CROWN CASTLE

1 Cityplace Dr, Suite 490
Creve Coeur, MO 63141

Phone: (314) 513-0147
www.crowncastle.com

July 22, 2022

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

RE: **Notice of Exempt Modification for AT&T**
Crown Site ID #876313; AT&T Site ID #CTL05264
1394 Meriden Waterbury Tpk, Southington, CT 06489
Latitude: 41° 33′ 51.39”/ Longitude: -72° 53′ 30.70″

Dear Ms. Bachman:

AT&T currently maintains (12) antennas at the 156.3, 158, and 159.9-foot mounts on the existing 160-foot Monopole Tower located at **1394 Meriden Waterbury Turnpike, Southington.** The property is owned by Southington Tower Development LLC and AT&T Tower Asset Group and the Tower by Crown Castle. AT&T now intends to remove nine (9) antennas, relocate three (3) antennas, and add six (6) new antennas. This modification/proposal includes hardware that is both 4G (LTE) and 5G capable through remote software configuration and either or both services may be turned on or off at various times.

Planned Modifications:

Tower:

REMOVE AND RELOCATE
(3) Kathrein – 800 – 1021 Antennas **(REMOVE)**
(3) CCI – HPA – 65R – BUU – H81 Antennas **(REMOVE)**
(3) CCI – TPA – 65R- LCUUUU- H8 Antennas **(REMOVE)**
(6) PowerWave Tech– LGP 21401 TMAs **(REMOVE)**
(3) Ericsson – RRUS – 11 B12 RRUS **(REMOVE)**
(3) Ericsson – 4478 B14 RRUS **(RELOCATE)**
(3) Ericsson – RRUS – 32 B30 RRUS **(RELOCATE)**
(3) Ericsson – 8843 B2/B66A RRUS **(RELOCATE)**
(3) Kathrein – 880 – 10966 Antennas **(RELOCATE)**

INSTALL:
(3) CCI – TPA65R – BU8DA – K Antennas
(6) Ericsson – AIR6449 B77D (Below) +AIR6419 B77G (Above) Stacked Antennas
(3) Ericsson – 4449 B5/B12 RRUS
(6) Back to Back Mount
(6) Mount Pipe with Associated Hardware

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Ground:

REMOVE:

(6) PowerWave – LGP2190 Diplexers **(REMOVE)**
(1) 5216 **(REMOVE)**

INSTALL:

(4) GE 48V DC Rectifiers
(1) 6648 with XCEDE

The Facility was approved by the Southington Planning and Zoning Commission on August 18, 1998. The approval was with no conditions that restrict exempt modifications. A copy of the approval is included in this filing as Exhibit A.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16-50j-72(b)(2). In accordance with R.C.S.A. §16-50j-73, a copy of this letter is being sent to Victoria Triano, Town of Southington Town Council Chair, Matthew A. Reimondo, Town of Southington Zoning Enforcement Officer, and Southington Tower Development LLC as the recorded property owner.

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

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

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

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

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

6. The existing structure and its foundation can support the proposed loading.

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

Sincerely,

Ersilia Davis

Ersilia Davis

1 Cityplace Dr, Suite 490
Creve Coeur, MO 63141

Phone: (314) 513-0147
www.crowncastle.com

Crown Castle, Agent for AT&T
edavis@nbcllc.com
(551)804-0667
cc:

Victoria Triano, Town Council Chair
33 Bellevue Avenue
Southington, CT 06489
(860) 628-6990
(Via FedEx)

Matthew A. Reimondo, Zoning Enforcement Officer
Municipal Center
196 North Main Street
Southington, CT 06489
(860) 276-6248
(Via FedEx)

Southington Tower Development LLC, Owner
754 Peachtree Street NE, 16th Floor
Atlanta, GA 30308
(Via FedEx)

Exhibit A

Original Facility Approval

From: Holzschuh, Cymon
To: Myl, Kimberly
Cc: Cunliffe, Fred
Subject: RE: EM Incomplete Letters
Date: Tuesday, January 05, 2016 9:51:46 AM
Attachments: image004.png
image001.png

This will suffice.

The document states that the P&Z Commission voted to permit the establishment of the facility, and there is no mention of conditions for this permitting.

I will note for our records that this facility was approved by the Southington Planning and Zoning Commission on August 18, 1998, and that this approval included no conditions that restrict exempt modifications.

Thanks,

Cymon Holzschuh
Siting Analyst
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051
P: 860.827.2941 | F: 860.827.2950

www.ct.gov/deep

Conserving, improving and protecting our natural resources and environment;
Ensuring a clean, affordable, reliable, and sustainable energy supply.

From: Myl, Kimberly [mailto:Kimberly.Myl@crowncastle.com]
Sent: Tuesday, January 05, 2016 9:02 AM
To: Holzschuh, Cymon
Cc: Cunliffe, Fred
Subject: RE: EM Incomplete Letters

Good Morning,
The town has been pretty unresponsive. We were able to locate this, can you please advise if this will work? Thank you.

KIMBERLY MYL

Real Estate Specialist
T: (201) 236-9069 | M: (201) 993-3697

CROWN CASTLE
1200 MacArthur Blvd, Suite 200
Mahwah, NJ 07430

From: Myl, Kimberly
Sent: Monday, January 04, 2016 10:05 AM
To: 'Holzschuh, Cymon'
Cc: Cunliffe, Fred
Subject: RE: EM Incomplete Letters

Good Morning,
I have requested the original zoning approval from the town on 12/09/15 with a follow up on 12/23/15 and again about 20 minutes ago.
Once I receive it from the town I will be able to resubmit. Thank you.

KIMBERLY MYL
Real Estate Specialist
T: (201) 236-9069 | M: (201) 993-3697

CROWN CASTLE
1200 MacArthur Blvd, Suite 200
Mahwah, NJ 07430

From: Holzschuh, Cymon [mailto:Cymon.Holzschuh@ct.gov]
Sent: Monday, January 04, 2016 10:03 AM
To: Myl, Kimberly
Cc: Cunliffe, Fred
Subject: FW: EM Incomplete Letters

Hello,

I would like to confirm whether any follow-up information has been sent to us with regard to this incomplete filing.

Thanks,

Cymon Holzschuh
Siting Analyst
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051
P: 860.827.2941 | F: 860.827.2950

www.ct.gov/deep

Conserving, improving and protecting our natural resources and environment;
Ensuring a clean, affordable, reliable, and sustainable energy supply.

From: Mulcahy, Carriann
Sent: Tuesday, December 08, 2015 3:35 PM
To: Myl, Kimberly (Kimberly.Myl@crowncastle.com)
Cc: CSC-DL Siting Council
Subject: EM Incomplete Letters

Please see the attached correspondence.

Carriann Mulcahy
Secretary II
Connecticut Siting Council
860-827-2940

PLANNING AND ZONING DEPARTMENT

P.O. BOX 610 • SOUTHINGTON, CONN. 06489 • 860/276-6248

VOL. 711 PAGE 790

August 20, 1998

Sprint PCS
c/o Thomas F. Flynn III
9 Barnes Industrial Road
Wallingford, CT 06492

RE: Special Permit Use Application of Sprint PCS proposing to establish a wireless telecommunication facility, property known as Assessors Map 13, Parcel 3 on Meriden-Waterbury Turnpike (SPU #263)

8299

Dear Mr. Flynn:

Please be advised that the Southington Planning and Zoning Commission at their Regular Meeting held on August 18, 1998 voted to your special permit use application to permit the establishment of a wireless telecommunication facility to be located on the southerly side of Meriden-Waterbury Turnpike, property known as Assessor's Map 13, Parcel 3 (SPU #263).

This permit becomes effective upon the filing of the approved special permit use plan with the Town Planner's Office and the filing of the original approval letter in the office of the Town Clerk, pursuant to Section 8-3d of the General Statutes of Connecticut. Such plan shall be certified by the Planning and Zoning Commission prior to filing. Also, an approved special permit use not put into effect within one year becomes null and void. A single one year extension may be granted before the approval's first anniversary date (Sect. 8-03.3).

If you have any questions regarding these matters, please do not hesitate to call.

Respectfully,

Robert J. Nerney
Town Planner

RJN/jg

RECEIVED SEP 10 1998 AT 10:20AM
TOWN CLERK

Exhibit B

Property Card

1394 MERIDEN WATERBURY TPKE

Location	1394 MERIDEN WATERBURY TPKE	**Mblu**	032/ / 103/ 0004/
		Acct#	18522
Owner	SOUTHINGTON TOWER DEVELOPMENT LLC	**Assessment**	$207,490
		Appraisal	$296,420
PID	1752	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2020	$0	$296,420	$296,420
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2020	$0	$207,490	$207,490

Owner of Record

Owner	SOUTHINGTON TOWER DEVELOPMENT LLC	**Sale Price**	$90,000
Co-Owner		**Certificate**	
Address	754 PEACHTREE ST, NE 16TH FLOOR ATLANTA, GA 30308	**Book & Page**	0997/1112
		Sale Date	01/18/2005
		Instrument	03

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
SOUTHINGTON TOWER DEVELOPMENT LLC	$90,000		0997/1112	03	01/18/2005

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0
Building Percent Good:

Building Attributes	
Field	**Description**
Style	Vacant
Model	
Grade:	
Stories	

Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Full Bthrms:	
Half Baths:	
Extra Fixtures	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Total Kitchens	
Fireplaces	
Whirlpool Tubs	
Fin Bsmt Area	
Fin Bsmt Quality	
Bsmt Garages	
.	
Bsmt Type	
Attic Type	
Cath Ceiling	
Fndtn Cndtn	
Basement	

Building Photo

(https://images.vgsi.com/photos2/SouthingtonCTPhotos//\0057\IMG_2279_

Building Layout

(ParcelSketch.ashx?pid=1752&bid=1752)

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 391
Description Vac Com Lnd wAcc
Zone B
Alt Land Appr No
Category

Land Line Valuation

Size (Acres) 0.83
Depth

Outbuildings

Outbuildings	Legend
No Data for Outbuildings	

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2021	$0	$296,420	$296,420
2020	$0	$296,420	$296,420
2019	$0	$204,320	$204,320
2018	$0	$204,320	$204,320
2017	$0	$204,320	$204,320

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2021	$0	$207,490	$207,490
2020	$0	$207,490	$207,490
2019	$0	$143,020	$143,020
2018	$0	$143,020	$143,020
2017	$0	$143,020	$143,020

Exhibit C

Construction Drawings

AT&T

AT&T SITE NUMBER:	**CTL05264**	**BUSINESS UNIT #:**	**876313**
AT&T SITE NAME:	**SOUTHINGTON- SOUTH**	**SITE ADDRESS:**	**1394 MERIDEN WATERBURY TPK SOUTHINGTON, CT 06489**
AT&T FA CODE:	**10092035**		
AT&T PACE NUMBER:	**MRCTB056467, MRCTB056728, MRCTB053388, MRCTB053379, MRCTB056535, MRCTB056038**	**COUNTY:**	**HARTFORD**
		SITE TYPE:	**MONOPOLE**
AT&T PROJECT:	**4TXRX ANTENNA RETROFIT, 5G NR 1SR CBAND, 5G NR ACTIVATION, BBU RECONFIGURATION WITH NEW IDS**	**TOWER HEIGHT:**	**160'-0"**

SITE INFORMATION

CROWN CASTLE USA INC. SITE NAME:	WEST JOHNSON AVE. BURNT HOUSE
SITE ADDRESS:	1394 MERIDEN WATERBURY TPK SOUTHINGTON, CT 06489
COUNTY:	HARTFORD
MAP/PARCEL #:	0321030004
AREA OF CONSTRUCTION:	EXISTING
LATITUDE:	41° 33' 51.39"
LONGITUDE:	-72° 53' 30.70"
LAT/LONG TYPE:	NAD83
GROUND ELEVATION:	135'-0"
CURRENT ZONING:	B
JURISDICTION:	CONNECTICUT SITING COUNCIL
OCCUPANCY CLASSIFICATION:	U
TYPE OF CONSTRUCTION:	IIB
A.D.A. COMPLIANCE:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
PROPERTY OWNER:	SOUTHINGTON TOWER DEVELOPMENT LLC 754 PEACHREE ST, NE ATLANTA, GA 30308
TOWER OWNER:	CROWN CASTLE USA INC 2000 CORPORATE DRIVE CANONSBURG, PA 15317
CARRIER/APPLICANT:	AT&T TOWER ASSET GROUP 575 MOROSGO DRIVE ATLANTA, GA 30324-3300
ELECTRIC PROVIDER:	EVERSOURCE 800.286.2000
TELCO PROVIDER:	AT&T 888.885.9284

PROJECT TEAM

A&E FIRM:	B+T GROUP 1717 S. BOULDER AVE. TULSA, OK 74119 MARVIN PHILLIPS MARVIN.PHILLIPS@BTGRP.COM
CROWN CASTLE USA INC. DISTRICT CONTACTS:	3530 TORINGDON WAY, SUITE 300 CHARLOTTE, NC 28277 WILLIAN GATES - PROJECT MANAGER WILLIAN.GATES@CROWNCASTLE.COM JASON D'AMICO - CONSTRUCTION MANAGER JASON.DAMICO@CROWNCASTLE.COM HEATHER MILLER - AES HEATHER.MILLER@CROWNCASTLE.COM

NOTE:
PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN NOC AT (800) 788-7011 & CROWN CONSTRUCTION MANAGER.

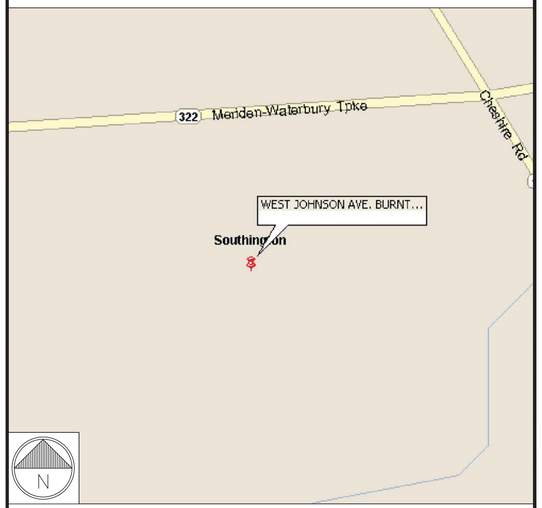
DRAWING INDEX

SHEET #	SHEET DESCRIPTION
T-1	TTILE SHEET
T-2	GENERAL NOTES
C-1.1	SITE PLAN
C-1.2	EQUIPMENT PLANS
C-2	TOWER ELEVATION & ANTENNA PLANS
C-3	ANTENNA SCHEDULE
C-4	EQUIPMENT DETAILS
C-5	EQUIPMENT SPECS.
G-1	GROUNDING DETAILS
G-2	GROUNDING DETAILS
ATTACHED	PLUMBING DIAGRAM

ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR FULL SIZE. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

CALL CONNECTICUT ONE CALL
(800) 922-4455 CBYD.COM
CALL 2 WORKING DAYS
BEFORE YOU DIG!

LOCATION MAP



NO SCALE

PROJECT DESCRIPTION

THE PURPOSE OF THIS PROJECT IS TO ENHANCE BROADBAND CONNECTIVITY AND CAPACITY TO THE EXISTING ELIGIBLE WIRELESS FACILITY.

TOWER SCOPE OF WORK:
- REMOVE (3) KATHREIN - 800-10121 ANTENNAS
- REMOVE (3) CCI - HPA-65R-BUU-H81 ANTENNAS
- REMOVE (3) CCI - TPA-65R-LCUUUU-H8 ANTENNAS
- REMOVE (6) POWERWAVE - LGP21401 TMAs
- REMOVE (3) ERICSSON - RRUS-11 B12 RRUS
- RELOCATE (3) KATHREIN - 800-10966 ANTENNAS
- RELOCATE (3) ERICSSON - RRUS-32 B30 RRUS
- RELOCATE (3) ERICSSON - 4478 B14 RRUS
- RELOCATE (3) ERICSSON - 8843 B2/B66A RRUS
- INSTALL (6) BACK TO BACK MOUNT
- INSTALL (6) MOUNT PIPE
- INSTALL (3) CCI - TPA65R-BU8DA-K ANTENNAS
- INSTALL (6) ERICSSON - AIR6449 B77D+AIR6419 B77G STACKED ANTENNAS
- INSTALL (3) ERICSSON - 4449 B5/B12 RRUS

GROUND SCOPE OF WORK:
- REMOVE (6) POWERWAVE - LGP21901 DIPLEXERS
- REMOVE (1) 5216
- INSTALL (4) GE 48V DC RECTIFIERS
- INSTALL (1) 6648 WITH XCEDE

NOTE:
THE POWER DESIGN FOR ANY AC ELECTRICAL POWER CHANGES IS TO BE PERFORMED BY OTHERS AND IS SHOWN HERE FOR REFERENCE PURPOSES ONLY. AT&T IS SOLELY RESPONSIBLE FOR THE ELECTRICAL POWER DESIGN.

SITE PHOTO

APPLICABLE CODES & REFERENCE DOCUMENTS

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

CODE TYPE	CODE
BUILDING	2018 CONNECTICUT SBC/2015 IBC
MECHANICAL	2018 CONNECTICUT SBC/2015 IMC
ELECTRICAL	2018 CONNECTICUT SBC/2017 NEC

REFERENCE DOCUMENTS:

STRUCTURAL ANALYSIS:	B+T GROUP
DATED:	6/23/22
MOUNT ANALYSIS:	INFINIGY
DATED:	5/2/22
RFDS REVISION:	PRELIMINARY
DATED:	2/18/22
ORDER ID:	586312
REVISION:	0
AC ELECTRICAL POWER DESIGN:	BY OTHERS
DATED:	

575 MOROSGO DRIVE
ATLANTA, GA 30324-3300

CROWN CASTLE
3530 TORINGDON WAY, SUITE 300
CHARLOTTE, NC 28277

B+T GRP
1717 S. BOULDER
SUITE 300
TULSA, OK 74119
PH: (918) 587-4630
www.btgrp.com

AT&T SITE NUMBER:
CTL05264

BU #: **876313**
WEST JOHNSON AVE.
BURNT HOUSE

1394 MERIDEN WATERBURY TPK
SOUTHINGTON, CT 06489

EXISTING
160'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	4/12/22	YX	PRELIMINARY REVIEW	LR
B	5/13/22	YX	CONSTRUCTION	LR
0	6/24/22	YX	CONSTRUCTION	LR

STATE OF CONNECTICUT
GREG LANE
No. 23924
LICENSED
PROFESSIONAL ENGINEER
6/24/22

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/23

SHEET NUMBER: T-1

REVISION: 0

CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:

1. NOTICE TO PROCEED– NO WORK SHALL COMMENCE PRIOR TO CROWN CASTLE USA INC. WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN CASTLE USA INC. NOC AT 800–788–7011 & THE CROWN CASTLE USA INC. CONSTRUCTION MANAGER.
2. "LOOK UP" – CROWN CASTLE USA INC. SAFETY CLIMB REQUIREMENT:
THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR CROWN CASTLE USA INC. POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.
3. PRIOR TO THE START OF CONSTRUCTION, ALL REQUIRED JURISDICTIONAL PERMITS SHALL BE OBTAINED. THIS INCLUDES, BUT IS NOT LIMITED TO, BUILDING, ELECTRICAL, MECHANICAL, FIRE, FLOOD ZONE, ENVIRONMENTAL, AND ZONING. AFTER ONSITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS SHALL BE SATISFIED AND CLOSED OUT ACCORDING TO LOCAL JURISDICTIONAL REQUIREMENTS.
4. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN, AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND CROWN CASTLE USA INC. STANDARD CED–STD–10253, INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION, TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH ANSI/TIA–322 (LATEST EDITION).
5. ALL SITE WORK TO COMPLY WITH QAS–STD–10068 "INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON CROWN CASTLE USA INC. TOWER SITE," CED–STD–10294 "STANDARD FOR INSTALLATION OF MOUNTS AND APPURTENANCES," AND LATEST VERSION OF ANSI/TIA–1019–A–2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."
6. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY CROWN CASTLE USA INC. PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
10. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION E) CONSTRUCTION SAFETY PROCEDURES.
11. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
12. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
13. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, TOWER OWNER, CROWN CASTLE USA INC., AND/OR LOCAL UTILITIES.
14. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.
15. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
16. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
17. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS.
18. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
19. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
20. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
21. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
22. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

GENERAL NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
CONTRACTOR: GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION
CARRIER: AT&T
TOWER OWNER: CROWN CASTLE USA INC.
2. THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. IT IS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKPEOPLE WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
3. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, FORMWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER OR HIS REPRESENTATIVE WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF THE FINISHED STRUCTURE ONLY.
4. NOTES AND DETAILS IN THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED CONTACT THE ENGINEER OF RECORD.
5. SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND/OR PLACEMENT OF CONSTRUCTION ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION OR CUTTING OF ANY NEW OR EXISTING CONSTRUCTION ELEMENTS. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.
6. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CROWN CASTLE.
7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
8. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
9. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
10. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CARRIER AND CROWN CASTLE PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
11. CONTRACTOR IS TO PERFORM A SITE INVESTIGATION AND IS TO DETERMINE THE BEST ROUTING OF ALL CONDUITS FOR POWER, AND TELCO AND FOR GROUNDING CABLES AS SHOWN IN THE POWER, TELCO, AND GROUNDING PLAN DRAWINGS.
12. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF CROWN CASTLE USA INC.
13. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
14. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST–IN–PLACE CONCRETE.
2. UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.
3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 3000 psi AT 28 DAYS, UNLESS NOTED OTHERWISE. NO MORE THAN 90 MINUTES SHALL ELAPSE FROM BATCH TIME TO TIME OF PLACEMENT UNLESS APPROVED BY THE ENGINEER OF RECORD. TEMPERATURE OF CONCRETE SHALL NOT EXCEED 90°f AT TIME OF PLACEMENT.
4. CONCRETE EXPOSED TO FREEZE–THAW CYCLES SHALL CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE TYPE II PORTLAND CEMENT WITH A MAXIMUM WATER–TO–CEMENT RATIO (W/C) OF 0.45.
5. ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. ALL SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS NOTED OTHERWISE. ALL HOOKS SHALL BE STANDARD 90 DEGREE HOOKS, UNLESS NOTED OTHERWISE. YIELD STRENGTH (Fy) OF STANDARD DEFORMED BARS ARE AS FOLLOWS:
#4 BARS AND SMALLER............40 ksi
#5 BARS AND LARGER............60 ksi
6. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH............3"
CONCRETE EXPOSED TO EARTH OR WEATHER:
#6 BARS AND LARGER............2"
#5 BARS AND SMALLER............1–1/2"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
SLAB AND WALLS............3/4"
BEAMS AND COLUMNS............1–1/2"
7. A TOOLED EDGE OR A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

GREENFIELD GROUNDING NOTES:

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
2. THE CONTRACTOR SHALL PERFORM IEEE FALL–OF–POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.
4. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
5. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
6. EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 BARE SOLID TINNED COPPER FOR OUTDOOR BTS.
7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED BACK TO BACK CONNECTIONS ON OPPOSITE SIDE OF THE GROUND BUS ARE PERMITTED.
8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
15. APPROVED ANTIOXIDANT COATINGS (i.e. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
17. MISCELLANEOUS ELECTRICAL AND NON–ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
18. BOND ALL METALLIC OBJECTS WITHIN 6 ft OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.
19. GROUND CONDUCTORS USED FOR THE FACILITY GROUNDING AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON–METALLIC MATERIAL SUCH AS PVC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (i.e., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
20. ALL GROUNDS THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 BARE SOLID TINNED COPPER IN 3/4" NON–METALLIC, FLEXIBLE CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD–WELD TERMINATION POINT. THE EXPOSED END OF THE CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).
21. BUILDINGS WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY).

ELECTRICAL INSTALLATION NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
4.1. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.
4.2. ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING THAT SHALL BE GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 22,000 AIC MINIMUM. VERYIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110.24 NEC OR THE MOST CURRENT ADOPTED CODE PRE THE GOVERNING JURISDICTION.
5. EACH END OF EVERY POWER PHASE CONDUCTOR, GROUNDING CONDUCTOR, AND TELCO CONDUCTOR OR CABLE SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.
6. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH LAMICOID TAGS SHOWING THEIR RATED VOLTAGE, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (i.e. PANEL BOARD AND CIRCUIT ID'S).
7. PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
8. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
9. ALL POWER AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE COPPER CONDUCTOR (#14 OR LARGER) WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
10. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE COPPER CONDUCTOR (#6 OR LARGER) WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
11. POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI–CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.
12. POWER AND CONTROL WIRING FOR USE IN CABLE TRAY SHALL BE MULTI–CONDUCTOR, TYPE TC CABLE (#14 OR LARGER), WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP–STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION NOT LESS THAN 75° C (90° C IF AVAILABLE).
14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
15. ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
16. ELECTRICAL METALLIC TUBING (EMT) OR METAL–CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
17. SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
18. LIQUID–TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID–TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION–TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
20. CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND THE NEC.
21. WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOLD SPECMATE WIREWAY).
22. SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).
23. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON–PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES (i.e. POWDER–ACTUATED) FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
24. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY–COATED SHEET STEEL. SHALL MEET OR EXCEED UL 50 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND NEMA 3R (OR BETTER) FOR EXTERIOR LOCATIONS.
25. METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY–COATED OR NON–CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
26. NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2 (NEWEST REVISION) AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
27. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CARRIER AND/OR CROWN CASTLE USA INC. BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
28. THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
29. INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "AT&T".
30. ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.

CONDUCTOR COLOR CODE

SYSTEM	CONDUCTOR	COLOR
120/240V, 1Ø	A PHASE	BLACK
	B PHASE	RED
	NEUTRAL	WHITE
	GROUND	GREEN
120/208V, 3Ø	A PHASE	BLACK
	B PHASE	RED
	C PHASE	BLUE
	NEUTRAL	WHITE
	GROUND	GREEN
277/480V, 3Ø	A PHASE	BROWN
	B PHASE	ORANGE OR PURPLE
	C PHASE	YELLOW
	NEUTRAL	GREY
	GROUND	GREEN
DC VOLTAGE	POS (+)	RED**
	NEG (–)	BLACK**

* SEE NEC 210.5(C)(1) AND (2)
** POLARITY MARKED AT TERMINATION

APWA UNIFORM COLOR CODE:

WHITE	PROPOSED EXCAVATION
PINK	TEMPORARY SURVEY MARKINGS
RED	ELECTRIC POWER LINES, CABLES, CONDUIT, AND LIGHTING CABLES
YELLOW	GAS, OIL, STEAM, PETROLEUM, OR GASEOUS MATERIALS
ORANGE	COMMUNICATION, ALARM OR SIGNAL LINES, CABLES, OR CONDUIT AND TRAFFIC LOOPS
BLUE	POTABLE WATER
PURPLE	RECLAIMED WATER, IRRIGATION, AND SLURRY LINES
GREEN	SEWERS AND DRAIN LINES

ABBREVIATIONS:

ANT	ANTENNA
(E)	EXISTING
FIF	FACILITY INTERFACE FRAME
GEN	GENERATOR
GPS	GLOBAL POSITIONING SYSTEM
GSM	GLOBAL SYSTEM FOR MOBILE
LTE	LONG TERM EVOLUTION
MGB	MASTER GROUND BAR
MW	MICROWAVE
(N)	NEW
NEC	NATIONAL ELECTRIC CODE
(P)	PROPOSED
PP	POWER PLANT
QTY	QUANTITY
RECT	RECTIFIER
RBS	RADIO BASE STATION
RET	REMOTE ELECTRIC TILT
RFDS	RADIO FREQUENCY DATA SHEET
RRH	REMOTE RADIO HEAD
RRU	REMOTE RADIO UNIT
SIAD	SMART INTEGRATED DEVICE
TMA	TOWER MOUNTED AMPLIFIER
TYP	TYPICAL
UMTS	UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
W.P.	WORK POINT

AT&T
575 MOROSGO DRIVE
ATLANTA, GA 30324-3300

CROWN CASTLE
3530 TORINGDON WAY, SUITE 300
CHARLOTTE, NC 28277

B+T GRP
1717 S. BOULDER
SUITE 300
TULSA, OK 74119
PH: (918) 587-4630
www.btgrp.com

AT&T SITE NUMBER:
CTL05264

BU #: **876313**
WEST JOHNSON AVE. BURNT HOUSE

1394 MERIDEN WATERBURY TPK
SOUTHINGTON, CT 06489

EXISTING
160'-0" MONOPOLE

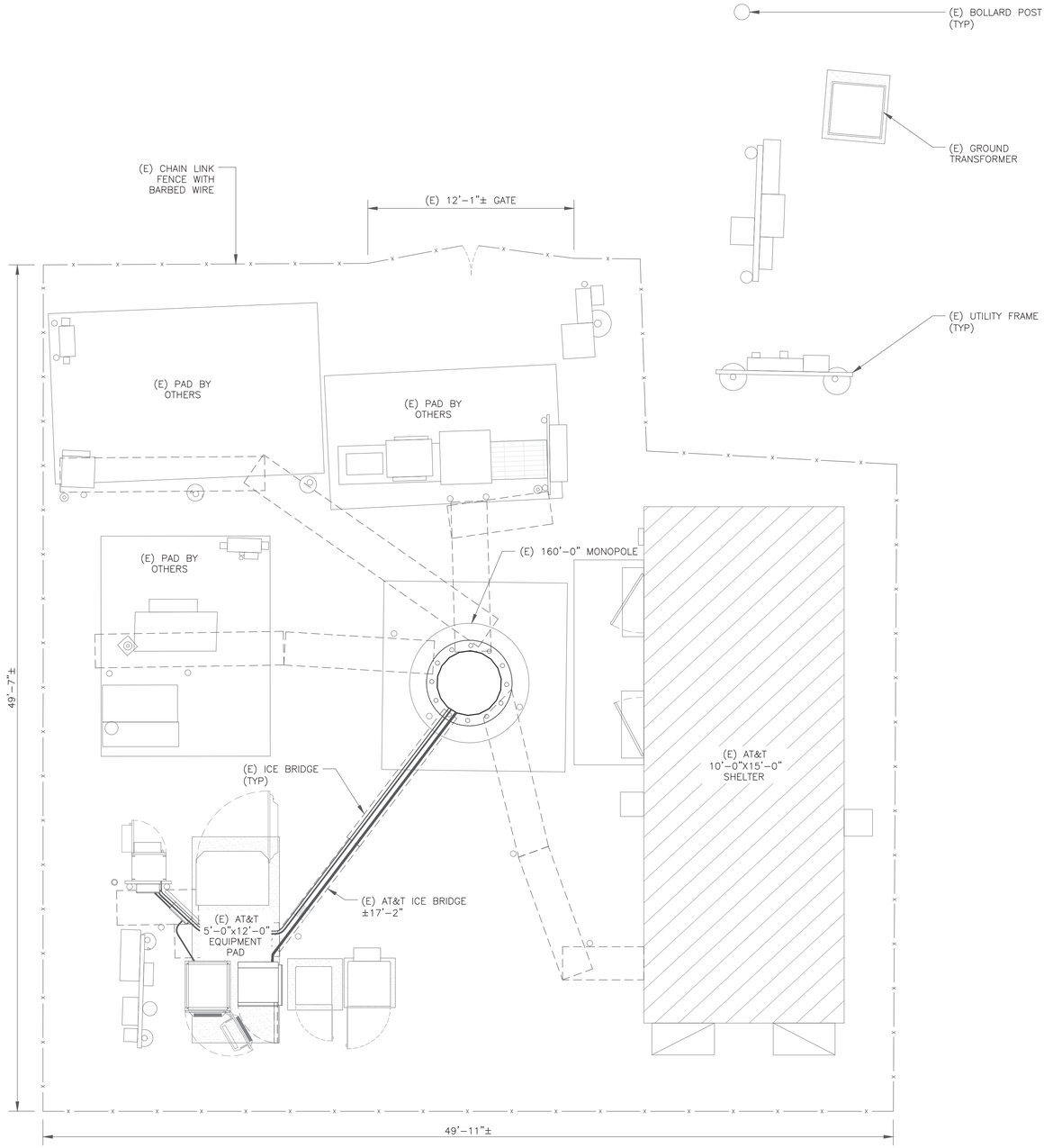
ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	4/12/22	YX	PRELIMINARY REVIEW	LR
B	5/13/22	YX	CONSTRUCTION	LR
0	6/24/22	YX	CONSTRUCTION	LR

STATE OF CONNECTICUT
No. 23924
LICENSED PROFESSIONAL ENGINEER
6/24/22

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/23

SHEET NUMBER:	REVISION:
T-2	0



1 SITE PLAN
SCALE: 4' 3' 2' 1' 0 4'
1/4"=1'-0" (FULL SIZE)
1/8"=1'-0" (11x17)

AT&T
575 MOROSGO DRIVE
ATLANTA, GA 30324-3300

CROWN CASTLE
3530 TORINGDON WAY, SUITE 300
CHARLOTTE, NC 28277

B+T GRP
1717 S. BOULDER
SUITE 300
TULSA, OK 74119
PH: (918) 587-4630
www.btgrp.com

AT&T SITE NUMBER:
CTL05264

BU #: **876313**
WEST JOHNSON AVE.
BURNT HOUSE

1394 MERIDEN WATERBURY TPK
SOUTHINGTON, CT 06489

EXISTING
160'-0" MONOPOLE

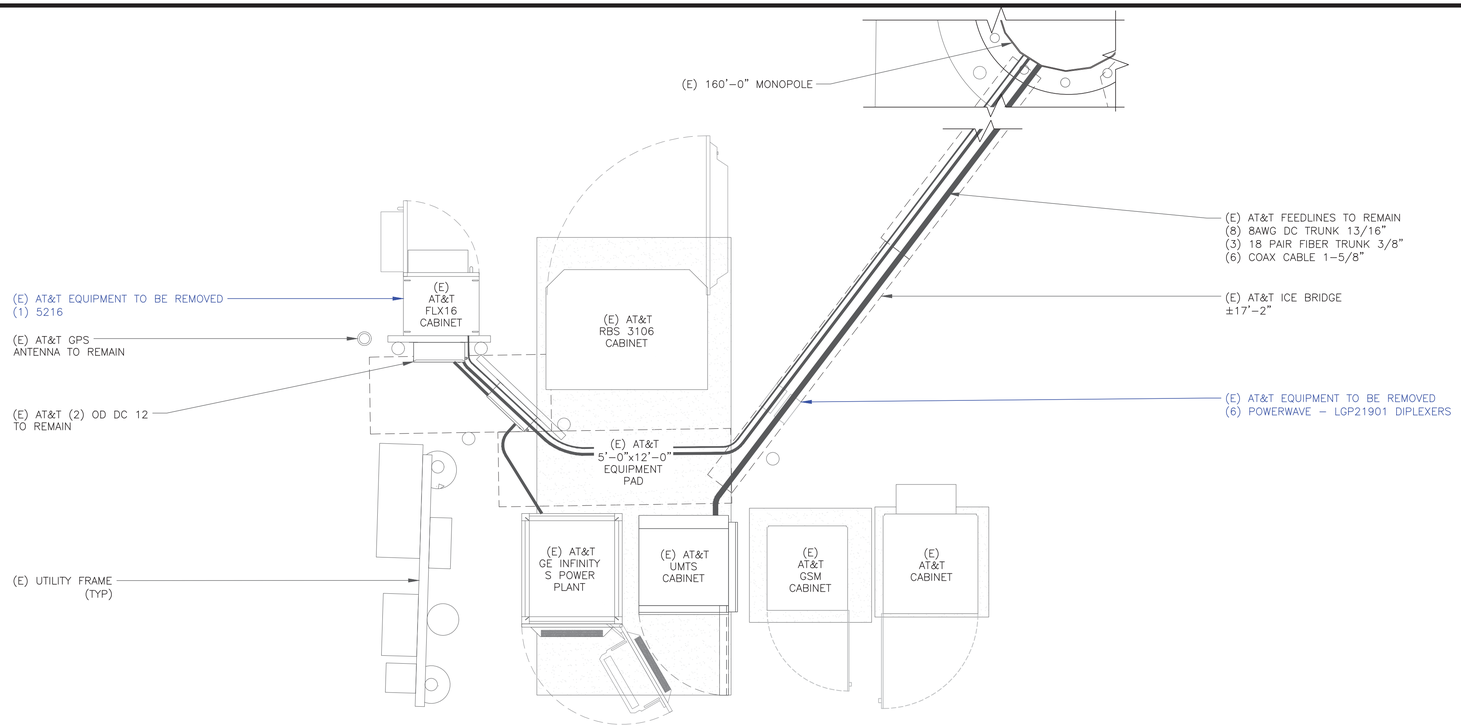
ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	4/12/22	YX	PRELIMINARY REVIEW	LR
B	5/13/22	YX	CONSTRUCTION	LR
0	6/24/22	YX	CONSTRUCTION	LR

LR CHRISTENSEN
CONNECTICUT
No. 23924
LICENSED
PROFESSIONAL ENGINEER
6/24/22

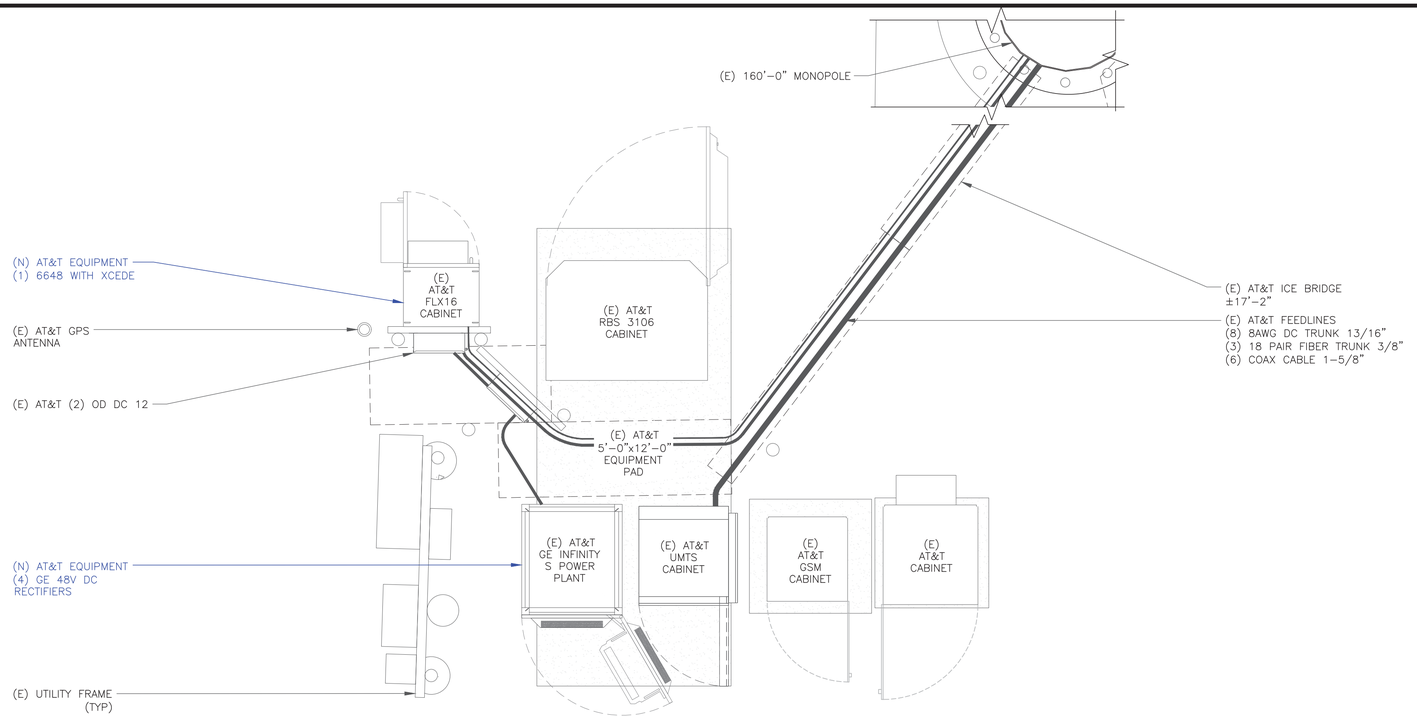
B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/23

SHEET NUMBER: C-1.1
REVISION: 0



1 EXISTING EQUIPMENT PLAN

SCALE: 2' 1' 0 2' 1/2"=1'-0" (FULL SIZE) 1/4"=1'-0" (11x17)



2 FINAL EQUIPMENT PLAN

SCALE: 2' 1' 0 2' 1/2"=1'-0" (FULL SIZE) 1/4"=1'-0" (11x17)

GROUND SCOPE OF WORK:

- REMOVE (6) POWERWAVE – LGP21901 DIPLEXERS
- REMOVE (1) 5216
- INSTALL (4) GE 48V DC RECTIFIERS
- INSTALL (1) 6648 WITH XCEDE

NOTE:

THE POWER DESIGN FOR ANY AC ELECTRICAL POWER CHANGES IS TO BE PERFORMED BY OTHERS AND IS SHOWN HERE FOR REFERENCE PURPOSES ONLY. AT&T IS SOLELY RESPONSIBLE FOR THE ELECTRICAL POWER DESIGN.

AT&T
575 MOROSGO DRIVE
ATLANTA, GA 30324-3300

CROWN CASTLE
3530 TORINGDON WAY, SUITE 300
CHARLOTTE, NC 28277

B+T GRP
1717 S. BOULDER
SUITE 300
TULSA, OK 74119
PH: (918) 587-4630
www.btgrp.com

AT&T SITE NUMBER:
CTL05264

BU #: **876313**
WEST JOHNSON AVE.
BURNT HOUSE

1394 MERIDEN WATERBURY TPK
SOUTHINGTON, CT 06489

EXISTING
160'-0" MONOPOLE

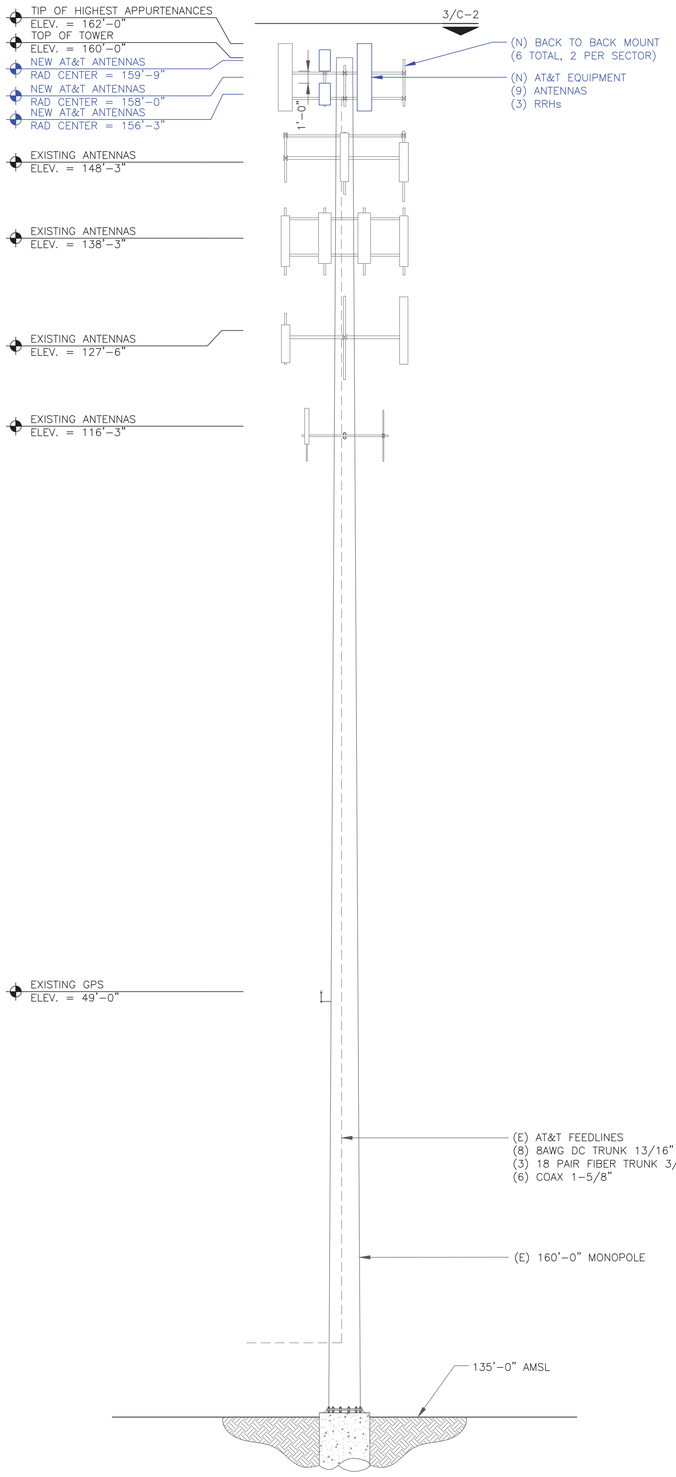
ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	4/12/22	YX	PRELIMINARY REVIEW	LR
B	5/13/22	YX	CONSTRUCTION	LR
0	6/24/22	YX	CONSTRUCTION	LR

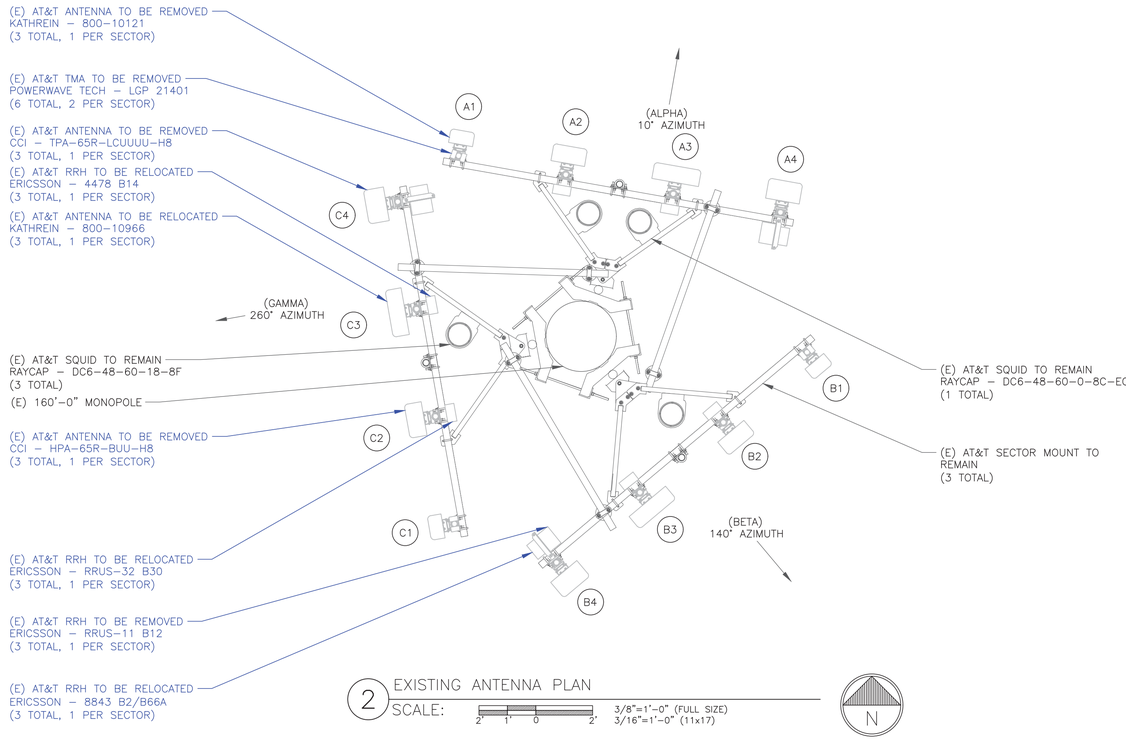
B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/23

SHEET NUMBER: C-1.2

REVISION: 0

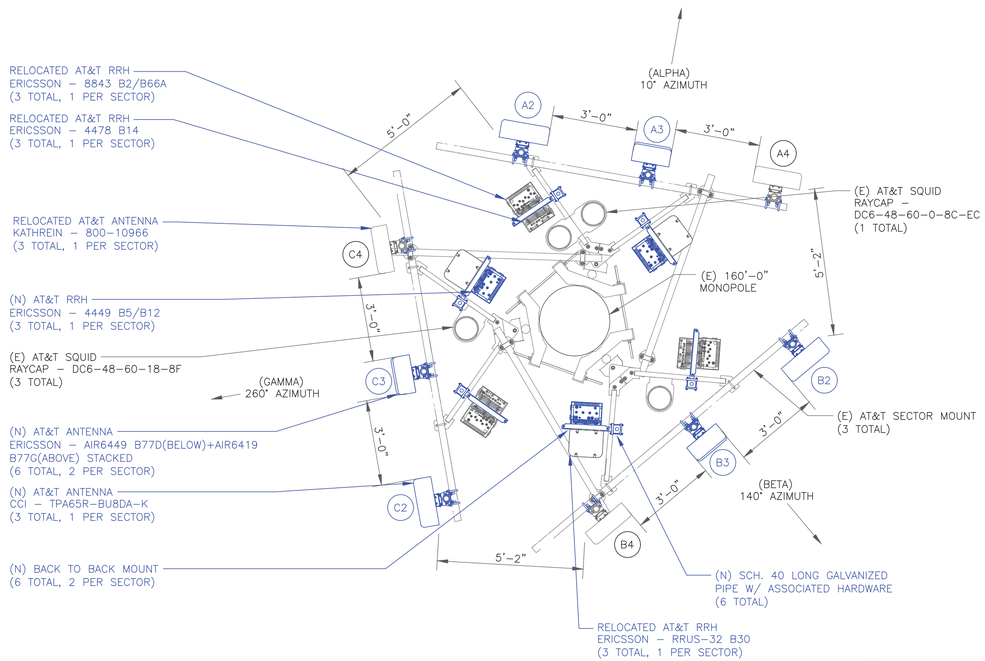


1 FINAL ELEVATION
SCALE: NOT TO SCALE



2 EXISTING ANTENNA PLAN
SCALE: 2' 1' 0 2' 3/8"=1'-0" (FULL SIZE) 3/16"=1'-0" (11x17)

N



3 FINAL ANTENNA PLAN
SCALE: 2' 1' 0 2' 3/8"=1'-0" (FULL SIZE) 3/16"=1'-0" (11x17)

N

"LOOK UP" - CROWN CASTLE USA INC.
SAFETY CLIMB REQUIREMENT:

THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR CROWN CASTLE USA INC. POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.

INSTALLER NOTES:

1. REFERENCE C-3 FOR FINAL EQUIPMENT SCHEDULE.
2. REFERENCE C-4 FOR NEW EQUIPMENT SPECIFICATIONS.
3. CONTRACTOR TO VERIFY ALL ANTENNA TIP HEIGHTS DO NOT EXCEED BEACON BASE HEIGHT.
4. 3'-0" MINIMUM DISTANCE REQUIRED BETWEEN LTE ANTENNAS ON SAME SECTOR.
5. 6'-0" MINIMUM DISTANCE REQUIRED BETWEEN 700BC & 700DE ANTENNAS ON SAME SECTOR.
6. 4'-0" MINIMUM DISTANCE REQUIRED BETWEEN LTE 700 ANTENNAS ON OPPOSING SECTORS.
7. ALL ANTENNA MEASUREMENT DISTANCES MUST BE EDGE TO EDGE (RELOCATE ANTENNAS AS NEEDED).
8. 8" MINIMUM DISTANCE REQUIRED BETWEEN ANTENNA & RADIO. SEE GENERIC EXAMPLE DETAIL ON SHEET C-4.

AT&T
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AT&T SITE NUMBER:
CTL05264

BU #: **876313**
WEST JOHNSON AVE.
BURNT HOUSE

1394 MERIDEN WATERBURY TPK
SOUTHINGTON, CT 06489

EXISTING
160'-0" MONOPOLE

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0	6/24/22	YX	CONSTRUCTION	LR

STATE OF CONNECTICUT
CHRISTOPHER J. DUFFY
No. 23924
LICENSED
PROFESSIONAL ENGINEER
6/24/22

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/23

SHEET NUMBER: C-2

REVISION: 0

FINAL EQUIPMENT SCHEDULE
(VERIFY WITH CURRENT RFDS)

ALPHA

POSITION	ANTENNA				RADIO			DIPLEXER			TMA			SURGE PROTECTION		CABLES			
	TECH.	STATUS/MANUFACTURER MODEL	AZIMUTH	RAD CENTER	QTY.	STATUS/MODEL	LOCATION	QTY.	STATUS	LOCATION	QTY.	STATUS/MANUFACTURER MODEL	QTY.	STATUS/MODEL	QTY.	STATUS/TYPE	SIZE	LENGTH
A2	LTE/5G	(N) CCI – TPA65R-BU8DA-K	10°	158'-0"	1	(E) ERICSSON – 4478 B14	TOWER	–	–	–	–	–	1	(E) RAYCAP – DC6-48-60-18 SQUID	4	(E) 8AWG DC TRUNK	13/16"	208'-0"
					1	(E) ERICSSON – 8843 B2/B66A (N) Y-CABLE	TOWER						1	(E) RAYCAP – DC6-48-60-0-8C-EC SQUID	1	(E) 18 PAIR FIBER TRUNK	3/8"	208'-0"
A3	5G DoD	(N) ERICSSON – AIR6419 B77G	10°	159'-9"	1	INTEGRATED WITHIN	TOWER	–	–	–	–	–	–	–	–	–	–	–
	5G CBAND	(N) ERICSSON – AIR6449 B77D		156'-3"											–	–	–	–
A4	LTE/5G	(E) KATHREIN – 800-10966	10°	158'-0"	1	(E) ERICSSON – RRUS-32 B30	TOWER	–	–	–	–	–	–	–	–	–	–	–
					1	(N) ERICSSON – 4449 B5/B12 (N) Y-CABLE	TOWER											
BETA																		
B2	LTE/5G	(N) CCI – TPA65R-BU8DA-K	140°	158'-0"	1	(E) ERICSSON – 4478 B14	TOWER	–	–	–	–	–	1	(E) RAYCAP – DC6-48-60-18 SQUID	2	(E) 8AWG DC TRUNK	13/16"	208'-0"
					1	(E) ERICSSON – 8843 B2/B66A (N) Y-CABLE	TOWER								1	(E) 18 PAIR FIBER TRUNK	3/8"	208'-0"
B3	5G DoD	(N) ERICSSON – AIR6419 B77G	140°	159'-9"	1	INTEGRATED WITHIN	TOWER	–	–	–	–	–	–	–	–	–	–	–
	5G CBAND	(N) ERICSSON – AIR6449 B77D		156'-3"											–	–	–	–
B4	LTE/5G	(E) KATHREIN – 800-10966	140°	158'-0"	1	(E) ERICSSON – RRUS-32 B30	TOWER	–	–	–	–	–	–	–	–	–	–	–
					1	(N) ERICSSON – 4449 B5/B12 (N) Y-CABLE	TOWER											
GAMMA																		
C2	LTE/5G	(N) CCI – TPA65R-BU8DA-K	260°	158'-0"	1	(E) ERICSSON – 4478 B14	TOWER	–	–	–	–	–	1	(E) RAYCAP – DC6-48-60-18 SQUID	2	(E) 8AWG DC TRUNK	13/16"	208'-0"
					1	(E) ERICSSON – 8843 B2/B66A (N) Y-CABLE	TOWER								1	(E) 18 PAIR FIBER TRUNK	3/8"	208'-0"
C3	5G DoD	(N) ERICSSON – AIR6419 B77G	260°	159'-9"	1	INTEGRATED WITHIN	TOWER	–	–	–	–	–	–	–	–	–	–	–
	5G CBAND	(N) ERICSSON – AIR6449 B77D		156'-3"											–	–	–	–
C4	LTE/5G	(E) KATHREIN – 800-10966	260°	158'-0"	1	(E) ERICSSON – RRUS-32 B30	TOWER	–	–	–	–	–	–	–	–	–	–	–
					1	(N) ERICSSON – 4449 B5/B12 (N) Y-CABLE	TOWER											
														UNUSED FEEDLINES:	6	COAX	1-5/8"	208'-0"

NOTE:
(E) – EXISTING
(N) – NEW

1 FINAL ANTENNA AND FEEDLINE SCHEDULE
SCALE: NOT TO SCALE

AT&T
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AT&T SITE NUMBER:
CTL05264

BU #: **876313**
WEST JOHNSON AVE.
BURNT HOUSE

1394 MERIDEN WATERBURY TPK
SOUTHINGTON, CT 06489

EXISTING
160'-0" MONOPOLE

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STATE OF CONNECTICUT
GREGORY R. LUCIUS
No. 23924
LICENSED
PROFESSIONAL ENGINEER
6/24/22

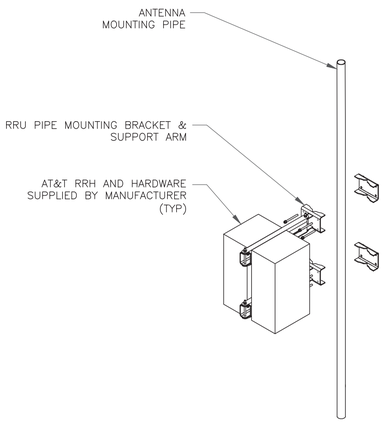
B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/23

SHEET NUMBER: C-3

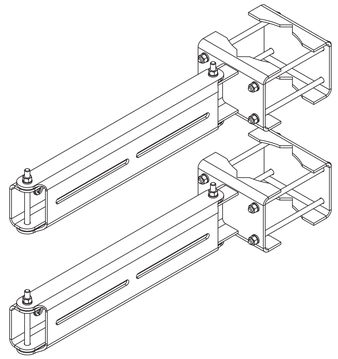
REVISION: 0

INSTALLER NOTES:

1. COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRHs RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING.
2. DO NOT OPEN RRH PACKAGES IN THE RAIN.
3. ALL PIPES, BRACKETS, AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.
4. RRHs SHALL NOT BE INSTALLED CLOSER THAN 8" TO ANTENNAS.



1 DUAL RRH MOUNTING DETAILS
SCALE: NOT TO SCALE

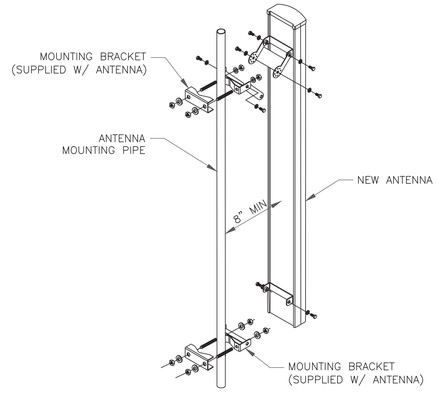


2 DUAL RADIO MOUNT
SCALE: NOT TO SCALE

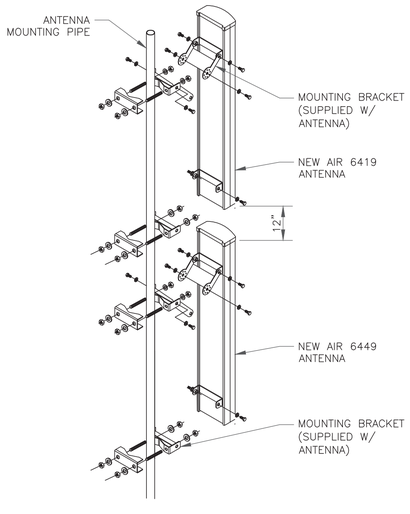
3 NOT USED
SCALE: NOT TO SCALE

INSTALLER NOTE:

1. ALL PIPES, BRACKETS, AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.



4 ANTENNA WITH RRH MOUNTING DETAIL
SCALE: NOT TO SCALE



5 ANTENNA WITH DUAL RRH MOUNTING DETAIL
SCALE: NOT TO SCALE

6 NOT USED
SCALE: NOT TO SCALE

AT&T
575 MOROSGO DRIVE
ATLANTA, GA 30324-3300

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CHARLOTTE, NC 28277

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AT&T SITE NUMBER:
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BU #: **876313**
WEST JOHNSON AVE.
BURNT HOUSE

1394 MERIDEN WATERBURY TPK
SOUTHINGTON, CT 06489

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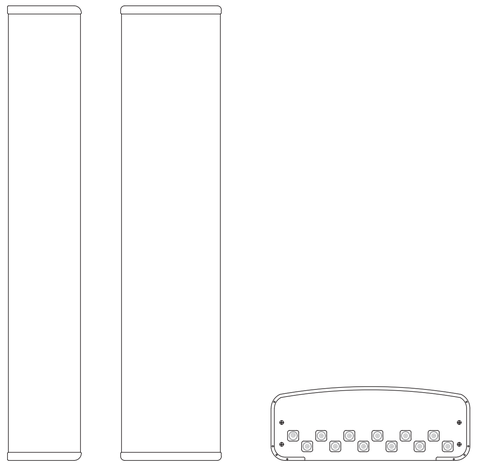
B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/23

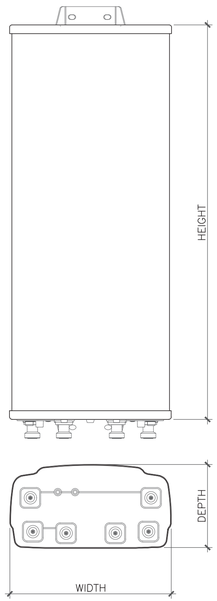
SHEET NUMBER: C-4

REVISION: 0



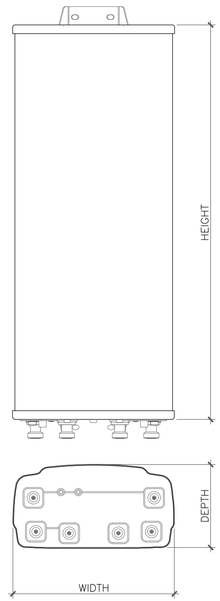
CCI ANTENNAS – TPA65R-BU8D
WEIGHT (WITHOUT MOUNTING HARDWARE): 82.5 LBS
SIZE (HXWXD): 96X21X7.8 IN.
MOUNTING HARDWARE P/N: MBK-01
RATED WIND VELOCITY: 150.0 MPH

1 CCI ANTENNAS – TPA65R-BU8D
SCALE: NOT TO SCALE



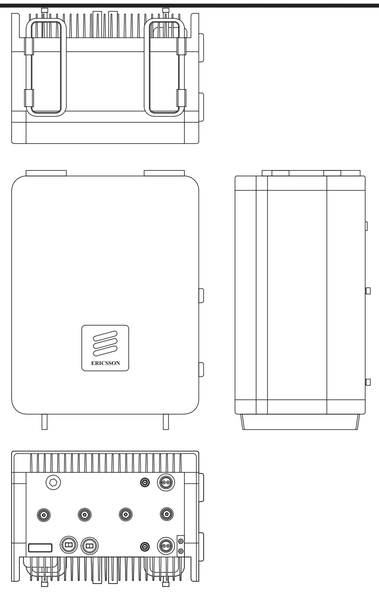
ANTENNA DIMENSIONS (INCHES)					
MANUFACTURER	MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
ERICSSON	AIR 6449 B77D	30.39"	15.87"	8.07"	81.6 LBS

2 ANTENNA DETAIL
SCALE: NOT TO SCALE



ANTENNA DIMENSIONS (INCHES)					
MANUFACTURER	MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
ERICSSON	AIR6419 B77G	31.1"	16.1"	7.3"	44 LBS

3 ANTENNA DETAIL
SCALE: NOT TO SCALE



ERICSSON – RADIO 4449
WEIGHT: 70.0 LBS
SIZE (HxWxD): 18.0x13.2x9.4 IN.

4 ERICSSON – RADIO 4449
SCALE: NOT TO SCALE

5 NOT USED
SCALE: NOT TO SCALE

6 NOT USED
SCALE: NOT TO SCALE

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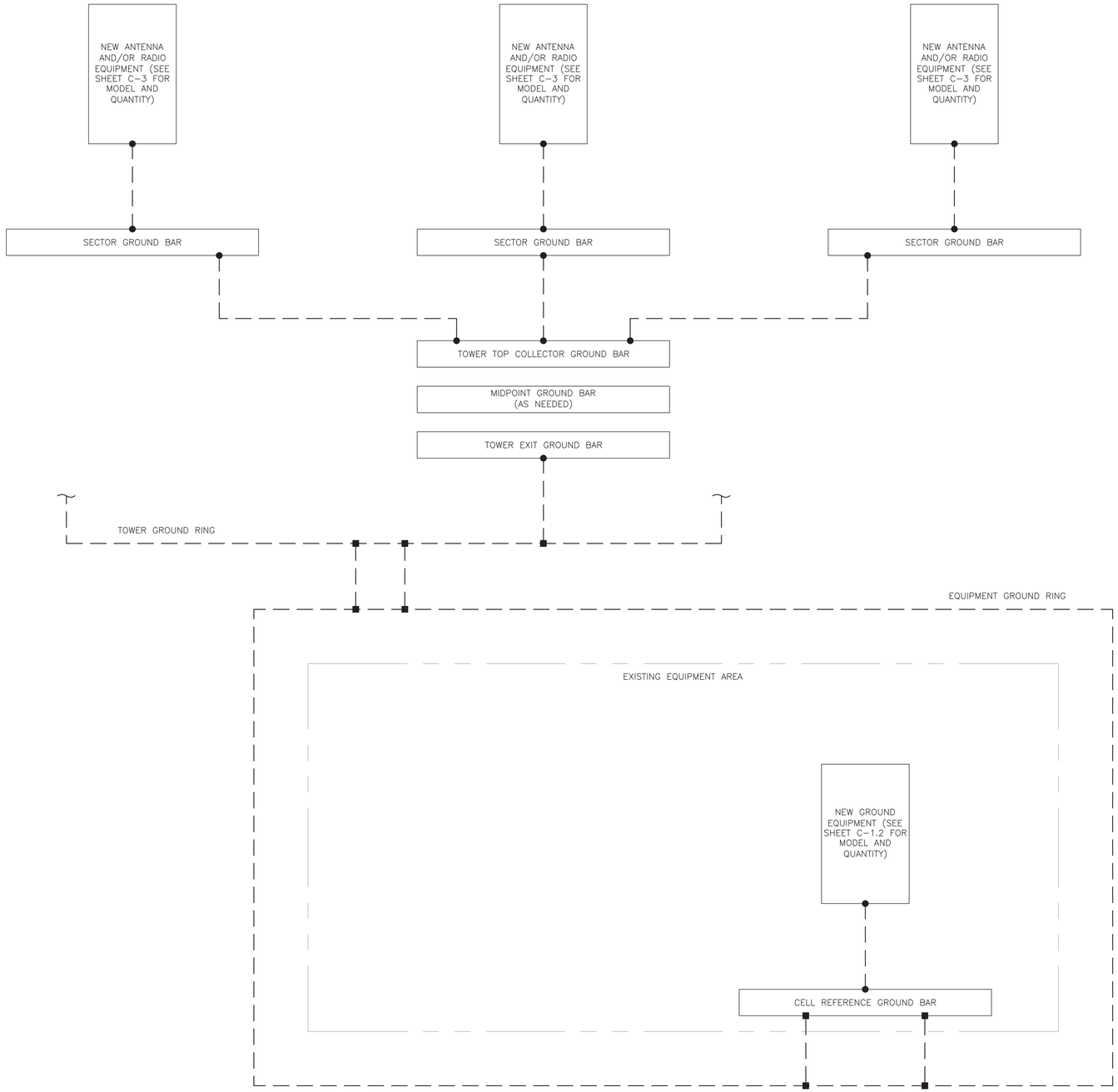
0	6/24/22	YX	CONSTRUCTION	LR

STATE OF CONNECTICUT
CHAD TUTTLE
No. 23824
LICENSED
PROFESSIONAL ENGINEER
6/24/22

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/23

SHEET NUMBER: C-5
REVISION: 0



1 GROUNDING SCHEMATIC
SCALE: NOT TO SCALE

GROUNDING PLAN LEGEND:

--- GROUND WIRE
■ EXOTHERMIC WELD
● MECHANICAL CONNECTION
COPPER GROUND ROD
GROUND ROD W/ TEST WELL

CELL REFERENCE GROUND BAR: POINT OF GROUND REFERENCE FOR ALL COMMUNICATIONS EQUIPMENT FRAMES. ALL BONDS ARE MADE WITH #2 STRANDED GREEN INSULATED COPPER CONDUCTORS. BOND TO GROUND RING WITH (2) #2 SOLID TINNED COPPER CONDUITS (ATT-TP-76416 7.6.7).

HATCH PLATE GROUND BAR: BOND TO THE INTERIOR GROUND RING WITH (2) #2 STRANDED GREEN INSULATED COPPER CONDUCTORS. WHEN A HATCH-PLATE AND A CELL REFERENCE GROUND BAR ARE BOTH PRESENT, THE CELL SITE REFERENCE GROUND BAR MUST BE CONNECTED TO THE HATCH-PLATE AND TO THE INTERIOR GROUND RING USING (2) #2 STRANDED GREEN INSULATED COPPER CONDUCTORS.

EXTERIOR CABLE ENTRY PORT GROUND BARS: LOCATED AT THE ENTRANCE TO THE CELL SITE BUILDING. BOND TO GROUND RING WITH A #2 SOLID TINNED COPPER CONDUCTORS WITH AN EXOTHERMIC WELD AND INSPECTION SLEEVE (ATT-TP-76416 7.6.7.2).

DURING ALL DC POWER SYSTEM CHANGES INCLUDING DC SYSTEM CHANGE OUTS, RECTIFIER REPLACEMENTS OR ADDITIONS, BREAKER DISTRIBUTION CHANGES, BATTERY ADDITIONS, BATTERY REPLACEMENTS AND INSTALLATIONS OR CHANGES TO DC CONVERTER SYSTEMS IT SHALL BE REQUIRED THAT SERVICES CONTRACTORS VERIFY ALL DC POWER SYSTEMS ARE EQUIPPED WITH MASTER DC SYSTEM RETURN GROUND CONDUCTOR FROM THE DC POWER SYSTEM COMMON RETURN BUS DIRECTLY CONNECTED TO THE CELL SITE REFERENCE GROUND BAR PER TP76300 SECTION H 6 AND TP76416 FIGURE 7-11 REQUIREMENTS.

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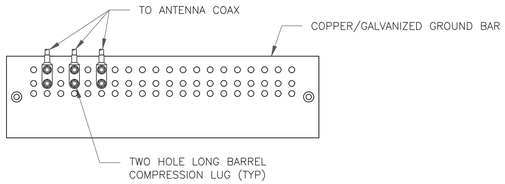
STATE OF CONNECTICUT
GREG RUSSO
No. 23924
LICENSED
PROFESSIONAL ENGINEER
6/24/22

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/23

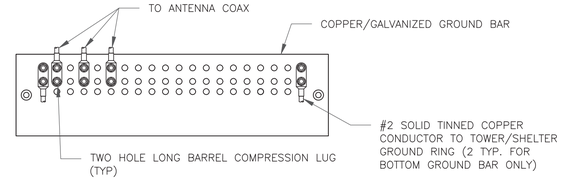
SHEET NUMBER: G-1
REVISION: 0



NOTES:

1. DOUBLING UP "OR STACKING" OF CONNECTIONS IS NOT PERMITTED.
2. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
3. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO ANTENNA MOUNT STEEL.

1 ANTENNA SECTOR GROUND BAR DETAIL
SCALE: NOT TO SCALE

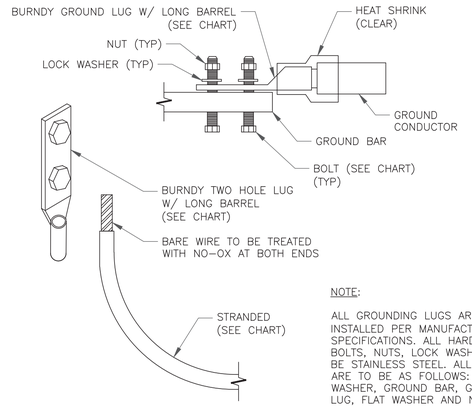


NOTES:

1. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
2. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL (TOWER ONLY).
3. GROUND BAR SHALL BE ISOLATED FROM BUILDING OR SHELTER.

2 TOWER/SHELTER GROUND BAR DETAIL
SCALE: NOT TO SCALE

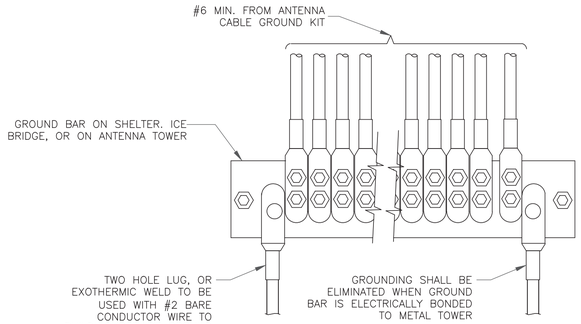
WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 GREEN INSULATED	YA6C-2TC38	3/8" - 16 NC SS 2 BOLT
#2 SOLID TINNED	YA3C-2TC38	3/8" - 16 NC SS 2 BOLT
#2 STRANDED	YA2C-2TC38	3/8" - 16 NC SS 2 BOLT
#2/0 STRANDED	YA26-2TC38	3/8" - 16 NC SS 2 BOLT
#4/0 STRANDED	YA28-2N	1/2" - 16 NC SS 2 BOLT



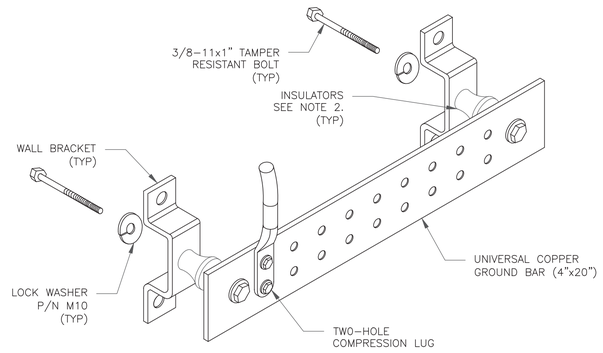
NOTE:

ALL GROUNDING LUGS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL HARDWARE BOLTS, NUTS, LOCK WASHERS SHALL BE STAINLESS STEEL. ALL HARDWARE ARE TO BE AS FOLLOWS: BOLT, FLAT WASHER, GROUND BAR, GROUND LUG, FLAT WASHER AND NUT.

3 MECHANICAL LUG CONNECTION
SCALE: NOT TO SCALE



4 GROUNDWIRE INSTALLATION
SCALE: NOT TO SCALE

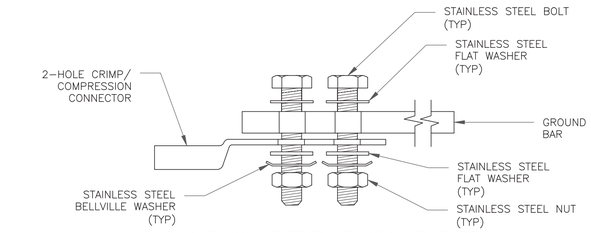


NOTES:

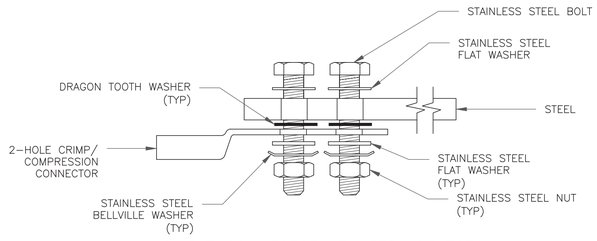
1. DOWN LEAD (HOME RUN) CONDUCTORS ARE NOT TO BE INSTALLED ON CROWN CASTLE USA INC. TOWER, PER THE GROUNDING DOWN CONDUCTOR POLICY QAS-STD-10091. NO MODIFICATION OR DRILLING TO TOWER STEEL IS ALLOWED IN ANY FORM OR FASHION, CAD-WELDING ON THE TOWER AND/OR IN THE AIR ARE NOT PERMITTED.

