 8" GALV THREADED ROD	4	
14	GWF-04	1/2" GALV FLAT WASHER	8	
15	GWL-04	1/2" GALV LOCK WASHER	10	
16	GN-04	1/2" GALV HEX NUT	10	
17	GB-04145	1/2" X 1-1/2" GALV BOLT KIT	2	
18	MT-382-18	5/8" X 18" GALV THREADED ROD	4	
19	GWF-05	5/8" GALV FLAT WASHER, 1.7OD	2	
20	GWL-05	5/8" GALV LOCK WASHER	8	
21	GN-05	5/8" GALV HEX NUT	12	
22	GB-05225	5/8" X 2-1/4" GALV BOLT KIT	14	
23	XP-2025	CROSSOVER PLATE KIT, 2-3/8 OD X 2-7/8 OD	8	
24	GUB-4352	1/2" X 3" X 5-1/4" GALV U-BOLT	4	
25	MT-651-120	2.375" OD X 120" PIPE	2	TIEBACK PIPE
26	MT-546-150	2-7/8" OD x 150" GALV PIPE	2	FOR 10' FACE PIPE USE MT-546-126; FOR 14' FACE PIPE USE MT-546-174
27	MT-651-96	∅2.375" OD X 96" PIPE	4	FOR 10' ANTENNA PIPE USE MT-537 (HDX USE MT546126120 FOR 126" & MT54696120 FOR 96"); NOT INCLUDED IN BASE KITS

ALLOWABLE TIEBACK ANGLE
±15 DEGREES VERTICAL
±25 DEGREES HORIZONTAL



PATENT PENDING

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COMMSCOPE, INC. OF NORTH CAROLINA

TITLE: SFG22HD SECTOR FRAME SERIES

SIZE	SCALE	DOCUMENT NO.			
C	1:14	SFG22HD			
		DRAWING			SHEET
		VERSION	STATUS	REVISION	
		04	CE		2 OF 7

Colliers Engineering & Design

Desktop Mount Mapping Form

Site Name:	BOLTON CT	**Tower Type:**	Guyed Tower
Site ID:	467254	**Tower Owner:**	Other
FUZE Project ID:	16244102	**Tower Height (Ft.):**	150
Customer:	Verizon Wireless	**Mount Elevation (Ft.):**	120
Colliers Project No.	21781125A	**Date:**	7/26/2021

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Document Type	Provided? (Yes/No)	Source Name	Project No.	Dated	Comments/Remarks
Previous Mount Mapping	No				
Previous Mapping Photos	No				
Previous Mount Analysis	No				
Previous Mount Modifications	No				
Previous Structural Analysis	Yes	VZ5-227 - 150' Guyed Bolton 0512202		5/10/2021	Use (2) Commscope SFG22 Mounts
Construction Drawings	Yes	Bolton CT VZ5-227 DE Rev0 05272021		5/27/2021	General placement location
Closeout Package	No				
Closeout Photos	No				
Handover Package	No				
New Build 445 Documentation	No				
Other	Yes	130 Vernon Road Bolton CT 05122021		4/15/2021	Shows the location of the new tower, this is a new mount on an adjacent tower
Previous PMI	No				

The desktop mount mapping is based on the engineering review of the available site documents in FUZE, as listed above, in place of a full mount mapping. It is assumed that the information provided in the documents listed above, provide an accurate representation of the existing mount. EOR reserves the right and will typically require additional clarification and verification as will be included in the PMI requirements. During the Post Modification Inspection (PMI) process, the GC on site will be required to confirm all questions, confirmations, and validations as posed by the EOR. The engineering review for this desktop mount mapping was performed in accordance to the ANSI/TIA-222-H requirements and Verizon's NSTD446 standard.

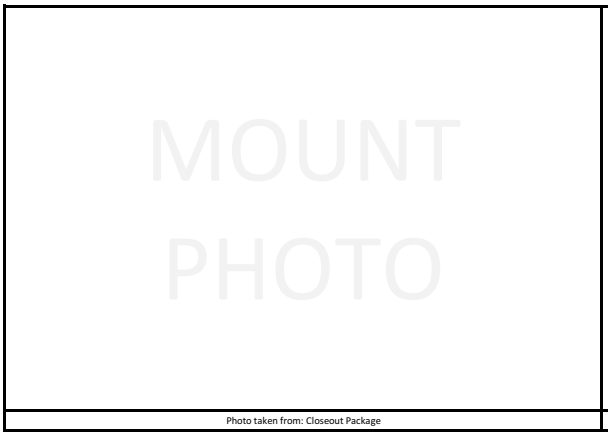


Photo taken from: Closeout Package

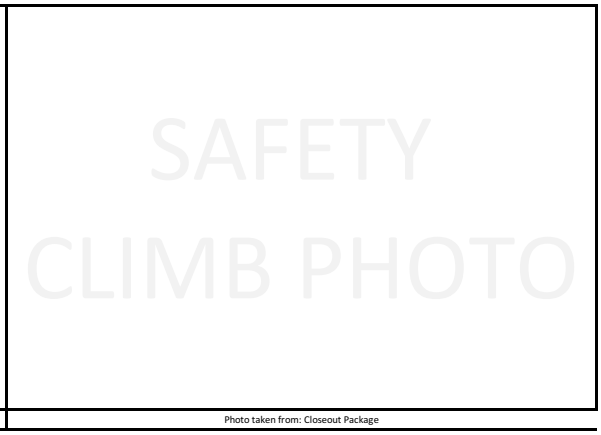
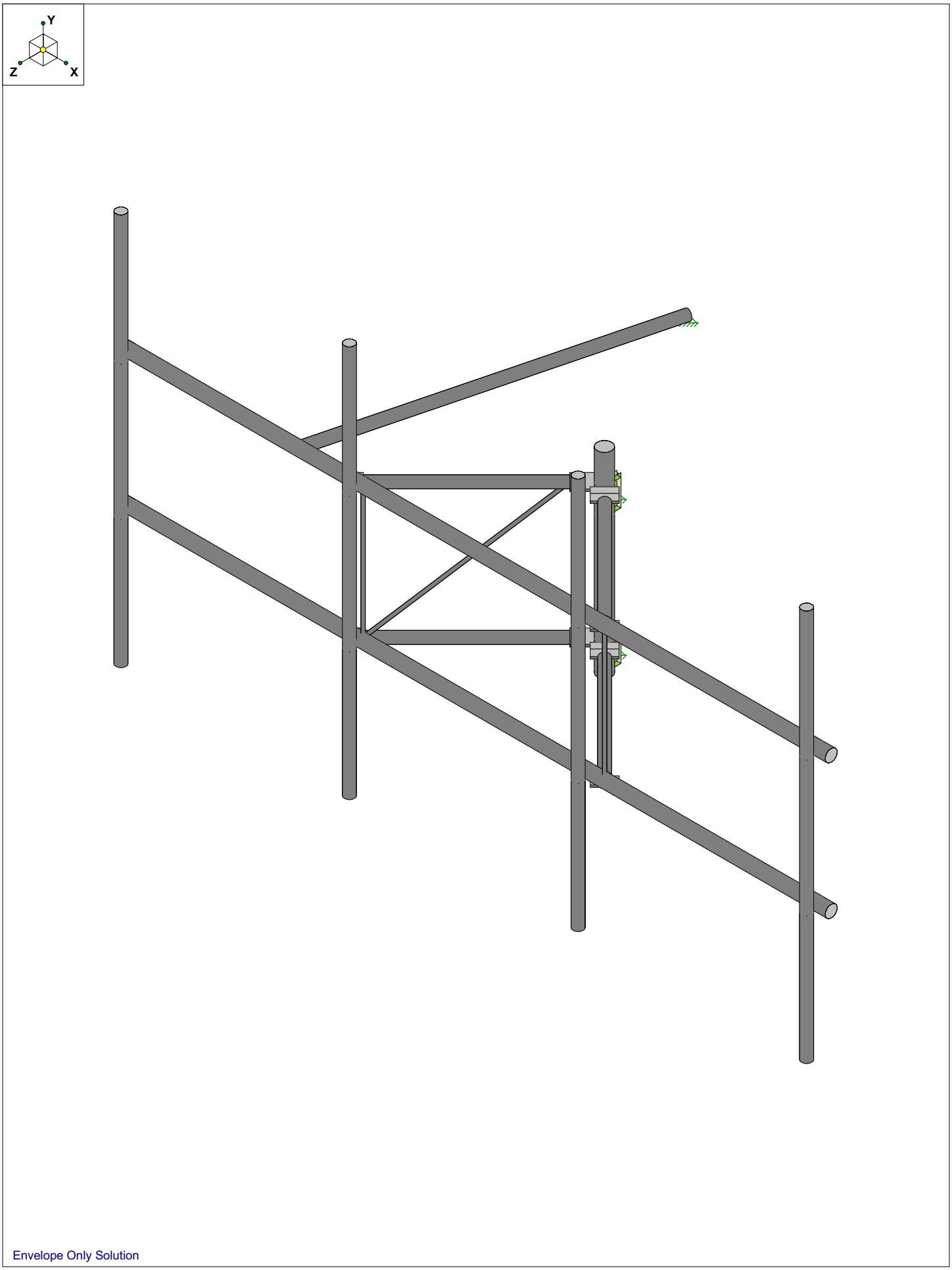
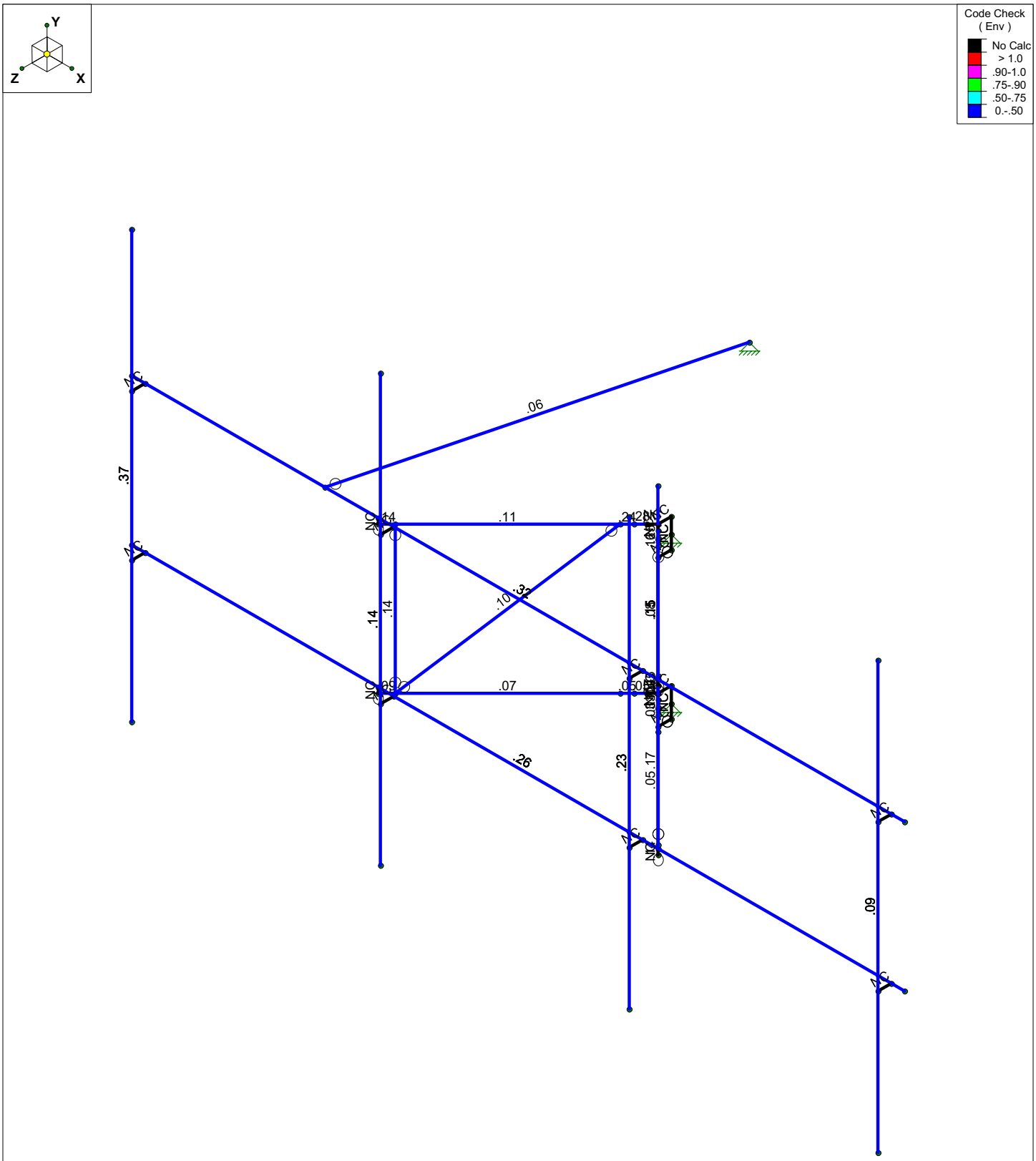


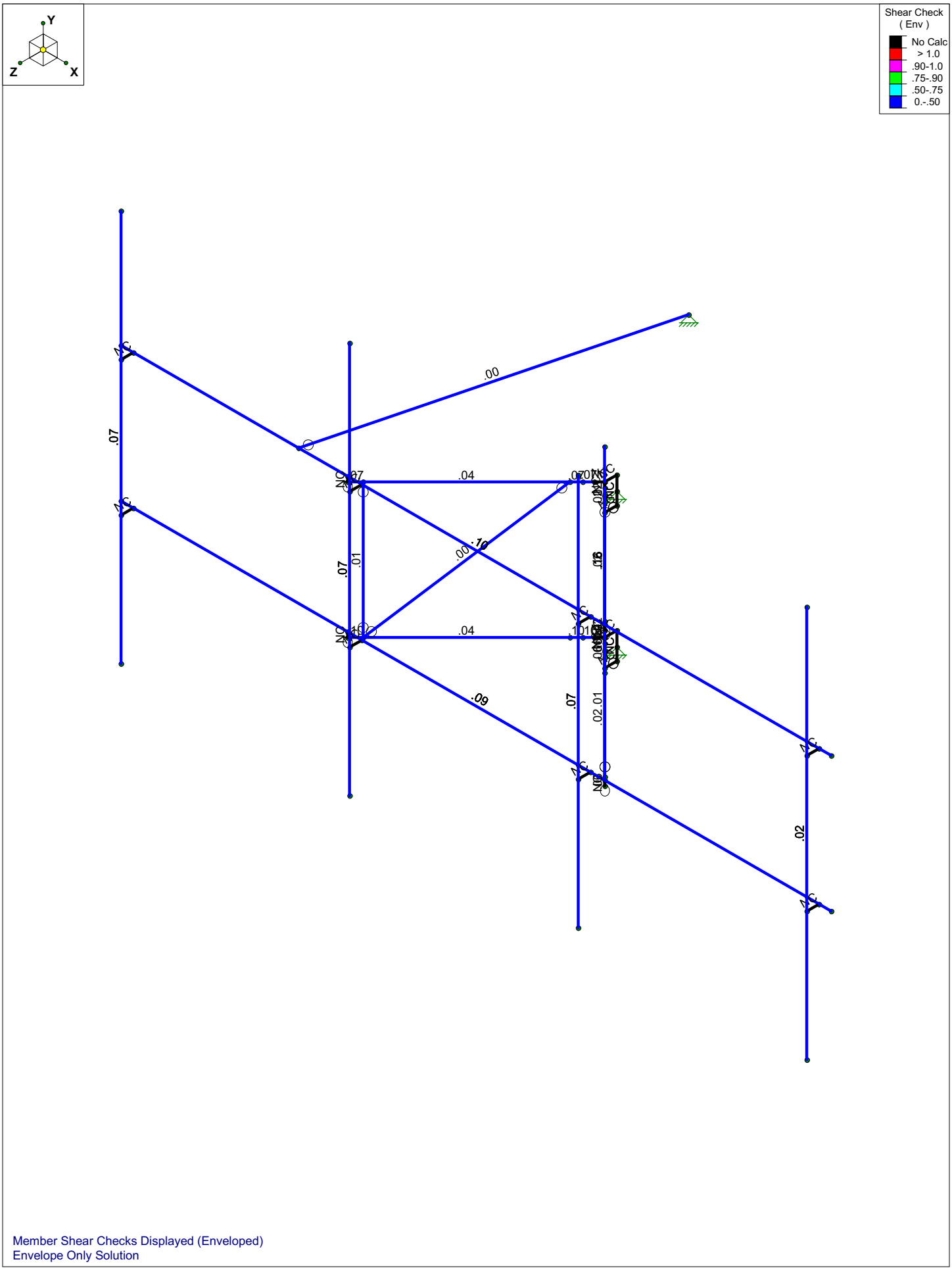
Photo taken from: Closeout Package



Envelope Only Solution



Member Code Checks Displayed (Enveloped)
Envelope Only Solution



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Basic Load Cases

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

Basic Load Cases (Continued)

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

Load Combinations

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.2D+1.0Wo (0 Deg)	Yes	Y		1	1.2	39	1.2	3	1	41	1														
2	1.2D+1.0Wo (30 Deg)	Yes	Y		1	1.2	39	1.2	4	1	42	1														
3	1.2D+1.0Wo (60 Deg)	Yes	Y		1	1.2	39	1.2	5	1	43	1														
4	1.2D+1.0Wo (90 Deg)	Yes	Y		1	1.2	39	1.2	6	1	44	1														
5	1.2D+1.0Wo (120 Deg)	Yes	Y		1	1.2	39	1.2	7	1	45	1														
6	1.2D+1.0Wo (150 Deg)	Yes	Y		1	1.2	39	1.2	8	1	46	1														
7	1.2D+1.0Wo (180 Deg)	Yes	Y		1	1.2	39	1.2	9	1	47	1														
8	1.2D+1.0Wo (210 Deg)	Yes	Y		1	1.2	39	1.2	10	1	48	1														
9	1.2D+1.0Wo (240 Deg)	Yes	Y		1	1.2	39	1.2	11	1	49	1														
10	1.2D+1.0Wo (270 Deg)	Yes	Y		1	1.2	39	1.2	12	1	50	1														
11	1.2D+1.0Wo (300 Deg)	Yes	Y		1	1.2	39	1.2	13	1	51	1														
12	1.2D+1.0Wo (330 Deg)	Yes	Y		1	1.2	39	1.2	14	1	52	1														
13	1.2D + 1.0Di + 1.0Wi (0 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1										
14	1.2D + 1.0Di + 1.0Wi (30 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1										
15	1.2D + 1.0Di + 1.0Wi (60 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1										
16	1.2D + 1.0Di + 1.0Wi (90 Deg)	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1										
17	1.2D + 1.0Di + 1.0Wi (120 D...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1										
18	1.2D + 1.0Di + 1.0Wi (150 D...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1										
19	1.2D + 1.0Di + 1.0Wi (180 D...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1										
20	1.2D + 1.0Di + 1.0Wi (210 D...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1										
21	1.2D + 1.0Di + 1.0Wi (240 D...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1										
22	1.2D + 1.0Di + 1.0Wi (270 D...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1										
23	1.2D + 1.0Di + 1.0Wi (300 D...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1										
24	1.2D + 1.0Di + 1.0Wi (330 D...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1										
25	1.2D + 1.5Lm1 + 1.0Wm (0 ...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1												
26	1.2D + 1.5Lm1 + 1.0Wm (30...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1												
27	1.2D + 1.5Lm1 + 1.0Wm (60...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1												
28	1.2D + 1.5Lm1 + 1.0Wm (90...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1												
29	1.2D + 1.5Lm1 + 1.0Wm (12...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1												
30	1.2D + 1.5Lm1 + 1.0Wm (15...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1												
31	1.2D + 1.5Lm1 + 1.0Wm (18...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1												
32	1.2D + 1.5Lm1 + 1.0Wm (21...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1												
33	1.2D + 1.5Lm1 + 1.0Wm (24...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1												
34	1.2D + 1.5Lm1 + 1.0Wm (27...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1												
35	1.2D + 1.5Lm1 + 1.0Wm (30...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1												
36	1.2D + 1.5Lm1 + 1.0Wm (33...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1												
37	1.2D + 1.5Lm2 + 1.0Wm (0 ...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1												
38	1.2D + 1.5Lm2 + 1.0Wm (30...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1												

Load Combinations (Continued)

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
39	1.2D + 1.5Lm2 + 1.0Wm (60...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1										
40	1.2D + 1.5Lm2 + 1.0Wm (90...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1										
41	1.2D + 1.5Lm2 + 1.0Wm (12...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1										
42	1.2D + 1.5Lm2 + 1.0Wm (15...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1										
43	1.2D + 1.5Lm2 + 1.0Wm (18...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1										
44	1.2D + 1.5Lm2 + 1.0Wm (21...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1										
45	1.2D + 1.5Lm2 + 1.0Wm (24...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1										
46	1.2D + 1.5Lm2 + 1.0Wm (27...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1										
47	1.2D + 1.5Lm2 + 1.0Wm (30...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1										
48	1.2D + 1.5Lm2 + 1.0Wm (33...	Yes	Y		1	1.2	39	1.2	78	1.5	38	1	76	1										
49	1.2D + 1.5Lv1	Yes	Y		1	1.2	39	1.2	79	1.5														
50	1.2D + 1.5Lv2	Yes	Y		1	1.2	39	1.2	80	1.5														
51	1.4D	Yes	Y		1	1.4	39	1.4																
52	Seismic Mass		Y		1	1	39	1																
53	1.2D + 1.0Ev + 1.0Eh (0 Deg)		Y		1	1.2	39	1.2	SX		SY	1	SZ	-1										
54	1.2D + 1.0Ev + 1.0Eh (30 De...		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	-.866										
55	1.2D + 1.0Ev + 1.0Eh (60 De...		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	-.5										
56	1.2D + 1.0Ev + 1.0Eh (90 De...		Y		1	1.2	39	1.2	SX	1	SY	1	SZ											
57	1.2D + 1.0Ev + 1.0Eh (120 D...		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	.5										
58	1.2D + 1.0Ev + 1.0Eh (150 D...		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	.866										
59	1.2D + 1.0Ev + 1.0Eh (180 D...		Y		1	1.2	39	1.2	SX		SY	1	SZ	1										
60	1.2D + 1.0Ev + 1.0Eh (210 D...		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	.866										
61	1.2D + 1.0Ev + 1.0Eh (240 D...		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	.5										
62	1.2D + 1.0Ev + 1.0Eh (270 D...		Y		1	1.2	39	1.2	SX	-1	SY	1	SZ											
63	1.2D + 1.0Ev + 1.0Eh (300 D...		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	-.5										
64	1.2D + 1.0Ev + 1.0Eh (330 D...		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	-.866										

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	0	0	0	0	
2	N2	0	2.75	0	0	
3	N3	-2.625	3.140667	2.872167	0	
4	N4	-2.625	0.390667	2.872167	0	
5	N5	2.625	3.140667	2.872167	0	
6	N6	2.625	0.390667	2.872167	0	
7	N7	-7.25	3.140667	2.872167	0	
8	N8	7.25	3.140667	2.872167	0	
9	N9	-7.25	0.390667	2.872167	0	
10	N10	7.25	0.390667	2.872167	0	
11	N11	-7	3.140667	2.872167	0	
12	N12	-7	0.390667	2.872167	0	
13	N13	7	3.140667	2.872167	0	
14	N14	7	0.390667	2.872167	0	
15	N15	2.333333	3.140667	2.872167	0	
16	N16	2.333333	0.390667	2.872167	0	
17	N17	-7	3.140667	3.122167	0	
18	N18	-7	0.390667	3.122167	0	
19	N19	7	3.140667	3.122167	0	
20	N20	7	0.390667	3.122167	0	
21	N21	2.333333	3.140667	3.122167	0	
22	N22	2.333333	0.390667	3.122167	0	
23	N23	-2.625	0.291667	2.872167	0	
24	N24	2.625	0.291667	2.872167	0	
25	N25	-2.625	3.041667	2.872167	0	
26	N26	2.625	3.041667	2.872167	0	
27	N27	-2.465917	0.291667	2.713083	0	
28	N28	-2.465917	3.041667	2.713083	0	
29	N29	-0.356417	0.291667	0.6035	0	
30	N30	-0.356417	3.041667	0.6035	0	
31	N31	-0.223833	0.291667	0.470917	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
32	N32	-0.223833	3.041667	0.470917	0	
33	N33	-0.105917	0.291667	0.353083	0	
34	N34	-0.105917	3.041667	0.353083	0	
35	N35	0	0.291667	.25	0	
36	N36	0	3.041667	.25	0	
37	N37	2.465917	0.291667	2.713083	0	
38	N38	2.465917	3.041667	2.713083	0	
39	N39	0.356333	0.291667	0.6035	0	
40	N40	0.356333	3.041667	0.6035	0	
41	N41	0.22375	0.291667	0.470917	0	
42	N42	0.22375	3.041667	0.470917	0	
43	N43	0.105917	0.291667	0.353083	0	
44	N44	0.105917	3.041667	0.353083	0	
45	N45	0	-0.333333	.25	0	
46	N46	0	3.66675	.25	0	
47	N47	0	0.291667	0	0	
48	N48	0	3.041667	0	0	
49	N49	-7	5.765667	3.122167	0	
50	N50	7	5.765667	3.122167	0	
51	N51	2.333333	5.765667	3.122167	0	
52	N52	-7	-2.234333	3.122167	0	
53	N53	7	-2.234333	3.122167	0	
54	N54	2.333333	-2.234333	3.122167	0	
55	N55	0	0.041667	.25	0	
56	N56	0	2.791667	.25	0	
57	N57	0	-.25	.25	0	
58	N58	0	2.5	.25	0	
59	N59	0	-.25	0	0	
60	N60	0	2.5	0	0	
61	N61	-2	3.140667	-3.464102	0	
62	N62	-3.625	3.140667	2.872167	0	
63	N63	-2.333333	3.140667	2.872167	0	
64	N64	-2.333333	0.390667	2.872167	0	
65	N65	-2.333333	3.140667	3.122167	0	
66	N66	-2.333333	0.390667	3.122167	0	
67	N67	-2.333333	5.765667	3.122167	0	
68	N68	-2.333333	-2.234333	3.122167	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Ru...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Face Horizontal	PIPE_2.5	None	None	A500 Gr. C 46	Typical	1.61	1.45	1.45	2.89
2	Standoff Horizontal	PIPE_2.0	None	None	A500 Gr. C 46	Typical	1.02	.627	.627	1.25
3	Standoff Vertical	SR_0.75	None	None	A529 Gr 50	Typical	.442	.016	.016	.031
4	Standoff Diagonal	SR_0.75	None	None	A529 Gr 50	Typical	.442	.016	.016	.031
5	Mast Pipe	PIPE_3.0	None	None	A500 Gr. C 46	Typical	2.07	2.85	2.85	5.69
6	Standoff Plate	PL1/2x5	None	None	A572 Gr.50	Typical	2.5	.052	5.208	.195
7	Tieback	PIPE_2.0	None	None	A500 Gr. C 46	Typical	1.02	.627	.627	1.25
8	Antenna Pipe	PIPE_2.0	None	None	A500 Gr. C 46	Typical	1.02	.627	.627	1.25