2. OMIT INSULATOR WHEN MOUNTING TO TOWER STEEL OR PLATFORM STEEL USE INSULATORS WHEN ATTACHING TO BUILDING OR SHELTERS.

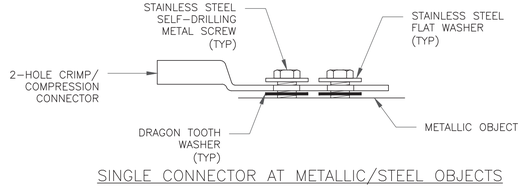
5 GROUND BAR DETAIL
SCALE: NOT TO SCALE



SINGLE CONNECTOR AT GROUND BARS

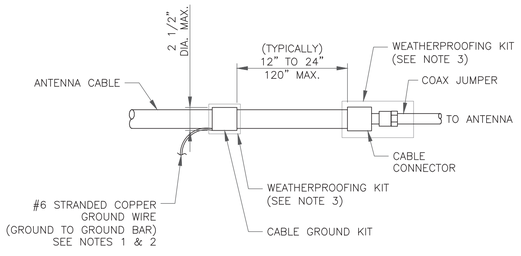


SINGLE CONNECTOR AT STEEL OBJECTS



SINGLE CONNECTOR AT METALLIC/STEEL OBJECTS

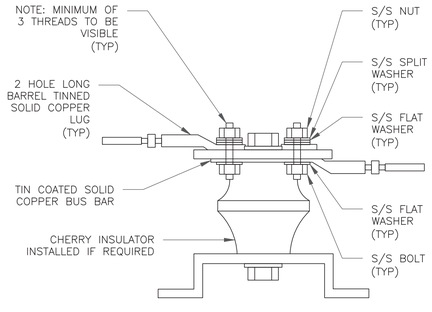
8 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE



NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

6 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE



7 LUG DETAIL
SCALE: NOT TO SCALE

AT&T
575 MOROSGO DRIVE
ATLANTA, GA 30324-3300

CROWN CASTLE
3530 TORINGDON WAY, SUITE 300
CHARLOTTE, NC 28277

B+T GRP
1717 S. BOULDER
SUITE 300
TULSA, OK 74119
PH: (918) 587-4630
www.btgrp.com

AT&T SITE NUMBER:
CTL05264

BU #: **876313**
WEST JOHNSON AVE.
BURNT HOUSE

1394 MERIDEN WATERBURY TPK
SOUTHINGTON, CT 06489

EXISTING
160'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	4/12/22	YX	PRELIMINARY REVIEW	LR
B	5/13/22	YX	CONSTRUCTION	LR
0	6/24/22	YX	CONSTRUCTION	LR

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/23

SHEET NUMBER: G-2

REVISION: 0

Diagram - Sector	A	Diagram File Name - NewCband_3Ant_2Coax_BA12_DoD_CB_DMP__8843_3DCFib_1DC_1x5216_XMU_6630_6648.vsd					
Atoll Site Name -	CTL05264	Location Name -	SOUTHINGTON- SOUTH	Market -	CONNECTICUT	Market Cluster -	NEW ENGLAND

Comments: "Important Note: For detailed radio to antenna wiring refer to the latest field notice - Antenna_Radio Connection Drawings Playbook v6.0_Ericsson"

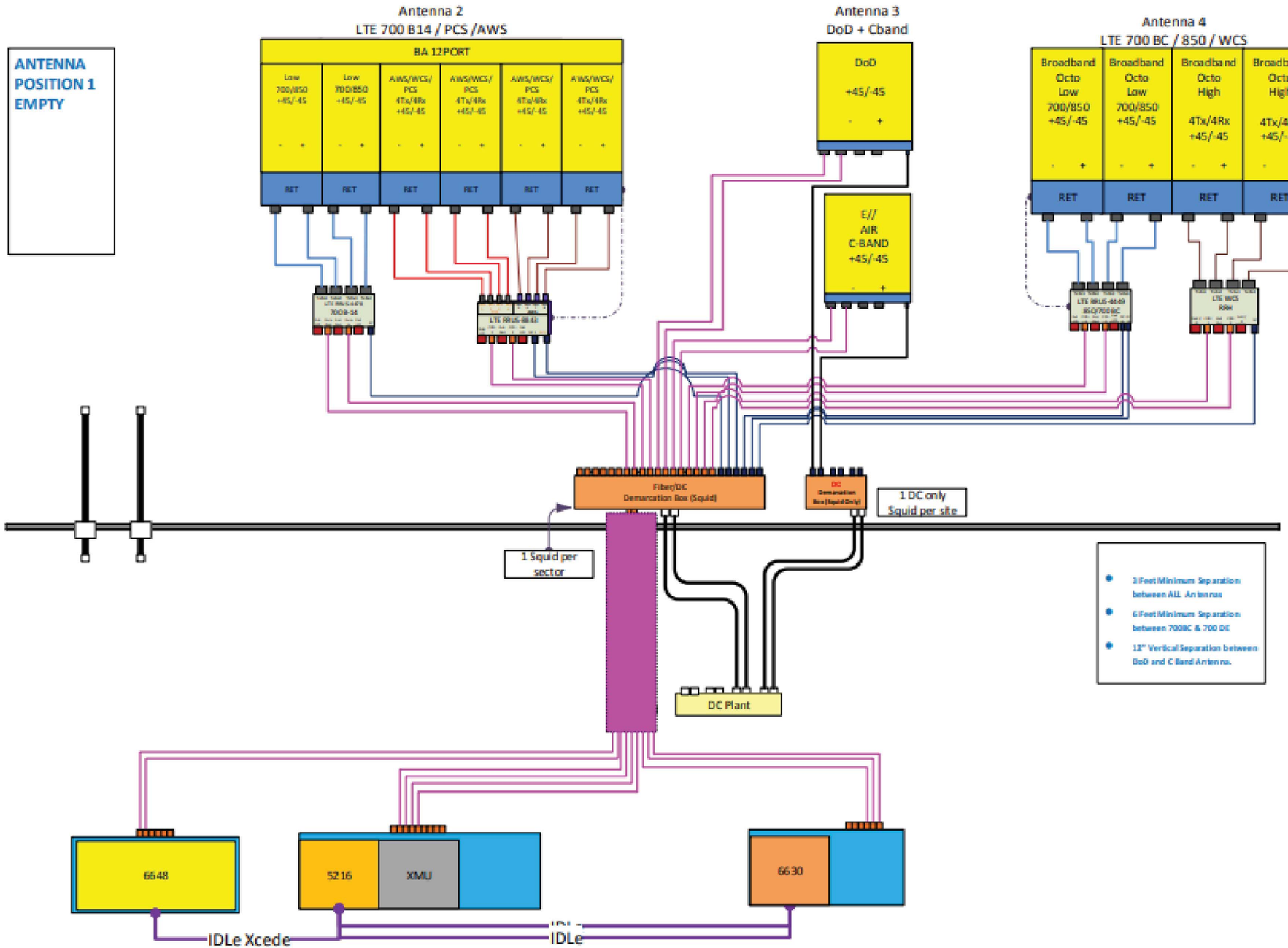


Diagram - Sector	B	Diagram File Name - NewCband_3Ant_2Coax_BA12_DoD_CB_DMP__8843_3DCFib_1DC_1x5216_XMU_6630_6648.vsd					
Atoll Site Name -	CTL05264	Location Name -	SOUTHINGTON- SOUTH	Market -	CONNECTICUT	Market Cluster -	NEW ENGLAND
Comments: "Important Note: For detailed radio to antenna wiring refer to the latest field notice - Antenna_Radio Connection Drawings Playbook v6.0_Ericsson"							

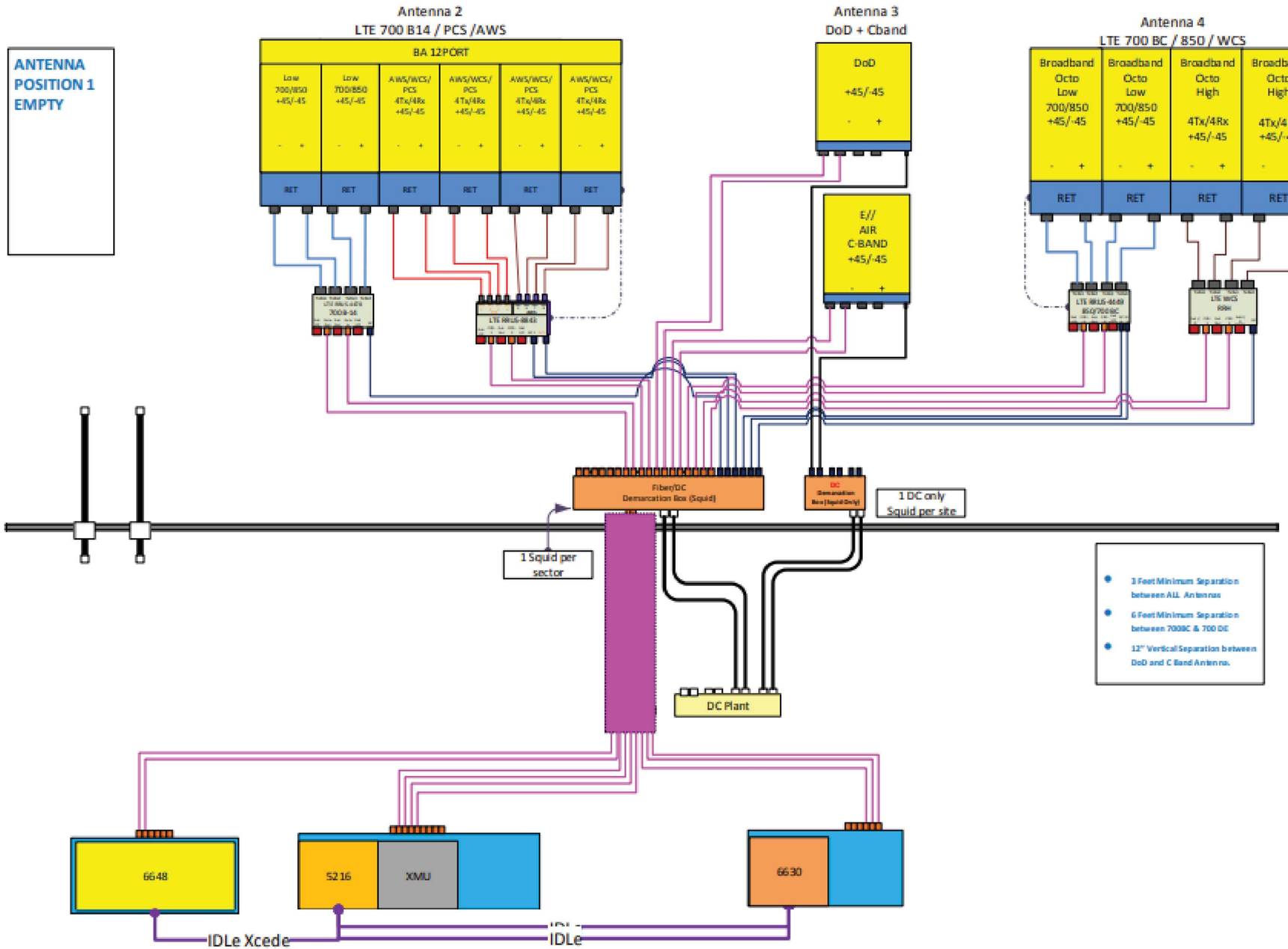


Diagram - Sector	C	Diagram File Name - NewCband_3Ant_2Coax_BA12_DoD_CB_DMP__8843_3DCFib_1DC_1x5216_XMU_6630_6648.vsd					
Atoll Site Name -	CTL05264	Location Name -	SOUTHINGTON- SOUTH	Market -	CONNECTICUT	Market Cluster -	NEW ENGLAND
Comments: "Important Note: For detailed radio to antenna wiring refer to the latest field notice - Antenna_Radio Connection Drawings Playbook v6.0_Ericsson"							

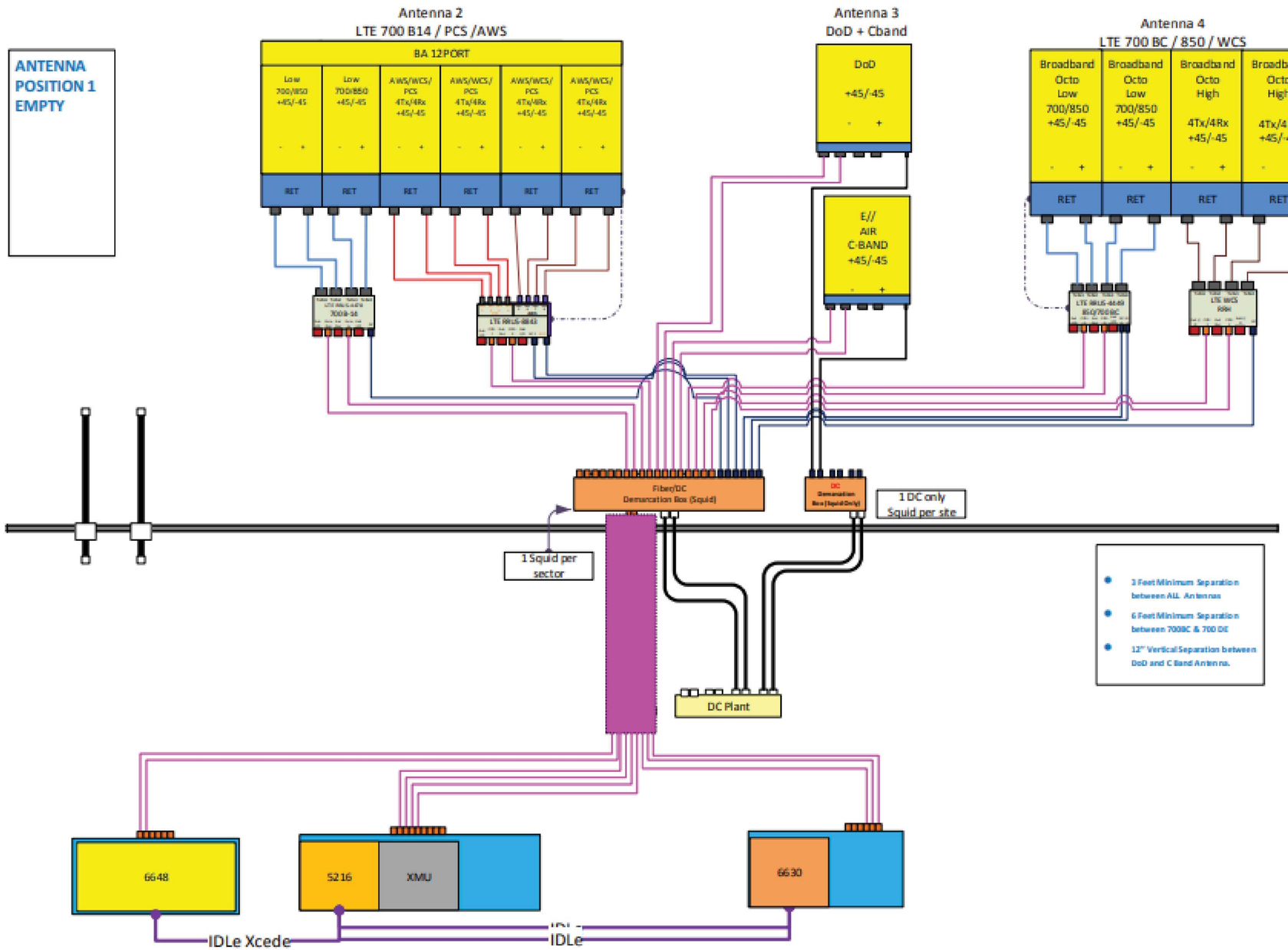


Exhibit D

Structural Analysis Report

Date: **June 23, 2022**

MTS Engineering, P.L.L.C.
1717 S, Boulder, Suite 300
Tulsa, OK 74119
(918) 587-4630

Subject:	**Structural Analysis Report**	
Carrier Designation:	***AT&T Mobility* Co-Locate**	
	Site Number:	CTL05264
	Site Name:	SOUTHINGTON- SOUTH
	FA Number:	10092035
Crown Castle Designation:	**BU Number:**	876313
	Site Name:	West Johnson Ave. Burnt House
	JDE Job Number:	686293
	Work Order Number:	2128450
	Order Number:	586312 Rev. 1
Engineering Firm Designation:	**B+T Group Project Number:**	137177.014.01
Site Data:	**1394 Meriden Waterbury Tpk, SOUTHINGTON, Hartford County, CT** **Latitude *41° 33' 51.39"*, Longitude *-72° 53' 30.7"*** **160 Foot - Monopole Tower**	

We are pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above-mentioned tower.

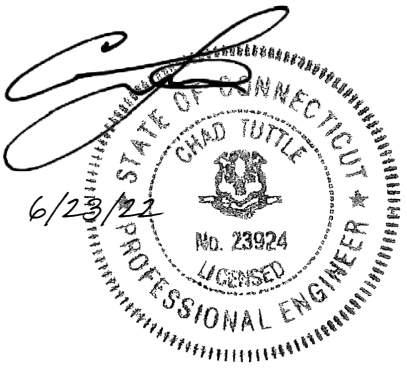
The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC4.7: Modified Structure w/ Proposed Equipment Configuration **Sufficient Capacity – 95.0%**

This analysis utilizes an ultimate 3-second gust wind speed of 118 mph as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by: Andrew Fisher

Respectfully submitted by: B+T Engineering, Inc.
COA: BER. 2386985



Chad E. Tuttle, P.E.

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 160 ft. Monopole tower designed by Summit.
The tower has been modified multiple times to accommodate additional loading.
Modifications designed by B+T Group, in January of 2022 is considered in this analysis.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	118 mph
Exposure Category:	B
Topographic Factor:	1
Ice Thickness:	1 in
Wind Speed with Ice:	50 mph
Service Wind Speed:	60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
157.0	160.0	3	Ericsson	AIR 6419 B77G_CCIV3	6 8 3	1-5/8 13/16 3/8
	158.0	3	CCI Antennas	TPA65R-BU8DA-K		
		3	Ericsson	RRUS 4449 B5/B12		
		3	Ericsson	RRUS 4478 B14		
		3	Ericsson	RRUS 8843 B2/B66A		
		3	Ericsson	RRUS-32 B30		
		3	Kathrein	80010966		
		4	Raycap	DC6-48-60-18-8F		
	157.0	1	--	Sector Mount [SM 503-3]		
		3	Site Pro 1	PM1 Stand Off Mount		
	156.0	3	Ericsson	AIR 6449 B77D_CCVI2		

Table 2 - Other Considered Equipment

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
148.0	148.0	3	Commscope	VV-65B-R1_TMO	3	1-5/8
		3	Ericsson	AIR 6419 B41_TMO		
		3	Ericsson	RADIO 4460 B2/B25 B66_TMO		
		3	Ericsson	Radio 4480_TMOV2		
		3	Rfs Celwave	APXVAALL24_43-U-NA20_TMO		
		1	Site Pro 1	PRK-SFS Reinforcement Kit		
		3	Site Pro 1	SCX1-K Crossover Plates		
		3	--	2STDX12.5' Horizontal Pipe		
		1	--	Platform Mount [LP 1201-1_HR-1]		
138.0	142.0	1	Lucent	KS24019-L112A	1	2-1/4

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
	138.0	6	Commscope	NNHH-65B-R4	6 1	1-5/8 1/2
		1	Raycap	RVZDC-6627-PF-48		
		3	Samsung Telecom	CBRS		
		3	Samsung Telecom4	MT6407-77A		
		3	Samsung Telecom	RFV01U-D1A		
		3	Samsung Telecom	RFV01U-D2A		
		1	--	Platform Mount [LP 303-1_KCKR-HR-1]		
127.0	129.0	3	Commscope	LNX-6515DS-VTM	6 1	1-5/8 1-1/4
		3	Ericsson	ERICSSON AIR 21 B2A B4P		
		3	Ericsson	ERICSSON AIR 21 B4A B2P		
		3	Ericsson	KRY 112 144/1		
		3	Ericsson	RRUS 11 B12		
	127.0	1	--	Platform Mount [LP 1201-1]		
119.0	119.0	3	Fujitsu	TA08025-B604	1	1-1/2
		3	Fujitsu	TA08025-B605		
		3	Jma Wireless	MX08FRO665-21		
		1	Raycap	RDIDC-9181-PF-48		
		1	--	Platform Mount [LP 716-1]		
48.0	50.0	1	Lucent	KS24019-L112A	1	1/2
	48.0	1	--	Side Arm Mount [SO 701-1]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
Tower Manufacturer Drawing	2134246	CCI Sites
Tower Modification Drawing	3348783	CCI Sites
Post Modification Inspection	3846956	CCI Sites
Tower Modification Drawing	4077469	CCI Sites
Post Modification Inspection	4077468	CCI Sites
Tower Modification Drawing	4094328	CCI Sites
Post Modification Inspection	4600286	CCI Sites
Tower Modification Drawing	5105790	CCI Sites
Post Modification Inspection	5380973	CCI Sites
Tower Modification Drawing	5266558	CCI Sites
Post Modification Inspection	5617077	CCI Sites
Tower Modification Drawing	10158802	CCI Sites
Foundation Drawing	1633746	CCI Sites
Geotech Report	5939573	CCI Sites
Crown CAD Package	Date: 06/15/2022	CCI Sites

3.1) Analysis Method

tnxTower (version 8.1.1.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A. When applicable, Crown Castle has calculated and provided the effective area for panel antennas using approved methods following the intent of the TIA-222 standard.

tnxTower was used to determine the loads on the modified structure. Additional calculations were performed to determine the stresses in the pole and in the reinforcing elements. These calculations are presented in Appendix C.

3.2) Assumptions

1) The tower and structures were maintained in accordance with the - TIA-222 standard.
2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
3) This analysis assumes modifications designed by MTS Engineering, P.L.L.C. dated January 21, 2022 will be installed according to the drawings.

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

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L1	160 - 155	Pole	TP10.75x10.75x0.349	1	-4.799	--	19.2	Pass
L2	155 - 150	Pole	TP10.75x10.75x0.349	2	-5.726	--	54.4	Pass
L3	150 - 148.5	Pole	TP10.75x10.75x0.349	3	-6.011	--	65.5	Pass
L4	148.5 - 148	Pole	TP23x23x0.349	4	-6.137	--	15.4	Pass
L5	148 - 143	Pole	TP23.81x23x0.25	5	-7.161	--	21.8	Pass
L6	143 - 138	Pole	TP24.62x23.81x0.25	6	-7.965	--	30.4	Pass
L7	138 - 133	Pole	TP25.43x24.62x0.25	7	-12.289	--	42.0	Pass
L8	133 - 128	Pole	TP26.24x25.43x0.25	8	-12.841	--	52.1	Pass
L9	128 - 123	Pole	TP27.05x26.24x0.25	9	-17.058	--	63.2	Pass
L10	123 - 118	Pole	TP27.86x27.05x0.25	10	-20.063	--	73.5	Pass
L11	118 - 114.75	Pole	TP28.994x27.86x0.25	11	-20.515	--	80.2	Pass
L12	114.75 - 109.75	Pole	TP28.696x27.887x0.313	12	-21.628	--	71.8	Pass
L13	109.75 - 105.33	Pole	TP29.412x28.696x0.313	13	-22.364	--	77.5	Pass
L14	105.33 - 105.08	Pole + Reinf.	TP29.452x29.412x0.469	14	-22.428	--	73.6	Pass
L15	105.08 - 100.08	Pole + Reinf.	TP30.262x29.452x0.463	15	-23.489	--	79.8	Pass
L16	100.08 - 95.08	Pole + Reinf.	TP31.072x30.262x0.463	16	-24.580	--	85.4	Pass
L17	95.08 - 92.5	Pole + Reinf.	TP31.491x31.072x0.456	17	-25.150	--	88.1	Pass
L18	92.5 - 92.25	Pole + Reinf.	TP31.531x31.491x0.638	18	-25.231	--	78.2	Pass
L19	92.25 - 87.25	Pole + Reinf.	TP32.341x31.531x0.625	19	-26.628	--	83.1	Pass
L20	87.25 - 82.25	Pole + Reinf.	TP33.151x32.341x0.613	20	-28.052	--	87.6	Pass
L21	82.25 - 81	Pole + Reinf.	TP34.042x33.151x0.613	21	-28.411	--	88.6	Pass
L22	81 - 75.75	Pole	TP33.579x32.729x0.375	22	-30.515	--	83.6	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L23	75.75 - 70.75	Pole	TP34.389x33.579x0.375	23	-31.613	--	85.9	Pass
L24	70.75 - 70.58	Pole	TP34.416x34.389x0.375	24	-31.662	--	86.0	Pass
L25	70.58 - 70.33	Pole + Reinf.	TP34.456x34.416x0.675	25	-31.750	--	75.2	Pass
L26	70.33 - 70	Pole + Reinf.	TP34.51x34.456x0.675	26	-31.867	--	75.4	Pass
L27	70 - 69.75	Pole	TP34.551x34.51x0.375	27	-31.922	--	86.4	Pass
L28	69.75 - 64.75	Pole	TP35.361x34.551x0.375	28	-33.030	--	88.4	Pass
L29	64.75 - 59.75	Pole	TP36.171x35.361x0.375	29	-34.181	--	90.4	Pass
L30	59.75 - 54.75	Pole	TP36.981x36.171x0.375	30	-35.355	--	92.5	Pass
L31	54.75 - 49.75	Pole	TP37.791x36.981x0.375	31	-36.552	--	94.4	Pass
L32	49.75 - 48	Pole	TP38.884x37.791x0.375	32	-36.966	--	95.0	Pass
L33	48 - 42	Pole	TP38.296x37.324x0.438	33	-39.549	--	85.2	Pass
L34	42 - 37	Pole	TP39.106x38.296x0.438	34	-40.926	--	86.0	Pass
L35	37 - 32	Pole	TP39.916x39.106x0.438	35	-42.328	--	86.7	Pass
L36	32 - 27.91	Pole	TP40.578x39.916x0.438	36	-43.491	--	87.2	Pass
L37	27.91 - 27.66	Pole + Reinf.	TP40.619x40.578x0.675	37	-43.606	--	85.0	Pass
L38	27.66 - 27.25	Pole + Reinf.	TP40.686x40.619x0.675	38	-43.774	--	85.1	Pass
L39	27.25 - 26.98	Pole + Reinf.	TP40.729x40.686x0.675	39	-43.878	--	83.3	Pass
L40	26.98 - 26.83	Pole + Reinf.	TP40.753x40.729x0.663	40	-43.936	--	83.3	Pass
L41	26.83 - 21.83	Pole + Reinf.	TP41.563x40.753x0.663	41	-45.849	--	84.3	Pass
L42	21.83 - 16.83	Pole + Reinf.	TP42.373x41.563x0.663	42	-47.794	--	85.2	Pass
L43	16.83 - 16	Pole + Reinf.	TP42.508x42.373x0.663	43	-48.123	--	85.4	Pass
L44	16 - 15.75	Pole + Reinf.	TP42.549x42.508x0.813	44	-48.244	--	76.5	Pass
L45	15.75 - 14.75	Pole + Reinf.	TP42.711x42.549x0.813	45	-48.704	--	76.7	Pass
L46	14.75 - 14.5	Pole + Reinf.	TP42.752x42.711x0.488	46	-48.800	--	87.1	Pass
L47	14.5 - 12.08	Pole + Reinf.	TP43.143x42.752x0.488	47	-49.673	--	87.4	Pass
L48	12.08 - 11.83	Pole + Reinf.	TP43.183x43.143x0.738	48	-49.793	--	78.3	Pass
L49	11.83 - 10	Pole + Reinf.	TP43.48x43.183x0.738	49	-50.569	--	78.6	Pass
L50	10 - 9.75	Pole + Reinf.	TP43.521x43.48x0.738	50	-50.689	--	78.6	Pass
L51	9.75 - 4.75	Pole + Reinf.	TP44.331x43.521x0.725	51	-52.850	--	79.3	Pass
L52	4.75 - 0	Pole + Reinf.	TP45.1x44.331x0.713	52	-54.930	--	80.0	Pass
							Summary	
						Pole	95.0	Pass
						Reinforcement	88.6	Pass
						Overall	95.0	Pass

Table 5 - Tower Component Stresses vs. Capacity – LC4.7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1,2	Flange Connection	148	27.9	Pass
1,2	Anchor Rods	Base	79.7	Pass
1,2	Base Plate	Base	60.0	Pass
1,2	Base Foundation (Structure)	Base	76.9	Pass
1,2	Base Foundation (Soil Interaction)	Base	72.6	Pass

Structure Rating (max from all components) =	95.0%

Notes:
1) See additional documentation in “Appendix C – Additional Calculations” for calculations supporting the % capacity consumed.
2) Rating per TIA-222-H Section 15.5.

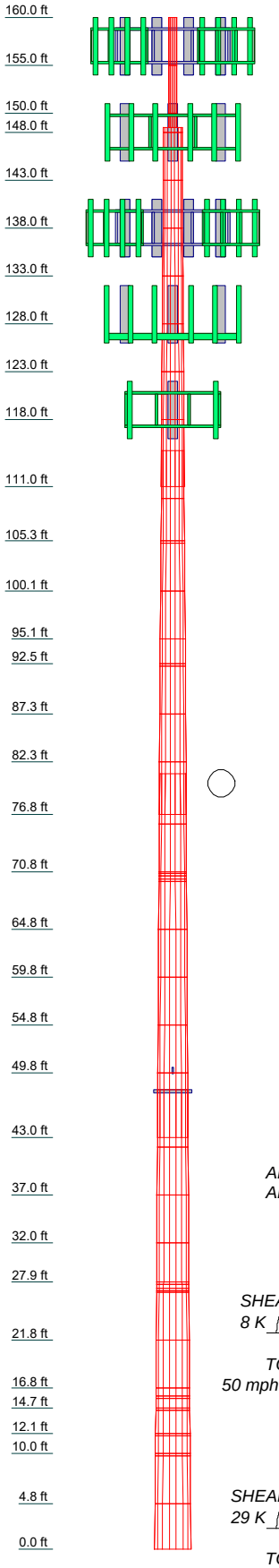
4.1) Recommendations

The tower and its foundation have sufficient capacity to carry the proposed equipment’s provided the modification drawing designed by MTS Engineering, P.L.L.C. (Doc. ID # 10158802) are installed.

APPENDIX A

TNXTOWER OUTPUT

Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (K)
1	5.000	0	0.349		10.750	10.750	A53-B-35	0.2
2	5.000	0	0.349		10.750	10.750		0.2
3	5.000	0	0.349		10.750	10.750		0.2
4	5.000	0	0.349		10.750	10.750		0.2
5	5.000	18	0.250		23.000	23.810		0.3
6	5.000	18	0.250		23.810	24.620		0.3
7	5.000	18	0.250		24.620	25.430		0.3
8	5.000	18	0.250		25.430	26.240		0.3
9	5.000	18	0.250		26.240	27.050		0.4
10	5.000	18	0.250		27.050	27.860		0.4
11	5.000	18	0.250	3.750	27.860	28.994		0.5
12	5.000	18	0.313		28.887	29.699		0.5
13	5.000	18	0.313		29.699	30.512		0.4
14	5.000	18	0.313		30.512	31.324		0.4
15	5.000	18	0.468		31.324	32.341		0.7
16	5.000	18	0.463		32.341	33.151		0.7
17	5.000	18	0.463		33.151	34.072		0.7
18	5.000	18	0.463		34.072	34.982		0.7
19	5.000	18	0.626		34.982	35.892		1.0
20	5.000	18	0.613		35.892	36.802		1.0
21	5.000	18	0.613	4.250	36.802	37.712		1.1
22	5.000	18	0.613		37.712	38.622		1.1
23	5.000	18	0.613		38.622	39.532		1.1
24	5.000	18	0.613		39.532	40.442		1.1
25	5.000	18	0.613		40.442	41.352		1.1
26	5.000	18	0.613		41.352	42.262		1.1
27	5.000	18	0.613		42.262	43.172		1.1
28	5.000	18	0.613		43.172	44.082		1.1
29	5.000	18	0.375		44.082	44.992		0.7
30	5.000	18	0.375		44.992	45.902		0.7
31	5.000	18	0.375		45.902	46.812		0.7
32	6.000	18	0.375	5.000	46.812	47.722		1.0
33	5.000	18	0.438		47.722	48.632		1.1
34	5.000	18	0.438		48.632	49.542		0.9
35	5.000	18	0.438		49.542	50.452		0.9
36	5.000	18	0.438		50.452	51.362		0.9
37	5.000	18	0.438		51.362	52.272		0.9
38	5.000	18	0.438		52.272	53.182		0.9
39	5.000	18	0.438		53.182	54.092		0.9
40	5.000	18	0.438		54.092	55.002		0.9
41	5.000	18	0.660		55.002	56.002		1.4
42	5.000	18	0.662		56.002	57.002		1.4
43	5.000	18	0.662		57.002	58.002		1.4
44	5.000	18	0.662		58.002	59.002		1.4
45	5.000	18	0.662		59.002	60.002		1.4
46	5.000	18	0.662		60.002	61.002		1.4
47	5.000	18	0.662		61.002	62.002		1.4
48	5.000	18	0.662		62.002	63.002		1.4
49	5.000	18	0.662		63.002	64.002		1.4
50	5.000	18	0.662		64.002	65.002		1.4
51	5.000	18	0.726		65.002	66.002		1.6
52	4.750	18	0.713		44.331	45.100	A607-65	1.5
								26.5



ALL REACTIONS ARE FACTORED

AXIAL 90 K

SHEAR 8 K *MOMENT 1052 kip-ft*

TORQUE 0 kip-ft
50 mph WIND - 1.000 in ICE

AXIAL 62 K

SHEAR 29 K *MOMENT 3873 kip-ft*

TORQUE 1 kip-ft
REACTIONS - 118 mph WIND

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A53-B-35	35 ksi	63 ksi	A607-65	65 ksi	80 ksi
A607-60	60 ksi	75 ksi			

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 118 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.00 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 0.000 ft
8. TIA-222-H Annex S
9. Tower Rating: 95.0%

MTS Engineering, P.L.L.C.
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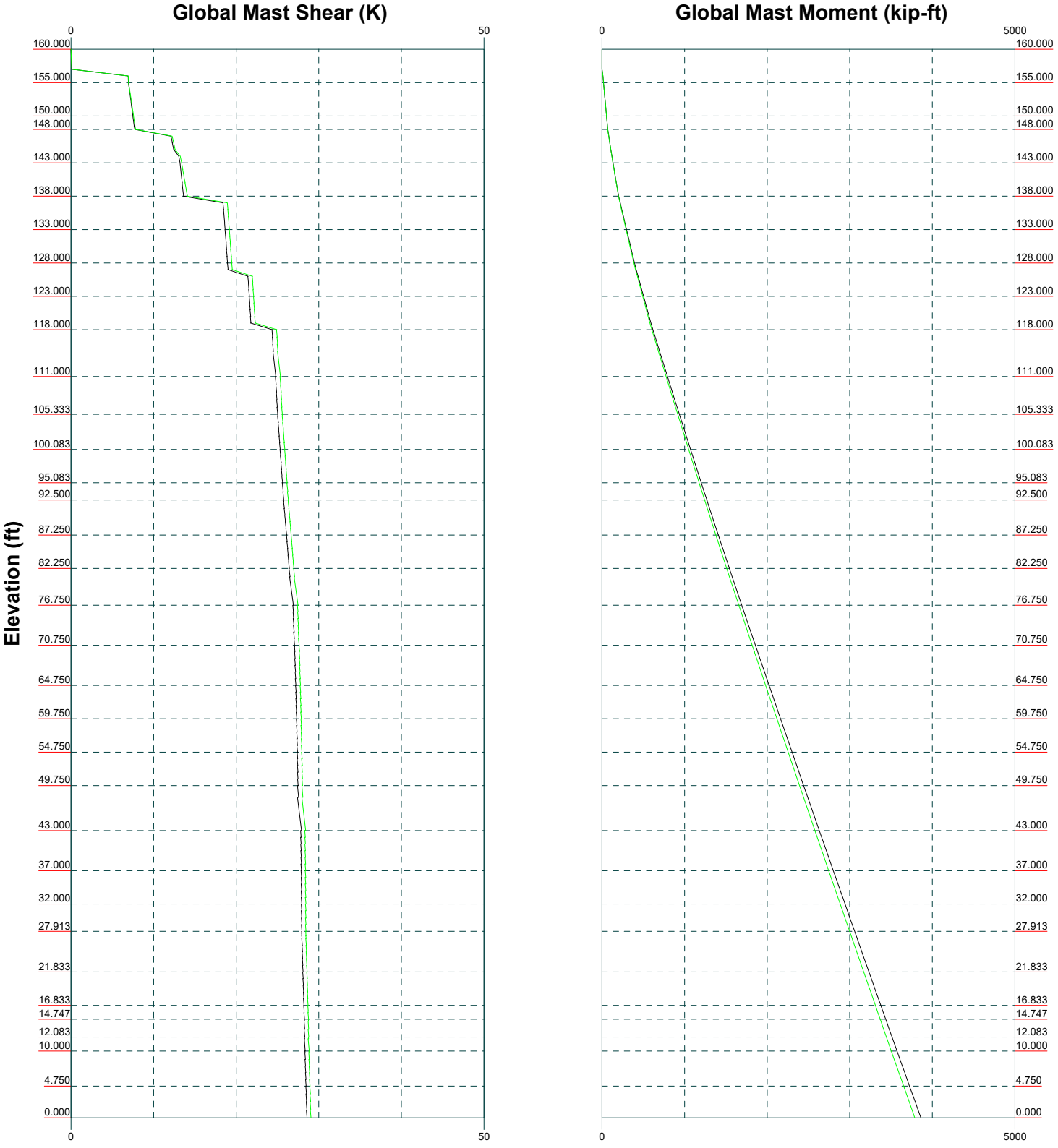
Tulsa, OK 74119
Phone: (918) 587-4630
FAX: (918) 587-4630

Job: **137177.014.01 - WEST JOHNSON AVE. BURNT HOUSE, CT (BU# 87631**			
Project:			
Client: Crown Castle	Drawn by: Nithish Acharya	App'd:	
Code: TIA-222-H	Date: 06/23/22	Scale: NTS	
Path:		Dwg No. E-1	

TIA-222-H - 118 mph/50 mph 1.000 in Ice Exposure B

Maximum Values

Vx Vz Mx Mz



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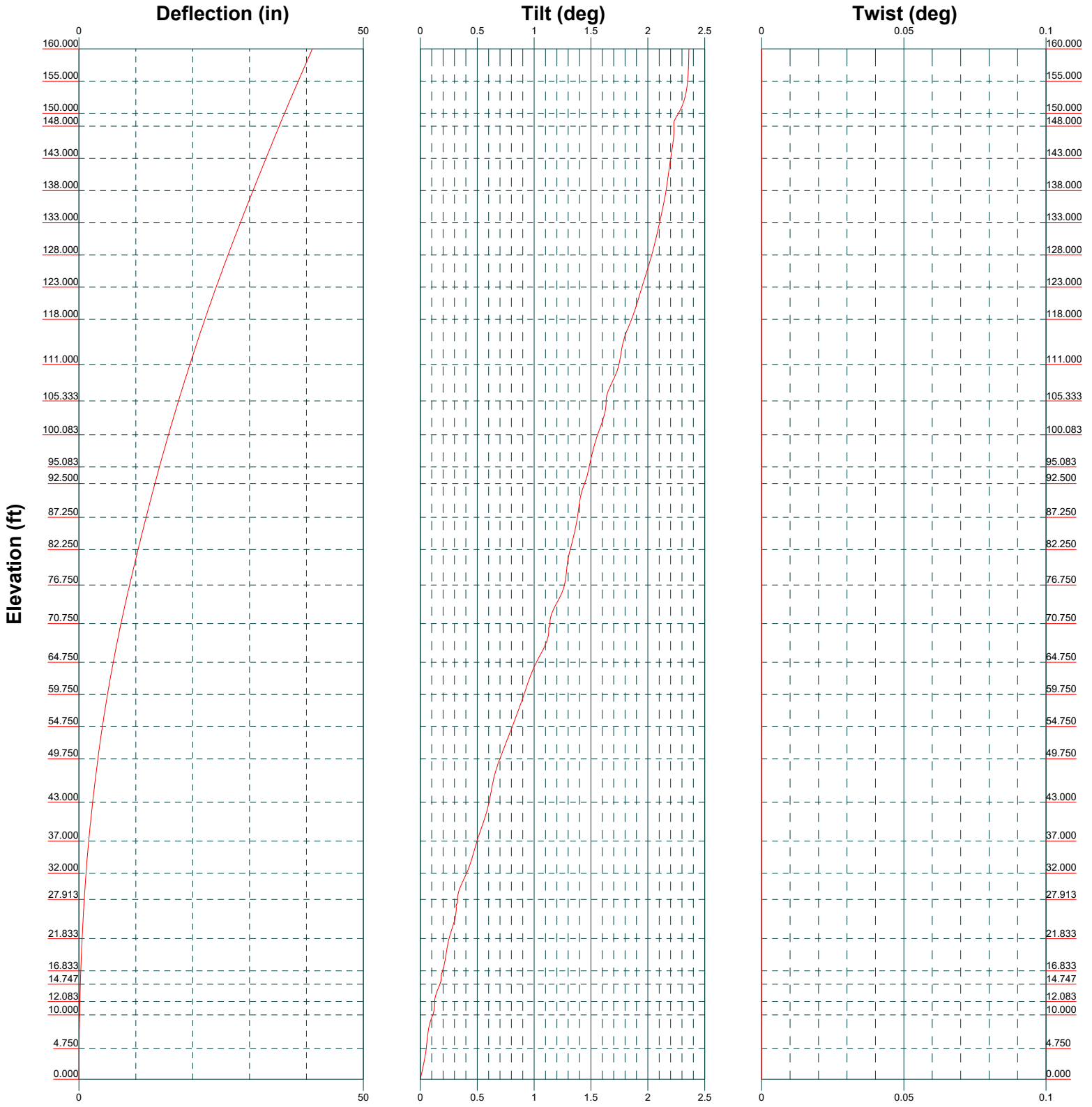
Job: *137177.014.01 - WEST JOHNSON AVE. BURNT HOUSE, CT (BU# 87631*		
Project:		
Client: Crown Castle	Drawn by: Nithish Acharya	App'd:
Code: TIA-222-H	Date: 06/23/22	Scale: NTS
Path:		Dwg No. E-4

TIA-222-H - Service - 60 mph

Maximum Values



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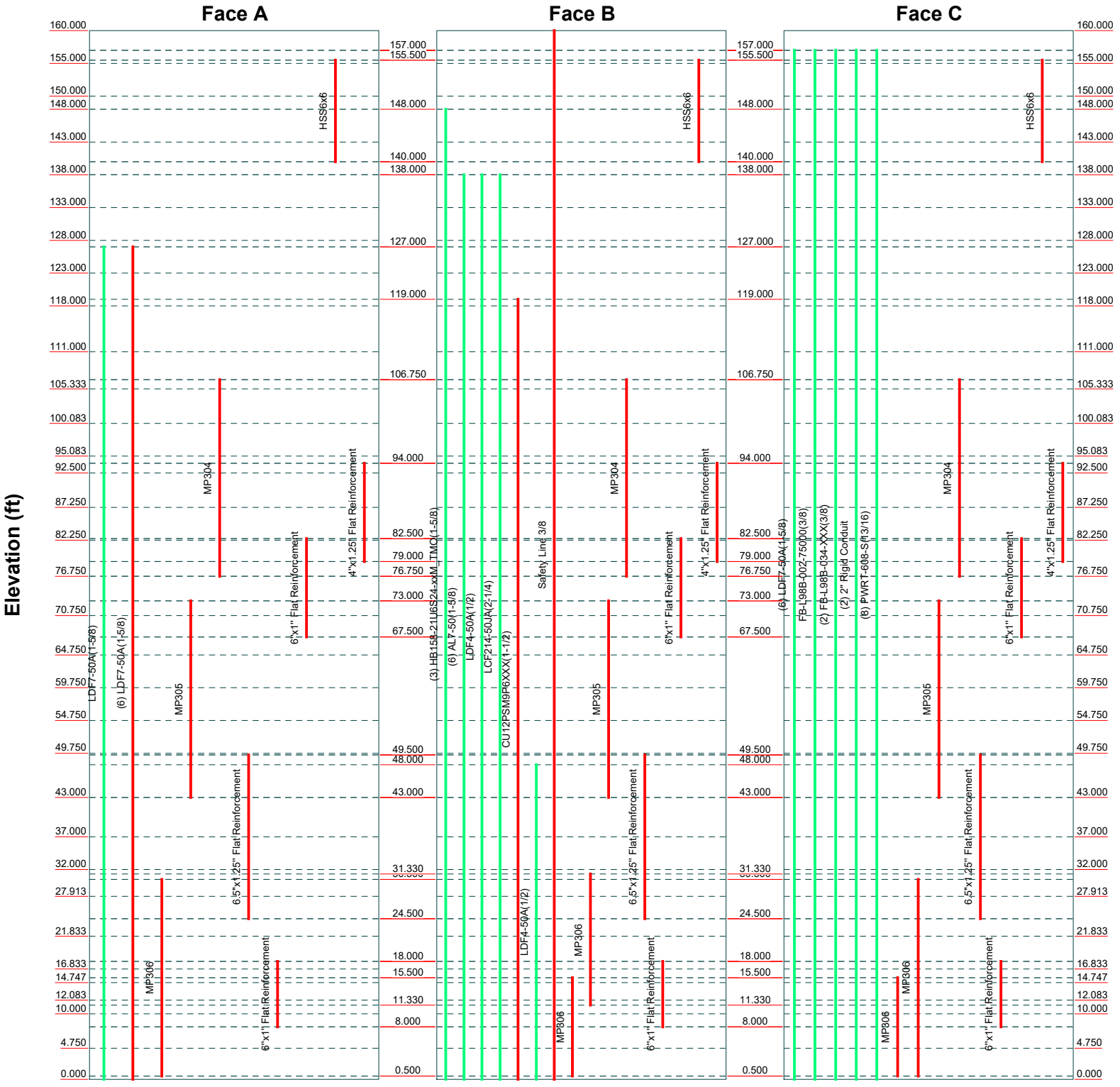
Job:	***137177.014.01 - WEST JOHNSON AVE. BURNT HOUSE, CT (BU# 87631***		
Project:			
Client: Crown Castle		Drawn by: Nithish Acharya	App'd:
Code: TIA-222-H		Date: 06/23/22	Scale: NTS
Path:			Dwg No. E-5

Feed Line Distribution Chart
0' - 160'

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



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FAX: (918) 587-4630

Job: 137177.014.01 - WEST JOHNSON AVE. BURNT HOUSE, CT (BU# 87631			
Project:			
Client: Crown Castle	Drawn by: Nithish Acharya	App'd:	
Code: TIA-222-H	Date: 06/23/22	Scale: NTS	
Path:		Dwg No. E-7	

Tower Input Data

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

Tower is located in Hartford County, Connecticut.
Tower base elevation above sea level: 133.000 ft.
Basic wind speed of 118 mph.
Risk Category II.
Exposure Category B.
Simplified Topographic Factor Procedure for wind speed-up calculations is used.
Topographic Category: 1.
Crest Height: 0.000 ft.
Nominal ice thickness of 1.000 in.
Ice thickness is considered to increase with height.
Ice density of 56.000 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50.000 °F.
Deflections calculated using a wind speed of 60 mph.
TIA-222-H Annex S.
Tower Rating: 95.0%.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.
Tower analysis based on target reliabilities in accordance with Annex S.
Load Modification Factors used: $K_{es}(F_w) = 0.95$, $K_{es}(t_i) = 0.85$.
Maximum demand-capacity ratio is: 1.05.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

	Consider Moments - Legs		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

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	160.000-155.000	5.000	0.000	Round	10.750	10.750	0.349		A53-B-35 (35 ksi)
L2	155.000-150.000	5.000	0.000	Round	10.750	10.750	0.349		A53-B-35 (35 ksi)
L3	150.000-148.500	1.500	0.000	Round	10.750	10.750	0.349		A53-B-35 (35 ksi)
L4	148.500-148.000	0.500	0.000	Round	23.000	23.000	0.349		A53-B-35 (35 ksi)
L5	148.000-143.000	5.000	0.000	18	23.000	23.810	0.250	1.000	A607-60 (60 ksi)
L6	143.000-138.000	5.000	0.000	18	23.810	24.620	0.250	1.000	A607-60 (60 ksi)
L7	138.000-133.000	5.000	0.000	18	24.620	25.430	0.250	1.000	A607-60 (60 ksi)
L8	133.000-128.000	5.000	0.000	18	25.430	26.240	0.250	1.000	A607-60 (60 ksi)
L9	128.000-123.000	5.000	0.000	18	26.240	27.050	0.250	1.000	A607-60 (60 ksi)
L10	123.000-118.000	5.000	0.000	18	27.050	27.860	0.250	1.000	A607-60 (60 ksi)
L11	118.000-111.000	7.000	3.750	18	27.860	28.994	0.250	1.000	A607-60 (60 ksi)
L12	111.000-109.750	5.000	0.000	18	27.887	28.696	0.313	1.250	A607-60 (60 ksi)
L13	109.750-105.333	4.417	0.000	18	28.696	29.412	0.313	1.250	A607-60 (60 ksi)
L14	105.333-105.083	0.250	0.000	18	29.412	29.452	0.469	1.875	A607-60 (60 ksi)
L15	105.083-100.083	5.000	0.000	18	29.452	30.262	0.463	1.850	A607-60 (60 ksi)
L16	100.083-95.083	5.000	0.000	18	30.262	31.072	0.463	1.850	A607-60 (60 ksi)
L17	95.083-92.500	2.583	0.000	18	31.072	31.491	0.456	1.825	A607-60 (60 ksi)
L18	92.500-92.250	0.250	0.000	18	31.491	31.531	0.637	2.550	A607-60 (60 ksi)
L19	92.250-87.250	5.000	0.000	18	31.531	32.341	0.625	2.500	A607-60 (60 ksi)
L20	87.250-82.250	5.000	0.000	18	32.341	33.151	0.613	2.450	A607-60 (60 ksi)
L21	82.250-76.750	5.500	4.250	18	33.151	34.042	0.613	2.450	A607-60 (60 ksi)
L22	76.750-75.750	5.250	0.000	18	32.729	33.579	0.375	1.500	A607-65 (65 ksi)
L23	75.750-70.750	5.000	0.000	18	33.579	34.389	0.375	1.500	A607-65 (65 ksi)
L24	70.750-70.583	0.167	0.000	18	34.389	34.416	0.375	1.500	A607-65 (65 ksi)
L25	70.583-70.333	0.250	0.000	18	34.416	34.456	0.675	2.700	A607-65 (65 ksi)
L26	70.333-70.000	0.333	0.000	18	34.456	34.510	0.675	2.700	A607-65 (65 ksi)
L27	70.000-69.750	0.250	0.000	18	34.510	34.551	0.375	1.500	A607-65 (65 ksi)
L28	69.750-64.750	5.000	0.000	18	34.551	35.361	0.375	1.500	A607-65 (65 ksi)

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L29	64.750-59.750	5.000	0.000	18	35.361	36.171	0.375	1.500	A607-65 (65 ksi)
L30	59.750-54.750	5.000	0.000	18	36.171	36.981	0.375	1.500	A607-65 (65 ksi)
L31	54.750-49.750	5.000	0.000	18	36.981	37.791	0.375	1.500	A607-65 (65 ksi)
L32	49.750-43.000	6.750	5.000	18	37.791	38.884	0.375	1.500	A607-65 (65 ksi)
L33	43.000-42.000	6.000	0.000	18	37.324	38.296	0.438	1.750	A607-65 (65 ksi)
L34	42.000-37.000	5.000	0.000	18	38.296	39.106	0.438	1.750	A607-65 (65 ksi)
L35	37.000-32.000	5.000	0.000	18	39.106	39.916	0.438	1.750	A607-65 (65 ksi)
L36	32.000-27.913	4.087	0.000	18	39.916	40.578	0.438	1.750	A607-65 (65 ksi)
L37	27.913-27.663	0.250	0.000	18	40.578	40.619	0.675	2.700	A607-65 (65 ksi)
L38	27.663-27.250	0.413	0.000	18	40.619	40.686	0.675	2.700	A607-65 (65 ksi)
L39	27.250-26.983	0.267	0.000	18	40.686	40.729	0.675	2.700	A607-65 (65 ksi)
L40	26.983-26.833	0.150	0.000	18	40.729	40.753	0.662	2.650	A607-65 (65 ksi)
L41	26.833-21.833	5.000	0.000	18	40.753	41.563	0.662	2.650	A607-65 (65 ksi)
L42	21.833-16.833	5.000	0.000	18	41.563	42.373	0.662	2.650	A607-65 (65 ksi)
L43	16.833-16.000	0.833	0.000	18	42.373	42.508	0.662	2.650	A607-65 (65 ksi)
L44	16.000-15.750	0.250	0.000	18	42.508	42.549	0.813	3.250	A607-65 (65 ksi)
L45	15.750-14.747	1.003	0.000	18	42.549	42.711	0.813	3.250	A607-65 (65 ksi)
L46	14.747-14.497	0.250	0.000	18	42.711	42.752	0.487	1.950	A607-65 (65 ksi)
L47	14.497-12.083	2.414	0.000	18	42.752	43.143	0.487	1.950	A607-65 (65 ksi)
L48	12.083-11.833	0.250	0.000	18	43.143	43.183	0.738	2.950	A607-65 (65 ksi)
L49	11.833-10.000	1.833	0.000	18	43.183	43.480	0.738	2.950	A607-65 (65 ksi)
L50	10.000-9.750	0.250	0.000	18	43.480	43.521	0.738	2.950	A607-65 (65 ksi)
L51	9.750-4.750	5.000	0.000	18	43.521	44.331	0.725	2.900	A607-65 (65 ksi)
L52	4.750-0.000	4.750		18	44.331	45.100	0.713	2.850	A607-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	10.750	11.404	154.383	3.679	5.375	28.722	308.766	5.699	0.000	0
	10.750	11.404	154.383	3.679	5.375	28.722	308.766	5.699	0.000	0
L2	10.750	11.404	154.383	3.679	5.375	28.722	308.766	5.699	0.000	0

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
	10.750	11.404	154.383	3.679	5.375	28.722	308.766	5.699	0.000	0
L3	10.750	11.404	154.383	3.679	5.375	28.722	308.766	5.699	0.000	0
	10.750	11.404	154.383	3.679	5.375	28.722	308.766	5.699	0.000	0
L4	23.000	24.835	1593.128	8.009	11.500	138.533	3186.255	12.410	0.000	0
	23.000	24.835	1593.128	8.009	11.500	138.533	3186.255	12.410	0.000	0
L5	23.316	18.052	1180.398	8.076	11.684	101.027	2362.350	9.028	3.608	14.432
	24.139	18.695	1311.023	8.364	12.095	108.389	2623.771	9.349	3.751	15.002
L6	24.139	18.695	1311.023	8.364	12.095	108.389	2623.771	9.349	3.751	15.002
	24.961	19.338	1450.945	8.651	12.507	116.011	2903.799	9.671	3.893	15.572
L7	24.961	19.338	1450.945	8.651	12.507	116.011	2903.799	9.671	3.893	15.572
	25.784	19.980	1600.485	8.939	12.918	123.891	3203.076	9.992	4.036	16.143
L8	25.784	19.980	1600.485	8.939	12.918	123.891	3203.076	9.992	4.036	16.143
	26.606	20.623	1759.962	9.226	13.330	132.031	3522.239	10.313	4.178	16.713
L9	26.606	20.623	1759.962	9.226	13.330	132.031	3522.239	10.313	4.178	16.713
	27.429	21.266	1929.695	9.514	13.741	140.429	3861.930	10.635	4.321	17.283
L10	27.429	21.266	1929.695	9.514	13.741	140.429	3861.930	10.635	4.321	17.283
	28.251	21.909	2110.006	9.802	14.153	149.087	4222.788	10.956	4.463	17.853
L11	28.251	21.909	2110.006	9.802	14.153	149.087	4222.788	10.956	4.463	17.853
	29.403	22.808	2380.817	10.204	14.729	161.642	4764.767	11.406	4.663	18.652
L12	28.885	27.350	2627.203	9.789	14.166	185.454	5257.864	13.678	4.358	13.946
	29.091	28.153	2865.578	10.076	14.578	196.571	5734.926	14.079	4.501	14.402
L13	29.091	28.153	2865.578	10.076	14.578	196.571	5734.926	14.079	4.501	14.402
	29.817	28.863	3087.791	10.330	14.941	206.662	6179.644	14.434	4.626	14.805
L14	29.793	43.062	4557.476	10.275	14.941	305.026	9120.949	21.535	4.351	9.283
	29.834	43.122	4576.633	10.289	14.962	305.887	9159.288	21.565	4.359	9.298
L15	29.835	42.556	4518.533	10.291	14.962	302.004	9043.012	21.282	4.370	9.448
	30.658	43.745	4907.935	10.579	15.373	319.251	9822.329	21.877	4.512	9.756
L16	30.658	43.745	4907.935	10.579	15.373	319.251	9822.329	21.877	4.512	9.756
	31.480	44.934	5319.091	10.866	15.785	336.977	10645.180	22.471	4.655	10.064
L17	31.481	44.336	5250.426	10.869	15.785	332.627	10507.760	22.172	4.666	10.226
	31.906	44.942	5468.645	11.017	15.997	341.848	10944.485	22.475	4.739	10.388
L18	31.878	62.429	7508.022	10.953	15.997	469.331	15025.922	31.221	4.420	6.934
	31.919	62.511	7537.625	10.967	16.018	470.577	15085.167	31.261	4.427	6.945
L19	31.921	61.310	7398.802	10.972	16.018	461.910	14807.339	30.661	4.449	7.119
	32.744	62.917	7995.862	11.259	16.429	486.683	16002.245	31.464	4.592	7.347
L20	32.746	61.683	7845.213	11.264	16.429	477.514	15700.750	30.847	4.614	7.533
	33.568	63.257	8461.473	11.551	16.841	502.441	16934.079	31.635	4.757	7.766
L21	33.568	63.257	8461.473	11.551	16.841	502.441	16934.079	31.635	4.757	7.766
	34.473	64.989	9175.719	11.867	17.293	530.593	18363.512	32.501	4.913	8.022
L22	33.875	38.509	5092.625	11.486	16.626	306.303	10191.951	19.258	5.100	13.601
	34.039	39.521	5504.857	11.787	17.058	322.712	11016.957	19.764	5.250	14
L23	34.039	39.521	5504.857	11.787	17.058	322.712	11016.957	19.764	5.250	14
	34.862	40.485	5917.594	12.075	17.470	338.737	11842.974	20.246	5.392	14.38
L24	34.862	40.485	5917.594	12.075	17.470	338.737	11842.974	20.246	5.392	14.38
	34.889	40.517	5931.724	12.085	17.483	339.279	11871.253	20.262	5.397	14.393
L25	34.843	72.288	10397.295	11.978	17.483	594.698	20808.270	36.151	4.869	7.214
	34.884	72.375	10434.777	11.992	17.504	596.141	20883.284	36.194	4.876	7.224
L26	34.884	72.375	10434.777	11.992	17.504	596.141	20883.284	36.194	4.876	7.224
	34.939	72.491	10484.842	12.012	17.531	598.065	20983.481	36.252	4.886	7.238
L27	34.985	40.630	5981.229	12.118	17.531	341.175	11970.328	20.319	5.414	14.437
	35.026	40.678	6002.542	12.132	17.552	341.989	12012.982	20.343	5.421	14.456
L28	35.026	40.678	6002.542	12.132	17.552	341.989	12012.982	20.343	5.421	14.456
	35.848	41.642	6439.494	12.420	17.963	358.481	12887.461	20.825	5.564	14.836
L29	35.848	41.642	6439.494	12.420	17.963	358.481	12887.461	20.825	5.564	14.836
	36.671	42.606	6897.153	12.707	18.375	375.361	13803.381	21.307	5.706	15.216
L30	36.671	42.606	6897.153	12.707	18.375	375.361	13803.381	21.307	5.706	15.216
	37.493	43.570	7375.998	12.995	18.786	392.629	14761.701	21.789	5.849	15.596
L31	37.493	43.570	7375.998	12.995	18.786	392.629	14761.701	21.789	5.849	15.596
	38.316	44.534	7876.508	13.283	19.198	410.286	15763.381	22.271	5.991	15.976
L32	38.316	44.534	7876.508	13.283	19.198	410.286	15763.381	22.271	5.991	15.976
	39.426	45.835	8587.413	13.671	19.753	434.738	17186.126	22.922	6.184	16.49
L33	38.655	51.222	8804.959	13.095	18.961	464.381	17621.505	25.616	5.799	13.255

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
	38.819	52.571	9519.515	13.440	19.454	489.325	19051.557	26.291	5.970	13.646
L34	38.819	52.571	9519.515	13.440	19.454	489.325	19051.557	26.291	5.970	13.646
	39.642	53.696	10143.698	13.727	19.866	510.609	20300.743	26.853	6.113	13.972
L35	39.642	53.696	10143.698	13.727	19.866	510.609	20300.743	26.853	6.113	13.972
	40.464	54.821	10794.585	14.015	20.277	532.347	21603.375	27.416	6.255	14.298
L36	40.464	54.821	10794.585	14.015	20.277	532.347	21603.375	27.416	6.255	14.298
	41.137	55.740	11346.847	14.250	20.614	550.452	22708.624	27.875	6.372	14.564
L37	41.100	85.490	17197.656	14.166	20.614	834.283	34417.940	42.753	5.954	8.82
	41.141	85.577	17250.073	14.180	20.634	835.992	34522.844	42.797	5.961	8.831
L38	41.141	85.577	17250.073	14.180	20.634	835.992	34522.844	42.797	5.961	8.831
	41.209	85.721	17336.900	14.204	20.668	838.818	34696.612	42.868	5.973	8.848
L39	41.209	85.721	17336.900	14.204	20.668	838.818	34696.612	42.868	5.973	8.848
	41.253	85.813	17393.187	14.219	20.690	840.647	34809.260	42.915	5.980	8.86
L40	41.255	84.250	17087.078	14.224	20.690	825.853	34196.640	42.133	6.002	9.06
	41.280	84.302	17118.187	14.232	20.703	826.863	34258.898	42.159	6.007	9.066
L41	41.280	84.302	17118.187	14.232	20.703	826.863	34258.898	42.159	6.007	9.066
	42.102	86.005	18176.861	14.520	21.114	860.889	36377.640	43.011	6.149	9.282
L42	42.102	86.005	18176.861	14.520	21.114	860.889	36377.640	43.011	6.149	9.282
	42.925	87.708	19278.309	14.807	21.526	895.602	38581.984	43.862	6.292	9.497
L43	42.925	87.708	19278.309	14.807	21.526	895.602	38581.984	43.862	6.292	9.497
	43.062	87.992	19466.026	14.855	21.594	901.452	38957.666	44.004	6.315	9.533
L44	43.038	107.528	23617.616	14.802	21.594	1093.708	47266.309	53.774	6.051	7.448
	43.080	107.632	23686.504	14.816	21.615	1095.854	47404.175	53.826	6.059	7.457
L45	43.080	107.632	23686.504	14.816	21.615	1095.854	47404.175	53.826	6.059	7.457
	43.245	108.051	23964.227	14.874	21.697	1104.485	47959.987	54.036	6.087	7.492
L46	43.295	65.333	14715.735	14.989	21.697	678.232	29450.832	32.673	6.659	13.66
	43.336	65.396	14758.120	15.004	21.718	679.541	29535.659	32.704	6.666	13.674
L47	43.336	65.396	14758.120	15.004	21.718	679.541	29535.659	32.704	6.666	13.674
	43.733	66.001	15171.588	15.143	21.916	692.247	30363.139	33.007	6.735	13.816
L48	43.694	99.263	22550.689	15.054	21.916	1028.940	45131.052	49.641	6.295	8.536
	43.735	99.358	22615.363	15.068	21.937	1030.923	45260.485	49.688	6.302	8.545
L49	43.735	99.358	22615.363	15.068	21.937	1030.923	45260.485	49.688	6.302	8.545
	44.037	100.053	23093.333	15.174	22.088	1045.522	46217.053	50.036	6.354	8.616
L50	44.037	100.053	23093.333	15.174	22.088	1045.522	46217.053	50.036	6.354	8.616
	44.078	100.148	23159.040	15.188	22.108	1047.521	46348.553	50.083	6.362	8.626
L51	44.080	98.479	22786.475	15.192	22.108	1030.669	45602.933	49.249	6.384	8.805
	44.903	100.343	24104.960	15.480	22.520	1070.385	48241.637	50.181	6.526	9.002
L52	44.904	98.641	23709.735	15.484	22.520	1052.835	47450.668	49.330	6.548	9.19
	45.686	100.381	24986.838	15.758	22.911	1090.614	50006.554	50.200	6.684	9.38

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 160.000-155.000				1	1	1			
L2 155.000-150.000				1	1	1			
L3 150.000-148.500				1	1	1			
L4 148.500-148.000				1	1	1			
L5 148.000-143.000				1	1	1			
L6				1	1	1			

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
143.000-138.000									
L7				1	1	1			
138.000-133.000									
L8				1	1	1			
133.000-128.000									
L9				1	1	1			
128.000-123.000									
L10				1	1	1			
123.000-118.000									
L11				1	1	1			
118.000-111.000									
L12				1	1	1			
111.000-109.750									
L13				1	1	1			
109.750-105.333									
L14				1	1	0.957593			
105.333-105.083									
L15				1	1	0.962316			
105.083-100.083									
L16				1	1	0.954732			
100.083-95.083									
L17				1	1	0.963802			
95.083-92.500									
L18				1	1	0.933531			
92.500-92.250									
L19				1	1	0.940278			
92.250-87.250									
L20				1	1	0.947916			
87.250-82.250									
L21				1	1	0.945209			
82.250-76.750									
L22				1	1	1			
76.750-75.750									
L23				1	1	1			
75.750-70.750									
L24				1	1	1			
70.750-70.583									
L25				1	1	1.04341			
70.583-70.333									
L26				1	1	1.04263			
70.333-70.000									
L27				1	1	1			
70.000-69.750									
L28				1	1	1			
69.750-64.750									
L29				1	1	1			
64.750-59.750									
L30				1	1	1			

Tower Elevation ft	Gusset Area (per face) ft²	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
59.750-54.750									
L31				1	1	1			
54.750-49.750									
L32				1	1	1			
49.750-43.000									
L33				1	1	1			
43.000-42.000									
L34				1	1	1			
42.000-37.000									
L35				1	1	1			
37.000-32.000									
L36				1	1	1			
32.000-27.913									
L37				1	1	1.03582			
27.913-27.663									
L38				1	1	1.03517			
27.663-27.250									
L39				1	1	0.94811			
27.250-26.983									
L40				1	1	0.965513			
26.983-26.833									
L41				1	1	0.95947			
26.833-21.833									
L42				1	1	0.953662			
21.833-16.833									
L43				1	1	0.952716			
16.833-16.000									
L44				1	1	0.946633			
16.000-15.750									
L45				1	1	0.94505			
15.750-14.747									
L46				1	1	1.15754			
14.747-14.497									
L47				1	1	1.15516			
14.497-12.083									
L48				1	1	0.938416			
12.083-11.833									
L49				1	1	0.936018			
11.833-10.000									
L50				1	1	0.935693			
10.000-9.750									
L51				1	1	0.945082			
9.750-4.750									
L52				1	1	0.955365			
4.750-0.000									

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight klf
LDF7-50A(1-5/8)	A	No	Surface Ar (CaAa)	127.000 - 0.000	6	6	0.000 0.300	1.980		0.001
*										

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight klf
CU12PSM9P6XXX(1-1/2)	B	No	Surface Ar (CaAa)	119.000 - 0.000	1	1	-0.230 -0.200	1.600		0.002
*										
Safety Line 3/8	B	No	Surface Ar (CaAa)	160.000 - 0.000	1	1	0.340 0.350	0.375		0.000
*										
MP306	B	No	Surface Af (CaAa)	15.500 - 0.500	1	1	0.000 0.050	6.890	19.000	0.000
MP306	C	No	Surface Af (CaAa)	15.500 - 0.500	1	1	-0.350 -0.300	6.890	19.000	0.000
*										
MP306	A	No	Surface Af (CaAa)	30.500 - 0.500	1	1	0.350 0.400	6.890	19.000	0.000
MP306	C	No	Surface Af (CaAa)	30.500 - 0.500	1	1	0.350 0.400	6.890	19.000	0.000
*										
MP306	B	No	Surface Af (CaAa)	31.330 - 11.330	1	1	0.350 0.400	6.890	19.000	0.000
*										
MP305	A	No	Surface Af (CaAa)	73.000 - 43.000	1	1	0.350 0.400	5.330	14.840	0.000
MP305	B	No	Surface Af (CaAa)	73.000 - 43.000	1	1	0.350 0.400	5.330	14.840	0.000
MP305	C	No	Surface Af (CaAa)	73.000 - 43.000	1	1	0.350 0.400	5.330	14.840	0.000
*										
MP304	A	No	Surface Af (CaAa)	106.750 - 76.750	1	1	0.350 0.400	4.780	12.780	0.000
MP304	B	No	Surface Af (CaAa)	106.750 - 76.750	1	1	0.350 0.400	4.780	12.780	0.000
MP304	C	No	Surface Af (CaAa)	106.750 - 76.750	1	1	0.350 0.400	4.780	12.780	0.000
*										
6.5"x1.25" Flat Reinforcement	A	No	Surface Af (CaAa)	49.500 - 24.500	1	1	-0.200 -0.150	6.500	15.500	0.000
6.5"x1.25" Flat Reinforcement	B	No	Surface Af (CaAa)	49.500 - 24.500	1	1	-0.200 -0.150	6.500	15.500	0.000
6.5"x1.25" Flat Reinforcement	C	No	Surface Af (CaAa)	49.500 - 24.500	1	1	-0.200 -0.150	6.500	15.500	0.000
*										
6"x1" Flat Reinforcement	A	No	Surface Af (CaAa)	18.000 - 8.000	1	1	-0.200 -0.150	6.000	14.000	0.000
6"x1" Flat Reinforcement	B	No	Surface Af (CaAa)	18.000 - 8.000	1	1	-0.200 -0.150	6.000	14.000	0.000
6"x1" Flat Reinforcement	C	No	Surface Af (CaAa)	18.000 - 8.000	1	1	-0.200 -0.150	6.000	14.000	0.000
*										
6"x1" Flat Reinforcement	A	No	Surface Af (CaAa)	82.500 - 67.500	1	1	-0.350 -0.300	6.000	14.000	0.000
6"x1" Flat Reinforcement	B	No	Surface Af (CaAa)	82.500 - 67.500	1	1	0.000 0.050	6.000	14.000	0.000
6"x1" Flat Reinforcement	C	No	Surface Af (CaAa)	82.500 - 67.500	1	1	-0.350 -0.300	6.000	14.000	0.000
*										
HSS6x6	A	No	Surface Af (CaAa)	155.500 - 140.000	1	1	-0.100 0.000	6.000	24.000	0.035
HSS6x6	B	No	Surface Af (CaAa)	155.500 - 140.000	1	1	-0.100 0.000	6.000	24.000	0.035
HSS6x6	C	No	Surface Af (CaAa)	155.500 - 140.000	1	1	-0.100 0.000	6.000	24.000	0.035

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight klf
*										
4"x1.25" Flat Reinforcement	A	No	Surface Af (CaAa)	94.000 - 79.000	1	1	-0.200 -0.150	4.000	10.500	0.000
4"x1.25" Flat Reinforcement	B	No	Surface Af (CaAa)	94.000 - 79.000	1	1	-0.200 -0.150	4.000	10.500	0.000
4"x1.25" Flat Reinforcement	C	No	Surface Af (CaAa)	94.000 - 79.000	1	1	-0.200 -0.150	4.000	10.500	0.000
*										

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight klf
LDF7-50A(1-5/8)	C	No	No	Inside Pole	157.000 - 0.000	6	No Ice	0.000	0.001
							1/2" Ice	0.000	0.001
							1" Ice	0.000	0.001
FB-L98B-002-75000 (3/8)	C	No	No	Inside Pole	157.000 - 0.000	1	No Ice	0.000	0.000
							1/2" Ice	0.000	0.000
							1" Ice	0.000	0.000
FB-L98B-034-XXX(3/8)	C	No	No	Inside Pole	157.000 - 0.000	2	No Ice	0.000	0.000
							1/2" Ice	0.000	0.000
							1" Ice	0.000	0.000
2" Rigid Conduit	C	No	No	Inside Pole	157.000 - 0.000	2	No Ice	0.000	0.003
							1/2" Ice	0.000	0.003
							1" Ice	0.000	0.003
PWRT-608-S(13/16)	C	No	No	Inside Pole	157.000 - 0.000	8	No Ice	0.000	0.001
							1/2" Ice	0.000	0.001
							1" Ice	0.000	0.001
*									
HB158-21U6S24-xx M_TMO(1-5/8)	B	No	No	Inside Pole	148.000 - 0.000	3	No Ice	0.000	0.003
							1/2" Ice	0.000	0.003
							1" Ice	0.000	0.003
*									
AL7-50(1-5/8)	B	No	No	Inside Pole	138.000 - 0.000	6	No Ice	0.000	0.001
							1/2" Ice	0.000	0.001
							1" Ice	0.000	0.001
LDF4-50A(1/2)	B	No	No	Inside Pole	138.000 - 0.000	1	No Ice	0.000	0.000
							1/2" Ice	0.000	0.000
							1" Ice	0.000	0.000
LCF214-50JA(2-1/4)	B	No	No	Inside Pole	138.000 - 0.000	1	No Ice	0.000	0.001
							1/2" Ice	0.000	0.001
							1" Ice	0.000	0.001
*									
LDF7-50A(1-5/8)	A	No	No	Inside Pole	127.000 - 0.000	1	No Ice	0.000	0.001
							1/2" Ice	0.000	0.001
							1" Ice	0.000	0.001
*									
LDF4-50A(1/2)	B	No	No	Inside Pole	48.000 - 0.000	1	No Ice	0.000	0.000
							1/2" Ice	0.000	0.000
							1" Ice	0.000	0.000
*									

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	160.000-155.000	A	0.000	0.000	0.474	0.000	0.018
		B	0.000	0.000	0.662	0.000	0.019
		C	0.000	0.000	0.474	0.000	0.049
L2	155.000-150.000	A	0.000	0.000	4.743	0.000	0.176
		B	0.000	0.000	4.931	0.000	0.178
		C	0.000	0.000	4.743	0.000	0.255
L3	150.000-148.500	A	0.000	0.000	1.423	0.000	0.053
		B	0.000	0.000	1.479	0.000	0.053
		C	0.000	0.000	1.423	0.000	0.076
L4	148.500-148.000	A	0.000	0.000	0.474	0.000	0.018
		B	0.000	0.000	0.493	0.000	0.018
		C	0.000	0.000	0.474	0.000	0.025
L5	148.000-143.000	A	0.000	0.000	4.743	0.000	0.176
		B	0.000	0.000	4.931	0.000	0.215
		C	0.000	0.000	4.743	0.000	0.255
L6	143.000-138.000	A	0.000	0.000	2.846	0.000	0.106
		B	0.000	0.000	3.034	0.000	0.144
		C	0.000	0.000	2.846	0.000	0.184
L7	138.000-133.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.188	0.000	0.061
		C	0.000	0.000	0.000	0.000	0.078
L8	133.000-128.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.188	0.000	0.061
		C	0.000	0.000	0.000	0.000	0.078
L9	128.000-123.000	A	0.000	0.000	4.752	0.000	0.023
		B	0.000	0.000	0.188	0.000	0.061
		C	0.000	0.000	0.000	0.000	0.078
L10	123.000-118.000	A	0.000	0.000	5.940	0.000	0.029
		B	0.000	0.000	0.347	0.000	0.063
		C	0.000	0.000	0.000	0.000	0.078
L11	118.000-111.000	A	0.000	0.000	8.316	0.000	0.040
		B	0.000	0.000	1.383	0.000	0.101
		C	0.000	0.000	0.000	0.000	0.110
L12	111.000-109.750	A	0.000	0.000	1.485	0.000	0.007
		B	0.000	0.000	0.247	0.000	0.018
		C	0.000	0.000	0.000	0.000	0.020
L13	109.750-105.333	A	0.000	0.000	6.376	0.000	0.025
		B	0.000	0.000	2.001	0.000	0.064
		C	0.000	0.000	1.129	0.000	0.069
L14	105.333-105.083	A	0.000	0.000	0.496	0.000	0.001
		B	0.000	0.000	0.249	0.000	0.004
		C	0.000	0.000	0.199	0.000	0.004
L15	105.083-100.083	A	0.000	0.000	9.923	0.000	0.029
		B	0.000	0.000	4.971	0.000	0.072
		C	0.000	0.000	3.983	0.000	0.078
L16	100.083-95.083	A	0.000	0.000	9.923	0.000	0.029
		B	0.000	0.000	4.971	0.000	0.072
		C	0.000	0.000	3.983	0.000	0.078
L17	95.083-92.500	A	0.000	0.000	6.126	0.000	0.015
		B	0.000	0.000	3.568	0.000	0.037
		C	0.000	0.000	3.058	0.000	0.040
L18	92.500-92.250	A	0.000	0.000	0.663	0.000	0.001
		B	0.000	0.000	0.415	0.000	0.004
		C	0.000	0.000	0.366	0.000	0.004
L19	92.250-87.250	A	0.000	0.000	13.257	0.000	0.029
		B	0.000	0.000	8.304	0.000	0.072

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C	0.000	0.000	7.317	0.000	0.078
L20	87.250-82.250	A	0.000	0.000	13.507	0.000	0.029
		B	0.000	0.000	8.554	0.000	0.072
		C	0.000	0.000	7.567	0.000	0.078
L21	82.250-76.750	A	0.000	0.000	18.582	0.000	0.032
		B	0.000	0.000	13.135	0.000	0.080
		C	0.000	0.000	12.048	0.000	0.086
L22	76.750-75.750	A	0.000	0.000	2.188	0.000	0.006
		B	0.000	0.000	1.198	0.000	0.014
		C	0.000	0.000	1.000	0.000	0.016
L23	75.750-70.750	A	0.000	0.000	12.939	0.000	0.029
		B	0.000	0.000	7.986	0.000	0.072
		C	0.000	0.000	6.999	0.000	0.078
L24	70.750-70.583	A	0.000	0.000	0.514	0.000	0.001
		B	0.000	0.000	0.348	0.000	0.002
		C	0.000	0.000	0.315	0.000	0.003
L25	70.583-70.333	A	0.000	0.000	0.769	0.000	0.001
		B	0.000	0.000	0.521	0.000	0.004
		C	0.000	0.000	0.472	0.000	0.004
L26	70.333-70.000	A	0.000	0.000	1.024	0.000	0.002
		B	0.000	0.000	0.695	0.000	0.005
		C	0.000	0.000	0.629	0.000	0.005
L27	70.000-69.750	A	0.000	0.000	0.769	0.000	0.001
		B	0.000	0.000	0.521	0.000	0.004
		C	0.000	0.000	0.472	0.000	0.004
L28	69.750-64.750	A	0.000	0.000	12.632	0.000	0.029
		B	0.000	0.000	7.679	0.000	0.072
		C	0.000	0.000	6.692	0.000	0.078
L29	64.750-59.750	A	0.000	0.000	10.382	0.000	0.029
		B	0.000	0.000	5.429	0.000	0.072
		C	0.000	0.000	4.442	0.000	0.078
L30	59.750-54.750	A	0.000	0.000	10.382	0.000	0.029
		B	0.000	0.000	5.429	0.000	0.072
		C	0.000	0.000	4.442	0.000	0.078
L31	54.750-49.750	A	0.000	0.000	10.382	0.000	0.029
		B	0.000	0.000	5.429	0.000	0.072
		C	0.000	0.000	4.442	0.000	0.078
L32	49.750-43.000	A	0.000	0.000	21.057	0.000	0.039
		B	0.000	0.000	14.371	0.000	0.098
		C	0.000	0.000	13.038	0.000	0.106
L33	43.000-42.000	A	0.000	0.000	2.271	0.000	0.006
		B	0.000	0.000	1.281	0.000	0.015
		C	0.000	0.000	1.083	0.000	0.016
L34	42.000-37.000	A	0.000	0.000	11.357	0.000	0.029
		B	0.000	0.000	6.404	0.000	0.073
		C	0.000	0.000	5.417	0.000	0.078
L35	37.000-32.000	A	0.000	0.000	11.357	0.000	0.029
		B	0.000	0.000	6.404	0.000	0.073
		C	0.000	0.000	5.417	0.000	0.078
L36	32.000-27.913	A	0.000	0.000	12.254	0.000	0.023
		B	0.000	0.000	9.159	0.000	0.060
		C	0.000	0.000	7.398	0.000	0.064
L37	27.913-27.663	A	0.000	0.000	0.855	0.000	0.001
		B	0.000	0.000	0.607	0.000	0.004
		C	0.000	0.000	0.558	0.000	0.004
L38	27.663-27.250	A	0.000	0.000	1.412	0.000	0.002
		B	0.000	0.000	1.003	0.000	0.006
		C	0.000	0.000	0.922	0.000	0.006
L39	27.250-26.983	A	0.000	0.000	0.913	0.000	0.002
		B	0.000	0.000	0.649	0.000	0.004
		C	0.000	0.000	0.596	0.000	0.004

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L40	26.983-26.833	A	0.000	0.000	0.513	0.000	0.001
		B	0.000	0.000	0.364	0.000	0.002
		C	0.000	0.000	0.335	0.000	0.002
L41	26.833-21.833	A	0.000	0.000	14.209	0.000	0.029
		B	0.000	0.000	9.257	0.000	0.073
		C	0.000	0.000	8.269	0.000	0.078
L42	21.833-16.833	A	0.000	0.000	12.746	0.000	0.029
		B	0.000	0.000	7.794	0.000	0.073
		C	0.000	0.000	6.806	0.000	0.078
L43	16.833-16.000	A	0.000	0.000	2.706	0.000	0.005
		B	0.000	0.000	1.881	0.000	0.012
		C	0.000	0.000	1.716	0.000	0.013
L44	16.000-15.750	A	0.000	0.000	0.812	0.000	0.001
		B	0.000	0.000	0.564	0.000	0.004
		C	0.000	0.000	0.515	0.000	0.004
L45	15.750-14.747	A	0.000	0.000	3.258	0.000	0.006
		B	0.000	0.000	3.121	0.000	0.015
		C	0.000	0.000	2.923	0.000	0.016
L46	14.747-14.497	A	0.000	0.000	0.812	0.000	0.001
		B	0.000	0.000	0.849	0.000	0.004
		C	0.000	0.000	0.799	0.000	0.004
L47	14.497-12.083	A	0.000	0.000	7.842	0.000	0.014
		B	0.000	0.000	8.197	0.000	0.035
		C	0.000	0.000	7.720	0.000	0.038
L48	12.083-11.833	A	0.000	0.000	0.812	0.000	0.001
		B	0.000	0.000	0.849	0.000	0.004
		C	0.000	0.000	0.799	0.000	0.004
L49	11.833-10.000	A	0.000	0.000	5.954	0.000	0.011
		B	0.000	0.000	4.696	0.000	0.027
		C	0.000	0.000	5.862	0.000	0.029
L50	10.000-9.750	A	0.000	0.000	0.812	0.000	0.001
		B	0.000	0.000	0.562	0.000	0.004
		C	0.000	0.000	0.799	0.000	0.004
L51	9.750-4.750	A	0.000	0.000	13.278	0.000	0.029
		B	0.000	0.000	8.271	0.000	0.073
		C	0.000	0.000	13.025	0.000	0.078
L52	4.750-0.000	A	0.000	0.000	10.523	0.000	0.027
		B	0.000	0.000	5.772	0.000	0.069
		C	0.000	0.000	9.715	0.000	0.074

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	160.000-155.000	A	0.994	0.000	0.000	0.537	0.000	0.023
		B		0.000	0.000	1.718	0.000	0.032
		C		0.000	0.000	0.537	0.000	0.054
L2	155.000-150.000	A	0.991	0.000	0.000	5.370	0.000	0.230
		B		0.000	0.000	6.548	0.000	0.239
		C		0.000	0.000	5.370	0.000	0.308
L3	150.000-148.500	A	0.988	0.000	0.000	1.611	0.000	0.069
		B		0.000	0.000	1.963	0.000	0.072
		C		0.000	0.000	1.611	0.000	0.092
L4	148.500-148.000	A	0.988	0.000	0.000	0.537	0.000	0.023
		B		0.000	0.000	0.654	0.000	0.024
		C		0.000	0.000	0.537	0.000	0.031
L5	148.000-143.000	A	0.986	0.000	0.000	5.367	0.000	0.230

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		B		0.000	0.000	6.541	0.000	0.276
		C		0.000	0.000	5.367	0.000	0.308
L6	143.000-138.000	A	0.982	0.000	0.000	3.219	0.000	0.138
		B		0.000	0.000	4.389	0.000	0.184
		C		0.000	0.000	3.219	0.000	0.216
L7	138.000-133.000	A	0.979	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	1.166	0.000	0.069
		C		0.000	0.000	0.000	0.000	0.078
L8	133.000-128.000	A	0.975	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	1.163	0.000	0.069
		C		0.000	0.000	0.000	0.000	0.078
L9	128.000-123.000	A	0.971	0.000	0.000	6.911	0.000	0.073
		B		0.000	0.000	1.159	0.000	0.069
		C		0.000	0.000	0.000	0.000	0.078
L10	123.000-118.000	A	0.968	0.000	0.000	8.634	0.000	0.092
		B		0.000	0.000	1.509	0.000	0.074
		C		0.000	0.000	0.000	0.000	0.078
L11	118.000-111.000	A	0.963	0.000	0.000	12.080	0.000	0.128
		B		0.000	0.000	4.078	0.000	0.133
		C		0.000	0.000	0.000	0.000	0.110
L12	111.000-109.750	A	0.959	0.000	0.000	2.157	0.000	0.023
		B		0.000	0.000	0.728	0.000	0.024
		C		0.000	0.000	0.000	0.000	0.020
L13	109.750-105.333	A	0.957	0.000	0.000	9.016	0.000	0.089
		B		0.000	0.000	3.962	0.000	0.093
		C		0.000	0.000	1.400	0.000	0.078
L14	105.333-105.083	A	0.954	0.000	0.000	0.678	0.000	0.006
		B		0.000	0.000	0.392	0.000	0.006
		C		0.000	0.000	0.247	0.000	0.005
L15	105.083-100.083	A	0.952	0.000	0.000	13.550	0.000	0.121
		B		0.000	0.000	7.827	0.000	0.125
		C		0.000	0.000	4.935	0.000	0.109
L16	100.083-95.083	A	0.947	0.000	0.000	13.540	0.000	0.120
		B		0.000	0.000	7.813	0.000	0.125
		C		0.000	0.000	4.931	0.000	0.108
L17	95.083-92.500	A	0.944	0.000	0.000	8.273	0.000	0.070
		B		0.000	0.000	5.313	0.000	0.072
		C		0.000	0.000	3.828	0.000	0.064
L18	92.500-92.250	A	0.942	0.000	0.000	0.890	0.000	0.007
		B		0.000	0.000	0.604	0.000	0.008
		C		0.000	0.000	0.460	0.000	0.007
L19	92.250-87.250	A	0.939	0.000	0.000	17.795	0.000	0.145
		B		0.000	0.000	12.062	0.000	0.150
		C		0.000	0.000	9.196	0.000	0.134
L20	87.250-82.250	A	0.934	0.000	0.000	18.071	0.000	0.146
		B		0.000	0.000	12.334	0.000	0.151
		C		0.000	0.000	9.479	0.000	0.135
L21	82.250-76.750	A	0.928	0.000	0.000	24.075	0.000	0.182
		B		0.000	0.000	17.760	0.000	0.187
		C		0.000	0.000	14.632	0.000	0.170
L22	76.750-75.750	A	0.924	0.000	0.000	2.892	0.000	0.024
		B		0.000	0.000	1.743	0.000	0.025
		C		0.000	0.000	1.175	0.000	0.022
L23	75.750-70.750	A	0.921	0.000	0.000	16.857	0.000	0.135
		B		0.000	0.000	11.110	0.000	0.140
		C		0.000	0.000	8.281	0.000	0.124
L24	70.750-70.583	A	0.917	0.000	0.000	0.661	0.000	0.005
		B		0.000	0.000	0.469	0.000	0.005
		C		0.000	0.000	0.375	0.000	0.005
L25	70.583-70.333	A	0.917	0.000	0.000	0.990	0.000	0.008
		B		0.000	0.000	0.702	0.000	0.008

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C		0.000	0.000	0.561	0.000	0.007
L26	70.333-70.000	A	0.917	0.000	0.000	1.318	0.000	0.010
		B		0.000	0.000	0.935	0.000	0.010
		C		0.000	0.000	0.748	0.000	0.009
L27	70.000-69.750	A	0.916	0.000	0.000	0.990	0.000	0.008
		B		0.000	0.000	0.702	0.000	0.008
		C		0.000	0.000	0.561	0.000	0.007
L28	69.750-64.750	A	0.913	0.000	0.000	16.559	0.000	0.135
		B		0.000	0.000	10.806	0.000	0.140
		C		0.000	0.000	7.993	0.000	0.125
L29	64.750-59.750	A	0.906	0.000	0.000	13.904	0.000	0.120
		B		0.000	0.000	8.146	0.000	0.126
		C		0.000	0.000	5.347	0.000	0.110
L30	59.750-54.750	A	0.898	0.000	0.000	13.887	0.000	0.119
		B		0.000	0.000	8.124	0.000	0.125
		C		0.000	0.000	5.340	0.000	0.110
L31	54.750-49.750	A	0.890	0.000	0.000	13.869	0.000	0.118
		B		0.000	0.000	8.099	0.000	0.124
		C		0.000	0.000	5.332	0.000	0.110
L32	49.750-43.000	A	0.879	0.000	0.000	26.876	0.000	0.200
		B		0.000	0.000	19.076	0.000	0.209
		C		0.000	0.000	15.368	0.000	0.190
L33	43.000-42.000	A	0.872	0.000	0.000	2.964	0.000	0.024
		B		0.000	0.000	1.808	0.000	0.025
		C		0.000	0.000	1.259	0.000	0.022
L34	42.000-37.000	A	0.865	0.000	0.000	14.789	0.000	0.117
		B		0.000	0.000	9.000	0.000	0.124
		C		0.000	0.000	6.282	0.000	0.110
L35	37.000-32.000	A	0.854	0.000	0.000	14.763	0.000	0.116
		B		0.000	0.000	8.965	0.000	0.123
		C		0.000	0.000	6.270	0.000	0.109
L36	32.000-27.913	A	0.842	0.000	0.000	15.451	0.000	0.112
		B		0.000	0.000	11.798	0.000	0.125
		C		0.000	0.000	8.522	0.000	0.108
L37	27.913-27.663	A	0.836	0.000	0.000	1.065	0.000	0.007
		B		0.000	0.000	0.774	0.000	0.008
		C		0.000	0.000	0.641	0.000	0.007
L38	27.663-27.250	A	0.835	0.000	0.000	1.759	0.000	0.012
		B		0.000	0.000	1.279	0.000	0.013
		C		0.000	0.000	1.060	0.000	0.012
L39	27.250-26.983	A	0.833	0.000	0.000	1.137	0.000	0.008
		B		0.000	0.000	0.827	0.000	0.008
		C		0.000	0.000	0.685	0.000	0.008
L40	26.983-26.833	A	0.833	0.000	0.000	0.639	0.000	0.004
		B		0.000	0.000	0.464	0.000	0.005
		C		0.000	0.000	0.385	0.000	0.004
L41	26.833-21.833	A	0.824	0.000	0.000	17.934	0.000	0.132
		B		0.000	0.000	12.115	0.000	0.141
		C		0.000	0.000	9.478	0.000	0.128
L42	21.833-16.833	A	0.806	0.000	0.000	16.145	0.000	0.122
		B		0.000	0.000	10.312	0.000	0.132
		C		0.000	0.000	7.713	0.000	0.119
L43	16.833-16.000	A	0.793	0.000	0.000	3.322	0.000	0.023
		B		0.000	0.000	2.348	0.000	0.025
		C		0.000	0.000	1.920	0.000	0.023
L44	16.000-15.750	A	0.790	0.000	0.000	0.997	0.000	0.007
		B		0.000	0.000	0.704	0.000	0.008
		C		0.000	0.000	0.576	0.000	0.007
L45	15.750-14.747	A	0.787	0.000	0.000	3.996	0.000	0.028
		B		0.000	0.000	3.746	0.000	0.035
		C		0.000	0.000	3.232	0.000	0.033

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L46	14.747-14.497	A	0.784	0.000	0.000	0.996	0.000	0.007
		B		0.000	0.000	1.009	0.000	0.009
		C		0.000	0.000	0.882	0.000	0.009
L47	14.497-12.083	A	0.776	0.000	0.000	9.604	0.000	0.067
		B		0.000	0.000	9.732	0.000	0.088
		C		0.000	0.000	8.506	0.000	0.082
L48	12.083-11.833	A	0.768	0.000	0.000	0.993	0.000	0.007
		B		0.000	0.000	1.006	0.000	0.009
		C		0.000	0.000	0.880	0.000	0.008
L49	11.833-10.000	A	0.761	0.000	0.000	7.277	0.000	0.050
		B		0.000	0.000	5.637	0.000	0.057
		C		0.000	0.000	6.447	0.000	0.062
L50	10.000-9.750	A	0.753	0.000	0.000	0.991	0.000	0.007
		B		0.000	0.000	0.678	0.000	0.007
		C		0.000	0.000	0.879	0.000	0.008
L51	9.750-4.750	A	0.730	0.000	0.000	16.544	0.000	0.116
		B		0.000	0.000	10.278	0.000	0.128
		C		0.000	0.000	14.302	0.000	0.148
L52	4.750-0.000	A	0.653	0.000	0.000	13.265	0.000	0.092
		B		0.000	0.000	7.325	0.000	0.105
		C		0.000	0.000	10.581	0.000	0.121

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	160.000-155.000	0.238	0.048	0.703	0.142
L2	155.000-150.000	0.050	0.010	0.264	0.053
L3	150.000-148.500	0.050	0.010	0.263	0.053
L4	148.500-148.000	0.082	0.017	0.449	0.090
L5	148.000-143.000	0.083	0.017	0.454	0.092
L6	143.000-138.000	0.108	0.022	0.585	0.118
L7	138.000-133.000	0.295	0.060	0.979	0.197
L8	133.000-128.000	0.295	0.060	0.980	0.198
L9	128.000-123.000	-3.280	-3.814	-2.082	-2.881
L10	123.000-118.000	-3.702	-4.500	-2.415	-3.478
L11	118.000-111.000	-3.251	-4.875	-1.930	-3.955
L12	111.000-109.750	-3.259	-4.886	-1.936	-3.966
L13	109.750-105.333	-2.641	-3.960	-1.683	-3.441
L14	105.333-105.083	-1.886	-2.829	-1.313	-2.684
L15	105.083-100.083	-1.903	-2.853	-1.325	-2.707
L16	100.083-95.083	-1.934	-2.900	-1.348	-2.750
L17	95.083-92.500	-1.626	-2.439	-1.173	-2.391
L18	92.500-92.250	-1.456	-2.185	-1.071	-2.181
L19	92.250-87.250	-1.470	-2.205	-1.081	-2.201
L20	87.250-82.250	-1.344	-2.120	-0.989	-2.142
L21	82.250-76.750	0.783	-0.494	0.693	-0.821
L22	76.750-75.750	1.214	-0.765	1.004	-1.188
L23	75.750-70.750	1.035	-0.651	0.883	-1.044
L24	70.750-70.583	0.878	-0.551	0.771	-0.909
L25	70.583-70.333	0.879	-0.551	0.771	-0.910
L26	70.333-70.000	0.880	-0.552	0.772	-0.911
L27	70.000-69.750	0.881	-0.552	0.773	-0.911
L28	69.750-64.750	-0.422	-1.663	-0.270	-1.850
L29	64.750-59.750	-2.023	-3.037	-1.450	-2.919
L30	59.750-54.750	-2.050	-3.078	-1.473	-2.956

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
L31	54.750-49.750	-2.077	-3.118	-1.495	-2.992
L32	49.750-43.000	-1.416	-2.126	-1.115	-2.223
L33	43.000-42.000	-1.927	-2.894	-1.435	-2.861
L34	42.000-37.000	-1.942	-2.916	-1.452	-2.880
L35	37.000-32.000	-1.967	-2.954	-1.475	-2.913
L36	32.000-27.913	-1.076	-1.740	-0.856	-1.939
L37	27.913-27.663	-1.349	-2.026	-1.101	-2.161
L38	27.663-27.250	-1.350	-2.028	-1.102	-2.163
L39	27.250-26.983	-1.351	-2.030	-1.104	-2.165
L40	26.983-26.833	-1.352	-2.031	-1.105	-2.166
L41	26.833-21.833	-1.628	-2.445	-1.291	-2.523
L42	21.833-16.833	-1.829	-2.747	-1.431	-2.778
L43	16.833-16.000	-1.462	-2.196	-1.210	-2.337
L44	16.000-15.750	-1.464	-2.200	-1.213	-2.340
L45	15.750-14.747	2.020	-1.920	1.573	-2.098
L46	14.747-14.497	2.969	-1.846	2.363	-2.031
L47	14.497-12.083	2.980	-1.853	2.370	-2.037
L48	12.083-11.833	2.992	-1.861	2.378	-2.044
L49	11.833-10.000	1.931	-3.545	1.435	-3.488
L50	10.000-9.750	1.491	-4.254	1.049	-4.087
L51	9.750-4.750	1.780	-5.077	1.206	-4.708
L52	4.750-0.000	1.691	-5.702	1.056	-5.113

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

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L1	25	Safety Line 3/8	155.00 - 160.00	1.0000	1.0000
L1	55	HSS6x6	155.00 - 155.50	1.0000	1.0000
L1	56	HSS6x6	155.00 - 155.50	1.0000	1.0000
L1	57	HSS6x6	155.00 - 155.50	1.0000	1.0000
L2	25	Safety Line 3/8	150.00 - 155.00	1.0000	1.0000
L2	55	HSS6x6	150.00 - 155.00	1.0000	1.0000
L2	56	HSS6x6	150.00 - 155.00	1.0000	1.0000
L2	57	HSS6x6	150.00 - 155.00	1.0000	1.0000
L3	25	Safety Line 3/8	148.50 - 150.00	1.0000	1.0000
L3	55	HSS6x6	148.50 - 150.00	1.0000	1.0000
L3	56	HSS6x6	148.50 - 150.00	1.0000	1.0000
L3	57	HSS6x6	148.50 - 150.00	1.0000	1.0000
L4	25	Safety Line 3/8	148.00 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L4	55	HSS6x6	148.50 148.00 - 148.50	1.0000	1.0000
L4	56	HSS6x6	148.00 - 148.50	1.0000	1.0000
L4	57	HSS6x6	148.00 - 148.50	1.0000	1.0000
L5	25	Safety Line 3/8	143.00 - 148.00	1.0000	1.0000
L5	55	HSS6x6	143.00 - 148.00	1.0000	1.0000
L5	56	HSS6x6	143.00 - 148.00	1.0000	1.0000
L5	57	HSS6x6	143.00 - 148.00	1.0000	1.0000
L6	25	Safety Line 3/8	138.00 - 143.00	1.0000	1.0000
L6	55	HSS6x6	140.00 - 143.00	1.0000	1.0000
L6	56	HSS6x6	140.00 - 143.00	1.0000	1.0000
L6	57	HSS6x6	140.00 - 143.00	1.0000	1.0000
L7	25	Safety Line 3/8	133.00 - 138.00	1.0000	1.0000
L8	25	Safety Line 3/8	128.00 - 133.00	1.0000	1.0000
L9	17	LDF7-50A(1-5/8)	123.00 - 127.00	1.0000	1.0000
L9	25	Safety Line 3/8	123.00 - 128.00	1.0000	1.0000
L10	17	LDF7-50A(1-5/8)	118.00 - 123.00	1.0000	1.0000
L10	21	CU12PSM9P6XXX(1-1/2)	118.00 - 119.00	1.0000	1.0000
L10	25	Safety Line 3/8	118.00 - 123.00	1.0000	1.0000
L11	17	LDF7-50A(1-5/8)	111.00 - 118.00	1.0000	1.0000
L11	21	CU12PSM9P6XXX(1-1/2)	111.00 - 118.00	1.0000	1.0000
L11	25	Safety Line 3/8	111.00 - 118.00	1.0000	1.0000
L12	17	LDF7-50A(1-5/8)	109.75 - 111.00	1.0000	1.0000
L12	21	CU12PSM9P6XXX(1-1/2)	109.75 - 111.00	1.0000	1.0000
L12	25	Safety Line 3/8	109.75 - 111.00	1.0000	1.0000
L13	17	LDF7-50A(1-5/8)	105.33 - 109.75	1.0000	1.0000
L13	21	CU12PSM9P6XXX(1-1/2)	105.33 - 109.75	1.0000	1.0000
L13	25	Safety Line 3/8	105.33 - 109.75	1.0000	1.0000
L13	39	MP304	105.33 - 106.75	1.0000	1.0000
L13	40	MP304	105.33 - 106.75	1.0000	1.0000
L13	41	MP304	105.33 - 106.75	1.0000	1.0000
L14	17	LDF7-50A(1-5/8)	105.08 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
			105.33		
L14	21	CU12PSM9P6XXX(1-1/2)	105.08 - 105.33	1.0000	1.0000
L14	25	Safety Line 3/8	105.08 - 105.33	1.0000	1.0000
L14	39	MP304	105.08 - 105.33	1.0000	1.0000
L14	40	MP304	105.08 - 105.33	1.0000	1.0000
L14	41	MP304	105.08 - 105.33	1.0000	1.0000
L15	17	LDF7-50A(1-5/8)	100.08 - 105.08	1.0000	1.0000
L15	21	CU12PSM9P6XXX(1-1/2)	100.08 - 105.08	1.0000	1.0000
L15	25	Safety Line 3/8	100.08 - 105.08	1.0000	1.0000
L15	39	MP304	100.08 - 105.08	1.0000	1.0000
L15	40	MP304	100.08 - 105.08	1.0000	1.0000
L15	41	MP304	100.08 - 105.08	1.0000	1.0000
L16	17	LDF7-50A(1-5/8)	95.08 - 100.08	1.0000	1.0000
L16	21	CU12PSM9P6XXX(1-1/2)	95.08 - 100.08	1.0000	1.0000
L16	25	Safety Line 3/8	95.08 - 100.08	1.0000	1.0000
L16	39	MP304	95.08 - 100.08	1.0000	1.0000
L16	40	MP304	95.08 - 100.08	1.0000	1.0000
L16	41	MP304	95.08 - 100.08	1.0000	1.0000
L17	17	LDF7-50A(1-5/8)	92.50 - 95.08	1.0000	1.0000
L17	21	CU12PSM9P6XXX(1-1/2)	92.50 - 95.08	1.0000	1.0000
L17	25	Safety Line 3/8	92.50 - 95.08	1.0000	1.0000
L17	39	MP304	92.50 - 95.08	1.0000	1.0000
L17	40	MP304	92.50 - 95.08	1.0000	1.0000
L17	41	MP304	92.50 - 95.08	1.0000	1.0000
L17	59	4"x1.25" Flat Reinforcement	92.50 - 94.00	1.0000	1.0000
L17	60	4"x1.25" Flat Reinforcement	92.50 - 94.00	1.0000	1.0000
L17	61	4"x1.25" Flat Reinforcement	92.50 - 94.00	1.0000	1.0000
L18	17	LDF7-50A(1-5/8)	92.25 - 92.50	1.0000	1.0000
L18	21	CU12PSM9P6XXX(1-1/2)	92.25 - 92.50	1.0000	1.0000
L18	25	Safety Line 3/8	92.25 - 92.50	1.0000	1.0000
L18	39	MP304	92.25 - 92.50	1.0000	1.0000
L18	40	MP304	92.25 - 92.50	1.0000	1.0000
L18	41	MP304	92.25 - 92.50	1.0000	1.0000
L18	59	4"x1.25" Flat Reinforcement	92.25 - 92.50	1.0000	1.0000
L18	60	4"x1.25" Flat Reinforcement	92.25 - 92.50	1.0000	1.0000
L18	61	4"x1.25" Flat Reinforcement	92.25 - 92.50	1.0000	1.0000
L19	17	LDF7-50A(1-5/8)	87.25 - 92.25	1.0000	1.0000
L19	21	CU12PSM9P6XXX(1-1/2)	87.25 - 92.25	1.0000	1.0000
L19	25	Safety Line 3/8	87.25 - 92.25	1.0000	1.0000
L19	39	MP304	87.25 - 92.25	1.0000	1.0000
L19	40	MP304	87.25 - 92.25	1.0000	1.0000
L19	41	MP304	87.25 - 92.25	1.0000	1.0000
L19	59	4"x1.25" Flat Reinforcement	87.25 - 92.25	1.0000	1.0000
L19	60	4"x1.25" Flat Reinforcement	87.25 - 92.25	1.0000	1.0000
L19	61	4"x1.25" Flat Reinforcement	87.25 - 92.25	1.0000	1.0000
L20	17	LDF7-50A(1-5/8)	82.25 - 87.25	1.0000	1.0000
L20	21	CU12PSM9P6XXX(1-1/2)	82.25 - 87.25	1.0000	1.0000
L20	25	Safety Line 3/8	82.25 - 87.25	1.0000	1.0000
L20	39	MP304	82.25 - 87.25	1.0000	1.0000
L20	40	MP304	82.25 - 87.25	1.0000	1.0000
L20	41	MP304	82.25 - 87.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L20	51	6"x1" Flat Reinforcement	82.25 - 82.50	1.0000	1.0000
L20	52	6"x1" Flat Reinforcement	82.25 - 82.50	1.0000	1.0000
L20	53	6"x1" Flat Reinforcement	82.25 - 82.50	1.0000	1.0000
L20	59	4"x1.25" Flat Reinforcement	82.25 - 87.25	1.0000	1.0000
L20	60	4"x1.25" Flat Reinforcement	82.25 - 87.25	1.0000	1.0000
L20	61	4"x1.25" Flat Reinforcement	82.25 - 87.25	1.0000	1.0000
L21	17	LDF7-50A(1-5/8)	76.75 - 82.25	1.0000	1.0000
L21	21	CU12PSM9P6XXX(1-1/2)	76.75 - 82.25	1.0000	1.0000
L21	25	Safety Line 3/8	76.75 - 82.25	1.0000	1.0000
L21	39	MP304	76.75 - 82.25	1.0000	1.0000
L21	40	MP304	76.75 - 82.25	1.0000	1.0000
L21	41	MP304	76.75 - 82.25	1.0000	1.0000
L21	51	6"x1" Flat Reinforcement	76.75 - 82.25	1.0000	1.0000
L21	52	6"x1" Flat Reinforcement	76.75 - 82.25	1.0000	1.0000
L21	53	6"x1" Flat Reinforcement	76.75 - 82.25	1.0000	1.0000
L21	59	4"x1.25" Flat Reinforcement	79.00 - 82.25	1.0000	1.0000
L21	60	4"x1.25" Flat Reinforcement	79.00 - 82.25	1.0000	1.0000
L21	61	4"x1.25" Flat Reinforcement	79.00 - 82.25	1.0000	1.0000
L22	17	LDF7-50A(1-5/8)	75.75 - 76.75	1.0000	1.0000
L22	21	CU12PSM9P6XXX(1-1/2)	75.75 - 76.75	1.0000	1.0000
L22	25	Safety Line 3/8	75.75 - 76.75	1.0000	1.0000
L22	51	6"x1" Flat Reinforcement	75.75 - 76.75	1.0000	1.0000
L22	52	6"x1" Flat Reinforcement	75.75 - 76.75	1.0000	1.0000
L22	53	6"x1" Flat Reinforcement	75.75 - 76.75	1.0000	1.0000
L23	17	LDF7-50A(1-5/8)	70.75 - 75.75	1.0000	1.0000
L23	21	CU12PSM9P6XXX(1-1/2)	70.75 - 75.75	1.0000	1.0000
L23	25	Safety Line 3/8	70.75 - 75.75	1.0000	1.0000
L23	35	MP305	70.75 - 73.00	1.0000	1.0000
L23	36	MP305	70.75 - 73.00	1.0000	1.0000
L23	37	MP305	70.75 - 73.00	1.0000	1.0000
L23	51	6"x1" Flat Reinforcement	70.75 - 75.75	1.0000	1.0000
L23	52	6"x1" Flat Reinforcement	70.75 - 75.75	1.0000	1.0000
L23	53	6"x1" Flat Reinforcement	70.75 - 75.75	1.0000	1.0000
L24	17	LDF7-50A(1-5/8)	70.58 - 70.75	1.0000	1.0000
L24	21	CU12PSM9P6XXX(1-1/2)	70.58 - 70.75	1.0000	1.0000
L24	25	Safety Line 3/8	70.58 - 70.75	1.0000	1.0000
L24	35	MP305	70.58 - 70.75	1.0000	1.0000
L24	36	MP305	70.58 - 70.75	1.0000	1.0000
L24	37	MP305	70.58 - 70.75	1.0000	1.0000
L24	51	6"x1" Flat Reinforcement	70.58 - 70.75	1.0000	1.0000
L24	52	6"x1" Flat Reinforcement	70.58 - 70.75	1.0000	1.0000
L24	53	6"x1" Flat Reinforcement	70.58 - 70.75	1.0000	1.0000
L25	17	LDF7-50A(1-5/8)	70.33 - 70.58	1.0000	1.0000
L25	21	CU12PSM9P6XXX(1-1/2)	70.33 - 70.58	1.0000	1.0000
L25	25	Safety Line 3/8	70.33 - 70.58	1.0000	1.0000
L25	35	MP305	70.33 - 70.58	1.0000	1.0000
L25	36	MP305	70.33 - 70.58	1.0000	1.0000
L25	37	MP305	70.33 - 70.58	1.0000	1.0000
L25	51	6"x1" Flat Reinforcement	70.33 - 70.58	1.0000	1.0000
L25	52	6"x1" Flat Reinforcement	70.33 - 70.58	1.0000	1.0000
L25	53	6"x1" Flat Reinforcement	70.33 - 70.58	1.0000	1.0000
L26	17	LDF7-50A(1-5/8)	70.00 - 70.33	1.0000	1.0000
L26	21	CU12PSM9P6XXX(1-1/2)	70.00 - 70.33	1.0000	1.0000
L26	25	Safety Line 3/8	70.00 - 70.33	1.0000	1.0000
L26	35	MP305	70.00 - 70.33	1.0000	1.0000
L26	36	MP305	70.00 - 70.33	1.0000	1.0000
L26	37	MP305	70.00 - 70.33	1.0000	1.0000
L26	51	6"x1" Flat Reinforcement	70.00 - 70.33	1.0000	1.0000
L26	52	6"x1" Flat Reinforcement	70.00 - 70.33	1.0000	1.0000
L26	53	6"x1" Flat Reinforcement	70.00 - 70.33	1.0000	1.0000
L27	17	LDF7-50A(1-5/8)	69.75 - 70.00	1.0000	1.0000
L27	21	CU12PSM9P6XXX(1-1/2)	69.75 - 70.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L27	25	Safety Line 3/8	69.75 - 70.00	1.0000	1.0000
L27	35	MP305	69.75 - 70.00	1.0000	1.0000
L27	36	MP305	69.75 - 70.00	1.0000	1.0000
L27	37	MP305	69.75 - 70.00	1.0000	1.0000
L27	51	6"x1" Flat Reinforcement	69.75 - 70.00	1.0000	1.0000
L27	52	6"x1" Flat Reinforcement	69.75 - 70.00	1.0000	1.0000
L27	53	6"x1" Flat Reinforcement	69.75 - 70.00	1.0000	1.0000
L28	17	LDF7-50A(1-5/8)	64.75 - 69.75	1.0000	1.0000
L28	21	CU12PSM9P6XXX(1-1/2)	64.75 - 69.75	1.0000	1.0000
L28	25	Safety Line 3/8	64.75 - 69.75	1.0000	1.0000
L28	35	MP305	64.75 - 69.75	1.0000	1.0000
L28	36	MP305	64.75 - 69.75	1.0000	1.0000
L28	37	MP305	64.75 - 69.75	1.0000	1.0000
L28	51	6"x1" Flat Reinforcement	67.50 - 69.75	1.0000	1.0000
L28	52	6"x1" Flat Reinforcement	67.50 - 69.75	1.0000	1.0000
L28	53	6"x1" Flat Reinforcement	67.50 - 69.75	1.0000	1.0000
L29	17	LDF7-50A(1-5/8)	59.75 - 64.75	1.0000	1.0000
L29	21	CU12PSM9P6XXX(1-1/2)	59.75 - 64.75	1.0000	1.0000
L29	25	Safety Line 3/8	59.75 - 64.75	1.0000	1.0000
L29	35	MP305	59.75 - 64.75	1.0000	1.0000
L29	36	MP305	59.75 - 64.75	1.0000	1.0000
L29	37	MP305	59.75 - 64.75	1.0000	1.0000
L30	17	LDF7-50A(1-5/8)	54.75 - 59.75	1.0000	1.0000
L30	21	CU12PSM9P6XXX(1-1/2)	54.75 - 59.75	1.0000	1.0000
L30	25	Safety Line 3/8	54.75 - 59.75	1.0000	1.0000
L30	35	MP305	54.75 - 59.75	1.0000	1.0000
L30	36	MP305	54.75 - 59.75	1.0000	1.0000
L30	37	MP305	54.75 - 59.75	1.0000	1.0000
L31	17	LDF7-50A(1-5/8)	49.75 - 54.75	1.0000	1.0000
L31	21	CU12PSM9P6XXX(1-1/2)	49.75 - 54.75	1.0000	1.0000
L31	25	Safety Line 3/8	49.75 - 54.75	1.0000	1.0000
L31	35	MP305	49.75 - 54.75	1.0000	1.0000
L31	36	MP305	49.75 - 54.75	1.0000	1.0000
L31	37	MP305	49.75 - 54.75	1.0000	1.0000
L32	17	LDF7-50A(1-5/8)	43.00 - 49.75	1.0000	1.0000
L32	21	CU12PSM9P6XXX(1-1/2)	43.00 - 49.75	1.0000	1.0000
L32	25	Safety Line 3/8	43.00 - 49.75	1.0000	1.0000
L32	35	MP305	43.00 - 49.75	1.0000	1.0000
L32	36	MP305	43.00 - 49.75	1.0000	1.0000
L32	37	MP305	43.00 - 49.75	1.0000	1.0000
L32	43	6.5"x1.25" Flat Reinforcement	43.00 - 49.50	1.0000	1.0000
L32	44	6.5"x1.25" Flat Reinforcement	43.00 - 49.50	1.0000	1.0000
L32	45	6.5"x1.25" Flat Reinforcement	43.00 - 49.50	1.0000	1.0000
L33	17	LDF7-50A(1-5/8)	42.00 - 43.00	1.0000	1.0000
L33	21	CU12PSM9P6XXX(1-1/2)	42.00 - 43.00	1.0000	1.0000
L33	25	Safety Line 3/8	42.00 - 43.00	1.0000	1.0000
L33	43	6.5"x1.25" Flat Reinforcement	42.00 - 43.00	1.0000	1.0000
L33	44	6.5"x1.25" Flat Reinforcement	42.00 - 43.00	1.0000	1.0000
L33	45	6.5"x1.25" Flat Reinforcement	42.00 - 43.00	1.0000	1.0000
L34	17	LDF7-50A(1-5/8)	37.00 - 42.00	1.0000	1.0000
L34	21	CU12PSM9P6XXX(1-1/2)	37.00 - 42.00	1.0000	1.0000
L34	25	Safety Line 3/8	37.00 - 42.00	1.0000	1.0000
L34	43	6.5"x1.25" Flat Reinforcement	37.00 - 42.00	1.0000	1.0000
L34	44	6.5"x1.25" Flat Reinforcement	37.00 - 42.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L34	45	6.5"x1.25" Flat Reinforcement	37.00 - 42.00	1.0000	1.0000
L35	17	LDF7-50A(1-5/8)	32.00 - 37.00	1.0000	1.0000
L35	21	CU12PSM9P6XXX(1-1/2)	32.00 - 37.00	1.0000	1.0000
L35	25	Safety Line 3/8	32.00 - 37.00	1.0000	1.0000
L35	43	6.5"x1.25" Flat Reinforcement	32.00 - 37.00	1.0000	1.0000
L35	44	6.5"x1.25" Flat Reinforcement	32.00 - 37.00	1.0000	1.0000
L35	45	6.5"x1.25" Flat Reinforcement	32.00 - 37.00	1.0000	1.0000
L36	17	LDF7-50A(1-5/8)	27.91 - 32.00	1.0000	1.0000
L36	21	CU12PSM9P6XXX(1-1/2)	27.91 - 32.00	1.0000	1.0000
L36	25	Safety Line 3/8	27.91 - 32.00	1.0000	1.0000
L36	30	MP306	27.91 - 30.50	1.0000	1.0000
L36	31	MP306	27.91 - 30.50	1.0000	1.0000
L36	33	MP306	27.91 - 31.33	1.0000	1.0000
L36	43	6.5"x1.25" Flat Reinforcement	27.91 - 32.00	1.0000	1.0000
L36	44	6.5"x1.25" Flat Reinforcement	27.91 - 32.00	1.0000	1.0000
L36	45	6.5"x1.25" Flat Reinforcement	27.91 - 32.00	1.0000	1.0000
L37	17	LDF7-50A(1-5/8)	27.66 - 27.91	1.0000	1.0000
L37	21	CU12PSM9P6XXX(1-1/2)	27.66 - 27.91	1.0000	1.0000
L37	25	Safety Line 3/8	27.66 - 27.91	1.0000	1.0000
L37	30	MP306	27.66 - 27.91	1.0000	1.0000
L37	31	MP306	27.66 - 27.91	1.0000	1.0000
L37	33	MP306	27.66 - 27.91	1.0000	1.0000
L37	43	6.5"x1.25" Flat Reinforcement	27.66 - 27.91	1.0000	1.0000
L37	44	6.5"x1.25" Flat Reinforcement	27.66 - 27.91	1.0000	1.0000
L37	45	6.5"x1.25" Flat Reinforcement	27.66 - 27.91	1.0000	1.0000
L38	17	LDF7-50A(1-5/8)	27.25 - 27.66	1.0000	1.0000
L38	21	CU12PSM9P6XXX(1-1/2)	27.25 - 27.66	1.0000	1.0000
L38	25	Safety Line 3/8	27.25 - 27.66	1.0000	1.0000
L38	30	MP306	27.25 - 27.66	1.0000	1.0000
L38	31	MP306	27.25 - 27.66	1.0000	1.0000
L38	33	MP306	27.25 - 27.66	1.0000	1.0000
L38	43	6.5"x1.25" Flat Reinforcement	27.25 - 27.66	1.0000	1.0000
L38	44	6.5"x1.25" Flat Reinforcement	27.25 - 27.66	1.0000	1.0000
L38	45	6.5"x1.25" Flat Reinforcement	27.25 - 27.66	1.0000	1.0000
L39	17	LDF7-50A(1-5/8)	26.98 - 27.25	1.0000	1.0000
L39	21	CU12PSM9P6XXX(1-1/2)	26.98 - 27.25	1.0000	1.0000
L39	25	Safety Line 3/8	26.98 - 27.25	1.0000	1.0000
L39	30	MP306	26.98 - 27.25	1.0000	1.0000
L39	31	MP306	26.98 - 27.25	1.0000	1.0000
L39	33	MP306	26.98 - 27.25	1.0000	1.0000
L39	43	6.5"x1.25" Flat Reinforcement	26.98 - 27.25	1.0000	1.0000
L39	44	6.5"x1.25" Flat Reinforcement	26.98 - 27.25	1.0000	1.0000
L39	45	6.5"x1.25" Flat Reinforcement	26.98 - 27.25	1.0000	1.0000
L40	17	LDF7-50A(1-5/8)	26.83 - 26.98	1.0000	1.0000
L40	21	CU12PSM9P6XXX(1-1/2)	26.83 - 26.98	1.0000	1.0000
L40	25	Safety Line 3/8	26.83 - 26.98	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L40	30	MP306	26.83 - 26.98	1.0000	1.0000
L40	31	MP306	26.83 - 26.98	1.0000	1.0000
L40	33	MP306	26.83 - 26.98	1.0000	1.0000
L40	43	6.5"x1.25" Flat Reinforcement	26.83 - 26.98	1.0000	1.0000
L40	44	6.5"x1.25" Flat Reinforcement	26.83 - 26.98	1.0000	1.0000
L40	45	6.5"x1.25" Flat Reinforcement	26.83 - 26.98	1.0000	1.0000
L41	17	LDF7-50A(1-5/8)	21.83 - 26.83	1.0000	1.0000
L41	21	CU12PSM9P6XXX(1-1/2)	21.83 - 26.83	1.0000	1.0000
L41	25	Safety Line 3/8	21.83 - 26.83	1.0000	1.0000
L41	30	MP306	21.83 - 26.83	1.0000	1.0000
L41	31	MP306	21.83 - 26.83	1.0000	1.0000
L41	33	MP306	21.83 - 26.83	1.0000	1.0000
L41	43	6.5"x1.25" Flat Reinforcement	24.50 - 26.83	1.0000	1.0000
L41	44	6.5"x1.25" Flat Reinforcement	24.50 - 26.83	1.0000	1.0000
L41	45	6.5"x1.25" Flat Reinforcement	24.50 - 26.83	1.0000	1.0000
L42	17	LDF7-50A(1-5/8)	16.83 - 21.83	1.0000	1.0000
L42	21	CU12PSM9P6XXX(1-1/2)	16.83 - 21.83	1.0000	1.0000
L42	25	Safety Line 3/8	16.83 - 21.83	1.0000	1.0000
L42	30	MP306	16.83 - 21.83	1.0000	1.0000
L42	31	MP306	16.83 - 21.83	1.0000	1.0000
L42	33	MP306	16.83 - 21.83	1.0000	1.0000
L42	47	6"x1" Flat Reinforcement	16.83 - 18.00	1.0000	1.0000
L42	48	6"x1" Flat Reinforcement	16.83 - 18.00	1.0000	1.0000
L42	49	6"x1" Flat Reinforcement	16.83 - 18.00	1.0000	1.0000
L43	17	LDF7-50A(1-5/8)	16.00 - 16.83	1.0000	1.0000
L43	21	CU12PSM9P6XXX(1-1/2)	16.00 - 16.83	1.0000	1.0000
L43	25	Safety Line 3/8	16.00 - 16.83	1.0000	1.0000
L43	30	MP306	16.00 - 16.83	1.0000	1.0000
L43	31	MP306	16.00 - 16.83	1.0000	1.0000
L43	33	MP306	16.00 - 16.83	1.0000	1.0000
L43	47	6"x1" Flat Reinforcement	16.00 - 16.83	1.0000	1.0000
L43	48	6"x1" Flat Reinforcement	16.00 - 16.83	1.0000	1.0000
L43	49	6"x1" Flat Reinforcement	16.00 - 16.83	1.0000	1.0000
L44	17	LDF7-50A(1-5/8)	15.75 - 16.00	1.0000	1.0000
L44	21	CU12PSM9P6XXX(1-1/2)	15.75 - 16.00	1.0000	1.0000
L44	25	Safety Line 3/8	15.75 - 16.00	1.0000	1.0000
L44	30	MP306	15.75 - 16.00	1.0000	1.0000
L44	31	MP306	15.75 - 16.00	1.0000	1.0000
L44	33	MP306	15.75 - 16.00	1.0000	1.0000
L44	47	6"x1" Flat Reinforcement	15.75 - 16.00	1.0000	1.0000
L44	48	6"x1" Flat Reinforcement	15.75 - 16.00	1.0000	1.0000
L44	49	6"x1" Flat Reinforcement	15.75 - 16.00	1.0000	1.0000
L45	17	LDF7-50A(1-5/8)	14.75 - 15.75	1.0000	1.0000
L45	21	CU12PSM9P6XXX(1-1/2)	14.75 - 15.75	1.0000	1.0000
L45	25	Safety Line 3/8	14.75 - 15.75	1.0000	1.0000
L45	27	MP306	14.75 - 15.50	1.0000	1.0000
L45	28	MP306	14.75 - 15.50	1.0000	1.0000
L45	30	MP306	14.75 - 15.75	1.0000	1.0000
L45	31	MP306	14.75 - 15.75	1.0000	1.0000
L45	33	MP306	14.75 - 15.75	1.0000	1.0000
L45	47	6"x1" Flat Reinforcement	14.75 - 15.75	1.0000	1.0000
L45	48	6"x1" Flat Reinforcement	14.75 - 15.75	1.0000	1.0000
L45	49	6"x1" Flat Reinforcement	14.75 - 15.75	1.0000	1.0000
L46	17	LDF7-50A(1-5/8)	14.50 - 14.75	1.0000	1.0000
L46	21	CU12PSM9P6XXX(1-1/2)	14.50 - 14.75	1.0000	1.0000
L46	25	Safety Line 3/8	14.50 - 14.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L46	27	MP306	14.50 - 14.75	1.0000	1.0000
L46	28	MP306	14.50 - 14.75	1.0000	1.0000
L46	30	MP306	14.50 - 14.75	1.0000	1.0000
L46	31	MP306	14.50 - 14.75	1.0000	1.0000
L46	33	MP306	14.50 - 14.75	1.0000	1.0000
L46	47	6"x1" Flat Reinforcement	14.50 - 14.75	1.0000	1.0000
L46	48	6"x1" Flat Reinforcement	14.50 - 14.75	1.0000	1.0000
L46	49	6"x1" Flat Reinforcement	14.50 - 14.75	1.0000	1.0000
L47	17	LDF7-50A(1-5/8)	12.08 - 14.50	1.0000	1.0000
L47	21	CU12PSM9P6XXX(1-1/2)	12.08 - 14.50	1.0000	1.0000
L47	25	Safety Line 3/8	12.08 - 14.50	1.0000	1.0000
L47	27	MP306	12.08 - 14.50	1.0000	1.0000
L47	28	MP306	12.08 - 14.50	1.0000	1.0000
L47	30	MP306	12.08 - 14.50	1.0000	1.0000
L47	31	MP306	12.08 - 14.50	1.0000	1.0000
L47	33	MP306	12.08 - 14.50	1.0000	1.0000
L47	47	6"x1" Flat Reinforcement	12.08 - 14.50	1.0000	1.0000
L47	48	6"x1" Flat Reinforcement	12.08 - 14.50	1.0000	1.0000
L47	49	6"x1" Flat Reinforcement	12.08 - 14.50	1.0000	1.0000
L48	17	LDF7-50A(1-5/8)	11.83 - 12.08	1.0000	1.0000
L48	21	CU12PSM9P6XXX(1-1/2)	11.83 - 12.08	1.0000	1.0000
L48	25	Safety Line 3/8	11.83 - 12.08	1.0000	1.0000
L48	27	MP306	11.83 - 12.08	1.0000	1.0000
L48	28	MP306	11.83 - 12.08	1.0000	1.0000
L48	30	MP306	11.83 - 12.08	1.0000	1.0000
L48	31	MP306	11.83 - 12.08	1.0000	1.0000
L48	33	MP306	11.83 - 12.08	1.0000	1.0000
L48	47	6"x1" Flat Reinforcement	11.83 - 12.08	1.0000	1.0000
L48	48	6"x1" Flat Reinforcement	11.83 - 12.08	1.0000	1.0000
L48	49	6"x1" Flat Reinforcement	11.83 - 12.08	1.0000	1.0000
L49	17	LDF7-50A(1-5/8)	10.00 - 11.83	1.0000	1.0000
L49	21	CU12PSM9P6XXX(1-1/2)	10.00 - 11.83	1.0000	1.0000
L49	25	Safety Line 3/8	10.00 - 11.83	1.0000	1.0000
L49	27	MP306	10.00 - 11.83	1.0000	1.0000
L49	28	MP306	10.00 - 11.83	1.0000	1.0000
L49	30	MP306	10.00 - 11.83	1.0000	1.0000
L49	31	MP306	10.00 - 11.83	1.0000	1.0000
L49	33	MP306	11.33 - 11.83	1.0000	1.0000
L49	47	6"x1" Flat Reinforcement	10.00 - 11.83	1.0000	1.0000
L49	48	6"x1" Flat Reinforcement	10.00 - 11.83	1.0000	1.0000
L49	49	6"x1" Flat Reinforcement	10.00 - 11.83	1.0000	1.0000
L50	17	LDF7-50A(1-5/8)	9.75 - 10.00	1.0000	1.0000
L50	21	CU12PSM9P6XXX(1-1/2)	9.75 - 10.00	1.0000	1.0000
L50	25	Safety Line 3/8	9.75 - 10.00	1.0000	1.0000
L50	27	MP306	9.75 - 10.00	1.0000	1.0000
L50	28	MP306	9.75 - 10.00	1.0000	1.0000
L50	30	MP306	9.75 - 10.00	1.0000	1.0000
L50	31	MP306	9.75 - 10.00	1.0000	1.0000
L50	47	6"x1" Flat Reinforcement	9.75 - 10.00	1.0000	1.0000
L50	48	6"x1" Flat Reinforcement	9.75 - 10.00	1.0000	1.0000
L50	49	6"x1" Flat Reinforcement	9.75 - 10.00	1.0000	1.0000
L51	17	LDF7-50A(1-5/8)	4.75 - 9.75	1.0000	1.0000
L51	21	CU12PSM9P6XXX(1-1/2)	4.75 - 9.75	1.0000	1.0000
L51	25	Safety Line 3/8	4.75 - 9.75	1.0000	1.0000
L51	27	MP306	4.75 - 9.75	1.0000	1.0000
L51	28	MP306	4.75 - 9.75	1.0000	1.0000
L51	30	MP306	4.75 - 9.75	1.0000	1.0000
L51	31	MP306	4.75 - 9.75	1.0000	1.0000
L51	47	6"x1" Flat Reinforcement	8.00 - 9.75	1.0000	1.0000
L51	48	6"x1" Flat Reinforcement	8.00 - 9.75	1.0000	1.0000
L51	49	6"x1" Flat Reinforcement	8.00 - 9.75	1.0000	1.0000
L52	17	LDF7-50A(1-5/8)	0.00 - 4.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L52	21	CU12PSM9P6XXX(1-1/2)	0.00 - 4.75	1.0000	1.0000
L52	25	Safety Line 3/8	0.00 - 4.75	1.0000	1.0000
L52	27	MP306	0.50 - 4.75	1.0000	1.0000
L52	28	MP306	0.50 - 4.75	1.0000	1.0000
L52	30	MP306	0.50 - 4.75	1.0000	1.0000
L52	31	MP306	0.50 - 4.75	1.0000	1.0000

Effective Width of Flat Linear Attachments / Feed Lines

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L1	55	HSS6x6	155.00 - 155.50	Auto	1.0000
L1	56	HSS6x6	155.00 - 155.50	Auto	1.0000
L1	57	HSS6x6	155.00 - 155.50	Auto	1.0000
L2	55	HSS6x6	150.00 - 155.00	Auto	1.0000
L2	56	HSS6x6	150.00 - 155.00	Auto	1.0000
L2	57	HSS6x6	150.00 - 155.00	Auto	1.0000
L3	55	HSS6x6	148.50 - 150.00	Auto	1.0000
L3	56	HSS6x6	148.50 - 150.00	Auto	1.0000
L3	57	HSS6x6	148.50 - 150.00	Auto	1.0000
L4	55	HSS6x6	148.00 - 148.50	Auto	1.0000
L4	56	HSS6x6	148.00 - 148.50	Auto	1.0000
L4	57	HSS6x6	148.00 - 148.50	Auto	1.0000
L5	55	HSS6x6	143.00 - 148.00	Auto	0.3868
L5	56	HSS6x6	143.00 - 148.00	Auto	0.3868
L5	57	HSS6x6	143.00 - 148.00	Auto	0.3868
L6	55	HSS6x6	140.00 - 143.00	Auto	0.3678
L6	56	HSS6x6	140.00 - 143.00	Auto	0.3678
L6	57	HSS6x6	140.00 - 143.00	Auto	0.3678
L13	39	MP304	105.33 - 106.75	Auto	0.0363
L13	40	MP304	105.33 - 106.75	Auto	0.0363
L13	41	MP304	105.33 - 106.75	Auto	0.0363

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L14	39	MP304	105.08 - 105.33	Auto	0.0889
L14	40	MP304	105.08 - 105.33	Auto	0.0889
L14	41	MP304	105.08 - 105.33	Auto	0.0889
L15	39	MP304	100.08 - 105.08	Auto	0.0709
L15	40	MP304	100.08 - 105.08	Auto	0.0709
L15	41	MP304	100.08 - 105.08	Auto	0.0709
L16	39	MP304	95.08 - 100.08	Auto	0.0411
L16	40	MP304	95.08 - 100.08	Auto	0.0411
L16	41	MP304	95.08 - 100.08	Auto	0.0411
L17	39	MP304	92.50 - 95.08	Auto	0.0162
L17	40	MP304	92.50 - 95.08	Auto	0.0162
L17	41	MP304	92.50 - 95.08	Auto	0.0162
L17	59	4"x1.25" Flat Reinforcement	92.50 - 94.00	Auto	0.0000
L17	60	4"x1.25" Flat Reinforcement	92.50 - 94.00	Auto	0.0000
L17	61	4"x1.25" Flat Reinforcement	92.50 - 94.00	Auto	0.0000
L18	39	MP304	92.25 - 92.50	Auto	0.0745
L18	40	MP304	92.25 - 92.50	Auto	0.0745
L18	41	MP304	92.25 - 92.50	Auto	0.0745
L18	59	4"x1.25" Flat Reinforcement	92.25 - 92.50	Auto	0.0000
L18	60	4"x1.25" Flat Reinforcement	92.25 - 92.50	Auto	0.0000
L18	61	4"x1.25" Flat Reinforcement	92.25 - 92.50	Auto	0.0000
L19	39	MP304	87.25 - 92.25	Auto	0.0542
L19	40	MP304	87.25 - 92.25	Auto	0.0542
L19	41	MP304	87.25 - 92.25	Auto	0.0542
L19	59	4"x1.25" Flat Reinforcement	87.25 - 92.25	Auto	0.0000
L19	60	4"x1.25" Flat Reinforcement	87.25 - 92.25	Auto	0.0000
L19	61	4"x1.25" Flat Reinforcement	87.25 - 92.25	Auto	0.0000
L20	39	MP304	82.25 - 87.25	Auto	0.0198
L20	40	MP304	82.25 - 87.25	Auto	0.0198
L20	41	MP304	82.25 - 87.25	Auto	0.0198
L20	51	6"x1" Flat Reinforcement	82.25 - 82.50	Auto	0.2078
L20	52	6"x1" Flat Reinforcement	82.25 - 82.50	Auto	0.2078
L20	53	6"x1" Flat Reinforcement	82.25 - 82.50	Auto	0.2078
L20	59	4"x1.25" Flat Reinforcement	82.25 - 87.25	Auto	0.0000
L20	60	4"x1.25" Flat Reinforcement	82.25 - 87.25	Auto	0.0000
L20	61	4"x1.25" Flat Reinforcement	82.25 - 87.25	Auto	0.0000
L21	39	MP304	76.75 - 82.25	Auto	0.0004
L21	40	MP304	76.75 - 82.25	Auto	0.0004
L21	41	MP304	76.75 - 82.25	Auto	0.0004
L21	51	6"x1" Flat Reinforcement	76.75 - 82.25	Auto	0.1942
L21	52	6"x1" Flat Reinforcement	76.75 - 82.25	Auto	0.1942
L21	53	6"x1" Flat Reinforcement	76.75 - 82.25	Auto	0.1942
L21	59	4"x1.25" Flat Reinforcement	79.00 - 82.25	Auto	0.0000
L21	60	4"x1.25" Flat Reinforcement	79.00 - 82.25	Auto	0.0000
L21	61	4"x1.25" Flat Reinforcement	79.00 - 82.25	Auto	0.0000
L22	51	6"x1" Flat Reinforcement	75.75 - 76.75	Auto	0.1274
L22	52	6"x1" Flat Reinforcement	75.75 - 76.75	Auto	0.1274
L22	53	6"x1" Flat Reinforcement	75.75 - 76.75	Auto	0.1274
L23	35	MP305	70.75 - 73.00	Auto	0.0000
L23	36	MP305	70.75 - 73.00	Auto	0.0000
L23	37	MP305	70.75 - 73.00	Auto	0.0000
L23	51	6"x1" Flat Reinforcement	70.75 - 75.75	Auto	0.1131
L23	52	6"x1" Flat Reinforcement	70.75 - 75.75	Auto	0.1131
L23	53	6"x1" Flat Reinforcement	70.75 - 75.75	Auto	0.1131
L24	35	MP305	70.58 - 70.75	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L24	36	MP305	70.58 - 70.75	Auto	0.0000
L24	37	MP305	70.58 - 70.75	Auto	0.0000
L24	51	6"x1" Flat Reinforcement	70.58 - 70.75	Auto	0.1009
L24	52	6"x1" Flat Reinforcement	70.58 - 70.75	Auto	0.1009
L24	53	6"x1" Flat Reinforcement	70.58 - 70.75	Auto	0.1009
L25	35	MP305	70.33 - 70.58	Auto	0.0858
L25	36	MP305	70.33 - 70.58	Auto	0.0858
L25	37	MP305	70.33 - 70.58	Auto	0.0858
L25	51	6"x1" Flat Reinforcement	70.33 - 70.58	Auto	0.1879
L25	52	6"x1" Flat Reinforcement	70.33 - 70.58	Auto	0.1879
L25	53	6"x1" Flat Reinforcement	70.33 - 70.58	Auto	0.1879
L26	35	MP305	70.00 - 70.33	Auto	0.0842
L26	36	MP305	70.00 - 70.33	Auto	0.0842
L26	37	MP305	70.00 - 70.33	Auto	0.0842
L26	51	6"x1" Flat Reinforcement	70.00 - 70.33	Auto	0.1865
L26	52	6"x1" Flat Reinforcement	70.00 - 70.33	Auto	0.1865
L26	53	6"x1" Flat Reinforcement	70.00 - 70.33	Auto	0.1865
L27	35	MP305	69.75 - 70.00	Auto	0.0000
L27	36	MP305	69.75 - 70.00	Auto	0.0000
L27	37	MP305	69.75 - 70.00	Auto	0.0000
L27	51	6"x1" Flat Reinforcement	69.75 - 70.00	Auto	0.0971
L27	52	6"x1" Flat Reinforcement	69.75 - 70.00	Auto	0.0971
L27	53	6"x1" Flat Reinforcement	69.75 - 70.00	Auto	0.0971
L28	35	MP305	64.75 - 69.75	Auto	0.0000
L28	36	MP305	64.75 - 69.75	Auto	0.0000
L28	37	MP305	64.75 - 69.75	Auto	0.0000
L28	51	6"x1" Flat Reinforcement	67.50 - 69.75	Auto	0.0912
L28	52	6"x1" Flat Reinforcement	67.50 - 69.75	Auto	0.0912
L28	53	6"x1" Flat Reinforcement	67.50 - 69.75	Auto	0.0912
L29	35	MP305	59.75 - 64.75	Auto	0.0000
L29	36	MP305	59.75 - 64.75	Auto	0.0000
L29	37	MP305	59.75 - 64.75	Auto	0.0000
L30	35	MP305	54.75 - 59.75	Auto	0.0000
L30	36	MP305	54.75 - 59.75	Auto	0.0000
L30	37	MP305	54.75 - 59.75	Auto	0.0000
L31	35	MP305	49.75 - 54.75	Auto	0.0000
L31	36	MP305	49.75 - 54.75	Auto	0.0000
L31	37	MP305	49.75 - 54.75	Auto	0.0000
L32	35	MP305	43.00 - 49.75	Auto	0.0000
L32	36	MP305	43.00 - 49.75	Auto	0.0000
L32	37	MP305	43.00 - 49.75	Auto	0.0000
L32	43	6.5"x1.25" Flat Reinforcement	43.00 - 49.50	Auto	0.0629
L32	44	6.5"x1.25" Flat Reinforcement	43.00 - 49.50	Auto	0.0629
L32	45	6.5"x1.25" Flat Reinforcement	43.00 - 49.50	Auto	0.0629
L33	43	6.5"x1.25" Flat Reinforcement	42.00 - 43.00	Auto	0.0837
L33	44	6.5"x1.25" Flat Reinforcement	42.00 - 43.00	Auto	0.0837
L33	45	6.5"x1.25" Flat Reinforcement	42.00 - 43.00	Auto	0.0837
L34	43	6.5"x1.25" Flat Reinforcement	37.00 - 42.00	Auto	0.0706
L34	44	6.5"x1.25" Flat Reinforcement	37.00 - 42.00	Auto	0.0706
L34	45	6.5"x1.25" Flat Reinforcement	37.00 - 42.00	Auto	0.0706
L35	43	6.5"x1.25" Flat Reinforcement	32.00 - 37.00	Auto	0.0486

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L35	44	6.5"x1.25" Flat Reinforcement	32.00 - 37.00	Auto	0.0486
L35	45	6.5"x1.25" Flat Reinforcement	32.00 - 37.00	Auto	0.0486
L36	30	MP306	27.91 - 30.50	Auto	0.0806
L36	31	MP306	27.91 - 30.50	Auto	0.0806
L36	33	MP306	27.91 - 31.33	Auto	0.0823
L36	43	6.5"x1.25" Flat Reinforcement	27.91 - 32.00	Auto	0.0287
L36	44	6.5"x1.25" Flat Reinforcement	27.91 - 32.00	Auto	0.0287
L36	45	6.5"x1.25" Flat Reinforcement	27.91 - 32.00	Auto	0.0287
L37	30	MP306	27.66 - 27.91	Auto	0.1354
L37	31	MP306	27.66 - 27.91	Auto	0.1354
L37	33	MP306	27.66 - 27.91	Auto	0.1354
L37	43	6.5"x1.25" Flat Reinforcement	27.66 - 27.91	Auto	0.0835
L37	44	6.5"x1.25" Flat Reinforcement	27.66 - 27.91	Auto	0.0835
L37	45	6.5"x1.25" Flat Reinforcement	27.66 - 27.91	Auto	0.0835
L38	30	MP306	27.25 - 27.66	Auto	0.1340
L38	31	MP306	27.25 - 27.66	Auto	0.1340
L38	33	MP306	27.25 - 27.66	Auto	0.1340
L38	43	6.5"x1.25" Flat Reinforcement	27.25 - 27.66	Auto	0.0820
L38	44	6.5"x1.25" Flat Reinforcement	27.25 - 27.66	Auto	0.0820
L38	45	6.5"x1.25" Flat Reinforcement	27.25 - 27.66	Auto	0.0820
L39	30	MP306	26.98 - 27.25	Auto	0.1326
L39	31	MP306	26.98 - 27.25	Auto	0.1326
L39	33	MP306	26.98 - 27.25	Auto	0.1326
L39	43	6.5"x1.25" Flat Reinforcement	26.98 - 27.25	Auto	0.0805
L39	44	6.5"x1.25" Flat Reinforcement	26.98 - 27.25	Auto	0.0805
L39	45	6.5"x1.25" Flat Reinforcement	26.98 - 27.25	Auto	0.0805
L40	30	MP306	26.83 - 26.98	Auto	0.1285
L40	31	MP306	26.83 - 26.98	Auto	0.1285
L40	33	MP306	26.83 - 26.98	Auto	0.1285
L40	43	6.5"x1.25" Flat Reinforcement	26.83 - 26.98	Auto	0.0762
L40	44	6.5"x1.25" Flat Reinforcement	26.83 - 26.98	Auto	0.0762
L40	45	6.5"x1.25" Flat Reinforcement	26.83 - 26.98	Auto	0.0762
L41	30	MP306	21.83 - 26.83	Auto	0.1179
L41	31	MP306	21.83 - 26.83	Auto	0.1179
L41	33	MP306	21.83 - 26.83	Auto	0.1179
L41	43	6.5"x1.25" Flat Reinforcement	24.50 - 26.83	Auto	0.0708
L41	44	6.5"x1.25" Flat Reinforcement	24.50 - 26.83	Auto	0.0708
L41	45	6.5"x1.25" Flat Reinforcement	24.50 - 26.83	Auto	0.0708
L42	30	MP306	16.83 - 21.83	Auto	0.0972
L42	31	MP306	16.83 - 21.83	Auto	0.0972
L42	33	MP306	16.83 - 21.83	Auto	0.0972

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L42	47	6"x1" Flat Reinforcement	16.83 - 18.00	Auto	0.0000
L42	48	6"x1" Flat Reinforcement	16.83 - 18.00	Auto	0.0000
L42	49	6"x1" Flat Reinforcement	16.83 - 18.00	Auto	0.0000
L43	30	MP306	16.00 - 16.83	Auto	0.0851
L43	31	MP306	16.00 - 16.83	Auto	0.0851
L43	33	MP306	16.00 - 16.83	Auto	0.0851
L43	47	6"x1" Flat Reinforcement	16.00 - 16.83	Auto	0.0000
L43	48	6"x1" Flat Reinforcement	16.00 - 16.83	Auto	0.0000
L43	49	6"x1" Flat Reinforcement	16.00 - 16.83	Auto	0.0000
L44	30	MP306	15.75 - 16.00	Auto	0.1212
L44	31	MP306	15.75 - 16.00	Auto	0.1212
L44	33	MP306	15.75 - 16.00	Auto	0.1212
L44	47	6"x1" Flat Reinforcement	15.75 - 16.00	Auto	0.0000
L44	48	6"x1" Flat Reinforcement	15.75 - 16.00	Auto	0.0000
L44	49	6"x1" Flat Reinforcement	15.75 - 16.00	Auto	0.0000
L45	27	MP306	14.75 - 15.50	Auto	0.1181
L45	28	MP306	14.75 - 15.50	Auto	0.1181
L45	30	MP306	14.75 - 15.75	Auto	0.1186
L45	31	MP306	14.75 - 15.75	Auto	0.1186
L45	33	MP306	14.75 - 15.75	Auto	0.1186
L45	47	6"x1" Flat Reinforcement	14.75 - 15.75	Auto	0.0000
L45	48	6"x1" Flat Reinforcement	14.75 - 15.75	Auto	0.0000
L45	49	6"x1" Flat Reinforcement	14.75 - 15.75	Auto	0.0000
L46	27	MP306	14.50 - 14.75	Auto	0.0330
L46	28	MP306	14.50 - 14.75	Auto	0.0330
L46	30	MP306	14.50 - 14.75	Auto	0.0330
L46	31	MP306	14.50 - 14.75	Auto	0.0330
L46	33	MP306	14.50 - 14.75	Auto	0.0330
L46	47	6"x1" Flat Reinforcement	14.50 - 14.75	Auto	0.0000
L46	48	6"x1" Flat Reinforcement	14.50 - 14.75	Auto	0.0000
L46	49	6"x1" Flat Reinforcement	14.50 - 14.75	Auto	0.0000
L47	27	MP306	12.08 - 14.50	Auto	0.0275
L47	28	MP306	12.08 - 14.50	Auto	0.0275
L47	30	MP306	12.08 - 14.50	Auto	0.0275
L47	31	MP306	12.08 - 14.50	Auto	0.0275
L47	33	MP306	12.08 - 14.50	Auto	0.0275
L47	47	6"x1" Flat Reinforcement	12.08 - 14.50	Auto	0.0000
L47	48	6"x1" Flat Reinforcement	12.08 - 14.50	Auto	0.0000
L47	49	6"x1" Flat Reinforcement	12.08 - 14.50	Auto	0.0000
L48	27	MP306	11.83 - 12.08	Auto	0.0858
L48	28	MP306	11.83 - 12.08	Auto	0.0858
L48	30	MP306	11.83 - 12.08	Auto	0.0858
L48	31	MP306	11.83 - 12.08	Auto	0.0858
L48	33	MP306	11.83 - 12.08	Auto	0.0858
L48	47	6"x1" Flat Reinforcement	11.83 - 12.08	Auto	0.0000
L48	48	6"x1" Flat Reinforcement	11.83 - 12.08	Auto	0.0000
L48	49	6"x1" Flat Reinforcement	11.83 - 12.08	Auto	0.0000
L49	27	MP306	10.00 - 11.83	Auto	0.0815
L49	28	MP306	10.00 - 11.83	Auto	0.0815
L49	30	MP306	10.00 - 11.83	Auto	0.0815
L49	31	MP306	10.00 - 11.83	Auto	0.0815
L49	33	MP306	11.33 - 11.83	Auto	0.0843
L49	47	6"x1" Flat Reinforcement	10.00 - 11.83	Auto	0.0000
L49	48	6"x1" Flat Reinforcement	10.00 - 11.83	Auto	0.0000
L49	49	6"x1" Flat Reinforcement	10.00 - 11.83	Auto	0.0000
L50	27	MP306	9.75 - 10.00	Auto	0.0772
L50	28	MP306	9.75 - 10.00	Auto	0.0772
L50	30	MP306	9.75 - 10.00	Auto	0.0772
L50	31	MP306	9.75 - 10.00	Auto	0.0772
L50	47	6"x1" Flat Reinforcement	9.75 - 10.00	Auto	0.0000
L50	48	6"x1" Flat Reinforcement	9.75 - 10.00	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L50	49	6"x1" Flat Reinforcement	9.75 - 10.00	Auto	0.0000
L51	27	MP306	4.75 - 9.75	Auto	0.0632
L51	28	MP306	4.75 - 9.75	Auto	0.0632
L51	30	MP306	4.75 - 9.75	Auto	0.0632
L51	31	MP306	4.75 - 9.75	Auto	0.0632
L51	47	6"x1" Flat Reinforcement	8.00 - 9.75	Auto	0.0000
L51	48	6"x1" Flat Reinforcement	8.00 - 9.75	Auto	0.0000
L51	49	6"x1" Flat Reinforcement	8.00 - 9.75	Auto	0.0000
L52	27	MP306	0.50 - 4.75	Auto	0.0408
L52	28	MP306	0.50 - 4.75	Auto	0.0408
L52	30	MP306	0.50 - 4.75	Auto	0.0408
L52	31	MP306	0.50 - 4.75	Auto	0.0408

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 K
80010966 w/ Mount Pipe	A	From Leg	4.000 0.000 1.000	0.000	157.000	No Ice 1/2" Ice 1" Ice	14.610 15.470 16.350	6.840 7.630 8.420	0.159 0.267 0.389
80010966 w/ Mount Pipe	B	From Leg	4.000 0.000 1.000	0.000	157.000	No Ice 1/2" Ice 1" Ice	14.610 15.470 16.350	6.840 7.630 8.420	0.159 0.267 0.389
80010966 w/ Mount Pipe	C	From Leg	4.000 0.000 1.000	0.000	157.000	No Ice 1/2" Ice 1" Ice	14.610 15.470 16.350	6.840 7.630 8.420	0.159 0.267 0.389
(2) DC6-48-60-18-8F	A	From Leg	4.000 0.000 1.000	0.000	157.000	No Ice 1/2" Ice 1" Ice	0.917 1.458 1.643	0.917 1.458 1.643	0.019 0.037 0.057
DC6-48-60-18-8F	B	From Leg	4.000 0.000 1.000	0.000	157.000	No Ice 1/2" Ice 1" Ice	0.917 1.458 1.643	0.917 1.458 1.643	0.019 0.037 0.057
DC6-48-60-18-8F	C	From Leg	4.000 0.000 1.000	0.000	157.000	No Ice 1/2" Ice 1" Ice	0.917 1.458 1.643	0.917 1.458 1.643	0.019 0.037 0.057
RRUS 8843 B2/B66A	A	From Leg	4.000 0.000 1.000	0.000	157.000	No Ice 1/2" Ice 1" Ice	1.639 1.799 1.966	1.353 1.500 1.655	0.072 0.090 0.110
RRUS 8843 B2/B66A	B	From Leg	4.000 0.000 1.000	0.000	157.000	No Ice 1/2" Ice 1" Ice	1.639 1.799 1.966	1.353 1.500 1.655	0.072 0.090 0.110
RRUS 8843 B2/B66A	C	From Leg	4.000 0.000 1.000	0.000	157.000	No Ice 1/2" Ice 1" Ice	1.639 1.799 1.966	1.353 1.500 1.655	0.072 0.090 0.110
RRUS 4478 B14	A	From Leg	4.000 0.000 1.000	0.000	157.000	No Ice 1/2" Ice 1" Ice	1.843 2.012 2.190	1.059 1.197 1.342	0.060 0.076 0.094
RRUS 4478 B14	B	From Leg	4.000 0.000	0.000	157.000	No Ice 1/2" Ice	1.843 2.012	1.059 1.197	0.060 0.076

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			1.000			1" Ice	2.190	1.342	0.094
RRUS 4478 B14	C	From Leg	4.000	0.000	157.000	No Ice	1.843	1.059	0.060
			0.000			1/2" Ice	2.012	1.197	0.076
			1.000			1" Ice	2.190	1.342	0.094
RRUS 4449 B5/B12	A	From Leg	4.000	0.000	157.000	No Ice	1.968	1.408	0.071
			0.000			1/2" Ice	2.144	1.564	0.090
			1.000			1" Ice	2.328	1.727	0.111
RRUS 4449 B5/B12	B	From Leg	4.000	0.000	157.000	No Ice	1.968	1.408	0.071
			0.000			1/2" Ice	2.144	1.564	0.090
			1.000			1" Ice	2.328	1.727	0.111
RRUS 4449 B5/B12	C	From Leg	4.000	0.000	157.000	No Ice	1.968	1.408	0.071
			0.000			1/2" Ice	2.144	1.564	0.090
			1.000			1" Ice	2.328	1.727	0.111
TPA65R-BU8DA-K w/ Mount Pipe	A	From Leg	4.000	0.000	157.000	No Ice	18.109	10.260	0.120
			0.000			1/2" Ice	18.843	11.781	0.241
			1.000			1" Ice	19.586	13.327	0.373
TPA65R-BU8DA-K w/ Mount Pipe	B	From Leg	4.000	0.000	157.000	No Ice	18.109	10.260	0.120
			0.000			1/2" Ice	18.843	11.781	0.241
			1.000			1" Ice	19.586	13.327	0.373
TPA65R-BU8DA-K w/ Mount Pipe	C	From Leg	4.000	0.000	157.000	No Ice	18.109	10.260	0.120
			0.000			1/2" Ice	18.843	11.781	0.241
			1.000			1" Ice	19.586	13.327	0.373
AIR 6419 B77G_CCIV3 w/ Mount Pipe	A	From Leg	4.000	0.000	157.000	No Ice	3.790	2.150	0.069
			0.000			1/2" Ice	4.140	2.450	0.104
			3.000			1" Ice	4.510	2.760	0.146
AIR 6419 B77G_CCIV3 w/ Mount Pipe	B	From Leg	4.000	0.000	157.000	No Ice	3.790	2.150	0.069
			0.000			1/2" Ice	4.140	2.450	0.104
			3.000			1" Ice	4.510	2.760	0.146
AIR 6419 B77G_CCIV3 w/ Mount Pipe	C	From Leg	4.000	0.000	157.000	No Ice	3.790	2.150	0.069
			0.000			1/2" Ice	4.140	2.450	0.104
			3.000			1" Ice	4.510	2.760	0.146
AIR 6449 B77D_CCVI2 w/ Mount Pipe	A	From Leg	4.000	0.000	157.000	No Ice	3.580	2.310	0.095
			0.000			1/2" Ice	3.920	2.600	0.130
			-1.000			1" Ice	4.270	2.910	0.173
AIR 6449 B77D_CCVI2 w/ Mount Pipe	B	From Leg	4.000	0.000	157.000	No Ice	3.580	2.310	0.095
			0.000			1/2" Ice	3.920	2.600	0.130
			-1.000			1" Ice	4.270	2.910	0.173
AIR 6449 B77D_CCVI2 w/ Mount Pipe	C	From Leg	4.000	0.000	157.000	No Ice	3.580	2.310	0.095
			0.000			1/2" Ice	3.920	2.600	0.130
			-1.000			1" Ice	4.270	2.910	0.173
RRUS-32 B30	A	From Leg	4.000	0.000	157.000	No Ice	3.314	2.424	0.077
			0.000			1/2" Ice	3.558	2.638	0.105
			1.000			1" Ice	3.809	2.860	0.136
RRUS-32 B30	B	From Leg	4.000	0.000	157.000	No Ice	3.314	2.424	0.077
			0.000			1/2" Ice	3.558	2.638	0.105
			1.000			1" Ice	3.809	2.860	0.136
RRUS-32 B30	C	From Leg	4.000	0.000	157.000	No Ice	3.314	2.424	0.077
			0.000			1/2" Ice	3.558	2.638	0.105
			1.000			1" Ice	3.809	2.860	0.136
(3) Side Arm Mount [SO 309-3]	C	None		0.000	157.000	No Ice	4.620	4.620	0.120
						1/2" Ice	6.880	6.880	0.184
						1" Ice	9.440	9.440	0.271
Sector Mount [SM 503-3]	C	None		0.000	157.000	No Ice	30.430	30.430	1.690
						1/2" Ice	43.020	43.020	2.296
						1" Ice	55.430	55.430	3.097
Pipe Mount [PM 601-3]	C	None		0.000	157.000	No Ice	3.170	3.170	0.195
						1/2" Ice	3.790	3.790	0.232

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						1" Ice	4.420	4.420	0.279
*									
*									
VV-65B-R1_TMO w/ Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	148.000	No Ice 1/2" Ice 1" Ice	8.154 8.704 9.219	5.426 6.558 7.414	0.067 0.127 0.196
VV-65B-R1_TMO w/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	148.000	No Ice 1/2" Ice 1" Ice	8.154 8.704 9.219	5.426 6.558 7.414	0.067 0.127 0.196
VV-65B-R1_TMO w/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	148.000	No Ice 1/2" Ice 1" Ice	8.154 8.704 9.219	5.426 6.558 7.414	0.067 0.127 0.196
AIR 6419 B41_TMO w/ Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	148.000	No Ice 1/2" Ice 1" Ice	6.580 7.060 7.570	3.500 3.900 4.320	0.111 0.162 0.220
AIR 6419 B41_TMO w/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	148.000	No Ice 1/2" Ice 1" Ice	6.580 7.060 7.570	3.500 3.900 4.320	0.111 0.162 0.220
AIR 6419 B41_TMO w/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	148.000	No Ice 1/2" Ice 1" Ice	6.580 7.060 7.570	3.500 3.900 4.320	0.111 0.162 0.220
APXVAALL24_43-U-NA20 _TMO w/ Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	148.000	No Ice 1/2" Ice 1" Ice	14.690 15.460 16.230	6.870 7.550 8.250	0.183 0.311 0.453
APXVAALL24_43-U-NA20 _TMO w/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	148.000	No Ice 1/2" Ice 1" Ice	14.690 15.460 16.230	6.870 7.550 8.250	0.183 0.311 0.453
APXVAALL24_43-U-NA20 _TMO w/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	148.000	No Ice 1/2" Ice 1" Ice	14.690 15.460 16.230	6.870 7.550 8.250	0.183 0.311 0.453
RADIO 4460 B2/B25 B66_TMO	A	From Leg	4.000 0.000 0.000	0.000	148.000	No Ice 1/2" Ice 1" Ice	2.139 2.321 2.511	1.686 1.850 2.022	0.109 0.131 0.156
RADIO 4460 B2/B25 B66_TMO	B	From Leg	4.000 0.000 0.000	0.000	148.000	No Ice 1/2" Ice 1" Ice	2.139 2.321 2.511	1.686 1.850 2.022	0.109 0.131 0.156
RADIO 4460 B2/B25 B66_TMO	C	From Leg	4.000 0.000 0.000	0.000	148.000	No Ice 1/2" Ice 1" Ice	2.139 2.321 2.511	1.686 1.850 2.022	0.109 0.131 0.156
Radio 4480_TMOV2	A	From Leg	4.000 0.000 0.000	0.000	148.000	No Ice 1/2" Ice 1" Ice	2.878 3.091 3.312	1.397 1.558 1.727	0.081 0.103 0.128
Radio 4480_TMOV2	B	From Leg	4.000 0.000 0.000	0.000	148.000	No Ice 1/2" Ice 1" Ice	2.878 3.091 3.312	1.397 1.558 1.727	0.081 0.103 0.128
Radio 4480_TMOV2	C	From Leg	4.000 0.000 0.000	0.000	148.000	No Ice 1/2" Ice 1" Ice	2.878 3.091 3.312	1.397 1.558 1.727	0.081 0.103 0.128
(2) L3x3x1/4x6'	A	From Leg	2.000 0.000 0.000	0.000	145.000	No Ice 1/2" Ice 1" Ice	1.800 2.220 2.648	0.008 0.030 0.058	0.070 0.080 0.095
(2) L3x3x1/4x6'	B	From Leg	2.000 0.000 0.000	0.000	145.000	No Ice 1/2" Ice 1" Ice	1.800 2.220 2.648	0.008 0.030 0.058	0.070 0.080 0.095
(2) L3x3x1/4x6'	C	From Leg	2.000 0.000 0.000	0.000	145.000	No Ice 1/2" Ice 1" Ice	1.800 2.220 2.648	0.008 0.030 0.058	0.070 0.080 0.095

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Offsets: Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Miscellaneous [NA 507-1]	C	None			0.000	145.000	No Ice	4.560	4.560	0.245
							1/2" Ice	6.390	6.390	0.311
							1" Ice	8.180	8.180	0.402
Platform Mount [LP 1201-1_HR-1]	C	None			0.000	148.000	No Ice	26.390	26.390	2.356
							1/2" Ice	31.400	31.400	3.061
							1" Ice	36.200	36.200	3.864
*										
(2) NNHH-65B-R4 w/ Mount Pipe	A	From Leg	4.000		0.000	138.000	No Ice	7.550	4.230	0.110
			0.000				1/2" Ice	8.040	4.670	0.197
			0.000				1" Ice	8.530	5.120	0.296
(2) NNHH-65B-R4 w/ Mount Pipe	B	From Leg	4.000		0.000	138.000	No Ice	7.550	4.230	0.110
			0.000				1/2" Ice	8.040	4.670	0.197
			0.000				1" Ice	8.530	5.120	0.296
(2) NNHH-65B-R4 w/ Mount Pipe	C	From Leg	4.000		0.000	138.000	No Ice	7.550	4.230	0.110
			0.000				1/2" Ice	8.040	4.670	0.197
			0.000				1" Ice	8.530	5.120	0.296
KS24019-L112A w/Mount Pipe	C	From Leg	4.000		0.000	138.000	No Ice	1.407	1.566	0.027
			0.000				1/2" Ice	1.909	2.123	0.044
			4.000				1" Ice	2.301	2.556	0.065
RFV01U-D1A	A	From Leg	4.000		0.000	138.000	No Ice	1.875	1.250	0.084
			0.000				1/2" Ice	2.045	1.393	0.103
			0.000				1" Ice	2.223	1.543	0.124
RFV01U-D1A	B	From Leg	4.000		0.000	138.000	No Ice	1.875	1.250	0.084
			0.000				1/2" Ice	2.045	1.393	0.103
			0.000				1" Ice	2.223	1.543	0.124
RFV01U-D1A	C	From Leg	4.000		0.000	138.000	No Ice	1.875	1.250	0.084
			0.000				1/2" Ice	2.045	1.393	0.103
			0.000				1" Ice	2.223	1.543	0.124
RVZDC-6627-PF-48	A	From Leg	4.000		0.000	138.000	No Ice	3.792	2.514	0.032
			0.000				1/2" Ice	4.044	2.727	0.063
			0.000				1" Ice	4.303	2.947	0.099
RFV01U-D2A	A	From Leg	4.000		0.000	138.000	No Ice	1.875	1.013	0.070
			0.000				1/2" Ice	2.045	1.145	0.087
			0.000				1" Ice	2.223	1.284	0.106
RFV01U-D2A	B	From Leg	4.000		0.000	138.000	No Ice	1.875	1.013	0.070
			0.000				1/2" Ice	2.045	1.145	0.087
			0.000				1" Ice	2.223	1.284	0.106
RFV01U-D2A	C	From Leg	4.000		0.000	138.000	No Ice	1.875	1.013	0.070
			0.000				1/2" Ice	2.045	1.145	0.087
			0.000				1" Ice	2.223	1.284	0.106
CBRS w/ Mount Pipe	A	From Leg	4.000		0.000	138.000	No Ice	1.450	0.990	0.032
			0.000				1/2" Ice	1.670	1.180	0.048
			0.000				1" Ice	1.900	1.390	0.068
CBRS w/ Mount Pipe	B	From Leg	4.000		0.000	138.000	No Ice	1.450	0.990	0.032
			0.000				1/2" Ice	1.670	1.180	0.048
			0.000				1" Ice	1.900	1.390	0.068
CBRS w/ Mount Pipe	C	From Leg	4.000		0.000	138.000	No Ice	1.450	0.990	0.032
			0.000				1/2" Ice	1.670	1.180	0.048
			0.000				1" Ice	1.900	1.390	0.068
MT6407-77A w/ Mount Pipe	A	From Leg	4.000		0.000	138.000	No Ice	4.907	2.682	0.096
			0.000				1/2" Ice	5.256	3.145	0.136
			0.000				1" Ice	5.615	3.624	0.180
MT6407-77A w/ Mount Pipe	B	From Leg	4.000		0.000	138.000	No Ice	4.907	2.682	0.096
			0.000				1/2" Ice	5.256	3.145	0.136
			0.000				1" Ice	5.615	3.624	0.180
MT6407-77A w/ Mount Pipe	C	From Leg	4.000		0.000	138.000	No Ice	4.907	2.682	0.096
			0.000				1/2" Ice	5.256	3.145	0.136

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.000			1" Ice	5.615	3.624	0.180
Platform Mount [LP 303-1_KCKR-HR-1]	C	None		0.000	138.000	No Ice	28.310	28.310	1.770
						1/2" Ice	35.690	35.690	2.297
						1" Ice	43.110	43.110	2.943
Mount Reinforcement Specifications	C	None		0.000	138.000	No Ice	28.630	28.630	0.280
						1/2" Ice	37.310	37.310	0.670
						1" Ice	45.800	45.800	0.940
*									
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	A	From Leg	4.000 0.000 2.000	0.000	127.000	No Ice 1/2" Ice 1" Ice	3.140 3.450 3.770	2.590 2.880 3.190	0.112 0.164 0.225
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	B	From Leg	4.000 0.000 2.000	0.000	127.000	No Ice 1/2" Ice 1" Ice	3.140 3.450 3.770	2.590 2.880 3.190	0.112 0.164 0.225
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	C	From Leg	4.000 0.000 2.000	0.000	127.000	No Ice 1/2" Ice 1" Ice	3.140 3.450 3.770	2.590 2.880 3.190	0.112 0.164 0.225
LNX-6515DS-VTM w/ Mount Pipe	A	From Leg	4.000 0.000 2.000	0.000	127.000	No Ice 1/2" Ice 1" Ice	5.310 5.800 6.300	4.270 4.750 5.240	0.083 0.165 0.261
LNX-6515DS-VTM w/ Mount Pipe	B	From Leg	4.000 0.000 2.000	0.000	127.000	No Ice 1/2" Ice 1" Ice	5.310 5.800 6.300	4.270 4.750 5.240	0.083 0.165 0.261
LNX-6515DS-VTM w/ Mount Pipe	C	From Leg	4.000 0.000 2.000	0.000	127.000	No Ice 1/2" Ice 1" Ice	5.310 5.800 6.300	4.270 4.750 5.240	0.083 0.165 0.261
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	A	From Leg	4.000 0.000 2.000	0.000	127.000	No Ice 1/2" Ice 1" Ice	3.140 3.450 3.770	2.590 2.880 3.190	0.111 0.163 0.224
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	B	From Leg	4.000 0.000 2.000	0.000	127.000	No Ice 1/2" Ice 1" Ice	3.140 3.450 3.770	2.590 2.880 3.190	0.111 0.163 0.224
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	C	From Leg	4.000 0.000 2.000	0.000	127.000	No Ice 1/2" Ice 1" Ice	3.140 3.450 3.770	2.590 2.880 3.190	0.111 0.163 0.224
KRY 112 144/1	A	From Leg	4.000 0.000 2.000	0.000	127.000	No Ice 1/2" Ice 1" Ice	0.350 0.426 0.509	0.175 0.234 0.301	0.011 0.014 0.019
KRY 112 144/1	B	From Leg	4.000 0.000 2.000	0.000	127.000	No Ice 1/2" Ice 1" Ice	0.350 0.426 0.509	0.175 0.234 0.301	0.011 0.014 0.019
KRY 112 144/1	C	From Leg	4.000 0.000 2.000	0.000	127.000	No Ice 1/2" Ice 1" Ice	0.350 0.426 0.509	0.175 0.234 0.301	0.011 0.014 0.019
RRUS 11 B12	A	From Leg	4.000 0.000 2.000	0.000	127.000	No Ice 1/2" Ice 1" Ice	2.833 3.043 3.259	1.182 1.330 1.485	0.051 0.072 0.095
RRUS 11 B12	B	From Leg	4.000 0.000 2.000	0.000	127.000	No Ice 1/2" Ice 1" Ice	2.833 3.043 3.259	1.182 1.330 1.485	0.051 0.072 0.095
RRUS 11 B12	C	From Leg	4.000 0.000 2.000	0.000	127.000	No Ice 1/2" Ice 1" Ice	2.833 3.043 3.259	1.182 1.330 1.485	0.051 0.072 0.095
Platform Mount [LP 1201-1]	C	None		0.000	127.000	No Ice 1/2" Ice 1" Ice	18.380 22.110 25.870	18.380 22.110 25.870	2.100 2.652 3.263
*									

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
*									
MX08FRO665-21 w/ Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	119.000	No Ice 1/2" Ice 1" Ice	8.010 8.520 9.040	4.230 4.690 5.160	0.108 0.194 0.292
MX08FRO665-21 w/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	119.000	No Ice 1/2" Ice 1" Ice	8.010 8.520 9.040	4.230 4.690 5.160	0.108 0.194 0.292
MX08FRO665-21 w/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	119.000	No Ice 1/2" Ice 1" Ice	8.010 8.520 9.040	4.230 4.690 5.160	0.108 0.194 0.292
TA08025-B605	A	From Leg	4.000 0.000 0.000	0.000	119.000	No Ice 1/2" Ice 1" Ice	1.964 2.138 2.320	1.129 1.267 1.411	0.075 0.093 0.114
TA08025-B605	B	From Leg	4.000 0.000 0.000	0.000	119.000	No Ice 1/2" Ice 1" Ice	1.964 2.138 2.320	1.129 1.267 1.411	0.075 0.093 0.114
TA08025-B605	C	From Leg	4.000 0.000 0.000	0.000	119.000	No Ice 1/2" Ice 1" Ice	1.964 2.138 2.320	1.129 1.267 1.411	0.075 0.093 0.114
TA08025-B604	A	From Leg	4.000 0.000 0.000	0.000	119.000	No Ice 1/2" Ice 1" Ice	1.964 2.138 2.320	0.981 1.112 1.250	0.064 0.081 0.100
TA08025-B604	B	From Leg	4.000 0.000 0.000	0.000	119.000	No Ice 1/2" Ice 1" Ice	1.964 2.138 2.320	0.981 1.112 1.250	0.064 0.081 0.100
TA08025-B604	C	From Leg	4.000 0.000 0.000	0.000	119.000	No Ice 1/2" Ice 1" Ice	1.964 2.138 2.320	0.981 1.112 1.250	0.064 0.081 0.100
RDIDC-9181-PF-48	A	From Leg	4.000 0.000 0.000	0.000	119.000	No Ice 1/2" Ice 1" Ice	2.012 2.189 2.373	1.168 1.311 1.461	0.022 0.040 0.060
(2) 8' x 2" Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	119.000	No Ice 1/2" Ice 1" Ice	1.900 2.728 3.401	1.900 2.728 3.401	0.029 0.044 0.063
(2) 8' x 2" Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	119.000	No Ice 1/2" Ice 1" Ice	1.900 2.728 3.401	1.900 2.728 3.401	0.029 0.044 0.063
(2) 8' x 2" Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	119.000	No Ice 1/2" Ice 1" Ice	1.900 2.728 3.401	1.900 2.728 3.401	0.029 0.044 0.063
Platform Mount [LP 716-1]	C	None		0.000	119.000	No Ice 1/2" Ice 1" Ice	26.800 32.200 37.600	26.800 32.200 37.600	1.509 1.811 2.113
*									
KS24019-L112A	A	From Leg	3.000 0.000 2.000	0.000	48.000	No Ice 1/2" Ice 1" Ice	0.141 0.198 0.262	0.141 0.198 0.262	0.005 0.007 0.009
2' x 2" Pipe Mount	A	From Leg	3.000 0.000 0.000	0.000	48.000	No Ice 1/2" Ice 1" Ice	0.023 0.049 0.085	0.023 0.049 0.085	0.007 0.008 0.009
Side Arm Mount [SO 701-1]	A	From Leg	1.500 0.000 0.000	0.000	48.000	No Ice 1/2" Ice 1" Ice	0.850 1.140 1.430	1.670 2.340 3.010	0.065 0.079 0.093
*									

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	160 - 155	Pole	Max Tension	2	0.000	-0.000	-0.000
			Max. Compression	26	-10.310	-0.002	0.277
			Max. Mx	20	-4.624	18.161	0.082
			Max. My	2	-4.603	0.001	18.291
			Max. Vy	20	-6.951	18.161	0.082
			Max. Vx	14	6.966	0.000	-18.090
			Max. Torque	8			0.144
L2	155 - 150	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-11.513	0.001	0.295
			Max. Mx	20	-5.543	54.274	0.089
			Max. My	2	-5.515	0.003	54.571
			Max. Vy	20	-7.494	54.274	0.089
			Max. Vx	14	7.576	0.002	-54.447
			Max. Torque	8			0.144
L3	150 - 148.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-11.874	0.002	0.300
			Max. Mx	20	-5.825	65.622	0.091
			Max. My	2	-5.795	0.004	66.006
			Max. Vy	20	-7.650	65.622	0.091
			Max. Vx	14	7.752	0.002	-65.934
			Max. Torque	8			0.144
L4	148.5 - 148	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-12.029	0.002	0.302
			Max. Mx	20	-5.949	69.464	0.094
			Max. My	2	-5.918	0.005	69.880
			Max. Vy	20	-7.726	69.464	0.094
			Max. Vx	14	7.836	0.003	-69.829
			Max. Torque	8			0.144
L5	148 - 143	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-22.677	0.005	0.332
			Max. Mx	20	-11.939	132.109	0.104
			Max. My	14	-11.871	0.005	-133.269
			Max. Vy	20	-13.196	132.109	0.104
			Max. Vx	14	13.391	0.005	-133.269
			Max. Torque	8			0.144
L6	143 - 138	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-23.843	0.010	0.364
			Max. Mx	20	-12.825	199.151	0.116
			Max. My	14	-12.715	0.008	-201.952
			Max. Vy	20	-13.628	199.151	0.116
			Max. Vx	14	14.091	0.008	-201.952
			Max. Torque	8			0.143
L7	138 - 133	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-32.486	0.320	0.753
			Max. Mx	20	-17.071	291.978	0.220
			Max. My	14	-16.941	0.099	-297.117
			Max. Vy	20	-18.663	291.978	0.220
			Max. Vx	14	19.180	0.099	-297.117
			Max. Torque	18			-0.476
L8	133 - 128	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-33.237	0.329	0.793
			Max. Mx	20	-17.694	385.993	0.245
			Max. My	14	-17.567	0.092	-393.715
			Max. Vy	20	-18.959	385.993	0.245
			Max. Vx	14	19.476	0.092	-393.715
			Max. Torque	18			-0.476
L9	128 - 123	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-40.388	0.415	0.882
			Max. Mx	20	-21.933	493.203	0.285
			Max. My	14	-21.803	0.108	-503.516
			Max. Vy	20	-21.596	493.203	0.285