Hot Rolled Steel Properties

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

Hot Rolled Steel Properties (Continued)

	Label	E [ksi]	G [ksi]	Nu	Therm (/1...	Density[k/f...	Yield[ksi]	Ry	Fu[ksi]	Rt
8	A529 Gr 50	29000	11154	.3	.65	.49	50	1.5	65	1.2

Member Primary Data

	Label	I Joint	J Joint	K ...	Rotat...	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N9	N10			Face Horizontal	None	None	A500 Gr. ...	Typical
2	M2	N7	N8			Face Horizontal	None	None	A500 Gr. ...	Typical
3	M3	N28	N30			Standoff Horizontal	None	None	A500 Gr. ...	Typical
4	M4	N27	N29			Standoff Horizontal	None	None	A500 Gr. ...	Typical
5	M5	N38	N40			Standoff Horizontal	None	None	A500 Gr. ...	Typical
6	M6	N37	N39			Standoff Horizontal	None	None	A500 Gr. ...	Typical
7	M7	N28	N27			Standoff Vertical	None	None	A529 Gr 50	Typical
8	M8	N38	N37			Standoff Vertical	None	None	A529 Gr 50	Typical
9	M9	N27	N30			Standoff Diagonal	None	None	A529 Gr 50	Typical
10	M10	N37	N40			Standoff Diagonal	None	None	A529 Gr 50	Typical
11	M11	N46	N45			Mast Pipe	None	None	A500 Gr. ...	Typical
12	M12	N32	N34		90	Standoff Plate	None	None	A572 Gr.50	Typical
13	M13	N31	N33		90	Standoff Plate	None	None	A572 Gr.50	Typical
14	M14	N42	N44		90	Standoff Plate	None	None	A572 Gr.50	Typical
15	M15	N41	N43		90	Standoff Plate	None	None	A572 Gr.50	Typical
16	M16	N25	N28		90	Standoff Plate	None	None	A572 Gr.50	Typical
17	M17	N23	N27		90	Standoff Plate	None	None	A572 Gr.50	Typical
18	M18	N30	N32		90	Standoff Plate	None	None	A572 Gr.50	Typical
19	M19	N29	N31		90	Standoff Plate	None	None	A572 Gr.50	Typical
20	M20	N26	N38		90	Standoff Plate	None	None	A572 Gr.50	Typical
21	M21	N24	N37		90	Standoff Plate	None	None	A572 Gr.50	Typical
22	M22	N40	N42		90	Standoff Plate	None	None	A572 Gr.50	Typical
23	M23	N39	N41		90	Standoff Plate	None	None	A572 Gr.50	Typical
24	M24	N62	N61			Tieback	None	None	A500 Gr. ...	Typical
25	MP1A	N50	N53			Antenna Pipe	None	None	A500 Gr. ...	Typical
26	MP2A	N51	N54			Antenna Pipe	None	None	A500 Gr. ...	Typical
27	MP3A	N67	N68			Antenna Pipe	None	None	A500 Gr. ...	Typical
28	MP4A	N49	N52			Antenna Pipe	None	None	A500 Gr. ...	Typical
29	M29	N11	N17			RIGID	None	None	RIGID	Typical
30	M30	N12	N18			RIGID	None	None	RIGID	Typical
31	M31	N15	N21			RIGID	None	None	RIGID	Typical
32	M32	N13	N19			RIGID	None	None	RIGID	Typical
33	M33	N14	N20			RIGID	None	None	RIGID	Typical
34	M34	N16	N22			RIGID	None	None	RIGID	Typical
35	M35	N3	N25			RIGID	None	None	RIGID	Typical
36	M36	N4	N23			RIGID	None	None	RIGID	Typical
37	M37	N6	N24			RIGID	None	None	RIGID	Typical
38	M38	N5	N26			RIGID	None	None	RIGID	Typical
39	M39	N34	N36			RIGID	None	None	RIGID	Typical
40	M40	N33	N35			RIGID	None	None	RIGID	Typical
41	M41	N44	N36			RIGID	None	None	RIGID	Typical
42	M42	N43	N35			RIGID	None	None	RIGID	Typical
43	M43	N36	N48			RIGID	None	None	RIGID	Typical
44	M44	N35	N47			RIGID	None	None	RIGID	Typical
45	M45	N58	N60			RIGID	None	None	RIGID	Typical
46	M46	N57	N59			RIGID	None	None	RIGID	Typical
47	M47	N48	N60			RIGID	None	None	RIGID	Typical
48	M48	N47	N59			RIGID	None	None	RIGID	Typical
49	M49	N63	N65			RIGID	None	None	RIGID	Typical
50	M50	N64	N66			RIGID	None	None	RIGID	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl R...	Analysis Of...	Inactive	Seismi...
1	M1						Yes	** NA **			None
2	M2						Yes	** NA **			None
3	M3						Yes	** NA **			None
4	M4						Yes	** NA **			None
5	M5						Yes	** NA **			None
6	M6						Yes	** NA **			None
7	M7	BenPIN	BenPIN				Yes	** NA **			None
8	M8	BenPIN	BenPIN				Yes	** NA **			None
9	M9	BenPIN	BenPIN				Yes	** NA **			None
10	M10	BenPIN	BenPIN				Yes	** NA **			None
11	M11						Yes	** NA **			None
12	M12						Yes	** NA **			None
13	M13						Yes	** NA **			None
14	M14						Yes	** NA **			None
15	M15						Yes	** NA **			None
16	M16						Yes	** NA **			None
17	M17						Yes	** NA **			None
18	M18						Yes	** NA **			None
19	M19						Yes	** NA **			None
20	M20						Yes	** NA **			None
21	M21						Yes	** NA **			None
22	M22						Yes	** NA **			None
23	M23						Yes	** NA **			None
24	M24	BenPIN					Yes	** NA **			None
25	MP1A						Yes	** NA **			None
26	MP2A						Yes	** NA **			None
27	MP3A						Yes	** NA **			None
28	MP4A						Yes	** NA **			None
29	M29						Yes	** NA **			None
30	M30						Yes	** NA **			None
31	M31						Yes	** NA **			None
32	M32						Yes	** NA **			None
33	M33						Yes	** NA **			None
34	M34						Yes	** NA **			None
35	M35	OOOXOO					Yes	** NA **			None
36	M36	OOOXOO					Yes	** NA **			None
37	M37	OOOXOO					Yes	** NA **			None
38	M38	OOOXOO					Yes	** NA **			None
39	M39						Yes	** NA **			None
40	M40						Yes	** NA **			None
41	M41						Yes	** NA **			None
42	M42						Yes	** NA **			None
43	M43						Yes	** NA **			None
44	M44						Yes	** NA **			None
45	M45	OOOXOX					Yes	** NA **			None
46	M46	OOOXOX					Yes	** NA **			None
47	M47						Yes	** NA **			None
48	M48						Yes	** NA **			None
49	M49						Yes	** NA **			None
50	M50						Yes	** NA **			None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
1	M1	Face Horizo...	14.5			Lbyy						Lateral
2	M2	Face Horizo...	14.5			Lbyy						Lateral
3	M3	Standoff Ho...	2.983			Lbyy						Lateral
4	M4	Standoff Ho...	2.983			Lbyy						Lateral
5	M5	Standoff Ho...	2.983			Lbyy						Lateral
6	M6	Standoff Ho...	2.983			Lbyy						Lateral
7	M7	Standoff Ve...	2.75						.7	.7		Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
8	M8	Standoff Ve...	2.75						.7	.7		Lateral
9	M9	Standoff Di...	4.057						.7	.7		Lateral
10	M10	Standoff Di...	4.057						.7	.7		Lateral
11	M11	Mast Pipe	4			Lbyy						Lateral
12	M12	Standoff Pla...	.167			Lbyy						Lateral
13	M13	Standoff Pla...	.167			Lbyy						Lateral
14	M14	Standoff Pla...	.167			Lbyy						Lateral
15	M15	Standoff Pla...	.167			Lbyy						Lateral
16	M16	Standoff Pla...	.225			Lbyy						Lateral
17	M17	Standoff Pla...	.225			Lbyy						Lateral
18	M18	Standoff Pla...	.188			Lbyy						Lateral
19	M19	Standoff Pla...	.188			Lbyy						Lateral
20	M20	Standoff Pla...	.225			Lbyy						Lateral
21	M21	Standoff Pla...	.225			Lbyy						Lateral
22	M22	Standoff Pla...	.188			Lbyy						Lateral
23	M23	Standoff Pla...	.188			Lbyy						Lateral
24	M24	Tieback	6.541			Lbyy						Lateral
25	MP1A	Antenna Pipe	8									Lateral
26	MP2A	Antenna Pipe	8									Lateral
27	MP3A	Antenna Pipe	8									Lateral
28	MP4A	Antenna Pipe	8									Lateral

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	Y	-32	1.5
2	M5	My	0	1.5
3	M5	Mz	0	1.5
4	MP1A	Y	-4.4	4
5	MP1A	My	-.002	4
6	MP1A	Mz	0	4
7	MP2A	Y	-21.85	1
8	MP2A	My	-.011	1
9	MP2A	Mz	.013	1
10	MP2A	Y	-21.85	7
11	MP2A	My	-.011	7
12	MP2A	Mz	.013	7
13	MP2A	Y	-21.85	1
14	MP2A	My	-.011	1
15	MP2A	Mz	-.013	1
16	MP2A	Y	-21.85	7
17	MP2A	My	-.011	7
18	MP2A	Mz	-.013	7
19	MP4A	Y	-43.55	2.5
20	MP4A	My	-.022	2.5
21	MP4A	Mz	0	2.5
22	MP4A	Y	-43.55	5.5
23	MP4A	My	-.022	5.5
24	MP4A	Mz	0	5.5
25	MP2A	Y	-84.4	3.5
26	MP2A	My	.042	3.5
27	MP2A	Mz	0	3.5
28	MP3A	Y	-70.3	3.5
29	MP3A	My	.035	3.5
30	MP3A	Mz	0	3.5

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	Y	-136.141	1.5
2	M5	My	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
3	M5	Mz	0	1.5
4	MP1A	Y	-22.433	4
5	MP1A	My	-.011	4
6	MP1A	Mz	0	4
7	MP2A	Y	-94.258	1
8	MP2A	My	-.047	1
9	MP2A	Mz	.055	1
10	MP2A	Y	-94.258	7
11	MP2A	My	-.047	7
12	MP2A	Mz	.055	7
13	MP2A	Y	-94.258	1
14	MP2A	My	-.047	1
15	MP2A	Mz	-.055	1
16	MP2A	Y	-94.258	7
17	MP2A	My	-.047	7
18	MP2A	Mz	-.055	7
19	MP4A	Y	-55.63	2.5
20	MP4A	My	-.028	2.5
21	MP4A	Mz	0	2.5
22	MP4A	Y	-55.63	5.5
23	MP4A	My	-.028	5.5
24	MP4A	Mz	0	5.5
25	MP2A	Y	-70.682	3.5
26	MP2A	My	.035	3.5
27	MP2A	Mz	0	3.5
28	MP3A	Y	-63.807	3.5
29	MP3A	My	.032	3.5
30	MP3A	Mz	0	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	0	1.5
2	M5	Z	-120.779	1.5
3	M5	Mx	0	1.5
4	MP1A	X	0	4
5	MP1A	Z	-34.703	4
6	MP1A	Mx	0	4
7	MP2A	X	0	1
8	MP2A	Z	-157.53	1
9	MP2A	Mx	-.092	1
10	MP2A	X	0	7
11	MP2A	Z	-157.53	7
12	MP2A	Mx	-.092	7
13	MP2A	X	0	1
14	MP2A	Z	-157.53	1
15	MP2A	Mx	.092	1
16	MP2A	X	0	7
17	MP2A	Z	-157.53	7
18	MP2A	Mx	.092	7
19	MP4A	X	0	2.5
20	MP4A	Z	-91.632	2.5
21	MP4A	Mx	0	2.5
22	MP4A	X	0	5.5
23	MP4A	Z	-91.632	5.5
24	MP4A	Mx	0	5.5
25	MP2A	X	0	3.5
26	MP2A	Z	-72.916	3.5
27	MP2A	Mx	0	3.5
28	MP3A	X	0	3.5
29	MP3A	Z	-72.916	3.5
30	MP3A	Mx	0	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	65.081	1.5
2	M5	Z	-112.723	1.5
3	M5	Mx	0	1.5
4	MP1A	X	13.864	4
5	MP1A	Z	-24.014	4
6	MP1A	Mx	-.007	4
7	MP2A	X	72.091	1
8	MP2A	Z	-124.866	1
9	MP2A	Mx	-.109	1
10	MP2A	X	72.091	7
11	MP2A	Z	-124.866	7
12	MP2A	Mx	-.109	7
13	MP2A	X	72.091	1
14	MP2A	Z	-124.866	1
15	MP2A	Mx	.037	1
16	MP2A	X	72.091	7
17	MP2A	Z	-124.866	7
18	MP2A	Mx	.037	7
19	MP4A	X	38.846	2.5
20	MP4A	Z	-67.284	2.5
21	MP4A	Mx	-.019	2.5
22	MP4A	X	38.846	5.5
23	MP4A	Z	-67.284	5.5
24	MP4A	Mx	-.019	5.5
25	MP2A	X	33.436	3.5
26	MP2A	Z	-57.913	3.5
27	MP2A	Mx	.017	3.5
28	MP3A	X	32.278	3.5
29	MP3A	Z	-55.908	3.5
30	MP3A	Mx	.016	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	128.975	1.5
2	M5	Z	-74.463	1.5
3	M5	Mx	0	1.5
4	MP1A	X	11.934	4
5	MP1A	Z	-6.89	4
6	MP1A	Mx	-.006	4
7	MP2A	X	101.749	1
8	MP2A	Z	-58.745	1
9	MP2A	Mx	-.085	1
10	MP2A	X	101.749	7
11	MP2A	Z	-58.745	7
12	MP2A	Mx	-.085	7
13	MP2A	X	101.749	1
14	MP2A	Z	-58.745	1
15	MP2A	Mx	-.017	1
16	MP2A	X	101.749	7
17	MP2A	Z	-58.745	7
18	MP2A	Mx	-.017	7
19	MP4A	X	43.14	2.5
20	MP4A	Z	-24.907	2.5
21	MP4A	Mx	-.022	2.5
22	MP4A	X	43.14	5.5
23	MP4A	Z	-24.907	5.5
24	MP4A	Mx	-.022	5.5
25	MP2A	X	47.445	3.5
26	MP2A	Z	-27.392	3.5
27	MP2A	Mx	.024	3.5
28	MP3A	X	41.43	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP3A	Z	-23.919	3.5
30	MP3A	Mx	.021	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	158.309	1.5
2	M5	Z	0	1.5
3	M5	Mx	0	1.5
4	MP1A	X	6.806	4
5	MP1A	Z	0	4
6	MP1A	Mx	-.003	4
7	MP2A	X	104.142	1
8	MP2A	Z	0	1
9	MP2A	Mx	-.052	1
10	MP2A	X	104.142	7
11	MP2A	Z	0	7
12	MP2A	Mx	-.052	7
13	MP2A	X	104.142	1
14	MP2A	Z	0	1
15	MP2A	Mx	-.052	1
16	MP2A	X	104.142	7
17	MP2A	Z	0	7
18	MP2A	Mx	-.052	7
19	MP4A	X	35.874	2.5
20	MP4A	Z	0	2.5
21	MP4A	Mx	-.018	2.5
22	MP4A	X	35.874	5.5
23	MP4A	Z	0	5.5
24	MP4A	Mx	-.018	5.5
25	MP2A	X	48.741	3.5
26	MP2A	Z	0	3.5
27	MP2A	Mx	.024	3.5
28	MP3A	X	39.48	3.5
29	MP3A	Z	0	3.5
30	MP3A	Mx	.02	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	128.975	1.5
2	M5	Z	74.463	1.5
3	M5	Mx	0	1.5
4	MP1A	X	11.934	4
5	MP1A	Z	6.89	4
6	MP1A	Mx	-.006	4
7	MP2A	X	101.749	1
8	MP2A	Z	58.745	1
9	MP2A	Mx	-.017	1
10	MP2A	X	101.749	7
11	MP2A	Z	58.745	7
12	MP2A	Mx	-.017	7
13	MP2A	X	101.749	1
14	MP2A	Z	58.745	1
15	MP2A	Mx	-.085	1
16	MP2A	X	101.749	7
17	MP2A	Z	58.745	7
18	MP2A	Mx	-.085	7
19	MP4A	X	43.14	2.5
20	MP4A	Z	24.907	2.5
21	MP4A	Mx	-.022	2.5
22	MP4A	X	43.14	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
23	MP4A	Z	24.907	5.5
24	MP4A	Mx	-.022	5.5
25	MP2A	X	47.445	3.5
26	MP2A	Z	27.392	3.5
27	MP2A	Mx	.024	3.5
28	MP3A	X	41.43	3.5
29	MP3A	Z	23.919	3.5
30	MP3A	Mx	.021	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	65.081	1.5
2	M5	Z	112.723	1.5
3	M5	Mx	0	1.5
4	MP1A	X	13.864	4
5	MP1A	Z	24.014	4
6	MP1A	Mx	-.007	4
7	MP2A	X	72.091	1
8	MP2A	Z	124.866	1
9	MP2A	Mx	.037	1
10	MP2A	X	72.091	7
11	MP2A	Z	124.866	7
12	MP2A	Mx	.037	7
13	MP2A	X	72.091	1
14	MP2A	Z	124.866	1
15	MP2A	Mx	-.109	1
16	MP2A	X	72.091	7
17	MP2A	Z	124.866	7
18	MP2A	Mx	-.109	7
19	MP4A	X	38.846	2.5
20	MP4A	Z	67.284	2.5
21	MP4A	Mx	-.019	2.5
22	MP4A	X	38.846	5.5
23	MP4A	Z	67.284	5.5
24	MP4A	Mx	-.019	5.5
25	MP2A	X	33.436	3.5
26	MP2A	Z	57.913	3.5
27	MP2A	Mx	.017	3.5
28	MP3A	X	32.278	3.5
29	MP3A	Z	55.908	3.5
30	MP3A	Mx	.016	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	0	1.5
2	M5	Z	120.779	1.5
3	M5	Mx	0	1.5
4	MP1A	X	0	4
5	MP1A	Z	34.703	4
6	MP1A	Mx	0	4
7	MP2A	X	0	1
8	MP2A	Z	157.53	1
9	MP2A	Mx	.092	1
10	MP2A	X	0	7
11	MP2A	Z	157.53	7
12	MP2A	Mx	.092	7
13	MP2A	X	0	1
14	MP2A	Z	157.53	1
15	MP2A	Mx	-.092	1
16	MP2A	X	0	7

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP2A	Z	157.53	7
18	MP2A	Mx	-.092	7
19	MP4A	X	0	2.5
20	MP4A	Z	91.632	2.5
21	MP4A	Mx	0	2.5
22	MP4A	X	0	5.5
23	MP4A	Z	91.632	5.5
24	MP4A	Mx	0	5.5
25	MP2A	X	0	3.5
26	MP2A	Z	72.916	3.5
27	MP2A	Mx	0	3.5
28	MP3A	X	0	3.5
29	MP3A	Z	72.916	3.5
30	MP3A	Mx	0	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	-65.081	1.5
2	M5	Z	112.723	1.5
3	M5	Mx	0	1.5
4	MP1A	X	-13.864	4
5	MP1A	Z	24.014	4
6	MP1A	Mx	.007	4
7	MP2A	X	-72.091	1
8	MP2A	Z	124.866	1
9	MP2A	Mx	.109	1
10	MP2A	X	-72.091	7
11	MP2A	Z	124.866	7
12	MP2A	Mx	.109	7
13	MP2A	X	-72.091	1
14	MP2A	Z	124.866	1
15	MP2A	Mx	-.037	1
16	MP2A	X	-72.091	7
17	MP2A	Z	124.866	7
18	MP2A	Mx	-.037	7
19	MP4A	X	-38.846	2.5
20	MP4A	Z	67.284	2.5
21	MP4A	Mx	.019	2.5
22	MP4A	X	-38.846	5.5
23	MP4A	Z	67.284	5.5
24	MP4A	Mx	.019	5.5
25	MP2A	X	-33.436	3.5
26	MP2A	Z	57.913	3.5
27	MP2A	Mx	-.017	3.5
28	MP3A	X	-32.278	3.5
29	MP3A	Z	55.908	3.5
30	MP3A	Mx	-.016	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	-128.975	1.5
2	M5	Z	74.463	1.5
3	M5	Mx	0	1.5
4	MP1A	X	-11.934	4
5	MP1A	Z	6.89	4
6	MP1A	Mx	.006	4
7	MP2A	X	-101.749	1
8	MP2A	Z	58.745	1
9	MP2A	Mx	.085	1
10	MP2A	X	-101.749	7