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	14	22.123	0.108	-503.516
			Max. Torque	18			-0.476
L10	123 - 118	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-45.778	0.518	1.312
			Max. Mx	20	-25.299	604.275	0.443
			Max. My	14	-25.165	0.129	-617.073
			Max. Vy	20	-24.363	604.275	0.443
			Max. Vx	14	24.922	0.129	-617.073
			Max. Torque	18			-0.642
L11	118 - 111	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-46.380	0.570	1.392
			Max. Mx	20	-25.817	683.628	0.478
			Max. My	14	-25.687	0.135	-698.211
			Max. Vy	20	-24.502	683.628	0.478
			Max. Vx	14	25.060	0.135	-698.211
			Max. Torque	18			-0.642
L12	111 - 109.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-47.899	0.650	1.514
			Max. Mx	20	-27.003	806.971	0.531
			Max. My	14	-26.877	0.144	-824.302
			Max. Vy	20	-24.844	806.971	0.531
			Max. Vx	14	25.403	0.144	-824.302
			Max. Torque	18			-0.641
L13	109.75 - 105.333	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-48.861	0.721	1.622
			Max. Mx	20	-27.828	917.037	0.578
			Max. My	14	-27.708	0.152	-936.794
			Max. Vy	20	-25.032	917.037	0.578
			Max. Vx	14	25.590	0.152	-936.794
			Max. Torque	18			-0.640
L14	105.333 - 105.083	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-48.932	0.726	1.630
			Max. Mx	20	-27.903	923.293	0.584
			Max. My	14	-27.783	0.153	-943.187
			Max. Vy	20	-25.038	923.293	0.584
			Max. Vx	14	25.596	0.153	-943.187
			Max. Torque	18			-0.640
L15	105.083 - 100.083	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-50.351	0.807	1.751
			Max. Mx	20	-29.043	1049.166	0.635
			Max. My	14	-28.928	0.161	-1071.801
			Max. Vy	20	-25.334	1049.166	0.635
			Max. Vx	14	25.891	0.161	-1071.801
			Max. Torque	18			-0.640
L16	100.083 - 95.083	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-51.790	0.889	1.874
			Max. Mx	20	-30.218	1176.476	0.688
			Max. My	14	-30.108	0.171	-1201.849
			Max. Vy	20	-25.616	1176.476	0.688
			Max. Vx	14	26.173	0.171	-1201.849
			Max. Torque	18			-0.639
L17	95.083 - 92.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-52.565	0.932	1.937
			Max. Mx	20	-30.831	1242.787	0.716
			Max. My	14	-30.724	0.176	-1269.572
			Max. Vy	20	-25.761	1242.787	0.716
			Max. Vx	14	26.318	0.176	-1269.572

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Torque	18			-0.638
L18	92.5 - 92.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-52.657	0.937	1.946
			Max. Mx	20	-30.921	1249.226	0.722
			Max. My	14	-30.815	0.177	-1276.148
			Max. Vy	20	-25.770	1249.226	0.722
			Max. Vx	14	26.327	0.177	-1276.148
			Max. Torque	18			-0.638
L19	92.25 - 87.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-54.505	1.020	2.068
			Max. Mx	20	-32.390	1378.865	0.774
			Max. My	14	-32.287	0.186	-1408.520
			Max. Vy	20	-26.107	1378.865	0.774
			Max. Vx	14	26.664	0.186	-1408.520
			Max. Torque	18			-0.638
L20	87.25 - 82.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-56.376	1.104	2.192
			Max. Mx	20	-33.890	1510.158	0.828
			Max. My	14	-33.791	0.197	-1542.547
			Max. Vy	20	-26.433	1510.158	0.828
			Max. Vx	14	26.990	0.197	-1542.547
			Max. Torque	18			-0.638
L21	82.25 - 76.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-56.863	1.121	2.217
			Max. Mx	20	-34.267	1543.233	0.842
			Max. My	14	-34.169	0.199	-1576.305
			Max. Vy	20	-26.515	1543.233	0.842
			Max. Vx	14	27.072	0.199	-1576.305
			Max. Torque	18			-0.637
L22	76.75 - 75.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-59.654	1.195	2.322
			Max. Mx	20	-36.442	1683.553	0.901
			Max. My	14	-36.347	0.210	-1719.500
			Max. Vy	20	-26.931	1683.553	0.901
			Max. Vx	14	27.490	0.210	-1719.500
			Max. Torque	18			-0.636
L23	75.75 - 70.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-61.104	1.265	2.421
			Max. Mx	20	-37.647	1818.432	0.956
			Max. My	14	-37.560	0.221	-1857.109
			Max. Vy	20	-27.070	1818.432	0.956
			Max. Vx	14	27.625	0.221	-1857.109
			Max. Torque	18			-0.636
L24	70.75 - 70.583	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-61.154	1.269	2.427
			Max. Mx	20	-37.705	1822.951	0.959
			Max. My	14	-37.619	0.222	-1861.718
			Max. Vy	20	-27.079	1822.951	0.959
			Max. Vx	14	27.633	0.222	-1861.718
			Max. Torque	18			-0.635
L25	70.583 - 70.333	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-61.266	1.273	2.432
			Max. Mx	20	-37.798	1829.714	0.962
			Max. My	14	-37.712	0.222	-1868.617
			Max. Vy	20	-27.077	1829.714	0.962
			Max. Vx	14	27.632	0.222	-1868.617
			Max. Torque	18			-0.635
L26	70.333 - 70	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-61.414	1.277	2.438
			Max. Mx	20	-37.919	1838.729	0.965

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	14	-37.834	0.223	-1877.814
			Max. Vy	20	-27.094	1838.729	0.965
			Max. Vx	14	27.648	0.223	-1877.814
			Max. Torque	18			-0.635
L27	70 - 69.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-61.490	1.280	2.442
			Max. Mx	20	-37.979	1845.502	0.968
			Max. My	14	-37.894	0.223	-1884.722
			Max. Vy	20	-27.108	1845.502	0.968
			Max. Vx	14	27.662	0.223	-1884.722
			Max. Torque	18			-0.635
L28	69.75 - 64.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-62.968	1.358	2.554
			Max. Mx	20	-39.198	1981.259	1.021
			Max. My	14	-39.120	0.233	-2023.187
			Max. Vy	20	-27.238	1981.259	1.021
			Max. Vx	14	27.788	0.233	-2023.187
			Max. Torque	18			-0.635
L29	64.75 - 59.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-64.425	1.430	2.652
			Max. Mx	20	-40.456	2117.578	1.076
			Max. My	14	-40.386	0.244	-2162.191
			Max. Vy	20	-27.343	2117.578	1.076
			Max. Vx	14	27.889	0.244	-2162.191
			Max. Torque	18			-0.634
L30	59.75 - 54.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-65.902	1.503	2.751
			Max. Mx	20	-41.736	2254.377	1.131
			Max. My	14	-41.675	0.255	-2301.651
			Max. Vy	20	-27.432	2254.377	1.131
			Max. Vx	14	27.973	0.255	-2301.651
			Max. Torque	18			-0.634
L31	54.75 - 49.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-67.400	1.578	2.852
			Max. Mx	20	-43.039	2391.577	1.185
			Max. My	14	-42.986	0.266	-2441.486
			Max. Vy	20	-27.504	2391.577	1.185
			Max. Vx	14	28.041	0.266	-2441.486
			Max. Torque	18			-0.633
L32	49.75 - 43	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-67.962	1.604	2.887
			Max. Mx	20	-43.485	2439.676	1.205
			Max. My	14	-43.434	0.270	-2490.501
			Max. Vy	20	-27.548	2439.676	1.205
			Max. Vx	14	28.083	0.270	-2490.501
			Max. Torque	18			-0.632
L33	43 - 42	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-71.304	1.695	3.417
			Max. Mx	20	-46.166	2605.951	1.569
			Max. My	14	-46.121	0.284	-2659.461
			Max. Vy	20	-27.862	2605.951	1.569
			Max. Vx	14	28.371	0.284	-2659.461
			Max. Torque	18			-0.789
L34	42 - 37	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-72.988	1.771	3.519
			Max. Mx	20	-47.642	2745.253	1.623
			Max. My	14	-47.604	0.295	-2801.236
			Max. Vy	20	-27.914	2745.253	1.623
			Max. Vx	14	28.418	0.295	-2801.236
			Max. Torque	18			-0.789
L35	37 - 32	Pole	Max Tension	1	0.000	0.000	0.000

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	26	-74.693	1.847	3.623
			Max. Mx	20	-49.141	2884.764	1.676
			Max. My	14	-49.111	0.307	-2943.191
			Max. Vy	20	-27.946	2884.764	1.676
			Max. Vx	14	28.445	0.307	-2943.191
			Max. Torque	18			-0.788
L36	32 - 27.913	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-76.164	1.898	3.706
			Max. Mx	20	-50.384	2998.886	1.719
			Max. My	14	-50.359	0.317	-3059.289
			Max. Vy	20	-27.958	2998.886	1.719
			Max. Vx	14	28.452	0.317	-3059.289
			Max. Torque	18			-0.788
L37	27.913 - 27.663	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-76.290	1.902	3.713
			Max. Mx	20	-50.507	3005.869	1.722
			Max. My	14	-50.483	0.317	-3066.393
			Max. Vy	20	-27.942	3005.869	1.722
			Max. Vx	14	28.435	0.317	-3066.393
			Max. Torque	18			-0.788
L38	27.663 - 27.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-76.497	1.908	3.721
			Max. Mx	20	-50.682	3017.408	1.726
			Max. My	14	-50.658	0.318	-3078.130
			Max. Vy	20	-27.953	3017.408	1.726
			Max. Vx	14	28.446	0.318	-3078.130
			Max. Torque	18			-0.788
L39	27.25 - 26.983	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-76.623	1.913	3.727
			Max. Mx	20	-50.790	3024.871	1.729
			Max. My	14	-50.766	0.319	-3085.721
			Max. Vy	20	-27.960	3024.871	1.729
			Max. Vx	14	28.452	0.319	-3085.721
			Max. Torque	18			-0.787
L40	26.983 - 26.833	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-76.694	1.915	3.731
			Max. Mx	20	-50.851	3029.064	1.731
			Max. My	14	-50.828	0.319	-3089.987
			Max. Vy	20	-27.972	3029.064	1.731
			Max. Vx	14	28.465	0.319	-3089.987
			Max. Torque	18			-0.787
L41	26.833 - 21.833	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-79.013	1.993	3.834
			Max. Mx	20	-52.840	3169.162	1.784
			Max. My	14	-52.821	0.331	-3232.477
			Max. Vy	20	-28.100	3169.162	1.784
			Max. Vx	14	28.590	0.331	-3232.477
			Max. Torque	18			-0.787
L42	21.833 - 16.833	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-81.325	2.072	3.939
			Max. Mx	20	-54.863	3309.867	1.838
			Max. My	14	-54.848	0.344	-3375.553
			Max. Vy	20	-28.218	3309.867	1.838
			Max. Vx	14	28.704	0.344	-3375.553
			Max. Torque	18			-0.787
L43	16.833 - 16	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-81.723	2.085	3.957

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Mx	20	-55.205	3333.365	1.847
			Max. My	14	-55.191	0.346	-3399.443
			Max. Vy	20	-28.234	3333.365	1.847
			Max. Vx	14	28.718	0.346	-3399.443
			Max. Torque	18			-0.787
L44	16 - 15.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-81.861	2.090	3.963
			Max. Mx	20	-55.332	3340.420	1.849
			Max. My	14	-55.319	0.346	-3406.617
			Max. Vy	20	-28.230	3340.420	1.849
			Max. Vx	14	28.715	0.346	-3406.617
			Max. Torque	18			-0.787
L45	15.75 - 14.747	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-82.424	2.091	3.978
			Max. Mx	20	-55.804	3368.747	1.860
			Max. My	14	-55.791	0.349	-3435.416
			Max. Vy	20	-28.273	3368.747	1.860
			Max. Vx	14	28.757	0.349	-3435.416
			Max. Torque	18			-0.787
L46	14.747 - 14.497	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-82.538	2.090	3.982
			Max. Mx	20	-55.906	3375.812	1.863
			Max. My	14	-55.894	0.350	-3442.599
			Max. Vy	20	-28.267	3375.812	1.863
			Max. Vx	14	28.750	0.350	-3442.599
			Max. Torque	18			-0.787
L47	14.497 - 12.083	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-83.641	2.083	4.016
			Max. Mx	20	-56.819	3444.047	1.889
			Max. My	14	-56.808	0.356	-3511.965
			Max. Vy	20	-28.307	3444.047	1.889
			Max. Vx	14	28.788	0.356	-3511.965
			Max. Torque	18			-0.787
L48	12.083 - 11.833	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-83.773	2.082	4.020
			Max. Mx	20	-56.946	3451.116	1.891
			Max. My	14	-56.937	0.356	-3519.151
			Max. Vy	20	-28.282	3451.116	1.891
			Max. Vx	14	28.763	0.356	-3519.151
			Max. Torque	18			-0.787
L49	11.833 - 10	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-84.729	2.097	4.047
			Max. Mx	20	-57.745	3502.996	1.911
			Max. My	14	-57.737	0.361	-3571.886
			Max. Vy	20	-28.362	3502.996	1.911
			Max. Vx	14	28.842	0.361	-3571.886
			Max. Torque	18			-0.787
L50	10 - 9.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-84.859	2.100	4.052
			Max. Mx	20	-57.874	3510.079	1.913
			Max. My	14	-57.866	0.362	-3579.085
			Max. Vy	20	-28.337	3510.079	1.913
			Max. Vx	14	28.816	0.362	-3579.085
			Max. Torque	18			-0.787
L51	9.75 - 4.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-87.407	2.162	4.129
			Max. Mx	20	-60.106	3652.055	1.967
			Max. My	14	-60.102	0.375	-3723.378

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	20	-28.473	3652.055	1.967
			Max. Vx	14	28.948	0.375	-3723.378
			Max. Torque	18			-0.787
L52	4.75 - 0	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-89.777	2.221	4.203
			Max. Mx	20	-62.255	3787.472	2.018
			Max. My	14	-62.255	0.387	-3860.975
			Max. Vy	20	-28.584	3787.472	2.018
			Max. Vx	14	29.055	0.387	-3860.975
			Max. Torque	18			-0.787

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	27	89.777	0.001	7.589
	Max. H_x	20	62.268	28.557	0.002
	Max. H_z	2	62.268	0.002	28.973
	Max. M_x	2	3855.440	0.002	28.973
	Max. M_z	8	3780.761	-28.525	-0.002
	Max. Torsion	6	0.785	-25.425	14.699
	Min. Vert	23	46.701	25.163	14.551
	Min. H_x	8	62.268	-28.525	-0.002
	Min. H_z	14	62.268	-0.002	-29.027
	Min. M_x	14	-3860.975	-0.002	-29.027
	Min. M_z	20	-3787.472	28.557	0.002
	Min. Torsion	18	-0.787	25.378	-14.672

Tower Mast Reaction Summary

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	51.890	0.000	0.000	-1.280	0.542	0.000
1.2 Dead+1.0 Wind 0 deg - No Ice	62.268	-0.002	-28.973	-3855.440	1.053	-0.218
0.9 Dead+1.0 Wind 0 deg - No Ice	46.701	-0.002	-28.973	-3751.257	0.848	-0.213
1.2 Dead+1.0 Wind 30 deg - No Ice	62.268	14.309	-24.824	-3292.146	-1894.629	-0.583
0.9 Dead+1.0 Wind 30 deg - No Ice	46.701	14.309	-24.824	-3203.188	-1843.855	-0.570
1.2 Dead+1.0 Wind 60 deg - No Ice	62.268	25.425	-14.699	-1941.197	-3351.661	-0.785
0.9 Dead+1.0 Wind 60 deg - No Ice	46.701	25.425	-14.699	-1888.636	-3261.808	-0.768
1.2 Dead+1.0 Wind 90 deg - No Ice	62.268	28.525	0.002	-1.352	-3780.761	-0.781
0.9 Dead+1.0 Wind 90 deg - No Ice	46.701	28.525	0.002	-0.905	-3679.233	-0.765
1.2 Dead+1.0 Wind 120 deg - No Ice	62.268	25.117	14.524	1927.888	-3333.779	-0.569

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
0.9 Dead+1.0 Wind 120 deg - No Ice	46.701	25.117	14.524	1876.436	-3244.287	-0.557
1.2 Dead+1.0 Wind 150 deg - No Ice	62.268	14.287	24.780	3285.251	-1892.978	-0.201
0.9 Dead+1.0 Wind 150 deg - No Ice	46.701	14.287	24.780	3197.268	-1842.229	-0.197
1.2 Dead+1.0 Wind 180 deg - No Ice	62.268	0.002	29.027	3860.975	0.387	0.216
0.9 Dead+1.0 Wind 180 deg - No Ice	46.701	0.002	29.027	3757.456	0.201	0.211
1.2 Dead+1.0 Wind 210 deg - No Ice	62.268	-14.293	24.796	3284.200	1893.427	0.582
0.9 Dead+1.0 Wind 210 deg - No Ice	46.701	-14.293	24.796	3196.290	1842.339	0.570
1.2 Dead+1.0 Wind 240 deg - No Ice	62.268	-25.378	14.672	1933.360	3345.362	0.787
0.9 Dead+1.0 Wind 240 deg - No Ice	46.701	-25.378	14.672	1881.840	3255.341	0.770
1.2 Dead+1.0 Wind 270 deg - No Ice	62.268	-28.557	-0.002	-2.018	3787.472	0.784
0.9 Dead+1.0 Wind 270 deg - No Ice	46.701	-28.557	-0.002	-1.552	3685.400	0.767
1.2 Dead+1.0 Wind 300 deg - No Ice	62.268	-25.163	-14.551	-1935.729	3342.965	0.569
0.9 Dead+1.0 Wind 300 deg - No Ice	46.701	-25.163	-14.551	-1883.235	3252.855	0.557
1.2 Dead+1.0 Wind 330 deg - No Ice	62.268	-14.271	-24.753	-3284.081	1891.797	0.199
0.9 Dead+1.0 Wind 330 deg - No Ice	46.701	-14.271	-24.753	-3195.310	1840.728	0.195
1.2 Dead+1.0 Ice+1.0 Temp	89.777	-0.000	-0.000	-4.203	2.221	0.000
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	89.777	-0.001	-7.589	-1051.844	2.424	-0.065
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	89.777	3.763	-6.524	-903.083	-515.667	-0.171
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	89.777	6.564	-3.792	-527.684	-902.742	-0.225
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	89.777	7.516	0.001	-4.290	-1031.745	-0.222
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	89.777	6.555	3.787	518.061	-901.089	-0.159
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	89.777	3.762	6.520	893.619	-515.396	-0.050
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	89.777	0.001	7.600	1045.086	2.217	0.065
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	89.777	-3.760	6.518	893.266	519.713	0.171
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	89.777	-6.554	3.786	517.882	905.626	0.225
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	89.777	-7.523	-0.001	-4.497	1037.574	0.222
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	89.777	-6.564	-3.793	-527.862	907.486	0.159
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	89.777	-3.759	-6.514	-901.376	519.442	0.050
Dead+Wind 0 deg - Service	51.890	-0.001	-7.069	-928.844	0.677	-0.054
Dead+Wind 30 deg - Service	51.890	3.491	-6.057	-793.217	-455.504	-0.146
Dead+Wind 60 deg - Service	51.890	6.203	-3.586	-468.177	-806.216	-0.197
Dead+Wind 90 deg - Service	51.890	6.960	0.001	-1.321	-909.364	-0.197
Dead+Wind 120 deg - Service	51.890	6.128	3.544	462.968	-801.887	-0.144
Dead+Wind 150 deg - Service	51.890	3.486	6.046	789.566	-455.106	-0.051

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
Dead+Wind 180 deg - Service	51.890	0.001	7.082	928.203	0.517	0.053
Dead+Wind 210 deg - Service	51.890	-3.488	6.050	789.312	456.060	0.146
Dead+Wind 240 deg - Service	51.890	-6.192	3.580	464.295	805.538	0.198
Dead+Wind 270 deg - Service	51.890	-6.968	-0.001	-1.480	911.832	0.197
Dead+Wind 300 deg - Service	51.890	-6.140	-3.550	-466.850	804.953	0.144
Dead+Wind 330 deg - Service	51.890	-3.482	-6.040	-791.265	455.663	0.051

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX	PY	PZ	PX	PY	PZ	% Error
	K	K	K	K	K	K	
1	0.000	-51.890	0.000	0.000	51.890	0.000	0.000%
2	-0.002	-62.268	-28.973	0.002	62.268	28.973	0.000%
3	-0.002	-46.701	-28.973	0.002	46.701	28.973	0.000%
4	14.309	-62.268	-24.824	-14.309	62.268	24.824	0.000%
5	14.309	-46.701	-24.824	-14.309	46.701	24.824	0.000%
6	25.425	-62.268	-14.699	-25.425	62.268	14.699	0.000%
7	25.425	-46.701	-14.699	-25.425	46.701	14.699	0.000%
8	28.525	-62.268	0.002	-28.525	62.268	-0.002	0.000%
9	28.525	-46.701	0.002	-28.525	46.701	-0.002	0.000%
10	25.117	-62.268	14.524	-25.117	62.268	-14.524	0.000%
11	25.117	-46.701	14.524	-25.117	46.701	-14.524	0.000%
12	14.287	-62.268	24.780	-14.287	62.268	-24.780	0.000%
13	14.287	-46.701	24.780	-14.287	46.701	-24.780	0.000%
14	0.002	-62.268	29.027	-0.002	62.268	-29.027	0.000%
15	0.002	-46.701	29.027	-0.002	46.701	-29.027	0.000%
16	-14.293	-62.268	24.796	14.293	62.268	-24.796	0.000%
17	-14.293	-46.701	24.796	14.293	46.701	-24.796	0.000%
18	-25.378	-62.268	14.672	25.378	62.268	-14.672	0.000%
19	-25.378	-46.701	14.672	25.378	46.701	-14.672	0.000%
20	-28.557	-62.268	-0.002	28.557	62.268	0.002	0.000%
21	-28.557	-46.701	-0.002	28.557	46.701	0.002	0.000%
22	-25.163	-62.268	-14.551	25.163	62.268	14.551	0.000%
23	-25.163	-46.701	-14.551	25.163	46.701	14.551	0.000%
24	-14.271	-62.268	-24.753	14.271	62.268	24.753	0.000%
25	-14.271	-46.701	-24.753	14.271	46.701	24.753	0.000%
26	0.000	-89.777	0.000	0.000	89.777	0.000	0.000%
27	-0.001	-89.777	-7.589	0.001	89.777	7.589	0.000%
28	3.763	-89.777	-6.524	-3.763	89.777	6.524	0.000%
29	6.564	-89.777	-3.792	-6.564	89.777	3.792	0.000%
30	7.516	-89.777	0.001	-7.516	89.777	-0.001	0.000%
31	6.555	-89.777	3.787	-6.555	89.777	-3.787	0.000%
32	3.762	-89.777	6.520	-3.762	89.777	-6.520	0.000%
33	0.001	-89.777	7.600	-0.001	89.777	-7.600	0.000%
34	-3.760	-89.777	6.518	3.760	89.777	-6.518	0.000%
35	-6.554	-89.777	3.786	6.554	89.777	-3.786	0.000%
36	-7.523	-89.777	-0.001	7.523	89.777	0.001	0.000%
37	-6.564	-89.777	-3.793	6.564	89.777	3.793	0.000%
38	-3.759	-89.777	-6.514	3.759	89.777	6.514	0.000%
39	-0.001	-51.890	-7.069	0.001	51.890	7.069	0.000%
40	3.491	-51.890	-6.057	-3.491	51.890	6.057	0.000%
41	6.203	-51.890	-3.586	-6.203	51.890	3.586	0.000%
42	6.960	-51.890	0.001	-6.960	51.890	-0.001	0.000%
43	6.128	-51.890	3.544	-6.128	51.890	-3.544	0.000%
44	3.486	-51.890	6.046	-3.486	51.890	-6.046	0.000%
45	0.001	-51.890	7.082	-0.001	51.890	-7.082	0.000%
46	-3.488	-51.890	6.050	3.488	51.890	-6.050	0.000%

Load Comb.	Sum of Applied Forces PX K	PY K	PZ K	Sum of Reactions PX K	PY K	PZ K	% Error
47	-6.192	-51.890	3.580	6.192	51.890	-3.580	0.000%
48	-6.968	-51.890	-0.001	6.968	51.890	0.001	0.000%
49	-6.140	-51.890	-3.550	6.140	51.890	3.550	0.000%
50	-3.482	-51.890	-6.040	3.482	51.890	6.040	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	6	0.00000001	0.00063563
3	Yes	6	0.00000001	0.00018181
4	Yes	8	0.00000001	0.00089769
5	Yes	8	0.00000001	0.00015471
6	Yes	8	0.00000001	0.00093297
7	Yes	8	0.00000001	0.00015944
8	Yes	6	0.00000001	0.00094566
9	Yes	6	0.00000001	0.00030643
10	Yes	8	0.00000001	0.00091655
11	Yes	8	0.00000001	0.00015671
12	Yes	8	0.00000001	0.00090174
13	Yes	8	0.00000001	0.00015572
14	Yes	6	0.00000001	0.00062108
15	Yes	6	0.00000001	0.00017574
16	Yes	8	0.00000001	0.00090478
17	Yes	8	0.00000001	0.00015641
18	Yes	8	0.00000001	0.00091696
19	Yes	8	0.00000001	0.00015657
20	Yes	6	0.00000001	0.00097345
21	Yes	6	0.00000001	0.00031649
22	Yes	8	0.00000001	0.00092962
23	Yes	8	0.00000001	0.00015889
24	Yes	8	0.00000001	0.00089904
25	Yes	8	0.00000001	0.00015519
26	Yes	5	0.00000001	0.00045408
27	Yes	8	0.00000001	0.00057332
28	Yes	8	0.00000001	0.00087452
29	Yes	8	0.00000001	0.00089498
30	Yes	8	0.00000001	0.00056181
31	Yes	8	0.00000001	0.00087499
32	Yes	8	0.00000001	0.00086608
33	Yes	8	0.00000001	0.00056898
34	Yes	8	0.00000001	0.00087321
35	Yes	8	0.00000001	0.00087877
36	Yes	8	0.00000001	0.00056526
37	Yes	8	0.00000001	0.00089952
38	Yes	8	0.00000001	0.00087948
39	Yes	6	0.00000001	0.00010965
40	Yes	6	0.00000001	0.00099524
41	Yes	7	0.00000001	0.00011806
42	Yes	6	0.00000001	0.00011408
43	Yes	7	0.00000001	0.00011258
44	Yes	7	0.00000001	0.00010933
45	Yes	6	0.00000001	0.00010952
46	Yes	7	0.00000001	0.00011049
47	Yes	7	0.00000001	0.00011274

48	Yes	6	0.00000001	0.00011457
49	Yes	7	0.00000001	0.00011730
50	Yes	7	0.00000001	0.00010903

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	160 - 155	41.037	41	2.361	0.002
L2	155 - 150	38.568	41	2.351	0.002
L3	150 - 148.5	36.144	41	2.270	0.002
L4	148.5 - 148	35.438	41	2.229	0.002
L5	148 - 143	35.205	41	2.228	0.002
L6	143 - 138	32.887	41	2.200	0.002
L7	138 - 133	30.606	41	2.158	0.001
L8	133 - 128	28.376	41	2.102	0.001
L9	128 - 123	26.212	41	2.032	0.001
L10	123 - 118	24.128	41	1.949	0.001
L11	118 - 111	22.136	41	1.854	0.001
L12	114.75 - 109.75	20.898	41	1.787	0.001
L13	109.75 - 105.333	19.055	41	1.725	0.001
L14	105.333 - 105.083	17.501	41	1.635	0.001
L15	105.083 - 100.083	17.415	41	1.632	0.001
L16	100.083 - 95.083	15.744	41	1.559	0.001
L17	95.083 - 92.5	14.151	41	1.483	0.001
L18	92.5 - 92.25	13.360	41	1.443	0.001
L19	92.25 - 87.25	13.284	41	1.440	0.001
L20	87.25 - 82.25	11.808	41	1.381	0.001
L21	82.25 - 76.75	10.394	41	1.319	0.001
L22	81 - 75.75	10.051	41	1.303	0.001
L23	75.75 - 70.75	8.642	41	1.249	0.000
L24	70.75 - 70.583	7.390	41	1.142	0.000
L25	70.583 - 70.333	7.350	41	1.139	0.000
L26	70.333 - 70	7.291	41	1.135	0.000
L27	70 - 69.75	7.212	41	1.131	0.000
L28	69.75 - 64.75	7.153	41	1.126	0.000
L29	64.75 - 59.75	6.030	41	1.019	0.000
L30	59.75 - 54.75	5.019	41	0.912	0.000
L31	54.75 - 49.75	4.119	41	0.805	0.000
L32	49.75 - 43	3.332	41	0.699	0.000
L33	48 - 42	3.082	41	0.662	0.000
L34	42 - 37	2.289	41	0.593	0.000
L35	37 - 32	1.717	41	0.498	0.000
L36	32 - 27.913	1.245	41	0.404	0.000
L37	27.913 - 27.663	0.932	41	0.328	0.000
L38	27.663 - 27.25	0.914	41	0.325	0.000
L39	27.25 - 26.983	0.886	41	0.320	0.000
L40	26.983 - 26.833	0.869	41	0.317	0.000
L41	26.833 - 21.833	0.859	41	0.315	0.000
L42	21.833 - 16.833	0.561	41	0.254	0.000
L43	16.833 - 16	0.327	41	0.194	0.000
L44	16 - 15.75	0.294	41	0.184	0.000
L45	15.75 - 14.747	0.284	41	0.181	0.000
L46	14.747 - 14.497	0.247	41	0.171	0.000
L47	14.497 - 12.083	0.238	41	0.167	0.000
L48	12.083 - 11.833	0.163	41	0.129	0.000
L49	11.833 - 10	0.157	41	0.126	0.000
L50	10 - 9.75	0.112	41	0.107	0.000
L51	9.75 - 4.75	0.106	41	0.104	0.000

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L52	4.75 - 0	0.025	41	0.051	0.000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
157.000	80010966 w/ Mount Pipe	41	39.553	2.358	0.002	6714
148.000	VV-65B-R1_TMO w/ Mount Pipe	41	35.205	2.228	0.002	4496
145.000	(2) L3x3x1/4x6'	41	33.811	2.215	0.002	8449
138.000	(2) NNHH-65B-R4 w/ Mount Pipe	41	30.606	2.158	0.001	5919
127.000	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	41	25.788	2.016	0.001	3638
119.000	MX08FRO665-21 w/ Mount Pipe	41	22.526	1.875	0.001	2963
48.000	KS24019-L112A	41	3.082	0.662	0.000	3753

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	160 - 155	170.470	14	9.828	0.009
L2	155 - 150	160.241	14	9.786	0.008
L3	150 - 148.5	150.191	14	9.452	0.006
L4	148.5 - 148	147.261	14	9.286	0.006
L5	148 - 143	146.293	14	9.279	0.006
L6	143 - 138	136.675	14	9.165	0.006
L7	138 - 133	127.206	14	8.992	0.006
L8	133 - 128	117.945	14	8.760	0.005
L9	128 - 123	108.957	14	8.468	0.005
L10	123 - 118	100.298	14	8.123	0.004
L11	118 - 111	92.024	14	7.730	0.004
L12	114.75 - 109.75	86.879	6	7.450	0.004
L13	109.75 - 105.333	79.230	6	7.190	0.003
L14	105.333 - 105.083	72.777	6	6.819	0.003
L15	105.083 - 100.083	72.421	6	6.805	0.003
L16	100.083 - 95.083	65.481	6	6.501	0.003
L17	95.083 - 92.5	58.862	6	6.185	0.002
L18	92.5 - 92.25	55.572	6	6.016	0.002
L19	92.25 - 87.25	55.259	6	6.004	0.002
L20	87.25 - 82.25	49.120	6	5.756	0.002
L21	82.25 - 76.75	43.243	6	5.499	0.002
L22	81 - 75.75	41.816	6	5.434	0.002
L23	75.75 - 70.75	35.956	6	5.206	0.002
L24	70.75 - 70.583	30.749	6	4.760	0.002
L25	70.583 - 70.333	30.583	6	4.745	0.002
L26	70.333 - 70	30.335	6	4.733	0.002
L27	70 - 69.75	30.007	6	4.716	0.002
L28	69.75 - 64.75	29.761	6	4.693	0.002
L29	64.75 - 59.75	25.088	6	4.247	0.001
L30	59.75 - 54.75	20.881	6	3.800	0.001
L31	54.75 - 49.75	17.139	6	3.355	0.001

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L32	49.75 - 43	13.861	6	2.912	0.001
L33	48 - 42	12.823	6	2.758	0.001
L34	42 - 37	9.520	6	2.469	0.001
L35	37 - 32	7.143	6	2.073	0.001
L36	32 - 27.913	5.178	6	1.682	0.001
L37	27.913 - 27.663	3.873	6	1.366	0.000
L38	27.663 - 27.25	3.802	6	1.354	0.000
L39	27.25 - 26.983	3.686	6	1.333	0.000
L40	26.983 - 26.833	3.612	6	1.319	0.000
L41	26.833 - 21.833	3.571	6	1.312	0.000
L42	21.833 - 16.833	2.331	6	1.056	0.000
L43	16.833 - 16	1.357	6	0.805	0.000
L44	16 - 15.75	1.220	6	0.763	0.000
L45	15.75 - 14.747	1.181	6	0.753	0.000
L46	14.747 - 14.497	1.027	6	0.712	0.000
L47	14.497 - 12.083	0.990	6	0.696	0.000
L48	12.083 - 11.833	0.679	6	0.536	0.000
L49	11.833 - 10	0.651	6	0.525	0.000
L50	10 - 9.75	0.465	6	0.444	0.000
L51	9.75 - 4.75	0.442	6	0.433	0.000
L52	4.75 - 0	0.105	6	0.211	0.000

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
157.000	80010966 w/ Mount Pipe	14	164.324	9.816	0.008	1739
148.000	VV-65B-R1_TMO w/ Mount Pipe	14	146.293	9.279	0.006	1150
145.000	(2) L3x3x1/4x6'	14	140.509	9.228	0.006	2148
138.000	(2) NNHH-65B-R4 w/ Mount Pipe	14	127.206	8.992	0.006	1495
127.000	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	14	107.197	8.403	0.005	911
119.000	MX08FRO665-21 w/ Mount Pipe	14	93.644	7.817	0.004	737
48.000	KS24019-L112A	6	12.823	2.758	0.001	905

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L1	160 - 155 (1)	TP10.75x10.75x0.349	5.000	0.000	0.0	11.404	-4.603	359.220	0.013
L2	155 - 150 (2)	TP10.75x10.75x0.349	5.000	0.000	0.0	11.404	-5.508	359.220	0.015
L3	150 - 148.5 (3)	TP10.75x10.75x0.349	1.500	0.000	0.0	11.404	-5.787	359.220	0.016
L4	148.5 - 148 (4)	TP23x23x0.349	0.500	0.000	0.0	24.835	-5.909	782.300	0.008
L5	148 - 143 (5)	TP23.81x23x0.25	5.000	0.000	0.0	18.695	-11.871	1009.520	0.012
L6	143 - 138 (6)	TP24.62x23.81x0.25	5.000	0.000	0.0	19.338	-12.715	1044.230	0.012
L7	138 - 133 (7)	TP25.43x24.62x0.25	5.000	0.000	0.0	19.980	-16.947	1078.940	0.016

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L8	133 - 128 (8)	TP26.24x25.43x0.25	5.000	0.000	0.0	20.623	-17.573	1113.650	0.016
L9	128 - 123 (9)	TP27.05x26.24x0.25	5.000	0.000	0.0	21.266	-21.803	1148.350	0.019
L10	123 - 118 (10)	TP27.86x27.05x0.25	5.000	0.000	0.0	21.909	-25.165	1183.060	0.021
L11	118 - 111 (11)	TP28.994x27.86x0.25	7.000	0.000	0.0	22.326	-25.687	1205.620	0.021
L12	111 - 109.75 (12)	TP28.696x27.887x0.313	5.000	0.000	0.0	28.153	-26.877	1520.280	0.018
L13	109.75 - 105.333 (13)	TP29.412x28.696x0.313	4.417	0.000	0.0	28.863	-27.708	1558.600	0.018
L14	105.333 - 105.083 (14)	TP29.452x29.412x0.469	0.250	0.000	0.0	43.122	-27.784	2328.600	0.012
L15	105.083 - 100.083 (15)	TP30.262x29.452x0.463	5.000	0.000	0.0	43.745	-28.928	2362.250	0.012
L16	100.083 - 95.083 (16)	TP31.072x30.262x0.463	5.000	0.000	0.0	44.934	-30.108	2426.460	0.012
L17	95.083 - 92.5 (17)	TP31.491x31.072x0.456	2.583	0.000	0.0	44.942	-30.724	2426.880	0.013
L18	92.5 - 92.25 (18)	TP31.531x31.491x0.638	0.250	0.000	0.0	62.511	-30.815	3375.600	0.009
L19	92.25 - 87.25 (19)	TP32.341x31.531x0.625	5.000	0.000	0.0	62.917	-32.287	3397.510	0.010
L20	87.25 - 82.25 (20)	TP33.151x32.341x0.613	5.000	0.000	0.0	63.257	-33.791	3415.900	0.010
L21	82.25 - 76.75 (21)	TP34.042x33.151x0.613	5.500	0.000	0.0	63.651	-34.169	3437.160	0.010
L22	76.75 - 75.75 (22)	TP33.579x32.729x0.375	5.250	0.000	0.0	39.521	-36.347	2311.980	0.016
L23	75.75 - 70.75 (23)	TP34.389x33.579x0.375	5.000	0.000	0.0	40.485	-37.560	2368.380	0.016
L24	70.75 - 70.583 (24)	TP34.416x34.389x0.375	0.167	0.000	0.0	40.517	-37.619	2370.260	0.016
L25	70.583 - 70.333 (25)	TP34.456x34.416x0.675	0.250	0.000	0.0	72.375	-37.712	4233.940	0.009
L26	70.333 - 70 (26)	TP34.51x34.456x0.675	0.333	0.000	0.0	72.491	-37.834	4240.700	0.009
L27	70 - 69.75 (27)	TP34.551x34.51x0.375	0.250	0.000	0.0	40.678	-37.894	2379.650	0.016
L28	69.75 - 64.75 (28)	TP35.361x34.551x0.375	5.000	0.000	0.0	41.642	-39.110	2436.050	0.016
L29	64.75 - 59.75 (29)	TP36.171x35.361x0.375	5.000	0.000	0.0	42.606	-40.376	2492.440	0.016
L30	59.75 - 54.75 (30)	TP36.981x36.171x0.375	5.000	0.000	0.0	43.570	-41.666	2548.840	0.016
L31	54.75 - 49.75 (31)	TP37.791x36.981x0.375	5.000	0.000	0.0	44.534	-42.978	2605.230	0.016
L32	49.75 - 43 (32)	TP38.884x37.791x0.375	6.750	0.000	0.0	44.871	-43.426	2624.970	0.017
L33	43 - 42 (33)	TP38.296x37.324x0.438	6.000	0.000	0.0	52.571	-46.112	3075.420	0.015
L34	42 - 37 (34)	TP39.106x38.296x0.438	5.000	0.000	0.0	53.696	-47.596	3141.220	0.015
L35	37 - 32 (35)	TP39.916x39.106x0.438	5.000	0.000	0.0	54.821	-49.105	3207.020	0.015
L36	32 - 27.913 (36)	TP40.578x39.916x0.438	4.087	0.000	0.0	55.740	-50.354	3260.810	0.015
L37	27.913 - 27.663 (37)	TP40.619x40.578x0.675	0.250	0.000	0.0	85.577	-50.477	5006.270	0.010
L38	27.663 - 27.25 (38)	TP40.686x40.619x0.675	0.413	0.000	0.0	85.721	-50.653	5014.650	0.010
L39	27.25 - 26.983 (39)	TP40.729x40.686x0.675	0.267	0.000	0.0	85.813	-50.761	5020.080	0.010
L40	26.983 - 26.833 (40)	TP40.753x40.729x0.663	0.150	0.000	0.0	84.301	-50.822	4931.640	0.010
L41	26.833 - 21.833 (41)	TP41.563x40.753x0.663	5.000	0.000	0.0	86.005	-52.816	5031.280	0.010
L42	21.833 -	TP42.373x41.563x0.663	5.000	0.000	0.0	87.708	-54.845	5130.920	0.011

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L43	16.833 (42) 16.833 - 16 (43)	TP42.508x42.373x0.663	0.833	0.000	0.0	87.992	-55.188	5147.520	0.011
L44	16 - 15.75 (44)	TP42.549x42.508x0.813	0.250	0.000	0.0	107.632	-55.315	6296.470	0.009
L45	15.75 - 14.747 (45)	TP42.711x42.549x0.813	1.003	0.000	0.0	108.051	-55.788	6320.980	0.009
L46	14.747 - 14.497 (46)	TP42.752x42.711x0.488	0.250	0.000	0.0	65.396	-55.890	3825.680	0.015
L47	14.497 - 12.083 (47)	TP43.143x42.752x0.488	2.414	0.000	0.0	66.001	-56.805	3861.070	0.015
L48	12.083 - 11.833 (48)	TP43.183x43.143x0.738	0.250	0.000	0.0	99.358	-56.934	5812.420	0.010
L49	11.833 - 10 (49)	TP43.48x43.183x0.738	1.833	0.000	0.0	100.053	-57.734	5853.090	0.010
L50	10 - 9.75 (50)	TP43.521x43.48x0.738	0.250	0.000	0.0	100.148	-57.863	5858.630	0.010
L51	9.75 - 4.75 (51)	TP44.331x43.521x0.725	5.000	0.000	0.0	100.343	-60.100	5870.050	0.010
L52	4.75 - 0 (52)	TP45.1x44.331x0.713	4.750	0.000	0.0	100.381	-62.254	5872.300	0.011

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	160 - 155 (1)	TP10.75x10.75x0.349	18.291	99.144	0.184	0.000	99.144	0.000
L2	155 - 150 (2)	TP10.75x10.75x0.349	54.600	99.144	0.551	0.000	99.144	0.000
L3	150 - 148.5 (3)	TP10.75x10.75x0.349	66.084	99.144	0.667	0.000	99.144	0.000
L4	148.5 - 148 (4)	TP23x23x0.349	69.979	458.290	0.153	0.000	458.290	0.000
L5	148 - 143 (5)	TP23.81x23x0.25	133.407	619.446	0.215	0.000	619.446	0.000
L6	143 - 138 (6)	TP24.62x23.81x0.25	202.071	663.003	0.305	0.000	663.003	0.000
L7	138 - 133 (7)	TP25.43x24.62x0.25	297.328	704.731	0.422	0.000	704.731	0.000
L8	133 - 128 (8)	TP26.24x25.43x0.25	393.749	745.141	0.528	0.000	745.141	0.000
L9	128 - 123 (9)	TP27.05x26.24x0.25	503.516	786.274	0.640	0.000	786.274	0.000
L10	123 - 118 (10)	TP27.86x27.05x0.25	617.073	828.096	0.745	0.000	828.096	0.000
L11	118 - 111 (11)	TP28.994x27.86x0.25	698.212	855.633	0.816	0.000	855.633	0.000
L12	111 - 109.75 (12)	TP28.696x27.887x0.313	824.303	1123.408	0.734	0.000	1123.408	0.000
L13	109.75 - 105.333 (13)	TP29.412x28.696x0.313	936.792	1181.075	0.793	0.000	1181.075	0.000
L14	105.333 - 105.083 (14)	TP29.452x29.412x0.469	943.192	1748.142	0.540	0.000	1748.142	0.000
L15	105.083 - 100.083 (15)	TP30.262x29.452x0.463	1071.800	1824.517	0.587	0.000	1824.517	0.000
L16	100.083 - 95.083 (16)	TP31.072x30.262x0.463	1201.850	1925.825	0.624	0.000	1925.825	0.000
L17	95.083 - 92.5 (17)	TP31.491x31.072x0.456	1269.575	1953.667	0.650	0.000	1953.667	0.000
L18	92.5 - 92.25 (18)	TP31.531x31.491x0.638	1276.150	2689.342	0.475	0.000	2689.342	0.000
L19	92.25 - 87.25 (19)	TP32.341x31.531x0.625	1408.517	2781.392	0.506	0.000	2781.392	0.000
L20	87.25 - 82.25 (20)	TP33.151x32.341x0.613	1542.550	2871.450	0.537	0.000	2871.450	0.000
L21	82.25 - 76.75 (21)	TP34.042x33.151x0.613	1576.308	2907.625	0.542	0.000	2907.625	0.000
L22	76.75 - 75.75 (22)	TP33.579x32.729x0.375	1719.500	1997.992	0.861	0.000	1997.992	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L23	75.75 - 70.75 (23)	TP34.389x33.579x0.375	1857.108	2097.208	0.886	0.000	2097.208	0.000
L24	70.75 - 70.583 (24)	TP34.416x34.389x0.375	1861.717	2100.567	0.886	0.000	2100.567	0.000
L25	70.583 - 70.333 (25)	TP34.456x34.416x0.675	1868.617	3690.858	0.506	0.000	3690.858	0.000
L26	70.333 - 70 (26)	TP34.51x34.456x0.675	1877.817	3702.767	0.507	0.000	3702.767	0.000
L27	70 - 69.75 (27)	TP34.551x34.51x0.375	1884.725	2117.342	0.890	0.000	2117.342	0.000
L28	69.75 - 64.75 (28)	TP35.361x34.551x0.375	2023.267	2219.442	0.912	0.000	2219.442	0.000
L29	64.75 - 59.75 (29)	TP36.171x35.361x0.375	2162.850	2321.658	0.932	0.000	2321.658	0.000
L30	59.75 - 54.75 (30)	TP36.981x36.171x0.375	2302.883	2415.300	0.953	0.000	2415.300	0.000
L31	54.75 - 49.75 (31)	TP37.791x36.981x0.375	2443.300	2510.158	0.973	0.000	2510.158	0.000
L32	49.75 - 43 (32)	TP38.884x37.791x0.375	2492.517	2543.642	0.980	0.000	2543.642	0.000
L33	43 - 42 (33)	TP38.296x37.324x0.438	2662.858	3029.533	0.879	0.000	3029.533	0.000
L34	42 - 37 (34)	TP39.106x38.296x0.438	2805.433	3161.308	0.887	0.000	3161.308	0.000
L35	37 - 32 (35)	TP39.916x39.106x0.438	2948.200	3295.892	0.895	0.000	3295.892	0.000
L36	32 - 27.913 (36)	TP40.578x39.916x0.438	3064.967	3407.983	0.899	0.000	3407.983	0.000
L37	27.913 - 27.663 (37)	TP40.619x40.578x0.675	3072.117	5175.833	0.594	0.000	5175.833	0.000
L38	27.663 - 27.25 (38)	TP40.686x40.619x0.675	3083.925	5193.333	0.594	0.000	5193.333	0.000
L39	27.25 - 26.983 (39)	TP40.729x40.686x0.675	3091.558	5204.658	0.594	0.000	5204.658	0.000
L40	26.983 - 26.833 (40)	TP40.753x40.729x0.663	3095.850	5119.317	0.605	0.000	5119.317	0.000
L41	26.833 - 21.833 (41)	TP41.563x40.753x0.663	3239.225	5329.983	0.608	0.000	5329.983	0.000
L42	21.833 - 16.833 (42)	TP42.373x41.563x0.663	3383.217	5544.900	0.610	0.000	5544.900	0.000
L43	16.833 - 16 (43)	TP42.508x42.373x0.663	3407.258	5581.117	0.610	0.000	5581.117	0.000
L44	16 - 15.75 (44)	TP42.549x42.508x0.813	3414.475	6784.708	0.503	0.000	6784.708	0.000
L45	15.75 - 14.747 (45)	TP42.711x42.549x0.813	3443.467	6838.141	0.504	0.000	6838.141	0.000
L46	14.747 - 14.497 (46)	TP42.752x42.711x0.488	3450.700	4207.208	0.820	0.000	4207.208	0.000
L47	14.497 - 12.083 (47)	TP43.143x42.752x0.488	3520.592	4285.875	0.821	0.000	4285.875	0.000
L48	12.083 - 11.833 (48)	TP43.183x43.143x0.738	3527.833	6382.700	0.553	0.000	6382.700	0.000
L49	11.833 - 10 (49)	TP43.48x43.183x0.738	3581.025	6473.091	0.553	0.000	6473.091	0.000
L50	10 - 9.75 (50)	TP43.521x43.48x0.738	3588.292	6485.467	0.553	0.000	6485.467	0.000
L51	9.75 - 4.75 (51)	TP44.331x43.521x0.725	3734.042	6627.017	0.563	0.000	6627.017	0.000
L52	4.75 - 0 (52)	TP45.1x44.331x0.713	3873.225	6752.267	0.574	0.000	6752.267	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	160 - 155 (1)	TP10.75x10.75x0.349	6.965	107.766	0.065	0.000	98.546	0.000
L2	155 - 150 (2)	TP10.75x10.75x0.349	7.575	107.766	0.070	0.124	98.546	0.001
L3	150 - 148.5 (3)	TP10.75x10.75x0.349	7.750	107.766	0.072	0.123	98.546	0.001
L4	148.5 - 148 (4)	TP23x23x0.349	7.839	234.690	0.033	0.123	467.371	0.000
L5	148 - 143 (5)	TP23.81x23x0.25	13.389	302.857	0.044	0.121	624.874	0.000
L6	143 - 138 (6)	TP24.62x23.81x0.25	14.086	313.269	0.045	0.120	668.579	0.000
L7	138 - 133 (7)	TP25.43x24.62x0.25	19.145	323.681	0.059	0.254	713.762	0.000
L8	133 - 128 (8)	TP26.24x25.43x0.25	19.442	334.094	0.058	0.254	760.422	0.000
L9	128 - 123 (9)	TP27.05x26.24x0.25	22.123	342.424	0.065	0.220	808.558	0.000
L10	123 - 118 (10)	TP27.86x27.05x0.25	24.922	352.836	0.071	0.220	858.175	0.000
L11	118 - 111 (11)	TP28.994x27.86x0.25	25.060	359.430	0.070	0.219	891.217	0.000
L12	111 - 109.75 (12)	TP28.696x27.887x0.313	25.403	452.830	0.056	0.219	1133.700	0.000
L13	109.75 - 105.333 (13)	TP29.412x28.696x0.313	25.590	464.706	0.055	0.219	1191.575	0.000
L14	105.333 - 105.083 (14)	TP29.452x29.412x0.469	25.596	698.581	0.037	0.219	1773.167	0.000
L15	105.083 - 100.083 (15)	TP30.262x29.452x0.463	25.891	704.824	0.037	0.219	1849.450	0.000
L16	100.083 - 95.083 (16)	TP31.072x30.262x0.463	26.173	724.085	0.036	0.219	1951.350	0.000
L17	95.083 - 92.5 (17)	TP31.491x31.072x0.456	26.318	723.155	0.036	0.218	1978.758	0.000
L18	92.5 - 92.25 (18)	TP31.531x31.491x0.638	26.327	1012.680	0.026	0.218	2739.817	0.000
L19	92.25 - 87.25 (19)	TP32.341x31.531x0.625	26.664	1014.050	0.026	0.218	2831.017	0.000
L20	87.25 - 82.25 (20)	TP33.151x32.341x0.613	26.990	1019.670	0.026	0.218	2920.150	0.000
L21	82.25 - 76.75 (21)	TP34.042x33.151x0.613	27.072	1024.770	0.026	0.218	2956.608	0.000
L22	76.75 - 75.75 (22)	TP33.579x32.729x0.375	27.490	690.211	0.040	0.218	2016.858	0.000
L23	75.75 - 70.75 (23)	TP34.389x33.579x0.375	27.625	707.129	0.039	0.218	2116.450	0.000
L24	70.75 - 70.583 (24)	TP34.416x34.389x0.375	27.633	711.078	0.039	0.218	2119.817	0.000
L25	70.583 - 70.333 (25)	TP34.456x34.416x0.675	27.632	1270.180	0.022	0.218	3757.717	0.000
L26	70.333 - 70 (26)	TP34.51x34.456x0.675	27.648	1272.210	0.022	0.218	3769.733	0.000
L27	70 - 69.75 (27)	TP34.551x34.51x0.375	27.662	713.896	0.039	0.218	2136.658	0.000
L28	69.75 - 64.75 (28)	TP35.361x34.551x0.375	27.896	730.815	0.038	0.633	2239.133	0.000
L29	64.75 - 59.75 (29)	TP36.171x35.361x0.375	27.997	747.733	0.037	0.632	2344.000	0.000
L30	59.75 - 54.75 (30)	TP36.981x36.171x0.375	28.081	764.652	0.037	0.631	2451.275	0.000
L31	54.75 - 49.75 (31)	TP37.791x36.981x0.375	28.148	781.570	0.036	0.630	2560.950	0.000
L32	49.75 - 43 (32)	TP38.884x37.791x0.375	28.198	787.492	0.036	0.630	2599.900	0.000
L33	43 - 42 (33)	TP38.296x37.324x0.438	28.525	922.627	0.031	0.787	3058.933	0.000
L34	42 - 37 (34)	TP39.106x38.296x0.438	28.571	942.367	0.030	0.786	3191.233	0.000
L35	37 - 32 (35)	TP39.916x39.106x0.438	28.598	962.107	0.030	0.786	3326.325	0.000
L36	32 - 27.913 (36)	TP40.578x39.916x0.438	28.611	978.242	0.029	0.786	3438.833	0.000
L37	27.913 - 27.663 (37)	TP40.619x40.578x0.675	28.590	1501.880	0.019	0.786	5253.675	0.000
L38	27.663 - 27.25 (38)	TP40.686x40.619x0.675	28.606	1504.400	0.019	0.786	5271.283	0.000

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L39	27.25 - 26.983 (39)	TP40.729x40.686x0.675	28.612	1506.020	0.019	0.786	5282.692	0.000
L40	26.983 - 26.833 (40)	TP40.753x40.729x0.663	28.615	1479.490	0.019	0.786	5194.392	0.000
L41	26.833 - 21.833 (41)	TP41.563x40.753x0.663	28.763	1509.380	0.019	0.785	5406.408	0.000
L42	21.833 - 16.833 (42)	TP42.373x41.563x0.663	28.878	1539.270	0.019	0.785	5622.667	0.000
L43	16.833 - 16 (43)	TP42.508x42.373x0.663	28.894	1544.250	0.019	0.785	5659.108	0.000
L44	16 - 15.75 (44)	TP42.549x42.508x0.813	28.888	1888.940	0.015	0.785	6904.141	0.000
L45	15.75 - 14.747 (45)	TP42.711x42.549x0.813	28.945	1896.300	0.015	0.785	6958.000	0.000
L46	14.747 - 14.497 (46)	TP42.752x42.711x0.488	28.938	1147.700	0.025	0.785	4247.958	0.000
L47	14.497 - 12.083 (47)	TP43.143x42.752x0.488	29.012	1158.320	0.025	0.785	4326.933	0.000
L48	12.083 - 11.833 (48)	TP43.183x43.143x0.738	28.988	1743.730	0.017	0.785	6481.725	0.000
L49	11.833 - 10 (49)	TP43.48x43.183x0.738	29.095	1755.930	0.017	0.785	6572.733	0.000
L50	10 - 9.75 (50)	TP43.521x43.48x0.738	29.069	1757.590	0.017	0.785	6585.200	0.000
L51	9.75 - 4.75 (51)	TP44.331x43.521x0.725	29.258	1761.020	0.017	0.785	6724.883	0.000
L52	4.75 - 0 (52)	TP45.1x44.331x0.713	29.397	1761.690	0.017	0.785	6848.100	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	160 - 155 (1)	0.013	0.184	0.000	0.065	0.000	0.201 ✔	1.050	4.8.2 ✔
L2	155 - 150 (2)	0.015	0.551	0.000	0.070	0.001	0.571 ✔	1.050	4.8.2 ✔
L3	150 - 148.5 (3)	0.016	0.667	0.000	0.072	0.001	0.688 ✔	1.050	4.8.2 ✔
L4	148.5 - 148 (4)	0.008	0.153	0.000	0.033	0.000	0.161 ✔	1.050	4.8.2 ✔
L5	148 - 143 (5)	0.012	0.215	0.000	0.044	0.000	0.229 ✔	1.050	4.8.2 ✔
L6	143 - 138 (6)	0.012	0.305	0.000	0.045	0.000	0.319 ✔	1.050	4.8.2 ✔
L7	138 - 133 (7)	0.016	0.422	0.000	0.059	0.000	0.441 ✔	1.050	4.8.2 ✔
L8	133 - 128 (8)	0.016	0.528	0.000	0.058	0.000	0.548 ✔	1.050	4.8.2 ✔
L9	128 - 123 (9)	0.019	0.640	0.000	0.065	0.000	0.664 ✔	1.050	4.8.2 ✔
L10	123 - 118 (10)	0.021	0.745	0.000	0.071	0.000	0.771 ✔	1.050	4.8.2 ✔
L11	118 - 111 (11)	0.021	0.816	0.000	0.070	0.000	0.842	1.050	4.8.2 ✔

Section No.	Elevation ft	Ratio $P_u/\phi P_n$	Ratio $M_{ux}/\phi M_{nx}$	Ratio $M_{uy}/\phi M_{ny}$	Ratio $V_u/\phi V_n$	Ratio $T_u/\phi T_n$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L12	111 - 109.75 (12)	0.018	0.734	0.000	0.056	0.000	0.755	1.050	4.8.2
L13	109.75 - 105.333 (13)	0.018	0.793	0.000	0.055	0.000	0.814	1.050	4.8.2
L14	105.333 - 105.083 (14)	0.012	0.540	0.000	0.037	0.000	0.553	1.050	4.8.2
L15	105.083 - 100.083 (15)	0.012	0.587	0.000	0.037	0.000	0.601	1.050	4.8.2
L16	100.083 - 95.083 (16)	0.012	0.624	0.000	0.036	0.000	0.638	1.050	4.8.2
L17	95.083 - 92.5 (17)	0.013	0.650	0.000	0.036	0.000	0.664	1.050	4.8.2
L18	92.5 - 92.25 (18)	0.009	0.475	0.000	0.026	0.000	0.484	1.050	4.8.2
L19	92.25 - 87.25 (19)	0.010	0.506	0.000	0.026	0.000	0.517	1.050	4.8.2
L20	87.25 - 82.25 (20)	0.010	0.537	0.000	0.026	0.000	0.548	1.050	4.8.2
L21	82.25 - 76.75 (21)	0.010	0.542	0.000	0.026	0.000	0.553	1.050	4.8.2
L22	76.75 - 75.75 (22)	0.016	0.861	0.000	0.040	0.000	0.878	1.050	4.8.2
L23	75.75 - 70.75 (23)	0.016	0.886	0.000	0.039	0.000	0.903	1.050	4.8.2
L24	70.75 - 70.583 (24)	0.016	0.886	0.000	0.039	0.000	0.904	1.050	4.8.2
L25	70.583 - 70.333 (25)	0.009	0.506	0.000	0.022	0.000	0.516	1.050	4.8.2
L26	70.333 - 70 (26)	0.009	0.507	0.000	0.022	0.000	0.517	1.050	4.8.2
L27	70 - 69.75 (27)	0.016	0.890	0.000	0.039	0.000	0.908	1.050	4.8.2
L28	69.75 - 64.75 (28)	0.016	0.912	0.000	0.038	0.000	0.929	1.050	4.8.2
L29	64.75 - 59.75 (29)	0.016	0.932	0.000	0.037	0.000	0.949	1.050	4.8.2
L30	59.75 - 54.75 (30)	0.016	0.953	0.000	0.037	0.000	0.971	1.050	4.8.2
L31	54.75 - 49.75 (31)	0.016	0.973	0.000	0.036	0.000	0.991	1.050	4.8.2
L32	49.75 - 43 (32)	0.017	0.980	0.000	0.036	0.000	0.998	1.050	4.8.2
L33	43 - 42 (33)	0.015	0.879	0.000	0.031	0.000	0.895	1.050	4.8.2
L34	42 - 37 (34)	0.015	0.887	0.000	0.030	0.000	0.904	1.050	4.8.2
L35	37 - 32 (35)	0.015	0.895	0.000	0.030	0.000	0.911	1.050	4.8.2
L36	32 - 27.913 (36)	0.015	0.899	0.000	0.029	0.000	0.916	1.050	4.8.2
L37	27.913 -	0.010	0.594	0.000	0.019	0.000	0.604	1.050	4.8.2

Section No.	Elevation ft	Ratio $P_u/\phi P_n$	Ratio $M_{ux}/\phi M_{nx}$	Ratio $M_{uy}/\phi M_{ny}$	Ratio $V_u/\phi V_n$	Ratio $T_u/\phi T_n$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	27.663 (37)						✔		
L38	27.663 - 27.25 (38)	0.010	0.594	0.000	0.019	0.000	0.604 ✔	1.050	4.8.2 ✔
L39	27.25 - 26.983 (39)	0.010	0.594	0.000	0.019	0.000	0.604 ✔	1.050	4.8.2 ✔
L40	26.983 - 26.833 (40)	0.010	0.605	0.000	0.019	0.000	0.615 ✔	1.050	4.8.2 ✔
L41	26.833 - 21.833 (41)	0.010	0.608	0.000	0.019	0.000	0.619 ✔	1.050	4.8.2 ✔
L42	21.833 - 16.833 (42)	0.011	0.610	0.000	0.019	0.000	0.621 ✔	1.050	4.8.2 ✔
L43	16.833 - 16 (43)	0.011	0.610	0.000	0.019	0.000	0.622 ✔	1.050	4.8.2 ✔
L44	16 - 15.75 (44)	0.009	0.503	0.000	0.015	0.000	0.512 ✔	1.050	4.8.2 ✔
L45	15.75 - 14.747 (45)	0.009	0.504	0.000	0.015	0.000	0.513 ✔	1.050	4.8.2 ✔
L46	14.747 - 14.497 (46)	0.015	0.820	0.000	0.025	0.000	0.835 ✔	1.050	4.8.2 ✔
L47	14.497 - 12.083 (47)	0.015	0.821	0.000	0.025	0.000	0.837 ✔	1.050	4.8.2 ✔
L48	12.083 - 11.833 (48)	0.010	0.553	0.000	0.017	0.000	0.563 ✔	1.050	4.8.2 ✔
L49	11.833 - 10 (49)	0.010	0.553	0.000	0.017	0.000	0.563 ✔	1.050	4.8.2 ✔
L50	10 - 9.75 (50)	0.010	0.553	0.000	0.017	0.000	0.563 ✔	1.050	4.8.2 ✔
L51	9.75 - 4.75 (51)	0.010	0.563	0.000	0.017	0.000	0.574 ✔	1.050	4.8.2 ✔
L52	4.75 - 0 (52)	0.011	0.574	0.000	0.017	0.000	0.585 ✔	1.050	4.8.2 ✔

Section Capacity Table

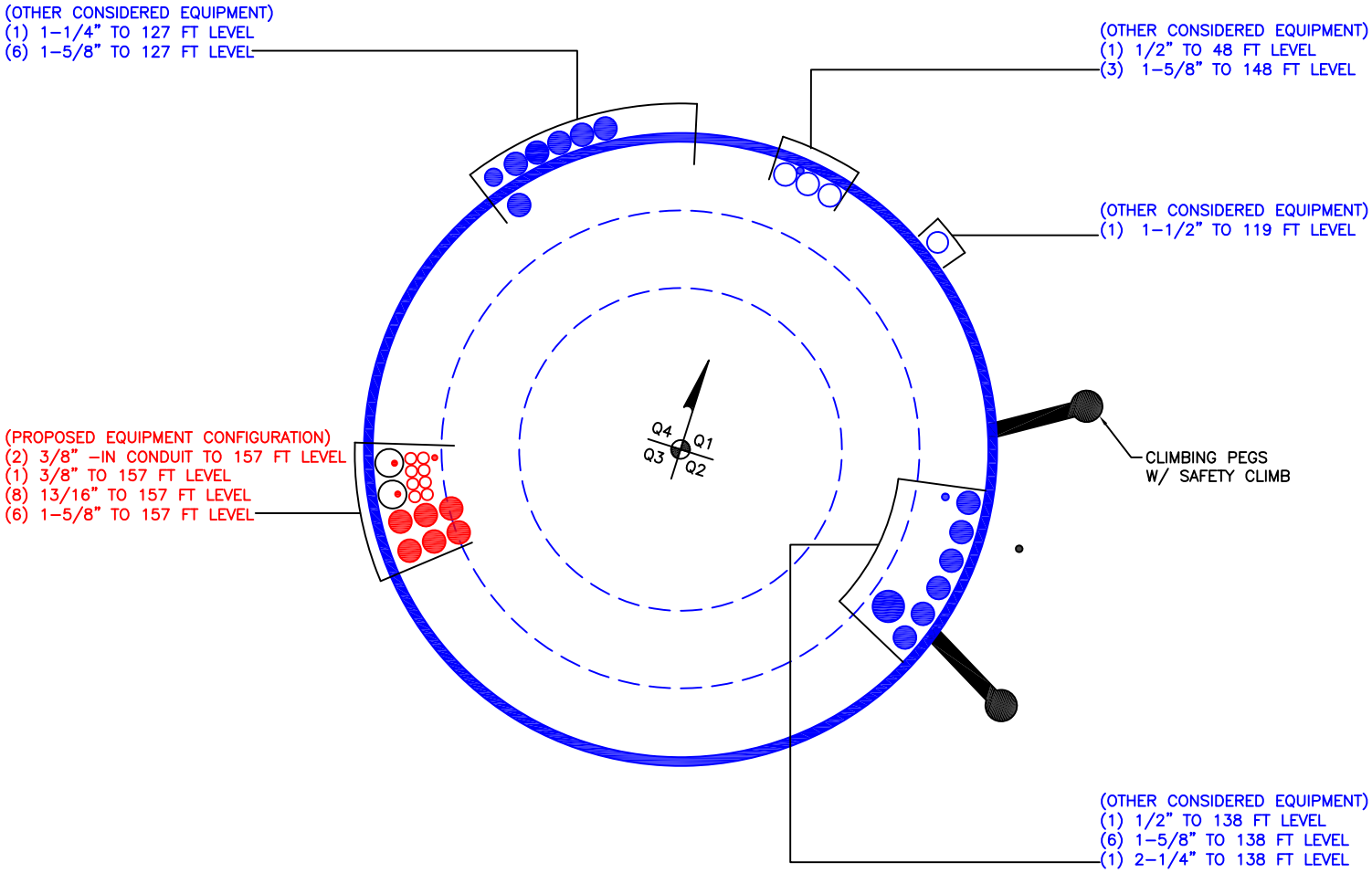
Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	160 - 155	Pole	TP10.75x10.75x0.349	1	-4.603	377.181	**	**
L2	155 - 150	Pole	TP10.75x10.75x0.349	2	-5.508	377.181	**	**
L3	150 - 148.5	Pole	TP10.75x10.75x0.349	3	-5.787	377.181	**	**
L4	148.5 - 148	Pole	TP23x23x0.349	4	-5.909	821.415	**	**
L5	148 - 143	Pole	TP23.81x23x0.25	5	-11.871	1059.996	**	**
L6	143 - 138	Pole	TP24.62x23.81x0.25	6	-12.715	1096.441	**	**
L7	138 - 133	Pole	TP25.43x24.62x0.25	7	-16.947	1132.887	**	**
L8	133 - 128	Pole	TP26.24x25.43x0.25	8	-17.573	1169.332	**	**
L9	128 - 123	Pole	TP27.05x26.24x0.25	9	-21.803	1205.767	**	**
L10	123 - 118	Pole	TP27.86x27.05x0.25	10	-25.165	1242.213	**	**
L11	118 - 111	Pole	TP28.994x27.86x0.25	11	-25.687	1265.901	**	**
L12	111 - 109.75	Pole	TP28.696x27.887x0.313	12	-26.877	1596.294	**	**

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L13	109.75 - 105.333	Pole	TP29.412x28.696x0.313	13	-27.708	1636.530	**	**
L14	105.333 - 105.083	Pole	TP29.452x29.412x0.469	14	-27.784	2445.030	**	**
L15	105.083 - 100.083	Pole	TP30.262x29.452x0.463	15	-28.928	2480.362	**	**
L16	100.083 - 95.083	Pole	TP31.072x30.262x0.463	16	-30.108	2547.783	**	**
L17	95.083 - 92.5	Pole	TP31.491x31.072x0.456	17	-30.724	2548.224	**	**
L18	92.5 - 92.25	Pole	TP31.531x31.491x0.638	18	-30.815	3544.380	**	**
L19	92.25 - 87.25	Pole	TP32.341x31.531x0.625	19	-32.287	3567.385	**	**
L20	87.25 - 82.25	Pole	TP33.151x32.341x0.613	20	-33.791	3586.695	**	**
L21	82.25 - 76.75	Pole	TP34.042x33.151x0.613	21	-34.169	3609.018	**	**
L22	76.75 - 75.75	Pole	TP33.579x32.729x0.375	22	-36.347	2427.579	**	**
L23	75.75 - 70.75	Pole	TP34.389x33.579x0.375	23	-37.560	2486.799	**	**
L24	70.75 - 70.583	Pole	TP34.416x34.389x0.375	24	-37.619	2488.773	**	**
L25	70.583 - 70.333	Pole	TP34.456x34.416x0.675	25	-37.712	4445.637	**	**
L26	70.333 - 70	Pole	TP34.51x34.456x0.675	26	-37.834	4452.735	**	**
L27	70 - 69.75	Pole	TP34.551x34.51x0.375	27	-37.894	2498.632	**	**
L28	69.75 - 64.75	Pole	TP35.361x34.551x0.375	28	-39.110	2557.852	**	**
L29	64.75 - 59.75	Pole	TP36.171x35.361x0.375	29	-40.376	2617.062	**	**
L30	59.75 - 54.75	Pole	TP36.981x36.171x0.375	30	-41.666	2676.282	**	**
L31	54.75 - 49.75	Pole	TP37.791x36.981x0.375	31	-42.978	2735.491	**	**
L32	49.75 - 43	Pole	TP38.884x37.791x0.375	32	-43.426	2756.218	**	**
L33	43 - 42	Pole	TP38.296x37.324x0.438	33	-46.112	3229.191	**	**
L34	42 - 37	Pole	TP39.106x38.296x0.438	34	-47.596	3298.281	**	**
L35	37 - 32	Pole	TP39.916x39.106x0.438	35	-49.105	3367.371	**	**
L36	32 - 27.913	Pole	TP40.578x39.916x0.438	36	-50.354	3423.850	**	**
L37	27.913 - 27.663	Pole	TP40.619x40.578x0.675	37	-50.477	5256.583	**	**
L38	27.663 - 27.25	Pole	TP40.686x40.619x0.675	38	-50.653	5265.382	**	**
L39	27.25 - 26.983	Pole	TP40.729x40.686x0.675	39	-50.761	5271.084	**	**
L40	26.983 - 26.833	Pole	TP40.753x40.729x0.663	40	-50.822	5178.222	**	**
L41	26.833 - 21.833	Pole	TP41.563x40.753x0.663	41	-52.816	5282.844	**	**
L42	21.833 - 16.833	Pole	TP42.373x41.563x0.663	42	-54.845	5387.466	**	**
L43	16.833 - 16	Pole	TP42.508x42.373x0.663	43	-55.188	5404.896	**	**
L44	16 - 15.75	Pole	TP42.549x42.508x0.813	44	-55.315	6611.293	**	**
L45	15.75 - 14.747	Pole	TP42.711x42.549x0.813	45	-55.788	6637.029	**	**
L46	14.747 - 14.497	Pole	TP42.752x42.711x0.488	46	-55.890	4016.964	**	**
L47	14.497 - 12.083	Pole	TP43.143x42.752x0.488	47	-56.805	4054.123	**	**
L48	12.083 - 11.833	Pole	TP43.183x43.143x0.738	48	-56.934	6103.041	**	**
L49	11.833 - 10	Pole	TP43.48x43.183x0.738	49	-57.734	6145.744	**	**
L50	10 - 9.75	Pole	TP43.521x43.48x0.738	50	-57.863	6151.561	**	**
L51	9.75 - 4.75	Pole	TP44.331x43.521x0.725	51	-60.100	6163.552	**	**
L52	4.75 - 0	Pole	TP45.1x44.331x0.713	52	-62.254	6165.915	**	**
							Summary	
						Pole (L32)	**	**
						RATING =	**	**

**Above stress ratios for reinforced sections are approximate. More exact calculations are presented in Appendix C.

APPENDIX B

BASE LEVEL DRAWING



BUSINESS UNIT: 876313

APPENDIX C

ADDITIONAL CALCULATIONS

CCIpole

per TIA-222- H

Site BU: 876313

Work Order: 2128450

Pole Geometry

	Pole Height Above Base (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	Wall Thickness (in)	Bend Radius (in)	Pole Material
1	160	11.5	0	0	10.75	10.75	0.349		A53-B-35
2	148.5	0.5	0	0	23.00	23	0.349		A53-B-35
3	148	37	3.75	18	23.00	28.994	0.25	Auto	A607-60
4	114.75	38	4.25	18	27.89	34.042	0.3125	Auto	A607-60
5	81	38	5	18	32.73	38.884	0.375	Auto	A607-65
6	48	48	0	18	37.32	45.1	0.4375	Auto	A607-65

Reinforcement Configuration

	Bottom Effective Elevation (ft)	Top Effective Elevation (ft)	Type	Model	Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0	27.083	channel	MP3-06 (1.1875in)	2			E1						E1									
2	0	12.083	channel	MP3-06 (1.1875in)	2													E1				E1	
3	14.747	27.913	channel	MP3-06 (1.1875in)	1															E1			
4	45.417	70.583	channel	MP3-05 (1.1875in)	3			E1						E1						E1			
5	78.167	105.333	channel	MP3-04 (1.1875in)	3			E1						E1						E1			
6	27.25	46.75	plate	CCI-SFP-065125	3						E3						E3						E3
7	10	16	plate	CCI-SFP-060100	3						E4						E4						E4
8	70	80	plate	CCI-AFP-060100	3	E5						E5				E5							
9	80.5	92.5	plate	CCI-SFP-040125	3				P						P						P		
10																							

Reinforcement Details

	B (in)	H (in)	Gross Area (in^2)	Pole Face to Centroid (in)	Bottom Termination Type	Bottom Termination Length (in)	Top Termination Type	Top Termination Length (in)	Lu (in)	Net Area (in2)	Bolt Hole Size (in)	Reinforcement Material
1	6.89	2.61	8.47	0.93	PC 8.8 - M20 (100)	41	PC 8.8 - M20 (100)	41.000	24.000	7.670	1.1875	A572-65
2	6.89	2.61	8.47	0.93	PC 8.8 - M20 (100)	41	PC 8.8 - M20 (100)	41.000	24.000	7.670	1.1875	A572-65
3	6.89	2.61	8.47	0.93	PC 8.8 - M20 (100)	41	PC 8.8 - M20 (100)	41.000	24.000	7.670	1.1875	A572-65
4	5.33	2.09	5.65	0.79	PC 8.8 - M20 (100)	29	PC 8.8 - M20 (100)	29.000	18.000	5.025	1.1875	A572-65
5	4.78	1.61	4.13	0.61	PC 8.8 - M20 (100)	17	PC 8.8 - M20 (100)	17.000	18.000	3.593	1.1875	A572-65
6	6.5	1.25	8.125	0.625	PC 8.8 - M20 (100)	33	PC 8.8 - M20 (100)	33.000	19.000	6.563	1.1875	A572-65
7	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.000	4.750	1.1875	A572-65
8	6	1	6	0.5	PC 8.8 - M20 (100)	30	PC 8.8 - M20 (100)	30.000	16.000	4.750	1.1875	A572-65
9	4	1.25	5	0.625	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	27.000	3.438	1.1875	A572-65

TNX Geometry Input

Increment (ft): 5 Export to TNX

	Section Height (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	Wall Thickness (in)	Tapered Pole Grade	Weight Multiplier
1	160 - 155	5		0	10.750	10.750	0.349	A53-B-35	1.000
2	155 - 150	5		0	10.750	10.750	0.349	A53-B-35	1.000
3	150 - 148.5	1.5	0	0	10.750	10.750	0.349	A53-B-35	1.000
4	148.5 - 148	0.5	0	0	23.000	23.000	0.349	A53-B-35	1.000
5	148 - 143	5		18	23.000	23.810	0.25	A607-60	1.000
6	143 - 138	5		18	23.810	24.620	0.25	A607-60	1.000
7	138 - 133	5		18	24.620	25.430	0.25	A607-60	1.000
8	133 - 128	5		18	25.430	26.240	0.25	A607-60	1.000
9	128 - 123	5		18	26.240	27.050	0.25	A607-60	1.000
10	123 - 118	5		18	27.050	27.860	0.25	A607-60	1.000
11	118 - 114.75	7	3.75	18	27.860	28.994	0.25	A607-60	1.000
12	114.75 - 109.75	5		18	27.887	28.696	0.3125	A607-60	1.000
13	109.75 - 105.333	4.417		18	28.696	29.412	0.3125	A607-60	1.000
14	105.333 - 105.083	0.25		18	29.412	29.452	0.46875	A607-60	0.958
15	105.083 - 100.083	5		18	29.452	30.262	0.4625	A607-60	0.962
16	100.083 - 95.083	5		18	30.262	31.072	0.4625	A607-60	0.955
17	95.083 - 92.5	2.583		18	31.072	31.491	0.45625	A607-60	0.964
18	92.5 - 92.25	0.25		18	31.491	31.531	0.6375	A607-60	0.934
19	92.25 - 87.25	5		18	31.531	32.341	0.625	A607-60	0.940
20	87.25 - 82.25	5		18	32.341	33.151	0.6125	A607-60	0.948
21	82.25 - 81	5.5	4.25	18	33.151	34.042	0.6125	A607-60	0.945
22	81 - 75.75	5.25		18	32.729	33.579	0.375	A607-65	1.000
23	75.75 - 70.75	5		18	33.579	34.389	0.375	A607-65	1.000
24	70.75 - 70.583	0.167		18	34.389	34.416	0.375	A607-65	1.000
25	70.583 - 70.333	0.25		18	34.416	34.456	0.675	A607-65	1.043
26	70.333 - 70	0.333		18	34.456	34.510	0.675	A607-65	1.043
27	70 - 69.75	0.25		18	34.510	34.551	0.375	A607-65	1.000
28	69.75 - 64.75	5		18	34.551	35.361	0.375	A607-65	1.000
29	64.75 - 59.75	5		18	35.361	36.171	0.375	A607-65	1.000
30	59.75 - 54.75	5		18	36.171	36.981	0.375	A607-65	1.000
31	54.75 - 49.75	5		18	36.981	37.791	0.375	A607-65	1.000
32	49.75 - 48	6.75	5	18	37.791	38.884	0.375	A607-65	1.000
33	48 - 42	6		18	37.324	38.296	0.4375	A607-65	1.000
34	42 - 37	5		18	38.296	39.106	0.4375	A607-65	1.000
35	37 - 32	5		18	39.106	39.916	0.4375	A607-65	1.000
36	32 - 27.913	4.087		18	39.916	40.578	0.4375	A607-65	1.000
37	27.913 - 27.663	0.25		18	40.578	40.619	0.675	A607-65	1.036
38	27.663 - 27.25	0.413		18	40.619	40.686	0.675	A607-65	1.035
39	27.25 - 26.983	0.267		18	40.686	40.729	0.675	A607-65	0.948
40	26.983 - 26.833	0.15		18	40.729	40.753	0.6625	A607-65	0.966
41	26.833 - 21.833	5		18	40.753	41.563	0.6625	A607-65	0.959
42	21.833 - 16.833	5		18	41.563	42.373	0.6625	A607-65	0.954
43	16.833 - 16	0.833		18	42.373	42.508	0.6625	A607-65	0.953
44	16 - 15.75	0.25		18	42.508	42.549	0.8125	A607-65	0.947
45	15.75 - 14.747	1.003		18	42.549	42.711	0.8125	A607-65	0.945
46	14.747 - 14.497	0.25		18	42.711	42.752	0.4875	A607-65	1.158
47	14.497 - 12.083	2.414		18	42.752	43.143	0.4875	A607-65	1.155
48	12.083 - 11.833	0.25		18	43.143	43.183	0.7375	A607-65	0.938
49	11.833 - 10	1.833		18	43.183	43.480	0.7375	A607-65	0.936
50	10 - 9.75	0.25		18	43.480	43.521	0.7375	A607-65	0.936
51	9.75 - 4.75	5		18	43.521	44.331	0.725	A607-65	0.945
52	4.75 - 0	4.75		18	44.331	45.100	0.7125	A607-65	0.955

TNX Section Forces

Increment (ft):	5	TNX Output		
	Section Height (ft)	P_u (K)	M_{ux} (kip-ft)	V_u (K)
1	160 - 155	4.60	18.29	6.97
2	155 - 150	5.51	54.60	7.57
3	150 - 148.5	5.79	66.08	7.75
4	148.5 - 148	5.91	69.98	7.84
5	148 - 143	11.87	133.41	13.39
6	143 - 138	12.71	202.07	14.09
7	138 - 133	16.95	297.33	19.14
8	133 - 128	17.57	393.75	19.44
9	128 - 123	21.80	503.52	22.12
10	123 - 118	25.16	617.07	24.92
11	118 - 114.75	25.69	698.21	25.06
12	114.75 - 109.75	26.88	824.30	25.40
13	109.75 - 105.333	27.71	936.79	25.59
14	105.333 - 105.083	27.78	943.19	25.60
15	105.083 - 100.083	28.93	1071.80	25.89
16	100.083 - 95.083	30.11	1201.85	26.17
17	95.083 - 92.5	30.72	1269.57	26.32
18	92.5 - 92.25	30.81	1276.15	26.33
19	92.25 - 87.25	32.29	1408.52	26.66
20	87.25 - 82.25	33.79	1542.55	26.99
21	82.25 - 81	34.17	1576.31	27.07
22	81 - 75.75	36.35	1719.50	27.49
23	75.75 - 70.75	37.56	1857.11	27.63
24	70.75 - 70.583	37.62	1861.72	27.63
25	70.583 - 70.333	37.71	1868.62	27.63
26	70.333 - 70	37.83	1877.81	27.65
27	70 - 69.75	37.89	1884.72	27.66
28	69.75 - 64.75	39.11	2023.27	27.90
29	64.75 - 59.75	40.38	2162.85	28.00
30	59.75 - 54.75	41.67	2302.88	28.08
31	54.75 - 49.75	42.98	2443.30	28.15
32	49.75 - 48	43.43	2492.52	28.20
33	48 - 42	46.11	2662.86	28.52
34	42 - 37	47.60	2805.44	28.57
35	37 - 32	49.10	2948.20	28.60
36	32 - 27.913	50.35	3064.97	28.61
37	27.913 - 27.663	50.48	3072.11	28.59
38	27.663 - 27.25	50.65	3083.92	28.61
39	27.25 - 26.983	50.76	3091.56	28.61
40	26.983 - 26.833	50.82	3095.85	28.61
41	26.833 - 21.833	52.82	3239.23	28.76
42	21.833 - 16.833	54.84	3383.21	28.88
43	16.833 - 16	55.19	3407.26	28.89
44	16 - 15.75	55.32	3414.48	28.89
45	15.75 - 14.747	55.79	3443.47	28.95
46	14.747 - 14.497	55.89	3450.70	28.94
47	14.497 - 12.083	56.81	3520.59	29.01
48	12.083 - 11.833	56.93	3527.83	28.99
49	11.833 - 10	57.73	3581.02	29.09
50	10 - 9.75	57.86	3588.29	29.07
51	9.75 - 4.75	60.10	3734.04	29.26
52	4.75 - 0	62.25	3873.23	29.40

Analysis Results

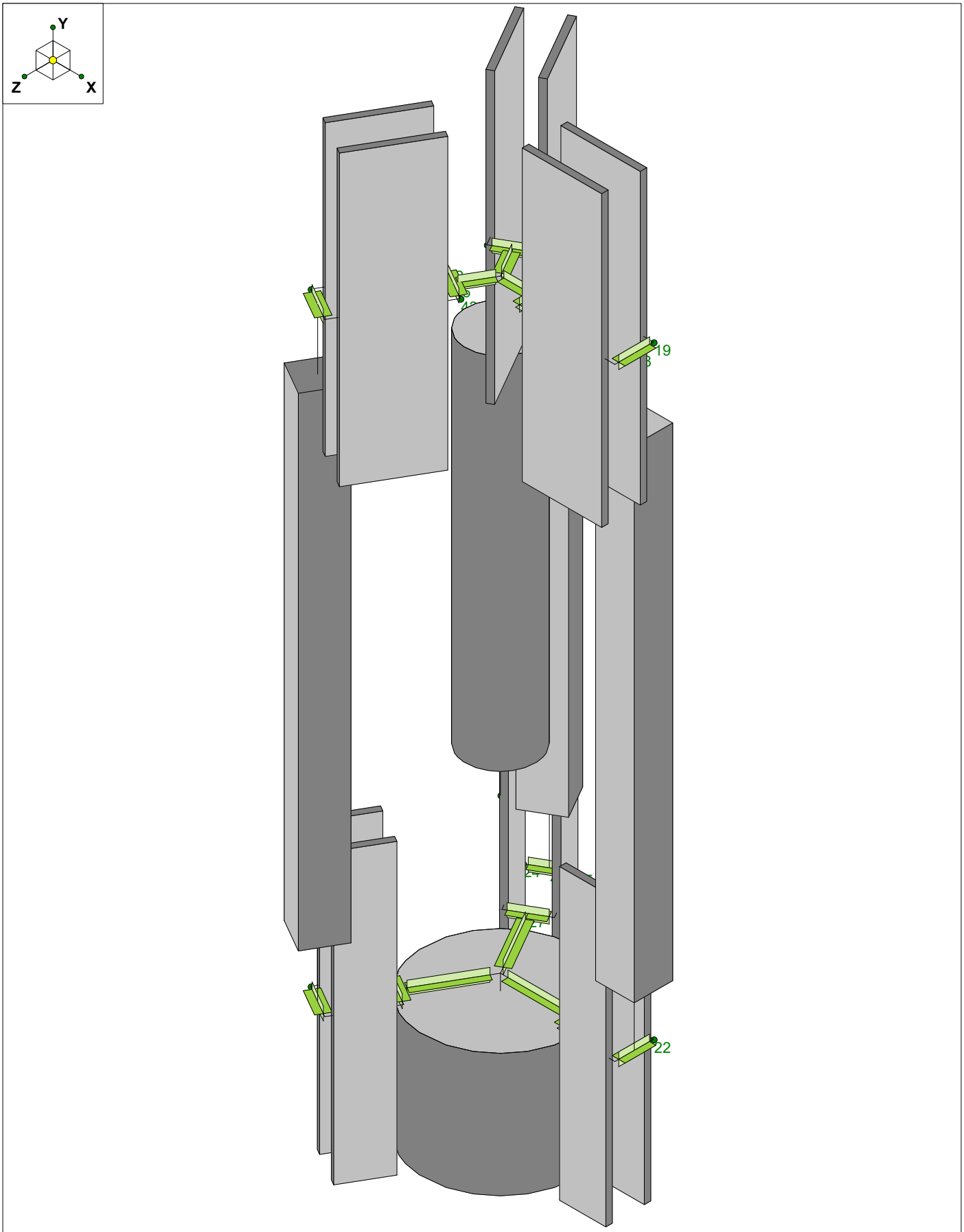
Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
160 - 155	Pole	TP10.75x10.75x0.349	Pole	19.2%	Pass
155 - 150	Pole	TP10.75x10.75x0.349	Pole	54.4%	Pass
150 - 148.5	Pole	TP10.75x10.75x0.349	Pole	65.5%	Pass
148.5 - 148	Pole	TP23x23x0.349	Pole	15.4%	Pass
148 - 143	Pole	TP23.81x23x0.25	Pole	21.8%	Pass
143 - 138	Pole	TP24.62x23.81x0.25	Pole	30.4%	Pass
138 - 133	Pole	TP25.43x24.62x0.25	Pole	42.0%	Pass
133 - 128	Pole	TP26.24x25.43x0.25	Pole	52.1%	Pass
128 - 123	Pole	TP27.05x26.24x0.25	Pole	63.2%	Pass
123 - 118	Pole	TP27.86x27.05x0.25	Pole	73.5%	Pass
118 - 114.75	Pole	TP28.994x27.86x0.25	Pole	80.2%	Pass
114.75 - 109.75	Pole	TP28.696x27.887x0.3125	Pole	71.8%	Pass
109.75 - 105.33	Pole	TP29.412x28.696x0.3125	Pole	77.5%	Pass
105.33 - 105.08	Pole + Reinf.	TP29.452x29.412x0.4688	Reinf. 5 Tension Rupture	73.6%	Pass
105.08 - 100.08	Pole + Reinf.	TP30.262x29.452x0.4625	Reinf. 5 Tension Rupture	79.8%	Pass
100.08 - 95.08	Pole + Reinf.	TP31.072x30.262x0.4625	Reinf. 5 Tension Rupture	85.4%	Pass
95.08 - 92.5	Pole + Reinf.	TP31.491x31.072x0.4563	Reinf. 5 Tension Rupture	88.1%	Pass
92.5 - 92.25	Pole + Reinf.	TP31.531x31.491x0.6375	Reinf. 9 Tension Rupture	78.2%	Pass
92.25 - 87.25	Pole + Reinf.	TP32.341x31.531x0.625	Reinf. 9 Tension Rupture	83.1%	Pass
87.25 - 82.25	Pole + Reinf.	TP33.151x32.341x0.6125	Reinf. 9 Tension Rupture	87.6%	Pass
82.25 - 81	Pole + Reinf.	TP34.042x33.151x0.6125	Reinf. 9 Tension Rupture	88.6%	Pass
81 - 75.75	Pole	TP33.579x32.729x0.375	Pole	83.6%	Pass
75.75 - 70.75	Pole	TP34.389x33.579x0.375	Pole	85.9%	Pass
70.75 - 70.58	Pole	TP34.416x34.389x0.375	Pole	86.0%	Pass
70.58 - 70.33	Pole + Reinf.	TP34.456x34.416x0.675	Reinf. 4 Tension Rupture	75.2%	Pass
70.33 - 70	Pole + Reinf.	TP34.51x34.456x0.675	Reinf. 4 Tension Rupture	75.4%	Pass
70 - 69.75	Pole	TP34.551x34.51x0.375	Pole	86.4%	Pass
69.75 - 64.75	Pole	TP35.361x34.551x0.375	Pole	88.4%	Pass
64.75 - 59.75	Pole	TP36.171x35.361x0.375	Pole	90.4%	Pass
59.75 - 54.75	Pole	TP36.981x36.171x0.375	Pole	92.5%	Pass
54.75 - 49.75	Pole	TP37.791x36.981x0.375	Pole	94.4%	Pass
49.75 - 48	Pole	TP38.884x37.791x0.375	Pole	95.0%	Pass
48 - 42	Pole	TP38.296x37.324x0.4375	Pole	85.2%	Pass
42 - 37	Pole	TP39.106x38.296x0.4375	Pole	86.0%	Pass
37 - 32	Pole	TP39.916x39.106x0.4375	Pole	86.7%	Pass
32 - 27.91	Pole	TP40.578x39.916x0.4375	Pole	87.2%	Pass
27.91 - 27.66	Pole + Reinf.	TP40.619x40.578x0.675	Reinf. 6 Tension Rupture	85.0%	Pass
27.66 - 27.25	Pole + Reinf.	TP40.686x40.619x0.675	Reinf. 6 Tension Rupture	85.1%	Pass
27.25 - 26.98	Pole + Reinf.	TP40.729x40.686x0.675	Reinf. 1 Tension Rupture	83.3%	Pass
26.98 - 26.83	Pole + Reinf.	TP40.753x40.729x0.6625	Reinf. 1 Tension Rupture	83.3%	Pass
26.83 - 21.83	Pole + Reinf.	TP41.563x40.753x0.6625	Reinf. 1 Tension Rupture	84.3%	Pass
21.83 - 16.83	Pole + Reinf.	TP42.373x41.563x0.6625	Reinf. 1 Tension Rupture	85.2%	Pass
16.83 - 16	Pole + Reinf.	TP42.508x42.373x0.6625	Reinf. 1 Tension Rupture	85.4%	Pass
16 - 15.75	Pole + Reinf.	TP42.549x42.508x0.8125	Reinf. 7 Tension Rupture	76.5%	Pass
15.75 - 14.75	Pole + Reinf.	TP42.711x42.549x0.8125	Reinf. 7 Tension Rupture	76.7%	Pass
14.75 - 14.5	Pole + Reinf.	TP42.752x42.711x0.4875	Pole	87.1%	Pass
14.5 - 12.08	Pole + Reinf.	TP43.143x42.752x0.4875	Pole	87.4%	Pass
12.08 - 11.83	Pole + Reinf.	TP43.183x43.143x0.7375	Reinf. 1 Tension Rupture	78.3%	Pass
11.83 - 10	Pole + Reinf.	TP43.48x43.183x0.7375	Reinf. 1 Tension Rupture	78.6%	Pass
10 - 9.75	Pole + Reinf.	TP43.521x43.48x0.7375	Reinf. 1 Tension Rupture	78.6%	Pass
9.75 - 4.75	Pole + Reinf.	TP44.331x43.521x0.725	Reinf. 1 Tension Rupture	79.3%	Pass
4.75 - 0	Pole + Reinf.	TP45.1x44.331x0.7125	Reinf. 1 Tension Rupture	80.0%	Pass
				Summary	
			Pole	95.0%	Pass
			Reinforcement	88.6%	Pass
			Overall	95.0%	Pass

Additional Calculations

Section Elevation (ft)	Moment of Inertia (in^4)			Area (in^2)			% Capacity* (100% Max. Allowable)									
	Pole	Reinf.	Total	Pole	Reinf.	Total	Pole	R1	R2	R3	R4	R5	R6	R7	R8	R9
160 - 155	154	n/a	154	11.40	n/a	11.40	19.2%									
155 - 150	154	n/a	154	11.40	n/a	11.40	54.4%									
150 - 148.5	154	n/a	154	11.40	n/a	11.40	65.5%									
148.5 - 148	1593	n/a	1593	24.83	n/a	24.83	15.4%									
148 - 143	1311	n/a	1311	18.69	n/a	18.69	21.8%									
143 - 138	1450	n/a	1450	19.34	n/a	19.34	30.4%									
138 - 133	1600	n/a	1600	19.98	n/a	19.98	42.0%									
133 - 128	1759	n/a	1759	20.62	n/a	20.62	52.1%									
128 - 123	1929	n/a	1929	21.27	n/a	21.27	63.2%									
123 - 118	2109	n/a	2109	21.91	n/a	21.91	73.5%									
118 - 114.75	2232	n/a	2232	22.33	n/a	22.33	80.2%									
114.75 - 109.75	2865	n/a	2865	28.15	n/a	28.15	71.8%									
109.75 - 105.33	3087	n/a	3087	28.86	n/a	28.86	77.5%									
105.33 - 105.08	3100	1464	4563	28.90	12.39	41.29	52.0%					73.6%				
105.08 - 100.08	3365	1542	4907	29.71	12.39	42.10	56.4%					79.8%				
100.08 - 95.08	3646	1622	5268	30.51	12.39	42.90	60.4%					85.4%				
95.08 - 92.5	3797	1664	5460	30.92	12.39	43.31	62.5%					88.1%				
92.5 - 92.25	3811	3694	7505	30.96	27.39	58.35	45.8%					64.6%				78.2%
92.25 - 87.25	4116	3878	7994	31.77	27.39	59.16	49.0%					68.6%				83.1%
87.25 - 82.25	4436	4066	8502	32.57	27.39	59.96	52.0%					72.3%				87.6%
82.25 - 81	4519	4114	8633	32.77	27.39	60.16	52.7%					73.2%				88.6%
81 - 75.75	5503	n/a	5503	39.52	n/a	39.52	83.6%									
75.75 - 70.75	5916	n/a	5916	40.48	n/a	40.48	85.9%									
70.75 - 70.58	5930	n/a	5930	40.52	n/a	40.52	86.0%									
70.58 - 70.33	5976	4418	10394	40.56	34.95	75.51	51.3%				75.2%				70.2%	
70.33 - 70	6005	4431	10436	40.63	34.95	75.58	51.4%				75.4%				70.4%	
70 - 69.75	6000	n/a	6000	40.68	n/a	40.68	86.4%									
69.75 - 64.75	6437	n/a	6437	41.64	n/a	41.64	88.4%									
64.75 - 59.75	6895	n/a	6895	42.60	n/a	42.60	90.4%									
59.75 - 54.75	7373	n/a	7373	43.57	n/a	43.57	92.5%									
54.75 - 49.75	7874	n/a	7874	44.53	n/a	44.53	94.4%									
49.75 - 48	8054	n/a	8054	44.87	n/a	44.87	95.0%									
48 - 42	9516	n/a	9516	52.57	n/a	52.57	85.2%									
42 - 37	10140	n/a	10140	53.69	n/a	53.69	86.0%									
37 - 32	10791	n/a	10791	54.82	n/a	54.82	86.7%									
32 - 27.91	11343	n/a	11343	55.74	n/a	55.74	87.2%									
27.91 - 27.66	11404	5776	17180	55.79	32.85	88.64	59.6%			63.9%			85.0%			
27.66 - 27.25	11461	5795	17256	55.89	32.85	88.73	59.7%			64.0%			85.1%			
27.25 - 26.98	11471	5787	17258	55.95	25.41	81.36	57.2%	83.3%		83.3%						
26.98 - 26.83	11492	5793	17285	55.98	25.41	81.39	57.2%	83.3%		83.3%						
26.83 - 21.83	12199	6015	18213	57.11	25.41	82.52	57.9%	84.3%		84.3%						
21.83 - 16.83	12934	6240	19174	58.23	25.41	83.64	58.8%	85.2%		85.2%						
16.83 - 16	13059	6278	19337	58.42	25.41	83.83	58.9%	85.4%		85.4%						
16 - 15.75	13097	10584	23681	58.47	43.41	101.88	48.3%	69.9%		69.9%				76.5%		
15.75 - 14.75	13249	10662	23911	58.70	43.41	102.11	48.5%	70.1%		70.1%				76.7%		
14.75 - 14.5	13650	1331	14981	58.76	16.94	75.70	87.1%	86.9%								
14.5 - 12.08	14026	1359	15386	59.30	16.94	76.24	87.4%	87.2%								
12.08 - 11.83	13727	8795	22521	59.36	33.88	93.24	55.9%	78.3%	76.3%							
11.83 - 10	14014	8911	22925	59.77	33.88	93.65	56.2%	78.6%	76.6%							
10 - 9.75	14054	8927	22981	59.82	33.88	93.70	56.3%	78.6%	76.6%							
9.75 - 4.75	14861	9248	24108	60.95	33.88	94.83	57.1%	79.3%	77.4%							
4.75 - 0	15655	9558	25213	62.02	33.88	95.90	57.9%	80.0%	78.0%							

Note: Section capacity checked using 5 degree increments.

**Rating per TIA-222-H Section 15.5.*



Envelope Only Solution

B+T Group	876313 - WEST JOHNSON AVE. BURNT HOUSE	SK - 1
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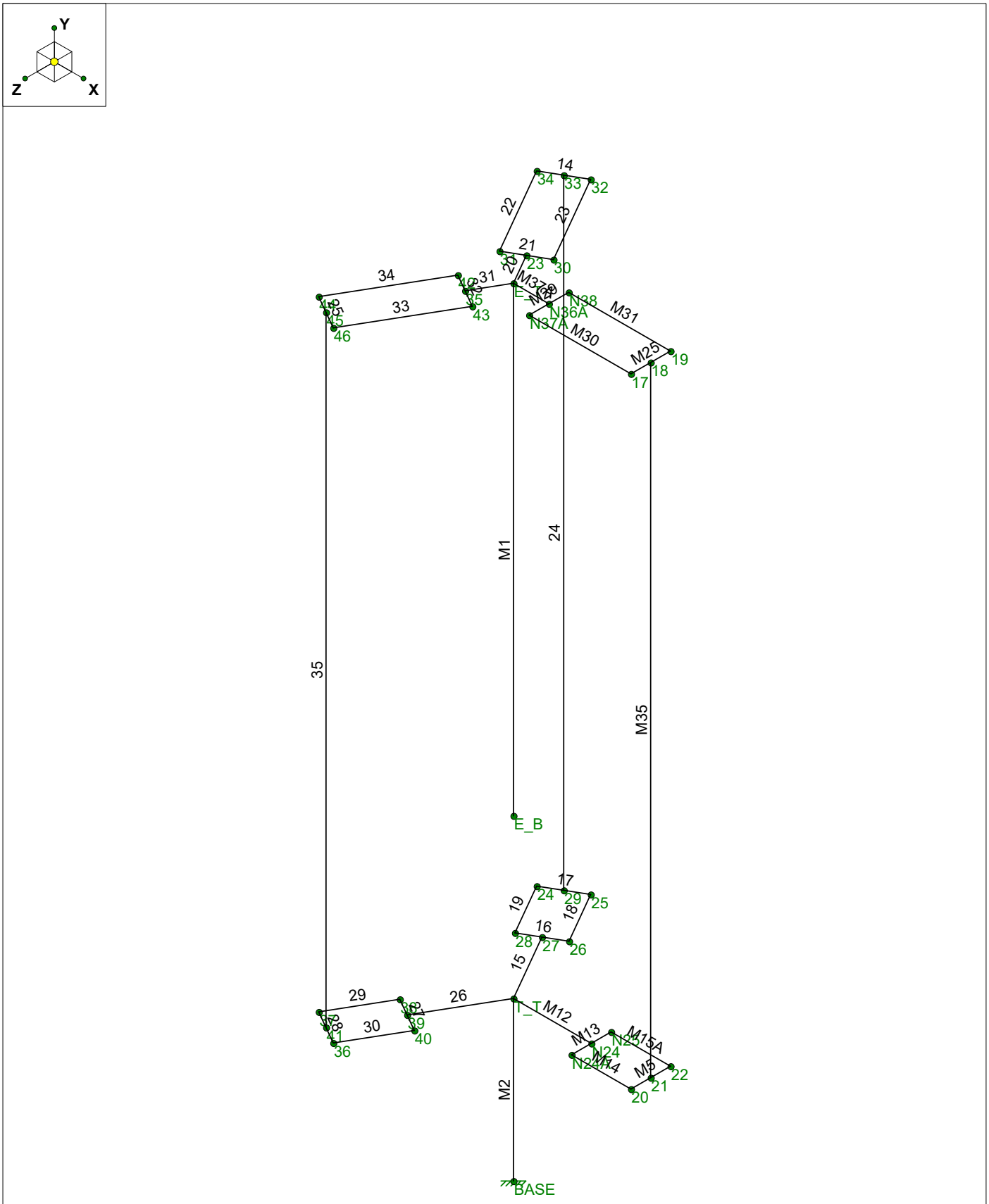

Envelope Only Solution

B+T Group	876313 - WEST JOHNSON AVE. BURNT HOUSE	SK - 2
NA		June 23, 2022 at 1:09 PM
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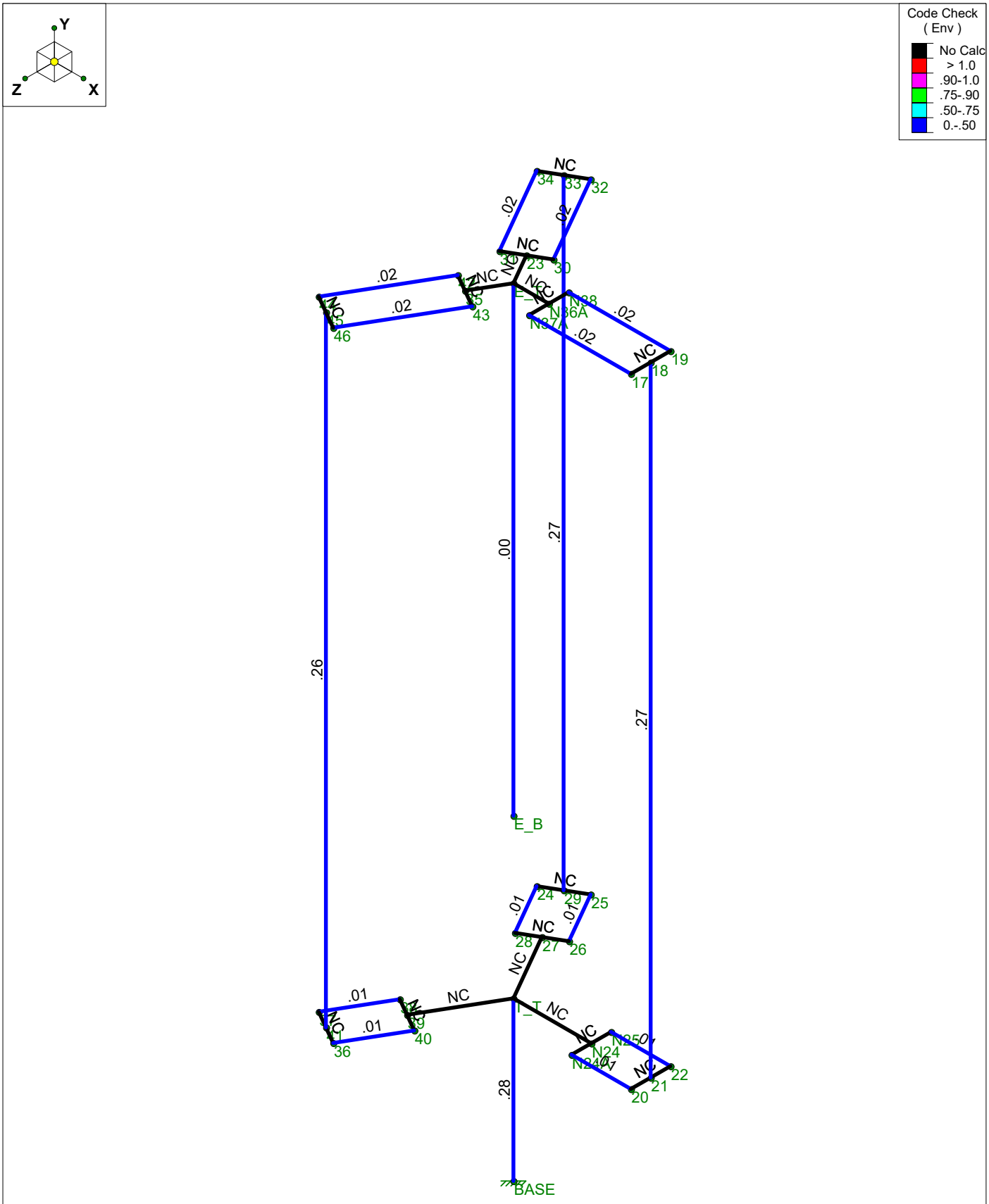

Member Code Checks Displayed (Enveloped)
Envelope Only Solution

B+T Group	876313 - WEST JOHNSON AVE. BURNT HOUSE	SK - 3
NA		June 23, 2022 at 1:09 PM
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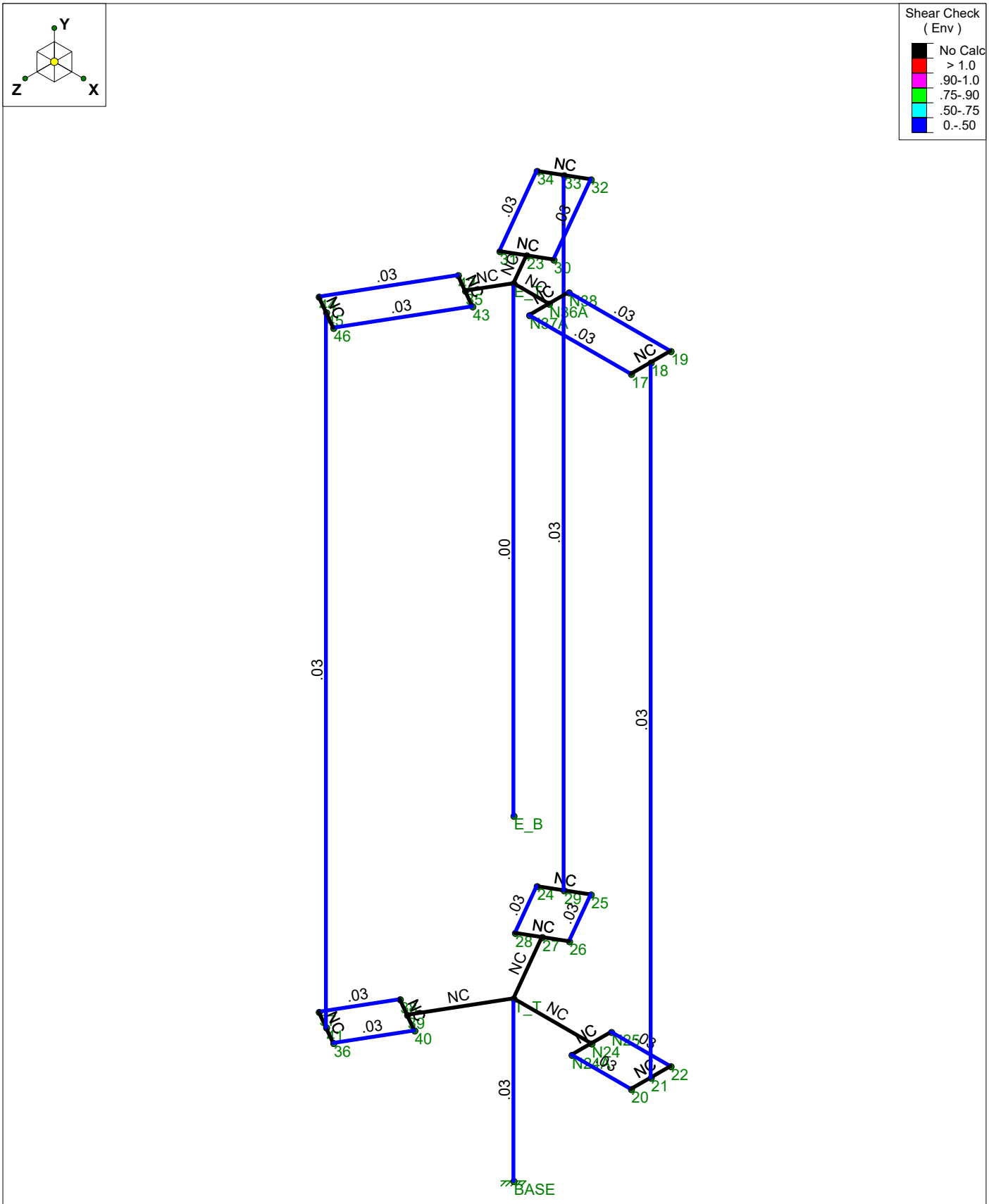

Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

B+T Group	876313 - WEST JOHNSON AVE. BURNT HOUSE	SK - 4
NA		June 23, 2022 at 1:10 PM
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(Global) Model Settings

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation?	Yes
Increase Nailing Capacity for Wind?	Yes
Include Warping?	Yes
Trans Load Btwn Intersecting Wood Wall?	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Include P-Delta for Walls?	Yes
Automatically Iterate Stiffness for Walls?	Yes
Max Iterations for Wall Stiffness	3
Gravity Acceleration (ft/sec^2)	32.2
Wall Mesh Size (in)	24
Eigensolution Convergence Tol. (1.E-)	4
Vertical Axis	Y
Global Member Orientation Plane	XZ
Static Solver	Sparse Accelerated
Dynamic Solver	Accelerated Solver

Hot Rolled Steel Code	AISC 15th(360-16): LRFD
Adjust Stiffness?	Yes(Iterative)
RISAConnection Code	AISC 14th(360-10): LRFD
Cold Formed Steel Code	AISI S100-16: LRFD
Wood Code	AWC NDS-18: ASD
Wood Temperature	< 100F
Concrete Code	ACI 318-14
Masonry Code	ACI 530-13: ASD
Aluminum Code	AA ADM1-15: ASD - Building
Stainless Steel Code	AISC 14th(360-10): ASD
Adjust Stiffness?	Yes(Iterative)

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	Exact Integration
Parme Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections?	Yes
Use Cracked Sections Slab?	No
Bad Framing Warnings?	No
Unused Force Warnings?	Yes
Min 1 Bar Diam. Spacing?	No
Concrete Rebar Set	REBAR_SET_ASTMA615
Min % Steel for Column	1
Max % Steel for Column	8

(Global) Model Settings, Continued

Seismic Code	ASCE 7-10
Seismic Base Elevation (ft)	Not Entered
Add Base Weight?	Yes
Ct X	.02
Ct Z	.02
T X (sec)	Not Entered
T Z (sec)	Not Entered
R X	3
R Z	3
Ct Exp. X	.75
Ct Exp. Z	.75
SD1	1
SDS	1
S1	1
TL (sec)	5
Risk Cat	I or II
Drift Cat	Other
Om Z	1
Om X	1
Cd Z	1
Cd X	1
Rho Z	1
Rho X	1
Footing Overturning Safety Factor	1
Optimize for OTM/Sliding	No
Check Concrete Bearing	No
Footing Concrete Weight (k/ft^3)	.145
Footing Concrete f'c (ksi)	4
Footing Concrete Ec (ksi)	3644
Lambda	1
Footing Steel fy (ksi)	60
Minimum Steel	0.0018
Maximum Steel	0.0075
Footing Top Bar	#6
Footing Top Bar Cover (in)	1.5
Footing Bottom Bar	#6
Footing Bottom Bar Cover (in)	3
Pedestal Bar	#6
Pedestal Bar Cover (in)	1.5
Pedestal Ties	#4

Hot Rolled Steel Properties

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

Hot Rolled Steel Properties (Continued)

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E..	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
8	A572 Gr. 65	29000	11154	.3	.65	.49	65	1.5	80	1.2
9	A607-60	29000	11154	.3	.65	.49	60	1.5	75	1.2

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rules	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Existing pole	Pole 23.812...	Column	Pipe	A607-60	Typical	18.506	1284.519	1284.519	2569.038
2	Extension pole	Pipe 10.75x0...	Column	Pipe	A53 Gr.B	Typical	11.404	154.383	154.383	308.766
3	HSS	HSS6X6X8	Column	Tube	A500 Gr.B R...	Typical	9.74	48.3	48.3	81.1
4	Plate Top	BP 1"x45"	Beam	RECT	A572 Gr. 65	Typical	45	3.75	7593.75	14.79
5	Plate Bottom	BP 1"x45"	Beam	RECT	A572 Gr. 65	Typical	45	3.75	7593.75	14.79

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	BASE	0	0	0	0	
2	T_T	0	2	0	0	
3	E_T	0	9.833	0	0	
4	E_B	0	4	0	0	
5	N24	0.984375	2	0	0	
6	N24A	0.984375	2	.25	0	
7	N25	0.984375	2	-.25	0	
8	N36A	0.447917	9.833	0	0	
9	N37A	0.447917	9.833	.25	0	
10	N38	0.447917	9.833	-.25	0	
11	17	1.734375	9.833	.25	0	
12	18	1.734375	9.833	0	0	
13	19	1.734375	9.833	-.25	0	
14	20	1.734375	2	.25	0	
15	21	1.734375	2	0	0	
16	22	1.734375	2	-.25	0	
17	23	-0.223959	9.833	-0.387908	0	
18	24	-1.083694	2	-1.377013	0	
19	25	-0.650681	2	-1.627013	0	
20	26	-0.275681	2	-0.977494	0	
21	27	-0.492188	2	-0.852494	0	
22	28	-0.708694	2	-0.727494	0	
23	29	-0.867188	2	-1.502013	0	
24	30	-0.007452	9.833	-0.512907	0	
25	31	-0.440465	9.833	-0.262908	0	
26	32	-0.650681	9.833	-1.627013	0	
27	33	-0.867188	9.833	-1.502013	0	
28	34	-1.083694	9.833	-1.377013	0	
29	35	-0.223959	9.833	0.387908	0	
30	36	-0.650681	2	1.627013	0	
31	37	-1.083694	2	1.377013	0	
32	38	-0.708694	2	0.727494	0	
33	39	-0.492188	2	0.852494	0	
34	40	-0.275681	2	0.977494	0	
35	41	-0.867188	2	1.502013	0	
36	42	-0.440465	9.833	0.262907	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
37	43	-0.007452	9.833	0.512908	0	
38	44	-1.083694	9.833	1.377013	0	
39	45	-0.867188	9.833	1.502013	0	
40	46	-0.650681	9.833	1.627013	0	

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	BASE	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

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	Extension p...	5.833									Lateral
2	M2	Existing pole	2									Lateral
3	M35	HSS	7.833	4.5	4.5							Lateral
4	M14	Plate Bottom	.75			Lbyy						Lateral
5	M15A	Plate Bottom	.75			Lbyy						Lateral
6	M30	Plate Top	1.286			Lbyy						Lateral
7	M31	Plate Top	1.286			Lbyy						Lateral
8	18	Plate Bottom	.75			Lbyy						Lateral
9	19	Plate Bottom	.75			Lbyy						Lateral
10	22	Plate Top	1.286			Lbyy						Lateral
11	23	Plate Top	1.286			Lbyy						Lateral
12	24	HSS	7.833	4.5	4.5							Lateral
13	29	Plate Bottom	.75			Lbyy						Lateral
14	30	Plate Bottom	.75			Lbyy						Lateral
15	33	Plate Top	1.286			Lbyy						Lateral
16	34	Plate Top	1.286			Lbyy						Lateral
17	35	HSS	7.833	4.5	4.5							Lateral

Joint Loads and Enforced Displacements (BLC 1 : 1)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	E_T	L	Y	-5.91
2	E_T	L	X	-7.84
3	E_T	L	Mz	69.98
4	E_T	L	My	-.5

Joint Loads and Enforced Displacements (BLC 2 : 2)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	E_T	L	Y	-5.91
2	E_T	L	X	-6.79
3	E_T	L	Z	-3.92
4	E_T	L	Mz	60.604
5	E_T	L	Mx	-34.99
6	E_T	L	My	-.5

Joint Loads and Enforced Displacements (BLC 3 : 3)

Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...

Joint Loads and Enforced Displacements (BLC 3 : 3) (Continued)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	E_T	L	Y	-5.91
2	E_T	L	X	-5.544
3	E_T	L	Z	-5.544
4	E_T	L	Mz	49.483
5	E_T	L	Mx	-49.483
6	E_T	L	My	-.5

Joint Loads and Enforced Displacements (BLC 4 : 4)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	E_T	L	Y	-5.91
2	E_T	L	X	-3.92
3	E_T	L	Z	-6.79
4	E_T	L	Mz	34.99
5	E_T	L	Mx	-60.604
6	E_T	L	My	-.5

Joint Loads and Enforced Displacements (BLC 5 : 5)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	E_T	L	Y	-5.91
2	E_T	L	Z	-7.84
3	E_T	L	Mx	-69.98
4	E_T	L	My	-.5

Joint Loads and Enforced Displacements (BLC 6 : 6)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	E_T	L	Y	-5.91
2	E_T	L	X	3.92
3	E_T	L	Z	-6.79
4	E_T	L	Mz	-34.99
5	E_T	L	Mx	-60.604
6	E_T	L	My	-.5

Joint Loads and Enforced Displacements (BLC 7 : 7)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	E_T	L	Y	-5.91
2	E_T	L	X	5.544
3	E_T	L	Z	-5.544
4	E_T	L	Mz	-49.483
5	E_T	L	Mx	-49.483
6	E_T	L	My	-.5

Joint Loads and Enforced Displacements (BLC 8 : 8)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	E_T	L	Y	-5.91
2	E_T	L	X	6.79
3	E_T	L	Z	-3.92
4	E_T	L	Mz	-60.604
5	E_T	L	Mx	-34.99
6	E_T	L	My	-.5

Joint Loads and Enforced Displacements (BLC 9 : 9)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	E_T	L	Y	-5.91
2	E_T	L	X	7.84
3	E_T	L	Mz	-69.98
4	E_T	L	My	-.5

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	1	None		-1		4				
2	2	None		-1		6				
3	3	None		-1		6				
4	4	None		-1		6				
5	5	None		-1		4				
6	6	None		-1		6				
7	7	None		-1		6				
8	8	None		-1		6				
9	9	None		-1		4				

Envelope Joint Reactions

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	BASE	max	7.84	1	8.971	9	7.84	5	147.303	5	.5	5	147.319	9
2		min	-7.84	9	8.971	2	0	1	-.012	9	.5	2	-147.288	1
3	Totals:	max	7.84	1	8.971	9	7.84	5						
4		min	-7.84	9	8.971	2	0	1						

Envelope Member Section Forces

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
1	M1	1	max	-.226	9	0	9	0	9	0	9	.001	5	.001	9
2			min	-.226	1	0	1	0	5	0	1	0	9	-.001	1
3		2	max	-.17	9	0	9	0	9	0	9	.001	5	.001	9
4			min	-.17	1	0	1	0	5	0	1	0	9	-.001	1
5		3	max	-.113	9	0	9	0	9	0	9	0	5	0	9
6			min	-.113	1	0	1	0	5	0	1	0	9	0	1
7		4	max	-.057	9	0	9	0	9	0	9	0	5	0	9
8			min	-.057	1	0	1	0	5	0	1	0	9	0	1
9		5	max	0	9	0	9	0	9	0	9	0	9	0	9
10			min	0	1	0	1	0	5	0	1	0	1	0	1
11	M2	1	max	8.845	9	7.847	1	7.847	5	.5	5	131.61	5	131.625	9
12			min	8.845	2	-7.847	9	0	1	.5	2	-.012	9	-131.594	1
13		2	max	8.876	9	7.847	1	7.847	5	.5	5	135.533	5	135.549	9
14			min	8.876	2	-7.847	9	0	1	.5	2	-.012	9	-135.518	1
15		3	max	8.908	9	7.847	1	7.847	5	.5	5	139.456	5	139.472	9
16			min	8.908	2	-7.847	9	0	1	.5	2	-.012	9	-139.441	1
17		4	max	8.939	9	7.847	1	7.847	5	.5	5	143.38	5	143.396	9
18			min	8.939	2	-7.847	9	0	1	.5	2	-.012	9	-143.365	1
19		5	max	8.971	9	7.847	1	7.847	5	.5	5	147.303	5	147.319	9
20			min	8.971	2	-7.847	9	0	1	.5	2	-.012	9	-147.288	1
21	M5	1	max	.019	1	20.537	9	1.692	1	5.971	1	.447	5	.216	5

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
22			min	-1.202	5	-25.904	3	-1.949	6	-9.368	7	-.006	1	-.003	9
23		2	max	.019	1	20.537	9	1.692	1	5.971	1	.319	3	3.39	3
24			min	-1.202	5	-25.904	3	-1.949	6	-9.368	7	-.143	9	-2.57	9
25		3	max	-.018	9	20.537	9	.555	2	5.981	9	.417	1	6.628	3
26			min	-1.202	5	-28.625	7	-1.551	5	-9.368	7	-.383	9	-7.308	7
27		4	max	1.202	5	17.806	1	1.556	9	5.981	9	.16	1	2.229	1
28			min	-.019	1	-28.625	7	-2.097	3	-9.365	3	-.302	6	-3.73	7
29		5	max	1.202	5	17.806	1	1.556	9	5.981	9	.006	1	.003	9
30			min	-.019	1	-28.625	7	-2.097	3	-9.365	3	-.447	5	-.216	5
31	M35	1	max	40.226	9	2.794	1	2.413	5	.119	5	.145	9	10.147	1
32			min	-35.337	1	-2.798	9	-.038	9	.103	1	-8.576	5	-10.165	9
33		2	max	40.296	9	2.794	1	2.413	5	.119	5	.072	9	4.677	1
34			min	-35.267	1	-2.798	9	-.038	9	.103	1	-3.851	5	-4.687	9
35		3	max	40.366	9	2.794	1	2.413	5	.119	5	.874	5	.792	9
36			min	-35.197	1	-2.798	9	-.038	9	.103	1	-.002	9	-.794	1
37		4	max	40.436	9	2.794	1	2.413	5	.119	5	5.599	5	6.27	9
38			min	-35.128	1	-2.798	9	-.038	9	.103	1	-.075	9	-6.264	1
39		5	max	40.506	9	2.794	1	2.413	5	.119	5	10.324	5	11.749	9
40			min	-35.058	1	-2.798	9	-.038	9	.103	1	-.149	9	-11.735	1
41	M12	1	max	2.922	1	40.732	9	2.404	5	10.324	5	.168	1	82.307	9
42			min	-2.65	9	-34.832	1	-.037	1	-.149	9	-4.05	5	-72.233	1
43		2	max	2.922	1	40.732	9	2.404	5	10.324	5	.158	1	72.283	9
44			min	-2.65	9	-34.832	1	-.037	1	-.149	9	-3.458	5	-63.661	1
45		3	max	2.922	1	40.732	9	2.404	5	10.324	5	.149	1	62.259	9
46			min	-2.65	9	-34.832	1	-.037	1	-.149	9	-2.867	5	-55.089	1
47		4	max	2.922	1	40.732	9	2.404	5	10.324	5	.14	1	52.235	9
48			min	-2.65	9	-34.832	1	-.037	1	-.149	9	-2.275	5	-46.517	1
49		5	max	2.922	1	40.732	9	2.404	5	10.324	5	.131	1	42.211	9
50			min	-2.65	9	-34.832	1	-.037	1	-.149	9	-1.684	5	-37.945	1
51	M13	1	max	1.202	5	25.789	3	1.949	6	21.213	9	.454	5	.003	9
52			min	-.019	1	-20.652	9	-1.692	1	-19.945	2	-.008	1	-.216	5
53		2	max	1.202	5	25.789	3	1.949	6	21.213	9	.648	5	2.585	9
54			min	-.019	1	-20.652	9	-1.692	1	-19.945	2	-.219	1	-3.375	3
55		3	max	1.202	5	28.74	7	1.551	5	21.213	9	.869	6	7.337	7
56			min	.018	9	-20.652	9	-.555	2	-22.077	8	-.92	4	-6.599	3
57		4	max	.019	1	28.74	7	2.097	3	19.076	1	.202	9	3.744	7
58			min	-1.202	5	-17.691	1	-1.556	9	-22.077	8	-.662	4	-2.214	1
59		5	max	.019	1	28.74	7	2.097	3	19.076	1	.008	1	.216	5
60			min	-1.202	5	-17.691	1	-1.556	9	-22.077	8	-.454	5	-.003	9
61	M14	1	max	1.692	1	20.651	9	1.202	5	.216	5	.008	1	21.213	9
62			min	-1.949	6	-25.788	3	-.019	1	-.003	9	-.454	5	-19.945	2
63		2	max	1.692	1	20.622	9	1.202	5	.216	5	.004	1	17.343	9
64			min	-1.949	6	-25.817	3	-.019	1	-.003	9	-.229	5	-15.652	1
65		3	max	1.692	1	20.593	9	1.202	5	.216	5	0	1	13.479	9
66			min	-1.949	6	-25.846	3	-.019	1	-.003	9	-.004	5	-12.431	1
67		4	max	1.692	1	20.565	9	1.202	5	.216	5	.222	5	10.24	8
68			min	-1.949	6	-25.874	3	-.019	1	-.003	9	-.003	1	-9.204	1
69		5	max	1.692	1	20.536	9	1.202	5	.216	5	.447	5	9.368	7
70			min	-1.949	6	-25.903	3	-.019	1	-.003	9	-.006	1	-5.971	1
71	M15A	1	max	2.097	3	28.741	7	1.202	5	.216	5	.008	1	22.077	8
72			min	-1.556	9	-17.692	1	-.019	1	-.003	9	-.454	5	-19.076	1
73		2	max	2.097	3	28.712	7	1.202	5	.216	5	.004	1	17.236	9

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
74			min	-1.556	9	-17.721	1	-.019	1	-.003	9	-.229	5	-15.756	1
75		3	max	2.097	3	28.683	7	1.202	5	.216	5	0	1	13.479	9
76			min	-1.556	9	-17.75	1	-.019	1	-.003	9	-.004	5	-12.431	1
77		4	max	2.097	3	28.655	7	1.202	5	.216	5	.222	5	9.728	9
78			min	-1.556	9	-17.779	1	-.019	1	-.003	9	-.003	1	-9.72	2
79		5	max	2.097	3	28.626	7	1.202	5	.216	5	.447	5	5.981	9
80			min	-1.556	9	-17.807	1	-.019	1	-.003	9	-.006	1	-9.365	3
81	M25	1	max	1.201	5	17.939	1	3.023	6	5.248	1	.012	1	.185	5
82			min	-.019	1	-26.104	7	-1.712	1	-11.658	6	-.767	5	-.003	9
83		2	max	1.201	5	17.939	1	3.023	6	5.248	1	.146	9	3.393	7
84			min	-.019	1	-26.104	7	-1.712	1	-11.658	6	-.459	4	-2.245	1
85		3	max	.019	1	20.392	9	3.202	4	5.261	9	.383	9	6.656	7
86			min	-1.203	5	-26.104	7	-1.712	1	-11.658	6	-.417	1	-6.045	3
87		4	max	.019	1	20.392	9	3.202	4	5.261	9	.436	6	2.552	9
88			min	-1.203	5	-23.662	3	-1.574	9	-11.657	4	-.163	1	-3.088	3
89		5	max	.019	1	20.392	9	3.202	4	5.261	9	.767	5	.003	9
90			min	-1.203	5	-23.662	3	-1.574	9	-11.657	4	-.012	1	-.185	5
91	M29	1	max	.019	1	25.907	7	1.712	1	17.962	1	.013	1	.003	9
92			min	-1.201	5	-18.136	1	-3.023	6	-23.277	8	-.78	5	-.185	5
93		2	max	.019	1	25.907	7	1.712	1	17.962	1	.227	1	2.27	1
94			min	-1.201	5	-18.136	1	-3.023	6	-23.277	8	-1.133	5	-3.368	7
95		3	max	1.203	5	25.907	7	1.712	1	20.841	9	1.492	4	6.094	3
96			min	-.019	1	-20.195	9	-3.202	4	-23.277	8	-1.411	6	-6.607	7
97		4	max	1.203	5	23.859	3	1.574	9	20.841	9	1.133	5	3.112	3
98			min	-.019	1	-20.195	9	-3.202	4	-20.401	2	-.209	9	-2.527	9
99		5	max	1.203	5	23.859	3	1.574	9	20.841	9	.78	5	.185	5
100			min	-.019	1	-20.195	9	-3.202	4	-20.401	2	-.013	1	-.003	9
101	M30	1	max	3.023	6	18.14	1	.019	1	.185	5	.78	5	17.962	1
102			min	-1.712	1	-25.904	7	-1.202	5	-.003	9	-.013	1	-23.277	8
103		2	max	3.023	6	18.091	1	.019	1	.185	5	.393	5	12.135	1
104			min	-1.712	1	-25.954	7	-1.202	5	-.003	9	-.007	1	-15.084	8
105		3	max	3.023	6	18.042	1	.019	1	.185	5	.007	5	6.325	1
106			min	-1.712	1	-26.003	7	-1.202	5	-.003	9	0	1	-7.821	9
107		4	max	3.023	6	17.992	1	.019	1	.185	5	.006	1	4.894	5
108			min	-1.712	1	-26.052	7	-1.202	5	-.003	9	-.38	5	-1.467	9
109		5	max	3.023	6	17.943	1	.019	1	.185	5	.012	1	11.658	6
110			min	-1.712	1	-26.101	7	-1.202	5	-.003	9	-.767	5	-5.248	1
111	M31	1	max	1.574	9	23.862	3	.019	1	.185	5	.78	5	20.401	2
112			min	-3.202	4	-20.191	9	-1.202	5	-.003	9	-.013	1	-20.841	9
113		2	max	1.574	9	23.812	3	.019	1	.185	5	.393	5	12.881	2
114			min	-3.202	4	-20.241	9	-1.202	5	-.003	9	-.007	1	-14.339	9
115		3	max	1.574	9	23.763	3	.019	1	.185	5	.007	5	6.325	1
116			min	-3.202	4	-20.29	9	-1.202	5	-.003	9	0	1	-7.821	9
117		4	max	1.574	9	23.714	3	.019	1	.185	5	.006	1	.705	1
118			min	-3.202	4	-20.339	9	-1.202	5	-.003	9	-.38	5	-5.663	5
119		5	max	1.574	9	23.665	3	.019	1	.185	5	.012	1	5.261	9
120			min	-3.202	4	-20.388	9	-1.202	5	-.003	9	-.767	5	-11.657	4
121	M37A	1	max	2.65	9	35.737	1	.038	1	8.576	5	4.05	5	51.581	1
122			min	-2.922	1	-39.827	9	-2.404	5	-.145	9	-.168	1	-59.163	9
123		2	max	2.65	9	35.737	1	.038	1	8.576	5	3.781	5	47.579	1
124			min	-2.922	1	-39.827	9	-2.404	5	-.145	9	-.164	1	-54.703	9
125		3	max	2.65	9	35.737	1	.038	1	8.576	5	3.512	5	43.577	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
126			min	-2.922	1	-39.827	9	-2.404	5	-.145	9	-.16	1	-50.244	9
127		4	max	2.65	9	35.737	1	.038	1	8.576	5	3.242	5	39.576	1
128			min	-2.922	1	-39.827	9	-2.404	5	-.145	9	-.156	1	-45.784	9
129		5	max	2.65	9	35.737	1	.038	1	8.576	5	2.973	5	35.574	1
130			min	-2.922	1	-39.827	9	-2.404	5	-.145	9	-.151	1	-41.324	9
131	14	1	max	1.009	1	22.951	9	3.023	1	12.011	9	.789	8	.16	1
132			min	-1.239	8	-25.651	2	-3.704	9	-11.659	1	-.644	1	-.191	8
133		2	max	1.009	1	22.951	9	3.023	1	12.011	9	.399	7	3.297	2
134			min	-1.239	8	-25.651	2	-3.704	9	-11.659	1	-.266	1	-3.035	9
135		3	max	.018	4	26.206	5	3.023	1	12.012	6	.383	4	6.649	5
136			min	-1.239	8	-25.651	2	-3.704	9	-11.659	1	-.223	9	-5.904	9
137		4	max	1.238	8	26.206	5	1.664	1	12.012	6	.436	1	3.373	5
138			min	-1.01	1	-3.517	1	-3.537	7	-6.58	1	-.419	9	-.599	1
139		5	max	1.238	8	26.206	5	1.664	1	12.012	6	.644	1	.191	8
140			min	-1.01	1	-3.517	1	-3.537	7	-6.58	1	-.789	8	-.16	1
141	15	1	max	1.428	9	40.732	4	2.019	1	8.922	1	4.383	8	82.306	4
142			min	-2.651	4	-15.948	9	-2.478	8	-10.617	8	-3.385	1	-33.622	9
143		2	max	1.428	9	40.732	4	2.019	1	8.922	1	3.774	8	72.282	4
144			min	-2.651	4	-15.948	9	-2.478	8	-10.617	8	-2.888	1	-29.697	9
145		3	max	1.428	9	40.732	4	2.019	1	8.922	1	3.164	8	62.258	4
146			min	-2.651	4	-15.948	9	-2.478	8	-10.617	8	-2.391	1	-25.772	9
147		4	max	1.428	9	40.732	4	2.019	1	8.922	1	2.554	8	52.235	4
148			min	-2.651	4	-15.948	9	-2.478	8	-10.617	8	-1.895	1	-21.848	9
149		5	max	1.428	9	40.732	4	2.019	1	8.922	1	1.944	8	42.211	4
150			min	-2.651	4	-15.948	9	-2.478	8	-10.617	8	-1.398	1	-17.923	9
151	16	1	max	1.009	1	6.179	1	1.949	1	22.288	5	.381	1	.222	8
152			min	-1.239	8	-28.578	6	-2.531	9	-2.343	9	-.469	8	-.187	1
153		2	max	1.009	1	6.179	1	1.949	1	22.288	5	.625	1	3.765	6
154			min	-1.239	8	-28.578	6	-2.531	9	-2.343	9	-.735	9	-.959	1
155		3	max	1.239	8	28.015	1	1.095	4	22.288	5	1.018	7	7.337	6
156			min	.018	4	-28.578	6	-2.013	8	-22.264	3	-1.051	9	-6.599	9
157		4	max	1.239	8	28.015	1	.59	1	15.58	9	.732	7	3.689	1
158			min	-1.009	1	-25.626	9	-2.41	6	-22.264	3	-.455	1	-3.396	9
159		5	max	1.239	8	28.015	1	.59	1	15.58	9	.469	8	.187	1
160			min	-1.009	1	-25.626	9	-2.41	6	-22.264	3	-.381	1	-.222	8
161	17	1	max	1.239	8	28.463	6	2.531	9	9.557	9	.376	1	.187	1
162			min	-1.009	1	-6.294	1	-1.949	1	-9.347	1	-.46	8	-.222	8
163		2	max	1.239	8	28.463	6	2.531	9	9.557	9	.132	1	.973	1
164			min	-1.009	1	-6.294	1	-1.949	1	-9.347	1	-.257	6	-3.751	6
165		3	max	-.018	4	28.463	6	2.013	8	9.557	6	.223	9	6.628	9
166			min	-1.239	8	-27.9	1	-1.095	4	-9.347	1	-.383	4	-7.309	6
167		4	max	1.009	1	25.741	9	2.41	6	9.557	6	.272	9	3.41	9
168			min	-1.239	8	-27.9	1	-.59	1	-3.477	1	-.302	1	-3.674	1
169		5	max	1.009	1	25.741	9	2.41	6	9.557	6	.46	8	.222	8
170			min	-1.239	8	-27.9	1	-.59	1	-3.477	1	-.376	1	-.187	1
171	18	1	max	2.531	9	28.58	6	1.009	1	.187	1	.469	8	22.288	5
172			min	-1.949	1	-6.179	1	-1.239	8	-.222	8	-.381	1	-2.343	9
173		2	max	2.531	9	28.551	6	1.009	1	.187	1	.237	8	17.343	4
174			min	-1.949	1	-6.208	1	-1.239	8	-.222	8	-.192	1	-4.154	9
175		3	max	2.531	9	28.523	6	1.009	1	.187	1	.005	8	13.479	4
176			min	-1.949	1	-6.237	1	-1.239	8	-.222	8	-.003	1	-5.96	9
177		4	max	2.531	9	28.494	6	1.009	1	.187	1	.186	1	10.274	3

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
178			min	-1.949	1	-6.265	1	-1.239	8	-.222	8	-.228	8	-7.761	9
179		5	max	2.531	9	28.465	6	1.009	1	.187	1	.376	1	9.347	1
180			min	-1.949	1	-6.294	1	-1.239	8	-.222	8	-.46	8	-9.557	9
181	19	1	max	.59	1	28.017	1	1.009	1	.187	1	.469	8	22.264	3
182			min	-2.41	6	-25.624	9	-1.239	8	-.222	8	-.381	1	-15.58	9
183		2	max	.59	1	27.988	1	1.009	1	.187	1	.237	8	17.648	3
184			min	-2.41	6	-25.653	9	-1.239	8	-.222	8	-.192	1	-10.773	9
185		3	max	.59	1	27.959	1	1.009	1	.187	1	.005	8	13.479	4
186			min	-2.41	6	-25.681	9	-1.239	8	-.222	8	-.003	1	-5.96	9
187		4	max	.59	1	27.931	1	1.009	1	.187	1	.186	1	10.346	5
188			min	-2.41	6	-25.71	9	-1.239	8	-.222	8	-.228	8	-1.143	9
189		5	max	.59	1	27.902	1	1.009	1	.187	1	.376	1	9.557	6
190			min	-2.41	6	-25.739	9	-1.239	8	-.222	8	-.46	8	-3.477	1
191	20	1	max	2.651	4	16.852	9	2.478	8	7.409	1	3.386	1	23.893	9
192			min	-1.428	9	-39.826	4	-2.019	1	-8.863	8	-4.383	8	-59.163	4
193		2	max	2.651	4	16.852	9	2.478	8	7.409	1	3.16	1	22.006	9
194			min	-1.428	9	-39.826	4	-2.019	1	-8.863	8	-4.106	8	-54.703	4
195		3	max	2.651	4	16.852	9	2.478	8	7.409	1	2.934	1	20.119	9
196			min	-1.428	9	-39.826	4	-2.019	1	-8.863	8	-3.828	8	-50.243	4
197		4	max	2.651	4	16.852	9	2.478	8	7.409	1	2.707	1	18.232	9
198			min	-1.428	9	-39.826	4	-2.019	1	-8.863	8	-3.551	8	-45.784	4
199		5	max	2.651	4	16.852	9	2.478	8	7.409	1	2.481	1	16.345	9
200			min	-1.428	9	-39.826	4	-2.019	1	-8.863	8	-3.274	8	-41.324	4
201	21	1	max	1.239	8	25.454	2	3.704	9	17.643	9	.805	8	.191	8
202			min	-1.008	1	-23.148	9	-3.023	1	-23.277	2	-.655	1	-.16	1
203		2	max	1.239	8	25.454	2	3.704	9	17.643	9	1.221	8	3.059	9
204			min	-1.008	1	-23.148	9	-3.023	1	-23.277	2	-1.033	1	-3.273	2
205		3	max	1.239	8	25.454	2	3.704	9	23.634	5	1.643	9	5.953	9
206			min	-.018	4	-26.009	5	-3.023	1	-23.277	2	-1.651	7	-6.599	5
207		4	max	1.01	1	3.714	1	3.537	7	23.634	5	.863	1	.624	1
208			min	-1.238	8	-26.009	5	-1.664	1	1.298	9	-1.221	8	-3.348	5
209		5	max	1.01	1	3.714	1	3.537	7	23.634	5	.655	1	.16	1
210			min	-1.238	8	-26.009	5	-1.664	1	1.298	9	-.805	8	-.191	8
211	22	1	max	3.537	7	3.71	1	1.239	8	.16	1	.655	1	-1.298	9
212			min	-1.664	1	-26.004	5	-1.01	1	-.191	8	-.805	8	-23.634	5
213		2	max	3.537	7	3.661	1	1.239	8	.16	1	.33	1	.735	9
214			min	-1.664	1	-26.054	5	-1.01	1	-.191	8	-.406	8	-15.262	5
215		3	max	3.537	7	3.611	1	1.239	8	.16	1	.005	1	2.784	9
216			min	-1.664	1	-26.103	5	-1.01	1	-.191	8	-.008	8	-7.822	4
217		4	max	3.537	7	3.562	1	1.239	8	.16	1	.391	8	5.069	8
218			min	-1.664	1	-26.152	5	-1.01	1	-.191	8	-.319	1	-5.442	1
219		5	max	3.537	7	3.513	1	1.239	8	.16	1	.789	8	12.012	6
220			min	-1.664	1	-26.201	5	-1.01	1	-.191	8	-.644	1	-6.58	1
221	23	1	max	3.023	1	23.149	9	1.239	8	.16	1	.655	1	17.643	9
222			min	-3.704	9	-25.45	2	-1.01	1	-.191	8	-.805	8	-23.277	2
223		2	max	3.023	1	23.1	9	1.239	8	.16	1	.33	1	10.206	9
224			min	-3.704	9	-25.5	2	-1.01	1	-.191	8	-.406	8	-15.102	3
225		3	max	3.023	1	23.051	9	1.239	8	.16	1	.005	1	2.784	9
226			min	-3.704	9	-25.549	2	-1.01	1	-.191	8	-.008	8	-7.822	4
227		4	max	3.023	1	23.002	9	1.239	8	.16	1	.391	8	3.677	1
228			min	-3.704	9	-25.598	2	-1.01	1	-.191	8	-.319	1	-5.917	7
229		5	max	3.023	1	22.952	9	1.239	8	.16	1	.789	8	11.659	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
230			min	-3.704	9	-25.647	2	-1.01	1	-.191	8	-.644	1	-12.011	9
231	24	1	max	40.226	4	2.085	1	2.798	4	.116	1	5.081	9	7.409	1
232			min	-16.456	9	-2.487	8	-1.399	9	.086	8	-10.165	4	-8.863	8
233		2	max	40.296	4	2.085	1	2.798	4	.116	1	2.341	9	3.326	1
234			min	-16.386	9	-2.487	8	-1.399	9	.086	8	-4.686	4	-3.993	8
235		3	max	40.366	4	2.085	1	2.798	4	.116	1	.792	4	.877	8
236			min	-16.316	9	-2.487	8	-1.399	9	.086	8	-.398	9	-.756	1
237		4	max	40.436	4	2.085	1	2.798	4	.116	1	6.27	4	5.747	8
238			min	-16.247	9	-2.487	8	-1.399	9	.086	8	-3.137	9	-4.839	1
239		5	max	40.506	4	2.085	1	2.798	4	.116	1	11.748	4	10.617	8
240			min	-16.177	9	-2.487	8	-1.399	9	.086	8	-5.876	9	-8.922	1
241	25	1	max	1.066	9	23.751	5	1.774	9	12.011	4	.789	2	.16	9
242			min	-1.239	2	-5.947	9	-3.704	4	-6.581	9	-.681	9	-.191	2
243		2	max	1.066	9	23.751	5	1.774	9	12.011	4	.396	1	.903	9
244			min	-1.239	2	-5.947	9	-3.704	4	-6.581	9	-.459	9	-3.066	5
245		3	max	.019	6	25.393	1	3.202	9	12.012	1	.214	1	6.514	1
246			min	-1.239	2	-23.207	8	-3.704	4	-11.658	9	-.416	6	-6.035	5
247		4	max	1.238	2	25.393	1	3.202	9	12.012	1	.28	9	3.34	1
248			min	-1.068	9	-23.207	8	-3.522	1	-11.658	9	-.419	4	-2.992	8
249		5	max	1.238	2	25.393	1	3.202	9	12.012	1	.681	9	.191	2
250			min	-1.068	9	-23.207	8	-3.522	1	-11.658	9	-.789	2	-.16	9
251	26	1	max	2.921	6	21.834	1	2.135	9	8.92	9	4.383	2	43.648	1
252			min	-1.358	1	-34.832	6	-2.478	2	-10.617	2	-3.585	9	-72.232	6
253		2	max	2.921	6	21.834	1	2.135	9	8.92	9	3.774	2	38.274	1
254			min	-1.358	1	-34.832	6	-2.478	2	-10.617	2	-3.06	9	-63.66	6
255		3	max	2.921	6	21.834	1	2.135	9	8.92	9	3.164	2	32.901	1
256			min	-1.358	1	-34.832	6	-2.478	2	-10.617	2	-2.535	9	-55.088	6
257		4	max	2.921	6	21.834	1	2.135	9	8.92	9	2.554	2	27.528	1
258			min	-1.358	1	-34.832	6	-2.478	2	-10.617	2	-2.009	9	-46.517	6
259		5	max	2.921	6	21.834	1	2.135	9	8.92	9	1.944	2	22.155	1
260			min	-1.358	1	-34.832	6	-2.478	2	-10.617	2	-1.484	9	-37.945	6
261	27	1	max	1.067	9	25.067	9	.641	9	17.701	1	.403	9	.222	2
262			min	-1.239	2	-28.578	1	-2.53	4	-20.132	7	-.469	2	-.187	9
263		2	max	1.067	9	25.067	9	.641	9	17.701	1	.483	9	3.765	1
264			min	-1.239	2	-28.578	1	-2.53	4	-20.132	7	-.753	3	-3.32	9
265		3	max	1.239	2	25.067	9	1.23	6	20.155	5	.999	1	7.337	1
266			min	.019	6	-28.578	1	-2.013	2	-20.132	7	-1.051	4	-6.599	4
267		4	max	1.239	2	9.121	9	2.068	9	20.155	5	.721	2	1.327	9
268			min	-1.067	9	-25.626	4	-2.41	1	-4.454	1	-.662	9	-3.396	4
269		5	max	1.239	2	9.121	9	2.068	9	20.155	5	.469	2	.187	9
270			min	-1.067	9	-25.626	4	-2.41	1	-4.454	1	-.403	9	-.222	2
271	28	1	max	1.239	2	28.463	1	2.53	4	9.556	4	.397	9	.187	9
272			min	-1.067	9	-25.182	9	-.641	9	-3.474	9	-.46	2	-.222	2
273		2	max	1.239	2	28.463	1	2.53	4	9.556	4	.317	9	3.334	9
274			min	-1.067	9	-25.182	9	-.641	9	-3.474	9	-.257	1	-3.751	1
275		3	max	-.019	6	28.463	1	2.013	2	9.557	1	.416	6	6.628	4
276			min	-1.239	2	-25.182	9	-1.23	6	-9.346	9	-.214	1	-7.309	1
277		4	max	1.067	9	25.741	4	2.41	1	9.557	1	.272	4	3.41	4
278			min	-1.239	2	-9.006	9	-2.068	9	-9.346	9	-.139	9	-1.312	9
279		5	max	1.067	9	25.741	4	2.41	1	9.557	1	.46	2	.222	2
280			min	-1.239	2	-9.006	9	-2.068	9	-9.346	9	-.397	9	-.187	9
281	29	1	max	2.53	4	28.58	1	1.067	9	.187	9	.469	2	17.701	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
282			min	-.641	9	-25.065	9	-1.239	2	-.222	2	-.403	9	-20.132	7
283		2	max	2.53	4	28.552	1	1.067	9	.187	9	.237	2	12.345	1
284			min	-.641	9	-25.094	9	-1.239	2	-.222	2	-.203	9	-16.064	7
285		3	max	2.53	4	28.523	1	1.067	9	.187	9	.005	2	6.995	1
286			min	-.641	9	-25.122	9	-1.239	2	-.222	2	-.003	9	-12.431	6
287		4	max	2.53	4	28.494	1	1.067	9	.187	9	.197	9	1.649	1
288			min	-.641	9	-25.151	9	-1.239	2	-.222	2	-.228	2	-9.825	5
289		5	max	2.53	4	28.466	1	1.067	9	.187	9	.397	9	3.474	9
290			min	-.641	9	-25.18	9	-1.239	2	-.222	2	-.46	2	-9.556	4
291	30	1	max	2.068	9	9.121	9	1.067	9	.187	9	.469	2	4.454	1
292			min	-2.41	1	-25.624	4	-1.239	2	-.222	2	-.403	9	-20.155	5
293		2	max	2.068	9	9.092	9	1.067	9	.187	9	.237	2	5.721	1
294			min	-2.41	1	-25.652	4	-1.239	2	-.222	2	-.203	9	-15.756	6
295		3	max	2.068	9	9.063	9	1.067	9	.187	9	.005	2	6.995	1
296			min	-2.41	1	-25.681	4	-1.239	2	-.222	2	-.003	9	-12.431	6
297		4	max	2.068	9	9.035	9	1.067	9	.187	9	.197	9	8.273	1
298			min	-2.41	1	-25.71	4	-1.239	2	-.222	2	-.228	2	-9.752	7
299		5	max	2.068	9	9.006	9	1.067	9	.187	9	.397	9	9.557	1
300			min	-2.41	1	-25.738	4	-1.239	2	-.222	2	-.46	2	-9.346	9
301	31	1	max	1.358	1	35.737	6	2.477	2	7.407	9	3.584	9	51.581	6
302			min	-2.921	6	-20.93	1	-2.134	9	-8.863	2	-4.383	2	-31.479	1
303		2	max	1.358	1	35.737	6	2.477	2	7.407	9	3.345	9	47.579	6
304			min	-2.921	6	-20.93	1	-2.134	9	-8.863	2	-4.106	2	-29.135	1
305		3	max	1.358	1	35.737	6	2.477	2	7.407	9	3.106	9	43.577	6
306			min	-2.921	6	-20.93	1	-2.134	9	-8.863	2	-3.828	2	-26.792	1
307		4	max	1.358	1	35.737	6	2.477	2	7.407	9	2.867	9	39.575	6
308			min	-2.921	6	-20.93	1	-2.134	9	-8.863	2	-3.551	2	-24.448	1
309		5	max	1.358	1	35.737	6	2.477	2	7.407	9	2.628	9	35.574	6
310			min	-2.921	6	-20.93	1	-2.134	9	-8.863	2	-3.274	2	-22.104	1
311	32	1	max	1.239	2	5.75	9	3.704	4	20.752	5	.805	2	.191	2
312			min	-1.066	9	-23.948	5	-1.774	9	-1.577	1	-.692	9	-.16	9
313		2	max	1.239	2	5.75	9	3.704	4	20.752	5	1.242	3	3.091	5
314			min	-1.066	9	-23.948	5	-1.774	9	-1.577	1	-.914	9	-.878	9
315		3	max	1.239	2	23.404	8	3.704	4	20.752	5	1.697	3	6.084	5
316			min	-.019	6	-25.197	1	-3.202	9	-20.401	8	-1.56	1	-6.465	1
317		4	max	1.068	9	23.404	8	3.522	1	20.527	1	1.092	9	3.016	8
318			min	-1.238	2	-25.197	1	-3.202	9	-20.401	8	-1.221	2	-3.315	1
319		5	max	1.068	9	23.404	8	3.522	1	20.527	1	.692	9	.16	9
320			min	-1.238	2	-25.197	1	-3.202	9	-20.401	8	-.805	2	-.191	2
321	33	1	max	3.522	1	23.408	8	1.239	2	.16	9	.692	9	20.401	8
322			min	-3.202	9	-25.195	1	-1.067	9	-.191	2	-.805	2	-20.527	1
323		2	max	3.522	1	23.359	8	1.239	2	.16	9	.349	9	12.901	7
324			min	-3.202	9	-25.244	1	-1.067	9	-.191	2	-.406	2	-12.416	1
325		3	max	3.522	1	23.31	8	1.239	2	.16	9	.006	9	6.325	6
326			min	-3.202	9	-25.293	1	-1.067	9	-.191	2	-.008	2	-4.289	1
327		4	max	3.522	1	23.261	8	1.239	2	.16	9	.391	2	5.144	3
328			min	-3.202	9	-25.343	1	-1.067	9	-.191	2	-.337	9	-4.444	9
329		5	max	3.522	1	23.211	8	1.239	2	.16	9	.789	2	12.012	1
330			min	-3.202	9	-25.392	1	-1.067	9	-.191	2	-.681	9	-11.658	9
331	34	1	max	1.774	9	23.953	5	1.239	2	.16	9	.692	9	20.752	5
332			min	-3.704	4	-5.754	9	-1.067	9	-.191	2	-.805	2	-1.577	1
333		2	max	1.774	9	23.904	5	1.239	2	.16	9	.349	9	13.056	5

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear[k]	LC	Torque[k-...	LC	y-y Mome...	LC	z-z Mome...	LC
334			min	-3.704	4	-5.803	9	-1.067	9	-.191	2	-.406	2	-2.941	1
335		3	max	1.774	9	23.855	5	1.239	2	.16	9	.006	9	6.325	6
336			min	-3.704	4	-5.852	9	-1.067	9	-.191	2	-.008	2	-4.289	1
337		4	max	1.774	9	23.805	5	1.239	2	.16	9	.391	2	4.675	9
338			min	-3.704	4	-5.901	9	-1.067	9	-.191	2	-.337	9	-5.841	2
339		5	max	1.774	9	23.756	5	1.239	2	.16	9	.789	2	6.581	9
340			min	-3.704	4	-5.951	9	-1.067	9	-.191	2	-.681	9	-12.011	4
341	35	1	max	21.326	1	2.487	2	2.794	6	.117	9	5.075	1	8.863	2
342			min	-35.337	6	-2.084	9	-1.397	1	.086	2	-10.147	6	-7.407	9
343		2	max	21.395	1	2.487	2	2.794	6	.117	9	2.34	1	3.993	2
344			min	-35.267	6	-2.084	9	-1.397	1	.086	2	-4.677	6	-3.325	9
345		3	max	21.465	1	2.487	2	2.794	6	.117	9	.794	6	.757	9
346			min	-35.197	6	-2.084	9	-1.397	1	.086	2	-.395	1	-.877	2
347		4	max	21.535	1	2.487	2	2.794	6	.117	9	6.264	6	4.838	9
348			min	-35.128	6	-2.084	9	-1.397	1	.086	2	-3.131	1	-5.747	2
349		5	max	21.605	1	2.487	2	2.794	6	.117	9	11.735	6	8.92	9
350			min	-35.058	6	-2.084	9	-1.397	1	.086	2	-5.866	1	-10.617	2

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

	Member	Shape	Code C...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-...	phi*Mn z-...	Cb	Eqn
1	M1	Pipe 10.75x0...	.000	0	9	.000	0		9	352.628	359.22	99.144	99.144	1....	H1-1b
2	M2	Pole 23.8128...	.279	2	9	.027	0		7	858.298	999.342	537.209	537.209	1....	H1-1b
3	M35	HSS6X6X8	.269	7.833	8	.028	0	y	9	387.597	403.236	68.31	68.31	2....	H1-1b
4	M14	BP 1"x45"	.014	0	4	.028	.75	y	4	2400.178	2632.5	54.844	2467.969	1....	H1-1b
5	M15A	BP 1"x45"	.014	0	6	.031	0	y	6	2400.178	2632.5	54.844	2467.969	1....	H1-1b
6	M30	BP 1"x45"	.021	0	6	.028	1.286	y	7	2005.921	2632.5	54.844	2467.969	2....	H1-1b
7	M31	BP 1"x45"	.020	0	4	.026	0	y	3	2005.921	2632.5	54.844	2467.969	2....	H1-1b
8	18	BP 1"x45"	.015	0	6	.032	0	y	6	2400.178	2632.5	54.844	2467.969	1....	H1-1b
9	19	BP 1"x45"	.014	0	1	.031	0	y	1	2400.178	2632.5	54.844	2467.969	1....	H1-1b
10	22	BP 1"x45"	.022	0	7	.028	1.286	y	6	2005.921	2632.5	54.844	2467.969	2....	H1-1b
11	23	BP 1"x45"	.021	0	9	.027	1.286	y	1	2005.921	2632.5	54.844	2467.969	2....	H1-1b
12	24	HSS6X6X8	.273	7.833	5	.028	0	z	4	387.597	403.236	68.31	68.31	2....	H1-1b
13	29	BP 1"x45"	.015	0	1	.032	0	y	1	2400.178	2632.5	54.844	2467.969	1....	H1-1b
14	30	BP 1"x45"	.014	0	4	.029	.75	y	4	2400.178	2632.5	54.844	2467.969	1....	H1-1b
15	33	BP 1"x45"	.022	0	1	.028	1.286	y	1	2005.921	2632.5	54.844	2467.969	2....	H1-1b
16	34	BP 1"x45"	.021	0	4	.026	0	y	4	2005.921	2632.5	54.844	2467.969	2....	H1-1b
17	35	HSS6X6X8	.265	7.833	5	.028	0	z	6	387.597	403.236	68.31	68.31	2....	H1-1b

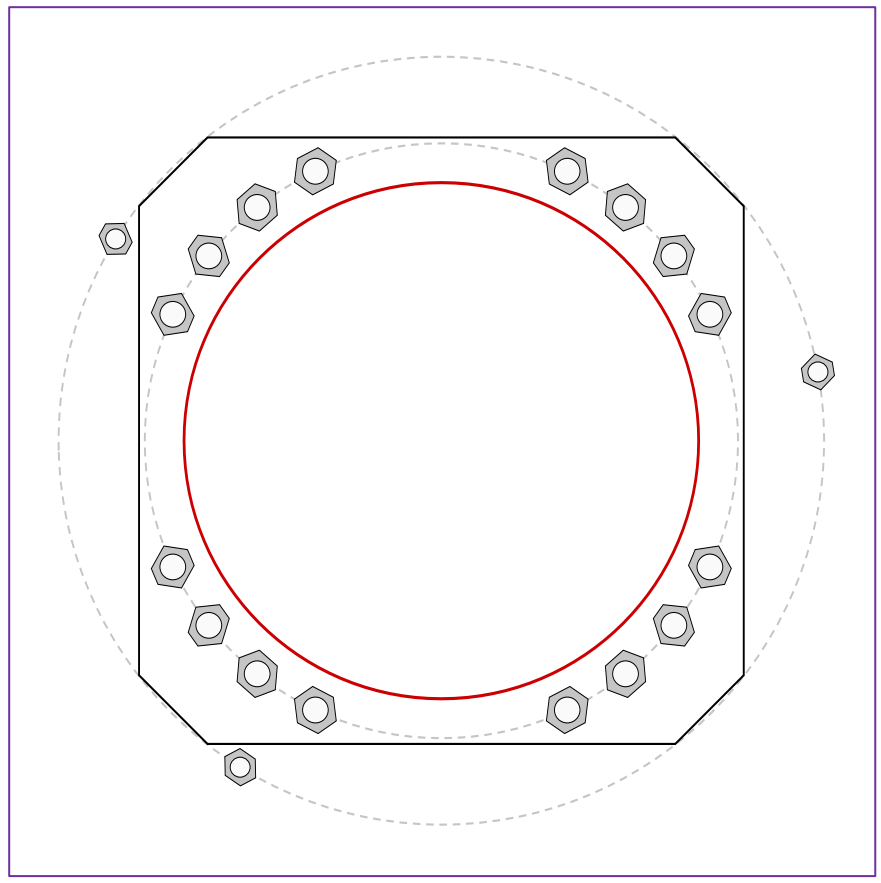
Monopole Base Plate Connection

Site Info	
BU #	876313
Site Name	HNSON AVE. BURNT H
Order #	586312, Rev. 1

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	See Custom Sheet
l_{ar} (in)	See Custom Sheet

Applied Loads	
Moment (kip-ft)	3873.23
Axial Force (kips)	62.25
Shear Force (kips)	29.40

**TIA-222-H Section 15.5 Applied*



Connection Properties

Anchor Rod Data

GROUP 1: (16) 2-1/4" ø bolts (A615-75 N; Fy=75 ksi, Fu=100 ksi) on 52" BC

Anchor Spacing: 6 in

GROUP 2: (3) 1-3/4" ø bolts (Williams R71 N N; Fy=120 ksi, Fu=125 ksi) on 67.1" BC

pos. (deg): 10.3, 148.3, 238.3

Base Plate Data

53" W x 3" Plate (A572-50; Fy=50 ksi, Fu=65 ksi); Clip: 6 in

Stiffener Data

N/A

Pole Data

45.1" x 0.4375" 18-sided pole (A607-65; Fy=65 ksi, Fu=80 ksi)

Analysis Results

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

GROUP 1:		
Pu_t = 186.14	ϕPn_t = 243.75	**Stress Rating**
Vu = 1.84	ϕVn = 149.1	**72.7%**
Mu = n/a	ϕMn = n/a	**Pass**

GROUP 2:		
Pu_c = 184.98	ϕPn_c = 221.02	**Stress Rating**
Vu = 0	ϕVn = 126.36	**79.7%**
Mu = 0	ϕMn = 108.42	**Pass**

Base Plate Summary

Max Stress (ksi):	28.35	(Flexural)
Allowable Stress (ksi):	45	
Stress Rating:	**60.0%**	**Pass**

CCIplate

Elevation (ft)	0	*(Base)*

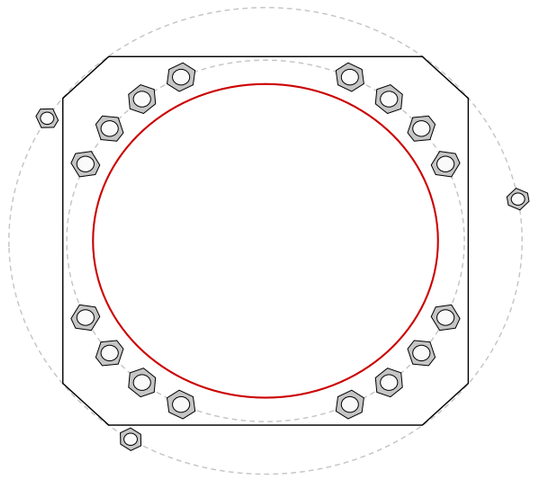
note: Bending interaction not considered when Grout Considered = "Yes"

Bolt Group	Resist Axial	Resist Shear	Induce Plate Bending	Grout Considered	Apply at BARB Elevation	BARB CL Elevation (ft)
1	Yes	Yes	Yes	No	No	
2	No	No	No	No	No	

Custom Bolt Connection

Bolt	Bolt Group ID	Location (deg.)	Diameter (in)	Material	Bolt Circle (in)	Eta Factor, η:	l_{ar} (in):	Thread Type	Area Override, in^2	Tension Only
1	1	25.122571	2.25	A615-75	52	0.5	2.25	N-Included		No
2	1	38.37419	2.25	A615-75	52	0.5	2.25	N-Included		No
3	1	51.62581	2.25	A615-75	52	0.5	2.25	N-Included		No
4	1	64.877429	2.25	A615-75	52	0.5	2.25	N-Included		No
5	1	115.12257	2.25	A615-75	52	0.5	2.25	N-Included		No
6	1	128.37419	2.25	A615-75	52	0.5	2.25	N-Included		No
7	1	141.62581	2.25	A615-75	52	0.5	2.25	N-Included		No
8	1	154.87743	2.25	A615-75	52	0.5	2.25	N-Included		No
9	1	205.12257	2.25	A615-75	52	0.5	2.25	N-Included		No
10	1	218.37419	2.25	A615-75	52	0.5	2.25	N-Included		No
11	1	231.62581	2.25	A615-75	52	0.5	2.25	N-Included		No
12	1	244.87743	2.25	A615-75	52	0.5	2.25	N-Included		No
13	1	295.12257	2.25	A615-75	52	0.5	2.25	N-Included		No
14	1	308.37419	2.25	A615-75	52	0.5	2.25	N-Included		No
15	1	321.62581	2.25	A615-75	52	0.5	2.25	N-Included		No
16	1	334.87743	2.25	A615-75	52	0.5	2.25	N-Included		No
17	2	10.3	1.75	Williams R71 N	67.1	0.5	14	N-Included	2.6	No
18	2	148.3	1.75	Williams R71 N	67.1	0.5	14	N-Included	2.6	No
19	2	238.3	1.75	Williams R71 N	67.1	0.5	14	N-Included	2.6	No

Plot Graphic



PROJECT	**137177.014.01 - WEST JOHNSON AVE. BURNT HOUSE, CT**
SUBJECT	**Anchor Rod Bracket Analysis**
DATE	**06-23-22**
v4.6.1	

TIA-222 Rev.	H
Apply TIA-222-H Section 15.5?	Yes

B+T GRP
1717 S. Boulder, Suite 300
Tulsa, OK 74119
(918) 587-4630

Analysis Criteria		
Design/Analysis	Analysis	
Load Type	Current Load	
Current load	184.98	kips
AR Capacity	259.8	kips

Tower Type	Monopole

Manufacturers Tower Prop.		
Pole Thickness	0.4375	in
Pole Grade	Custom	
Fy	65	ksi
Fu	80	ksi
Base Plate Gr.	A572-50	
Fy	50	ksi
Fu	65	ksi

Post-Installed Adhesive AR Mod.			
ARB Type	Welded		
Size	1.75		in
Grade	Custom		
Fy	120	120	ksi
Fu	125	125	ksi