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
11	MP2A	Z	58.745	7
12	MP2A	Mx	.085	7
13	MP2A	X	-101.749	1
14	MP2A	Z	58.745	1
15	MP2A	Mx	.017	1
16	MP2A	X	-101.749	7
17	MP2A	Z	58.745	7
18	MP2A	Mx	.017	7
19	MP4A	X	-43.14	2.5
20	MP4A	Z	24.907	2.5
21	MP4A	Mx	.022	2.5
22	MP4A	X	-43.14	5.5
23	MP4A	Z	24.907	5.5
24	MP4A	Mx	.022	5.5
25	MP2A	X	-47.445	3.5
26	MP2A	Z	27.392	3.5
27	MP2A	Mx	-.024	3.5
28	MP3A	X	-41.43	3.5
29	MP3A	Z	23.919	3.5
30	MP3A	Mx	-.021	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	-158.309	1.5
2	M5	Z	0	1.5
3	M5	Mx	0	1.5
4	MP1A	X	-6.806	4
5	MP1A	Z	0	4
6	MP1A	Mx	.003	4
7	MP2A	X	-104.142	1
8	MP2A	Z	0	1
9	MP2A	Mx	.052	1
10	MP2A	X	-104.142	7
11	MP2A	Z	0	7
12	MP2A	Mx	.052	7
13	MP2A	X	-104.142	1
14	MP2A	Z	0	1
15	MP2A	Mx	.052	1
16	MP2A	X	-104.142	7
17	MP2A	Z	0	7
18	MP2A	Mx	.052	7
19	MP4A	X	-35.874	2.5
20	MP4A	Z	0	2.5
21	MP4A	Mx	.018	2.5
22	MP4A	X	-35.874	5.5
23	MP4A	Z	0	5.5
24	MP4A	Mx	.018	5.5
25	MP2A	X	-48.741	3.5
26	MP2A	Z	0	3.5
27	MP2A	Mx	-.024	3.5
28	MP3A	X	-39.48	3.5
29	MP3A	Z	0	3.5
30	MP3A	Mx	-.02	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	-128.975	1.5
2	M5	Z	-74.463	1.5
3	M5	Mx	0	1.5
4	MP1A	X	-11.934	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
5	MP1A	Z	-6.89	4
6	MP1A	Mx	.006	4
7	MP2A	X	-101.749	1
8	MP2A	Z	-58.745	1
9	MP2A	Mx	.017	1
10	MP2A	X	-101.749	7
11	MP2A	Z	-58.745	7
12	MP2A	Mx	.017	7
13	MP2A	X	-101.749	1
14	MP2A	Z	-58.745	1
15	MP2A	Mx	.085	1
16	MP2A	X	-101.749	7
17	MP2A	Z	-58.745	7
18	MP2A	Mx	.085	7
19	MP4A	X	-43.14	2.5
20	MP4A	Z	-24.907	2.5
21	MP4A	Mx	.022	2.5
22	MP4A	X	-43.14	5.5
23	MP4A	Z	-24.907	5.5
24	MP4A	Mx	.022	5.5
25	MP2A	X	-47.445	3.5
26	MP2A	Z	-27.392	3.5
27	MP2A	Mx	-.024	3.5
28	MP3A	X	-41.43	3.5
29	MP3A	Z	-23.919	3.5
30	MP3A	Mx	-.021	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	-65.081	1.5
2	M5	Z	-112.723	1.5
3	M5	Mx	0	1.5
4	MP1A	X	-13.864	4
5	MP1A	Z	-24.014	4
6	MP1A	Mx	.007	4
7	MP2A	X	-72.091	1
8	MP2A	Z	-124.866	1
9	MP2A	Mx	-.037	1
10	MP2A	X	-72.091	7
11	MP2A	Z	-124.866	7
12	MP2A	Mx	-.037	7
13	MP2A	X	-72.091	1
14	MP2A	Z	-124.866	1
15	MP2A	Mx	.109	1
16	MP2A	X	-72.091	7
17	MP2A	Z	-124.866	7
18	MP2A	Mx	.109	7
19	MP4A	X	-38.846	2.5
20	MP4A	Z	-67.284	2.5
21	MP4A	Mx	.019	2.5
22	MP4A	X	-38.846	5.5
23	MP4A	Z	-67.284	5.5
24	MP4A	Mx	.019	5.5
25	MP2A	X	-33.436	3.5
26	MP2A	Z	-57.913	3.5
27	MP2A	Mx	-.017	3.5
28	MP3A	X	-32.278	3.5
29	MP3A	Z	-55.908	3.5
30	MP3A	Mx	-.016	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	0	1.5
2	M5	Z	-26.977	1.5
3	M5	Mx	0	1.5
4	MP1A	X	0	4
5	MP1A	Z	-9.082	4
6	MP1A	Mx	0	4
7	MP2A	X	0	1
8	MP2A	Z	-32.704	1
9	MP2A	Mx	-.019	1
10	MP2A	X	0	7
11	MP2A	Z	-32.704	7
12	MP2A	Mx	-.019	7
13	MP2A	X	0	1
14	MP2A	Z	-32.704	1
15	MP2A	Mx	.019	1
16	MP2A	X	0	7
17	MP2A	Z	-32.704	7
18	MP2A	Mx	.019	7
19	MP4A	X	0	2.5
20	MP4A	Z	-19.66	2.5
21	MP4A	Mx	0	2.5
22	MP4A	X	0	5.5
23	MP4A	Z	-19.66	5.5
24	MP4A	Mx	0	5.5
25	MP2A	X	0	3.5
26	MP2A	Z	-17.012	3.5
27	MP2A	Mx	0	3.5
28	MP3A	X	0	3.5
29	MP3A	Z	-17.012	3.5
30	MP3A	Mx	0	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	14.384	1.5
2	M5	Z	-24.914	1.5
3	M5	Mx	0	1.5
4	MP1A	X	3.79	4
5	MP1A	Z	-6.564	4
6	MP1A	Mx	-.002	4
7	MP2A	X	15.136	1
8	MP2A	Z	-26.216	1
9	MP2A	Mx	-.023	1
10	MP2A	X	15.136	7
11	MP2A	Z	-26.216	7
12	MP2A	Mx	-.023	7
13	MP2A	X	15.136	1
14	MP2A	Z	-26.216	1
15	MP2A	Mx	.008	1
16	MP2A	X	15.136	7
17	MP2A	Z	-26.216	7
18	MP2A	Mx	.008	7
19	MP4A	X	8.462	2.5
20	MP4A	Z	-14.657	2.5
21	MP4A	Mx	-.004	2.5
22	MP4A	X	8.462	5.5
23	MP4A	Z	-14.657	5.5
24	MP4A	Mx	-.004	5.5
25	MP2A	X	7.886	3.5
26	MP2A	Z	-13.659	3.5
27	MP2A	Mx	.004	3.5
28	MP3A	X	7.651	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP3A	Z	-13.252	3.5
30	MP3A	Mx	.004	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	28.017	1.5
2	M5	Z	-16.176	1.5
3	M5	Mx	0	1.5
4	MP1A	X	3.961	4
5	MP1A	Z	-2.287	4
6	MP1A	Mx	-.002	4
7	MP2A	X	22.004	1
8	MP2A	Z	-12.704	1
9	MP2A	Mx	-.018	1
10	MP2A	X	22.004	7
11	MP2A	Z	-12.704	7
12	MP2A	Mx	-.018	7
13	MP2A	X	22.004	1
14	MP2A	Z	-12.704	1
15	MP2A	Mx	-.004	1
16	MP2A	X	22.004	7
17	MP2A	Z	-12.704	7
18	MP2A	Mx	-.004	7
19	MP4A	X	9.919	2.5
20	MP4A	Z	-5.726	2.5
21	MP4A	Mx	-.005	2.5
22	MP4A	X	9.919	5.5
23	MP4A	Z	-5.726	5.5
24	MP4A	Mx	-.005	5.5
25	MP2A	X	11.513	3.5
26	MP2A	Z	-6.647	3.5
27	MP2A	Mx	.006	3.5
28	MP3A	X	10.29	3.5
29	MP3A	Z	-5.941	3.5
30	MP3A	Mx	.005	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	34.143	1.5
2	M5	Z	0	1.5
3	M5	Mx	0	1.5
4	MP1A	X	3.071	4
5	MP1A	Z	0	4
6	MP1A	Mx	-.002	4
7	MP2A	X	22.977	1
8	MP2A	Z	0	1
9	MP2A	Mx	-.011	1
10	MP2A	X	22.977	7
11	MP2A	Z	0	7
12	MP2A	Mx	-.011	7
13	MP2A	X	22.977	1
14	MP2A	Z	0	1
15	MP2A	Mx	-.011	1
16	MP2A	X	22.977	7
17	MP2A	Z	0	7
18	MP2A	Mx	-.011	7
19	MP4A	X	8.717	2.5
20	MP4A	Z	0	2.5
21	MP4A	Mx	-.004	2.5
22	MP4A	X	8.717	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
23	MP4A	Z	0	5.5
24	MP4A	Mx	-.004	5.5
25	MP2A	X	12.055	3.5
26	MP2A	Z	0	3.5
27	MP2A	Mx	.006	3.5
28	MP3A	X	10.171	3.5
29	MP3A	Z	0	3.5
30	MP3A	Mx	.005	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	28.017	1.5
2	M5	Z	16.176	1.5
3	M5	Mx	0	1.5
4	MP1A	X	3.961	4
5	MP1A	Z	2.287	4
6	MP1A	Mx	-.002	4
7	MP2A	X	22.004	1
8	MP2A	Z	12.704	1
9	MP2A	Mx	-.004	1
10	MP2A	X	22.004	7
11	MP2A	Z	12.704	7
12	MP2A	Mx	-.004	7
13	MP2A	X	22.004	1
14	MP2A	Z	12.704	1
15	MP2A	Mx	-.018	1
16	MP2A	X	22.004	7
17	MP2A	Z	12.704	7
18	MP2A	Mx	-.018	7
19	MP4A	X	9.919	2.5
20	MP4A	Z	5.726	2.5
21	MP4A	Mx	-.005	2.5
22	MP4A	X	9.919	5.5
23	MP4A	Z	5.726	5.5
24	MP4A	Mx	-.005	5.5
25	MP2A	X	11.513	3.5
26	MP2A	Z	6.647	3.5
27	MP2A	Mx	.006	3.5
28	MP3A	X	10.29	3.5
29	MP3A	Z	5.941	3.5
30	MP3A	Mx	.005	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	14.384	1.5
2	M5	Z	24.914	1.5
3	M5	Mx	0	1.5
4	MP1A	X	3.79	4
5	MP1A	Z	6.564	4
6	MP1A	Mx	-.002	4
7	MP2A	X	15.136	1
8	MP2A	Z	26.216	1
9	MP2A	Mx	.008	1
10	MP2A	X	15.136	7
11	MP2A	Z	26.216	7
12	MP2A	Mx	.008	7
13	MP2A	X	15.136	1
14	MP2A	Z	26.216	1
15	MP2A	Mx	-.023	1
16	MP2A	X	15.136	7

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP2A	Z	26.216	7
18	MP2A	Mx	-.023	7
19	MP4A	X	8.462	2.5
20	MP4A	Z	14.657	2.5
21	MP4A	Mx	-.004	2.5
22	MP4A	X	8.462	5.5
23	MP4A	Z	14.657	5.5
24	MP4A	Mx	-.004	5.5
25	MP2A	X	7.886	3.5
26	MP2A	Z	13.659	3.5
27	MP2A	Mx	.004	3.5
28	MP3A	X	7.651	3.5
29	MP3A	Z	13.252	3.5
30	MP3A	Mx	.004	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	0	1.5
2	M5	Z	26.977	1.5
3	M5	Mx	0	1.5
4	MP1A	X	0	4
5	MP1A	Z	9.082	4
6	MP1A	Mx	0	4
7	MP2A	X	0	1
8	MP2A	Z	32.704	1
9	MP2A	Mx	.019	1
10	MP2A	X	0	7
11	MP2A	Z	32.704	7
12	MP2A	Mx	.019	7
13	MP2A	X	0	1
14	MP2A	Z	32.704	1
15	MP2A	Mx	-.019	1
16	MP2A	X	0	7
17	MP2A	Z	32.704	7
18	MP2A	Mx	-.019	7
19	MP4A	X	0	2.5
20	MP4A	Z	19.66	2.5
21	MP4A	Mx	0	2.5
22	MP4A	X	0	5.5
23	MP4A	Z	19.66	5.5
24	MP4A	Mx	0	5.5
25	MP2A	X	0	3.5
26	MP2A	Z	17.012	3.5
27	MP2A	Mx	0	3.5
28	MP3A	X	0	3.5
29	MP3A	Z	17.012	3.5
30	MP3A	Mx	0	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	-14.384	1.5
2	M5	Z	24.914	1.5
3	M5	Mx	0	1.5
4	MP1A	X	-3.79	4
5	MP1A	Z	6.564	4
6	MP1A	Mx	.002	4
7	MP2A	X	-15.136	1
8	MP2A	Z	26.216	1
9	MP2A	Mx	.023	1
10	MP2A	X	-15.136	7

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
11	MP2A	Z	26.216	7
12	MP2A	Mx	.023	7
13	MP2A	X	-15.136	1
14	MP2A	Z	26.216	1
15	MP2A	Mx	-.008	1
16	MP2A	X	-15.136	7
17	MP2A	Z	26.216	7
18	MP2A	Mx	-.008	7
19	MP4A	X	-8.462	2.5
20	MP4A	Z	14.657	2.5
21	MP4A	Mx	.004	2.5
22	MP4A	X	-8.462	5.5
23	MP4A	Z	14.657	5.5
24	MP4A	Mx	.004	5.5
25	MP2A	X	-7.886	3.5
26	MP2A	Z	13.659	3.5
27	MP2A	Mx	-.004	3.5
28	MP3A	X	-7.651	3.5
29	MP3A	Z	13.252	3.5
30	MP3A	Mx	-.004	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	-28.017	1.5
2	M5	Z	16.176	1.5
3	M5	Mx	0	1.5
4	MP1A	X	-3.961	4
5	MP1A	Z	2.287	4
6	MP1A	Mx	.002	4
7	MP2A	X	-22.004	1
8	MP2A	Z	12.704	1
9	MP2A	Mx	.018	1
10	MP2A	X	-22.004	7
11	MP2A	Z	12.704	7
12	MP2A	Mx	.018	7
13	MP2A	X	-22.004	1
14	MP2A	Z	12.704	1
15	MP2A	Mx	.004	1
16	MP2A	X	-22.004	7
17	MP2A	Z	12.704	7
18	MP2A	Mx	.004	7
19	MP4A	X	-9.919	2.5
20	MP4A	Z	5.726	2.5
21	MP4A	Mx	.005	2.5
22	MP4A	X	-9.919	5.5
23	MP4A	Z	5.726	5.5
24	MP4A	Mx	.005	5.5
25	MP2A	X	-11.513	3.5
26	MP2A	Z	6.647	3.5
27	MP2A	Mx	-.006	3.5
28	MP3A	X	-10.29	3.5
29	MP3A	Z	5.941	3.5
30	MP3A	Mx	-.005	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	-34.143	1.5
2	M5	Z	0	1.5
3	M5	Mx	0	1.5
4	MP1A	X	-3.071	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
5	MP1A	Z	0	4
6	MP1A	Mx	.002	4
7	MP2A	X	-22.977	1
8	MP2A	Z	0	1
9	MP2A	Mx	.011	1
10	MP2A	X	-22.977	7
11	MP2A	Z	0	7
12	MP2A	Mx	.011	7
13	MP2A	X	-22.977	1
14	MP2A	Z	0	1
15	MP2A	Mx	.011	1
16	MP2A	X	-22.977	7
17	MP2A	Z	0	7
18	MP2A	Mx	.011	7
19	MP4A	X	-8.717	2.5
20	MP4A	Z	0	2.5
21	MP4A	Mx	.004	2.5
22	MP4A	X	-8.717	5.5
23	MP4A	Z	0	5.5
24	MP4A	Mx	.004	5.5
25	MP2A	X	-12.055	3.5
26	MP2A	Z	0	3.5
27	MP2A	Mx	-.006	3.5
28	MP3A	X	-10.171	3.5
29	MP3A	Z	0	3.5
30	MP3A	Mx	-.005	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	-28.017	1.5
2	M5	Z	-16.176	1.5
3	M5	Mx	0	1.5
4	MP1A	X	-3.961	4
5	MP1A	Z	-2.287	4
6	MP1A	Mx	.002	4
7	MP2A	X	-22.004	1
8	MP2A	Z	-12.704	1
9	MP2A	Mx	.004	1
10	MP2A	X	-22.004	7
11	MP2A	Z	-12.704	7
12	MP2A	Mx	.004	7
13	MP2A	X	-22.004	1
14	MP2A	Z	-12.704	1
15	MP2A	Mx	.018	1
16	MP2A	X	-22.004	7
17	MP2A	Z	-12.704	7
18	MP2A	Mx	.018	7
19	MP4A	X	-9.919	2.5
20	MP4A	Z	-5.726	2.5
21	MP4A	Mx	.005	2.5
22	MP4A	X	-9.919	5.5
23	MP4A	Z	-5.726	5.5
24	MP4A	Mx	.005	5.5
25	MP2A	X	-11.513	3.5
26	MP2A	Z	-6.647	3.5
27	MP2A	Mx	-.006	3.5
28	MP3A	X	-10.29	3.5
29	MP3A	Z	-5.941	3.5
30	MP3A	Mx	-.005	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	-14.384	1.5
2	M5	Z	-24.914	1.5
3	M5	Mx	0	1.5
4	MP1A	X	-3.79	4
5	MP1A	Z	-6.564	4
6	MP1A	Mx	.002	4
7	MP2A	X	-15.136	1
8	MP2A	Z	-26.216	1
9	MP2A	Mx	-.008	1
10	MP2A	X	-15.136	7
11	MP2A	Z	-26.216	7
12	MP2A	Mx	-.008	7
13	MP2A	X	-15.136	1
14	MP2A	Z	-26.216	1
15	MP2A	Mx	.023	1
16	MP2A	X	-15.136	7
17	MP2A	Z	-26.216	7
18	MP2A	Mx	.023	7
19	MP4A	X	-8.462	2.5
20	MP4A	Z	-14.657	2.5
21	MP4A	Mx	.004	2.5
22	MP4A	X	-8.462	5.5
23	MP4A	Z	-14.657	5.5
24	MP4A	Mx	.004	5.5
25	MP2A	X	-7.886	3.5
26	MP2A	Z	-13.659	3.5
27	MP2A	Mx	-.004	3.5
28	MP3A	X	-7.651	3.5
29	MP3A	Z	-13.252	3.5
30	MP3A	Mx	-.004	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	0	1.5
2	M5	Z	-7.807	1.5
3	M5	Mx	0	1.5
4	MP1A	X	0	4
5	MP1A	Z	-2.243	4
6	MP1A	Mx	0	4
7	MP2A	X	0	1
8	MP2A	Z	-10.182	1
9	MP2A	Mx	-.006	1
10	MP2A	X	0	7
11	MP2A	Z	-10.182	7
12	MP2A	Mx	-.006	7
13	MP2A	X	0	1
14	MP2A	Z	-10.182	1
15	MP2A	Mx	.006	1
16	MP2A	X	0	7
17	MP2A	Z	-10.182	7
18	MP2A	Mx	.006	7
19	MP4A	X	0	2.5
20	MP4A	Z	-5.923	2.5
21	MP4A	Mx	0	2.5
22	MP4A	X	0	5.5
23	MP4A	Z	-5.923	5.5
24	MP4A	Mx	0	5.5
25	MP2A	X	0	3.5
26	MP2A	Z	-4.713	3.5
27	MP2A	Mx	0	3.5
28	MP3A	X	0	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP3A	Z	-4.713	3.5
30	MP3A	Mx	0	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	4.207	1.5
2	M5	Z	-7.286	1.5
3	M5	Mx	0	1.5
4	MP1A	X	.896	4
5	MP1A	Z	-1.552	4
6	MP1A	Mx	-.000448	4
7	MP2A	X	4.66	1
8	MP2A	Z	-8.071	1
9	MP2A	Mx	-.007	1
10	MP2A	X	4.66	7
11	MP2A	Z	-8.071	7
12	MP2A	Mx	-.007	7
13	MP2A	X	4.66	1
14	MP2A	Z	-8.071	1
15	MP2A	Mx	.002	1
16	MP2A	X	4.66	7
17	MP2A	Z	-8.071	7
18	MP2A	Mx	.002	7
19	MP4A	X	2.511	2.5
20	MP4A	Z	-4.349	2.5
21	MP4A	Mx	-.001	2.5
22	MP4A	X	2.511	5.5
23	MP4A	Z	-4.349	5.5
24	MP4A	Mx	-.001	5.5
25	MP2A	X	2.161	3.5
26	MP2A	Z	-3.743	3.5
27	MP2A	Mx	.001	3.5
28	MP3A	X	2.086	3.5
29	MP3A	Z	-3.614	3.5
30	MP3A	Mx	.001	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	8.336	1.5
2	M5	Z	-4.813	1.5
3	M5	Mx	0	1.5
4	MP1A	X	.771	4
5	MP1A	Z	-.445	4
6	MP1A	Mx	-.000386	4
7	MP2A	X	6.577	1
8	MP2A	Z	-3.797	1
9	MP2A	Mx	-.006	1
10	MP2A	X	6.577	7
11	MP2A	Z	-3.797	7
12	MP2A	Mx	-.006	7
13	MP2A	X	6.577	1
14	MP2A	Z	-3.797	1
15	MP2A	Mx	-.001	1
16	MP2A	X	6.577	7
17	MP2A	Z	-3.797	7
18	MP2A	Mx	-.001	7
19	MP4A	X	2.788	2.5
20	MP4A	Z	-1.61	2.5
21	MP4A	Mx	-.001	2.5
22	MP4A	X	2.788	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
23	MP4A	Z	-1.61	5.5
24	MP4A	Mx	-.001	5.5
25	MP2A	X	3.067	3.5
26	MP2A	Z	-1.771	3.5
27	MP2A	Mx	.002	3.5
28	MP3A	X	2.678	3.5
29	MP3A	Z	-1.546	3.5
30	MP3A	Mx	.001	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	10.233	1.5
2	M5	Z	0	1.5
3	M5	Mx	0	1.5
4	MP1A	X	.44	4
5	MP1A	Z	0	4
6	MP1A	Mx	-.00022	4
7	MP2A	X	6.731	1
8	MP2A	Z	0	1
9	MP2A	Mx	-.003	1
10	MP2A	X	6.731	7
11	MP2A	Z	0	7
12	MP2A	Mx	-.003	7
13	MP2A	X	6.731	1
14	MP2A	Z	0	1
15	MP2A	Mx	-.003	1
16	MP2A	X	6.731	7
17	MP2A	Z	0	7
18	MP2A	Mx	-.003	7
19	MP4A	X	2.319	2.5
20	MP4A	Z	0	2.5
21	MP4A	Mx	-.001	2.5
22	MP4A	X	2.319	5.5
23	MP4A	Z	0	5.5
24	MP4A	Mx	-.001	5.5
25	MP2A	X	3.15	3.5
26	MP2A	Z	0	3.5
27	MP2A	Mx	.002	3.5
28	MP3A	X	2.552	3.5
29	MP3A	Z	0	3.5
30	MP3A	Mx	.001	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	8.336	1.5
2	M5	Z	4.813	1.5
3	M5	Mx	0	1.5
4	MP1A	X	.771	4
5	MP1A	Z	.445	4
6	MP1A	Mx	-.000386	4
7	MP2A	X	6.577	1
8	MP2A	Z	3.797	1
9	MP2A	Mx	-.001	1
10	MP2A	X	6.577	7
11	MP2A	Z	3.797	7
12	MP2A	Mx	-.001	7
13	MP2A	X	6.577	1
14	MP2A	Z	3.797	1
15	MP2A	Mx	-.006	1
16	MP2A	X	6.577	7

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP2A	Z	3.797	7
18	MP2A	Mx	-.006	7
19	MP4A	X	2.788	2.5
20	MP4A	Z	1.61	2.5
21	MP4A	Mx	-.001	2.5
22	MP4A	X	2.788	5.5
23	MP4A	Z	1.61	5.5
24	MP4A	Mx	-.001	5.5
25	MP2A	X	3.067	3.5
26	MP2A	Z	1.771	3.5
27	MP2A	Mx	.002	3.5
28	MP3A	X	2.678	3.5
29	MP3A	Z	1.546	3.5
30	MP3A	Mx	.001	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	4.207	1.5
2	M5	Z	7.286	1.5
3	M5	Mx	0	1.5
4	MP1A	X	.896	4
5	MP1A	Z	1.552	4
6	MP1A	Mx	-.000448	4
7	MP2A	X	4.66	1
8	MP2A	Z	8.071	1
9	MP2A	Mx	.002	1
10	MP2A	X	4.66	7
11	MP2A	Z	8.071	7
12	MP2A	Mx	.002	7
13	MP2A	X	4.66	1
14	MP2A	Z	8.071	1
15	MP2A	Mx	-.007	1
16	MP2A	X	4.66	7
17	MP2A	Z	8.071	7
18	MP2A	Mx	-.007	7
19	MP4A	X	2.511	2.5
20	MP4A	Z	4.349	2.5
21	MP4A	Mx	-.001	2.5
22	MP4A	X	2.511	5.5
23	MP4A	Z	4.349	5.5
24	MP4A	Mx	-.001	5.5
25	MP2A	X	2.161	3.5
26	MP2A	Z	3.743	3.5
27	MP2A	Mx	.001	3.5
28	MP3A	X	2.086	3.5
29	MP3A	Z	3.614	3.5
30	MP3A	Mx	.001	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	0	1.5
2	M5	Z	7.807	1.5
3	M5	Mx	0	1.5
4	MP1A	X	0	4
5	MP1A	Z	2.243	4
6	MP1A	Mx	0	4
7	MP2A	X	0	1
8	MP2A	Z	10.182	1
9	MP2A	Mx	.006	1
10	MP2A	X	0	7

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
11	MP2A	Z	10.182	7
12	MP2A	Mx	.006	7
13	MP2A	X	0	1
14	MP2A	Z	10.182	1
15	MP2A	Mx	-.006	1
16	MP2A	X	0	7
17	MP2A	Z	10.182	7
18	MP2A	Mx	-.006	7
19	MP4A	X	0	2.5
20	MP4A	Z	5.923	2.5
21	MP4A	Mx	0	2.5
22	MP4A	X	0	5.5
23	MP4A	Z	5.923	5.5
24	MP4A	Mx	0	5.5
25	MP2A	X	0	3.5
26	MP2A	Z	4.713	3.5
27	MP2A	Mx	0	3.5
28	MP3A	X	0	3.5
29	MP3A	Z	4.713	3.5
30	MP3A	Mx	0	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	-4.207	1.5
2	M5	Z	7.286	1.5
3	M5	Mx	0	1.5
4	MP1A	X	-.896	4
5	MP1A	Z	1.552	4
6	MP1A	Mx	.000448	4
7	MP2A	X	-4.66	1
8	MP2A	Z	8.071	1
9	MP2A	Mx	.007	1
10	MP2A	X	-4.66	7
11	MP2A	Z	8.071	7
12	MP2A	Mx	.007	7
13	MP2A	X	-4.66	1
14	MP2A	Z	8.071	1
15	MP2A	Mx	-.002	1
16	MP2A	X	-4.66	7
17	MP2A	Z	8.071	7
18	MP2A	Mx	-.002	7
19	MP4A	X	-2.511	2.5
20	MP4A	Z	4.349	2.5
21	MP4A	Mx	.001	2.5
22	MP4A	X	-2.511	5.5
23	MP4A	Z	4.349	5.5
24	MP4A	Mx	.001	5.5
25	MP2A	X	-2.161	3.5
26	MP2A	Z	3.743	3.5
27	MP2A	Mx	-.001	3.5
28	MP3A	X	-2.086	3.5
29	MP3A	Z	3.614	3.5
30	MP3A	Mx	-.001	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	-8.336	1.5
2	M5	Z	4.813	1.5
3	M5	Mx	0	1.5
4	MP1A	X	-.771	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
5	MP1A	Z	.445	4
6	MP1A	Mx	.000386	4
7	MP2A	X	-6.577	1
8	MP2A	Z	3.797	1
9	MP2A	Mx	.006	1
10	MP2A	X	-6.577	7
11	MP2A	Z	3.797	7
12	MP2A	Mx	.006	7
13	MP2A	X	-6.577	1
14	MP2A	Z	3.797	1
15	MP2A	Mx	.001	1
16	MP2A	X	-6.577	7
17	MP2A	Z	3.797	7
18	MP2A	Mx	.001	7
19	MP4A	X	-2.788	2.5
20	MP4A	Z	1.61	2.5
21	MP4A	Mx	.001	2.5
22	MP4A	X	-2.788	5.5
23	MP4A	Z	1.61	5.5
24	MP4A	Mx	.001	5.5
25	MP2A	X	-3.067	3.5
26	MP2A	Z	1.771	3.5
27	MP2A	Mx	-.002	3.5
28	MP3A	X	-2.678	3.5
29	MP3A	Z	1.546	3.5
30	MP3A	Mx	-.001	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	-10.233	1.5
2	M5	Z	0	1.5
3	M5	Mx	0	1.5
4	MP1A	X	-.44	4
5	MP1A	Z	0	4
6	MP1A	Mx	.00022	4
7	MP2A	X	-6.731	1
8	MP2A	Z	0	1
9	MP2A	Mx	.003	1
10	MP2A	X	-6.731	7
11	MP2A	Z	0	7
12	MP2A	Mx	.003	7
13	MP2A	X	-6.731	1
14	MP2A	Z	0	1
15	MP2A	Mx	.003	1
16	MP2A	X	-6.731	7
17	MP2A	Z	0	7
18	MP2A	Mx	.003	7
19	MP4A	X	-2.319	2.5
20	MP4A	Z	0	2.5
21	MP4A	Mx	.001	2.5
22	MP4A	X	-2.319	5.5
23	MP4A	Z	0	5.5
24	MP4A	Mx	.001	5.5
25	MP2A	X	-3.15	3.5
26	MP2A	Z	0	3.5
27	MP2A	Mx	-.002	3.5
28	MP3A	X	-2.552	3.5
29	MP3A	Z	0	3.5
30	MP3A	Mx	-.001	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	-8.336	1.5
2	M5	Z	-4.813	1.5
3	M5	Mx	0	1.5
4	MP1A	X	-.771	4
5	MP1A	Z	-.445	4
6	MP1A	Mx	.000386	4
7	MP2A	X	-6.577	1
8	MP2A	Z	-3.797	1
9	MP2A	Mx	.001	1
10	MP2A	X	-6.577	7
11	MP2A	Z	-3.797	7
12	MP2A	Mx	.001	7
13	MP2A	X	-6.577	1
14	MP2A	Z	-3.797	1
15	MP2A	Mx	.006	1
16	MP2A	X	-6.577	7
17	MP2A	Z	-3.797	7
18	MP2A	Mx	.006	7
19	MP4A	X	-2.788	2.5
20	MP4A	Z	-1.61	2.5
21	MP4A	Mx	.001	2.5
22	MP4A	X	-2.788	5.5
23	MP4A	Z	-1.61	5.5
24	MP4A	Mx	.001	5.5
25	MP2A	X	-3.067	3.5
26	MP2A	Z	-1.771	3.5
27	MP2A	Mx	-.002	3.5
28	MP3A	X	-2.678	3.5
29	MP3A	Z	-1.546	3.5
30	MP3A	Mx	-.001	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M5	X	-4.207	1.5
2	M5	Z	-7.286	1.5
3	M5	Mx	0	1.5
4	MP1A	X	-.896	4
5	MP1A	Z	-1.552	4
6	MP1A	Mx	.000448	4
7	MP2A	X	-4.66	1
8	MP2A	Z	-8.071	1
9	MP2A	Mx	-.002	1
10	MP2A	X	-4.66	7
11	MP2A	Z	-8.071	7
12	MP2A	Mx	-.002	7
13	MP2A	X	-4.66	1
14	MP2A	Z	-8.071	1
15	MP2A	Mx	.007	1
16	MP2A	X	-4.66	7
17	MP2A	Z	-8.071	7
18	MP2A	Mx	.007	7
19	MP4A	X	-2.511	2.5
20	MP4A	Z	-4.349	2.5
21	MP4A	Mx	.001	2.5
22	MP4A	X	-2.511	5.5
23	MP4A	Z	-4.349	5.5
24	MP4A	Mx	.001	5.5
25	MP2A	X	-2.161	3.5
26	MP2A	Z	-3.743	3.5
27	MP2A	Mx	-.001	3.5
28	MP3A	X	-2.086	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP3A	Z	-3.614	3.5
30	MP3A	Mx	-.001	3.5

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M30	Y	-500	0

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M34	Y	-500	0

Member Point Loads (BLC 79 : Lv1)

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

Member Point Loads (BLC 80 : Lv2)

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

Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Y	-9.564	-9.564	0	%100
2	M2	Y	-9.564	-9.564	0	%100
3	M3	Y	-8.521	-8.521	0	%100
4	M4	Y	-8.521	-8.521	0	%100
5	M5	Y	-8.521	-8.521	0	%100
6	M6	Y	-8.521	-8.521	0	%100
7	M7	Y	-5.13	-5.13	0	%100
8	M8	Y	-5.13	-5.13	0	%100
9	M9	Y	-5.13	-5.13	0	%100
10	M10	Y	-5.13	-5.13	0	%100
11	M11	Y	-10.869	-10.869	0	%100
12	M12	Y	-14.051	-14.051	0	%100
13	M13	Y	-14.051	-14.051	0	%100
14	M14	Y	-14.051	-14.051	0	%100
15	M15	Y	-14.051	-14.051	0	%100
16	M16	Y	-14.051	-14.051	0	%100
17	M17	Y	-14.051	-14.051	0	%100
18	M18	Y	-14.051	-14.051	0	%100
19	M19	Y	-14.051	-14.051	0	%100
20	M20	Y	-14.051	-14.051	0	%100
21	M21	Y	-14.051	-14.051	0	%100
22	M22	Y	-14.051	-14.051	0	%100
23	M23	Y	-14.051	-14.051	0	%100
24	M24	Y	-8.521	-8.521	0	%100
25	MP1A	Y	-8.521	-8.521	0	%100
26	MP2A	Y	-8.521	-8.521	0	%100
27	MP3A	Y	-8.521	-8.521	0	%100
28	MP4A	Y	-8.521	-8.521	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	-11.21	-11.21	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-11.21	-11.21	0	%100
5	M3	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
6	M3	Z	-3.779	-3.779	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	-3.779	-3.779	0	%100
9	M5	X	0	0	0	%100
10	M5	Z	-3.779	-3.779	0	%100
11	M6	X	0	0	0	%100
12	M6	Z	-3.779	-3.779	0	%100
13	M7	X	0	0	0	%100
14	M7	Z	-2.924	-2.924	0	%100
15	M8	X	0	0	0	%100
16	M8	Z	-2.924	-2.924	0	%100
17	M9	X	0	0	0	%100
18	M9	Z	-2.134	-2.134	0	%100
19	M10	X	0	0	0	%100
20	M10	Z	-2.134	-2.134	0	%100
21	M11	X	0	0	0	%100
22	M11	Z	-10.795	-10.795	0	%100
23	M12	X	0	0	0	%100
24	M12	Z	-.976	-.976	0	%100
25	M13	X	0	0	0	%100
26	M13	Z	-.976	-.976	0	%100
27	M14	X	0	0	0	%100
28	M14	Z	-.975	-.975	0	%100
29	M15	X	0	0	0	%100
30	M15	Z	-.975	-.975	0	%100
31	M16	X	0	0	0	%100
32	M16	Z	-.975	-.975	0	%100
33	M17	X	0	0	0	%100
34	M17	Z	-.975	-.975	0	%100
35	M18	X	0	0	0	%100
36	M18	Z	-.975	-.975	0	%100
37	M19	X	0	0	0	%100
38	M19	Z	-.975	-.975	0	%100
39	M20	X	0	0	0	%100
40	M20	Z	-.975	-.975	0	%100
41	M21	X	0	0	0	%100
42	M21	Z	-.975	-.975	0	%100
43	M22	X	0	0	0	%100
44	M22	Z	-.975	-.975	0	%100
45	M23	X	0	0	0	%100
46	M23	Z	-.975	-.975	0	%100
47	M24	X	0	0	0	%100
48	M24	Z	-.572	-.572	0	%100
49	MP1A	X	0	0	0	%100
50	MP1A	Z	-9.261	-9.261	0	%100
51	MP2A	X	0	0	0	%100
52	MP2A	Z	-9.261	-9.261	0	%100
53	MP3A	X	0	0	0	%100
54	MP3A	Z	-9.261	-9.261	0	%100
55	MP4A	X	0	0	0	%100
56	MP4A	Z	-9.261	-9.261	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	4.204	4.204	0	%100
2	M1	Z	-7.281	-7.281	0	%100
3	M2	X	4.204	4.204	0	%100
4	M2	Z	-7.281	-7.281	0	%100
5	M3	X	.253	.253	0	%100
6	M3	Z	-.438	-.438	0	%100
7	M4	X	.253	.253	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
8	M4	Z	-.438	-.438	0	%100
9	M5	X	3.526	3.526	0	%100
10	M5	Z	-6.107	-6.107	0	%100
11	M6	X	3.526	3.526	0	%100
12	M6	Z	-6.107	-6.107	0	%100
13	M7	X	1.462	1.462	0	%100
14	M7	Z	-2.533	-2.533	0	%100
15	M8	X	1.462	1.462	0	%100
16	M8	Z	-2.533	-2.533	0	%100
17	M9	X	.725	.725	0	%100
18	M9	Z	-1.255	-1.255	0	%100
19	M10	X	1.409	1.409	0	%100
20	M10	Z	-2.441	-2.441	0	%100
21	M11	X	5.398	5.398	0	%100
22	M11	Z	-9.349	-9.349	0	%100
23	M12	X	.065	.065	0	%100
24	M12	Z	-.113	-.113	0	%100
25	M13	X	.065	.065	0	%100
26	M13	Z	-.113	-.113	0	%100
27	M14	X	.91	.91	0	%100
28	M14	Z	-1.575	-1.575	0	%100
29	M15	X	.91	.91	0	%100
30	M15	Z	-1.575	-1.575	0	%100
31	M16	X	.065	.065	0	%100
32	M16	Z	-.113	-.113	0	%100
33	M17	X	.065	.065	0	%100
34	M17	Z	-.113	-.113	0	%100
35	M18	X	.065	.065	0	%100
36	M18	Z	-.113	-.113	0	%100
37	M19	X	.065	.065	0	%100
38	M19	Z	-.113	-.113	0	%100
39	M20	X	.91	.91	0	%100
40	M20	Z	-1.575	-1.575	0	%100
41	M21	X	.91	.91	0	%100
42	M21	Z	-1.575	-1.575	0	%100
43	M22	X	.91	.91	0	%100
44	M22	Z	-1.575	-1.575	0	%100
45	M23	X	.91	.91	0	%100
46	M23	Z	-1.575	-1.575	0	%100
47	M24	X	.336	.336	0	%100
48	M24	Z	-.581	-.581	0	%100
49	MP1A	X	4.63	4.63	0	%100
50	MP1A	Z	-8.02	-8.02	0	%100
51	MP2A	X	4.63	4.63	0	%100
52	MP2A	Z	-8.02	-8.02	0	%100
53	MP3A	X	4.63	4.63	0	%100
54	MP3A	Z	-8.02	-8.02	0	%100
55	MP4A	X	4.63	4.63	0	%100
56	MP4A	Z	-8.02	-8.02	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	2.427	2.427	0	%100
2	M1	Z	-1.401	-1.401	0	%100
3	M2	X	2.427	2.427	0	%100
4	M2	Z	-1.401	-1.401	0	%100
5	M3	X	.439	.439	0	%100
6	M3	Z	-.253	-.253	0	%100
7	M4	X	.439	.439	0	%100
8	M4	Z	-.253	-.253	0	%100
9	M5	X	6.107	6.107	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
10	M5	Z	-3.526	-3.526	0	%100
11	M6	X	6.107	6.107	0	%100
12	M6	Z	-3.526	-3.526	0	%100
13	M7	X	2.533	2.533	0	%100
14	M7	Z	-1.462	-1.462	0	%100
15	M8	X	2.533	2.533	0	%100
16	M8	Z	-1.462	-1.462	0	%100
17	M9	X	1.255	1.255	0	%100
18	M9	Z	-.725	-.725	0	%100
19	M10	X	2.441	2.441	0	%100
20	M10	Z	-1.409	-1.409	0	%100
21	M11	X	9.349	9.349	0	%100
22	M11	Z	-5.398	-5.398	0	%100
23	M12	X	.113	.113	0	%100
24	M12	Z	-.065	-.065	0	%100
25	M13	X	.113	.113	0	%100
26	M13	Z	-.065	-.065	0	%100
27	M14	X	1.575	1.575	0	%100
28	M14	Z	-.91	-.91	0	%100
29	M15	X	1.575	1.575	0	%100
30	M15	Z	-.91	-.91	0	%100
31	M16	X	.113	.113	0	%100
32	M16	Z	-.065	-.065	0	%100
33	M17	X	.113	.113	0	%100
34	M17	Z	-.065	-.065	0	%100
35	M18	X	.113	.113	0	%100
36	M18	Z	-.065	-.065	0	%100
37	M19	X	.113	.113	0	%100
38	M19	Z	-.065	-.065	0	%100
39	M20	X	1.575	1.575	0	%100
40	M20	Z	-.91	-.91	0	%100
41	M21	X	1.575	1.575	0	%100
42	M21	Z	-.91	-.91	0	%100
43	M22	X	1.575	1.575	0	%100
44	M22	Z	-.91	-.91	0	%100
45	M23	X	1.575	1.575	0	%100
46	M23	Z	-.91	-.91	0	%100
47	M24	X	4.096	4.096	0	%100
48	M24	Z	-2.365	-2.365	0	%100
49	MP1A	X	8.02	8.02	0	%100
50	MP1A	Z	-4.63	-4.63	0	%100
51	MP2A	X	8.02	8.02	0	%100
52	MP2A	Z	-4.63	-4.63	0	%100
53	MP3A	X	8.02	8.02	0	%100
54	MP3A	Z	-4.63	-4.63	0	%100
55	MP4A	X	8.02	8.02	0	%100
56	MP4A	Z	-4.63	-4.63	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	M3	X	3.779	3.779	0	%100
6	M3	Z	0	0	0	%100
7	M4	X	3.779	3.779	0	%100
8	M4	Z	0	0	0	%100
9	M5	X	3.779	3.779	0	%100
10	M5	Z	0	0	0	%100
11	M6	X	3.779	3.779	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
12	M6	Z	0	0	0	%100
13	M7	X	2.924	2.924	0	%100
14	M7	Z	0	0	0	%100
15	M8	X	2.924	2.924	0	%100
16	M8	Z	0	0	0	%100
17	M9	X	2.134	2.134	0	%100
18	M9	Z	0	0	0	%100
19	M10	X	2.134	2.134	0	%100
20	M10	Z	0	0	0	%100
21	M11	X	10.795	10.795	0	%100
22	M11	Z	0	0	0	%100
23	M12	X	.974	.974	0	%100
24	M12	Z	0	0	0	%100
25	M13	X	.974	.974	0	%100
26	M13	Z	0	0	0	%100
27	M14	X	.975	.975	0	%100
28	M14	Z	0	0	0	%100
29	M15	X	.975	.975	0	%100
30	M15	Z	0	0	0	%100
31	M16	X	.975	.975	0	%100
32	M16	Z	0	0	0	%100
33	M17	X	.975	.975	0	%100
34	M17	Z	0	0	0	%100
35	M18	X	.975	.975	0	%100
36	M18	Z	0	0	0	%100
37	M19	X	.975	.975	0	%100
38	M19	Z	0	0	0	%100
39	M20	X	.975	.975	0	%100
40	M20	Z	0	0	0	%100
41	M21	X	.975	.975	0	%100
42	M21	Z	0	0	0	%100
43	M22	X	.975	.975	0	%100
44	M22	Z	0	0	0	%100
45	M23	X	.975	.975	0	%100
46	M23	Z	0	0	0	%100
47	M24	X	8.689	8.689	0	%100
48	M24	Z	0	0	0	%100
49	MP1A	X	9.261	9.261	0	%100
50	MP1A	Z	0	0	0	%100
51	MP2A	X	9.261	9.261	0	%100
52	MP2A	Z	0	0	0	%100
53	MP3A	X	9.261	9.261	0	%100
54	MP3A	Z	0	0	0	%100
55	MP4A	X	9.261	9.261	0	%100
56	MP4A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	2.427	2.427	0	%100
2	M1	Z	1.401	1.401	0	%100
3	M2	X	2.427	2.427	0	%100
4	M2	Z	1.401	1.401	0	%100
5	M3	X	6.107	6.107	0	%100
6	M3	Z	3.526	3.526	0	%100
7	M4	X	6.107	6.107	0	%100
8	M4	Z	3.526	3.526	0	%100
9	M5	X	.438	.438	0	%100
10	M5	Z	.253	.253	0	%100
11	M6	X	.438	.438	0	%100
12	M6	Z	.253	.253	0	%100
13	M7	X	2.533	2.533	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
14	M7	Z	1.462	1.462	0	%100
15	M8	X	2.533	2.533	0	%100
16	M8	Z	1.462	1.462	0	%100
17	M9	X	2.441	2.441	0	%100
18	M9	Z	1.409	1.409	0	%100
19	M10	X	1.255	1.255	0	%100
20	M10	Z	.725	.725	0	%100
21	M11	X	9.349	9.349	0	%100
22	M11	Z	5.398	5.398	0	%100
23	M12	X	1.575	1.575	0	%100
24	M12	Z	.909	.909	0	%100
25	M13	X	1.575	1.575	0	%100
26	M13	Z	.909	.909	0	%100
27	M14	X	.113	.113	0	%100
28	M14	Z	.065	.065	0	%100
29	M15	X	.113	.113	0	%100
30	M15	Z	.065	.065	0	%100
31	M16	X	1.575	1.575	0	%100
32	M16	Z	.91	.91	0	%100
33	M17	X	1.575	1.575	0	%100
34	M17	Z	.91	.91	0	%100
35	M18	X	1.575	1.575	0	%100
36	M18	Z	.91	.91	0	%100
37	M19	X	1.575	1.575	0	%100
38	M19	Z	.91	.91	0	%100
39	M20	X	.113	.113	0	%100
40	M20	Z	.065	.065	0	%100
41	M21	X	.113	.113	0	%100
42	M21	Z	.065	.065	0	%100
43	M22	X	.113	.113	0	%100
44	M22	Z	.065	.065	0	%100
45	M23	X	.113	.113	0	%100
46	M23	Z	.065	.065	0	%100
47	M24	X	7.439	7.439	0	%100
48	M24	Z	4.295	4.295	0	%100
49	MP1A	X	8.02	8.02	0	%100
50	MP1A	Z	4.63	4.63	0	%100
51	MP2A	X	8.02	8.02	0	%100
52	MP2A	Z	4.63	4.63	0	%100
53	MP3A	X	8.02	8.02	0	%100
54	MP3A	Z	4.63	4.63	0	%100
55	MP4A	X	8.02	8.02	0	%100
56	MP4A	Z	4.63	4.63	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	4.204	4.204	0	%100
2	M1	Z	7.281	7.281	0	%100
3	M2	X	4.204	4.204	0	%100
4	M2	Z	7.281	7.281	0	%100
5	M3	X	3.526	3.526	0	%100
6	M3	Z	6.107	6.107	0	%100
7	M4	X	3.526	3.526	0	%100
8	M4	Z	6.107	6.107	0	%100
9	M5	X	.253	.253	0	%100
10	M5	Z	.438	.438	0	%100
11	M6	X	.253	.253	0	%100
12	M6	Z	.438	.438	0	%100
13	M7	X	1.462	1.462	0	%100
14	M7	Z	2.533	2.533	0	%100
15	M8	X	1.462	1.462	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
16	M8	Z	2.533	2.533	0	%100
17	M9	X	1.409	1.409	0	%100
18	M9	Z	2.441	2.441	0	%100
19	M10	X	.725	.725	0	%100
20	M10	Z	1.255	1.255	0	%100
21	M11	X	5.398	5.398	0	%100
22	M11	Z	9.349	9.349	0	%100
23	M12	X	.91	.91	0	%100
24	M12	Z	1.576	1.576	0	%100
25	M13	X	.91	.91	0	%100
26	M13	Z	1.576	1.576	0	%100
27	M14	X	.065	.065	0	%100
28	M14	Z	.113	.113	0	%100
29	M15	X	.065	.065	0	%100
30	M15	Z	.113	.113	0	%100
31	M16	X	.91	.91	0	%100
32	M16	Z	1.575	1.575	0	%100
33	M17	X	.91	.91	0	%100
34	M17	Z	1.575	1.575	0	%100
35	M18	X	.91	.91	0	%100
36	M18	Z	1.575	1.575	0	%100
37	M19	X	.91	.91	0	%100
38	M19	Z	1.575	1.575	0	%100
39	M20	X	.065	.065	0	%100
40	M20	Z	.113	.113	0	%100
41	M21	X	.065	.065	0	%100
42	M21	Z	.113	.113	0	%100
43	M22	X	.065	.065	0	%100
44	M22	Z	.113	.113	0	%100
45	M23	X	.065	.065	0	%100
46	M23	Z	.113	.113	0	%100
47	M24	X	2.265	2.265	0	%100
48	M24	Z	3.924	3.924	0	%100
49	MP1A	X	4.63	4.63	0	%100
50	MP1A	Z	8.02	8.02	0	%100
51	MP2A	X	4.63	4.63	0	%100
52	MP2A	Z	8.02	8.02	0	%100
53	MP3A	X	4.63	4.63	0	%100
54	MP3A	Z	8.02	8.02	0	%100
55	MP4A	X	4.63	4.63	0	%100
56	MP4A	Z	8.02	8.02	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	11.21	11.21	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	11.21	11.21	0	%100
5	M3	X	0	0	0	%100
6	M3	Z	3.779	3.779	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	3.779	3.779	0	%100
9	M5	X	0	0	0	%100
10	M5	Z	3.779	3.779	0	%100
11	M6	X	0	0	0	%100
12	M6	Z	3.779	3.779	0	%100
13	M7	X	0	0	0	%100
14	M7	Z	2.924	2.924	0	%100
15	M8	X	0	0	0	%100
16	M8	Z	2.924	2.924	0	%100
17	M9	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
18	M9	Z	2.134	2.134	0	%100
19	M10	X	0	0	0	%100
20	M10	Z	2.134	2.134	0	%100
21	M11	X	0	0	0	%100
22	M11	Z	10.795	10.795	0	%100
23	M12	X	0	0	0	%100
24	M12	Z	.976	.976	0	%100
25	M13	X	0	0	0	%100
26	M13	Z	.976	.976	0	%100
27	M14	X	0	0	0	%100
28	M14	Z	.975	.975	0	%100
29	M15	X	0	0	0	%100
30	M15	Z	.975	.975	0	%100
31	M16	X	0	0	0	%100
32	M16	Z	.975	.975	0	%100
33	M17	X	0	0	0	%100
34	M17	Z	.975	.975	0	%100
35	M18	X	0	0	0	%100
36	M18	Z	.975	.975	0	%100
37	M19	X	0	0	0	%100
38	M19	Z	.975	.975	0	%100
39	M20	X	0	0	0	%100
40	M20	Z	.975	.975	0	%100
41	M21	X	0	0	0	%100
42	M21	Z	.975	.975	0	%100
43	M22	X	0	0	0	%100
44	M22	Z	.975	.975	0	%100
45	M23	X	0	0	0	%100
46	M23	Z	.975	.975	0	%100
47	M24	X	0	0	0	%100
48	M24	Z	.572	.572	0	%100
49	MP1A	X	0	0	0	%100
50	MP1A	Z	9.261	9.261	0	%100
51	MP2A	X	0	0	0	%100
52	MP2A	Z	9.261	9.261	0	%100
53	MP3A	X	0	0	0	%100
54	MP3A	Z	9.261	9.261	0	%100
55	MP4A	X	0	0	0	%100
56	MP4A	Z	9.261	9.261	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-4.204	-4.204	0	%100
2	M1	Z	7.281	7.281	0	%100
3	M2	X	-4.204	-4.204	0	%100
4	M2	Z	7.281	7.281	0	%100
5	M3	X	-.253	-.253	0	%100
6	M3	Z	.438	.438	0	%100
7	M4	X	-.253	-.253	0	%100
8	M4	Z	.438	.438	0	%100
9	M5	X	-3.526	-3.526	0	%100
10	M5	Z	6.107	6.107	0	%100
11	M6	X	-3.526	-3.526	0	%100
12	M6	Z	6.107	6.107	0	%100
13	M7	X	-1.462	-1.462	0	%100
14	M7	Z	2.533	2.533	0	%100
15	M8	X	-1.462	-1.462	0	%100
16	M8	Z	2.533	2.533	0	%100
17	M9	X	-.725	-.725	0	%100
18	M9	Z	1.255	1.255	0	%100
19	M10	X	-1.409	-1.409	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
20	M10	Z	2.441	2.441	0	%100
21	M11	X	-5.398	-5.398	0	%100
22	M11	Z	9.349	9.349	0	%100
23	M12	X	-.065	-.065	0	%100
24	M12	Z	.113	.113	0	%100
25	M13	X	-.065	-.065	0	%100
26	M13	Z	.113	.113	0	%100
27	M14	X	-.91	-.91	0	%100
28	M14	Z	1.575	1.575	0	%100
29	M15	X	-.91	-.91	0	%100
30	M15	Z	1.575	1.575	0	%100
31	M16	X	-.065	-.065	0	%100
32	M16	Z	.113	.113	0	%100
33	M17	X	-.065	-.065	0	%100
34	M17	Z	.113	.113	0	%100
35	M18	X	-.065	-.065	0	%100
36	M18	Z	.113	.113	0	%100
37	M19	X	-.065	-.065	0	%100
38	M19	Z	.113	.113	0	%100
39	M20	X	-.91	-.91	0	%100
40	M20	Z	1.575	1.575	0	%100
41	M21	X	-.91	-.91	0	%100
42	M21	Z	1.575	1.575	0	%100
43	M22	X	-.91	-.91	0	%100
44	M22	Z	1.575	1.575	0	%100
45	M23	X	-.91	-.91	0	%100
46	M23	Z	1.575	1.575	0	%100
47	M24	X	-.336	-.336	0	%100
48	M24	Z	.581	.581	0	%100
49	MP1A	X	-4.63	-4.63	0	%100
50	MP1A	Z	8.02	8.02	0	%100
51	MP2A	X	-4.63	-4.63	0	%100
52	MP2A	Z	8.02	8.02	0	%100
53	MP3A	X	-4.63	-4.63	0	%100
54	MP3A	Z	8.02	8.02	0	%100
55	MP4A	X	-4.63	-4.63	0	%100
56	MP4A	Z	8.02	8.02	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-2.427	-2.427	0	%100
2	M1	Z	1.401	1.401	0	%100
3	M2	X	-2.427	-2.427	0	%100
4	M2	Z	1.401	1.401	0	%100
5	M3	X	-.439	-.439	0	%100
6	M3	Z	.253	.253	0	%100
7	M4	X	-.439	-.439	0	%100
8	M4	Z	.253	.253	0	%100
9	M5	X	-6.107	-6.107	0	%100
10	M5	Z	3.526	3.526	0	%100
11	M6	X	-6.107	-6.107	0	%100
12	M6	Z	3.526	3.526	0	%100
13	M7	X	-2.533	-2.533	0	%100
14	M7	Z	1.462	1.462	0	%100
15	M8	X	-2.533	-2.533	0	%100
16	M8	Z	1.462	1.462	0	%100
17	M9	X	-1.255	-1.255	0	%100
18	M9	Z	.725	.725	0	%100
19	M10	X	-2.441	-2.441	0	%100
20	M10	Z	1.409	1.409	0	%100
21	M11	X	-9.349	-9.349	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
22	M11	Z	5.398	5.398	0	%100
23	M12	X	-.113	-.113	0	%100
24	M12	Z	.065	.065	0	%100
25	M13	X	-.113	-.113	0	%100
26	M13	Z	.065	.065	0	%100
27	M14	X	-1.575	-1.575	0	%100
28	M14	Z	.91	.91	0	%100
29	M15	X	-1.575	-1.575	0	%100
30	M15	Z	.91	.91	0	%100
31	M16	X	-.113	-.113	0	%100
32	M16	Z	.065	.065	0	%100
33	M17	X	-.113	-.113	0	%100
34	M17	Z	.065	.065	0	%100
35	M18	X	-.113	-.113	0	%100
36	M18	Z	.065	.065	0	%100
37	M19	X	-.113	-.113	0	%100
38	M19	Z	.065	.065	0	%100
39	M20	X	-1.575	-1.575	0	%100
40	M20	Z	.91	.91	0	%100
41	M21	X	-1.575	-1.575	0	%100
42	M21	Z	.91	.91	0	%100
43	M22	X	-1.575	-1.575	0	%100
44	M22	Z	.91	.91	0	%100
45	M23	X	-1.575	-1.575	0	%100
46	M23	Z	.91	.91	0	%100
47	M24	X	-4.096	-4.096	0	%100
48	M24	Z	2.365	2.365	0	%100
49	MP1A	X	-8.02	-8.02	0	%100
50	MP1A	Z	4.63	4.63	0	%100
51	MP2A	X	-8.02	-8.02	0	%100
52	MP2A	Z	4.63	4.63	0	%100
53	MP3A	X	-8.02	-8.02	0	%100
54	MP3A	Z	4.63	4.63	0	%100
55	MP4A	X	-8.02	-8.02	0	%100
56	MP4A	Z	4.63	4.63	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	M3	X	-3.779	-3.779	0	%100
6	M3	Z	0	0	0	%100
7	M4	X	-3.779	-3.779	0	%100
8	M4	Z	0	0	0	%100
9	M5	X	-3.779	-3.779	0	%100
10	M5	Z	0	0	0	%100
11	M6	X	-3.779	-3.779	0	%100
12	M6	Z	0	0	0	%100
13	M7	X	-2.924	-2.924	0	%100
14	M7	Z	0	0	0	%100
15	M8	X	-2.924	-2.924	0	%100
16	M8	Z	0	0	0	%100
17	M9	X	-2.134	-2.134	0	%100
18	M9	Z	0	0	0	%100
19	M10	X	-2.134	-2.134	0	%100
20	M10	Z	0	0	0	%100
21	M11	X	-10.795	-10.795	0	%100
22	M11	Z	0	0	0	%100
23	M12	X	-.974	-.974	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
24	M12	Z	0	0	0	%100
25	M13	X	-.974	-.974	0	%100
26	M13	Z	0	0	0	%100
27	M14	X	-.975	-.975	0	%100
28	M14	Z	0	0	0	%100
29	M15	X	-.975	-.975	0	%100
30	M15	Z	0	0	0	%100
31	M16	X	-.975	-.975	0	%100
32	M16	Z	0	0	0	%100
33	M17	X	-.975	-.975	0	%100
34	M17	Z	0	0	0	%100
35	M18	X	-.975	-.975	0	%100
36	M18	Z	0	0	0	%100
37	M19	X	-.975	-.975	0	%100
38	M19	Z	0	0	0	%100
39	M20	X	-.975	-.975	0	%100
40	M20	Z	0	0	0	%100
41	M21	X	-.975	-.975	0	%100
42	M21	Z	0	0	0	%100
43	M22	X	-.975	-.975	0	%100
44	M22	Z	0	0	0	%100
45	M23	X	-.975	-.975	0	%100
46	M23	Z	0	0	0	%100
47	M24	X	-8.689	-8.689	0	%100
48	M24	Z	0	0	0	%100
49	MP1A	X	-9.261	-9.261	0	%100
50	MP1A	Z	0	0	0	%100
51	MP2A	X	-9.261	-9.261	0	%100
52	MP2A	Z	0	0	0	%100
53	MP3A	X	-9.261	-9.261	0	%100
54	MP3A	Z	0	0	0	%100
55	MP4A	X	-9.261	-9.261	0	%100
56	MP4A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-2.427	-2.427	0	%100
2	M1	Z	-1.401	-1.401	0	%100
3	M2	X	-2.427	-2.427	0	%100
4	M2	Z	-1.401	-1.401	0	%100
5	M3	X	-6.107	-6.107	0	%100
6	M3	Z	-3.526	-3.526	0	%100
7	M4	X	-6.107	-6.107	0	%100
8	M4	Z	-3.526	-3.526	0	%100
9	M5	X	-.438	-.438	0	%100
10	M5	Z	-.253	-.253	0	%100
11	M6	X	-.438	-.438	0	%100
12	M6	Z	-.253	-.253	0	%100
13	M7	X	-2.533	-2.533	0	%100
14	M7	Z	-1.462	-1.462	0	%100
15	M8	X	-2.533	-2.533	0	%100
16	M8	Z	-1.462	-1.462	0	%100
17	M9	X	-2.441	-2.441	0	%100
18	M9	Z	-1.409	-1.409	0	%100
19	M10	X	-1.255	-1.255	0	%100
20	M10	Z	-.725	-.725	0	%100
21	M11	X	-9.349	-9.349	0	%100
22	M11	Z	-5.398	-5.398	0	%100
23	M12	X	-1.575	-1.575	0	%100
24	M12	Z	-.909	-.909	0	%100
25	M13	X	-1.575	-1.575	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
26	M13	Z	-.909	-.909	0	%100
27	M14	X	-.113	-.113	0	%100
28	M14	Z	-.065	-.065	0	%100
29	M15	X	-.113	-.113	0	%100
30	M15	Z	-.065	-.065	0	%100
31	M16	X	-1.575	-1.575	0	%100
32	M16	Z	-.91	-.91	0	%100
33	M17	X	-1.575	-1.575	0	%100
34	M17	Z	-.91	-.91	0	%100
35	M18	X	-1.575	-1.575	0	%100
36	M18	Z	-.91	-.91	0	%100
37	M19	X	-1.575	-1.575	0	%100
38	M19	Z	-.91	-.91	0	%100
39	M20	X	-.113	-.113	0	%100
40	M20	Z	-.065	-.065	0	%100
41	M21	X	-.113	-.113	0	%100
42	M21	Z	-.065	-.065	0	%100
43	M22	X	-.113	-.113	0	%100
44	M22	Z	-.065	-.065	0	%100
45	M23	X	-.113	-.113	0	%100
46	M23	Z	-.065	-.065	0	%100
47	M24	X	-7.439	-7.439	0	%100
48	M24	Z	-4.295	-4.295	0	%100
49	MP1A	X	-8.02	-8.02	0	%100
50	MP1A	Z	-4.63	-4.63	0	%100
51	MP2A	X	-8.02	-8.02	0	%100
52	MP2A	Z	-4.63	-4.63	0	%100
53	MP3A	X	-8.02	-8.02	0	%100
54	MP3A	Z	-4.63	-4.63	0	%100
55	MP4A	X	-8.02	-8.02	0	%100
56	MP4A	Z	-4.63	-4.63	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-4.204	-4.204	0	%100
2	M1	Z	-7.281	-7.281	0	%100
3	M2	X	-4.204	-4.204	0	%100
4	M2	Z	-7.281	-7.281	0	%100
5	M3	X	-3.526	-3.526	0	%100
6	M3	Z	-6.107	-6.107	0	%100
7	M4	X	-3.526	-3.526	0	%100
8	M4	Z	-6.107	-6.107	0	%100
9	M5	X	-.253	-.253	0	%100
10	M5	Z	-.438	-.438	0	%100
11	M6	X	-.253	-.253	0	%100
12	M6	Z	-.438	-.438	0	%100
13	M7	X	-1.462	-1.462	0	%100
14	M7	Z	-2.533	-2.533	0	%100
15	M8	X	-1.462	-1.462	0	%100
16	M8	Z	-2.533	-2.533	0	%100
17	M9	X	-1.409	-1.409	0	%100
18	M9	Z	-2.441	-2.441	0	%100
19	M10	X	-.725	-.725	0	%100
20	M10	Z	-1.255	-1.255	0	%100
21	M11	X	-5.398	-5.398	0	%100
22	M11	Z	-9.349	-9.349	0	%100
23	M12	X	-.91	-.91	0	%100