Anchor Rod Bracket Analysis Checks		
Tube Bearing	36.0%	-
Tube Compression	54.0%	-
Gusset Shear	16.3%	-
Gusset Flexure	N/A	-
Welds: Gusset to Tower and BP	28.4%	-
Welds: Gusset to Tube	33.0%	-
Welds: Geometry	N/A	
Tower Punching	17.0%	-
Tube Punching	17.6%	-
Utilization	**54.0%**	

Bracket Properties

Gusset		
Thickness	1.25	in
Width at Tube	7.75	in
Height at Pole	45	in
Height at Tube	24	in
Grade	A572-65	
Fy	65	ksi
Fu	80	ksi

Pipe/Tube		
Size	HSS5x5x1/2	
Total Length	24	in
Length above Gusset	0	in
Length below Gusset	9	in
Grade	A500 Grade B (Square)	
Fy	46	ksi
Fu	58	ksi

Weld - Gusset to Pipe/Tube		
FEXX	70	ksi
Weld Type	Double Fillet	
Fillet Size	1/2	in

Weld - Gusset to Tower		
FEXX	80	ksi
Weld Type	Double Fillet	
Fillet Size	3/8	in

Weld - Gusset to Base Plate		
FEXX	80	ksi
Weld Type	CJP - Double Bevel	
Fillet Size	5/8	in
Bevel Depth	5/8	in
Gap	0	in
Notch (horiz)	0.75	in
Notch (vert)	0.75	in
Pipe/Tube Welded to Base/Footpad?	No	

Drilled Pier Foundation

BU # :	876313
Site Name:	WEST JOHNSON AVE. BU
Order Number:	586312, Rev. 1
TIA-222 Revison:	H
Tower Type:	Monopole

Applied Loads	Comp.	Uplift
Moment (kip-ft)	3873.23	
Axial Force (kips)	62.25	
Shear Force (kips)	29.4	

Material Properties		
Concrete Strength, f'c:	3	ksi
Rebar Strength, Fy:	60	ksi
Tie Yield Strength, Fyt:	40	ksi

Pier Design Data		
Depth	25.5	ft
Ext. Above Grade	0.5	ft
Pier Section 1		
From 0.5' above grade to 6.5' below grade		
Pier Diameter	11	ft
Rebar Quantity	20	
Rebar Size	11	
Clear Cover to Ties	28	in
Tie Size	5	
Tie Spacing	18	in

Rebar & Pier Options
Embedded Pole Inputs
Belled Pier Inputs

Pier Section 2		
From 6.5' below grade to 25.5' below grade		
Pier Diameter	7	ft
Rebar Quantity	20	
Rebar Size	11	
Clear Cover to Ties	4	in
Tie Size	5	
Tie Spacing	18	in

Analysis Results		
Soil Lateral Check	*Compression*	*Uplift*
$D_{v=0}$ (ft from TOC)	6.10	-
Soil Safety Factor	1.75	-
Max Moment (kip-ft)	4043.95	-
Rating*	*72.6%*	-
Soil Vertical Check	*Compression*	*Uplift*
Skin Friction (kips)	236.44	-
End Bearing (kips)	123.82	-
Weight of Concrete (kips)	206.61	-
Total Capacity (kips)	360.27	-
Axial (kips)	268.86	-
Rating*	*71.1%*	-
Reinforced Concrete Flexure	*Compression*	*Uplift*
Critical Depth (ft from TOC)	7.01	-
Critical Moment (kip-ft)	4023.02	-
Critical Moment Capacity	5123.75	-
Rating*	*74.8%*	-
Reinforced Concrete Shear	*Compression*	*Uplift*
Critical Depth (ft from TOC)	13.21	-
Critical Shear (kip)	406.25	-
Critical Shear Capacity	502.82	-
Rating*	*76.9%*	-

Structural Foundation Rating*	**76.9%**
Soil Interaction Rating*	**72.6%**

*Rating per TIA-222-H Section 15.5

Check Limitation	
Apply TIA-222-H Section 15.5:	☑
N/A	☐
Additional Longitudinal Rebar	
Input Effective Depths (else Actual):	☐
Shear Design Options	
Check Shear along Depth of Pier:	☑
Utilize Shear-Friction Methodology:	☐
Override Critical Depth:	☐

Go to Soil Calculations

Soil Profile

Groundwater Depth	10	# of Layers	10

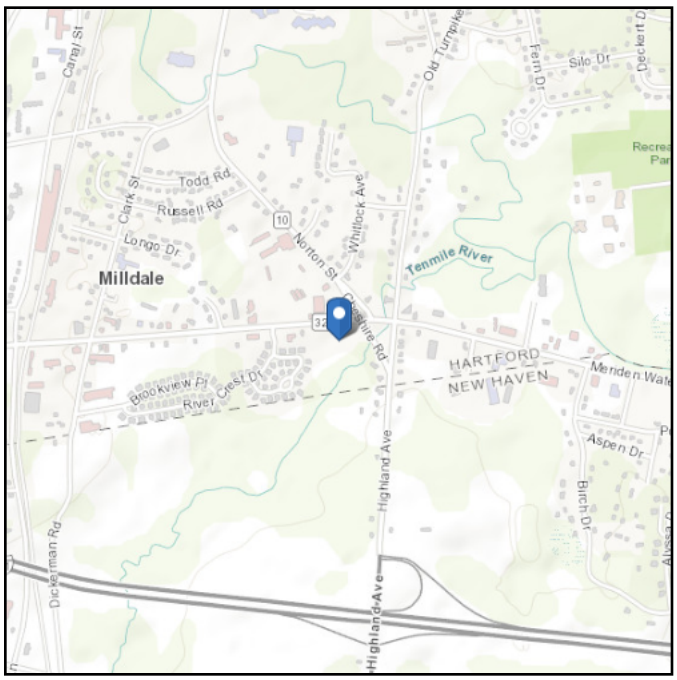
Layer	Top (ft)	Bottom (ft)	Thickness (ft)	γ_{soil} (pcf)	$\gamma_{concrete}$ (pcf)	Cohesion (ksf)	Angle of Friction (degrees)	Calculated Ultimate Skin Friction Comp (ksf)	Calculated Ultimate Skin Friction Uplift (ksf)	Ultimate Skin Friction Comp Override (ksf)	Ultimate Skin Friction Uplift Override (ksf)	Ult. Gross Bearing Capacity (ksf)	SPT Blow Count	Soil Type
1	0	2	2	105	150	0	0	0.000	0.000	0.00	0.00			Cohesionless
2	2	3.5	1.5	110	150	0	0	0.000	0.000	0.00	0.00			Cohesionless
3	3.5	4	0.5	110	150	0	0	0.000	0.000	0.00	0.00			Cohesionless
4	4	4.7	0.7	110	150	0	0	0.000	0.000	0.00	0.00			Cohesionless
5	4.7	6	1.3	110	150	0	31	0.000	0.000	0.10	0.08			Cohesionless
6	6	8	2	120	150	2.5	0	1.375	1.375	1.48	1.48			Cohesive
7	8	10	2	115	150	2.25	0	1.24	1.24	1.23	1.23			Cohesive
8	10	15	5	48	87.6	1	0	0.55	0.55	0.55	0.55			Cohesive
9	15	20	5	48	87.6	1.25	0	0.69	0.69	0.66	0.66			Cohesive
10	20	25.5	5.5	43	87.6	0.75	0	0.41	0.41	0.41	0.41	4.29		Cohesive

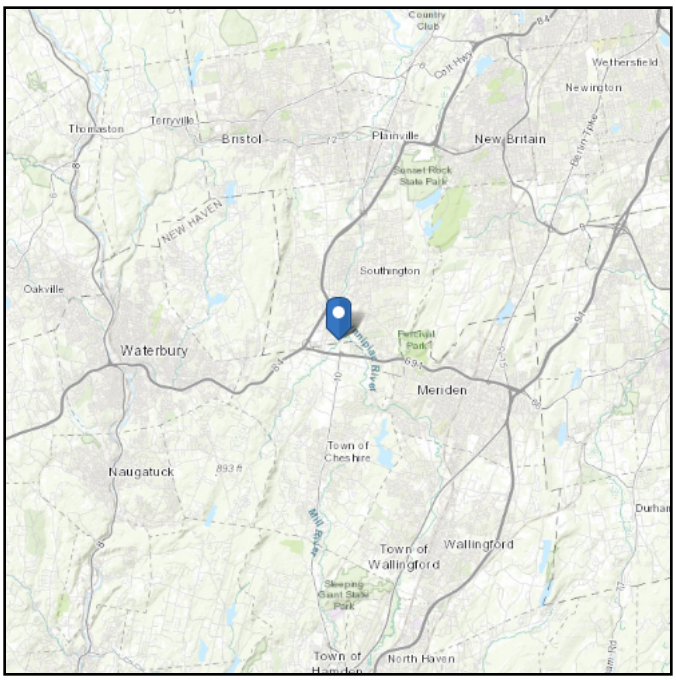
ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 133.13 ft (NAVD 88)
Latitude: 41.564275
Longitude: -72.891861





Wind

Results:

Wind Speed	118 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	90 Vmph
100-year MRI	97 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed: Sat Jan 08 2022

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

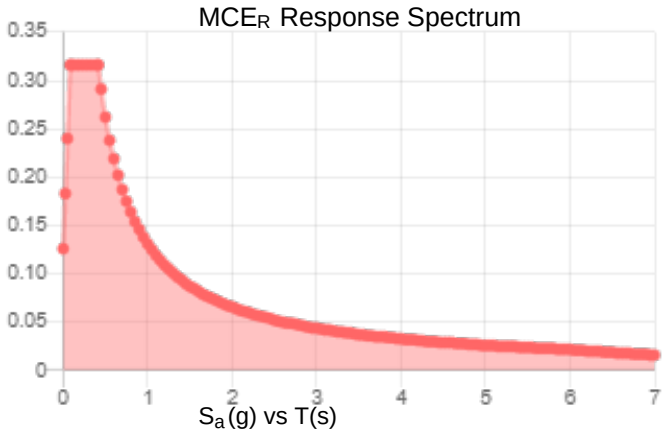
Seismic

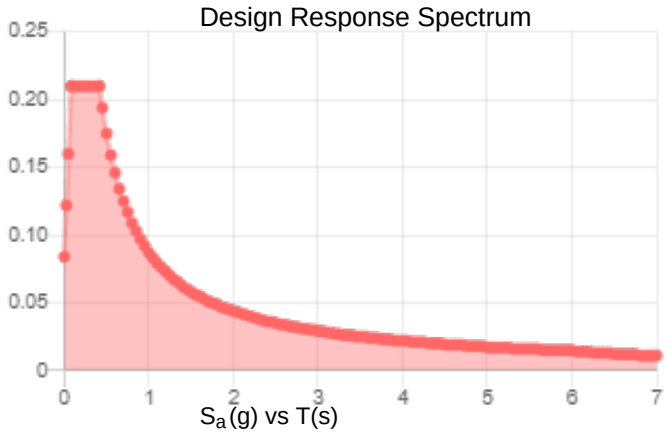
Site Soil Class: D - Stiff Soil

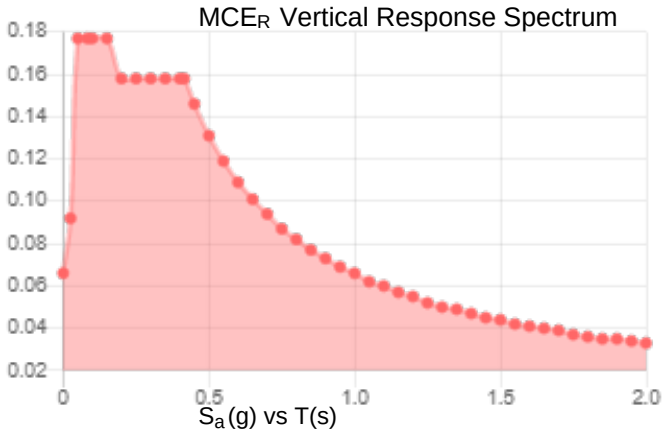
Results:

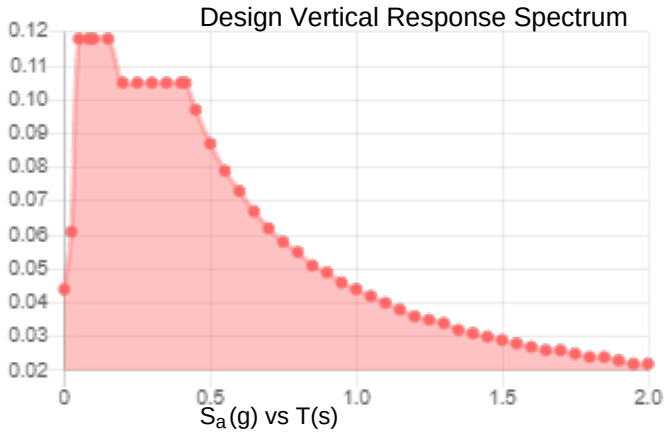
S_S :	0.197	S_{D1} :	0.087
S_1 :	0.055	T_L :	6
F_a :	1.6	PGA :	0.109
F_v :	2.4	PGA_M :	0.172
S_{MS} :	0.316	F_{PGA} :	1.583
S_{M1} :	0.131	I_e :	1
S_{DS} :	0.21	C_v :	0.7

Seismic Design Category B









Data Accessed: **Sat Jan 08 2022**

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness:	1.00 in.
Concurrent Temperature:	15 F
Gust Speed	50 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Sat Jan 08 2022

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Exhibit E

Mount Analysis

Date: **May 2, 2022**

Infinigy
1033 Watervliet Shaker Road
Albany, NY 12205
518-690-0790
structural@infinigy.com

Subject:	**Mount Analysis Report**	
Carrier Designation:	**AT&T Mobility Equipment Change-Out**	
	Carrier Site Number:	CTL05264
	Carrier Site Name:	SOUTHINGTON-SOUTH
	Carrier FA Number:	10092035
Crown Castle Designation:	**Crown Castle BU Number:**	876313
	Crown Castle Site Name:	WEST JOHNSON AVE. BURNT HOUSE
	Crown Castle JDE Job Number:	686293
	Crown Castle Order Number:	586312 Rev.1
Engineering Firm Designation:	**Infinigy Report Designation:**	1039-Z0001-B
Site Data:	**1394 Meriden Waterbury Tpk, Southington, Hartford County, CT, 06489** **Latitude 41°33'51.39" Longitude -72°53'30.70"**	
Structure Information:	**Tower Height & Type:**	**160.0 ft Monopole**
	Mount Elevation:	**157.0 ft**
	Mount Type:	**12.5 ft Sector Frame**

Infinigy is pleased to submit this **"Mount Analysis Report"** to determine the structural integrity of AT&T Mobility's antenna mounting system with the proposed appurtenance and equipment addition on the abovementioned supporting tower structure. Analysis of the existing supporting tower structure is to be completed by others and therefore is not part of this analysis. Analysis of the antenna mounting system as a tie-off point for fall protection or rigging is not part of this document.

The purpose of the analysis is to determine acceptability of the mount stress level. Based on our analysis we have determined the mount stress level to be:

Sector Frame **Sufficient**

***See Section 4.1 of this report for the loading and structural modifications required in order for the mount to support the loading listed in Table 1.**

This analysis has been performed in accordance with the 2018 International Building Code based upon an ultimate 3-second gust wind speed of 118 mph. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Mount analysis prepared by: Alex Mercado, E.I.T.

Respectfully Submitted by:
Luis Mendoza, P.E.
949-338-6143
structural@infinigy.com
CT PE License No.35574

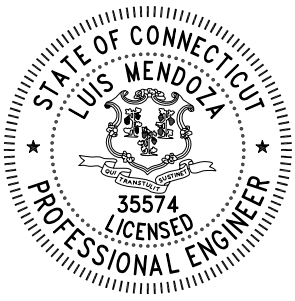


TABLE OF CONTENTS

1) INTRODUCTION

This is an existing 3 sector 12.5 ft Sector Frame, designed by Site Pro 1.

2) ANALYSIS CRITERIA

Building Code:	2018 IBC
TIA-222 Revision:	TIA-222-H
Risk Category:	II
Ultimate Wind Speed:	118 mph
Exposure Category:	B
Topographic Factor at Base:	1.0
Topographic Factor at Mount:	1.0
Ice Thickness:	1.0 in
Wind Speed with Ice:	50 mph
Seismic S_s:	0.197
Seismic S_1:	0.055
Live Loading Wind Speed:	30 mph
Man Live Load at Mid/End-Points:	250 lb
Man Live Load at Mount Pipes:	500 lb

Table 1 - Proposed Equipment Configuration

Mount Centerline (ft)	Antenna Centerline (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount / Modification Details
157.0	160.0	3	ERICSSON	AIR 6419 B77G_CCIV3	12.5 ft Sector Frame
	158.0	4	RAYCAP	DC6-48-60-18-8F	
		3	CCI ANTENNAS	TPA65R-BU8DA-K	
		3	KATHREIN	80010966	
		3	ERICSSON	RRUS 4449 B5/B12	
		3	ERICSSON	RRUS 4478 B14	
		3	ERICSSON	RRUS 8843 B2/B66A	
		3	ERICSSON	RRUS-32 B30	
	156.0	3	ERICSSON	AIR 6449 B77D_CCVI2	

3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

Document	Remarks	Reference	Source
Crown Application	AT&T Mobility Application	586312 Rev.1	CCI Sites
Mount Manufacturer Drawings	Site Pro 1	VFA12-HD-S	Infinigy

3.1) Analysis Method

RISA-3D (Version 17.0.4), a commercially available analysis software package, was used to create a three-dimensional model of the antenna mounting system and calculate member stresses for various loading cases.

Infinigy Mount Analysis Tool V2.1.7, a tool internally developed by Infinigy, was used to calculate wind loading on all appurtenances, dishes and mount members for various loading cases. Selected output from the analysis is included in Appendix B “Software Input Calculations”.

This analysis was performed in accordance with Crown Castle’s ENG-SOW-10208 *Mount Analysis* (Revision E).

3.2) Assumptions

1) The antenna mounting system was properly fabricated, installed and maintained in good condition in accordance with its original design and manufacturer's specifications.
2) The configuration of antennas, mounts, and other appurtenances are as specified in Table 1 and the referenced drawings.
3) 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.
4) The analysis will be required to be revised if the existing conditions in the field differ from those shown in the above-referenced documents or assumed in this analysis. No allowance was made for any damaged, missing, or rusted members.
5) Prior structural modifications to the tower mounting system are assumed to be installed as shown per available data.
6) Steel grades have been assumed as follows, unless noted otherwise:

Channel, Solid Round, Angle, Plate	Q345 (GR 36)
HSS (Rectangular)	Q235-GB (GR 35)
Pipe	Q235-GB (GR 35)
Connection Bolts	SAE J429 Grade 2

This analysis may be affected if any assumptions are not valid or have been made in error. Infinigy should be notified to determine the effect on the structural integrity of the antenna mounting system.

4) ANALYSIS RESULTS

Table 3 - Mount Component Stresses vs. Capacity (Sector Frame, All Sectors)

Notes	Component	Critical Member	Centerline (ft)	% Capacity	Pass / Fail
1,2	Mount Pipe(s)	MP1	157.0	61.7	Pass
	Horizontal(s)	HOR3		40.0	Pass
	Standoff(s)	SA6		38.6	Pass
	Connection Plate(s)	M118		47.4	Pass
	Bracing(s)	M92		53.6	Pass
	Mount Connection(s)	--		22.5	Pass

Structure Rating (max from all components) =	**61.7%**

Notes:
1) See additional documentation in "Appendix C - Software Analysis Output" for calculations supporting the % capacity consumed.
2) See additional documentation in “Appendix D – Additional Calculations” for detailed mount connection calculations.

4.1) Recommendations

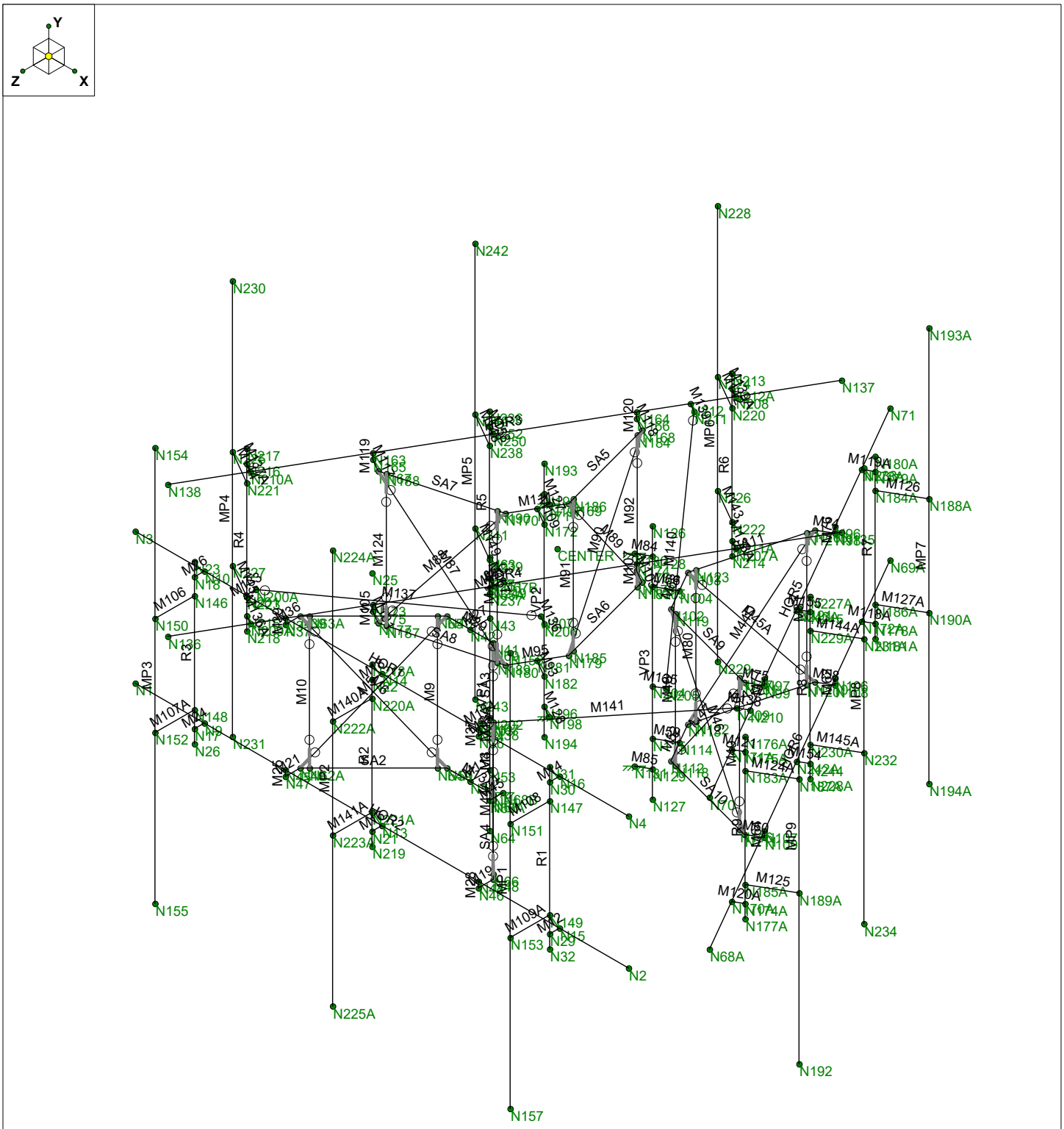
The mount has sufficient capacity to carry the proposed loading configuration. In order for the results of the analysis to be considered valid, the structural modifications listed below must be completed.

1. Installation of (3) Site Pro 1 PM1 Stand-Off Mount per sector for proposed loading.

No structural modifications are required at this time, provided that the above-listed changes are implemented.

APPENDIX A

WIRE FRAME AND RENDERED MODELS



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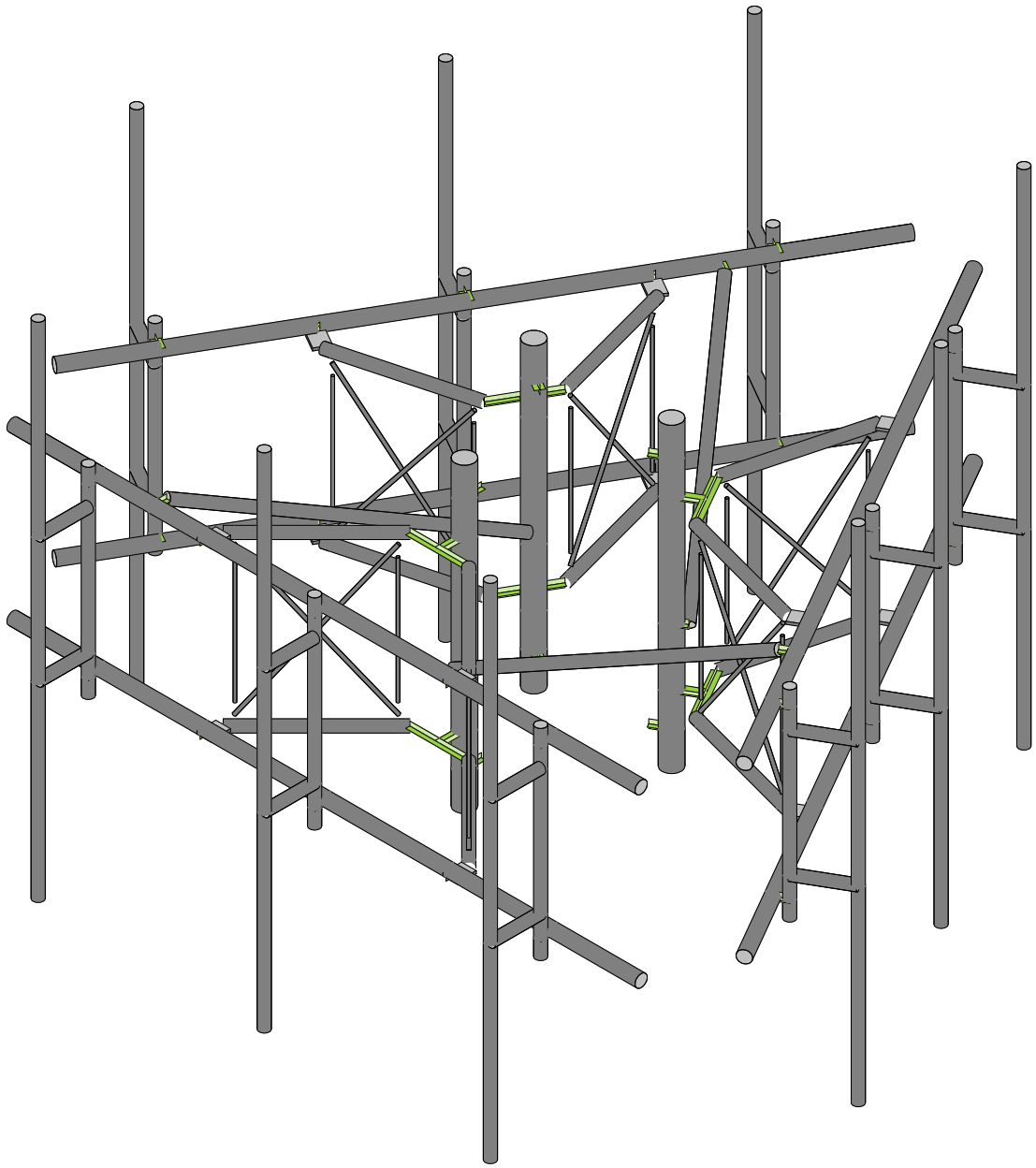

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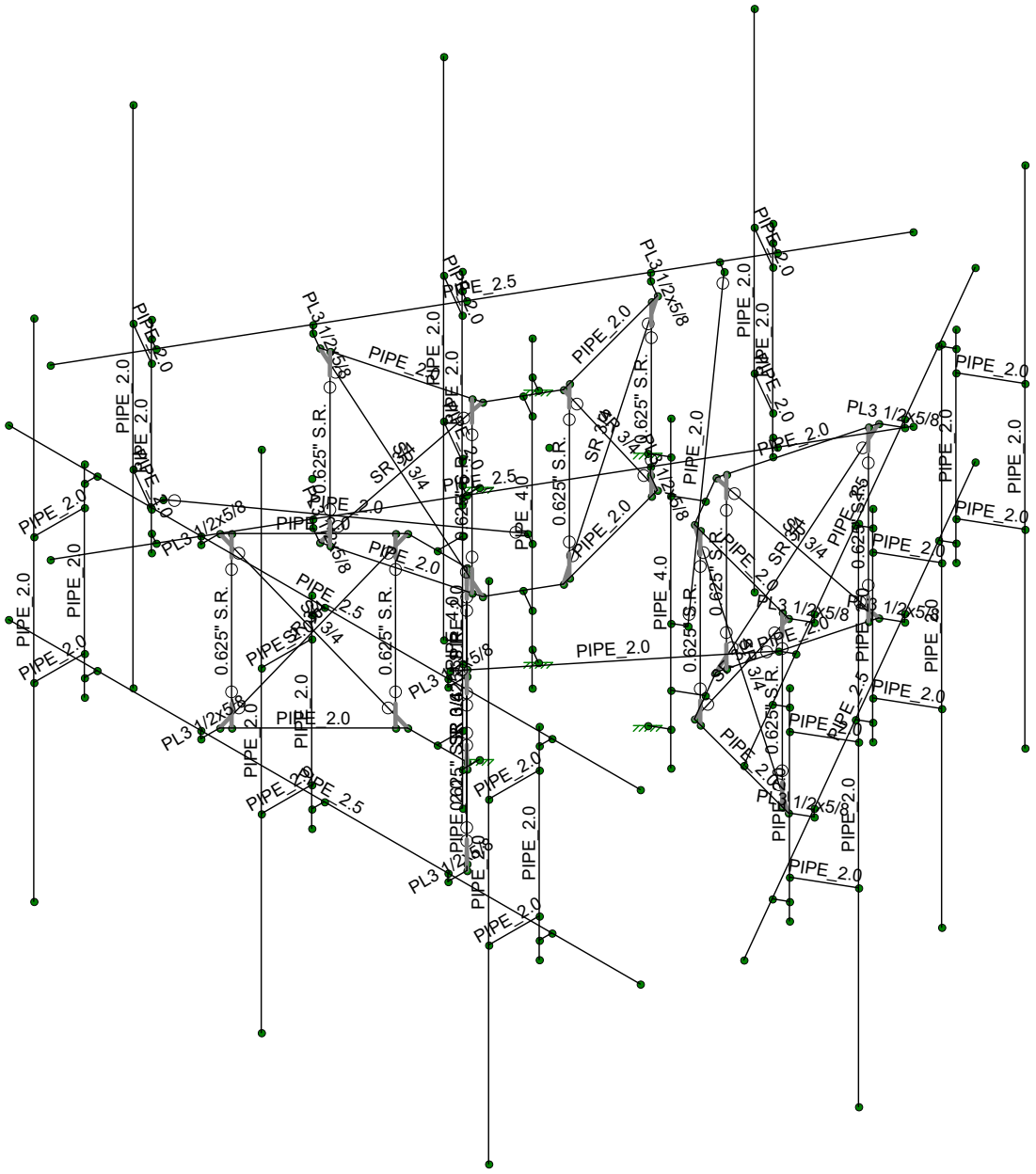

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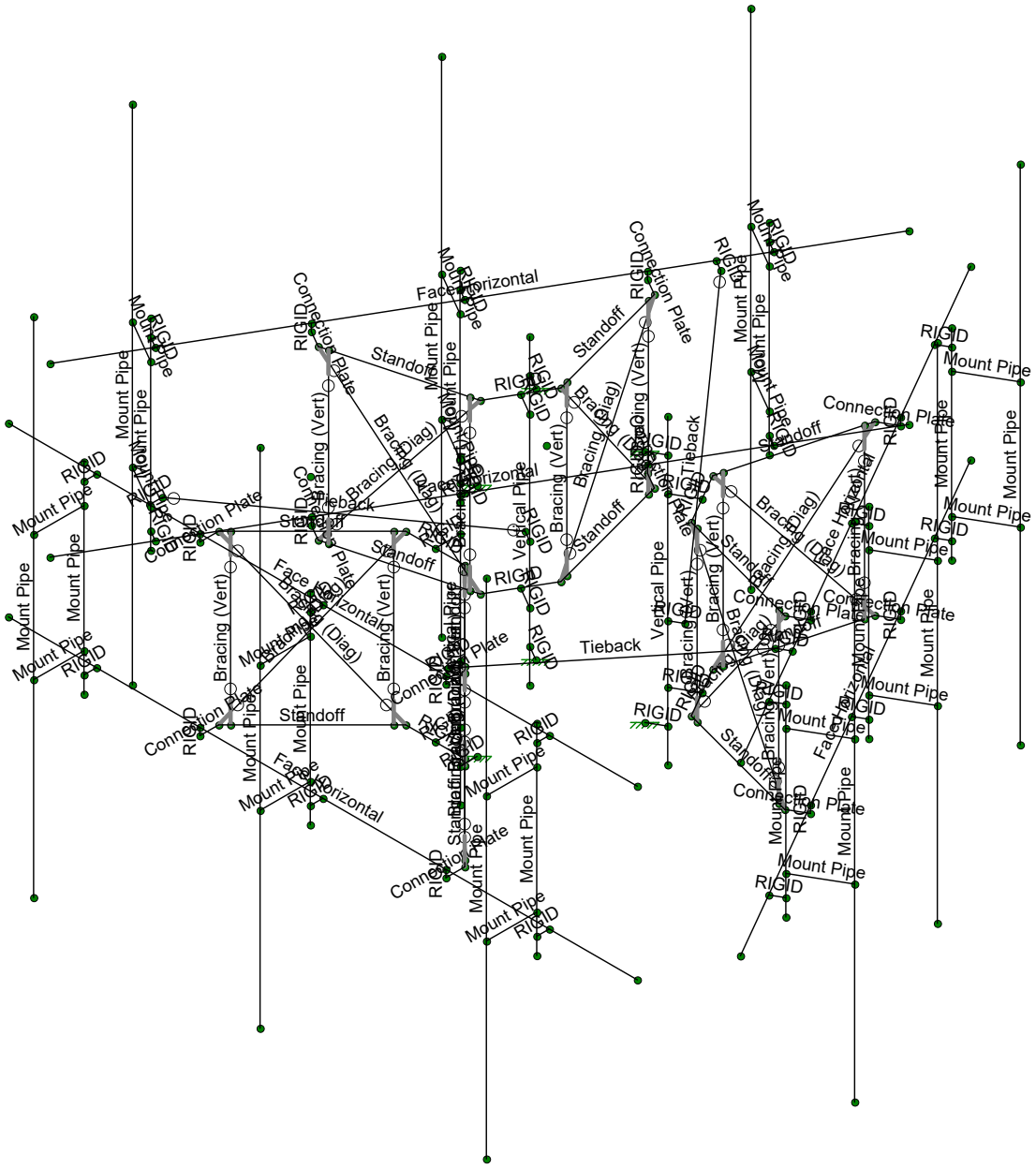

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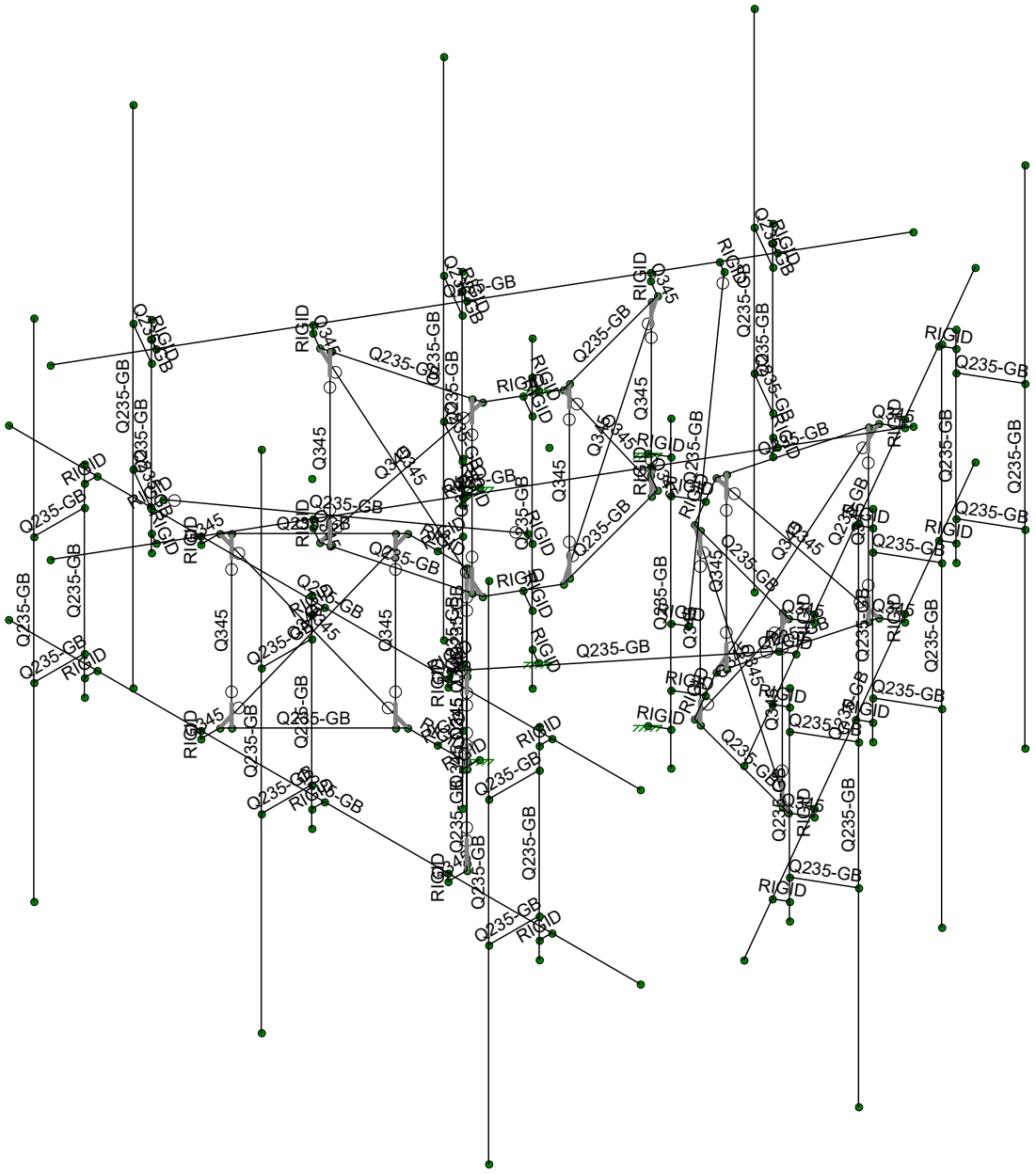

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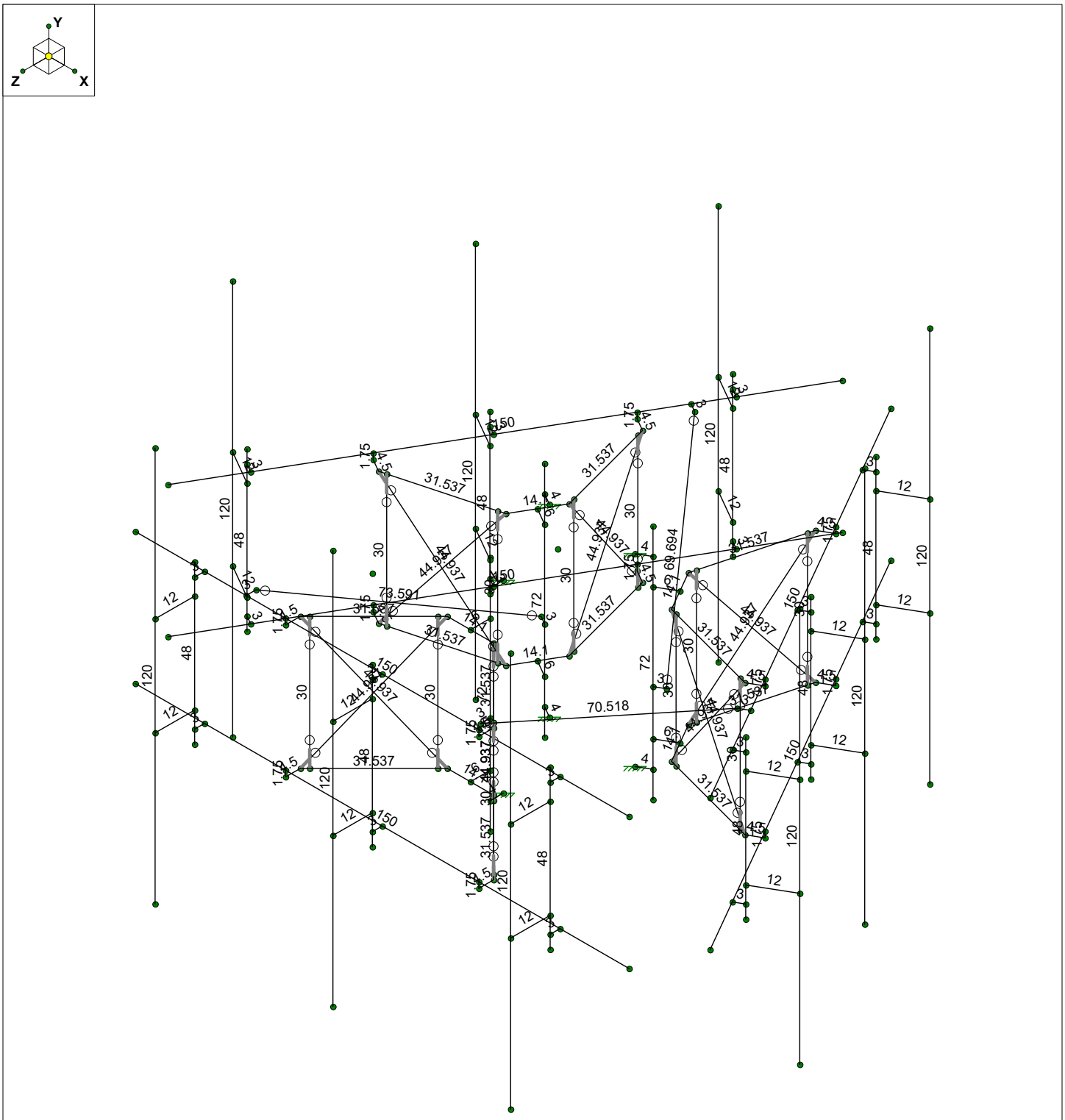

Member Length (in) Displayed

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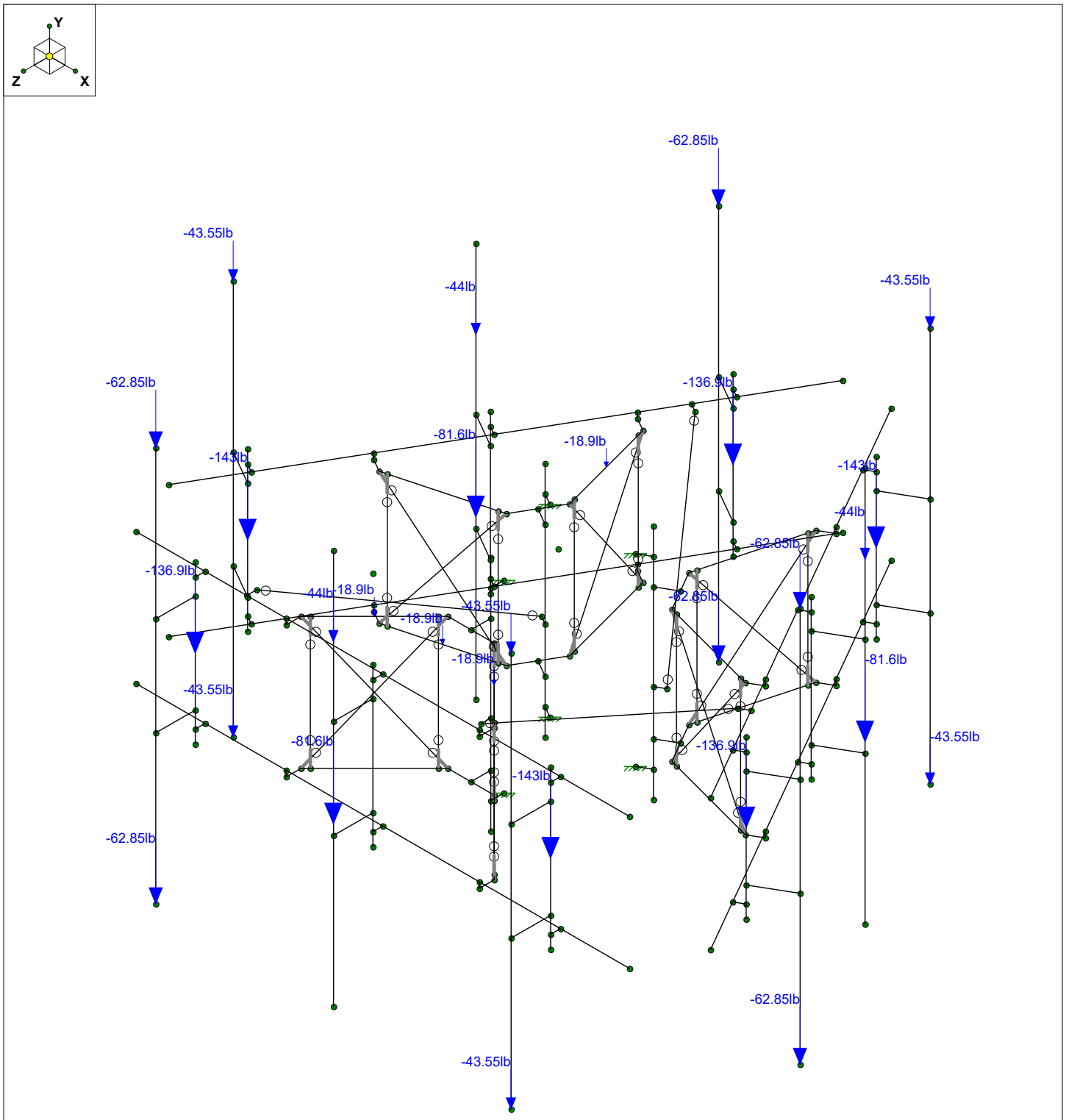

Loads: BLC 1, Self Weight

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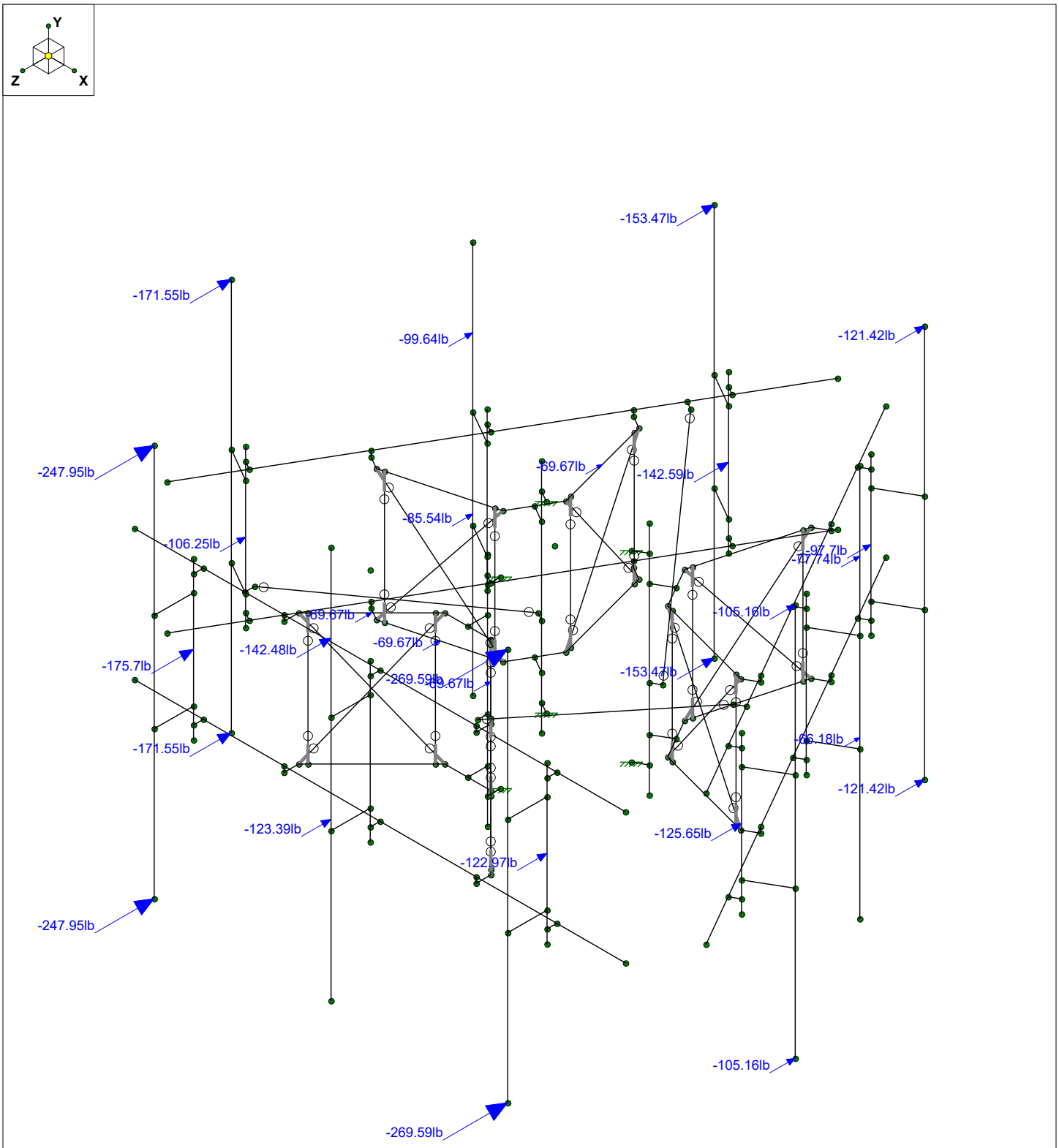

Loads: BLC 2, Wind Load AZI 0

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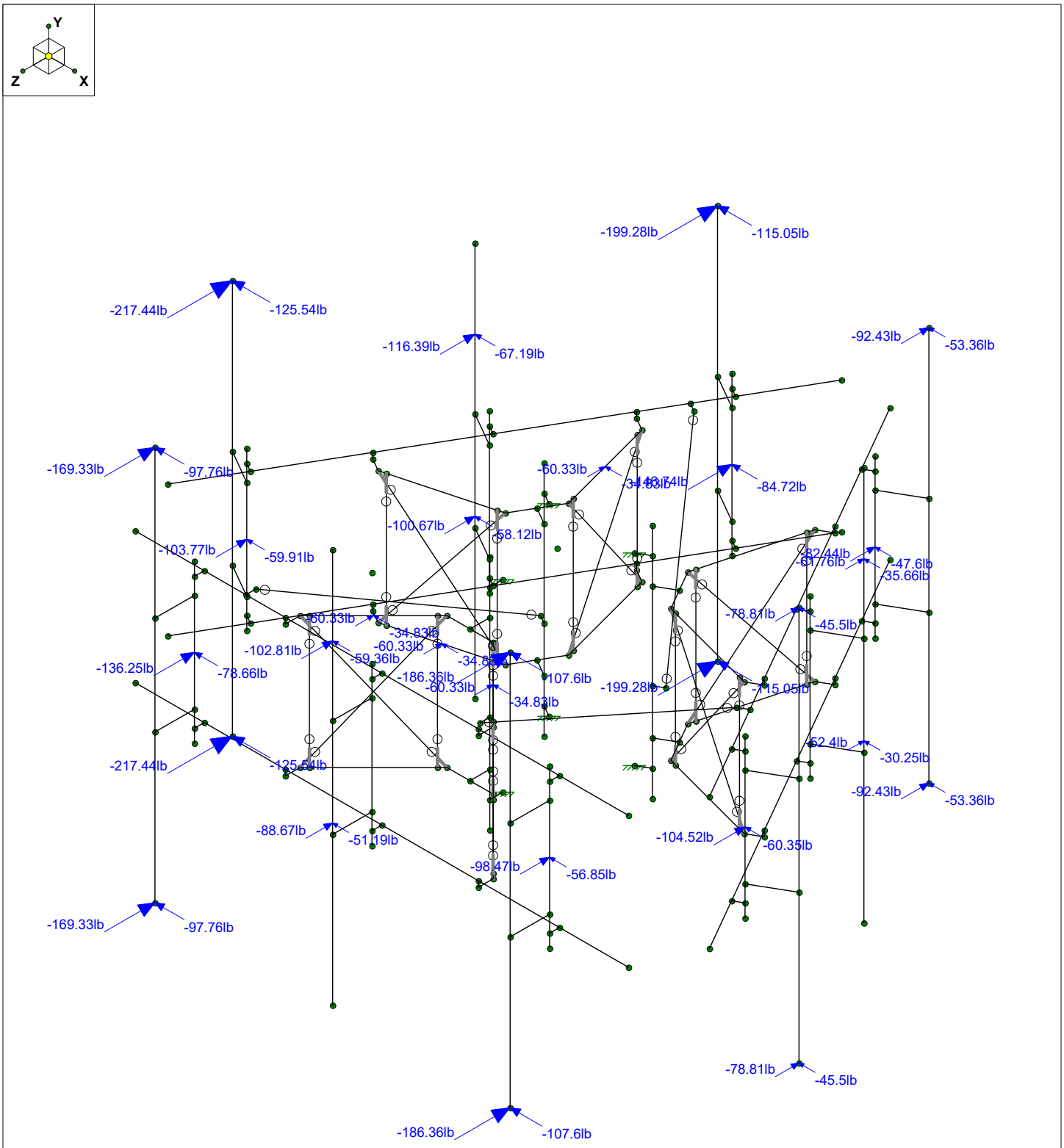

Loads: BLC 3, Wind Load AZI 30

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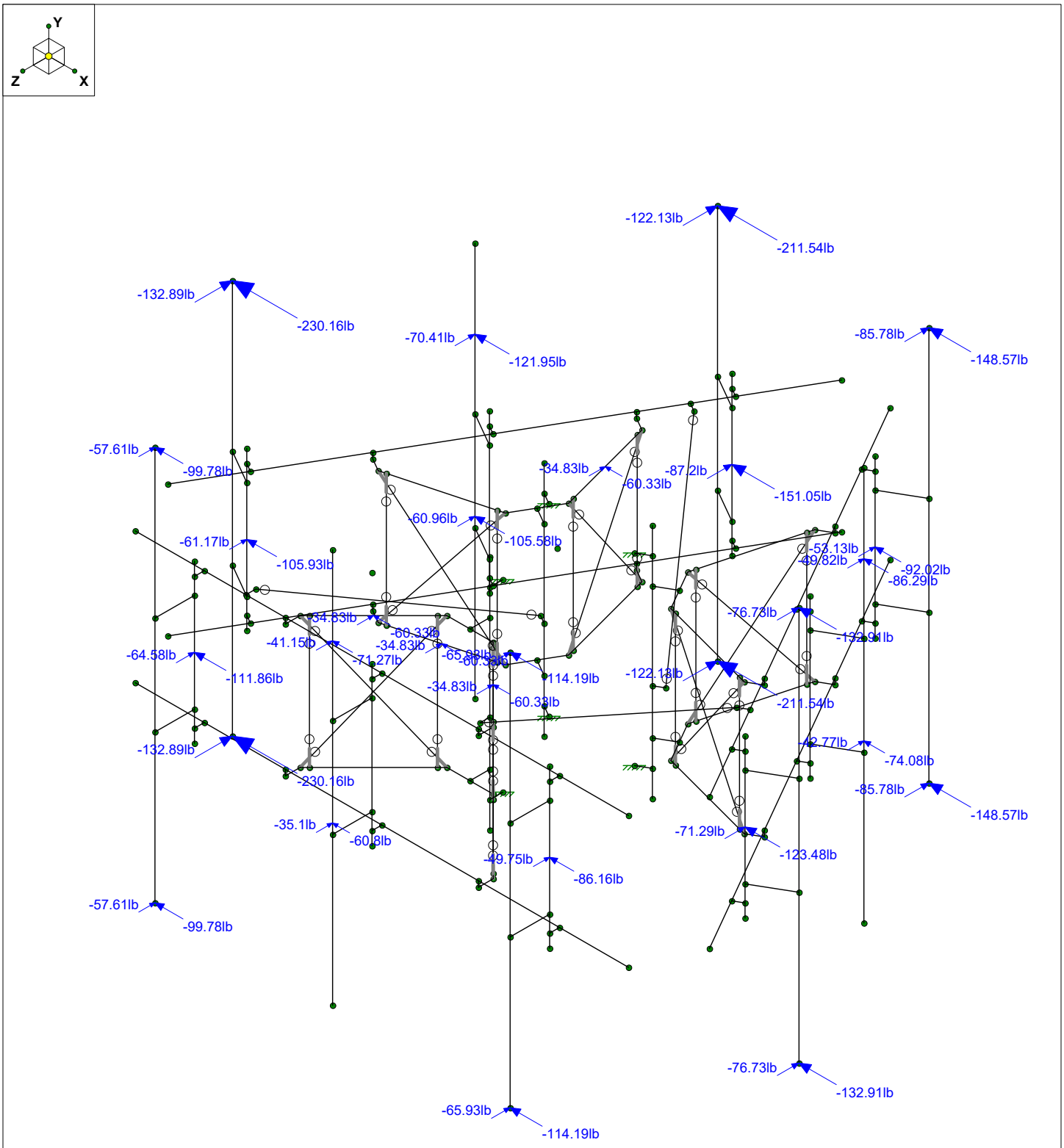

Loads: BLC 4, Wind Load AZI 60

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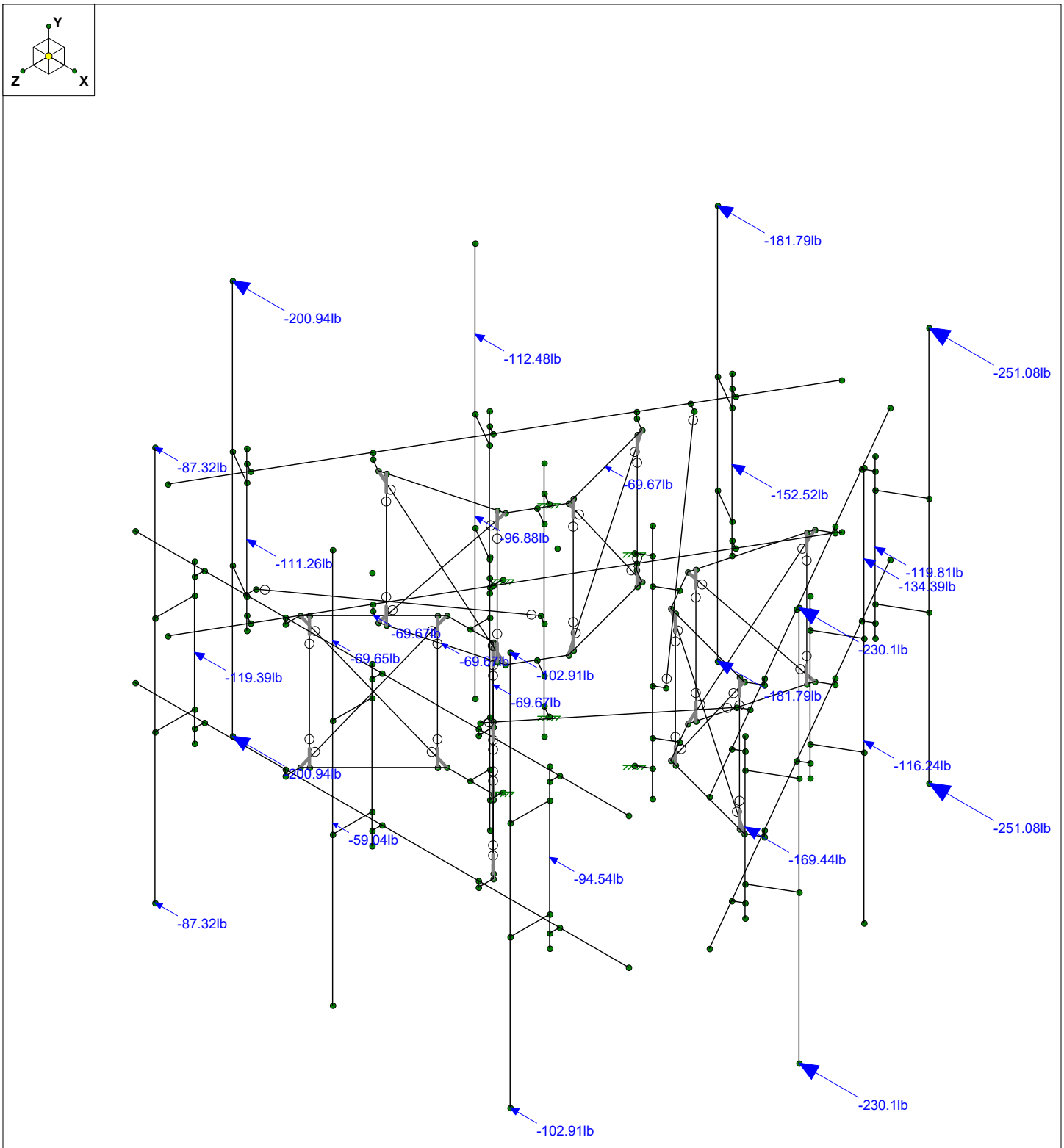

Loads: BLC 5, Wind Load AZI 90

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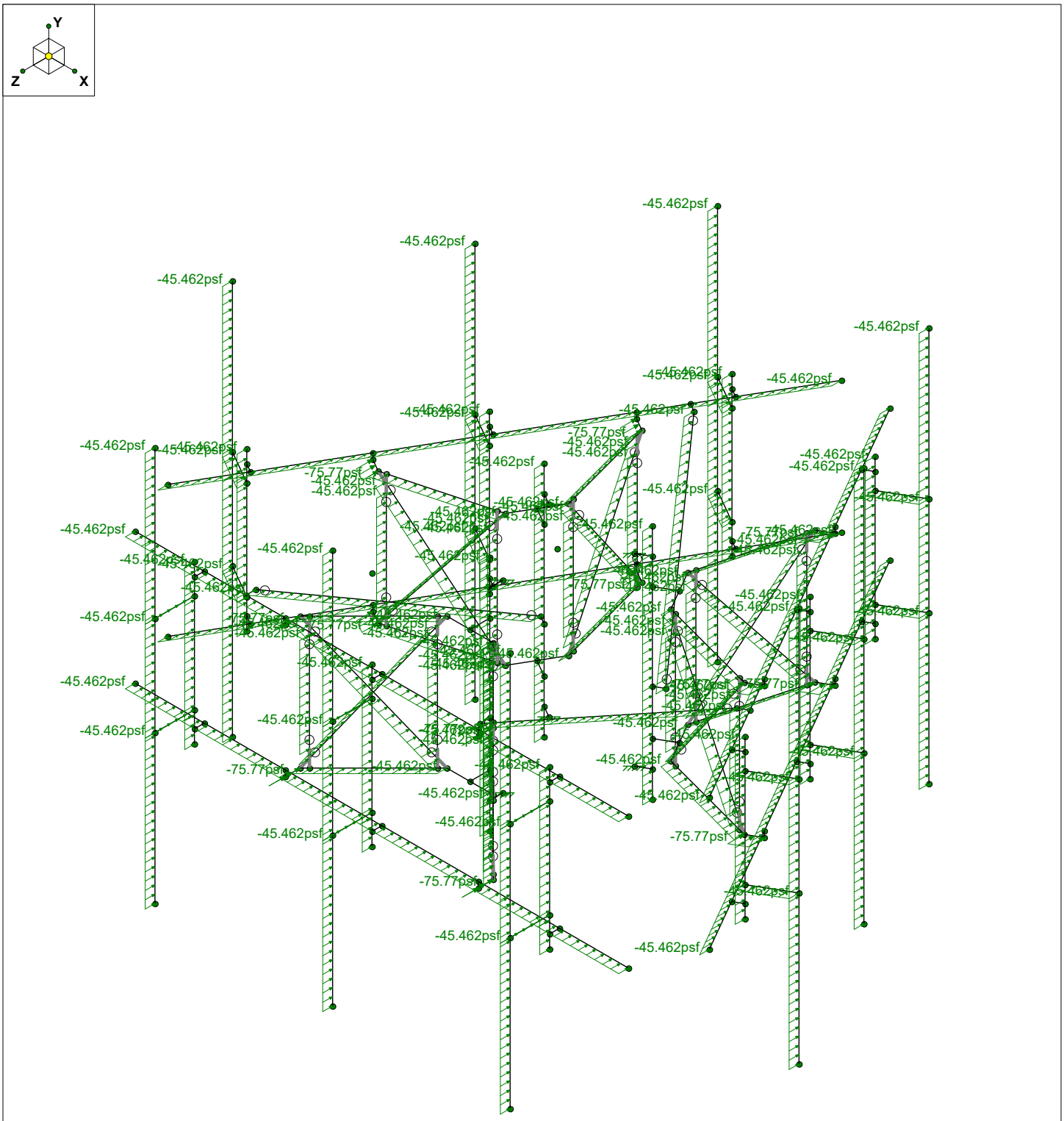

Loads: BLC 14, Distr. Wind Load Z

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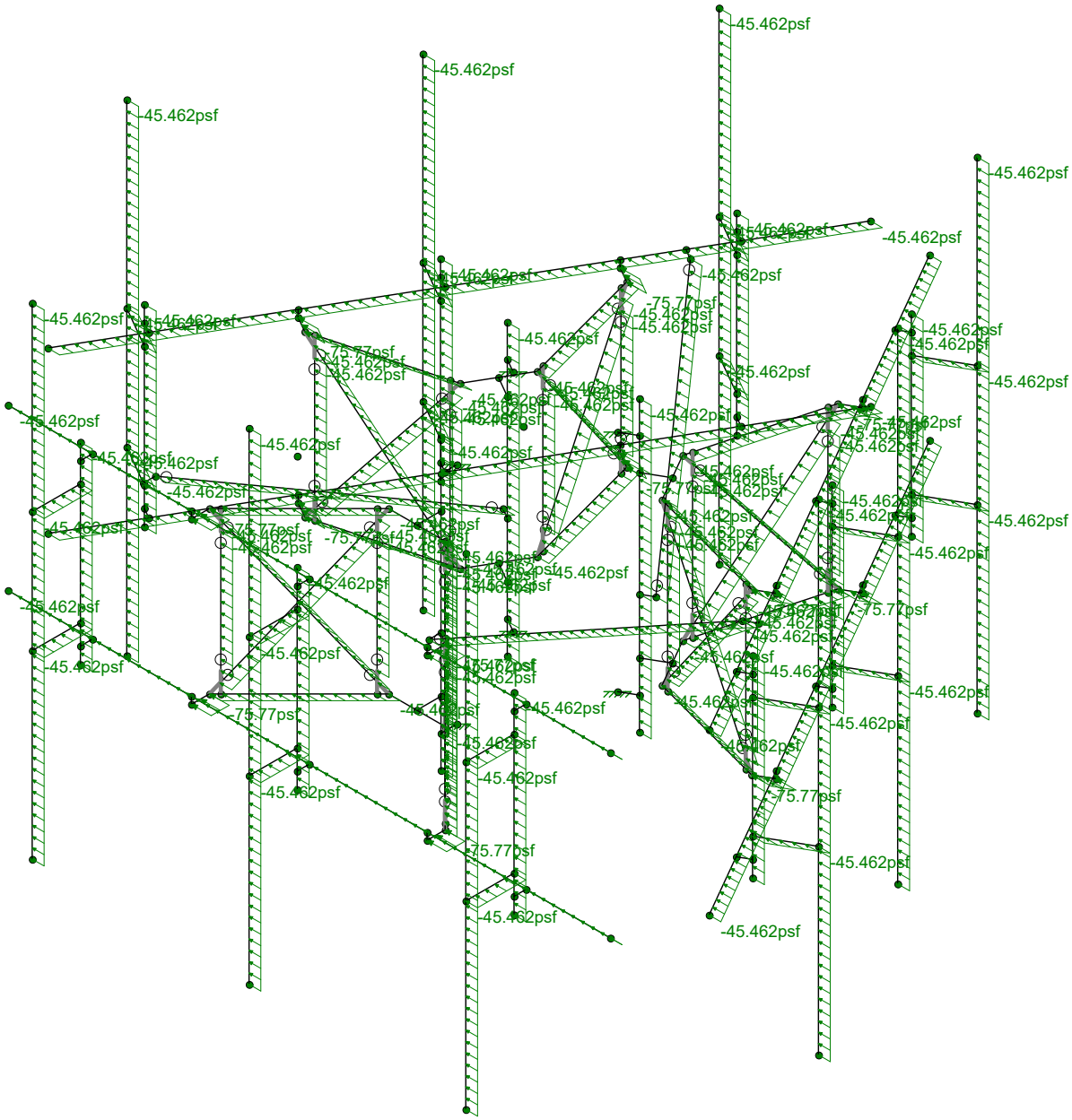

Loads: BLC 15, Distr. Wind Load X

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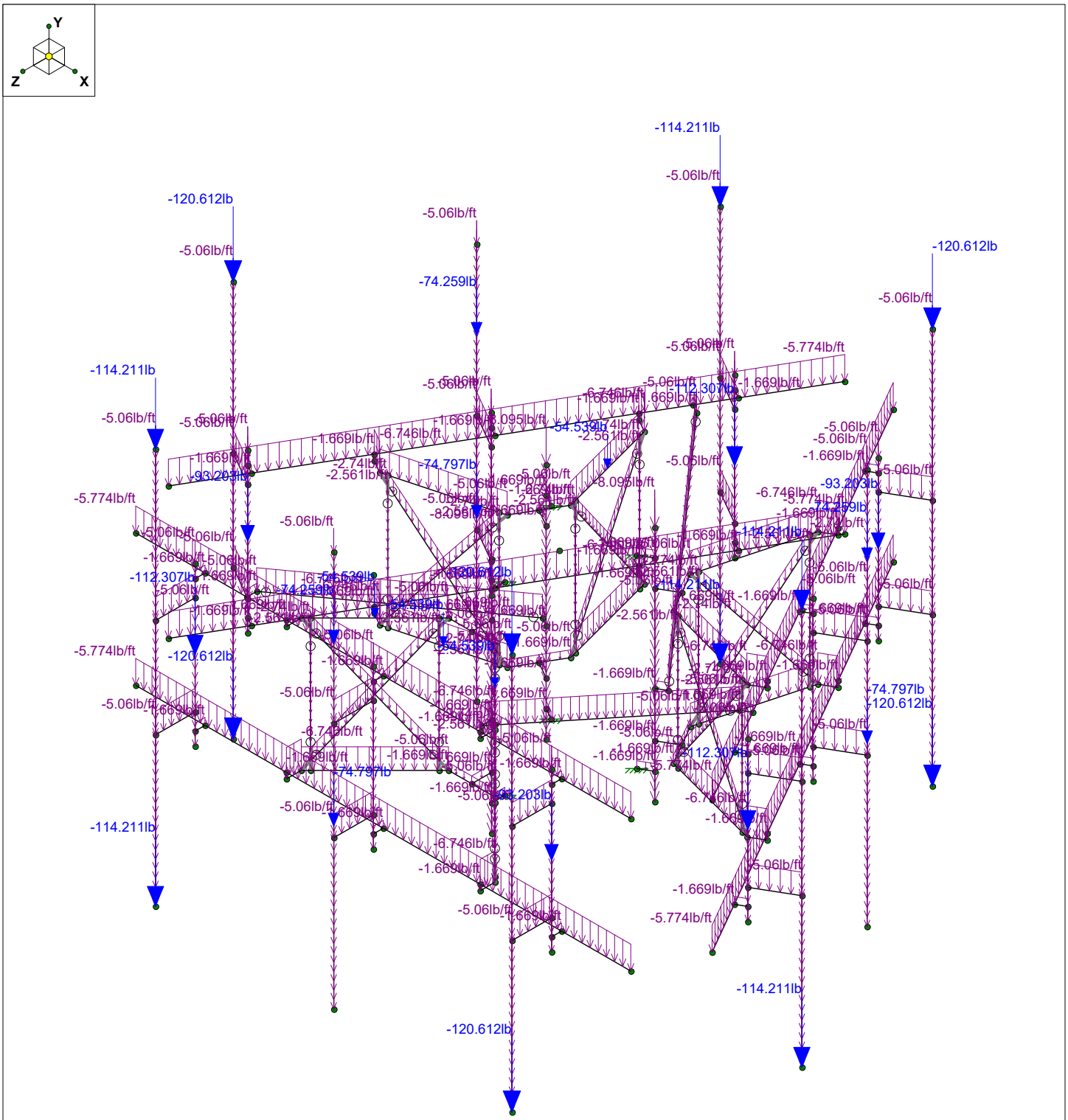

Loads: BLC 16, Ice Weight

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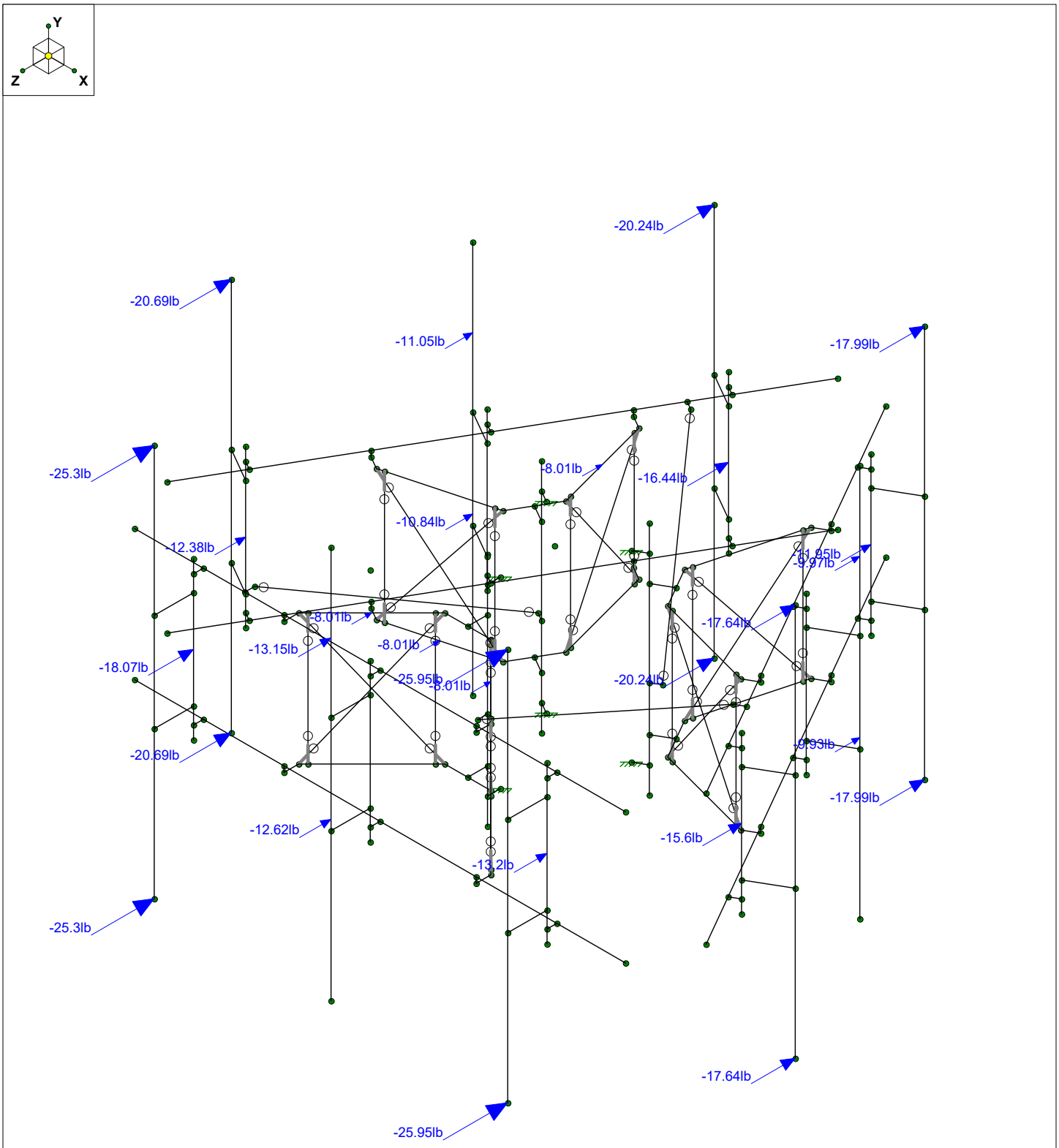

Loads: BLC 17, Ice Wind Load AZI 0

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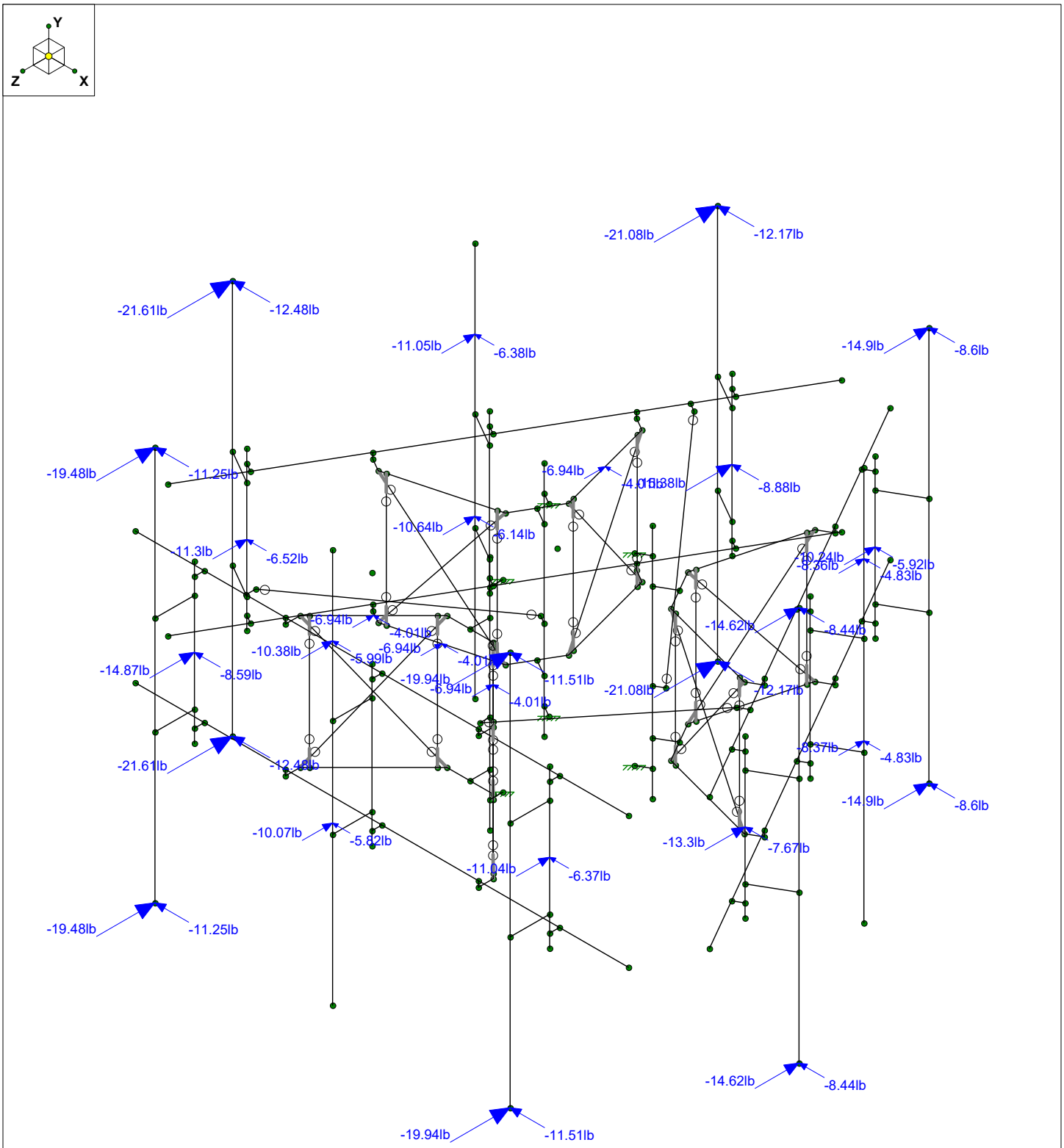

Loads: BLC 18, Ice Wind Load AZI 30

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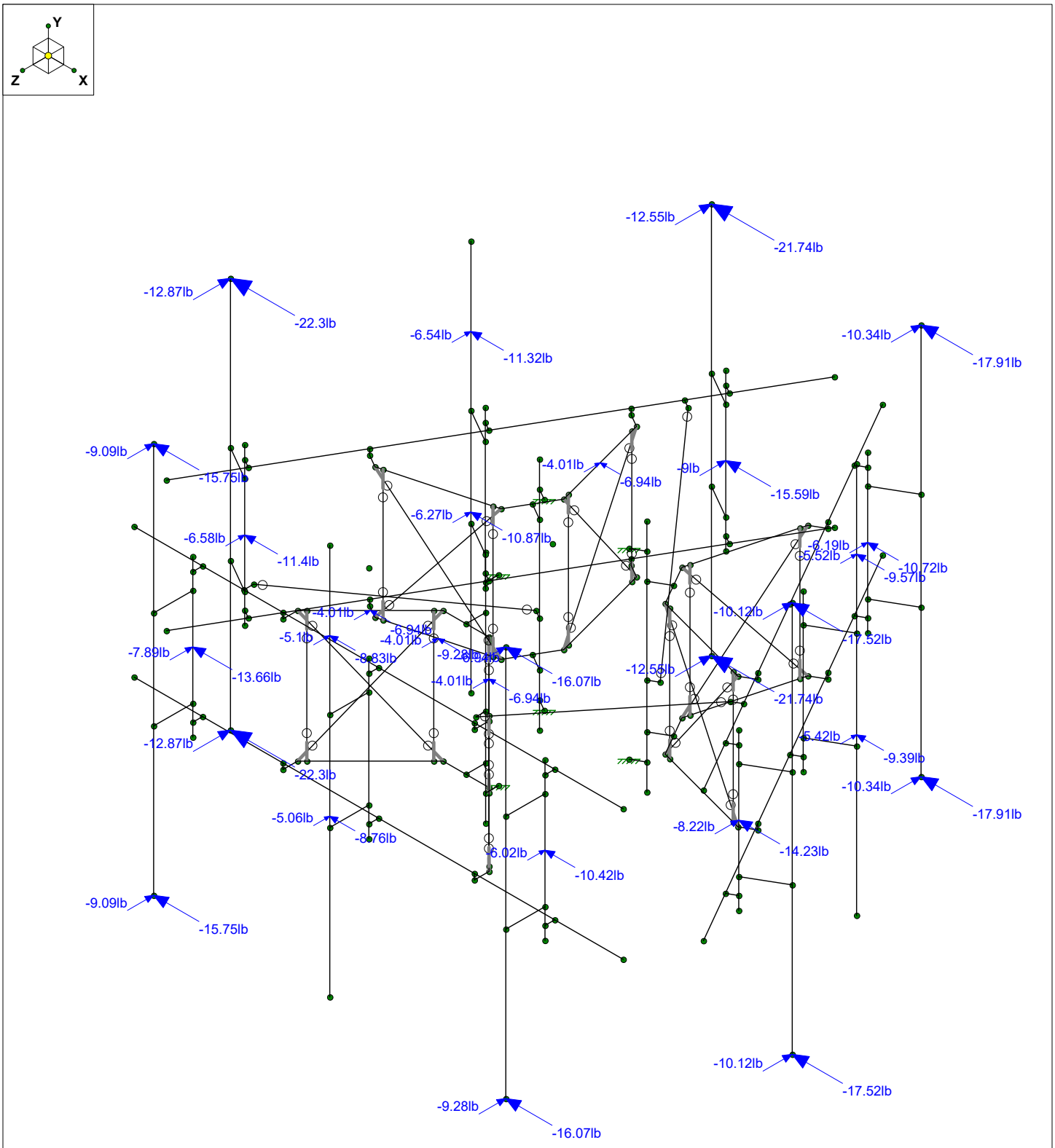