24	M12	Z	-1.576	-1.576	0	%100
25	M13	X	-.91	-.91	0	%100
26	M13	Z	-1.576	-1.576	0	%100
27	M14	X	-.065	-.065	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
28	M14	Z	-.113	-.113	0	%100
29	M15	X	-.065	-.065	0	%100
30	M15	Z	-.113	-.113	0	%100
31	M16	X	-.91	-.91	0	%100
32	M16	Z	-1.575	-1.575	0	%100
33	M17	X	-.91	-.91	0	%100
34	M17	Z	-1.575	-1.575	0	%100
35	M18	X	-.91	-.91	0	%100
36	M18	Z	-1.575	-1.575	0	%100
37	M19	X	-.91	-.91	0	%100
38	M19	Z	-1.575	-1.575	0	%100
39	M20	X	-.065	-.065	0	%100
40	M20	Z	-.113	-.113	0	%100
41	M21	X	-.065	-.065	0	%100
42	M21	Z	-.113	-.113	0	%100
43	M22	X	-.065	-.065	0	%100
44	M22	Z	-.113	-.113	0	%100
45	M23	X	-.065	-.065	0	%100
46	M23	Z	-.113	-.113	0	%100
47	M24	X	-2.265	-2.265	0	%100
48	M24	Z	-3.924	-3.924	0	%100
49	MP1A	X	-4.63	-4.63	0	%100
50	MP1A	Z	-8.02	-8.02	0	%100
51	MP2A	X	-4.63	-4.63	0	%100
52	MP2A	Z	-8.02	-8.02	0	%100
53	MP3A	X	-4.63	-4.63	0	%100
54	MP3A	Z	-8.02	-8.02	0	%100
55	MP4A	X	-4.63	-4.63	0	%100
56	MP4A	Z	-8.02	-8.02	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	-4.404	-4.404	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-4.404	-4.404	0	%100
5	M3	X	0	0	0	%100
6	M3	Z	-1.553	-1.553	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	-1.553	-1.553	0	%100
9	M5	X	0	0	0	%100
10	M5	Z	-1.553	-1.553	0	%100
11	M6	X	0	0	0	%100
12	M6	Z	-1.553	-1.553	0	%100
13	M7	X	0	0	0	%100
14	M7	Z	-2.237	-2.237	0	%100
15	M8	X	0	0	0	%100
16	M8	Z	-2.237	-2.237	0	%100
17	M9	X	0	0	0	%100
18	M9	Z	-1.781	-1.781	0	%100
19	M10	X	0	0	0	%100
20	M10	Z	-1.781	-1.781	0	%100
21	M11	X	0	0	0	%100
22	M11	Z	-3.845	-3.845	0	%100
23	M12	X	0	0	0	%100
24	M12	Z	-.873	-.873	0	%100
25	M13	X	0	0	0	%100
26	M13	Z	-.873	-.873	0	%100
27	M14	X	0	0	0	%100
28	M14	Z	-.873	-.873	0	%100
29	M15	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
30	M15	Z	-.873	-.873	0	%100
31	M16	X	0	0	0	%100
32	M16	Z	-.873	-.873	0	%100
33	M17	X	0	0	0	%100
34	M17	Z	-.873	-.873	0	%100
35	M18	X	0	0	0	%100
36	M18	Z	-.873	-.873	0	%100
37	M19	X	0	0	0	%100
38	M19	Z	-.873	-.873	0	%100
39	M20	X	0	0	0	%100
40	M20	Z	-.873	-.873	0	%100
41	M21	X	0	0	0	%100
42	M21	Z	-.873	-.873	0	%100
43	M22	X	0	0	0	%100
44	M22	Z	-.873	-.873	0	%100
45	M23	X	0	0	0	%100
46	M23	Z	-.873	-.873	0	%100
47	M24	X	0	0	0	%100
48	M24	Z	-.245	-.245	0	%100
49	MP1A	X	0	0	0	%100
50	MP1A	Z	-4.054	-4.054	0	%100
51	MP2A	X	0	0	0	%100
52	MP2A	Z	-4.054	-4.054	0	%100
53	MP3A	X	0	0	0	%100
54	MP3A	Z	-4.054	-4.054	0	%100
55	MP4A	X	0	0	0	%100
56	MP4A	Z	-4.054	-4.054	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.652	1.652	0	%100
2	M1	Z	-2.861	-2.861	0	%100
3	M2	X	1.652	1.652	0	%100
4	M2	Z	-2.861	-2.861	0	%100
5	M3	X	.104	.104	0	%100
6	M3	Z	-.18	-.18	0	%100
7	M4	X	.104	.104	0	%100
8	M4	Z	-.18	-.18	0	%100
9	M5	X	1.449	1.449	0	%100
10	M5	Z	-2.509	-2.509	0	%100
11	M6	X	1.449	1.449	0	%100
12	M6	Z	-2.509	-2.509	0	%100
13	M7	X	1.119	1.119	0	%100
14	M7	Z	-1.938	-1.938	0	%100
15	M8	X	1.119	1.119	0	%100
16	M8	Z	-1.938	-1.938	0	%100
17	M9	X	.605	.605	0	%100
18	M9	Z	-1.048	-1.048	0	%100
19	M10	X	1.176	1.176	0	%100
20	M10	Z	-2.037	-2.037	0	%100
21	M11	X	1.922	1.922	0	%100
22	M11	Z	-3.33	-3.33	0	%100
23	M12	X	.059	.059	0	%100
24	M12	Z	-.102	-.102	0	%100
25	M13	X	.059	.059	0	%100
26	M13	Z	-.102	-.102	0	%100
27	M14	X	.814	.814	0	%100
28	M14	Z	-1.41	-1.41	0	%100
29	M15	X	.814	.814	0	%100
30	M15	Z	-1.41	-1.41	0	%100
31	M16	X	.058	.058	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
32	M16	Z	-.101	-.101	0	%100
33	M17	X	.058	.058	0	%100
34	M17	Z	-.101	-.101	0	%100
35	M18	X	.058	.058	0	%100
36	M18	Z	-.101	-.101	0	%100
37	M19	X	.058	.058	0	%100
38	M19	Z	-.101	-.101	0	%100
39	M20	X	.814	.814	0	%100
40	M20	Z	-1.41	-1.41	0	%100
41	M21	X	.814	.814	0	%100
42	M21	Z	-1.41	-1.41	0	%100
43	M22	X	.814	.814	0	%100
44	M22	Z	-1.41	-1.41	0	%100
45	M23	X	.814	.814	0	%100
46	M23	Z	-1.41	-1.41	0	%100
47	M24	X	.144	.144	0	%100
48	M24	Z	-.249	-.249	0	%100
49	MP1A	X	2.027	2.027	0	%100
50	MP1A	Z	-3.511	-3.511	0	%100
51	MP2A	X	2.027	2.027	0	%100
52	MP2A	Z	-3.511	-3.511	0	%100
53	MP3A	X	2.027	2.027	0	%100
54	MP3A	Z	-3.511	-3.511	0	%100
55	MP4A	X	2.027	2.027	0	%100
56	MP4A	Z	-3.511	-3.511	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.954	.954	0	%100
2	M1	Z	-.551	-.551	0	%100
3	M2	X	.954	.954	0	%100
4	M2	Z	-.551	-.551	0	%100
5	M3	X	.18	.18	0	%100
6	M3	Z	-.104	-.104	0	%100
7	M4	X	.18	.18	0	%100
8	M4	Z	-.104	-.104	0	%100
9	M5	X	2.509	2.509	0	%100
10	M5	Z	-1.449	-1.449	0	%100
11	M6	X	2.509	2.509	0	%100
12	M6	Z	-1.449	-1.449	0	%100
13	M7	X	1.938	1.938	0	%100
14	M7	Z	-1.119	-1.119	0	%100
15	M8	X	1.938	1.938	0	%100
16	M8	Z	-1.119	-1.119	0	%100
17	M9	X	1.048	1.048	0	%100
18	M9	Z	-.605	-.605	0	%100
19	M10	X	2.037	2.037	0	%100
20	M10	Z	-1.176	-1.176	0	%100
21	M11	X	3.33	3.33	0	%100
22	M11	Z	-1.922	-1.922	0	%100
23	M12	X	.101	.101	0	%100
24	M12	Z	-.058	-.058	0	%100
25	M13	X	.101	.101	0	%100
26	M13	Z	-.058	-.058	0	%100
27	M14	X	1.41	1.41	0	%100
28	M14	Z	-.814	-.814	0	%100
29	M15	X	1.41	1.41	0	%100
30	M15	Z	-.814	-.814	0	%100
31	M16	X	.101	.101	0	%100
32	M16	Z	-.058	-.058	0	%100
33	M17	X	.101	.101	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
34	M17	Z	-.058	-.058	0	%100
35	M18	X	.101	.101	0	%100
36	M18	Z	-.058	-.058	0	%100
37	M19	X	.101	.101	0	%100
38	M19	Z	-.058	-.058	0	%100
39	M20	X	1.41	1.41	0	%100
40	M20	Z	-.814	-.814	0	%100
41	M21	X	1.41	1.41	0	%100
42	M21	Z	-.814	-.814	0	%100
43	M22	X	1.41	1.41	0	%100
44	M22	Z	-.814	-.814	0	%100
45	M23	X	1.41	1.41	0	%100
46	M23	Z	-.814	-.814	0	%100
47	M24	X	1.754	1.754	0	%100
48	M24	Z	-1.013	-1.013	0	%100
49	MP1A	X	3.511	3.511	0	%100
50	MP1A	Z	-2.027	-2.027	0	%100
51	MP2A	X	3.511	3.511	0	%100
52	MP2A	Z	-2.027	-2.027	0	%100
53	MP3A	X	3.511	3.511	0	%100
54	MP3A	Z	-2.027	-2.027	0	%100
55	MP4A	X	3.511	3.511	0	%100
56	MP4A	Z	-2.027	-2.027	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	M3	X	1.553	1.553	0	%100
6	M3	Z	0	0	0	%100
7	M4	X	1.553	1.553	0	%100
8	M4	Z	0	0	0	%100
9	M5	X	1.553	1.553	0	%100
10	M5	Z	0	0	0	%100
11	M6	X	1.553	1.553	0	%100
12	M6	Z	0	0	0	%100
13	M7	X	2.237	2.237	0	%100
14	M7	Z	0	0	0	%100
15	M8	X	2.237	2.237	0	%100
16	M8	Z	0	0	0	%100
17	M9	X	1.781	1.781	0	%100
18	M9	Z	0	0	0	%100
19	M10	X	1.781	1.781	0	%100
20	M10	Z	0	0	0	%100
21	M11	X	3.845	3.845	0	%100
22	M11	Z	0	0	0	%100
23	M12	X	.872	.872	0	%100
24	M12	Z	0	0	0	%100
25	M13	X	.872	.872	0	%100
26	M13	Z	0	0	0	%100
27	M14	X	.873	.873	0	%100
28	M14	Z	0	0	0	%100
29	M15	X	.873	.873	0	%100
30	M15	Z	0	0	0	%100
31	M16	X	.873	.873	0	%100
32	M16	Z	0	0	0	%100
33	M17	X	.873	.873	0	%100
34	M17	Z	0	0	0	%100
35	M18	X	.873	.873	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
36	M18	Z	0	0	0	%100
37	M19	X	.873	.873	0	%100
38	M19	Z	0	0	0	%100
39	M20	X	.873	.873	0	%100
40	M20	Z	0	0	0	%100
41	M21	X	.873	.873	0	%100
42	M21	Z	0	0	0	%100
43	M22	X	.873	.873	0	%100
44	M22	Z	0	0	0	%100
45	M23	X	.873	.873	0	%100
46	M23	Z	0	0	0	%100
47	M24	X	3.72	3.72	0	%100
48	M24	Z	0	0	0	%100
49	MP1A	X	4.054	4.054	0	%100
50	MP1A	Z	0	0	0	%100
51	MP2A	X	4.054	4.054	0	%100
52	MP2A	Z	0	0	0	%100
53	MP3A	X	4.054	4.054	0	%100
54	MP3A	Z	0	0	0	%100
55	MP4A	X	4.054	4.054	0	%100
56	MP4A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.954	.954	0	%100
2	M1	Z	.551	.551	0	%100
3	M2	X	.954	.954	0	%100
4	M2	Z	.551	.551	0	%100
5	M3	X	2.509	2.509	0	%100
6	M3	Z	1.449	1.449	0	%100
7	M4	X	2.509	2.509	0	%100
8	M4	Z	1.449	1.449	0	%100
9	M5	X	.18	.18	0	%100
10	M5	Z	.104	.104	0	%100
11	M6	X	.18	.18	0	%100
12	M6	Z	.104	.104	0	%100
13	M7	X	1.938	1.938	0	%100
14	M7	Z	1.119	1.119	0	%100
15	M8	X	1.938	1.938	0	%100
16	M8	Z	1.119	1.119	0	%100
17	M9	X	2.037	2.037	0	%100
18	M9	Z	1.176	1.176	0	%100
19	M10	X	1.048	1.048	0	%100
20	M10	Z	.605	.605	0	%100
21	M11	X	3.33	3.33	0	%100
22	M11	Z	1.922	1.922	0	%100
23	M12	X	1.41	1.41	0	%100
24	M12	Z	.814	.814	0	%100
25	M13	X	1.41	1.41	0	%100
26	M13	Z	.814	.814	0	%100
27	M14	X	.101	.101	0	%100
28	M14	Z	.058	.058	0	%100
29	M15	X	.101	.101	0	%100
30	M15	Z	.058	.058	0	%100
31	M16	X	1.41	1.41	0	%100
32	M16	Z	.814	.814	0	%100
33	M17	X	1.41	1.41	0	%100
34	M17	Z	.814	.814	0	%100
35	M18	X	1.41	1.41	0	%100
36	M18	Z	.814	.814	0	%100
37	M19	X	1.41	1.41	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
38	M19	Z	.814	.814	0	%100
39	M20	X	.101	.101	0	%100
40	M20	Z	.058	.058	0	%100
41	M21	X	.101	.101	0	%100
42	M21	Z	.058	.058	0	%100
43	M22	X	.101	.101	0	%100
44	M22	Z	.058	.058	0	%100
45	M23	X	.101	.101	0	%100
46	M23	Z	.058	.058	0	%100
47	M24	X	3.185	3.185	0	%100
48	M24	Z	1.839	1.839	0	%100
49	MP1A	X	3.511	3.511	0	%100
50	MP1A	Z	2.027	2.027	0	%100
51	MP2A	X	3.511	3.511	0	%100
52	MP2A	Z	2.027	2.027	0	%100
53	MP3A	X	3.511	3.511	0	%100
54	MP3A	Z	2.027	2.027	0	%100
55	MP4A	X	3.511	3.511	0	%100
56	MP4A	Z	2.027	2.027	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.652	1.652	0	%100
2	M1	Z	2.861	2.861	0	%100
3	M2	X	1.652	1.652	0	%100
4	M2	Z	2.861	2.861	0	%100
5	M3	X	1.449	1.449	0	%100
6	M3	Z	2.509	2.509	0	%100
7	M4	X	1.449	1.449	0	%100
8	M4	Z	2.509	2.509	0	%100
9	M5	X	.104	.104	0	%100
10	M5	Z	.18	.18	0	%100
11	M6	X	.104	.104	0	%100
12	M6	Z	.18	.18	0	%100
13	M7	X	1.119	1.119	0	%100
14	M7	Z	1.938	1.938	0	%100
15	M8	X	1.119	1.119	0	%100
16	M8	Z	1.938	1.938	0	%100
17	M9	X	1.176	1.176	0	%100
18	M9	Z	2.037	2.037	0	%100
19	M10	X	.605	.605	0	%100
20	M10	Z	1.048	1.048	0	%100
21	M11	X	1.922	1.922	0	%100
22	M11	Z	3.33	3.33	0	%100
23	M12	X	.814	.814	0	%100
24	M12	Z	1.41	1.41	0	%100
25	M13	X	.814	.814	0	%100
26	M13	Z	1.41	1.41	0	%100
27	M14	X	.058	.058	0	%100
28	M14	Z	.101	.101	0	%100
29	M15	X	.058	.058	0	%100
30	M15	Z	.101	.101	0	%100
31	M16	X	.814	.814	0	%100
32	M16	Z	1.41	1.41	0	%100
33	M17	X	.814	.814	0	%100
34	M17	Z	1.41	1.41	0	%100
35	M18	X	.814	.814	0	%100
36	M18	Z	1.41	1.41	0	%100
37	M19	X	.814	.814	0	%100
38	M19	Z	1.41	1.41	0	%100
39	M20	X	.058	.058	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
40	M20	Z	.101	.101	0	%100
41	M21	X	.058	.058	0	%100
42	M21	Z	.101	.101	0	%100
43	M22	X	.058	.058	0	%100
44	M22	Z	.101	.101	0	%100
45	M23	X	.058	.058	0	%100
46	M23	Z	.101	.101	0	%100
47	M24	X	.97	.97	0	%100
48	M24	Z	1.68	1.68	0	%100
49	MP1A	X	2.027	2.027	0	%100
50	MP1A	Z	3.511	3.511	0	%100
51	MP2A	X	2.027	2.027	0	%100
52	MP2A	Z	3.511	3.511	0	%100
53	MP3A	X	2.027	2.027	0	%100
54	MP3A	Z	3.511	3.511	0	%100
55	MP4A	X	2.027	2.027	0	%100
56	MP4A	Z	3.511	3.511	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	4.404	4.404	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	4.404	4.404	0	%100
5	M3	X	0	0	0	%100
6	M3	Z	1.553	1.553	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	1.553	1.553	0	%100
9	M5	X	0	0	0	%100
10	M5	Z	1.553	1.553	0	%100
11	M6	X	0	0	0	%100
12	M6	Z	1.553	1.553	0	%100
13	M7	X	0	0	0	%100
14	M7	Z	2.237	2.237	0	%100
15	M8	X	0	0	0	%100
16	M8	Z	2.237	2.237	0	%100
17	M9	X	0	0	0	%100
18	M9	Z	1.781	1.781	0	%100
19	M10	X	0	0	0	%100
20	M10	Z	1.781	1.781	0	%100
21	M11	X	0	0	0	%100
22	M11	Z	3.845	3.845	0	%100
23	M12	X	0	0	0	%100
24	M12	Z	.873	.873	0	%100
25	M13	X	0	0	0	%100
26	M13	Z	.873	.873	0	%100
27	M14	X	0	0	0	%100
28	M14	Z	.873	.873	0	%100
29	M15	X	0	0	0	%100
30	M15	Z	.873	.873	0	%100
31	M16	X	0	0	0	%100
32	M16	Z	.873	.873	0	%100
33	M17	X	0	0	0	%100
34	M17	Z	.873	.873	0	%100
35	M18	X	0	0	0	%100
36	M18	Z	.873	.873	0	%100
37	M19	X	0	0	0	%100
38	M19	Z	.873	.873	0	%100
39	M20	X	0	0	0	%100
40	M20	Z	.873	.873	0	%100
41	M21	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
42	M21	Z	.873	.873	0	%100
43	M22	X	0	0	0	%100
44	M22	Z	.873	.873	0	%100
45	M23	X	0	0	0	%100
46	M23	Z	.873	.873	0	%100
47	M24	X	0	0	0	%100
48	M24	Z	.245	.245	0	%100
49	MP1A	X	0	0	0	%100
50	MP1A	Z	4.054	4.054	0	%100
51	MP2A	X	0	0	0	%100
52	MP2A	Z	4.054	4.054	0	%100
53	MP3A	X	0	0	0	%100
54	MP3A	Z	4.054	4.054	0	%100
55	MP4A	X	0	0	0	%100
56	MP4A	Z	4.054	4.054	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.652	-1.652	0	%100
2	M1	Z	2.861	2.861	0	%100
3	M2	X	-1.652	-1.652	0	%100
4	M2	Z	2.861	2.861	0	%100
5	M3	X	-.104	-.104	0	%100
6	M3	Z	.18	.18	0	%100
7	M4	X	-.104	-.104	0	%100
8	M4	Z	.18	.18	0	%100
9	M5	X	-1.449	-1.449	0	%100
10	M5	Z	2.509	2.509	0	%100
11	M6	X	-1.449	-1.449	0	%100
12	M6	Z	2.509	2.509	0	%100
13	M7	X	-1.119	-1.119	0	%100
14	M7	Z	1.938	1.938	0	%100
15	M8	X	-1.119	-1.119	0	%100
16	M8	Z	1.938	1.938	0	%100
17	M9	X	-.605	-.605	0	%100
18	M9	Z	1.048	1.048	0	%100
19	M10	X	-1.176	-1.176	0	%100
20	M10	Z	2.037	2.037	0	%100
21	M11	X	-1.922	-1.922	0	%100
22	M11	Z	3.33	3.33	0	%100
23	M12	X	-.059	-.059	0	%100
24	M12	Z	.102	.102	0	%100
25	M13	X	-.059	-.059	0	%100
26	M13	Z	.102	.102	0	%100
27	M14	X	-.814	-.814	0	%100
28	M14	Z	1.41	1.41	0	%100
29	M15	X	-.814	-.814	0	%100
30	M15	Z	1.41	1.41	0	%100
31	M16	X	-.058	-.058	0	%100
32	M16	Z	.101	.101	0	%100
33	M17	X	-.058	-.058	0	%100
34	M17	Z	.101	.101	0	%100
35	M18	X	-.058	-.058	0	%100
36	M18	Z	.101	.101	0	%100
37	M19	X	-.058	-.058	0	%100
38	M19	Z	.101	.101	0	%100
39	M20	X	-.814	-.814	0	%100
40	M20	Z	1.41	1.41	0	%100
41	M21	X	-.814	-.814	0	%100
42	M21	Z	1.41	1.41	0	%100
43	M22	X	-.814	-.814	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
44	M22	Z	1.41	1.41	0	%100
45	M23	X	-.814	-.814	0	%100
46	M23	Z	1.41	1.41	0	%100
47	M24	X	-.144	-.144	0	%100
48	M24	Z	.249	.249	0	%100
49	MP1A	X	-2.027	-2.027	0	%100
50	MP1A	Z	3.511	3.511	0	%100
51	MP2A	X	-2.027	-2.027	0	%100
52	MP2A	Z	3.511	3.511	0	%100
53	MP3A	X	-2.027	-2.027	0	%100
54	MP3A	Z	3.511	3.511	0	%100
55	MP4A	X	-2.027	-2.027	0	%100
56	MP4A	Z	3.511	3.511	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.954	-.954	0	%100
2	M1	Z	.551	.551	0	%100
3	M2	X	-.954	-.954	0	%100
4	M2	Z	.551	.551	0	%100
5	M3	X	-.18	-.18	0	%100
6	M3	Z	.104	.104	0	%100
7	M4	X	-.18	-.18	0	%100
8	M4	Z	.104	.104	0	%100
9	M5	X	-2.509	-2.509	0	%100
10	M5	Z	1.449	1.449	0	%100
11	M6	X	-2.509	-2.509	0	%100
12	M6	Z	1.449	1.449	0	%100
13	M7	X	-1.938	-1.938	0	%100
14	M7	Z	1.119	1.119	0	%100
15	M8	X	-1.938	-1.938	0	%100
16	M8	Z	1.119	1.119	0	%100
17	M9	X	-1.048	-1.048	0	%100
18	M9	Z	.605	.605	0	%100
19	M10	X	-2.037	-2.037	0	%100
20	M10	Z	1.176	1.176	0	%100
21	M11	X	-3.33	-3.33	0	%100
22	M11	Z	1.922	1.922	0	%100
23	M12	X	-.101	-.101	0	%100
24	M12	Z	.058	.058	0	%100
25	M13	X	-.101	-.101	0	%100
26	M13	Z	.058	.058	0	%100
27	M14	X	-1.41	-1.41	0	%100
28	M14	Z	.814	.814	0	%100
29	M15	X	-1.41	-1.41	0	%100
30	M15	Z	.814	.814	0	%100
31	M16	X	-.101	-.101	0	%100
32	M16	Z	.058	.058	0	%100
33	M17	X	-.101	-.101	0	%100
34	M17	Z	.058	.058	0	%100
35	M18	X	-.101	-.101	0	%100
36	M18	Z	.058	.058	0	%100
37	M19	X	-.101	-.101	0	%100
38	M19	Z	.058	.058	0	%100
39	M20	X	-1.41	-1.41	0	%100
40	M20	Z	.814	.814	0	%100
41	M21	X	-1.41	-1.41	0	%100
42	M21	Z	.814	.814	0	%100
43	M22	X	-1.41	-1.41	0	%100
44	M22	Z	.814	.814	0	%100
45	M23	X	-1.41	-1.41	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
46	M23	Z	.814	.814	0	%100
47	M24	X	-1.754	-1.754	0	%100
48	M24	Z	1.013	1.013	0	%100
49	MP1A	X	-3.511	-3.511	0	%100
50	MP1A	Z	2.027	2.027	0	%100
51	MP2A	X	-3.511	-3.511	0	%100
52	MP2A	Z	2.027	2.027	0	%100
53	MP3A	X	-3.511	-3.511	0	%100
54	MP3A	Z	2.027	2.027	0	%100
55	MP4A	X	-3.511	-3.511	0	%100
56	MP4A	Z	2.027	2.027	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	M3	X	-1.553	-1.553	0	%100
6	M3	Z	0	0	0	%100
7	M4	X	-1.553	-1.553	0	%100
8	M4	Z	0	0	0	%100
9	M5	X	-1.553	-1.553	0	%100
10	M5	Z	0	0	0	%100
11	M6	X	-1.553	-1.553	0	%100
12	M6	Z	0	0	0	%100
13	M7	X	-2.237	-2.237	0	%100
14	M7	Z	0	0	0	%100
15	M8	X	-2.237	-2.237	0	%100
16	M8	Z	0	0	0	%100
17	M9	X	-1.781	-1.781	0	%100
18	M9	Z	0	0	0	%100
19	M10	X	-1.781	-1.781	0	%100
20	M10	Z	0	0	0	%100
21	M11	X	-3.845	-3.845	0	%100
22	M11	Z	0	0	0	%100
23	M12	X	-.872	-.872	0	%100
24	M12	Z	0	0	0	%100
25	M13	X	-.872	-.872	0	%100
26	M13	Z	0	0	0	%100
27	M14	X	-.873	-.873	0	%100
28	M14	Z	0	0	0	%100
29	M15	X	-.873	-.873	0	%100
30	M15	Z	0	0	0	%100
31	M16	X	-.873	-.873	0	%100
32	M16	Z	0	0	0	%100
33	M17	X	-.873	-.873	0	%100
34	M17	Z	0	0	0	%100
35	M18	X	-.873	-.873	0	%100
36	M18	Z	0	0	0	%100
37	M19	X	-.873	-.873	0	%100
38	M19	Z	0	0	0	%100
39	M20	X	-.873	-.873	0	%100
40	M20	Z	0	0	0	%100
41	M21	X	-.873	-.873	0	%100
42	M21	Z	0	0	0	%100
43	M22	X	-.873	-.873	0	%100
44	M22	Z	0	0	0	%100
45	M23	X	-.873	-.873	0	%100
46	M23	Z	0	0	0	%100
47	M24	X	-3.72	-3.72	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
48	M24	Z	0	0	0	%100
49	MP1A	X	-4.054	-4.054	0	%100
50	MP1A	Z	0	0	0	%100
51	MP2A	X	-4.054	-4.054	0	%100
52	MP2A	Z	0	0	0	%100
53	MP3A	X	-4.054	-4.054	0	%100
54	MP3A	Z	0	0	0	%100
55	MP4A	X	-4.054	-4.054	0	%100
56	MP4A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.954	-.954	0	%100
2	M1	Z	-.551	-.551	0	%100
3	M2	X	-.954	-.954	0	%100
4	M2	Z	-.551	-.551	0	%100
5	M3	X	-2.509	-2.509	0	%100
6	M3	Z	-1.449	-1.449	0	%100
7	M4	X	-2.509	-2.509	0	%100
8	M4	Z	-1.449	-1.449	0	%100
9	M5	X	-.18	-.18	0	%100
10	M5	Z	-.104	-.104	0	%100
11	M6	X	-.18	-.18	0	%100
12	M6	Z	-.104	-.104	0	%100
13	M7	X	-1.938	-1.938	0	%100
14	M7	Z	-1.119	-1.119	0	%100
15	M8	X	-1.938	-1.938	0	%100
16	M8	Z	-1.119	-1.119	0	%100
17	M9	X	-2.037	-2.037	0	%100
18	M9	Z	-1.176	-1.176	0	%100
19	M10	X	-1.048	-1.048	0	%100
20	M10	Z	-.605	-.605	0	%100
21	M11	X	-3.33	-3.33	0	%100
22	M11	Z	-1.922	-1.922	0	%100
23	M12	X	-1.41	-1.41	0	%100
24	M12	Z	-.814	-.814	0	%100
25	M13	X	-1.41	-1.41	0	%100
26	M13	Z	-.814	-.814	0	%100
27	M14	X	-.101	-.101	0	%100
28	M14	Z	-.058	-.058	0	%100
29	M15	X	-.101	-.101	0	%100
30	M15	Z	-.058	-.058	0	%100
31	M16	X	-1.41	-1.41	0	%100
32	M16	Z	-.814	-.814	0	%100
33	M17	X	-1.41	-1.41	0	%100
34	M17	Z	-.814	-.814	0	%100
35	M18	X	-1.41	-1.41	0	%100
36	M18	Z	-.814	-.814	0	%100
37	M19	X	-1.41	-1.41	0	%100
38	M19	Z	-.814	-.814	0	%100
39	M20	X	-.101	-.101	0	%100
40	M20	Z	-.058	-.058	0	%100
41	M21	X	-.101	-.101	0	%100
42	M21	Z	-.058	-.058	0	%100
43	M22	X	-.101	-.101	0	%100
44	M22	Z	-.058	-.058	0	%100
45	M23	X	-.101	-.101	0	%100
46	M23	Z	-.058	-.058	0	%100
47	M24	X	-3.185	-3.185	0	%100
48	M24	Z	-1.839	-1.839	0	%100
49	MP1A	X	-3.511	-3.511	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
50	MP1A	Z	-2.027	-2.027	0	%100
51	MP2A	X	-3.511	-3.511	0	%100
52	MP2A	Z	-2.027	-2.027	0	%100
53	MP3A	X	-3.511	-3.511	0	%100
54	MP3A	Z	-2.027	-2.027	0	%100
55	MP4A	X	-3.511	-3.511	0	%100
56	MP4A	Z	-2.027	-2.027	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.652	-1.652	0	%100
2	M1	Z	-2.861	-2.861	0	%100
3	M2	X	-1.652	-1.652	0	%100
4	M2	Z	-2.861	-2.861	0	%100
5	M3	X	-1.449	-1.449	0	%100
6	M3	Z	-2.509	-2.509	0	%100
7	M4	X	-1.449	-1.449	0	%100
8	M4	Z	-2.509	-2.509	0	%100
9	M5	X	-.104	-.104	0	%100
10	M5	Z	-.18	-.18	0	%100
11	M6	X	-.104	-.104	0	%100
12	M6	Z	-.18	-.18	0	%100
13	M7	X	-1.119	-1.119	0	%100
14	M7	Z	-1.938	-1.938	0	%100
15	M8	X	-1.119	-1.119	0	%100
16	M8	Z	-1.938	-1.938	0	%100
17	M9	X	-1.176	-1.176	0	%100
18	M9	Z	-2.037	-2.037	0	%100
19	M10	X	-.605	-.605	0	%100
20	M10	Z	-1.048	-1.048	0	%100
21	M11	X	-1.922	-1.922	0	%100
22	M11	Z	-3.33	-3.33	0	%100
23	M12	X	-.814	-.814	0	%100
24	M12	Z	-1.41	-1.41	0	%100
25	M13	X	-.814	-.814	0	%100
26	M13	Z	-1.41	-1.41	0	%100
27	M14	X	-.058	-.058	0	%100
28	M14	Z	-.101	-.101	0	%100
29	M15	X	-.058	-.058	0	%100
30	M15	Z	-.101	-.101	0	%100
31	M16	X	-.814	-.814	0	%100
32	M16	Z	-1.41	-1.41	0	%100
33	M17	X	-.814	-.814	0	%100
34	M17	Z	-1.41	-1.41	0	%100
35	M18	X	-.814	-.814	0	%100
36	M18	Z	-1.41	-1.41	0	%100
37	M19	X	-.814	-.814	0	%100
38	M19	Z	-1.41	-1.41	0	%100
39	M20	X	-.058	-.058	0	%100
40	M20	Z	-.101	-.101	0	%100
41	M21	X	-.058	-.058	0	%100
42	M21	Z	-.101	-.101	0	%100
43	M22	X	-.058	-.058	0	%100
44	M22	Z	-.101	-.101	0	%100
45	M23	X	-.058	-.058	0	%100
46	M23	Z	-.101	-.101	0	%100
47	M24	X	-.97	-.97	0	%100
48	M24	Z	-1.68	-1.68	0	%100
49	MP1A	X	-2.027	-2.027	0	%100
50	MP1A	Z	-3.511	-3.511	0	%100
51	MP2A	X	-2.027	-2.027	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
52	MP2A	Z	-3.511	-3.511	0	%100
53	MP3A	X	-2.027	-2.027	0	%100
54	MP3A	Z	-3.511	-3.511	0	%100
55	MP4A	X	-2.027	-2.027	0	%100
56	MP4A	Z	-3.511	-3.511	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	-.725	-.725	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-.725	-.725	0	%100
5	M3	X	0	0	0	%100
6	M3	Z	-.244	-.244	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	-.244	-.244	0	%100
9	M5	X	0	0	0	%100
10	M5	Z	-.244	-.244	0	%100
11	M6	X	0	0	0	%100
12	M6	Z	-.244	-.244	0	%100
13	M7	X	0	0	0	%100
14	M7	Z	-.189	-.189	0	%100
15	M8	X	0	0	0	%100
16	M8	Z	-.189	-.189	0	%100
17	M9	X	0	0	0	%100
18	M9	Z	-.138	-.138	0	%100
19	M10	X	0	0	0	%100
20	M10	Z	-.138	-.138	0	%100
21	M11	X	0	0	0	%100
22	M11	Z	-.698	-.698	0	%100
23	M12	X	0	0	0	%100
24	M12	Z	-.063	-.063	0	%100
25	M13	X	0	0	0	%100
26	M13	Z	-.063	-.063	0	%100
27	M14	X	0	0	0	%100
28	M14	Z	-.063	-.063	0	%100
29	M15	X	0	0	0	%100
30	M15	Z	-.063	-.063	0	%100
31	M16	X	0	0	0	%100
32	M16	Z	-.063	-.063	0	%100
33	M17	X	0	0	0	%100
34	M17	Z	-.063	-.063	0	%100
35	M18	X	0	0	0	%100
36	M18	Z	-.063	-.063	0	%100
37	M19	X	0	0	0	%100
38	M19	Z	-.063	-.063	0	%100
39	M20	X	0	0	0	%100
40	M20	Z	-.063	-.063	0	%100
41	M21	X	0	0	0	%100
42	M21	Z	-.063	-.063	0	%100
43	M22	X	0	0	0	%100
44	M22	Z	-.063	-.063	0	%100
45	M23	X	0	0	0	%100
46	M23	Z	-.063	-.063	0	%100
47	M24	X	0	0	0	%100
48	M24	Z	-.037	-.037	0	%100
49	MP1A	X	0	0	0	%100
50	MP1A	Z	-.599	-.599	0	%100
51	MP2A	X	0	0	0	%100
52	MP2A	Z	-.599	-.599	0	%100
53	MP3A	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
54	MP3A	Z	-.599	-.599	0	%100
55	MP4A	X	0	0	0	%100
56	MP4A	Z	-.599	-.599	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.272	.272	0	%100
2	M1	Z	-.471	-.471	0	%100
3	M2	X	.272	.272	0	%100
4	M2	Z	-.471	-.471	0	%100
5	M3	X	.016	.016	0	%100
6	M3	Z	-.028	-.028	0	%100
7	M4	X	.016	.016	0	%100
8	M4	Z	-.028	-.028	0	%100
9	M5	X	.228	.228	0	%100
10	M5	Z	-.395	-.395	0	%100
11	M6	X	.228	.228	0	%100
12	M6	Z	-.395	-.395	0	%100
13	M7	X	.095	.095	0	%100
14	M7	Z	-.164	-.164	0	%100
15	M8	X	.095	.095	0	%100
16	M8	Z	-.164	-.164	0	%100
17	M9	X	.047	.047	0	%100
18	M9	Z	-.081	-.081	0	%100
19	M10	X	.091	.091	0	%100
20	M10	Z	-.158	-.158	0	%100
21	M11	X	.349	.349	0	%100
22	M11	Z	-.604	-.604	0	%100
23	M12	X	.004	.004	0	%100
24	M12	Z	-.007	-.007	0	%100
25	M13	X	.004	.004	0	%100
26	M13	Z	-.007	-.007	0	%100
27	M14	X	.059	.059	0	%100
28	M14	Z	-.102	-.102	0	%100
29	M15	X	.059	.059	0	%100
30	M15	Z	-.102	-.102	0	%100
31	M16	X	.004	.004	0	%100
32	M16	Z	-.007	-.007	0	%100
33	M17	X	.004	.004	0	%100
34	M17	Z	-.007	-.007	0	%100
35	M18	X	.004	.004	0	%100
36	M18	Z	-.007	-.007	0	%100
37	M19	X	.004	.004	0	%100
38	M19	Z	-.007	-.007	0	%100
39	M20	X	.059	.059	0	%100
40	M20	Z	-.102	-.102	0	%100
41	M21	X	.059	.059	0	%100
42	M21	Z	-.102	-.102	0	%100
43	M22	X	.059	.059	0	%100
44	M22	Z	-.102	-.102	0	%100
45	M23	X	.059	.059	0	%100
46	M23	Z	-.102	-.102	0	%100
47	M24	X	.022	.022	0	%100
48	M24	Z	-.038	-.038	0	%100
49	MP1A	X	.299	.299	0	%100
50	MP1A	Z	-.518	-.518	0	%100
51	MP2A	X	.299	.299	0	%100
52	MP2A	Z	-.518	-.518	0	%100
53	MP3A	X	.299	.299	0	%100
54	MP3A	Z	-.518	-.518	0	%100
55	MP4A	X	.299	.299	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
56	MP4A	Z	-.518	-.518	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.157	.157	0	%100
2	M1	Z	-.091	-.091	0	%100
3	M2	X	.157	.157	0	%100
4	M2	Z	-.091	-.091	0	%100
5	M3	X	.028	.028	0	%100
6	M3	Z	-.016	-.016	0	%100
7	M4	X	.028	.028	0	%100
8	M4	Z	-.016	-.016	0	%100
9	M5	X	.395	.395	0	%100
10	M5	Z	-.228	-.228	0	%100
11	M6	X	.395	.395	0	%100
12	M6	Z	-.228	-.228	0	%100
13	M7	X	.164	.164	0	%100
14	M7	Z	-.095	-.095	0	%100
15	M8	X	.164	.164	0	%100
16	M8	Z	-.095	-.095	0	%100
17	M9	X	.081	.081	0	%100
18	M9	Z	-.047	-.047	0	%100
19	M10	X	.158	.158	0	%100
20	M10	Z	-.091	-.091	0	%100
21	M11	X	.604	.604	0	%100
22	M11	Z	-.349	-.349	0	%100
23	M12	X	.007	.007	0	%100
24	M12	Z	-.004	-.004	0	%100
25	M13	X	.007	.007	0	%100
26	M13	Z	-.004	-.004	0	%100
27	M14	X	.102	.102	0	%100
28	M14	Z	-.059	-.059	0	%100
29	M15	X	.102	.102	0	%100
30	M15	Z	-.059	-.059	0	%100
31	M16	X	.007	.007	0	%100
32	M16	Z	-.004	-.004	0	%100
33	M17	X	.007	.007	0	%100
34	M17	Z	-.004	-.004	0	%100
35	M18	X	.007	.007	0	%100
36	M18	Z	-.004	-.004	0	%100
37	M19	X	.007	.007	0	%100
38	M19	Z	-.004	-.004	0	%100
39	M20	X	.102	.102	0	%100
40	M20	Z	-.059	-.059	0	%100
41	M21	X	.102	.102	0	%100
42	M21	Z	-.059	-.059	0	%100
43	M22	X	.102	.102	0	%100
44	M22	Z	-.059	-.059	0	%100
45	M23	X	.102	.102	0	%100
46	M23	Z	-.059	-.059	0	%100
47	M24	X	.265	.265	0	%100
48	M24	Z	-.153	-.153	0	%100
49	MP1A	X	.518	.518	0	%100
50	MP1A	Z	-.299	-.299	0	%100
51	MP2A	X	.518	.518	0	%100
52	MP2A	Z	-.299	-.299	0	%100
53	MP3A	X	.518	.518	0	%100
54	MP3A	Z	-.299	-.299	0	%100
55	MP4A	X	.518	.518	0	%100
56	MP4A	Z	-.299	-.299	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	M3	X	.244	.244	0	%100
6	M3	Z	0	0	0	%100
7	M4	X	.244	.244	0	%100
8	M4	Z	0	0	0	%100
9	M5	X	.244	.244	0	%100
10	M5	Z	0	0	0	%100
11	M6	X	.244	.244	0	%100
12	M6	Z	0	0	0	%100
13	M7	X	.189	.189	0	%100
14	M7	Z	0	0	0	%100
15	M8	X	.189	.189	0	%100
16	M8	Z	0	0	0	%100
17	M9	X	.138	.138	0	%100
18	M9	Z	0	0	0	%100
19	M10	X	.138	.138	0	%100
20	M10	Z	0	0	0	%100
21	M11	X	.698	.698	0	%100
22	M11	Z	0	0	0	%100
23	M12	X	.063	.063	0	%100
24	M12	Z	0	0	0	%100
25	M13	X	.063	.063	0	%100
26	M13	Z	0	0	0	%100
27	M14	X	.063	.063	0	%100
28	M14	Z	0	0	0	%100
29	M15	X	.063	.063	0	%100
30	M15	Z	0	0	0	%100
31	M16	X	.063	.063	0	%100
32	M16	Z	0	0	0	%100
33	M17	X	.063	.063	0	%100
34	M17	Z	0	0	0	%100
35	M18	X	.063	.063	0	%100
36	M18	Z	0	0	0	%100
37	M19	X	.063	.063	0	%100
38	M19	Z	0	0	0	%100
39	M20	X	.063	.063	0	%100
40	M20	Z	0	0	0	%100
41	M21	X	.063	.063	0	%100
42	M21	Z	0	0	0	%100
43	M22	X	.063	.063	0	%100
44	M22	Z	0	0	0	%100
45	M23	X	.063	.063	0	%100
46	M23	Z	0	0	0	%100
47	M24	X	.562	.562	0	%100
48	M24	Z	0	0	0	%100
49	MP1A	X	.599	.599	0	%100
50	MP1A	Z	0	0	0	%100
51	MP2A	X	.599	.599	0	%100
52	MP2A	Z	0	0	0	%100
53	MP3A	X	.599	.599	0	%100
54	MP3A	Z	0	0	0	%100
55	MP4A	X	.599	.599	0	%100
56	MP4A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.157	.157	0	%100
2	M1	Z	.091	.091	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
3	M2	X	.157	.157	0	%100
4	M2	Z	.091	.091	0	%100
5	M3	X	.395	.395	0	%100
6	M3	Z	.228	.228	0	%100
7	M4	X	.395	.395	0	%100
8	M4	Z	.228	.228	0	%100
9	M5	X	.028	.028	0	%100
10	M5	Z	.016	.016	0	%100
11	M6	X	.028	.028	0	%100
12	M6	Z	.016	.016	0	%100
13	M7	X	.164	.164	0	%100
14	M7	Z	.095	.095	0	%100
15	M8	X	.164	.164	0	%100
16	M8	Z	.095	.095	0	%100
17	M9	X	.158	.158	0	%100
18	M9	Z	.091	.091	0	%100
19	M10	X	.081	.081	0	%100
20	M10	Z	.047	.047	0	%100
21	M11	X	.604	.604	0	%100
22	M11	Z	.349	.349	0	%100
23	M12	X	.102	.102	0	%100
24	M12	Z	.059	.059	0	%100
25	M13	X	.102	.102	0	%100
26	M13	Z	.059	.059	0	%100
27	M14	X	.007	.007	0	%100
28	M14	Z	.004	.004	0	%100
29	M15	X	.007	.007	0	%100
30	M15	Z	.004	.004	0	%100
31	M16	X	.102	.102	0	%100
32	M16	Z	.059	.059	0	%100
33	M17	X	.102	.102	0	%100
34	M17	Z	.059	.059	0	%100
35	M18	X	.102	.102	0	%100
36	M18	Z	.059	.059	0	%100
37	M19	X	.102	.102	0	%100
38	M19	Z	.059	.059	0	%100
39	M20	X	.007	.007	0	%100
40	M20	Z	.004	.004	0	%100
41	M21	X	.007	.007	0	%100
42	M21	Z	.004	.004	0	%100
43	M22	X	.007	.007	0	%100
44	M22	Z	.004	.004	0	%100
45	M23	X	.007	.007	0	%100
46	M23	Z	.004	.004	0	%100
47	M24	X	.481	.481	0	%100
48	M24	Z	.278	.278	0	%100
49	MP1A	X	.518	.518	0	%100
50	MP1A	Z	.299	.299	0	%100
51	MP2A	X	.518	.518	0	%100
52	MP2A	Z	.299	.299	0	%100
53	MP3A	X	.518	.518	0	%100
54	MP3A	Z	.299	.299	0	%100
55	MP4A	X	.518	.518	0	%100
56	MP4A	Z	.299	.299	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.272	.272	0	%100
2	M1	Z	.471	.471	0	%100
3	M2	X	.272	.272	0	%100
4	M2	Z	.471	.471	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
5	M3	X	.228	.228	0	%100
6	M3	Z	.395	.395	0	%100
7	M4	X	.228	.228	0	%100
8	M4	Z	.395	.395	0	%100
9	M5	X	.016	.016	0	%100
10	M5	Z	.028	.028	0	%100
11	M6	X	.016	.016	0	%100
12	M6	Z	.028	.028	0	%100
13	M7	X	.095	.095	0	%100
14	M7	Z	.164	.164	0	%100
15	M8	X	.095	.095	0	%100
16	M8	Z	.164	.164	0	%100
17	M9	X	.091	.091	0	%100
18	M9	Z	.158	.158	0	%100
19	M10	X	.047	.047	0	%100
20	M10	Z	.081	.081	0	%100
21	M11	X	.349	.349	0	%100
22	M11	Z	.604	.604	0	%100
23	M12	X	.059	.059	0	%100
24	M12	Z	.102	.102	0	%100
25	M13	X	.059	.059	0	%100
26	M13	Z	.102	.102	0	%100
27	M14	X	.004	.004	0	%100
28	M14	Z	.007	.007	0	%100
29	M15	X	.004	.004	0	%100
30	M15	Z	.007	.007	0	%100
31	M16	X	.059	.059	0	%100
32	M16	Z	.102	.102	0	%100
33	M17	X	.059	.059	0	%100
34	M17	Z	.102	.102	0	%100
35	M18	X	.059	.059	0	%100
36	M18	Z	.102	.102	0	%100
37	M19	X	.059	.059	0	%100
38	M19	Z	.102	.102	0	%100
39	M20	X	.004	.004	0	%100
40	M20	Z	.007	.007	0	%100
41	M21	X	.004	.004	0	%100
42	M21	Z	.007	.007	0	%100
43	M22	X	.004	.004	0	%100
44	M22	Z	.007	.007	0	%100
45	M23	X	.004	.004	0	%100
46	M23	Z	.007	.007	0	%100
47	M24	X	.146	.146	0	%100
48	M24	Z	.254	.254	0	%100
49	MP1A	X	.299	.299	0	%100
50	MP1A	Z	.518	.518	0	%100
51	MP2A	X	.299	.299	0	%100
52	MP2A	Z	.518	.518	0	%100
53	MP3A	X	.299	.299	0	%100
54	MP3A	Z	.518	.518	0	%100
55	MP4A	X	.299	.299	0	%100
56	MP4A	Z	.518	.518	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	.725	.725	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	.725	.725	0	%100
5	M3	X	0	0	0	%100
6	M3	Z	.244	.244	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
7	M4	X	0	0	0	%100
8	M4	Z	.244	.244	0	%100
9	M5	X	0	0	0	%100
10	M5	Z	.244	.244	0	%100
11	M6	X	0	0	0	%100
12	M6	Z	.244	.244	0	%100
13	M7	X	0	0	0	%100
14	M7	Z	.189	.189	0	%100
15	M8	X	0	0	0	%100
16	M8	Z	.189	.189	0	%100
17	M9	X	0	0	0	%100
18	M9	Z	.138	.138	0	%100
19	M10	X	0	0	0	%100
20	M10	Z	.138	.138	0	%100
21	M11	X	0	0	0	%100
22	M11	Z	.698	.698	0	%100
23	M12	X	0	0	0	%100
24	M12	Z	.063	.063	0	%100
25	M13	X	0	0	0	%100
26	M13	Z	.063	.063	0	%100
27	M14	X	0	0	0	%100
28	M14	Z	.063	.063	0	%100
29	M15	X	0	0	0	%100
30	M15	Z	.063	.063	0	%100
31	M16	X	0	0	0	%100
32	M16	Z	.063	.063	0	%100
33	M17	X	0	0	0	%100
34	M17	Z	.063	.063	0	%100
35	M18	X	0	0	0	%100
36	M18	Z	.063	.063	0	%100
37	M19	X	0	0	0	%100
38	M19	Z	.063	.063	0	%100
39	M20	X	0	0	0	%100
40	M20	Z	.063	.063	0	%100
41	M21	X	0	0	0	%100
42	M21	Z	.063	.063	0	%100
43	M22	X	0	0	0	%100
44	M22	Z	.063	.063	0	%100
45	M23	X	0	0	0	%100
46	M23	Z	.063	.063	0	%100
47	M24	X	0	0	0	%100
48	M24	Z	.037	.037	0	%100
49	MP1A	X	0	0	0	%100
50	MP1A	Z	.599	.599	0	%100
51	MP2A	X	0	0	0	%100
52	MP2A	Z	.599	.599	0	%100
53	MP3A	X	0	0	0	%100
54	MP3A	Z	.599	.599	0	%100
55	MP4A	X	0	0	0	%100
56	MP4A	Z	.599	.599	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.272	-.272	0	%100
2	M1	Z	.471	.471	0	%100
3	M2	X	-.272	-.272	0	%100
4	M2	Z	.471	.471	0	%100
5	M3	X	-.016	-.016	0	%100
6	M3	Z	.028	.028	0	%100
7	M4	X	-.016	-.016	0	%100
8	M4	Z	.028	.028	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
9	M5	X	-.228	-.228	0	%100
10	M5	Z	.395	.395	0	%100
11	M6	X	-.228	-.228	0	%100
12	M6	Z	.395	.395	0	%100
13	M7	X	-.095	-.095	0	%100
14	M7	Z	.164	.164	0	%100
15	M8	X	-.095	-.095	0	%100
16	M8	Z	.164	.164	0	%100
17	M9	X	-.047	-.047	0	%100
18	M9	Z	.081	.081	0	%100
19	M10	X	-.091	-.091	0	%100
20	M10	Z	.158	.158	0	%100
21	M11	X	-.349	-.349	0	%100
22	M11	Z	.604	.604	0	%100
23	M12	X	-.004	-.004	0	%100
24	M12	Z	.007	.007	0	%100
25	M13	X	-.004	-.004	0	%100
26	M13	Z	.007	.007	0	%100
27	M14	X	-.059	-.059	0	%100
28	M14	Z	.102	.102	0	%100
29	M15	X	-.059	-.059	0	%100
30	M15	Z	.102	.102	0	%100
31	M16	X	-.004	-.004	0	%100
32	M16	Z	.007	.007	0	%100
33	M17	X	-.004	-.004	0	%100
34	M17	Z	.007	.007	0	%100
35	M18	X	-.004	-.004	0	%100
36	M18	Z	.007	.007	0	%100
37	M19	X	-.004	-.004	0	%100
38	M19	Z	.007	.007	0	%100
39	M20	X	-.059	-.059	0	%100
40	M20	Z	.102	.102	0	%100
41	M21	X	-.059	-.059	0	%100
42	M21	Z	.102	.102	0	%100
43	M22	X	-.059	-.059	0	%100
44	M22	Z	.102	.102	0	%100
45	M23	X	-.059	-.059	0	%100
46	M23	Z	.102	.102	0	%100
47	M24	X	-.022	-.022	0	%100
48	M24	Z	.038	.038	0	%100
49	MP1A	X	-.299	-.299	0	%100
50	MP1A	Z	.518	.518	0	%100
51	MP2A	X	-.299	-.299	0	%100
52	MP2A	Z	.518	.518	0	%100
53	MP3A	X	-.299	-.299	0	%100
54	MP3A	Z	.518	.518	0	%100
55	MP4A	X	-.299	-.299	0	%100
56	MP4A	Z	.518	.518	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.157	-.157	0	%100
2	M1	Z	.091	.091	0	%100
3	M2	X	-.157	-.157	0	%100
4	M2	Z	.091	.091	0	%100
5	M3	X	-.028	-.028	0	%100
6	M3	Z	.016	.016	0	%100
7	M4	X	-.028	-.028	0	%100
8	M4	Z	.016	.016	0	%100
9	M5	X	-.395	-.395	0	%100
10	M5	Z	.228	.228	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
11	M6	X	-.395	-.395	0	%100
12	M6	Z	.228	.228	0	%100
13	M7	X	-.164	-.164	0	%100
14	M7	Z	.095	.095	0	%100
15	M8	X	-.164	-.164	0	%100
16	M8	Z	.095	.095	0	%100
17	M9	X	-.081	-.081	0	%100
18	M9	Z	.047	.047	0	%100
19	M10	X	-.158	-.158	0	%100
20	M10	Z	.091	.091	0	%100
21	M11	X	-.604	-.604	0	%100
22	M11	Z	.349	.349	0	%100
23	M12	X	-.007	-.007	0	%100
24	M12	Z	.004	.004	0	%100
25	M13	X	-.007	-.007	0	%100
26	M13	Z	.004	.004	0	%100
27	M14	X	-.102	-.102	0	%100
28	M14	Z	.059	.059	0	%100
29	M15	X	-.102	-.102	0	%100
30	M15	Z	.059	.059	0	%100
31	M16	X	-.007	-.007	0	%100
32	M16	Z	.004	.004	0	%100
33	M17	X	-.007	-.007	0	%100
34	M17	Z	.004	.004	0	%100
35	M18	X	-.007	-.007	0	%100
36	M18	Z	.004	.004	0	%100
37	M19	X	-.007	-.007	0	%100
38	M19	Z	.004	.004	0	%100
39	M20	X	-.102	-.102	0	%100
40	M20	Z	.059	.059	0	%100
41	M21	X	-.102	-.102	0	%100
42	M21	Z	.059	.059	0	%100
43	M22	X	-.102	-.102	0	%100
44	M22	Z	.059	.059	0	%100
45	M23	X	-.102	-.102	0	%100
46	M23	Z	.059	.059	0	%100
47	M24	X	-.265	-.265	0	%100
48	M24	Z	.153	.153	0	%100
49	MP1A	X	-.518	-.518	0	%100
50	MP1A	Z	.299	.299	0	%100
51	MP2A	X	-.518	-.518	0	%100
52	MP2A	Z	.299	.299	0	%100
53	MP3A	X	-.518	-.518	0	%100
54	MP3A	Z	.299	.299	0	%100
55	MP4A	X	-.518	-.518	0	%100
56	MP4A	Z	.299	.299	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	M3	X	-.244	-.244	0	%100
6	M3	Z	0	0	0	%100
7	M4	X	-.244	-.244	0	%100
8	M4	Z	0	0	0	%100
9	M5	X	-.244	-.244	0	%100
10	M5	Z	0	0	0	%100
11	M6	X	-.244	-.244	0	%100
12	M6	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
13	M7	X	-.189	-.189	0	%100
14	M7	Z	0	0	0	%100
15	M8	X	-.189	-.189	0	%100
16	M8	Z	0	0	0	%100
17	M9	X	-.138	-.138	0	%100
18	M9	Z	0	0	0	%100
19	M10	X	-.138	-.138	0	%100
20	M10	Z	0	0	0	%100
21	M11	X	-.698	-.698	0	%100
22	M11	Z	0	0	0	%100
23	M12	X	-.063	-.063	0	%100
24	M12	Z	0	0	0	%100
25	M13	X	-.063	-.063	0	%100
26	M13	Z	0	0	0	%100
27	M14	X	-.063	-.063	0	%100
28	M14	Z	0	0	0	%100
29	M15	X	-.063	-.063	0	%100
30	M15	Z	0	0	0	%100
31	M16	X	-.063	-.063	0	%100
32	M16	Z	0	0	0	%100
33	M17	X	-.063	-.063	0	%100
34	M17	Z	0	0	0	%100
35	M18	X	-.063	-.063	0	%100
36	M18	Z	0	0	0	%100
37	M19	X	-.063	-.063	0	%100
38	M19	Z	0	0	0	%100
39	M20	X	-.063	-.063	0	%100
40	M20	Z	0	0	0	%100
41	M21	X	-.063	-.063	0	%100
42	M21	Z	0	0	0	%100
43	M22	X	-.063	-.063	0	%100
44	M22	Z	0	0	0	%100
45	M23	X	-.063	-.063	0	%100
46	M23	Z	0	0	0	%100
47	M24	X	-.562	-.562	0	%100
48	M24	Z	0	0	0	%100
49	MP1A	X	-.599	-.599	0	%100
50	MP1A	Z	0	0	0	%100
51	MP2A	X	-.599	-.599	0	%100
52	MP2A	Z	0	0	0	%100
53	MP3A	X	-.599	-.599	0	%100
54	MP3A	Z	0	0	0	%100
55	MP4A	X	-.599	-.599	0	%100
56	MP4A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.157	-.157	0	%100
2	M1	Z	-.091	-.091	0	%100
3	M2	X	-.157	-.157	0	%100
4	M2	Z	-.091	-.091	0	%100
5	M3	X	-.395	-.395	0	%100
6	M3	Z	-.228	-.228	0	%100
7	M4	X	-.395	-.395	0	%100
8	M4	Z	-.228	-.228	0	%100
9	M5	X	-.028	-.028	0	%100
10	M5	Z	-.016	-.016	0	%100
11	M6	X	-.028	-.028	0	%100
12	M6	Z	-.016	-.016	0	%100
13	M7	X	-.164	-.164	0	%100
14	M7	Z	-.095	-.095	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
15	M8	X	-.164	-.164	0	%100
16	M8	Z	-.095	-.095	0	%100
17	M9	X	-.158	-.158	0	%100
18	M9	Z	-.091	-.091	0	%100
19	M10	X	-.081	-.081	0	%100
20	M10	Z	-.047	-.047	0	%100
21	M11	X	-.604	-.604	0	%100
22	M11	Z	-.349	-.349	0	%100
23	M12	X	-.102	-.102	0	%100
24	M12	Z	-.059	-.059	0	%100
25	M13	X	-.102	-.102	0	%100
26	M13	Z	-.059	-.059	0	%100
27	M14	X	-.007	-.007	0	%100
28	M14	Z	-.004	-.004	0	%100
29	M15	X	-.007	-.007	0	%100
30	M15	Z	-.004	-.004	0	%100
31	M16	X	-.102	-.102	0	%100
32	M16	Z	-.059	-.059	0	%100
33	M17	X	-.102	-.102	0	%100
34	M17	Z	-.059	-.059	0	%100
35	M18	X	-.102	-.102	0	%100
36	M18	Z	-.059	-.059	0	%100
37	M19	X	-.102	-.102	0	%100
38	M19	Z	-.059	-.059	0	%100
39	M20	X	-.007	-.007	0	%100
40	M20	Z	-.004	-.004	0	%100
41	M21	X	-.007	-.007	0	%100
42	M21	Z	-.004	-.004	0	%100
43	M22	X	-.007	-.007	0	%100
44	M22	Z	-.004	-.004	0	%100
45	M23	X	-.007	-.007	0	%100
46	M23	Z	-.004	-.004	0	%100
47	M24	X	-.481	-.481	0	%100
48	M24	Z	-.278	-.278	0	%100
49	MP1A	X	-.518	-.518	0	%100
50	MP1A	Z	-.299	-.299	0	%100
51	MP2A	X	-.518	-.518	0	%100
52	MP2A	Z	-.299	-.299	0	%100
53	MP3A	X	-.518	-.518	0	%100
54	MP3A	Z	-.299	-.299	0	%100
55	MP4A	X	-.518	-.518	0	%100
56	MP4A	Z	-.299	-.299	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.272	-.272	0	%100
2	M1	Z	-.471	-.471	0	%100
3	M2	X	-.272	-.272	0	%100
4	M2	Z	-.471	-.471	0	%100
5	M3	X	-.228	-.228	0	%100
6	M3	Z	-.395	-.395	0	%100
7	M4	X	-.228	-.228	0	%100
8	M4	Z	-.395	-.395	0	%100
9	M5	X	-.016	-.016	0	%100
10	M5	Z	-.028	-.028	0	%100
11	M6	X	-.016	-.016	0	%100
12	M6	Z	-.028	-.028	0	%100
13	M7	X	-.095	-.095	0	%100
14	M7	Z	-.164	-.164	0	%100
15	M8	X	-.095	-.095	0	%100
16	M8	Z	-.164	-.164	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
17	M9	X	-.091	-.091	0	%100
18	M9	Z	-.158	-.158	0	%100
19	M10	X	-.047	-.047	0	%100
20	M10	Z	-.081	-.081	0	%100
21	M11	X	-.349	-.349	0	%100
22	M11	Z	-.604	-.604	0	%100
23	M12	X	-.059	-.059	0	%100
24	M12	Z	-.102	-.102	0	%100
25	M13	X	-.059	-.059	0	%100
26	M13	Z	-.102	-.102	0	%100
27	M14	X	-.004	-.004	0	%100
28	M14	Z	-.007	-.007	0	%100
29	M15	X	-.004	-.004	0	%100
30	M15	Z	-.007	-.007	0	%100
31	M16	X	-.059	-.059	0	%100
32	M16	Z	-.102	-.102	0	%100
33	M17	X	-.059	-.059	0	%100
34	M17	Z	-.102	-.102	0	%100
35	M18	X	-.059	-.059	0	%100
36	M18	Z	-.102	-.102	0	%100
37	M19	X	-.059	-.059	0	%100
38	M19	Z	-.102	-.102	0	%100
39	M20	X	-.004	-.004	0	%100
40	M20	Z	-.007	-.007	0	%100
41	M21	X	-.004	-.004	0	%100
42	M21	Z	-.007	-.007	0	%100
43	M22	X	-.004	-.004	0	%100
44	M22	Z	-.007	-.007	0	%100
45	M23	X	-.004	-.004	0	%100
46	M23	Z	-.007	-.007	0	%100
47	M24	X	-.146	-.146	0	%100
48	M24	Z	-.254	-.254	0	%100
49	MP1A	X	-.299	-.299	0	%100
50	MP1A	Z	-.518	-.518	0	%100
51	MP2A	X	-.299	-.299	0	%100
52	MP2A	Z	-.518	-.518	0	%100
53	MP3A	X	-.299	-.299	0	%100
54	MP3A	Z	-.518	-.518	0	%100
55	MP4A	X	-.299	-.299	0	%100
56	MP4A	Z	-.518	-.518	0	%100