Loads: BLC 19, Ice Wind Load AZI 60

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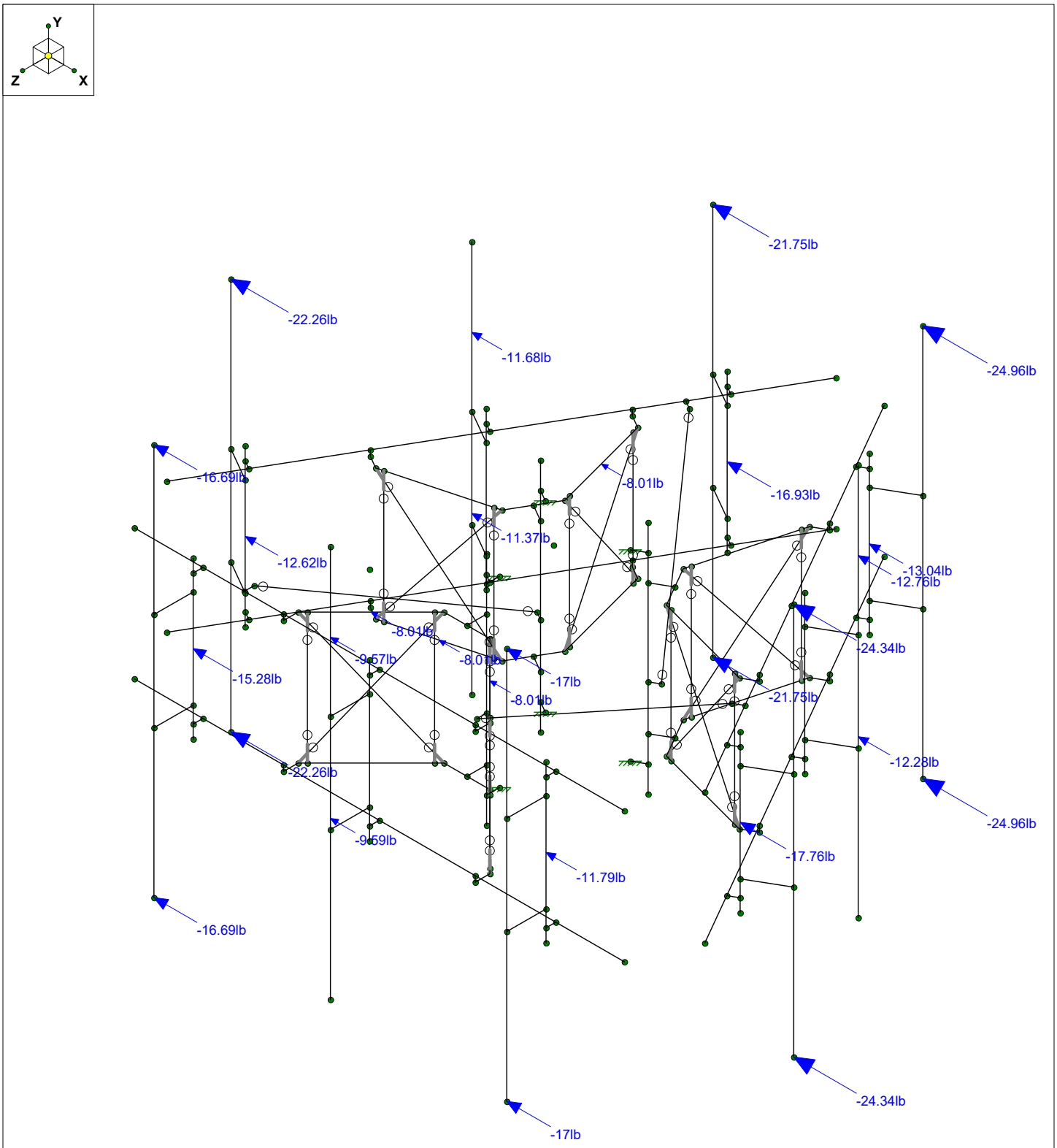

Loads: BLC 20, Ice Wind Load AZI 90

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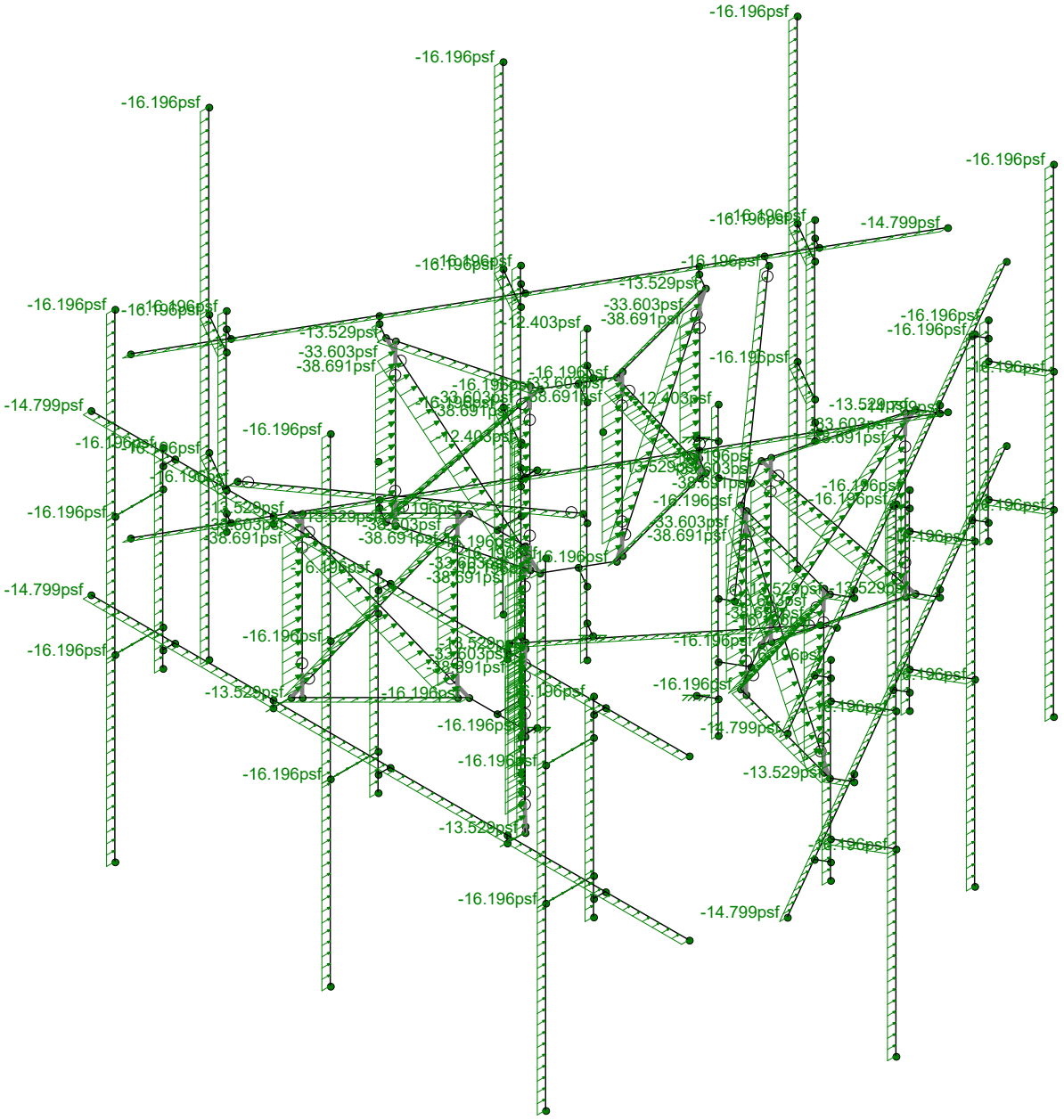

Loads: BLC 29, Distr. Ice Wind Load Z

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AM		May 2, 2022 at 10:31 AM
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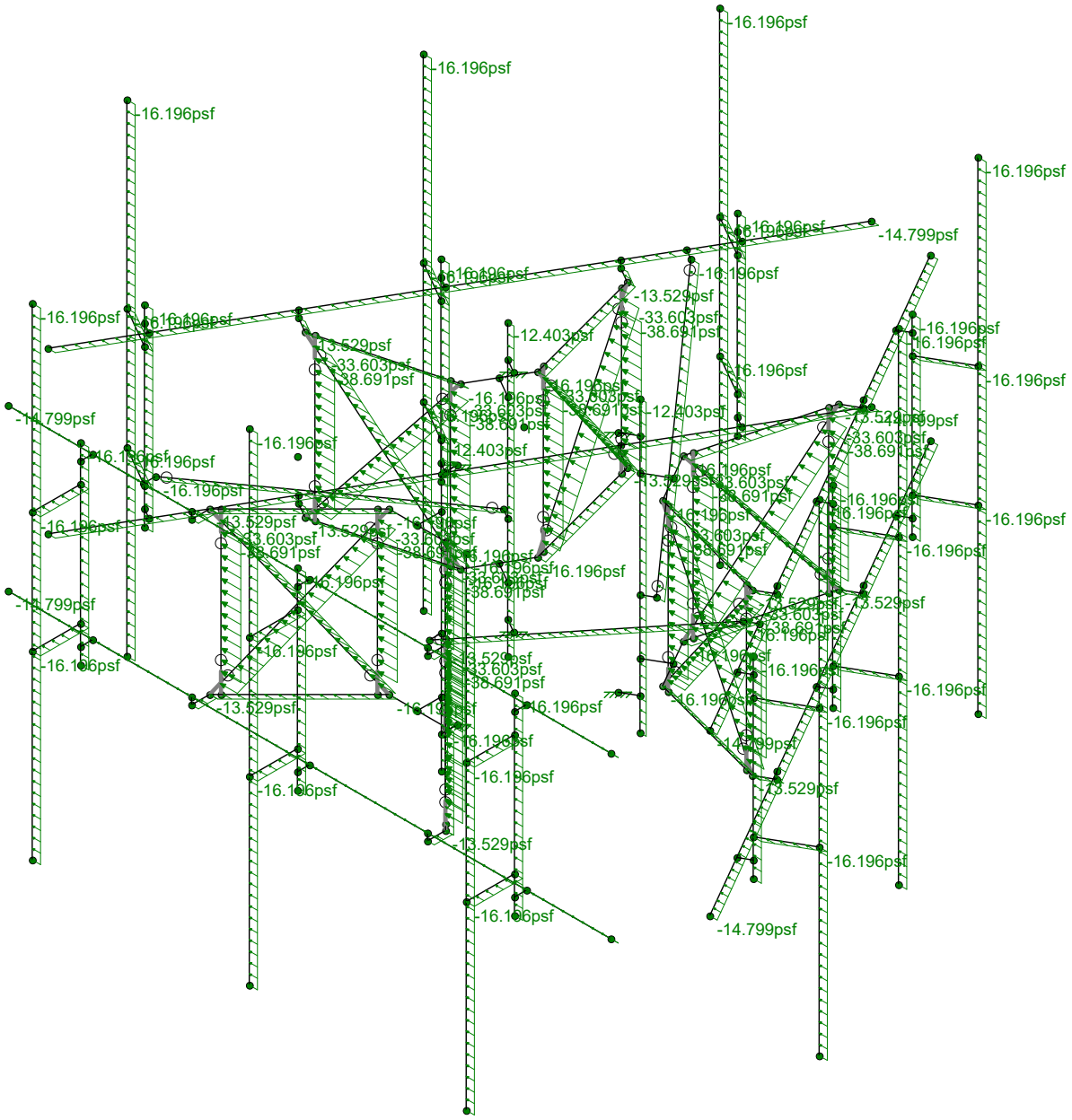
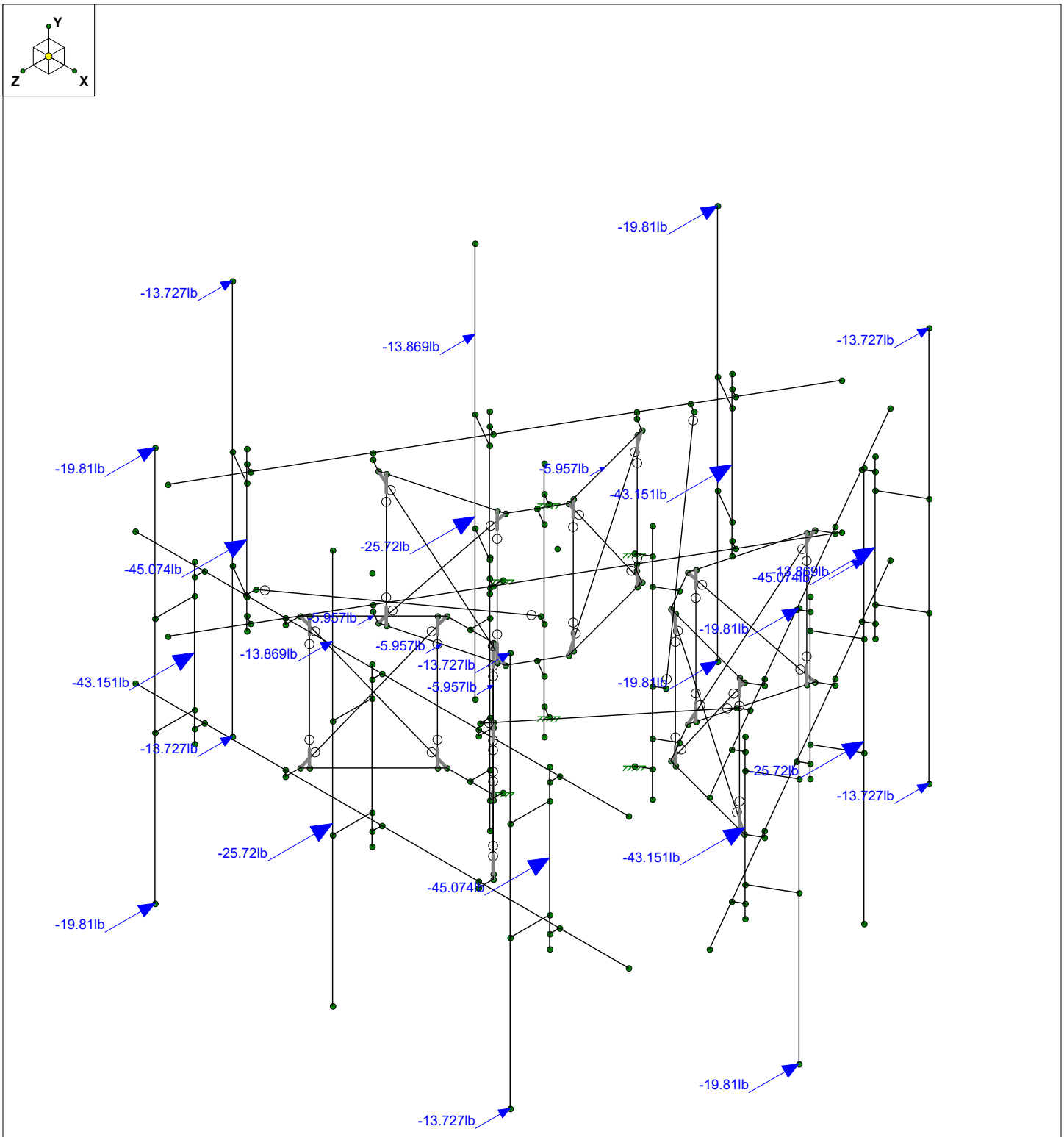


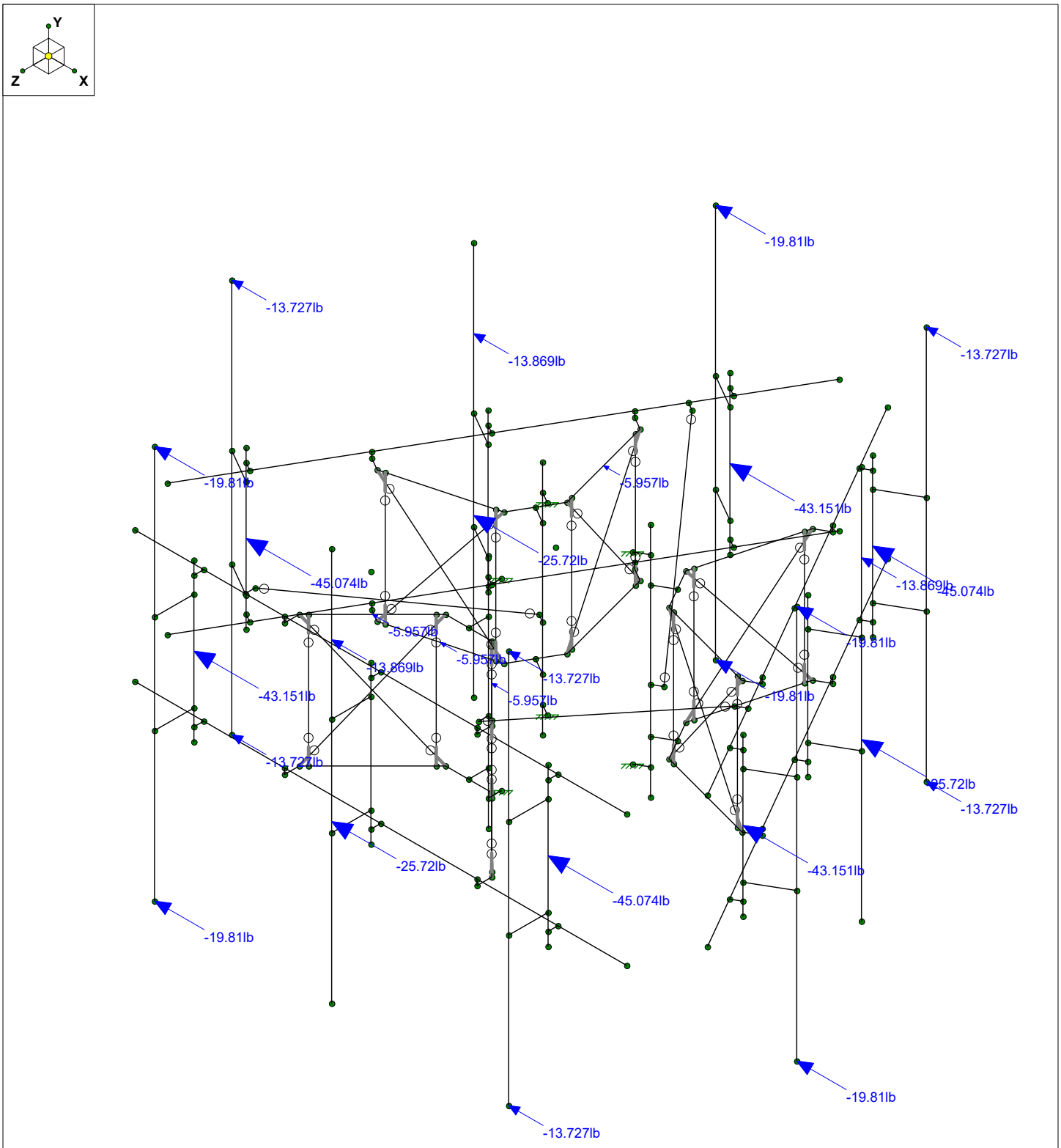
Loads: BLC 30, Distr. Ice Wind Load X

Infinigy Engineering	876313	Dist. Ice Wind Loading 90
AM		May 2, 2022 at 10:31 AM
1039-Z0001-B		876313_loaded.r3d



Loads: BLC 31, Seismic Load Z

Infinigy Engineering	876313	Seismic Loading 0
AM		May 2, 2022 at 10:32 AM
1039-Z0001-B		876313_loaded.r3d



Loads: BLC 32, Seismic Load X

Infinigy Engineering	876313	Seismic Loading 90
AM		May 2, 2022 at 10:32 AM
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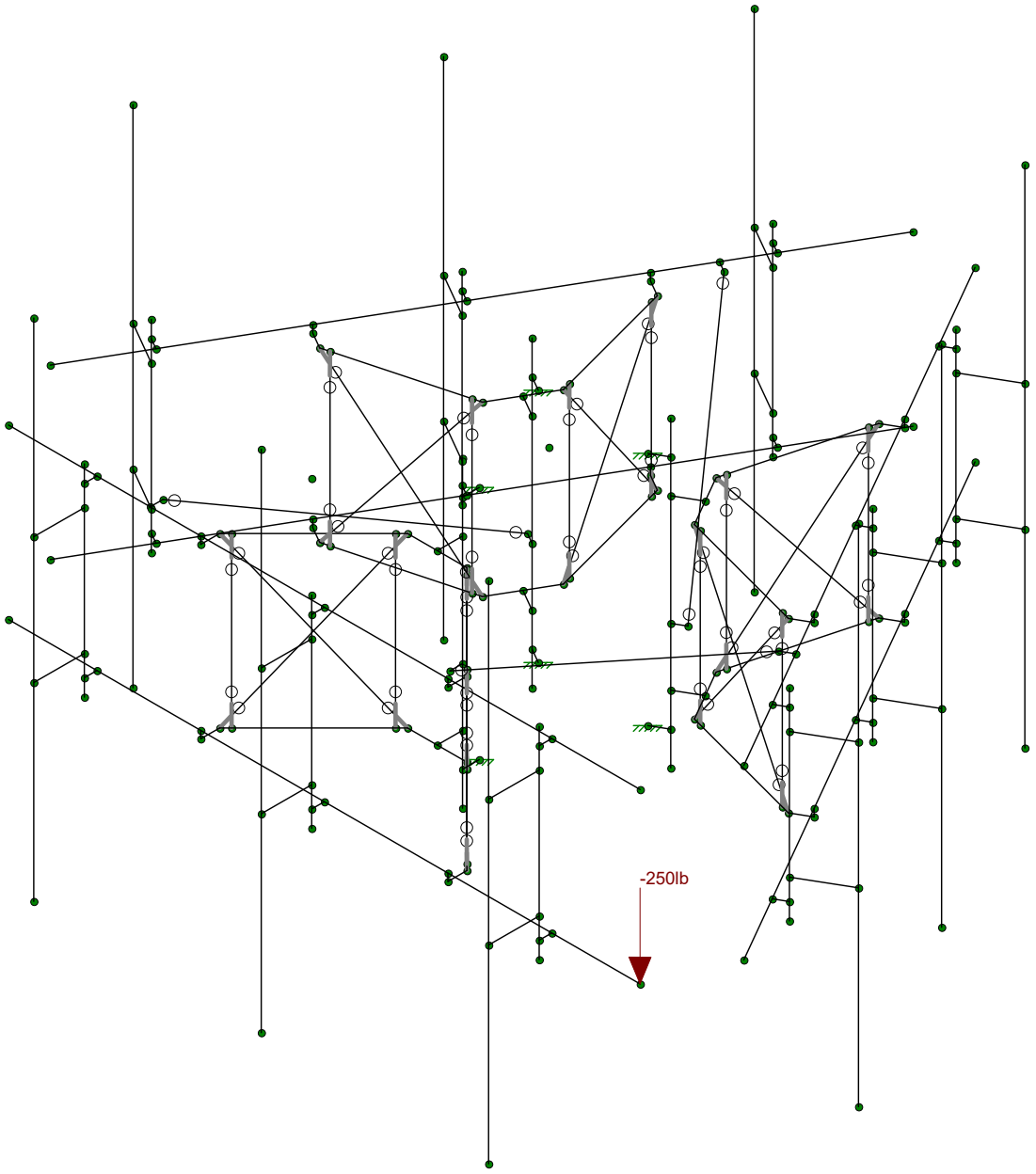
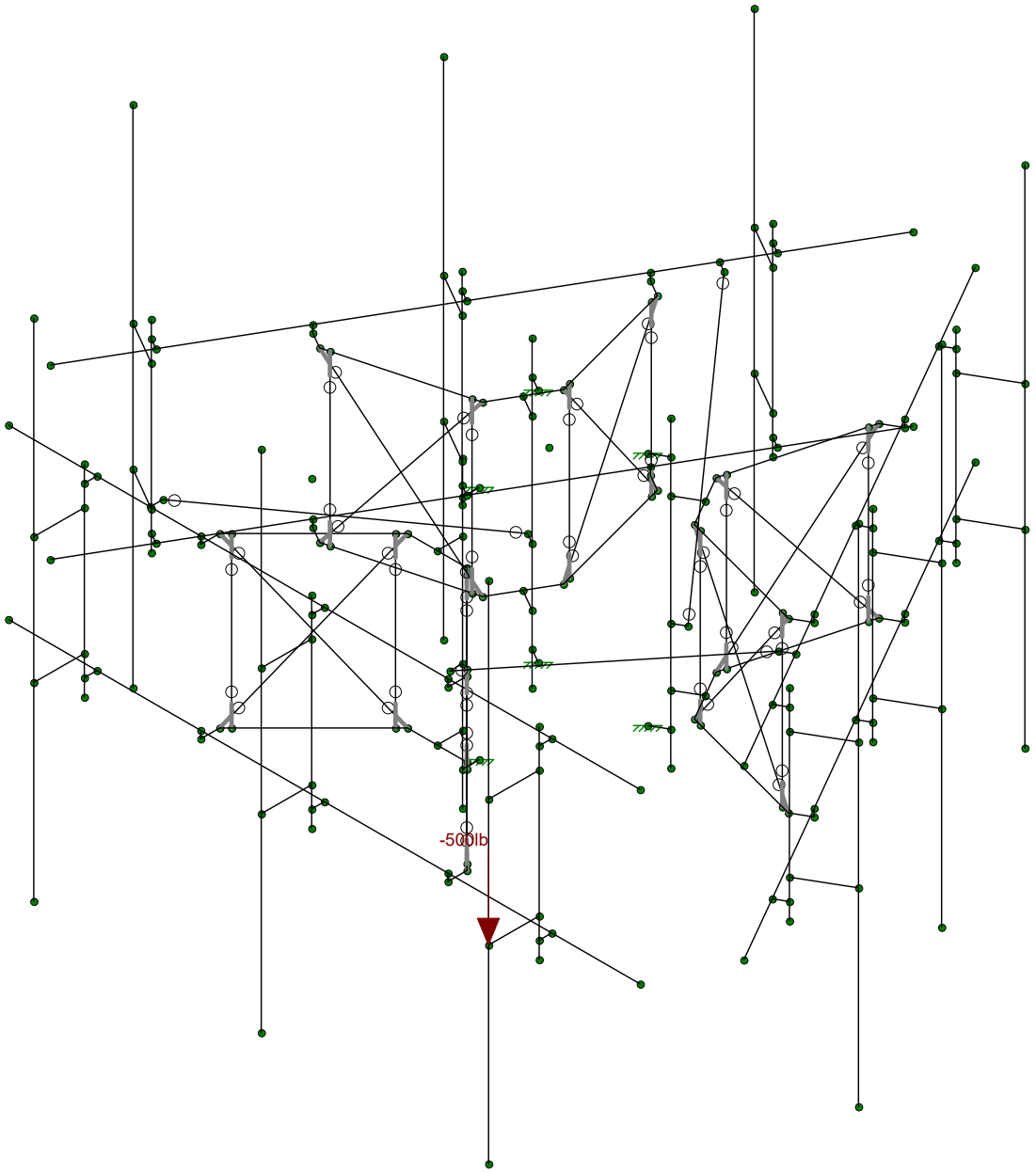


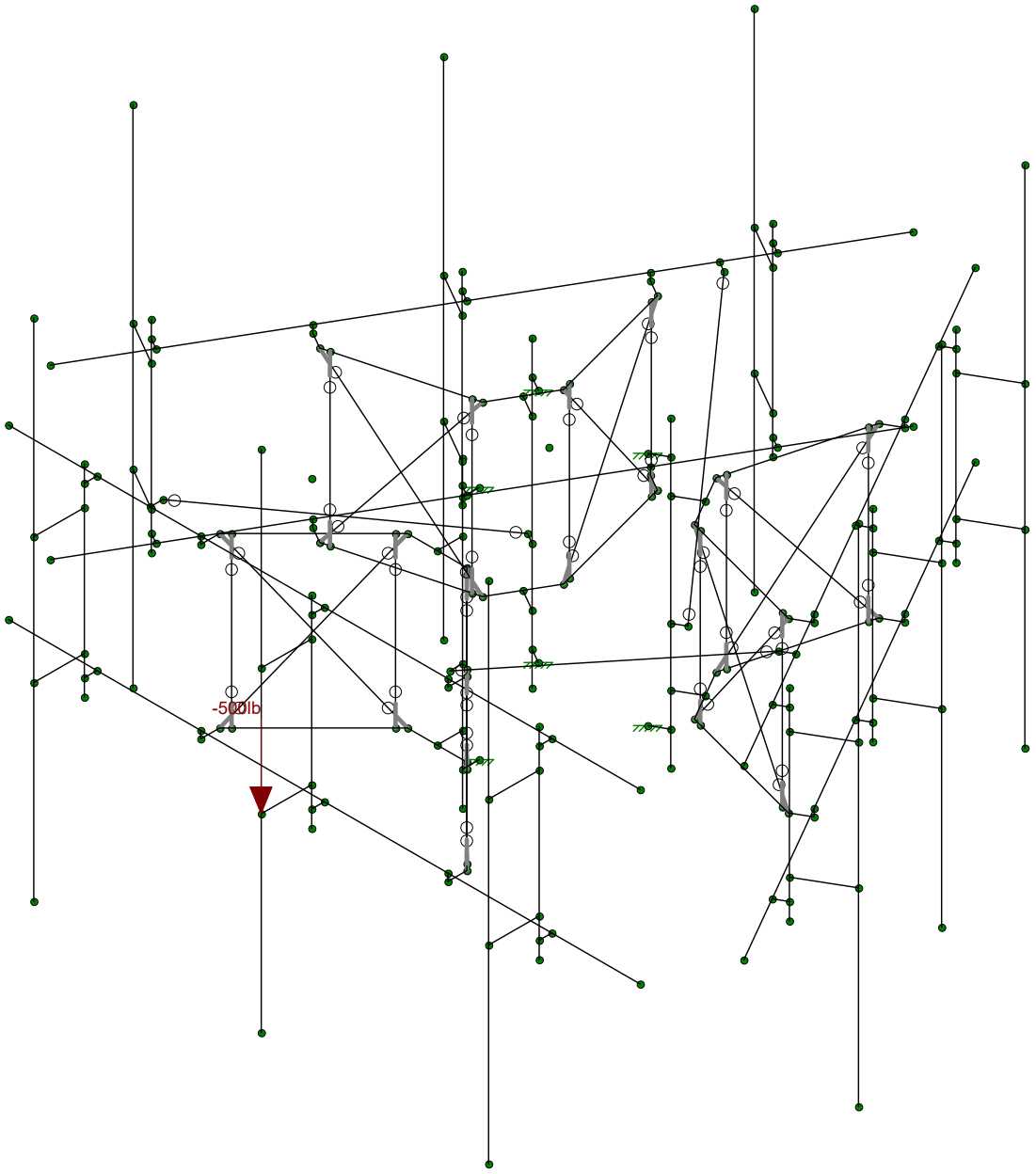
Loads: BLC 33, Service Live Loads

Infinigy Engineering	876313	Service
AM		May 2, 2022 at 10:32 AM
1039-Z0001-B		876313_loaded.r3d



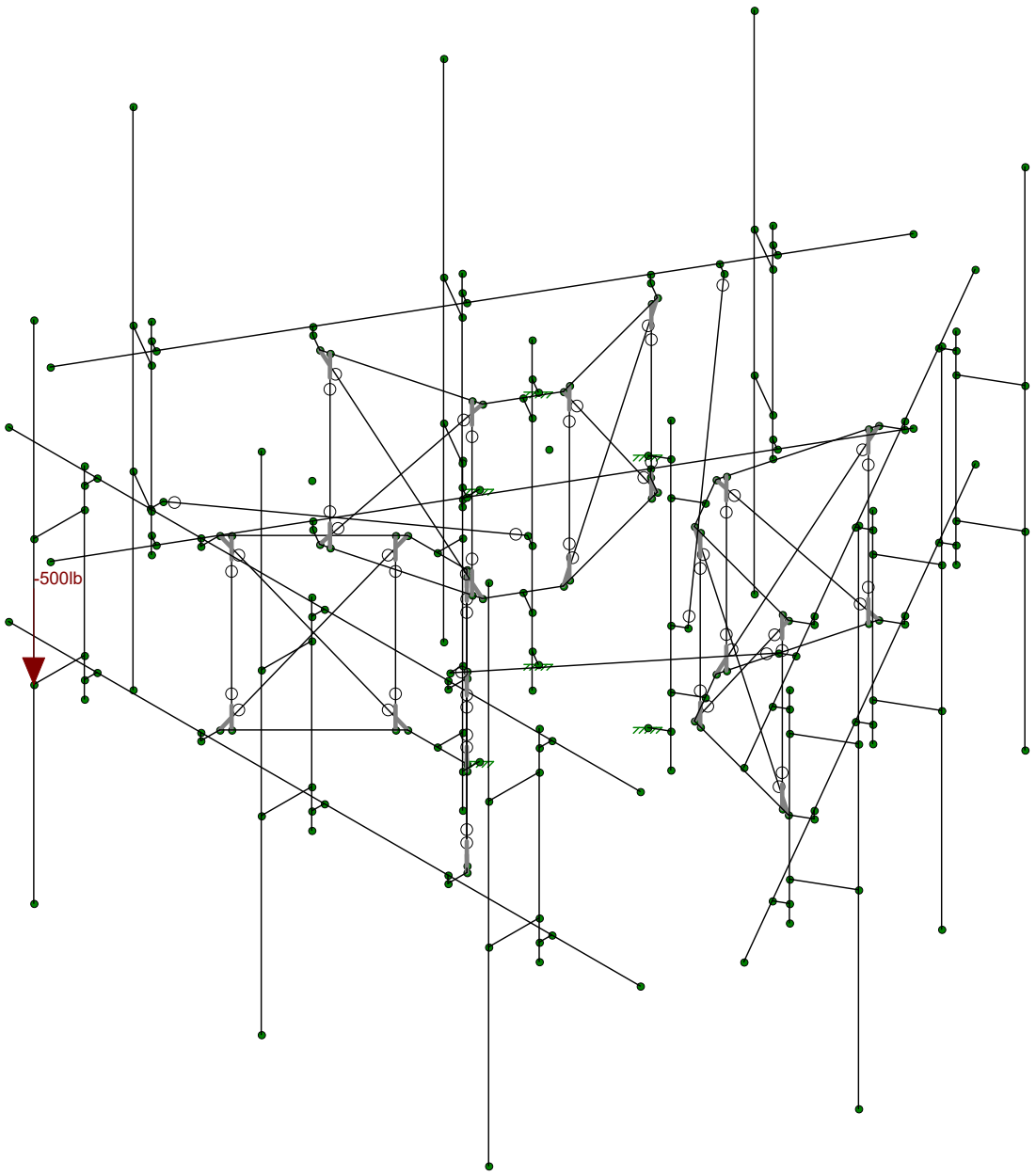
Loads: BLC 34, Maintenance Load 1

Infinigy Engineering	876313	Maintenance Load 1
AM		May 2, 2022 at 10:32 AM
1039-Z0001-B		876313_loaded.r3d



Loads: BLC 40, Maintenance Load 7

Infinigy Engineering	876313	Maintenance Load 3
AM		May 2, 2022 at 10:45 AM
1039-Z0001-B		876313_loaded.r3d



Loads: BLC 35, Maintenance Load 2

Infinigy Engineering	876313	Maintenance Load 2
AM		May 2, 2022 at 10:32 AM
1039-Z0001-B		876313_loaded.r3d

APPENDIX B

SOFTWARE INPUT CALCULATIONS

Program Inputs

PROJECT INFORMATION	
Client:	Crown Castle
Carrier:	AT&T Mobility
Engineer:	Alex Mercado

SITE INFORMATION		
Risk Category:	II	
Exposure Category:	B	
Topo Factor Procedure:	Method 1, Category 1	
Site Class:	D - Stiff Soil (Assumed)	
Ground Elevation:	133.13	ft *Rev H

MOUNT INFORMATION		
Mount Type:	Sector Frame	
Num Sectors:	3	
Centerline AGL:	157.00	ft
Tower Height AGL:	160.00	ft

TOPOGRAPHIC DATA		
Topo Feature:	N/A	
Slope Distance:	N/A	ft
Crest Distance:	N/A	ft
Crest Height:	N/A	ft

FACTORS		
Directionality Fact. (K_d):	0.950	
Ground Ele. Factor (K_e):	0.995	*Rev H Only
Rooftop Speed-Up (K_s):	1.000	*Rev H Only
Topographic Factor (K_{zt}):	1.000	
Gust Effect Factor (G_h):	1.000	

CODE STANDARDS		
Building Code:	2018 IBC	
TIA Standard:	TIA-222-H	
ASCE Standard:	ASCE 7-16	

WIND AND ICE DATA		
Ultimate Wind (V_{ult}):	118	mph
Design Wind (V):	N/A	mph
Ice Wind (V_{ice}):	50	mph
Base Ice Thickness (t_i):	1	in
Flat Pressure:	75.770	psf
Round Pressure:	45.462	psf
Ice Wind Pressure:	8.162	psf

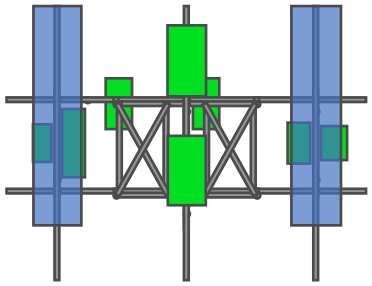
SEISMIC DATA		
Short-Period Accel. (S_s):	0.197	g
1-Second Accel. (S_1):	0.055	g
Short-Period Design (S_{DS}):	0.210	
1-Second Design (S_{D1}):	0.088	
Short-Period Coeff. (F_a):	1.600	
1-Second Coeff. (F_v):	2.400	
Amplification Factor (A_s):	3.000	
Response Mod. Coeff. (R):	2.000	

INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless

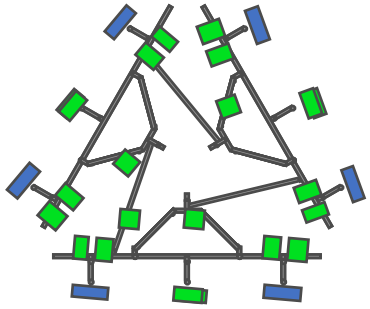
Infinigy Load Calculator V2.1.7

Program Inputs

ELEVATION VIEW



PLAN VIEW



INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless

Infinigy Load Calculator V2.1.7

APPURTENANCE INFORMATION

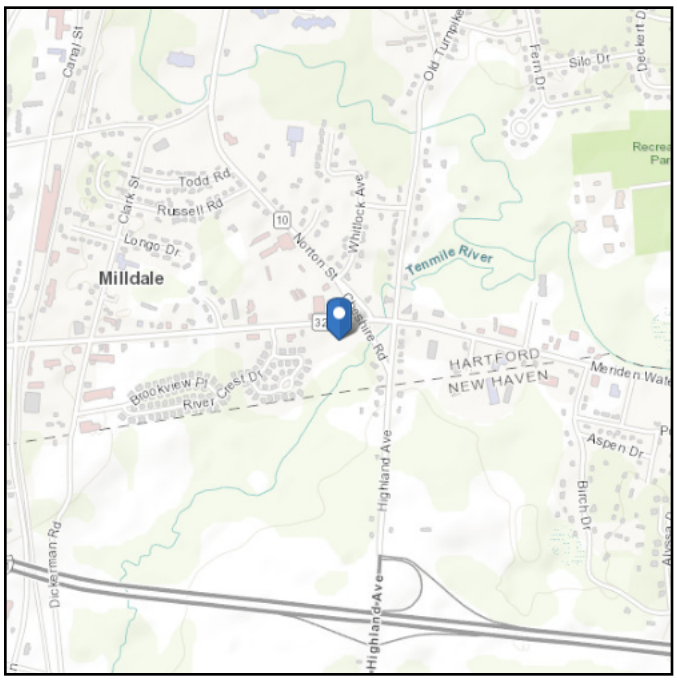
Appurtenance Name	Elevation	Qty.	K_a	q_z (psf)	EPA_N (ft^2)	EPA_T (ft^2)	Wind F_z (lbs)	Wind F_x (lbs)	Weight (lbs)	Seismic F (lbs)	Member (α sector)
CCI ANTENNAS TPA65R-BU8DA-K	158.0	3	0.90	37.95	15.86	5.95	539.18	205.81	87.10	27.45	MP1
ERICSSON AIR 6419 B77G_CCIV3	160.0	3	0.90	38.09	4.17	2.02	142.48	69.65	44.00	13.87	MP2
ERICSSON AIR 6449 B77D_CCVI2	156.0	3	0.90	37.82	3.64	1.72	123.39	59.04	81.60	25.72	MP2
KATHREIN 80010966	158.0	3	0.90	37.95	14.59	5.04	495.89	174.64	125.70	39.62	MP3
ERICSSON RRUS 4449 B5/B12	158.0	3	0.90	37.95	1.97	1.41	67.06	48.24	71.00	22.38	R1
ERICSSON RRUS 4478 B14	158.0	3	0.90	37.95	1.84	1.06	62.73	36.37	59.90	18.88	R3
ERICSSON RRUS 8843 B2/B66A	158.0	3	0.90	37.95	1.64	1.35	55.91	46.30	72.00	22.69	R1
ERICSSON RRUS-32 B30	158.0	3	0.90	37.95	3.31	2.42	112.97	83.02	77.00	24.27	R3
RAYCAP DC6-48-60-18-8F	158.0	3	0.90	37.95	2.04	2.04	69.67	69.67	18.90	5.96	SA1
RAYCAP DC6-48-60-18-8F	158.0	1	0.90	37.95	2.04	2.04	69.67	69.67	18.90	5.96	SA3

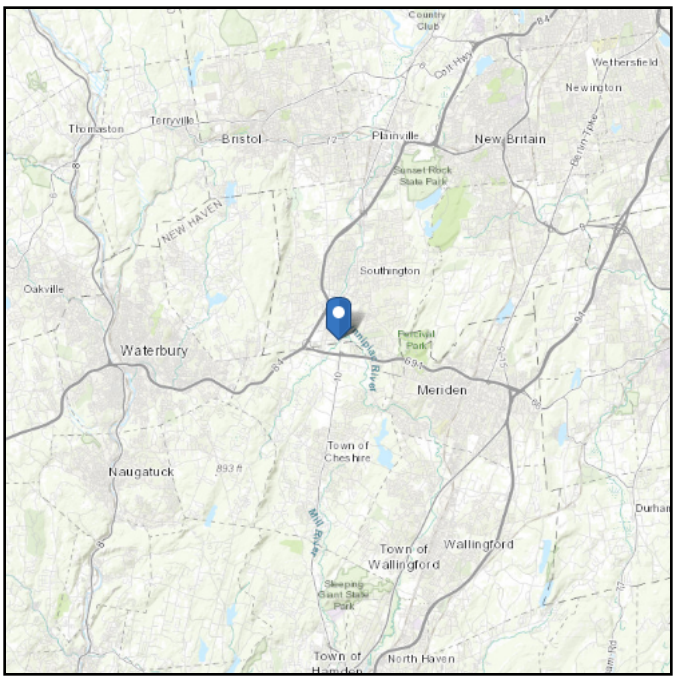
ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Default (see Section 11.4.3)

Elevation: 133.13 ft (NAVD 88)
Latitude: 41.564275
Longitude: -72.891861





Wind

Results:

Wind Speed	118 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	90 Vmph
100-year MRI	97 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed: Mon May 02 2022

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

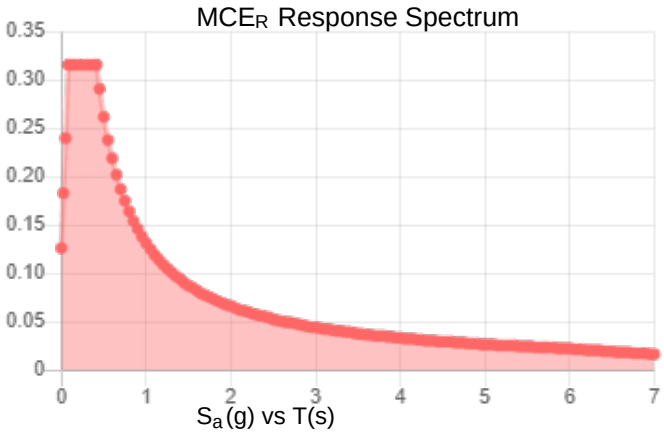
Seismic

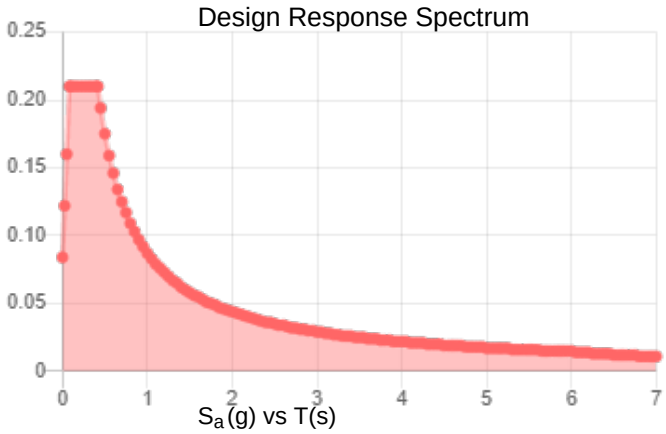
Site Soil Class: D - Default (see Section 11.4.3)

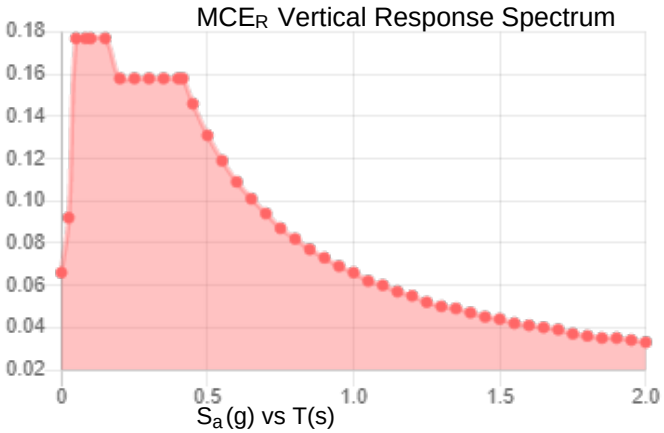
Results:

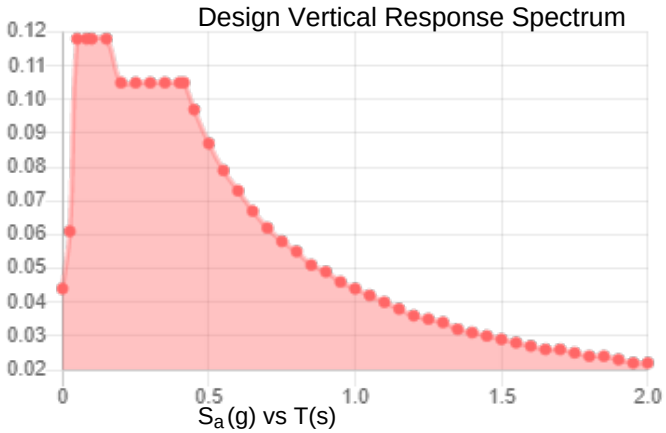
S_S :	0.197	S_{D1} :	0.087
S_1 :	0.055	T_L :	6
F_a :	1.6	PGA :	0.109
F_v :	2.4	PGA_M :	0.172
S_{MS} :	0.316	F_{PGA} :	1.583
S_{M1} :	0.131	I_e :	1
S_{DS} :	0.21	C_v :	0.7

Seismic Design Category B









Data Accessed: **Mon May 02 2022**

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness:	1.00 in.
Concurrent Temperature:	15 F
Gust Speed	50 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Mon May 02 2022

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

APPENDIX C

SOFTWARE ANALYSIS OUTPUT

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Ru...
1	M3	N38	N51			Bracing (Diag)	Beam	BAR	Q345	Typical
2	M4	N41	N48			Bracing (Diag)	Beam	BAR	Q345	Typical
3	M5	N40	N49			Bracing (Diag)	Beam	BAR	Q345	Typical
4	M6	N39	N50			Bracing (Diag)	Beam	BAR	Q345	Typical
5	M9	N65	N64A			Bracing (Vert)	Beam	BAR	Q345	Typical
6	M10	N63A	N62A			Bracing (Vert)	Beam	BAR	Q345	Typical
7	M11	N53	N52		90	RIGID	None	None	RIGID	Typical
8	M12	N15	N29			RIGID	None	None	RIGID	Typical
9	M13	N50	N51			RIGID	None	None	RIGID	Typical
10	M14	N16	N30			RIGID	None	None	RIGID	Typical
11	SA4	N51	N48			Standoff	Beam	Pipe	Q235-GB	Typical
12	M16	N13	N21			RIGID	None	None	RIGID	Typical
13	SA2	N50	N49			Standoff	Beam	Pipe	Q235-GB	Typical
14	M18	N14	N22			RIGID	None	None	RIGID	Typical
15	M19	N48	N46		90	Connection Plate	Beam	RECT	Q345	Typical
16	M21	N49	N47		90	Connection Plate	Beam	RECT	Q345	Typical
17	M23	N44	N46			RIGID	None	None	RIGID	Typical
18	M24	N9	N17			RIGID	None	None	RIGID	Typical
19	M25	N45	N47			RIGID	None	None	RIGID	Typical
20	M26	N10	N18			RIGID	None	None	RIGID	Typical
21	M27	N43	N42		90	RIGID	None	None	RIGID	Typical
22	R1	N31	N32			Mount Pipe	Column	Pipe	Q235-GB	Typical
23	M29	N40	N41			RIGID	None	None	RIGID	Typical
24	SA3	N41	N38			Standoff	Beam	Pipe	Q235-GB	Typical
25	SA1	N40	N39			Standoff	Beam	Pipe	Q235-GB	Typical
26	R3	N23	N26			Mount Pipe	Column	Pipe	Q235-GB	Typical
27	M35	N38	N36		90	Connection Plate	Beam	RECT	Q345	Typical
28	M36	N39	N37		90	Connection Plate	Beam	RECT	Q345	Typical
29	M37	N34	N36			RIGID	None	None	RIGID	Typical
30	M39	N35	N37			RIGID	None	None	RIGID	Typical
31	HOR2	N1	N2			Face Horizontal	Beam	Pipe	Q235-GB	Typical
32	HOR1	N3	N4			Face Horizontal	Beam	Pipe	Q235-GB	Typical
33	M43A	N69	N68			Bracing (Vert)	Beam	BAR	Q345	Typical
34	M44A	N67	N66			Bracing (Vert)	Beam	BAR	Q345	Typical
35	VP1	N63	N64			Vertical Pipe	Column	Pipe	Q235-GB	Typical
36	M44C	N65A	N67B			RIGID	None	None	RIGID	Typical
37	M45	N66A	N68B			RIGID	None	None	RIGID	Typical
38	M44D	N100	N113			Bracing (Diag)	Beam	BAR	Q345	Typical
39	M45A	N103	N110			Bracing (Diag)	Beam	BAR	Q345	Typical
40	M46	N102	N111			Bracing (Diag)	Beam	BAR	Q345	Typical
41	M47	N101	N112			Bracing (Diag)	Beam	BAR	Q345	Typical
42	M48	N119	N118			Bracing (Vert)	Beam	BAR	Q345	Typical
43	M49	N117	N116			Bracing (Vert)	Beam	BAR	Q345	Typical
44	M50	N115	N114		90	RIGID	None	None	RIGID	Typical
45	M52	N112	N113			RIGID	None	None	RIGID	Typical
46	SA12	N113	N110			Standoff	Beam	Pipe	Q235-GB	Typical
47	SA10	N112	N111			Standoff	Beam	Pipe	Q235-GB	Typical
48	M58	N110	N108		90	Connection Plate	Beam	RECT	Q345	Typical
49	M60	N111	N109		90	Connection Plate	Beam	RECT	Q345	Typical
50	M62	N106	N108			RIGID	None	None	RIGID	Typical
51	M64	N107	N109			RIGID	None	None	RIGID	Typical
52	M66	N105	N104		90	RIGID	None	None	RIGID	Typical
53	M68	N102	N103			RIGID	None	None	RIGID	Typical
54	SA11	N103	N100			Standoff	Beam	Pipe	Q235-GB	Typical
55	SA9	N102	N101			Standoff	Beam	Pipe	Q235-GB	Typical
56	M74	N100	N98		90	Connection Plate	Beam	RECT	Q345	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Ru...
57	M75	N101	N99		90	Connection Plate	Beam	RECT	Q345	Typical
58	M76	N96	N98			RIGID	None	None	RIGID	Typical
59	M77	N97	N99			RIGID	None	None	RIGID	Typical
60	HOR6	N68A	N69A			Face Horizontal	Beam	Pipe	Q235-GB	Typical
61	HOR5	N70	N71			Face Horizontal	Beam	Pipe	Q235-GB	Typical
62	M80	N123	N122			Bracing (Vert)	Beam	BAR	Q345	Typical
63	M81	N121	N120			Bracing (Vert)	Beam	BAR	Q345	Typical
64	VP3	N126	N127			Vertical Pipe	Column	Pipe	Q235-GB	Typical
65	M84	N128	N130			RIGID	None	None	RIGID	Typical
66	M85	N129	N131			RIGID	None	None	RIGID	Typical
67	M87	N167	N180			Bracing (Diag)	Beam	BAR	Q345	Typical
68	M88	N170	N177			Bracing (Diag)	Beam	BAR	Q345	Typical
69	M89	N169	N178			Bracing (Diag)	Beam	BAR	Q345	Typical
70	M90	N168	N179			Bracing (Diag)	Beam	BAR	Q345	Typical
71	M91	N186	N185			Bracing (Vert)	Beam	BAR	Q345	Typical
72	M92	N184	N183			Bracing (Vert)	Beam	BAR	Q345	Typical
73	M93	N182	N181		90	RIGID	None	None	RIGID	Typical
74	M95	N179	N180			RIGID	None	None	RIGID	Typical
75	SA8	N180	N177			Standoff	Beam	Pipe	Q235-GB	Typical
76	SA6	N179	N178			Standoff	Beam	Pipe	Q235-GB	Typical
77	M101	N177	N175		90	Connection Plate	Beam	RECT	Q345	Typical
78	M103	N178	N176		90	Connection Plate	Beam	RECT	Q345	Typical
79	M105	N173	N175			RIGID	None	None	RIGID	Typical
80	M107	N174	N176			RIGID	None	None	RIGID	Typical
81	M109	N172	N171		90	RIGID	None	None	RIGID	Typical
82	M111	N169	N170			RIGID	None	None	RIGID	Typical
83	SA7	N170	N167			Standoff	Beam	Pipe	Q235-GB	Typical
84	SA5	N169	N168			Standoff	Beam	Pipe	Q235-GB	Typical
85	M117	N167	N165		90	Connection Plate	Beam	RECT	Q345	Typical
86	M118	N168	N166		90	Connection Plate	Beam	RECT	Q345	Typical
87	M119	N163	N165			RIGID	None	None	RIGID	Typical
88	M120	N164	N166			RIGID	None	None	RIGID	Typical
89	HOR4	N135	N136			Face Horizontal	Beam	Pipe	Q235-GB	Typical
90	HOR3	N137	N138			Face Horizontal	Beam	Pipe	Q235-GB	Typical
91	M123	N190	N189			Bracing (Vert)	Beam	BAR	Q345	Typical
92	M124	N188	N187			Bracing (Vert)	Beam	BAR	Q345	Typical
93	VP2	N193	N194			Vertical Pipe	Column	Pipe	Q235-GB	Typical
94	M127	N195	N197			RIGID	None	None	RIGID	Typical
95	M128	N196	N198			RIGID	None	None	RIGID	Typical
96	M133	N200A	N201			RIGID	None	None	RIGID	Typical
97	M134	N202	N203			RIGID	None	None	RIGID	Typical
98	M135	N204	N205			RIGID	None	None	RIGID	Typical
99	M136	N206	N207			RIGID	None	None	RIGID	Typical
100	M137	N200A	N207			Tieback	Beam	Pipe	Q235-GB	Typical
101	M138	N209	N210			RIGID	None	None	RIGID	Typical
102	M139	N211	N212			RIGID	None	None	RIGID	Typical
103	M140	N211	N205			Tieback	Beam	Pipe	Q235-GB	Typical
104	M141	N209	N203			Tieback	Beam	Pipe	Q235-GB	Typical
105	M106	N150	N146			Mount Pipe	Column	Pipe	Q235-GB	Typical
106	M107A	N152	N148			Mount Pipe	Column	Pipe	Q235-GB	Typical
107	M108	N151	N147			Mount Pipe	Column	Pipe	Q235-GB	Typical
108	M109A	N153	N149			Mount Pipe	Column	Pipe	Q235-GB	Typical
109	MP1	N156	N157			Mount Pipe	Column	Pipe	Q235-GB	Typical
110	MP3	N154	N155			Mount Pipe	Column	Pipe	Q235-GB	Typical
111	M118A	N172A	N178A			RIGID	None	None	RIGID	Typical
112	M119A	N173A	N179A			RIGID	None	None	RIGID	Typical
113	M120A	N170A	N174A			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Ru...
114	M121	N171A	N175A			RIGID	None	None	RIGID	Typical
115	R7	N180A	N181A			Mount Pipe	Column	Pipe	Q235-GB	Typical
116	R9	N176A	N177A			Mount Pipe	Column	Pipe	Q235-GB	Typical
117	M124A	N187A	N183A			Mount Pipe	Column	Pipe	Q235-GB	Typical
118	M125	N189A	N185A			Mount Pipe	Column	Pipe	Q235-GB	Typical
119	M126	N188A	N184A			Mount Pipe	Column	Pipe	Q235-GB	Typical
120	M127A	N190A	N186A			Mount Pipe	Column	Pipe	Q235-GB	Typical
121	MP7	N193A	N194A			Mount Pipe	Column	Pipe	Q235-GB	Typical
122	MP9	N191	N192			Mount Pipe	Column	Pipe	Q235-GB	Typical
123	M136A	N209A	N215			RIGID	None	None	RIGID	Typical
124	M137A	N210A	N216			RIGID	None	None	RIGID	Typical
125	M138A	N207A	N211A			RIGID	None	None	RIGID	Typical
126	M139A	N208	N212A			RIGID	None	None	RIGID	Typical
127	R4	N217	N218			Mount Pipe	Column	Pipe	Q235-GB	Typical
128	R6	N213	N214			Mount Pipe	Column	Pipe	Q235-GB	Typical
129	M142	N224	N220			Mount Pipe	Column	Pipe	Q235-GB	Typical
130	M143	N226	N222			Mount Pipe	Column	Pipe	Q235-GB	Typical
131	M144	N225	N221			Mount Pipe	Column	Pipe	Q235-GB	Typical
132	M145	N227	N223			Mount Pipe	Column	Pipe	Q235-GB	Typical
133	MP4	N230	N231			Mount Pipe	Column	Pipe	Q235-GB	Typical
134	MP6	N228	N229			Mount Pipe	Column	Pipe	Q235-GB	Typical
135	M154	N242A	N244			RIGID	None	None	RIGID	Typical
136	M155	N243A	N245			RIGID	None	None	RIGID	Typical
137	M157	N249	N251			RIGID	None	None	RIGID	Typical
138	M158	N250	N252			RIGID	None	None	RIGID	Typical
139	R2	N218A	N219			Mount Pipe	Column	Pipe	Q235-GB	Typical
140	M140A	N222A	N220A			Mount Pipe	Column	Pipe	Q235-GB	Typical
141	M141A	N223A	N221A			Mount Pipe	Column	Pipe	Q235-GB	Typical
142	MP2	N224A	N225A			Mount Pipe	Column	Pipe	Q235-GB	Typical
143	R8	N227A	N228A			Mount Pipe	Column	Pipe	Q235-GB	Typical
144	M144A	N231A	N229A			Mount Pipe	Column	Pipe	Q235-GB	Typical
145	M145A	N232	N230A			Mount Pipe	Column	Pipe	Q235-GB	Typical
146	MP8	N233	N234			Mount Pipe	Column	Pipe	Q235-GB	Typical
147	R5	N236	N237			Mount Pipe	Column	Pipe	Q235-GB	Typical
148	M148	N240	N238			Mount Pipe	Column	Pipe	Q235-GB	Typical
149	M149	N241	N239			Mount Pipe	Column	Pipe	Q235-GB	Typical
150	MP5	N242	N243			Mount Pipe	Column	Pipe	Q235-GB	Typical

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[K]
1	General				
2	RIGID		54	237.6	0
3	Total General		54	237.6	0
4					
5	Hot Rolled Steel				
6	Q235-GB	PIPE_2.0	51	2320.2	.671
7	Q235-GB	PIPE_2.5	6	900	.411
8	Q235-GB	PIPE_4.0	3	216	.181
9	Q345	0.625" S.R.	12	360	.031
10	Q345	PL3 1/2x5/8	12	54	.033
11	Q345	SR 3/4	12	539.2	.068
12	Total HR Steel		96	4389.5	1.396

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribut...	Area(M...	Surface(Plate/Wall)
1	Self Weight	DL		-1			34			
2	Wind Load AZI 0	WLZ					68			
3	Wind Load AZI 30	None					68			
4	Wind Load AZI 60	None					68			
5	Wind Load AZI 90	WLX					68			
6	Wind Load AZI 120	None					68			
7	Wind Load AZI 150	None					68			
8	Wind Load AZI 180	None					68			
9	Wind Load AZI 210	None					68			
10	Wind Load AZI 240	None					68			
11	Wind Load AZI 270	None					68			
12	Wind Load AZI 300	None					68			
13	Wind Load AZI 330	None					68			
14	Distr. Wind Load Z	WLZ						150		
15	Distr. Wind Load X	WLX						150		
16	Ice Weight	OL1					34	150		
17	Ice Wind Load AZI 0	OL2					68			
18	Ice Wind Load AZI ...	None					68			
19	Ice Wind Load AZI ...	None					68			
20	Ice Wind Load AZI ...	OL3					68			
21	Ice Wind Load AZI ...	None					68			
22	Ice Wind Load AZI ...	None					68			
23	Ice Wind Load AZI ...	None					68			
24	Ice Wind Load AZI ...	None					68			
25	Ice Wind Load AZI ...	None					68			
26	Ice Wind Load AZI ...	None					68			
27	Ice Wind Load AZI ...	None					68			
28	Ice Wind Load AZI ...	None					68			
29	Distr. Ice Wind Loa...	OL2						150		
30	Distr. Ice Wind Loa...	OL3						150		
31	Seismic Load Z	ELZ			-.315		34			
32	Seismic Load X	ELX	-.315				34			
33	Service Live Loads	LL				1				
34	Maintenance Load 1	LL				1				
35	Maintenance Load 2	LL				1				
36	Maintenance Load 3	LL				1				
37	Maintenance Load 4	LL				1				
38	Maintenance Load 5	LL				1				
39	Maintenance Load 6	LL				1				
40	Maintenance Load 7	LL				1				
41	Maintenance Load 8	LL				1				
42	Maintenance Load 9	LL				1				

Load Combinations

	Description	Solve	PDelta	SRSS	BLC	Factor	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.4DL	Yes	Y		1	1.4																		
2	1.2DL + 1WL AZI 0	Yes	Y		1	1.2	2	1	14	1	15													
3	1.2DL + 1WL AZI 30	Yes	Y		1	1.2	3	1	14	.866	15	.5												
4	1.2DL + 1WL AZI 60	Yes	Y		1	1.2	4	1	14	.5	15	.866												
5	1.2DL + 1WL AZI 90	Yes	Y		1	1.2	5	1	14		15	1												
6	1.2DL + 1WL AZI 120	Yes	Y		1	1.2	6	1	14	-.5	15	.866												
7	1.2DL + 1WL AZI 150	Yes	Y		1	1.2	7	1	14	-.8...	15	.5												
8	1.2DL + 1WL AZI 180	Yes	Y		1	1.2	8	1	14	-1	15													
9	1.2DL + 1WL AZI 210	Yes	Y		1	1.2	9	1	14	-.8...	15	-.5												

Load Combinations (Continued)

	Description	Solve	PDelta	SRSS	BLC	Factor	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
10	1.2DL + 1WL AZI 240	Yes	Y		1	1.2	10	1	14	-.5	15	-.8...												
11	1.2DL + 1WL AZI 270	Yes	Y		1	1.2	11	1	14		15	-1												
12	1.2DL + 1WL AZI 300	Yes	Y		1	1.2	12	1	14	.5	15	-.8...												
13	1.2DL + 1WL AZI 330	Yes	Y		1	1.2	13	1	14	.866	15	-.5												
14	0.9DL + 1WL AZI 0	Yes	Y		1	.9	2	1	14	1	15													
15	0.9DL + 1WL AZI 30	Yes	Y		1	.9	3	1	14	.866	15	.5												
16	0.9DL + 1WL AZI 60	Yes	Y		1	.9	4	1	14	.5	15	.866												
17	0.9DL + 1WL AZI 90	Yes	Y		1	.9	5	1	14		15	1												
18	0.9DL + 1WL AZI 120	Yes	Y		1	.9	6	1	14	-.5	15	.866												
19	0.9DL + 1WL AZI 150	Yes	Y		1	.9	7	1	14	-.8...	15	.5												
20	0.9DL + 1WL AZI 180	Yes	Y		1	.9	8	1	14	-1	15													
21	0.9DL + 1WL AZI 210	Yes	Y		1	.9	9	1	14	-.8...	15	-.5												
22	0.9DL + 1WL AZI 240	Yes	Y		1	.9	10	1	14	-.5	15	-.8...												
23	0.9DL + 1WL AZI 270	Yes	Y		1	.9	11	1	14		15	-1												
24	0.9DL + 1WL AZI 300	Yes	Y		1	.9	12	1	14	.5	15	-.8...												
25	0.9DL + 1WL AZI 330	Yes	Y		1	.9	13	1	14	.866	15	-.5												
26	1.2D + 1.0Di	Yes	Y		1	1.2	16	1																
27	1.2D + 1.0Di +1.0Wi A...	Yes	Y		1	1.2	16	1	17	1	29	1	30												
28	1.2D + 1.0Di +1.0Wi A...	Yes	Y		1	1.2	16	1	18	1	29	.866	30	.5											
29	1.2D + 1.0Di +1.0Wi A...	Yes	Y		1	1.2	16	1	19	1	29	.5	30	.866											
30	1.2D + 1.0Di +1.0Wi A...	Yes	Y		1	1.2	16	1	20	1	29		30	1											
31	1.2D + 1.0Di +1.0Wi A...	Yes	Y		1	1.2	16	1	21	1	29	-.5	30	.866											
32	1.2D + 1.0Di +1.0Wi A...	Yes	Y		1	1.2	16	1	22	1	29	-.8...	30	.5											
33	1.2D + 1.0Di +1.0Wi A...	Yes	Y		1	1.2	16	1	23	1	29	-1	30												
34	1.2D + 1.0Di +1.0Wi A...	Yes	Y		1	1.2	16	1	24	1	29	-.8...	30	-.5											
35	1.2D + 1.0Di +1.0Wi A...	Yes	Y		1	1.2	16	1	25	1	29	-.5	30	-.8...											
36	1.2D + 1.0Di +1.0Wi A...	Yes	Y		1	1.2	16	1	26	1	29		30	-1											
37	1.2D + 1.0Di +1.0Wi A...	Yes	Y		1	1.2	16	1	27	1	29	.5	30	-.8...											
38	1.2D + 1.0Di +1.0Wi A...	Yes	Y		1	1.2	16	1	28	1	29	.866	30	-.5											
39	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.242	31	1	32															
40	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.242	31	.866	32	.5														
41	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.242	31	.5	32	.866														
42	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.242	31		32	1														
43	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.242	31	-.5	32	.866														
44	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.242	31	-.8...	32	.5														
45	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.242	31	-1	32															
46	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.242	31	-.8...	32	-.5														
47	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.242	31	-.5	32	-.8...														
48	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.242	31		32	-1														
49	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.242	31	.5	32	-.8...														
50	(1.2 + 0.2Sds)DL + 1.0...	Yes	Y		1	1.242	31	.866	32	-.5														
51	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.858	31	1	32															
52	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.858	31	.866	32	.5														
53	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.858	31	.5	32	.866														
54	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.858	31		32	1														
55	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.858	31	-.5	32	.866														
56	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.858	31	-.8...	32	.5														
57	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.858	31	-1	32															
58	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.858	31	-.8...	32	-.5														
59	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.858	31	-.5	32	-.8...														
60	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.858	31		32	-1														
61	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.858	31	.5	32	-.8...														
62	(0.9 - 0.2Sds)DL + 1.0...	Yes	Y		1	.858	31	.866	32	-.5														
63	1.0DL + 1.5LL + 1.0SW...	Yes	Y		1	1	2	.259	14	.259	15		33	1.5										
64	1.0DL + 1.5LL + 1.0SW...	Yes	Y		1	1	3	.259	14	.224	15	.129	33	1.5										
65	1.0DL + 1.5LL + 1.0SW...	Yes	Y		1	1	4	.259	14	.129	15	.224	33	1.5										
66	1.0DL + 1.5LL + 1.0SW...	Yes	Y		1	1	5	.259	14		15	.259	33	1.5										

Load Combinations (Continued)

	Description	Solve	PDelta	SRSS	BLC	Factor	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
67	1.0DL + 1.5LL + 1.0SW...	Yes	Y		1	1	6	.259	14	-.1...	15	.224	33	1.5										
68	1.0DL + 1.5LL + 1.0SW...	Yes	Y		1	1	7	.259	14	-.2...	15	.129	33	1.5										
69	1.0DL + 1.5LL + 1.0SW...	Yes	Y		1	1	8	.259	14	-.2...	15		33	1.5										
70	1.0DL + 1.5LL + 1.0SW...	Yes	Y		1	1	9	.259	14	-.2...	15	-.1...	33	1.5										
71	1.0DL + 1.5LL + 1.0SW...	Yes	Y		1	1	10	.259	14	-.1...	15	-.2...	33	1.5										
72	1.0DL + 1.5LL + 1.0SW...	Yes	Y		1	1	11	.259	14		15	-.2...	33	1.5										
73	1.0DL + 1.5LL + 1.0SW...	Yes	Y		1	1	12	.259	14	.129	15	-.2...	33	1.5										
74	1.0DL + 1.5LL + 1.0SW...	Yes	Y		1	1	13	.259	14	.224	15	-.1...	33	1.5										
75	1.2DL + 1.5LL	Yes	Y		1	1.2	33	1.5																
76	1.2DL + 1.5LM-MP1 + ...	Yes	Y		1	1.2	34	1.5	2	.065	14	.065	15											
77	1.2DL + 1.5LM-MP1 + ...	Yes	Y		1	1.2	34	1.5	3	.065	14	.056	15	.032										
78	1.2DL + 1.5LM-MP1 + ...	Yes	Y		1	1.2	34	1.5	4	.065	14	.032	15	.056										
79	1.2DL + 1.5LM-MP1 + ...	Yes	Y		1	1.2	34	1.5	5	.065	14		15	.065										
80	1.2DL + 1.5LM-MP1 + ...	Yes	Y		1	1.2	34	1.5	6	.065	14	-.0...	15	.056										
81	1.2DL + 1.5LM-MP1 + ...	Yes	Y		1	1.2	34	1.5	7	.065	14	-.0...	15	.032										
82	1.2DL + 1.5LM-MP1 + ...	Yes	Y		1	1.2	34	1.5	8	.065	14	-.0...	15											
83	1.2DL + 1.5LM-MP1 + ...	Yes	Y		1	1.2	34	1.5	9	.065	14	-.0...	15	-.0...										
84	1.2DL + 1.5LM-MP1 + ...	Yes	Y		1	1.2	34	1.5	10	.065	14	-.0...	15	-.0...										
85	1.2DL + 1.5LM-MP1 + ...	Yes	Y		1	1.2	34	1.5	11	.065	14		15	-.0...										
86	1.2DL + 1.5LM-MP1 + ...	Yes	Y		1	1.2	34	1.5	12	.065	14	.032	15	-.0...										
87	1.2DL + 1.5LM-MP1 + ...	Yes	Y		1	1.2	34	1.5	13	.065	14	.056	15	-.0...										
88	1.2DL + 1.5LM-MP2 + ...	Yes	Y		1	1.2	35	1.5	2	.065	14	.065	15											
89	1.2DL + 1.5LM-MP2 + ...	Yes	Y		1	1.2	35	1.5	3	.065	14	.056	15	.032										
90	1.2DL + 1.5LM-MP2 + ...	Yes	Y		1	1.2	35	1.5	4	.065	14	.032	15	.056										
91	1.2DL + 1.5LM-MP2 + ...	Yes	Y		1	1.2	35	1.5	5	.065	14		15	.065										
92	1.2DL + 1.5LM-MP2 + ...	Yes	Y		1	1.2	35	1.5	6	.065	14	-.0...	15	.056										
93	1.2DL + 1.5LM-MP2 + ...	Yes	Y		1	1.2	35	1.5	7	.065	14	-.0...	15	.032										
94	1.2DL + 1.5LM-MP2 + ...	Yes	Y		1	1.2	35	1.5	8	.065	14	-.0...	15											
95	1.2DL + 1.5LM-MP2 + ...	Yes	Y		1	1.2	35	1.5	9	.065	14	-.0...	15	-.0...										
96	1.2DL + 1.5LM-MP2 + ...	Yes	Y		1	1.2	35	1.5	10	.065	14	-.0...	15	-.0...										
97	1.2DL + 1.5LM-MP2 + ...	Yes	Y		1	1.2	35	1.5	11	.065	14		15	-.0...										
98	1.2DL + 1.5LM-MP2 + ...	Yes	Y		1	1.2	35	1.5	12	.065	14	.032	15	-.0...										
99	1.2DL + 1.5LM-MP2 + ...	Yes	Y		1	1.2	35	1.5	13	.065	14	.056	15	-.0...										
100	1.2DL + 1.5LM-MP3 + ...	Yes	Y		1	1.2	36	1.5	2	.065	14	.065	15											
101	1.2DL + 1.5LM-MP3 + ...	Yes	Y		1	1.2	36	1.5	3	.065	14	.056	15	.032										
102	1.2DL + 1.5LM-MP3 + ...	Yes	Y		1	1.2	36	1.5	4	.065	14	.032	15	.056										
103	1.2DL + 1.5LM-MP3 + ...	Yes	Y		1	1.2	36	1.5	5	.065	14		15	.065										
104	1.2DL + 1.5LM-MP3 + ...	Yes	Y		1	1.2	36	1.5	6	.065	14	-.0...	15	.056										
105	1.2DL + 1.5LM-MP3 + ...	Yes	Y		1	1.2	36	1.5	7	.065	14	-.0...	15	.032										
106	1.2DL + 1.5LM-MP3 + ...	Yes	Y		1	1.2	36	1.5	8	.065	14	-.0...	15											
107	1.2DL + 1.5LM-MP3 + ...	Yes	Y		1	1.2	36	1.5	9	.065	14	-.0...	15	-.0...										
108	1.2DL + 1.5LM-MP3 + ...	Yes	Y		1	1.2	36	1.5	10	.065	14	-.0...	15	-.0...										
109	1.2DL + 1.5LM-MP3 + ...	Yes	Y		1	1.2	36	1.5	11	.065	14		15	-.0...										
110	1.2DL + 1.5LM-MP3 + ...	Yes	Y		1	1.2	36	1.5	12	.065	14	.032	15	-.0...										
111	1.2DL + 1.5LM-MP3 + ...	Yes	Y		1	1.2	36	1.5	13	.065	14	.056	15	-.0...										
112	1.2DL + 1.5LM-MP4 + ...	Yes	Y		1	1.2	37	1.5	2	.065	14	.065	15											
113	1.2DL + 1.5LM-MP4 + ...	Yes	Y		1	1.2	37	1.5	3	.065	14	.056	15	.032										
114	1.2DL + 1.5LM-MP4 + ...	Yes	Y		1	1.2	37	1.5	4	.065	14	.032	15	.056										
115	1.2DL + 1.5LM-MP4 + ...	Yes	Y		1	1.2	37	1.5	5	.065	14		15	.065										
116	1.2DL + 1.5LM-MP4 + ...	Yes	Y		1	1.2	37	1.5	6	.065	14	-.0...	15	.056										
117	1.2DL + 1.5LM-MP4 + ...	Yes	Y		1	1.2	37	1.5	7	.065	14	-.0...	15	.032										
118	1.2DL + 1.5LM-MP4 + ...	Yes	Y		1	1.2	37	1.5	8	.065	14	-.0...	15											
119	1.2DL + 1.5LM-MP4 + ...	Yes	Y		1	1.2	37	1.5	9	.065	14	-.0...	15	-.0...										
120	1.2DL + 1.5LM-MP4 + ...	Yes	Y		1	1.2	37	1.5	10	.065	14	-.0...	15	-.0...										
121	1.2DL + 1.5LM-MP4 + ...	Yes	Y		1	1.2	37	1.5	11	.065	14		15	-.0...										
122	1.2DL + 1.5LM-MP4 + ...	Yes	Y		1	1.2	37	1.5	12	.065	14	.032	15	-.0...										
123	1.2DL + 1.5LM-MP4 + ...	Yes	Y		1	1.2	37	1.5	13	.065	14	.056	15	-.0...										

Load Combinations (Continued)

	Description	Solve	PDelta	SRSS	BLC	Factor	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
124	1.2DL + 1.5LM-MP5 + ...	Yes	Y		1	1.2	38	1.5	2	.065	14	.065	15													
125	1.2DL + 1.5LM-MP5 + ...	Yes	Y		1	1.2	38	1.5	3	.065	14	.056	15	.032												
126	1.2DL + 1.5LM-MP5 + ...	Yes	Y		1	1.2	38	1.5	4	.065	14	.032	15	.056												
127	1.2DL + 1.5LM-MP5 + ...	Yes	Y		1	1.2	38	1.5	5	.065	14		15	.065												
128	1.2DL + 1.5LM-MP5 + ...	Yes	Y		1	1.2	38	1.5	6	.065	14	-.0...	15	.056												
129	1.2DL + 1.5LM-MP5 + ...	Yes	Y		1	1.2	38	1.5	7	.065	14	-.0...	15	.032												
130	1.2DL + 1.5LM-MP5 + ...	Yes	Y		1	1.2	38	1.5	8	.065	14	-.0...	15													
131	1.2DL + 1.5LM-MP5 + ...	Yes	Y		1	1.2	38	1.5	9	.065	14	-.0...	15	-.0...												
132	1.2DL + 1.5LM-MP5 + ...	Yes	Y		1	1.2	38	1.5	10	.065	14	-.0...	15	-.0...												
133	1.2DL + 1.5LM-MP5 + ...	Yes	Y		1	1.2	38	1.5	11	.065	14		15	-.0...												
134	1.2DL + 1.5LM-MP5 + ...	Yes	Y		1	1.2	38	1.5	12	.065	14	.032	15	-.0...												
135	1.2DL + 1.5LM-MP5 + ...	Yes	Y		1	1.2	38	1.5	13	.065	14	.056	15	-.0...												
136	1.2DL + 1.5LM-MP6 + ...	Yes	Y		1	1.2	39	1.5	2	.065	14	.065	15													
137	1.2DL + 1.5LM-MP6 + ...	Yes	Y		1	1.2	39	1.5	3	.065	14	.056	15	.032												
138	1.2DL + 1.5LM-MP6 + ...	Yes	Y		1	1.2	39	1.5	4	.065	14	.032	15	.056												
139	1.2DL + 1.5LM-MP6 + ...	Yes	Y		1	1.2	39	1.5	5	.065	14		15	.065												
140	1.2DL + 1.5LM-MP6 + ...	Yes	Y		1	1.2	39	1.5	6	.065	14	-.0...	15	.056												
141	1.2DL + 1.5LM-MP6 + ...	Yes	Y		1	1.2	39	1.5	7	.065	14	-.0...	15	.032												
142	1.2DL + 1.5LM-MP6 + ...	Yes	Y		1	1.2	39	1.5	8	.065	14	-.0...	15													
143	1.2DL + 1.5LM-MP6 + ...	Yes	Y		1	1.2	39	1.5	9	.065	14	-.0...	15	-.0...												
144	1.2DL + 1.5LM-MP6 + ...	Yes	Y		1	1.2	39	1.5	10	.065	14	-.0...	15	-.0...												
145	1.2DL + 1.5LM-MP6 + ...	Yes	Y		1	1.2	39	1.5	11	.065	14		15	-.0...												
146	1.2DL + 1.5LM-MP6 + ...	Yes	Y		1	1.2	39	1.5	12	.065	14	.032	15	-.0...												
147	1.2DL + 1.5LM-MP6 + ...	Yes	Y		1	1.2	39	1.5	13	.065	14	.056	15	-.0...												
148	1.2DL + 1.5LM-MP7 + ...	Yes	Y		1	1.2	40	1.5	2	.065	14	.065	15													
149	1.2DL + 1.5LM-MP7 + ...	Yes	Y		1	1.2	40	1.5	3	.065	14	.056	15	.032												
150	1.2DL + 1.5LM-MP7 + ...	Yes	Y		1	1.2	40	1.5	4	.065	14	.032	15	.056												
151	1.2DL + 1.5LM-MP7 + ...	Yes	Y		1	1.2	40	1.5	5	.065	14		15	.065												
152	1.2DL + 1.5LM-MP7 + ...	Yes	Y		1	1.2	40	1.5	6	.065	14	-.0...	15	.056												
153	1.2DL + 1.5LM-MP7 + ...	Yes	Y		1	1.2	40	1.5	7	.065	14	-.0...	15	.032												
154	1.2DL + 1.5LM-MP7 + ...	Yes	Y		1	1.2	40	1.5	8	.065	14	-.0...	15													
155	1.2DL + 1.5LM-MP7 + ...	Yes	Y		1	1.2	40	1.5	9	.065	14	-.0...	15	-.0...												
156	1.2DL + 1.5LM-MP7 + ...	Yes	Y		1	1.2	40	1.5	10	.065	14	-.0...	15	-.0...												
157	1.2DL + 1.5LM-MP7 + ...	Yes	Y		1	1.2	40	1.5	11	.065	14		15	-.0...												
158	1.2DL + 1.5LM-MP7 + ...	Yes	Y		1	1.2	40	1.5	12	.065	14	.032	15	-.0...												
159	1.2DL + 1.5LM-MP7 + ...	Yes	Y		1	1.2	40	1.5	13	.065	14	.056	15	-.0...												
160	1.2DL + 1.5LM-MP8 + ...	Yes	Y		1	1.2	41	1.5	2	.065	14	.065	15													
161	1.2DL + 1.5LM-MP8 + ...	Yes	Y		1	1.2	41	1.5	3	.065	14	.056	15	.032												
162	1.2DL + 1.5LM-MP8 + ...	Yes	Y		1	1.2	41	1.5	4	.065	14	.032	15	.056												
163	1.2DL + 1.5LM-MP8 + ...	Yes	Y		1	1.2	41	1.5	5	.065	14		15	.065												
164	1.2DL + 1.5LM-MP8 + ...	Yes	Y		1	1.2	41	1.5	6	.065	14	-.0...	15	.056												
165	1.2DL + 1.5LM-MP8 + ...	Yes	Y		1	1.2	41	1.5	7	.065	14	-.0...	15	.032												
166	1.2DL + 1.5LM-MP8 + ...	Yes	Y		1	1.2	41	1.5	8	.065	14	-.0...	15													
167	1.2DL + 1.5LM-MP8 + ...	Yes	Y		1	1.2	41	1.5	9	.065	14	-.0...	15	-.0...												
168	1.2DL + 1.5LM-MP8 + ...	Yes	Y		1	1.2	41	1.5	10	.065	14	-.0...	15	-.0...												
169	1.2DL + 1.5LM-MP8 + ...	Yes	Y		1	1.2	41	1.5	11	.065	14		15	-.0...												
170	1.2DL + 1.5LM-MP8 + ...	Yes	Y		1	1.2	41	1.5	12	.065	14	.032	15	-.0...												
171	1.2DL + 1.5LM-MP8 + ...	Yes	Y		1	1.2	41	1.5	13	.065	14	.056	15	-.0...												
172	1.2DL + 1.5LM-MP9 + ...	Yes	Y		1	1.2	42	1.5	2	.065	14	.065	15													
173	1.2DL + 1.5LM-MP9 + ...	Yes	Y		1	1.2	42	1.5	3	.065	14	.056	15	.032												
174	1.2DL + 1.5LM-MP9 + ...	Yes	Y		1	1.2	42	1.5	4	.065	14	.032	15	.056												
175	1.2DL + 1.5LM-MP9 + ...	Yes	Y		1	1.2	42	1.5	5	.065	14		15	.065												
176	1.2DL + 1.5LM-MP9 + ...	Yes	Y		1	1.2	42	1.5	6	.065	14	-.0...	15	.056												
177	1.2DL + 1.5LM-MP9 + ...	Yes	Y		1	1.2	42	1.5	7	.065	14	-.0...	15	.032												
178	1.2DL + 1.5LM-MP9 + ...	Yes	Y		1	1.2	42	1.5	8	.065	14	-.0...	15													
179	1.2DL + 1.5LM-MP9 + ...	Yes	Y		1	1.2	42	1.5	9	.065	14	-.0...	15	-.0...												
180	1.2DL + 1.5LM-MP9 + ...	Yes	Y		1	1.2	42	1.5	10	.065	14	-.0...	15	-.0...												