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	N2	max	2133.367	33	227.922	3	1352.356	2	0	51	0	51	0	51
2		min	-1071.4	3	-2237.005	21	-3208.76	20	0	1	0	1	0	1
3	N1	max	507.861	47	4752.17	21	2734.605	13	0	51	0	51	0	51
4		min	-2073.994	29	679.439	3	351.317	7	0	1	0	1	0	1
5	N61	max	324.303	3	41.87	15	1314.253	9	0	51	0	51	0	51
6		min	-328.347	9	13.108	9	-1318.797	3	0	1	0	1	0	1
7	Totals:	max	1218.763	10	2556.291	24	1863.851	1						
8		min	-1218.765	4	921.614	7	-1863.85	7						

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [l...	phi*Pnt [lb]	phi*Mn y-...	phi*Mn z-...	Cb	Eqn
1	M1	PIPE_2.5	.263	4.531	26	.094	9.818		7	10819.554	66654	4.727	4.727	2...	H1-1b
2	M2	PIPE_2.5	.323	4.682	8	.097	4.531		9	10819.554	66654	4.727	4.727	2...	H1-1b
3	M3	PIPE_2.0	.115	2.983	3	.038	0		27	36702.009	42228	2.46	2.46	2...	H1-1b
4	M4	PIPE_2.0	.075	0	36	.043	0		27	36702.009	42228	2.46	2.46	1...	H1-1b

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [l...	phi*Pnt [lb]	phi*Mn y-...	phi*Mn z-...	Cb	Eqn
5	M5	PIPE_2.0	.078	2.238	20	.019	0		17	36701.805	42228	2.46	2.46	1....	H1-1b
6	M6	PIPE_2.0	.049	0	20	.025	0		27	36701.805	42228	2.46	2.46	1....	H1-1b
7	M7	SR_0.75	.138	2.75	26	.014	0		27	6575.719	19880.37	.249	.249	1....	H1-1b*
8	M8	SR_0.75	.169	2.75	1	.014	2.75		3	6575.719	19880.37	.249	.249	1	H1-1b*
9	M9	SR_0.75	.096	2.029	16	.004	4.057		34	3020.676	19880.37	.249	.249	1....	H1-1b
10	M10	SR_0.75	.098	2.029	22	.007	0		33	3020.611	19880.37	.249	.249	1....	H1-1b
11	M11	PIPE_3.0	.153	1.167	33	.156	1.167		33	76573.923	85698	7.555	7.555	1....	H1-1b
12	M12	PL1/2x5	.279	.167	27	.068	.167	z	27	110928.5...	112500	1.174	11.719	1....	H1-1b
13	M13	PL1/2x5	.049	0	25	.102	.167	y	27	110928.5...	112500	1.174	11.719	1....	H1-1b
14	M14	PL1/2x5	.252	.167	21	.023	.167	z	23	110929.6...	112500	1.174	11.719	1....	H1-1b
15	M15	PL1/2x5	.031	.167	31	.056	.167	y	26	110929.6...	112500	1.174	11.719	1....	H1-1b
16	M16	PL1/2x5	.139	.225	33	.065	0	y	27	109654.2...	112500	1.174	11.719	1....	H1-1b
17	M17	PL1/2x5	.093	.225	32	.101	.225	y	27	109654.2...	112500	1.174	11.719	1....	H1-1b
18	M18	PL1/2x5	.239	0	27	.068	.188	z	27	110515.6...	112500	1.174	11.719	1....	H1-1b
19	M19	PL1/2x5	.051	0	25	.102	.188	y	27	110515.6...	112500	1.174	11.719	1....	H1-1b
20	M20	PL1/2x5	.145	0	1	.024	.225	z	12	109654.2...	112500	1.174	11.719	1....	H1-1b
21	M21	PL1/2x5	.139	0	7	.055	0	y	26	109654.2...	112500	1.174	11.719	1....	H1-1b
22	M22	PL1/2x5	.162	0	21	.023	.188	z	23	110515.6...	112500	1.174	11.719	1....	H1-1b
23	M23	PL1/2x5	.029	.188	31	.056	.188	y	26	110515.6...	112500	1.174	11.719	1....	H1-1b
24	M24	PIPE_2.0	.064	0	9	.003	0		22	21516.345	42228	2.46	2.46	1....	H1-1b*
25	MP1A	PIPE_2.0	.090	2.667	15	.017	4		27	15369.683	42228	2.46	2.46	4....	H1-1b
26	MP2A	PIPE_2.0	.228	2.583	7	.067	2.583		5	15369.683	42228	2.46	2.46	3....	H1-1b
27	MP3A	PIPE_2.0	.144	2.667	33	.069	3.583		9	15369.683	42228	2.46	2.46	4....	H1-1b
28	MP4A	PIPE_2.0	.367	2.667	33	.066	2.667		33	15369.683	42228	2.46	2.46	4....	H1-1b

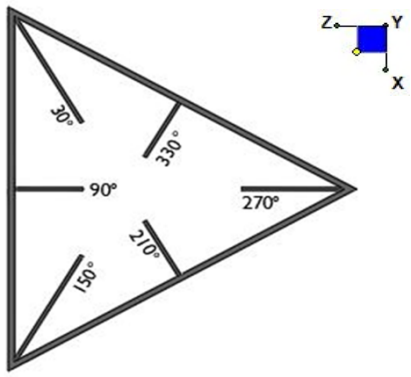
Client:	Verizon Wireless	Date:	8/23/2021
Site Name:	BOLTON CT		
Project No.	21781125A		
Title:	Mount Analysis	Page:	1

Version 3.1

I. Mount-to-Tower Connection Check

RISA Model Data

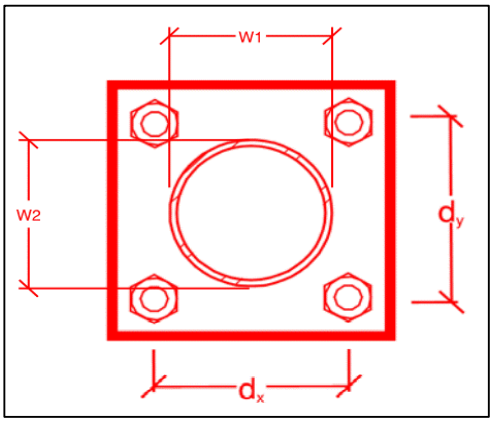
Nodes *(labeled per RISA)*	Orientation *(per graphic of typical platform)*
N1	90
N2	90



TYPICAL PLATFORM

Tower Connection Bolt Checks

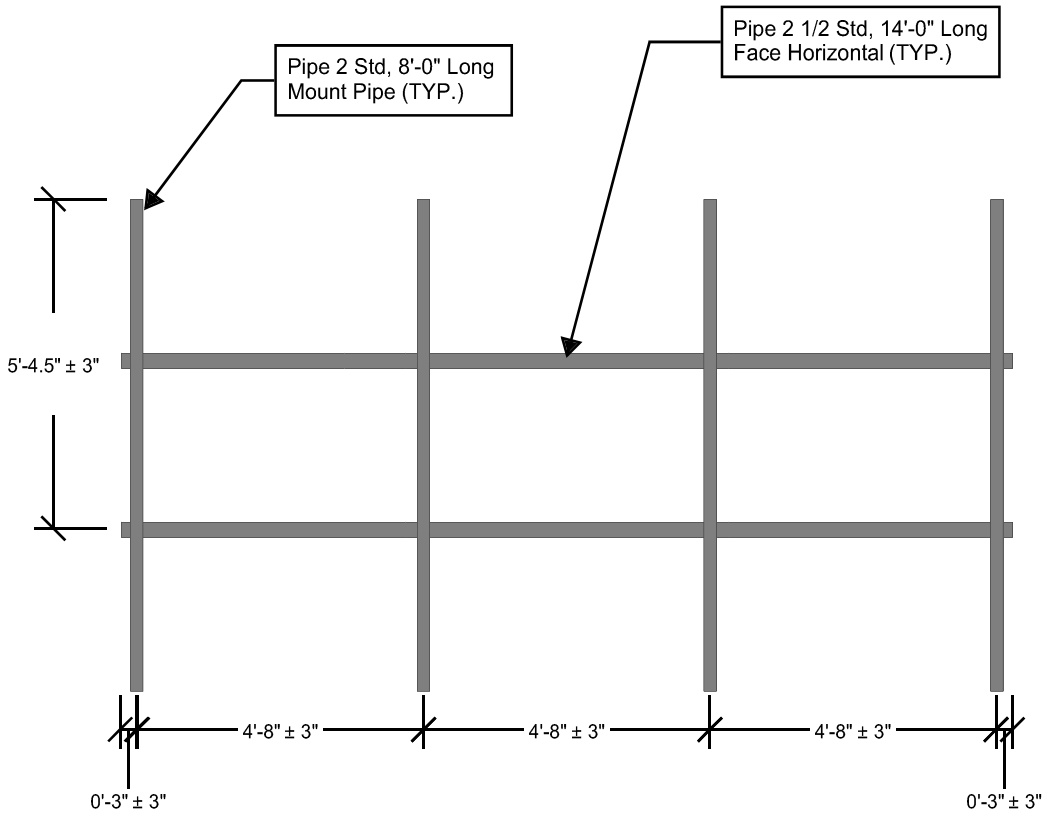
Any moment resistance?:	No
Bolt Quantity per Reaction:	2
d_x (in) *(Delta X of typ. bolt config. sketch)* :	9.5
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	0
Bolt Type:	A307
Bolt Diameter (in):	0.625
Required Tensile Strength (kips):	3.2
Required Shear Strength (kips):	4.8
Tensile Strength / bolt (kips):	10.0
Shear Strength / bolt (kips):	6.0
Tensile Capacity Overall:	**16.0%***
Shear Capacity Overall:	**39.6%**



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

STANDARD PIPE DIMENSIONS				
PIPE SIZE	O.D. (IN.)	THICKNESS (IN.)		
		STD	XSTR	XXSTR
P1 1/2	1.900	0.145	0.200	0.400
P2	2.375	0.154	0.218	0.436
P2 1/2	2.875	0.203	0.276	0.552
P3	3.500	0.216	0.300	0.600
P3 1/2	4.000	0.226	0.318	0.636
P4	4.500	0.237	0.337	0.674
P4 1/2	5.000	0.247	0.355	0.710
P5	5.563	0.258	0.375	0.750
P6	6.625	0.280	0.432	0.864

MOUNT FRONT ELEVATION VIEW



MOUNT GEOMETRY VERIFICATION

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

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Passing Mount Analysis

Purpose – to provide Maser Consulting Connecticut 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:

- Any special photos outside of the standard requirements will be indicated on the passing MA
- Verification that loading is as communicated in the Passing Mount Analysis. NOTE If loading is different than what is conveyed contact Maser Consulting Connecticut immediately.
- Each photo should be time and date stamped
- Photos should be high resolution and submitted in a Zip File and should be organized in the file structure as depicted in Schedule A attached.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope.
- The photos in the file structure should be uploaded to ***https://pmi.vzwsmart.com*** as depicted on the drawings

Photo Requirements:

- *Base and "During Installation Photos"*
  - Base pictures include
    - Photo of Gate Signs showing the tower owner, site name, and number
    - Photo of carrier shelter showing the carrier site name and number if available
    - Photos of the galvanizing compound and/or paint used (if applicable), clearly showing the label and name
  - "During Installation Photos if provided - must be placed only in this folder
- *Photos taken at ground level*
  - Overall tower structure before and after installation of the equipment modifications
  - Photos of the appropriate mount before and after installation of the modifications; if the mounts are at different rad elevations, pictures must be provided for all elevations that the modifications were installed
- *Photos taken at Mount Elevation*
  - Photos showing each individual sector before and also after installation of equipment.

These photos should also certify that the placement and geometry of the equipment on the mount is as depicted on the sketch and table in the mount analysis

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

Antenna & equipment placement and Geometry Confirmation:

- The contractor must certify that the antenna & equipment placement and geometry is in accordance with the antenna placement diagrams as included in this mount analysis.

☐ The contractor certifies that the photos support and the equipment on the mount is as depicted on the antenna placement diagrams as included in this mount analysis.

☐ The contractor notes that the equipment on the mount is not in accordance with the antenna placement diagrams and has accordingly marked up the diagrams or provided a diagram outlining the differences.

Certifying Individual: Company _____

Name _____

Signature _____

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

Issue:

- Contractor shall verify all dimensions and member sizes shown in the mount geometry verification requirements sector of the mount analysis report. Contact EOR if these documents are not available to the general contractor.
- If present, contractor shall inspect climbing facilities and ensure that the safety climb is in good condition. Contractor shall install safety climb wire rope guide (Part #: Site Pro 1 - 120-203/317 or EOR approved equal) in locations where the wire rope is rubbing against mount to tower attachments. Contractor shall provide photos of safety climb wire rope guide installation.

Response:

Schedule A – Photo & Document File Structure

- VzW Site Number / Name
  - Base & “During Installation” Photos
  - Pre-Installation Photos
    - Alpha
    - Beta
    - Gamma
    - Ground Level
    - Tape Drop
  - Post-Installation Photos
    - Alpha
    - Beta
    - Gamma
    - Ground Level
    - Tape Drop
    - Photos of climbing facility and safety climb – If Present
  - Certifications – Submission of this document including certifications
  - Specific Required Additional Photos

Structure: 467254-VZW - BOLTON CT

Sector: **A**

Structure Type: Guyed

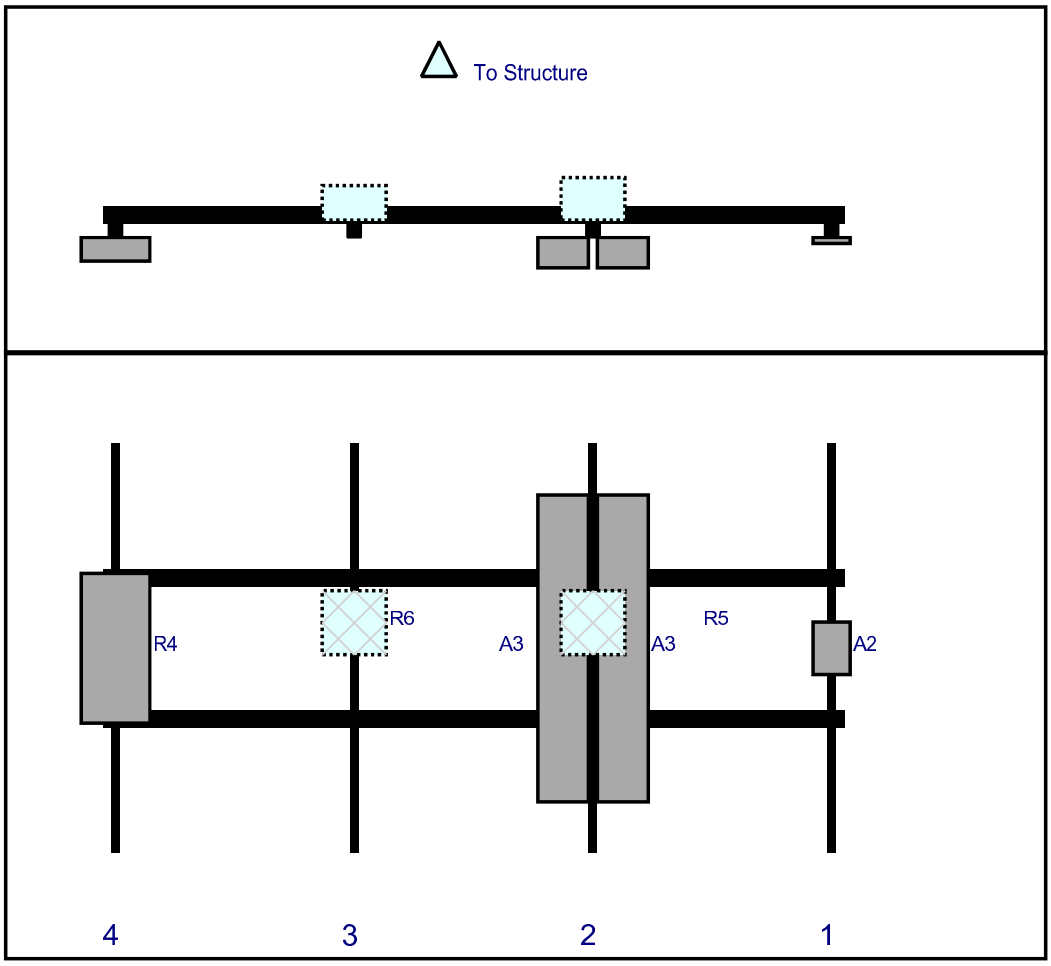
Mount Elev: 121.00

10090271

8/23/2021

Plan View

Front View
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A2	XXDWMM-12.5-65	12.3	8.7	171	1	a	Front	48	0	Added	
A3	NHH-65B-R2B	72	11.9	115	2	a	Front	48	7	Added	
A3	NHH-65B-R2B	72	11.9	115	2	b	Front	48	-7	Added	
R5	B2/B66A RRH-BR049	15	15	115	2	a	Behind	42	0	Added	
R6	B5/B13 RRH-BR04C	15	15	59	3	a	Behind	42	0	Added	
R4	MT6407-77A	35.1	16.1	3	4	a	Front	48	0	Added	

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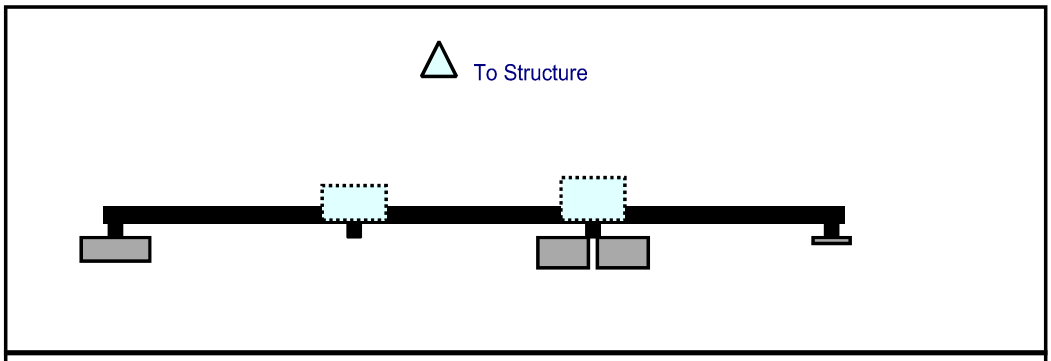
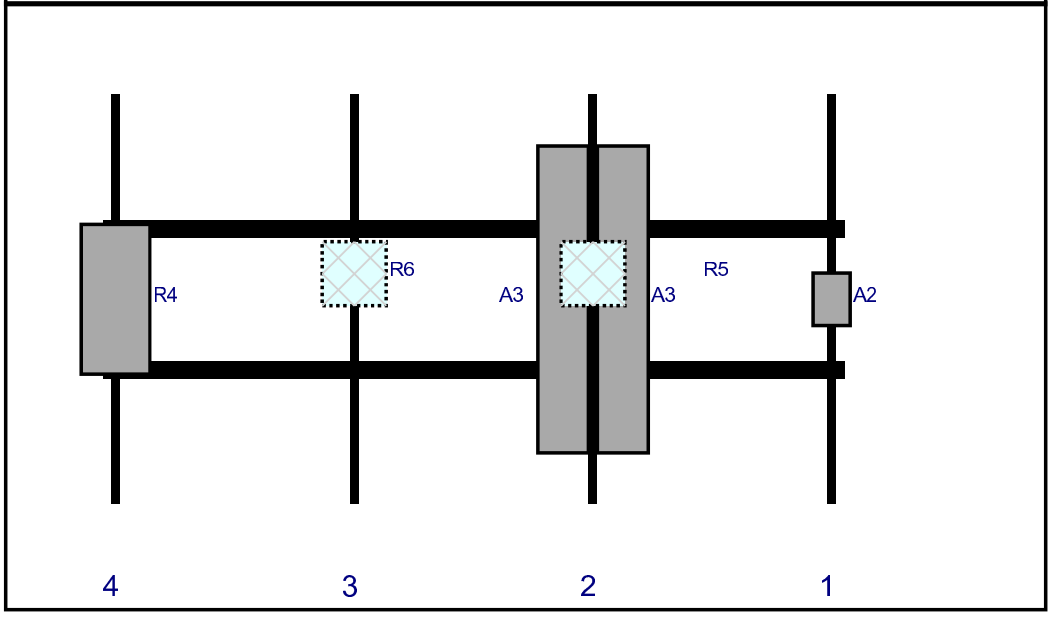
Plan View



Front View
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A2	XXDWMM-12.5-65	12.3	8.7	171	1	a	Front	48	0	Added	
A3	NHH-65B-R2B	72	11.9	115	2	a	Front	48	7	Added	
A3	NHH-65B-R2B	72	11.9	115	2	b	Front	48	-7	Added	
R5	B2/B66A RRH-BR049	15	15	115	2	a	Behind	42	0	Added	
R6	B5/B13 RRH-BR04C	15	15	59	3	a	Behind	42	0	Added	
R4	MT6407-77A	35.1	16.1	3	4	a	Front	48	0	Added	

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Maser Consulting Connecticut

Subject	TIA-222-H Usage	
Site Information	Site ID:	*467254-VZW / BOLTON CT*
	Site Name:	*BOLTON CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*130 Vernon Rd.* *Vernon Rockville, Connecticut 06066* *Tolland County*
	Latitude:	*41.802778°*
	Longitude:	*-72.441111°*
Structure Information	Tower Type:	*150-ft Guyed*
	Mount Type:	*14.50-ft Sector Frame*

To Whom It May Concern,

We respectfully submit the above referenced Antenna Mount Structural Analysis report in conformance with ANSI/TIA-222-H, Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures.

The 2015 International Building Code states that, in Section 3108, telecommunication towers shall be designed and constructed in accordance with the provisions of TIA-222. The TIA-222-H is the latest revision of the TIA-222 Standard, effective as of January 01, 2018.

As with all ANSI standards and engineering best practice is to apply the most current revision of the standard. This ensures the engineer is applying all updates. As an example, the TIA-222-H standard includes updates to bring it in line with the latest AISC and ACI standards and it also incorporates the latest wind speed maps by ASCE 7 based on updated studies of the wind data.

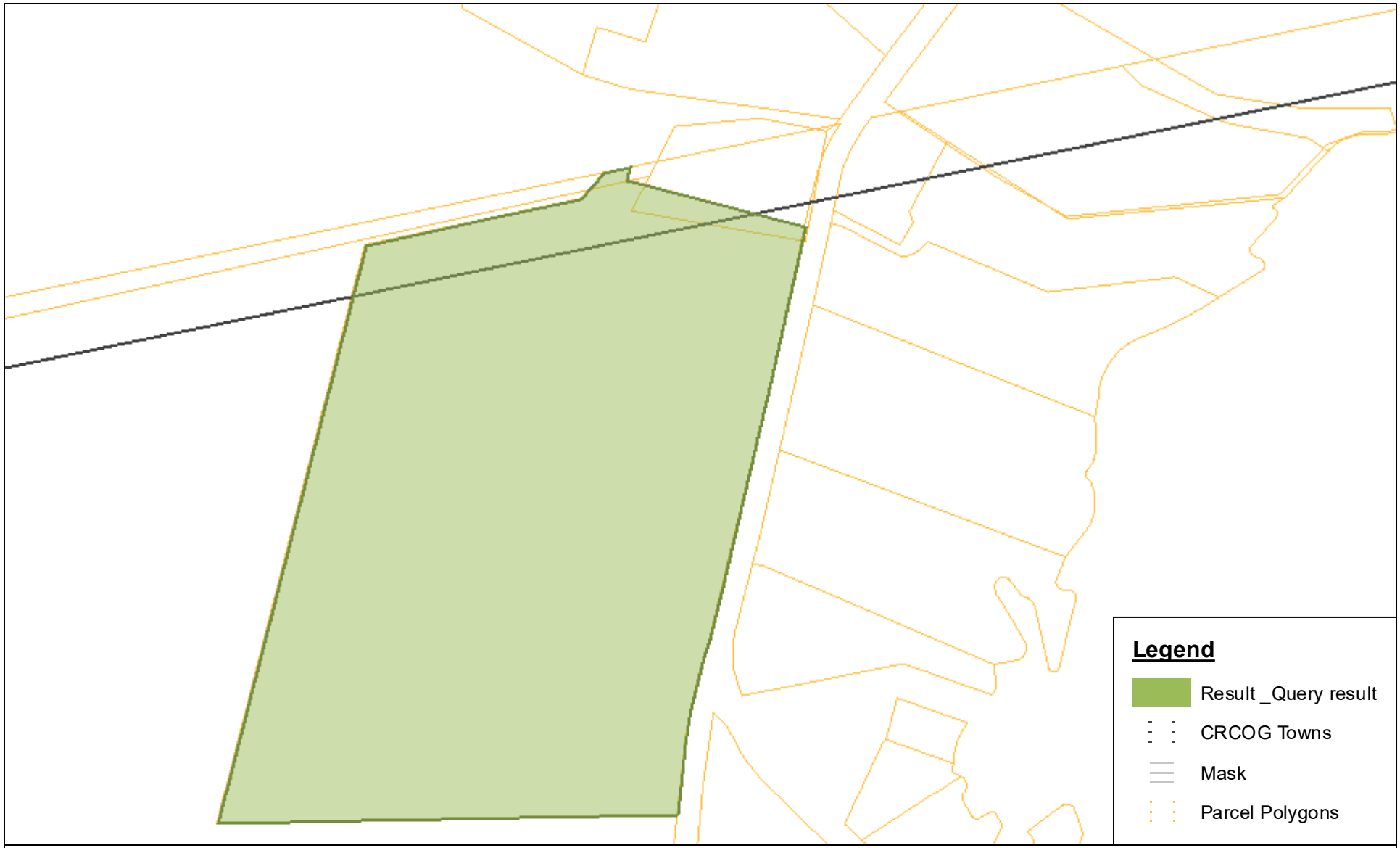
The TIA-222-H standard clarifies these specific requirements for the antenna mount analysis such as modeling methods, seismic analysis, 30-degree increment wind directions and maintenance loading. Therefore, it is our opinion that TIA-222-H is the most appropriate standard for antenna mount structural analysis and is acceptable for use at this site to ensure the engineer is taking into account the most current engineering standard available.

Sincerely,

Eric Anderson, PE
Technical Specialist

ATTACHMENT 5

ArcGIS Web Map



N
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CRCOG CAPITOL REGION COUNCIL OF GOVERNMENTS
Working together for a better region.

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

Scale
1:4,514
Created: 5/6/2020

130 VERNON RD

Location	130 VERNON RD	**Mblu**	02/ / 3/ /
Owner	MOUNTAINTOP ENTERPRISES INC	**Assessment**	$344,420
		Appraisal	$683,000
PID	1982	**Building Count**	1

Current Value

Appraisal	
Valuation Year	**Total**
2018	$683,000

Assessment	
Valuation Year	**Total**
2018	$344,420

Owner of Record

Owner	MOUNTAINTOP ENTERPRISES INC	**Sale Price**	$0
Co-Owner		**Certificate**	
Address	PO BOX 9219 BOLTON, CT 06043	**Book & Page**	166/656
		Sale Date	10/01/2014
		Instrument	24

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
MOUNTAINTOP ENTERPRISES INC	$0		166/656	24	10/01/2014
MOUNTAINTOP ENTERPRISES INC	$0		0051/0920		01/30/1979

Building Information

Building 1 : Section 1

Year Built: 1980
Living Area: 1,920
Building Percent Good: 76

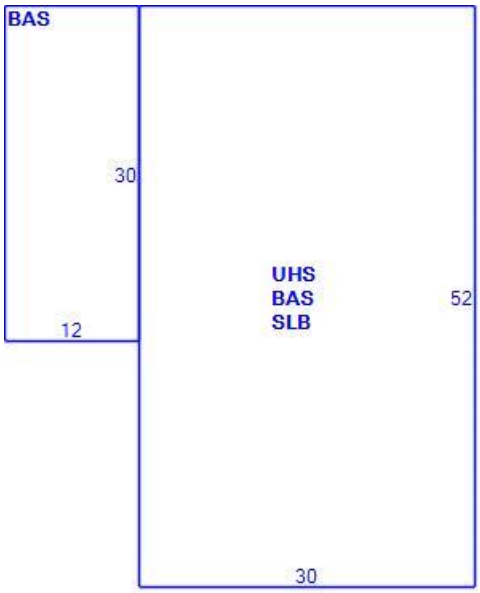
Building Attributes	
Field	**Description**

STYLE	Equipment Garage
MODEL	Comm/Ind
Grade	D
Stories:	1.5
Occupancy	1.00
Exterior Wall 1	Board & Batten
Exterior Wall 2	
Roof Structure	Gable
Roof Cover	Metal
Interior Wall 1	Minimum
Interior Wall 2	
Interior Floor 1	Minimum
Interior Floor 2	
Heating Fuel	None
Heating Type	None
% Central Air	0
Frame Type	WOOD FRAME
Fin. Bsmt. Area	
Wall Height	8.00

Building Photo

(PhotoHandler.ashx?pid=1982&bid=1982)

Building Layout



(ParcelSketch.ashx?pid=1982&bid=1982)

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	1,920	1,920
SLB	Slab	1,560	0
UHS	Unfinished Half Story	1,560	0
		5,040	1,920

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Zone R-3

Land Line Valuation

Size (Acres) 30.30
Depth
Assessed Value $297,220
Appraised Value $615,500

Outbuildings

Outbuildings					Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Bldg #**
SHD1	Shed	MS	Masonry	128.00 S.F.	1
SHD1	Shed	MS	Masonry	200.00 S.F.	1
BRN1	1 Story Barn	FR	Frame	4000.00 S.F.	1
CELL	Cell Tower			150.00 FEET	1
CELL	Cell Tower			200.00 FEET	1
SHD1	Shed	MS	Masonry	264.00 S.F.	1
SHD1	Shed	MS	Masonry	256.00 S.F.	1
SHD1	Shed	MS	Masonry	1144.00 S.F.	1

Valuation History

Appraisal	
Valuation Year	**Total**
2018	$683,000
2018	$683,000

Assessment	
Valuation Year	**Total**
2018	$344,420
2018	$344,420

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ATTACHMENT 6

UNITED STATES POSTAL SERVICE®

BOLTON

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here ***Postmark with Date of Receipt.***
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	3	3	neopost 10/04/2021 US POSTAGE $002.99⁰ ZIP 06103 041L12203937
	Postmaster, per *(name of receiving employee)*		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Sandra W. Pierog, First Selectwoman Town of Bolton 222 Bolton Center Road Bolton, CT 06043				
2.	Patrice Carson, AICP, Director of Community Development Town of Bolton 222 Bolton Center Road Bolton, CT 06043				
3.	Mountaintop Enterprises, Inc. P.O. Box 9219 Bolton, CT 06043				
4.					
5.					
6.					

OLD STATE HOUSE STATION 06103 OCT -4 2021 USPS