Load Combinations (Continued)

	Description	Solve	PDelta	SRSS	BLC	Factor	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
181	1.2DL + 1.5LM-MP9 + ...	Yes	Y		1	1.2	42	1.5	11	.065	14		15	-.0...										
182	1.2DL + 1.5LM-MP9 + ...	Yes	Y		1	1.2	42	1.5	12	.065	14	.032	15	-.0...										

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N67B	max	1098.761	6	1602.58	33	1178.834	25	763.053	7	1282.642	6	508.808	6
2		min	-1004.561	24	-214.497	14	-2946.03	7	-721.929	12	-1326.2...	12	-594.736	12
3	N68B	max	1392.084	19	1570.595	36	2447.398	38	590.346	2	1565.922	18	643.515	13
4		min	-1466.765	13	-46.304	17	-491.831	19	-426.045	20	-1656.6...	12	-624.723	19
5	N130	max	1318.019	17	1511.879	38	1517.474	111	164.079	121	1208.239	10	890.875	4
6		min	-2921.606	11	-186.028	18	3.262	117	-332.343	103	-1241.1...	4	-865.627	11
7	N131	max	2648.365	5	1504.839	28	365.914	16	360.783	17	1604.133	22	578.841	24
8		min	-1058.671	23	-169.429	21	-1534.6...	108	-404.621	11	-1748.9	4	-758.794	6
9	N197	max	2126.614	28	1584.245	30	2372.931	3	949.686	8	1385.545	14	436.938	3
10		min	-518.948	21	-169.574	22	-1489.3...	21	-827.334	3	-1476.64	8	-369.762	20
11	N198	max	13.955	16	1585.296	32	1630.591	15	714.455	15	1881.974	2	371.628	133
12		min	-2049.419	36	-135.483	14	-2510.1...	9	-794.532	9	-1947.0...	8	-227.298	17
13	Totals:	max	6184.939	17	8502.796	27	6351.331	2						
14		min	-6184.94	11	2853.768	56	-6351.3...	20						

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Face Horizontal	PIPE_2.5	Beam	Pipe	Q235-GB	Typical	1.61	1.45	1.45	2.89
2	Standoff	PIPE_2.0	Beam	Pipe	Q235-GB	Typical	1.02	.627	.627	1.25
3	Bracing (Vert)	0.625" S.R.	Beam	BAR	Q345	Typical	.307	.007	.007	.015
4	Mount Pipe	PIPE_2.0	Column	Pipe	Q235-GB	Typical	1.02	.627	.627	1.25
5	Vertical Pipe	PIPE_4.0	Column	Pipe	Q235-GB	Typical	2.96	6.82	6.82	13.6
6	Conn. Plate	PL0.625x3.5	Beam	RECT	Q345	Typical	2.188	.071	2.233	.253
7	Pivot Plate	PL0.625x9.25	Beam	RECT	Q345	Typical	5.781	.188	41.222	.721
8	Connection Plate	PL3 1/2x5/8	Beam	RECT	Q345	Typical	2.188	.071	2.233	.253
9	Tieback	PIPE_2.0	Beam	Pipe	Q235-GB	Typical	1.02	.627	.627	1.25
10	Bracing (Diag)	SR 3/4	Beam	BAR	Q345	Typical	.442	.016	.016	.031

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N43						
2	N53						
3	N63						
4	N64						
5	N65A						
6	N66A						
7	N67B	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
8	N68B	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
9	CENTER						
10	N105						
11	N115						
12	N126						
13	N127						
14	N128						
15	N129						
16	N130	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
17	N131	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Joint Boundary Conditions (Continued)

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
18	N172						
19	N182						
20	N193						
21	N194						
22	N195						
23	N196						
24	N197	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
25	N198	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
26	N202						
27	N203						
28	N204						
29	N205						
30	N206						
31	N207						

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M3	BenPIN	BenPIN	3	3	Euler Buc...	Yes				None
2	M4	BenPIN	BenPIN	3	3	Euler Buc...	Yes				None
3	M5	BenPIN	BenPIN	3	3	Euler Buc...	Yes				None
4	M6	BenPIN	BenPIN	3	3	Euler Buc...	Yes				None
5	M9	BenPIN	BenPIN	5	5		Yes				None
6	M10	BenPIN	BenPIN	5	5		Yes				None
7	M11						Yes	** NA **			None
8	M12						Yes	** NA **			None
9	M13						Yes	** NA **			None
10	M14						Yes	** NA **			None
11	SA4						Yes				None
12	M16						Yes	** NA **			None
13	SA2						Yes				None
14	M18						Yes	** NA **			None
15	M19						Yes				None
16	M21						Yes				None
17	M23						Yes	** NA **			None
18	M24						Yes	** NA **			None
19	M25						Yes	** NA **			None
20	M26						Yes	** NA **			None
21	M27						Yes	** NA **			None
22	R1						Yes	** NA **			None
23	M29						Yes	** NA **			None
24	SA3						Yes				None
25	SA1						Yes	Default			None
26	R3						Yes	** NA **			None
27	M35						Yes				None
28	M36						Yes				None
29	M37						Yes	** NA **			None
30	M39						Yes	** NA **			None
31	HOR2						Yes	Default			None
32	HOR1						Yes				None
33	M43A	BenPIN	BenPIN	5	5		Yes				None
34	M44A	BenPIN	BenPIN	5	5		Yes				None
35	VP1						Yes	** NA **			None
36	M44C						Yes	** NA **			None
37	M45						Yes	** NA **			None
38	M44D	BenPIN	BenPIN	3	3	Euler Buc...	Yes				None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
39	M45A	BenPIN	BenPIN	3	3	Euler Buc...	Yes				None
40	M46	BenPIN	BenPIN	3	3	Euler Buc...	Yes				None
41	M47	BenPIN	BenPIN	3	3	Euler Buc...	Yes				None
42	M48	BenPIN	BenPIN	5	5		Yes				None
43	M49	BenPIN	BenPIN	5	5	Euler Buc...	Yes				None
44	M50						Yes	** NA **			None
45	M52						Yes	** NA **			None
46	SA12						Yes				None
47	SA10						Yes				None
48	M58						Yes				None
49	M60						Yes				None
50	M62						Yes	** NA **			None
51	M64						Yes	** NA **			None
52	M66						Yes	** NA **			None
53	M68						Yes	** NA **			None
54	SA11						Yes				None
55	SA9						Yes	Default			None
56	M74						Yes				None
57	M75						Yes				None
58	M76						Yes	** NA **			None
59	M77						Yes	** NA **			None
60	HOR6						Yes				None
61	HOR5						Yes				None
62	M80	BenPIN	BenPIN	5	5		Yes				None
63	M81	BenPIN	BenPIN	5	5		Yes				None
64	VP3						Yes	** NA **			None
65	M84						Yes	** NA **			None
66	M85						Yes	** NA **			None
67	M87	BenPIN	BenPIN	3	3	Euler Buc...	Yes				None
68	M88	BenPIN	BenPIN	3	3	Euler Buc...	Yes				None
69	M89	BenPIN	BenPIN	3	3	Euler Buc...	Yes				None
70	M90	BenPIN	BenPIN	3	3	Euler Buc...	Yes				None
71	M91	BenPIN	BenPIN	5	5		Yes				None
72	M92	BenPIN	BenPIN	5	5		Yes				None
73	M93						Yes	** NA **			None
74	M95						Yes	** NA **			None
75	SA8						Yes				None
76	SA6						Yes				None
77	M101						Yes				None
78	M103						Yes				None
79	M105						Yes	** NA **			None
80	M107						Yes	** NA **			None
81	M109						Yes	** NA **			None
82	M111						Yes	** NA **			None
83	SA7						Yes				None
84	SA5						Yes	Default			None
85	M117						Yes				None
86	M118						Yes				None
87	M119						Yes	** NA **			None
88	M120						Yes	** NA **			None
89	HOR4						Yes				None
90	HOR3						Yes				None
91	M123	BenPIN	BenPIN	5	5		Yes				None
92	M124	BenPIN	BenPIN	5	5		Yes				None
93	VP2						Yes	** NA **			None
94	M127						Yes	** NA **			None
95	M128						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
96	M133						Yes	** NA **			None
97	M134						Yes	** NA **			None
98	M135						Yes	** NA **			None
99	M136						Yes	** NA **			None
100	M137	BenPIN	BenPIN				Yes	Default			None
101	M138						Yes	** NA **			None
102	M139						Yes	** NA **			None
103	M140	BenPIN	BenPIN				Yes	Default			None
104	M141	BenPIN	BenPIN				Yes	Default			None
105	M106						Yes	** NA **			None
106	M107A						Yes	** NA **			None
107	M108						Yes	** NA **			None
108	M109A						Yes	** NA **			None
109	MP1						Yes	** NA **			None
110	MP3						Yes	** NA **			None
111	M118A						Yes	** NA **			None
112	M119A						Yes	** NA **			None
113	M120A						Yes	** NA **			None
114	M121						Yes	** NA **			None
115	R7						Yes	** NA **			None
116	R9						Yes	** NA **			None
117	M124A						Yes	** NA **			None
118	M125						Yes	** NA **			None
119	M126						Yes	** NA **			None
120	M127A						Yes	** NA **			None
121	MP7						Yes	** NA **			None
122	MP9						Yes	** NA **			None
123	M136A						Yes	** NA **			None
124	M137A						Yes	** NA **			None
125	M138A						Yes	** NA **			None
126	M139A						Yes	** NA **			None
127	R4						Yes	** NA **			None
128	R6						Yes	** NA **			None
129	M142						Yes	** NA **			None
130	M143						Yes	** NA **			None
131	M144						Yes	** NA **			None
132	M145						Yes	** NA **			None
133	MP4						Yes	** NA **			None
134	MP6						Yes	** NA **			None
135	M154						Yes	** NA **			None
136	M155						Yes	** NA **			None
137	M157						Yes	** NA **			None
138	M158						Yes	** NA **			None
139	R2						Yes	** NA **			None
140	M140A						Yes	** NA **			None
141	M141A						Yes	** NA **			None
142	MP2						Yes	** NA **			None
143	R8						Yes	** NA **			None
144	M144A						Yes	** NA **			None
145	M145A						Yes	** NA **			None
146	MP8						Yes	** NA **			None
147	R5						Yes	** NA **			None
148	M148						Yes	** NA **			None
149	M149						Yes	** NA **			None
150	MP5						Yes	** NA **			None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[in]	Lcomp bot[in]	L-torq...	Kyy	Kzz	Cb	Function
1	M3	Bracing (Di...	50.937			Lbyy						Lateral
2	M4	Bracing (Di...	50.937			Lbyy						Lateral
3	M5	Bracing (Di...	50.937			Lbyy						Lateral
4	M6	Bracing (Di...	50.937			Lbyy						Lateral
5	M9	Bracing (Ve...	40			Lbyy						Lateral
6	M10	Bracing (Ve...	40			Lbyy						Lateral
7	SA4	Standoff	31.537			Lbyy						Lateral
8	SA2	Standoff	31.537			Lbyy						Lateral
9	M19	Connection ...	4.5			Lbyy						Lateral
10	M21	Connection ...	4.5			Lbyy						Lateral
11	R1	Mount Pipe	48			Lbyy						Lateral
12	SA3	Standoff	31.537			Lbyy						Lateral
13	SA1	Standoff	31.537			Lbyy						Lateral
14	R3	Mount Pipe	48			Lbyy						Lateral
15	M35	Connection ...	4.5			Lbyy						Lateral
16	M36	Connection ...	4.5			Lbyy						Lateral
17	HOR2	Face Horizo...	150	Segment	Segment	Segment	Segment	Segm...				Lateral
18	HOR1	Face Horizo...	150	Segment	Segment	Segment	Segment	Segm...				Lateral
19	M43A	Bracing (Ve...	40			Lbyy						Lateral
20	M44A	Bracing (Ve...	40			Lbyy						Lateral
21	VP1	Vertical Pipe	72									Lateral
22	M44D	Bracing (Di...	50.937			Lbyy						Lateral
23	M45A	Bracing (Di...	50.937			Lbyy						Lateral
24	M46	Bracing (Di...	50.937			Lbyy						Lateral
25	M47	Bracing (Di...	50.937			Lbyy						Lateral
26	M48	Bracing (Ve...	40			Lbyy						Lateral
27	M49	Bracing (Ve...	40			Lbyy						Lateral
28	SA12	Standoff	31.537			Lbyy						Lateral
29	SA10	Standoff	31.537			Lbyy						Lateral
30	M58	Connection ...	4.5			Lbyy						Lateral
31	M60	Connection ...	4.5			Lbyy						Lateral
32	SA11	Standoff	31.537			Lbyy						Lateral
33	SA9	Standoff	31.537			Lbyy						Lateral
34	M74	Connection ...	4.5			Lbyy						Lateral
35	M75	Connection ...	4.5			Lbyy						Lateral
36	HOR6	Face Horizo...	150			Lbyy						Lateral
37	HOR5	Face Horizo...	150	Segment	Segment	Segment	Segment	Segm...				Lateral
38	M80	Bracing (Ve...	40			Lbyy						Lateral
39	M81	Bracing (Ve...	40			Lbyy						Lateral
40	VP3	Vertical Pipe	72									Lateral
41	M87	Bracing (Di...	50.937			Lbyy						Lateral
42	M88	Bracing (Di...	50.937			Lbyy						Lateral
43	M89	Bracing (Di...	50.937			Lbyy						Lateral
44	M90	Bracing (Di...	50.937			Lbyy						Lateral
45	M91	Bracing (Ve...	40			Lbyy						Lateral
46	M92	Bracing (Ve...	40			Lbyy						Lateral
47	SA8	Standoff	31.537			Lbyy						Lateral
48	SA6	Standoff	31.537			Lbyy						Lateral
49	M101	Connection ...	4.5			Lbyy						Lateral
50	M103	Connection ...	4.5			Lbyy						Lateral
51	SA7	Standoff	31.537			Lbyy						Lateral
52	SA5	Standoff	31.537			Lbyy						Lateral
53	M117	Connection ...	4.5			Lbyy						Lateral
54	M118	Connection ...	4.5			Lbyy						Lateral
55	HOR4	Face Horizo...	150	Segment	Segment	Segment	Segment	Segm...				Lateral
56	HOR3	Face Horizo...	150	Segment	Segment	Segment	Segment	Segm...				Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[in]	Lcomp bot[in]	L-torq...	Kyy	Kzz	Cb	Function
57	M123	Bracing (Ve...	40			Lbyy						Lateral
58	M124	Bracing (Ve...	40			Lbyy						Lateral
59	VP2	Vertical Pipe	72									Lateral
60	M137	Tieback	73.591			Lbyy						Lateral
61	M140	Tieback	69.694			Lbyy						Lateral
62	M141	Tieback	70.518			Lbyy						Lateral
63	M106	Mount Pipe	12									Lateral
64	M107A	Mount Pipe	12									Lateral
65	M108	Mount Pipe	12									Lateral
66	M109A	Mount Pipe	12									Lateral
67	MP1	Mount Pipe	120			Lbyy						Lateral
68	MP3	Mount Pipe	120			Lbyy						Lateral
69	R7	Mount Pipe	48			Lbyy						Lateral
70	R9	Mount Pipe	48			Lbyy						Lateral
71	M124A	Mount Pipe	12									Lateral
72	M125	Mount Pipe	12									Lateral
73	M126	Mount Pipe	12									Lateral
74	M127A	Mount Pipe	12									Lateral
75	MP7	Mount Pipe	120			Lbyy						Lateral
76	MP9	Mount Pipe	120			Lbyy						Lateral
77	R4	Mount Pipe	48			Lbyy						Lateral
78	R6	Mount Pipe	48			Lbyy						Lateral
79	M142	Mount Pipe	12									Lateral
80	M143	Mount Pipe	12									Lateral
81	M144	Mount Pipe	12									Lateral
82	M145	Mount Pipe	12									Lateral
83	MP4	Mount Pipe	120			Lbyy						Lateral
84	MP6	Mount Pipe	120			Lbyy						Lateral
85	R2	Mount Pipe	48			Lbyy						Lateral
86	M140A	Mount Pipe	12									Lateral
87	M141A	Mount Pipe	12									Lateral
88	MP2	Mount Pipe	120			Lbyy						Lateral
89	R8	Mount Pipe	48			Lbyy						Lateral
90	M144A	Mount Pipe	12									Lateral
91	M145A	Mount Pipe	12									Lateral
92	MP8	Mount Pipe	120			Lbyy						Lateral
93	R5	Mount Pipe	48			Lbyy						Lateral
94	M148	Mount Pipe	12									Lateral
95	M149	Mount Pipe	12									Lateral
96	MP5	Mount Pipe	120			Lbyy						Lateral

Hot Rolled Steel Properties

	Label	E [psi]	G [psi]	Nu	Ther...	Density[k/ft^3]	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A992	2.9e+7	1.115e+7	.3	.65	.49	50	1.1	65	1.1
2	Q345	2.9e+7	1.115e+7	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	2.9e+7	1.115e+7	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	2.9e+7	1.115e+7	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B Rect	2.9e+7	1.115e+7	.3	.65	.527	46	1.4	58	1.3
6	Q235-GB	2.9e+7	1.115e+7	.3	.65	.49	35	1.6	60	1.2
7	A1085	2.9e+7	1.115e+7	.3	.65	.49	50	1.4	65	1.3

Joint Loads and Enforced Displacements (BLC 33 : Service Live Loads)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (l...
1	N2	L	Y	-250

Joint Loads and Enforced Displacements (BLC 34 : Maintenance Load 1)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (l...
1	N153	L	Y	-500

Joint Loads and Enforced Displacements (BLC 35 : Maintenance Load 2)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (l...
1	N152	L	Y	-500

Joint Loads and Enforced Displacements (BLC 36 : Maintenance Load 3)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (l...
1	N190A	L	Y	-500

Joint Loads and Enforced Displacements (BLC 37 : Maintenance Load 4)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (l...
1	N189A	L	Y	-500

Joint Loads and Enforced Displacements (BLC 38 : Maintenance Load 5)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (l...
1	N227	L	Y	-500

Joint Loads and Enforced Displacements (BLC 39 : Maintenance Load 6)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (l...
1	N226	L	Y	-500

Joint Loads and Enforced Displacements (BLC 40 : Maintenance Load 7)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (l...
1	N223A	L	Y	-500

Joint Loads and Enforced Displacements (BLC 41 : Maintenance Load 8)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (l...
1	N232	L	Y	-500

Joint Loads and Enforced Displacements (BLC 42 : Maintenance Load 9)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (l...
1	N241	L	Y	-500

Member Point Loads (BLC 1 : Self Weight)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Y	-43.55	0
2	MP1	Y	-43.55	%100
3	MP2	Y	-44	24
4	MP2	Y	-81.6	72
5	MP3	Y	-62.85	0
6	MP3	Y	-62.85	%100
7	R1	Y	-71	%50
8	R3	Y	-59.9	%50
9	R1	Y	-72	%50
10	R3	Y	-77	%50

Member Point Loads (BLC 1 : Self Weight) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
11	SA1	Y	-18.9	%50
12	SA3	Y	-18.9	%50
13	MP4	Y	-43.55	0
14	MP4	Y	-43.55	%100
15	MP5	Y	-44	24
16	MP5	Y	-81.6	72
17	MP6	Y	-62.85	0
18	MP6	Y	-62.85	%100
19	R4	Y	-71	%50
20	R6	Y	-59.9	%50
21	R4	Y	-72	%50
22	R6	Y	-77	%50
23	SA5	Y	-18.9	%50
24	MP7	Y	-43.55	0
25	MP7	Y	-43.55	%100
26	MP8	Y	-44	24
27	MP8	Y	-81.6	72
28	MP9	Y	-62.85	0
29	MP9	Y	-62.85	%100
30	R7	Y	-71	%50
31	R9	Y	-59.9	%50
32	R7	Y	-72	%50
33	R9	Y	-77	%50
34	SA8	Y	-18.9	%50

Member Point Loads (BLC 2 : Wind Load AZI 0)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0	0
2	MP1	Z	-269.59	0
3	MP1	X	0	%100
4	MP1	Z	-269.59	%100
5	MP2	X	0	24
6	MP2	Z	-142.48	24
7	MP2	X	0	72
8	MP2	Z	-123.39	72
9	MP3	X	0	0
10	MP3	Z	-247.95	0
11	MP3	X	0	%100
12	MP3	Z	-247.95	%100
13	R1	X	0	%50
14	R1	Z	-67.06	%50
15	R3	X	0	%50
16	R3	Z	-62.73	%50
17	R1	X	0	%50
18	R1	Z	-55.91	%50
19	R3	X	0	%50
20	R3	Z	-112.97	%50
21	SA1	X	0	%50
22	SA1	Z	-69.67	%50
23	SA3	X	0	%50
24	SA3	Z	-69.67	%50
25	MP4	X	0	0
26	MP4	Z	-171.55	0
27	MP4	X	0	%100
28	MP4	Z	-171.55	%100
29	MP5	X	0	24

Member Point Loads (BLC 2 : Wind Load AZI 0) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
30	MP5	Z	-99.64	24
31	MP5	X	0	72
32	MP5	Z	-85.54	72
33	MP6	X	0	0
34	MP6	Z	-153.47	0
35	MP6	X	0	%100
36	MP6	Z	-153.47	%100
37	R4	X	0	%50
38	R4	Z	-55.99	%50
39	R6	X	0	%50
40	R6	Z	-47.23	%50
41	R4	X	0	%50
42	R4	Z	-50.26	%50
43	R6	X	0	%50
44	R6	Z	-95.36	%50
45	SA5	X	0	%50
46	SA5	Z	-69.67	%50
47	MP7	X	0	0
48	MP7	Z	-121.42	0
49	MP7	X	0	%100
50	MP7	Z	-121.42	%100
51	MP8	X	0	24
52	MP8	Z	-77.74	24
53	MP8	X	0	72
54	MP8	Z	-66.18	72
55	MP9	X	0	0
56	MP9	Z	-105.16	0
57	MP9	X	0	%100
58	MP9	Z	-105.16	%100
59	R7	X	0	%50
60	R7	Z	-50.33	%50
61	R9	X	0	%50
62	R9	Z	-39.3	%50
63	R7	X	0	%50
64	R7	Z	-47.37	%50
65	R9	X	0	%50
66	R9	Z	-86.35	%50
67	SA8	X	0	%50
68	SA8	Z	-69.67	%50

Member Point Loads (BLC 3 : Wind Load AZI 30)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-107.6	0
2	MP1	Z	-186.36	0
3	MP1	X	-107.6	%100
4	MP1	Z	-186.36	%100
5	MP2	X	-59.36	24
6	MP2	Z	-102.81	24
7	MP2	X	-51.19	72
8	MP2	Z	-88.67	72
9	MP3	X	-97.76	0
10	MP3	Z	-169.33	0
11	MP3	X	-97.76	%100
12	MP3	Z	-169.33	%100
13	R1	X	-30.46	%50
14	R1	Z	-52.76	%50

Member Point Loads (BLC 3 : Wind Load AZI 30) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
15	R3	X	-27.06	%50
16	R3	Z	-46.88	%50
17	R1	X	-26.39	%50
18	R1	Z	-45.71	%50
19	R3	X	-51.6	%50
20	R3	Z	-89.37	%50
21	SA1	X	-34.83	%50
22	SA1	Z	-60.33	%50
23	SA3	X	-34.83	%50
24	SA3	Z	-60.33	%50
25	MP4	X	-125.54	0
26	MP4	Z	-217.44	0
27	MP4	X	-125.54	%100
28	MP4	Z	-217.44	%100
29	MP5	X	-67.19	24
30	MP5	Z	-116.39	24
31	MP5	X	-58.12	72
32	MP5	Z	-100.67	72
33	MP6	X	-115.05	0
34	MP6	Z	-199.28	0
35	MP6	X	-115.05	%100
36	MP6	Z	-199.28	%100
37	R4	X	-32.49	%50
38	R4	Z	-56.27	%50
39	R6	X	-29.9	%50
40	R6	Z	-51.79	%50
41	R4	X	-27.42	%50
42	R4	Z	-47.5	%50
43	R6	X	-54.82	%50
44	R6	Z	-94.95	%50
45	SA5	X	-34.83	%50
46	SA5	Z	-60.33	%50
47	MP7	X	-53.36	0
48	MP7	Z	-92.43	0
49	MP7	X	-53.36	%100
50	MP7	Z	-92.43	%100
51	MP8	X	-35.66	24
52	MP8	Z	-61.76	24
53	MP8	X	-30.25	72
54	MP8	Z	-52.4	72
55	MP9	X	-45.5	0
56	MP9	Z	-78.81	0
57	MP9	X	-45.5	%100
58	MP9	Z	-78.81	%100
59	R7	X	-24.34	%50
60	R7	Z	-42.15	%50
61	R9	X	-18.49	%50
62	R9	Z	-32.02	%50
63	R7	X	-23.26	%50
64	R7	Z	-40.29	%50
65	R9	X	-41.86	%50
66	R9	Z	-72.5	%50
67	SA8	X	-34.83	%50
68	SA8	Z	-60.33	%50

Member Point Loads (BLC 4 : Wind Load AZI 60)

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

Member Point Loads (BLC 4 : Wind Load AZI 60) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-114.19	0
2	MP1	Z	-65.93	0
3	MP1	X	-114.19	%100
4	MP1	Z	-65.93	%100
5	MP2	X	-71.27	24
6	MP2	Z	-41.15	24
7	MP2	X	-60.8	72
8	MP2	Z	-35.1	72
9	MP3	X	-99.78	0
10	MP3	Z	-57.61	0
11	MP3	X	-99.78	%100
12	MP3	Z	-57.61	%100
13	R1	X	-44.61	%50
14	R1	Z	-25.76	%50
15	R3	X	-35.46	%50
16	R3	Z	-20.47	%50
17	R1	X	-41.55	%50
18	R1	Z	-23.99	%50
19	R3	X	-76.4	%50
20	R3	Z	-44.11	%50
21	SA1	X	-60.33	%50
22	SA1	Z	-34.83	%50
23	SA3	X	-60.33	%50
24	SA3	Z	-34.83	%50
25	MP4	X	-230.16	0
26	MP4	Z	-132.89	0
27	MP4	X	-230.16	%100
28	MP4	Z	-132.89	%100
29	MP5	X	-121.95	24
30	MP5	Z	-70.41	24
31	MP5	X	-105.58	72
32	MP5	Z	-60.96	72
33	MP6	X	-211.54	0
34	MP6	Z	-122.13	0
35	MP6	X	-211.54	%100
36	MP6	Z	-122.13	%100
37	R4	X	-57.7	%50
38	R4	Z	-33.32	%50
39	R6	X	-53.81	%50
40	R6	Z	-31.06	%50
41	R4	X	-48.23	%50
42	R4	Z	-27.85	%50
43	R6	X	-97.24	%50
44	R6	Z	-56.14	%50
45	SA5	X	-60.33	%50
46	SA5	Z	-34.83	%50
47	MP7	X	-148.57	0
48	MP7	Z	-85.78	0
49	MP7	X	-148.57	%100
50	MP7	Z	-85.78	%100
51	MP8	X	-86.29	24
52	MP8	Z	-49.82	24
53	MP8	X	-74.08	72
54	MP8	Z	-42.77	72
55	MP9	X	-132.91	0
56	MP9	Z	-76.73	0
57	MP9	X	-132.91	%100

Member Point Loads (BLC 4 : Wind Load AZI 60) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
58	MP9	Z	-76.73	%100
59	R7	X	-48.49	%50
60	R7	Z	-28	%50
61	R9	X	-40.9	%50
62	R9	Z	-23.61	%50
63	R7	X	-43.53	%50
64	R7	Z	-25.13	%50
65	R9	X	-82.58	%50
66	R9	Z	-47.68	%50
67	SA8	X	-60.33	%50
68	SA8	Z	-34.83	%50

Member Point Loads (BLC 5 : Wind Load AZI 90)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-102.91	0
2	MP1	Z	0	0
3	MP1	X	-102.91	%100
4	MP1	Z	0	%100
5	MP2	X	-69.65	24
6	MP2	Z	0	24
7	MP2	X	-59.04	72
8	MP2	Z	0	72
9	MP3	X	-87.32	0
10	MP3	Z	0	0
11	MP3	X	-87.32	%100
12	MP3	Z	0	%100
13	R1	X	-48.24	%50
14	R1	Z	0	%50
15	R3	X	-36.37	%50
16	R3	Z	0	%50
17	R1	X	-46.3	%50
18	R1	Z	0	%50
19	R3	X	-83.02	%50
20	R3	Z	0	%50
21	SA1	X	-69.67	%50
22	SA1	Z	0	%50
23	SA3	X	-69.67	%50
24	SA3	Z	0	%50
25	MP4	X	-200.94	0
26	MP4	Z	0	0
27	MP4	X	-200.94	%100
28	MP4	Z	0	%100
29	MP5	X	-112.48	24
30	MP5	Z	0	24
31	MP5	X	-96.88	72
32	MP5	Z	0	72
33	MP6	X	-181.79	0
34	MP6	Z	0	0
35	MP6	X	-181.79	%100
36	MP6	Z	0	%100
37	R4	X	-59.31	%50
38	R4	Z	0	%50
39	R6	X	-51.88	%50
40	R6	Z	0	%50
41	R4	X	-51.95	%50
42	R4	Z	0	%50

Member Point Loads (BLC 5 : Wind Load AZI 90) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
43	R6	X	-100.64	%50
44	R6	Z	0	%50
45	SA5	X	-69.67	%50
46	SA5	Z	0	%50
47	MP7	X	-251.08	0
48	MP7	Z	0	0
49	MP7	X	-251.08	%100
50	MP7	Z	0	%100
51	MP8	X	-134.39	24
52	MP8	Z	0	24
53	MP8	X	-116.24	72
54	MP8	Z	0	72
55	MP9	X	-230.1	0
56	MP9	Z	0	0
57	MP9	X	-230.1	%100
58	MP9	Z	0	%100
59	R7	X	-64.97	%50
60	R7	Z	0	%50
61	R9	X	-59.8	%50
62	R9	Z	0	%50
63	R7	X	-54.84	%50
64	R7	Z	0	%50
65	R9	X	-109.64	%50
66	R9	Z	0	%50
67	SA8	X	-69.67	%50
68	SA8	Z	0	%50

Member Point Loads (BLC 6 : Wind Load AZI 120)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-136.23	0
2	MP1	Z	78.65	0
3	MP1	X	-136.23	%100
4	MP1	Z	78.65	%100
5	MP2	X	-80.9	24
6	MP2	Z	46.71	24
7	MP2	X	-69.31	72
8	MP2	Z	40.02	72
9	MP3	X	-121.02	0
10	MP3	Z	69.87	0
11	MP3	X	-121.02	%100
12	MP3	Z	69.87	%100
13	R1	X	-47.1	%50
14	R1	Z	27.19	%50
15	R3	X	-38.95	%50
16	R3	Z	22.49	%50
17	R1	X	-42.82	%50
18	R1	Z	24.72	%50
19	R3	X	-80.36	%50
20	R3	Z	46.4	%50
21	SA1	X	-60.33	%50
22	SA1	Z	34.83	%50
23	SA3	X	-60.33	%50
24	SA3	Z	34.83	%50
25	MP4	X	-105.15	0
26	MP4	Z	60.71	0
27	MP4	X	-105.15	%100

Member Point Loads (BLC 6 : Wind Load AZI 120) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
28	MP4	Z	60.71	%100
29	MP5	X	-67.32	24
30	MP5	Z	38.87	24
31	MP5	X	-57.32	72
32	MP5	Z	33.09	72
33	MP6	X	-91.07	0
34	MP6	Z	52.58	0
35	MP6	X	-91.07	%100
36	MP6	Z	52.58	%100
37	R4	X	-43.59	%50
38	R4	Z	25.17	%50
39	R6	X	-34.03	%50
40	R6	Z	19.65	%50
41	R4	X	-41.02	%50
42	R4	Z	23.69	%50
43	R6	X	-74.78	%50
44	R6	Z	43.18	%50
45	SA5	X	-60.33	%50
46	SA5	Z	34.83	%50
47	MP7	X	-230.16	0
48	MP7	Z	132.89	0
49	MP7	X	-230.16	%100
50	MP7	Z	132.89	%100
51	MP8	X	-121.95	24
52	MP8	Z	70.41	24
53	MP8	X	-105.58	72
54	MP8	Z	60.96	72
55	MP9	X	-211.54	0
56	MP9	Z	122.13	0
57	MP9	X	-211.54	%100
58	MP9	Z	122.13	%100
59	R7	X	-57.7	%50
60	R7	Z	33.32	%50
61	R9	X	-53.81	%50
62	R9	Z	31.06	%50
63	R7	X	-48.23	%50
64	R7	Z	27.85	%50
65	R9	X	-97.24	%50
66	R9	Z	56.14	%50
67	SA8	X	-60.33	%50
68	SA8	Z	34.83	%50

Member Point Loads (BLC 7 : Wind Load AZI 150)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-120.32	0
2	MP1	Z	208.4	0
3	MP1	X	-120.32	%100
4	MP1	Z	208.4	%100
5	MP2	X	-64.92	24
6	MP2	Z	112.44	24
7	MP2	X	-56.11	72
8	MP2	Z	97.18	72
9	MP3	X	-110.03	0
10	MP3	Z	190.57	0
11	MP3	X	-110.03	%100
12	MP3	Z	190.57	%100

Member Point Loads (BLC 7 : Wind Load AZI 150) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
13	R1	X	-31.9	%50
14	R1	Z	55.25	%50
15	R3	X	-29.08	%50
16	R3	Z	50.36	%50
17	R1	X	-27.12	%50
18	R1	Z	46.98	%50
19	R3	X	-53.88	%50
20	R3	Z	93.33	%50
21	SA1	X	-34.83	%50
22	SA1	Z	60.33	%50
23	SA3	X	-34.83	%50
24	SA3	Z	60.33	%50
25	MP4	X	-53.36	0
26	MP4	Z	92.43	0
27	MP4	X	-53.36	%100
28	MP4	Z	92.43	%100
29	MP5	X	-35.66	24
30	MP5	Z	61.76	24
31	MP5	X	-30.25	72
32	MP5	Z	52.4	72
33	MP6	X	-45.5	0
34	MP6	Z	78.81	0
35	MP6	X	-45.5	%100
36	MP6	Z	78.81	%100
37	R4	X	-24.34	%50
38	R4	Z	42.15	%50
39	R6	X	-18.49	%50
40	R6	Z	32.02	%50
41	R4	X	-23.26	%50
42	R4	Z	40.29	%50
43	R6	X	-41.86	%50
44	R6	Z	72.5	%50
45	SA5	X	-34.83	%50
46	SA5	Z	60.33	%50
47	MP7	X	-100.47	0
48	MP7	Z	174.02	0
49	MP7	X	-100.47	%100
50	MP7	Z	174.02	%100
51	MP8	X	-56.24	24
52	MP8	Z	97.41	24
53	MP8	X	-48.44	72
54	MP8	Z	83.9	72
55	MP9	X	-90.9	0
56	MP9	Z	157.44	0
57	MP9	X	-90.9	%100
58	MP9	Z	157.44	%100
59	R7	X	-29.66	%50
60	R7	Z	51.37	%50
61	R9	X	-25.94	%50
62	R9	Z	44.93	%50
63	R7	X	-25.98	%50
64	R7	Z	44.99	%50
65	R9	X	-50.32	%50
66	R9	Z	87.15	%50
67	SA8	X	-34.83	%50
68	SA8	Z	60.33	%50

Member Point Loads (BLC 8 : Wind Load AZI 180)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0	0
2	MP1	Z	269.59	0
3	MP1	X	0	%100
4	MP1	Z	269.59	%100
5	MP2	X	0	24
6	MP2	Z	142.48	24
7	MP2	X	0	72
8	MP2	Z	123.39	72
9	MP3	X	0	0
10	MP3	Z	247.95	0
11	MP3	X	0	%100
12	MP3	Z	247.95	%100
13	R1	X	0	%50
14	R1	Z	67.06	%50
15	R3	X	0	%50
16	R3	Z	62.73	%50
17	R1	X	0	%50
18	R1	Z	55.91	%50
19	R3	X	0	%50
20	R3	Z	112.97	%50
21	SA1	X	0	%50
22	SA1	Z	69.67	%50
23	SA3	X	0	%50
24	SA3	Z	69.67	%50
25	MP4	X	0	0
26	MP4	Z	171.55	0
27	MP4	X	0	%100
28	MP4	Z	171.55	%100
29	MP5	X	0	24
30	MP5	Z	99.64	24
31	MP5	X	0	72
32	MP5	Z	85.54	72
33	MP6	X	0	0
34	MP6	Z	153.47	0
35	MP6	X	0	%100
36	MP6	Z	153.47	%100
37	R4	X	0	%50
38	R4	Z	55.99	%50
39	R6	X	0	%50
40	R6	Z	47.23	%50
41	R4	X	0	%50
42	R4	Z	50.26	%50
43	R6	X	0	%50
44	R6	Z	95.36	%50
45	SA5	X	0	%50
46	SA5	Z	69.67	%50
47	MP7	X	0	0
48	MP7	Z	121.42	0
49	MP7	X	0	%100
50	MP7	Z	121.42	%100
51	MP8	X	0	24
52	MP8	Z	77.74	24
53	MP8	X	0	72
54	MP8	Z	66.18	72
55	MP9	X	0	0
56	MP9	Z	105.16	0
57	MP9	X	0	%100

Member Point Loads (BLC 8 : Wind Load AZI 180) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
58	MP9	Z	105.16	%100
59	R7	X	0	%50
60	R7	Z	50.33	%50
61	R9	X	0	%50
62	R9	Z	39.3	%50
63	R7	X	0	%50
64	R7	Z	47.37	%50
65	R9	X	0	%50
66	R9	Z	86.35	%50
67	SA8	X	0	%50
68	SA8	Z	69.67	%50

Member Point Loads (BLC 9 : Wind Load AZI 210)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	107.6	0
2	MP1	Z	186.36	0
3	MP1	X	107.6	%100
4	MP1	Z	186.36	%100
5	MP2	X	59.36	24
6	MP2	Z	102.81	24
7	MP2	X	51.19	72
8	MP2	Z	88.67	72
9	MP3	X	97.76	0
10	MP3	Z	169.33	0
11	MP3	X	97.76	%100
12	MP3	Z	169.33	%100
13	R1	X	30.46	%50
14	R1	Z	52.76	%50
15	R3	X	27.06	%50
16	R3	Z	46.88	%50
17	R1	X	26.39	%50
18	R1	Z	45.71	%50
19	R3	X	51.6	%50
20	R3	Z	89.37	%50
21	SA1	X	34.83	%50
22	SA1	Z	60.33	%50
23	SA3	X	34.83	%50
24	SA3	Z	60.33	%50
25	MP4	X	125.54	0
26	MP4	Z	217.44	0
27	MP4	X	125.54	%100
28	MP4	Z	217.44	%100
29	MP5	X	67.19	24
30	MP5	Z	116.39	24
31	MP5	X	58.12	72
32	MP5	Z	100.67	72
33	MP6	X	115.05	0
34	MP6	Z	199.28	0
35	MP6	X	115.05	%100
36	MP6	Z	199.28	%100
37	R4	X	32.49	%50
38	R4	Z	56.27	%50
39	R6	X	29.9	%50
40	R6	Z	51.79	%50
41	R4	X	27.42	%50
42	R4	Z	47.5	%50

Member Point Loads (BLC 9 : Wind Load AZI 210) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
43	R6	X	54.82	%50
44	R6	Z	94.95	%50
45	SA5	X	34.83	%50
46	SA5	Z	60.33	%50
47	MP7	X	53.36	0
48	MP7	Z	92.43	0
49	MP7	X	53.36	%100
50	MP7	Z	92.43	%100
51	MP8	X	35.66	24
52	MP8	Z	61.76	24
53	MP8	X	30.25	72
54	MP8	Z	52.4	72
55	MP9	X	45.5	0
56	MP9	Z	78.81	0
57	MP9	X	45.5	%100
58	MP9	Z	78.81	%100
59	R7	X	24.34	%50
60	R7	Z	42.15	%50
61	R9	X	18.49	%50
62	R9	Z	32.02	%50
63	R7	X	23.26	%50
64	R7	Z	40.29	%50
65	R9	X	41.86	%50
66	R9	Z	72.5	%50
67	SA8	X	34.83	%50
68	SA8	Z	60.33	%50

Member Point Loads (BLC 10 : Wind Load AZI 240)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	114.19	0
2	MP1	Z	65.93	0
3	MP1	X	114.19	%100
4	MP1	Z	65.93	%100
5	MP2	X	71.27	24
6	MP2	Z	41.15	24
7	MP2	X	60.8	72
8	MP2	Z	35.1	72
9	MP3	X	99.78	0
10	MP3	Z	57.61	0
11	MP3	X	99.78	%100
12	MP3	Z	57.61	%100
13	R1	X	44.61	%50
14	R1	Z	25.76	%50
15	R3	X	35.46	%50
16	R3	Z	20.47	%50
17	R1	X	41.55	%50
18	R1	Z	23.99	%50
19	R3	X	76.4	%50
20	R3	Z	44.11	%50
21	SA1	X	60.33	%50
22	SA1	Z	34.83	%50
23	SA3	X	60.33	%50
24	SA3	Z	34.83	%50
25	MP4	X	230.16	0
26	MP4	Z	132.89	0
27	MP4	X	230.16	%100

Member Point Loads (BLC 10 : Wind Load AZI 240) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
28	MP4	Z	132.89	%100
29	MP5	X	121.95	24
30	MP5	Z	70.41	24
31	MP5	X	105.58	72
32	MP5	Z	60.96	72
33	MP6	X	211.54	0
34	MP6	Z	122.13	0
35	MP6	X	211.54	%100
36	MP6	Z	122.13	%100
37	R4	X	57.7	%50
38	R4	Z	33.32	%50
39	R6	X	53.81	%50
40	R6	Z	31.06	%50
41	R4	X	48.23	%50
42	R4	Z	27.85	%50
43	R6	X	97.24	%50
44	R6	Z	56.14	%50
45	SA5	X	60.33	%50
46	SA5	Z	34.83	%50
47	MP7	X	148.57	0
48	MP7	Z	85.78	0
49	MP7	X	148.57	%100
50	MP7	Z	85.78	%100
51	MP8	X	86.29	24
52	MP8	Z	49.82	24
53	MP8	X	74.08	72
54	MP8	Z	42.77	72
55	MP9	X	132.91	0
56	MP9	Z	76.73	0
57	MP9	X	132.91	%100
58	MP9	Z	76.73	%100
59	R7	X	48.49	%50
60	R7	Z	28	%50
61	R9	X	40.9	%50
62	R9	Z	23.61	%50
63	R7	X	43.53	%50
64	R7	Z	25.13	%50
65	R9	X	82.58	%50
66	R9	Z	47.68	%50
67	SA8	X	60.33	%50
68	SA8	Z	34.83	%50

Member Point Loads (BLC 11 : Wind Load AZI 270)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	102.91	0
2	MP1	Z	0	0
3	MP1	X	102.91	%100
4	MP1	Z	0	%100
5	MP2	X	69.65	24
6	MP2	Z	0	24
7	MP2	X	59.04	72
8	MP2	Z	0	72
9	MP3	X	87.32	0
10	MP3	Z	0	0
11	MP3	X	87.32	%100
12	MP3	Z	0	%100

Member Point Loads (BLC 11 : Wind Load AZI 270) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
13	R1	X	48.24	%50
14	R1	Z	0	%50
15	R3	X	36.37	%50
16	R3	Z	0	%50
17	R1	X	46.3	%50
18	R1	Z	0	%50
19	R3	X	83.02	%50
20	R3	Z	0	%50
21	SA1	X	69.67	%50
22	SA1	Z	0	%50
23	SA3	X	69.67	%50
24	SA3	Z	0	%50
25	MP4	X	200.94	0
26	MP4	Z	0	0
27	MP4	X	200.94	%100
28	MP4	Z	0	%100
29	MP5	X	112.48	24
30	MP5	Z	0	24
31	MP5	X	96.88	72
32	MP5	Z	0	72
33	MP6	X	181.79	0
34	MP6	Z	0	0
35	MP6	X	181.79	%100
36	MP6	Z	0	%100
37	R4	X	59.31	%50
38	R4	Z	0	%50
39	R6	X	51.88	%50
40	R6	Z	0	%50
41	R4	X	51.95	%50
42	R4	Z	0	%50
43	R6	X	100.64	%50
44	R6	Z	0	%50
45	SA5	X	69.67	%50
46	SA5	Z	0	%50
47	MP7	X	251.08	0
48	MP7	Z	0	0
49	MP7	X	251.08	%100
50	MP7	Z	0	%100
51	MP8	X	134.39	24
52	MP8	Z	0	24
53	MP8	X	116.24	72
54	MP8	Z	0	72
55	MP9	X	230.1	0
56	MP9	Z	0	0
57	MP9	X	230.1	%100
58	MP9	Z	0	%100
59	R7	X	64.97	%50
60	R7	Z	0	%50
61	R9	X	59.8	%50
62	R9	Z	0	%50
63	R7	X	54.84	%50
64	R7	Z	0	%50
65	R9	X	109.64	%50
66	R9	Z	0	%50
67	SA8	X	69.67	%50
68	SA8	Z	0	%50

Member Point Loads (BLC 12 : Wind Load AZI 300)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	136.23	0
2	MP1	Z	-78.65	0
3	MP1	X	136.23	%100
4	MP1	Z	-78.65	%100
5	MP2	X	80.9	24
6	MP2	Z	-46.71	24
7	MP2	X	69.31	72
8	MP2	Z	-40.02	72
9	MP3	X	121.02	0
10	MP3	Z	-69.87	0
11	MP3	X	121.02	%100
12	MP3	Z	-69.87	%100
13	R1	X	47.1	%50
14	R1	Z	-27.19	%50
15	R3	X	38.95	%50
16	R3	Z	-22.49	%50
17	R1	X	42.82	%50
18	R1	Z	-24.72	%50
19	R3	X	80.36	%50
20	R3	Z	-46.4	%50
21	SA1	X	60.33	%50
22	SA1	Z	-34.83	%50
23	SA3	X	60.33	%50
24	SA3	Z	-34.83	%50
25	MP4	X	105.15	0
26	MP4	Z	-60.71	0
27	MP4	X	105.15	%100
28	MP4	Z	-60.71	%100
29	MP5	X	67.32	24
30	MP5	Z	-38.87	24
31	MP5	X	57.32	72
32	MP5	Z	-33.09	72
33	MP6	X	91.07	0
34	MP6	Z	-52.58	0
35	MP6	X	91.07	%100
36	MP6	Z	-52.58	%100
37	R4	X	43.59	%50
38	R4	Z	-25.17	%50
39	R6	X	34.03	%50
40	R6	Z	-19.65	%50
41	R4	X	41.02	%50
42	R4	Z	-23.69	%50
43	R6	X	74.78	%50
44	R6	Z	-43.18	%50
45	SA5	X	60.33	%50
46	SA5	Z	-34.83	%50
47	MP7	X	230.16	0
48	MP7	Z	-132.89	0
49	MP7	X	230.16	%100
50	MP7	Z	-132.89	%100
51	MP8	X	121.95	24
52	MP8	Z	-70.41	24
53	MP8	X	105.58	72
54	MP8	Z	-60.96	72
55	MP9	X	211.54	0
56	MP9	Z	-122.13	0
57	MP9	X	211.54	%100

Member Point Loads (BLC 12 : Wind Load AZI 300) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
58	MP9	Z	-122.13	%100
59	R7	X	57.7	%50
60	R7	Z	-33.32	%50
61	R9	X	53.81	%50
62	R9	Z	-31.06	%50
63	R7	X	48.23	%50
64	R7	Z	-27.85	%50
65	R9	X	97.24	%50
66	R9	Z	-56.14	%50
67	SA8	X	60.33	%50
68	SA8	Z	-34.83	%50

Member Point Loads (BLC 13 : Wind Load AZI 330)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	120.32	0
2	MP1	Z	-208.4	0
3	MP1	X	120.32	%100
4	MP1	Z	-208.4	%100
5	MP2	X	64.92	24
6	MP2	Z	-112.44	24
7	MP2	X	56.11	72
8	MP2	Z	-97.18	72
9	MP3	X	110.03	0
10	MP3	Z	-190.57	0
11	MP3	X	110.03	%100
12	MP3	Z	-190.57	%100
13	R1	X	31.9	%50
14	R1	Z	-55.25	%50
15	R3	X	29.08	%50
16	R3	Z	-50.36	%50
17	R1	X	27.12	%50
18	R1	Z	-46.98	%50
19	R3	X	53.88	%50
20	R3	Z	-93.33	%50
21	SA1	X	34.83	%50
22	SA1	Z	-60.33	%50
23	SA3	X	34.83	%50
24	SA3	Z	-60.33	%50
25	MP4	X	53.36	0
26	MP4	Z	-92.43	0
27	MP4	X	53.36	%100
28	MP4	Z	-92.43	%100
29	MP5	X	35.66	24
30	MP5	Z	-61.76	24
31	MP5	X	30.25	72
32	MP5	Z	-52.4	72
33	MP6	X	45.5	0
34	MP6	Z	-78.81	0
35	MP6	X	45.5	%100
36	MP6	Z	-78.81	%100
37	R4	X	24.34	%50
38	R4	Z	-42.15	%50
39	R6	X	18.49	%50
40	R6	Z	-32.02	%50
41	R4	X	23.26	%50
42	R4	Z	-40.29	%50

Member Point Loads (BLC 13 : Wind Load AZI 330) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
43	R6	X	41.86	%50
44	R6	Z	-72.5	%50
45	SA5	X	34.83	%50
46	SA5	Z	-60.33	%50
47	MP7	X	100.47	0
48	MP7	Z	-174.02	0
49	MP7	X	100.47	%100
50	MP7	Z	-174.02	%100
51	MP8	X	56.24	24
52	MP8	Z	-97.41	24
53	MP8	X	48.44	72
54	MP8	Z	-83.9	72
55	MP9	X	90.9	0
56	MP9	Z	-157.44	0
57	MP9	X	90.9	%100
58	MP9	Z	-157.44	%100
59	R7	X	29.66	%50
60	R7	Z	-51.37	%50
61	R9	X	25.94	%50
62	R9	Z	-44.93	%50
63	R7	X	25.98	%50
64	R7	Z	-44.99	%50
65	R9	X	50.32	%50
66	R9	Z	-87.15	%50
67	SA8	X	34.83	%50
68	SA8	Z	-60.33	%50

Member Point Loads (BLC 16 : Ice Weight)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Y	-120.612	0
2	MP1	Y	-120.612	%100
3	MP2	Y	-74.259	24
4	MP2	Y	-74.797	72
5	MP3	Y	-114.211	0
6	MP3	Y	-114.211	%100
7	R1	Y	-47.746	%50
8	R3	Y	-41.294	%50
9	R1	Y	-45.457	%50
10	R3	Y	-71.013	%50
11	SA1	Y	-54.539	%50
12	SA3	Y	-54.539	%50
13	MP4	Y	-120.612	0
14	MP4	Y	-120.612	%100
15	MP5	Y	-74.259	24
16	MP5	Y	-74.797	72
17	MP6	Y	-114.211	0
18	MP6	Y	-114.211	%100
19	R4	Y	-47.746	%50
20	R6	Y	-41.294	%50
21	R4	Y	-45.457	%50
22	R6	Y	-71.013	%50
23	SA5	Y	-54.539	%50
24	MP7	Y	-120.612	0
25	MP7	Y	-120.612	%100
26	MP8	Y	-74.259	24
27	MP8	Y	-74.797	72

Member Point Loads (BLC 16 : Ice Weight) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
28	MP9	Y	-114.211	0
29	MP9	Y	-114.211	%100
30	R7	Y	-47.746	%50
31	R9	Y	-41.294	%50
32	R7	Y	-45.457	%50
33	R9	Y	-71.013	%50
34	SA8	Y	-54.539	%50

Member Point Loads (BLC 17 : Ice Wind Load AZI 0)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0	0
2	MP1	Z	-25.95	0
3	MP1	X	0	%100
4	MP1	Z	-25.95	%100
5	MP2	X	0	24
6	MP2	Z	-13.15	24
7	MP2	X	0	72
8	MP2	Z	-12.62	72
9	MP3	X	0	0
10	MP3	Z	-25.3	0
11	MP3	X	0	%100
12	MP3	Z	-25.3	%100
13	R1	X	0	%50
14	R1	Z	-7.13	%50
15	R3	X	0	%50
16	R3	Z	-6.68	%50
17	R1	X	0	%50
18	R1	Z	-6.07	%50
19	R3	X	0	%50
20	R3	Z	-11.39	%50
21	SA1	X	0	%50
22	SA1	Z	-8.01	%50
23	SA3	X	0	%50
24	SA3	Z	-8.01	%50
25	MP4	X	0	0
26	MP4	Z	-20.69	0
27	MP4	X	0	%100
28	MP4	Z	-20.69	%100
29	MP5	X	0	24
30	MP5	Z	-11.05	24
31	MP5	X	0	72
32	MP5	Z	-10.84	72
33	MP6	X	0	0
34	MP6	Z	-20.24	0
35	MP6	X	0	%100
36	MP6	Z	-20.24	%100
37	R4	X	0	%50
38	R4	Z	-6.58	%50
39	R6	X	0	%50
40	R6	Z	-5.88	%50
41	R4	X	0	%50
42	R4	Z	-5.8	%50
43	R6	X	0	%50
44	R6	Z	-10.56	%50
45	SA5	X	0	%50
46	SA5	Z	-8.01	%50

Member Point Loads (BLC 17 : Ice Wind Load AZI 0) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
47	MP7	X	0	0
48	MP7	Z	-17.99	0
49	MP7	X	0	%100
50	MP7	Z	-17.99	%100
51	MP8	X	0	24
52	MP8	Z	-9.97	24
53	MP8	X	0	72
54	MP8	Z	-9.93	72
55	MP9	X	0	0
56	MP9	Z	-17.64	0
57	MP9	X	0	%100
58	MP9	Z	-17.64	%100
59	R7	X	0	%50
60	R7	Z	-6.3	%50
61	R9	X	0	%50
62	R9	Z	-5.47	%50
63	R7	X	0	%50
64	R7	Z	-5.65	%50
65	R9	X	0	%50
66	R9	Z	-10.13	%50
67	SA8	X	0	%50
68	SA8	Z	-8.01	%50

Member Point Loads (BLC 18 : Ice Wind Load AZI 30)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-11.51	0
2	MP1	Z	-19.94	0
3	MP1	X	-11.51	%100
4	MP1	Z	-19.94	%100
5	MP2	X	-5.99	24
6	MP2	Z	-10.38	24
7	MP2	X	-5.82	72
8	MP2	Z	-10.07	72
9	MP3	X	-11.25	0
10	MP3	Z	-19.48	0
11	MP3	X	-11.25	%100
12	MP3	Z	-19.48	%100
13	R1	X	-3.41	%50
14	R1	Z	-5.91	%50
15	R3	X	-3.12	%50
16	R3	Z	-5.4	%50
17	R1	X	-2.96	%50
18	R1	Z	-5.13	%50
19	R3	X	-5.47	%50
20	R3	Z	-9.47	%50
21	SA1	X	-4.01	%50
22	SA1	Z	-6.94	%50
23	SA3	X	-4.01	%50
24	SA3	Z	-6.94	%50
25	MP4	X	-12.48	0
26	MP4	Z	-21.61	0
27	MP4	X	-12.48	%100
28	MP4	Z	-21.61	%100
29	MP5	X	-6.38	24
30	MP5	Z	-11.05	24
31	MP5	X	-6.14	72

Member Point Loads (BLC 18 : Ice Wind Load AZI 30) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
32	MP5	Z	-10.64	72
33	MP6	X	-12.17	0
34	MP6	Z	-21.08	0
35	MP6	X	-12.17	%100
36	MP6	Z	-21.08	%100
37	R4	X	-3.51	%50
38	R4	Z	-6.08	%50
39	R6	X	-3.26	%50
40	R6	Z	-5.65	%50
41	R4	X	-3.01	%50
42	R4	Z	-5.22	%50
43	R6	X	-5.62	%50
44	R6	Z	-9.73	%50
45	SA5	X	-4.01	%50
46	SA5	Z	-6.94	%50
47	MP7	X	-8.6	0
48	MP7	Z	-14.9	0
49	MP7	X	-8.6	%100
50	MP7	Z	-14.9	%100
51	MP8	X	-4.83	24
52	MP8	Z	-8.36	24
53	MP8	X	-4.83	72
54	MP8	Z	-8.37	72
55	MP9	X	-8.44	0
56	MP9	Z	-14.62	0
57	MP9	X	-8.44	%100
58	MP9	Z	-14.62	%100
59	R7	X	-3.11	%50
60	R7	Z	-5.38	%50
61	R9	X	-2.67	%50
62	R9	Z	-4.63	%50
63	R7	X	-2.81	%50
64	R7	Z	-4.86	%50
65	R9	X	-5	%50
66	R9	Z	-8.67	%50
67	SA8	X	-4.01	%50
68	SA8	Z	-6.94	%50

Member Point Loads (BLC 19 : Ice Wind Load AZI 60)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-16.07	0
2	MP1	Z	-9.28	0
3	MP1	X	-16.07	%100
4	MP1	Z	-9.28	%100
5	MP2	X	-8.83	24
6	MP2	Z	-5.1	24
7	MP2	X	-8.76	72
8	MP2	Z	-5.06	72
9	MP3	X	-15.75	0
10	MP3	Z	-9.09	0
11	MP3	X	-15.75	%100
12	MP3	Z	-9.09	%100
13	R1	X	-5.5	%50
14	R1	Z	-3.18	%50
15	R3	X	-4.81	%50
16	R3	Z	-2.78	%50

Member Point Loads (BLC 19 : Ice Wind Load AZI 60) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
17	R1	X	-4.92	%50
18	R1	Z	-2.84	%50
19	R3	X	-8.85	%50
20	R3	Z	-5.11	%50
21	SA1	X	-6.94	%50
22	SA1	Z	-4.01	%50
23	SA3	X	-6.94	%50
24	SA3	Z	-4.01	%50
25	MP4	X	-22.3	0
26	MP4	Z	-12.87	0
27	MP4	X	-22.3	%100
28	MP4	Z	-12.87	%100
29	MP5	X	-11.32	24
30	MP5	Z	-6.54	24
31	MP5	X	-10.87	72
32	MP5	Z	-6.27	72
33	MP6	X	-21.74	0
34	MP6	Z	-12.55	0
35	MP6	X	-21.74	%100
36	MP6	Z	-12.55	%100
37	R4	X	-6.15	%50
38	R4	Z	-3.55	%50
39	R6	X	-5.75	%50
40	R6	Z	-3.32	%50
41	R4	X	-5.25	%50
42	R4	Z	-3.03	%50
43	R6	X	-9.84	%50
44	R6	Z	-5.68	%50
45	SA5	X	-6.94	%50
46	SA5	Z	-4.01	%50
47	MP7	X	-17.91	0
48	MP7	Z	-10.34	0
49	MP7	X	-17.91	%100
50	MP7	Z	-10.34	%100
51	MP8	X	-9.57	24
52	MP8	Z	-5.52	24
53	MP8	X	-9.39	72
54	MP8	Z	-5.42	72
55	MP9	X	-17.52	0
56	MP9	Z	-10.12	0
57	MP9	X	-17.52	%100
58	MP9	Z	-10.12	%100
59	R7	X	-5.7	%50
60	R7	Z	-3.29	%50
61	R9	X	-5.09	%50
62	R9	Z	-2.94	%50
63	R7	X	-5.02	%50
64	R7	Z	-2.9	%50
65	R9	X	-9.14	%50
66	R9	Z	-5.28	%50
67	SA8	X	-6.94	%50
68	SA8	Z	-4.01	%50

Member Point Loads (BLC 20 : Ice Wind Load AZI 90)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-17	0

Member Point Loads (BLC 20 : Ice Wind Load AZI 90) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
2	MP1	Z	0	0
3	MP1	X	-17	%100
4	MP1	Z	0	%100
5	MP2	X	-9.57	24
6	MP2	Z	0	24
7	MP2	X	-9.59	72
8	MP2	Z	0	72
9	MP3	X	-16.69	0
10	MP3	Z	0	0
11	MP3	X	-16.69	%100
12	MP3	Z	0	%100
13	R1	X	-6.19	%50
14	R1	Z	0	%50
15	R3	X	-5.31	%50
16	R3	Z	0	%50
17	R1	X	-5.6	%50
18	R1	Z	0	%50
19	R3	X	-9.97	%50
20	R3	Z	0	%50
21	SA1	X	-8.01	%50
22	SA1	Z	0	%50
23	SA3	X	-8.01	%50
24	SA3	Z	0	%50
25	MP4	X	-22.26	0
26	MP4	Z	0	0
27	MP4	X	-22.26	%100
28	MP4	Z	0	%100
29	MP5	X	-11.68	24
30	MP5	Z	0	24
31	MP5	X	-11.37	72
32	MP5	Z	0	72
33	MP6	X	-21.75	0
34	MP6	Z	0	0
35	MP6	X	-21.75	%100
36	MP6	Z	0	%100
37	R4	X	-6.74	%50
38	R4	Z	0	%50
39	R6	X	-6.12	%50
40	R6	Z	0	%50
41	R4	X	-5.88	%50
42	R4	Z	0	%50
43	R6	X	-10.81	%50
44	R6	Z	0	%50
45	SA5	X	-8.01	%50
46	SA5	Z	0	%50
47	MP7	X	-24.96	0
48	MP7	Z	0	0
49	MP7	X	-24.96	%100
50	MP7	Z	0	%100
51	MP8	X	-12.76	24
52	MP8	Z	0	24
53	MP8	X	-12.28	72
54	MP8	Z	0	72
55	MP9	X	-24.34	0
56	MP9	Z	0	0
57	MP9	X	-24.34	%100
58	MP9	Z	0	%100

Member Point Loads (BLC 20 : Ice Wind Load AZI 90) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
59	R7	X	-7.02	%50
60	R7	Z	0	%50
61	R9	X	-6.52	%50
62	R9	Z	0	%50
63	R7	X	-6.02	%50
64	R7	Z	0	%50
65	R9	X	-11.24	%50
66	R9	Z	0	%50
67	SA8	X	-8.01	%50
68	SA8	Z	0	%50

Member Point Loads (BLC 21 : Ice Wind Load AZI 120)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-17.25	0
2	MP1	Z	9.96	0
3	MP1	X	-17.25	%100
4	MP1	Z	9.96	%100
5	MP2	X	-9.3	24
6	MP2	Z	5.37	24
7	MP2	X	-9.16	72
8	MP2	Z	5.29	72
9	MP3	X	-16.89	0
10	MP3	Z	9.75	0
11	MP3	X	-16.89	%100
12	MP3	Z	9.75	%100
13	R1	X	-5.63	%50
14	R1	Z	3.25	%50
15	R3	X	-4.99	%50
16	R3	Z	2.88	%50
17	R1	X	-4.98	%50
18	R1	Z	2.88	%50
19	R3	X	-9.04	%50
20	R3	Z	5.22	%50
21	SA1	X	-6.94	%50
22	SA1	Z	4.01	%50
23	SA3	X	-6.94	%50
24	SA3	Z	4.01	%50
25	MP4	X	-15.58	0
26	MP4	Z	9	0
27	MP4	X	-15.58	%100
28	MP4	Z	9	%100
29	MP5	X	-8.63	24
30	MP5	Z	4.99	24
31	MP5	X	-8.6	72
32	MP5	Z	4.96	72
33	MP6	X	-15.28	0
34	MP6	Z	8.82	0
35	MP6	X	-15.28	%100
36	MP6	Z	8.82	%100
37	R4	X	-5.45	%50
38	R4	Z	3.15	%50
39	R6	X	-4.73	%50
40	R6	Z	2.73	%50
41	R4	X	-4.9	%50
42	R4	Z	2.83	%50
43	R6	X	-8.77	%50

Member Point Loads (BLC 21 : Ice Wind Load AZI 120) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
44	R6	Z	5.07	%50
45	SA5	X	-6.94	%50
46	SA5	Z	4.01	%50
47	MP7	X	-22.3	0
48	MP7	Z	12.87	0
49	MP7	X	-22.3	%100
50	MP7	Z	12.87	%100
51	MP8	X	-11.32	24
52	MP8	Z	6.54	24
53	MP8	X	-10.87	72
54	MP8	Z	6.27	72
55	MP9	X	-21.74	0
56	MP9	Z	12.55	0
57	MP9	X	-21.74	%100
58	MP9	Z	12.55	%100
59	R7	X	-6.15	%50
60	R7	Z	3.55	%50
61	R9	X	-5.75	%50
62	R9	Z	3.32	%50
63	R7	X	-5.25	%50
64	R7	Z	3.03	%50
65	R9	X	-9.84	%50
66	R9	Z	5.68	%50
67	SA8	X	-6.94	%50
68	SA8	Z	4.01	%50

Member Point Loads (BLC 22 : Ice Wind Load AZI 150)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-12.2	0
2	MP1	Z	21.13	0
3	MP1	X	-12.2	%100
4	MP1	Z	21.13	%100
5	MP2	X	-6.27	24
6	MP2	Z	10.85	24
7	MP2	X	-6.05	72
8	MP2	Z	10.47	72
9	MP3	X	-11.9	0
10	MP3	Z	20.62	0
11	MP3	X	-11.9	%100
12	MP3	Z	20.62	%100
13	R1	X	-3.48	%50
14	R1	Z	6.03	%50
15	R3	X	-3.22	%50
16	R3	Z	5.58	%50
17	R1	X	-3	%50
18	R1	Z	5.19	%50
19	R3	X	-5.57	%50
20	R3	Z	9.65	%50
21	SA1	X	-4.01	%50
22	SA1	Z	6.94	%50
23	SA3	X	-4.01	%50
24	SA3	Z	6.94	%50
25	MP4	X	-8.6	0
26	MP4	Z	14.9	0
27	MP4	X	-8.6	%100
28	MP4	Z	14.9	%100

Member Point Loads (BLC 22 : Ice Wind Load AZI 150) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
29	MP5	X	-4.83	24
30	MP5	Z	8.36	24
31	MP5	X	-4.83	72
32	MP5	Z	8.37	72
33	MP6	X	-8.44	0
34	MP6	Z	14.62	0
35	MP6	X	-8.44	%100
36	MP6	Z	14.62	%100
37	R4	X	-3.11	%50
38	R4	Z	5.38	%50
39	R6	X	-2.67	%50
40	R6	Z	4.63	%50
41	R4	X	-2.81	%50
42	R4	Z	4.86	%50
43	R6	X	-5	%50
44	R6	Z	8.67	%50
45	SA5	X	-4.01	%50
46	SA5	Z	6.94	%50
47	MP7	X	-11.13	0
48	MP7	Z	19.28	0
49	MP7	X	-11.13	%100
50	MP7	Z	19.28	%100
51	MP8	X	-5.84	24
52	MP8	Z	10.11	24
53	MP8	X	-5.69	72
54	MP8	Z	9.85	72
55	MP9	X	-10.88	0
56	MP9	Z	18.84	0
57	MP9	X	-10.88	%100
58	MP9	Z	18.84	%100
59	R7	X	-3.37	%50
60	R7	Z	5.84	%50
61	R9	X	-3.06	%50
62	R9	Z	5.3	%50
63	R7	X	-2.94	%50
64	R7	Z	5.09	%50
65	R9	X	-5.4	%50
66	R9	Z	9.36	%50
67	SA8	X	-4.01	%50
68	SA8	Z	6.94	%50

Member Point Loads (BLC 23 : Ice Wind Load AZI 180)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0	0
2	MP1	Z	25.95	0
3	MP1	X	0	%100
4	MP1	Z	25.95	%100
5	MP2	X	0	24
6	MP2	Z	13.15	24
7	MP2	X	0	72
8	MP2	Z	12.62	72
9	MP3	X	0	0
10	MP3	Z	25.3	0
11	MP3	X	0	%100
12	MP3	Z	25.3	%100
13	R1	X	0	%50

Member Point Loads (BLC 23 : Ice Wind Load AZI 180) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
14	R1	Z	7.13	%50
15	R3	X	0	%50
16	R3	Z	6.68	%50
17	R1	X	0	%50
18	R1	Z	6.07	%50
19	R3	X	0	%50
20	R3	Z	11.39	%50
21	SA1	X	0	%50
22	SA1	Z	8.01	%50
23	SA3	X	0	%50
24	SA3	Z	8.01	%50
25	MP4	X	0	0
26	MP4	Z	20.69	0
27	MP4	X	0	%100
28	MP4	Z	20.69	%100
29	MP5	X	0	24
30	MP5	Z	11.05	24
31	MP5	X	0	72
32	MP5	Z	10.84	72
33	MP6	X	0	0
34	MP6	Z	20.24	0
35	MP6	X	0	%100
36	MP6	Z	20.24	%100
37	R4	X	0	%50
38	R4	Z	6.58	%50
39	R6	X	0	%50
40	R6	Z	5.88	%50
41	R4	X	0	%50
42	R4	Z	5.8	%50
43	R6	X	0	%50
44	R6	Z	10.56	%50
45	SA5	X	0	%50
46	SA5	Z	8.01	%50
47	MP7	X	0	0
48	MP7	Z	17.99	0
49	MP7	X	0	%100
50	MP7	Z	17.99	%100
51	MP8	X	0	24
52	MP8	Z	9.97	24
53	MP8	X	0	72
54	MP8	Z	9.93	72
55	MP9	X	0	0
56	MP9	Z	17.64	0
57	MP9	X	0	%100
58	MP9	Z	17.64	%100
59	R7	X	0	%50
60	R7	Z	6.3	%50
61	R9	X	0	%50
62	R9	Z	5.47	%50
63	R7	X	0	%50
64	R7	Z	5.65	%50
65	R9	X	0	%50
66	R9	Z	10.13	%50
67	SA8	X	0	%50
68	SA8	Z	8.01	%50

Member Point Loads (BLC 24 : Ice Wind Load AZI 210)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	11.51	0
2	MP1	Z	19.94	0
3	MP1	X	11.51	%100
4	MP1	Z	19.94	%100
5	MP2	X	5.99	24
6	MP2	Z	10.38	24
7	MP2	X	5.82	72
8	MP2	Z	10.07	72
9	MP3	X	11.25	0
10	MP3	Z	19.48	0
11	MP3	X	11.25	%100
12	MP3	Z	19.48	%100
13	R1	X	3.41	%50
14	R1	Z	5.91	%50
15	R3	X	3.12	%50
16	R3	Z	5.4	%50
17	R1	X	2.96	%50
18	R1	Z	5.13	%50
19	R3	X	5.47	%50
20	R3	Z	9.47	%50
21	SA1	X	4.01	%50
22	SA1	Z	6.94	%50
23	SA3	X	4.01	%50
24	SA3	Z	6.94	%50
25	MP4	X	12.48	0
26	MP4	Z	21.61	0
27	MP4	X	12.48	%100
28	MP4	Z	21.61	%100
29	MP5	X	6.38	24
30	MP5	Z	11.05	24
31	MP5	X	6.14	72
32	MP5	Z	10.64	72
33	MP6	X	12.17	0
34	MP6	Z	21.08	0
35	MP6	X	12.17	%100
36	MP6	Z	21.08	%100
37	R4	X	3.51	%50
38	R4	Z	6.08	%50
39	R6	X	3.26	%50
40	R6	Z	5.65	%50
41	R4	X	3.01	%50
42	R4	Z	5.22	%50
43	R6	X	5.62	%50
44	R6	Z	9.73	%50
45	SA5	X	4.01	%50
46	SA5	Z	6.94	%50
47	MP7	X	8.6	0
48	MP7	Z	14.9	0
49	MP7	X	8.6	%100
50	MP7	Z	14.9	%100
51	MP8	X	4.83	24
52	MP8	Z	8.36	24
53	MP8	X	4.83	72
54	MP8	Z	8.37	72
55	MP9	X	8.44	0
56	MP9	Z	14.62	0
57	MP9	X	8.44	%100

Member Point Loads (BLC 24 : Ice Wind Load AZI 210) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
58	MP9	Z	14.62	%100
59	R7	X	3.11	%50
60	R7	Z	5.38	%50
61	R9	X	2.67	%50
62	R9	Z	4.63	%50
63	R7	X	2.81	%50
64	R7	Z	4.86	%50
65	R9	X	5	%50
66	R9	Z	8.67	%50
67	SA8	X	4.01	%50
68	SA8	Z	6.94	%50

Member Point Loads (BLC 25 : Ice Wind Load AZI 240)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	16.07	0
2	MP1	Z	9.28	0
3	MP1	X	16.07	%100
4	MP1	Z	9.28	%100
5	MP2	X	8.83	24
6	MP2	Z	5.1	24
7	MP2	X	8.76	72
8	MP2	Z	5.06	72
9	MP3	X	15.75	0
10	MP3	Z	9.09	0
11	MP3	X	15.75	%100
12	MP3	Z	9.09	%100
13	R1	X	5.5	%50
14	R1	Z	3.18	%50
15	R3	X	4.81	%50
16	R3	Z	2.78	%50
17	R1	X	4.92	%50
18	R1	Z	2.84	%50
19	R3	X	8.85	%50
20	R3	Z	5.11	%50
21	SA1	X	6.94	%50
22	SA1	Z	4.01	%50
23	SA3	X	6.94	%50
24	SA3	Z	4.01	%50
25	MP4	X	22.3	0
26	MP4	Z	12.87	0
27	MP4	X	22.3	%100
28	MP4	Z	12.87	%100
29	MP5	X	11.32	24
30	MP5	Z	6.54	24
31	MP5	X	10.87	72
32	MP5	Z	6.27	72
33	MP6	X	21.74	0
34	MP6	Z	12.55	0
35	MP6	X	21.74	%100
36	MP6	Z	12.55	%100
37	R4	X	6.15	%50
38	R4	Z	3.55	%50
39	R6	X	5.75	%50
40	R6	Z	3.32	%50
41	R4	X	5.25	%50
42	R4	Z	3.03	%50

Member Point Loads (BLC 25 : Ice Wind Load AZI 240) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
43	R6	X	9.84	%50
44	R6	Z	5.68	%50
45	SA5	X	6.94	%50
46	SA5	Z	4.01	%50
47	MP7	X	17.91	0
48	MP7	Z	10.34	0
49	MP7	X	17.91	%100
50	MP7	Z	10.34	%100
51	MP8	X	9.57	24
52	MP8	Z	5.52	24
53	MP8	X	9.39	72
54	MP8	Z	5.42	72
55	MP9	X	17.52	0
56	MP9	Z	10.12	0
57	MP9	X	17.52	%100
58	MP9	Z	10.12	%100
59	R7	X	5.7	%50
60	R7	Z	3.29	%50
61	R9	X	5.09	%50
62	R9	Z	2.94	%50
63	R7	X	5.02	%50
64	R7	Z	2.9	%50
65	R9	X	9.14	%50
66	R9	Z	5.28	%50
67	SA8	X	6.94	%50
68	SA8	Z	4.01	%50

Member Point Loads (BLC 26 : Ice Wind Load AZI 270)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	17	0
2	MP1	Z	0	0
3	MP1	X	17	%100
4	MP1	Z	0	%100
5	MP2	X	9.57	24
6	MP2	Z	0	24
7	MP2	X	9.59	72
8	MP2	Z	0	72
9	MP3	X	16.69	0
10	MP3	Z	0	0
11	MP3	X	16.69	%100
12	MP3	Z	0	%100
13	R1	X	6.19	%50
14	R1	Z	0	%50
15	R3	X	5.31	%50
16	R3	Z	0	%50
17	R1	X	5.6	%50
18	R1	Z	0	%50
19	R3	X	9.97	%50
20	R3	Z	0	%50
21	SA1	X	8.01	%50
22	SA1	Z	0	%50
23	SA3	X	8.01	%50
24	SA3	Z	0	%50
25	MP4	X	22.26	0
26	MP4	Z	0	0
27	MP4	X	22.26	%100

Member Point Loads (BLC 26 : Ice Wind Load AZI 270) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
28	MP4	Z	0	%100
29	MP5	X	11.68	24
30	MP5	Z	0	24
31	MP5	X	11.37	72
32	MP5	Z	0	72
33	MP6	X	21.75	0
34	MP6	Z	0	0
35	MP6	X	21.75	%100
36	MP6	Z	0	%100
37	R4	X	6.74	%50
38	R4	Z	0	%50
39	R6	X	6.12	%50
40	R6	Z	0	%50
41	R4	X	5.88	%50
42	R4	Z	0	%50
43	R6	X	10.81	%50
44	R6	Z	0	%50
45	SA5	X	8.01	%50
46	SA5	Z	0	%50
47	MP7	X	24.96	0
48	MP7	Z	0	0
49	MP7	X	24.96	%100
50	MP7	Z	0	%100
51	MP8	X	12.76	24
52	MP8	Z	0	24
53	MP8	X	12.28	72
54	MP8	Z	0	72
55	MP9	X	24.34	0
56	MP9	Z	0	0
57	MP9	X	24.34	%100
58	MP9	Z	0	%100
59	R7	X	7.02	%50
60	R7	Z	0	%50
61	R9	X	6.52	%50
62	R9	Z	0	%50
63	R7	X	6.02	%50
64	R7	Z	0	%50
65	R9	X	11.24	%50
66	R9	Z	0	%50
67	SA8	X	8.01	%50
68	SA8	Z	0	%50

Member Point Loads (BLC 27 : Ice Wind Load AZI 300)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	17.25	0
2	MP1	Z	-9.96	0
3	MP1	X	17.25	%100
4	MP1	Z	-9.96	%100
5	MP2	X	9.3	24
6	MP2	Z	-5.37	24
7	MP2	X	9.16	72
8	MP2	Z	-5.29	72
9	MP3	X	16.89	0
10	MP3	Z	-9.75	0
11	MP3	X	16.89	%100
12	MP3	Z	-9.75	%100

Member Point Loads (BLC 27 : Ice Wind Load AZI 300) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
13	R1	X	5.63	%50
14	R1	Z	-3.25	%50
15	R3	X	4.99	%50
16	R3	Z	-2.88	%50
17	R1	X	4.98	%50
18	R1	Z	-2.88	%50
19	R3	X	9.04	%50
20	R3	Z	-5.22	%50
21	SA1	X	6.94	%50
22	SA1	Z	-4.01	%50
23	SA3	X	6.94	%50
24	SA3	Z	-4.01	%50
25	MP4	X	15.58	0
26	MP4	Z	-9	0
27	MP4	X	15.58	%100
28	MP4	Z	-9	%100
29	MP5	X	8.63	24
30	MP5	Z	-4.99	24
31	MP5	X	8.6	72
32	MP5	Z	-4.96	72
33	MP6	X	15.28	0
34	MP6	Z	-8.82	0
35	MP6	X	15.28	%100
36	MP6	Z	-8.82	%100
37	R4	X	5.45	%50
38	R4	Z	-3.15	%50
39	R6	X	4.73	%50
40	R6	Z	-2.73	%50
41	R4	X	4.9	%50
42	R4	Z	-2.83	%50
43	R6	X	8.77	%50
44	R6	Z	-5.07	%50
45	SA5	X	6.94	%50
46	SA5	Z	-4.01	%50
47	MP7	X	22.3	0
48	MP7	Z	-12.87	0
49	MP7	X	22.3	%100
50	MP7	Z	-12.87	%100
51	MP8	X	11.32	24
52	MP8	Z	-6.54	24
53	MP8	X	10.87	72
54	MP8	Z	-6.27	72
55	MP9	X	21.74	0
56	MP9	Z	-12.55	0
57	MP9	X	21.74	%100
58	MP9	Z	-12.55	%100
59	R7	X	6.15	%50
60	R7	Z	-3.55	%50
61	R9	X	5.75	%50
62	R9	Z	-3.32	%50
63	R7	X	5.25	%50
64	R7	Z	-3.03	%50
65	R9	X	9.84	%50
66	R9	Z	-5.68	%50
67	SA8	X	6.94	%50
68	SA8	Z	-4.01	%50

Member Point Loads (BLC 28 : Ice Wind Load AZI 330)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	12.2	0
2	MP1	Z	-21.13	0
3	MP1	X	12.2	%100
4	MP1	Z	-21.13	%100
5	MP2	X	6.27	24
6	MP2	Z	-10.85	24
7	MP2	X	6.05	72
8	MP2	Z	-10.47	72
9	MP3	X	11.9	0
10	MP3	Z	-20.62	0
11	MP3	X	11.9	%100
12	MP3	Z	-20.62	%100
13	R1	X	3.48	%50
14	R1	Z	-6.03	%50
15	R3	X	3.22	%50
16	R3	Z	-5.58	%50
17	R1	X	3	%50
18	R1	Z	-5.19	%50
19	R3	X	5.57	%50
20	R3	Z	-9.65	%50
21	SA1	X	4.01	%50
22	SA1	Z	-6.94	%50
23	SA3	X	4.01	%50
24	SA3	Z	-6.94	%50
25	MP4	X	8.6	0
26	MP4	Z	-14.9	0
27	MP4	X	8.6	%100
28	MP4	Z	-14.9	%100
29	MP5	X	4.83	24
30	MP5	Z	-8.36	24
31	MP5	X	4.83	72
32	MP5	Z	-8.37	72
33	MP6	X	8.44	0
34	MP6	Z	-14.62	0
35	MP6	X	8.44	%100
36	MP6	Z	-14.62	%100
37	R4	X	3.11	%50
38	R4	Z	-5.38	%50
39	R6	X	2.67	%50
40	R6	Z	-4.63	%50
41	R4	X	2.81	%50
42	R4	Z	-4.86	%50
43	R6	X	5	%50
44	R6	Z	-8.67	%50
45	SA5	X	4.01	%50
46	SA5	Z	-6.94	%50
47	MP7	X	11.13	0
48	MP7	Z	-19.28	0
49	MP7	X	11.13	%100
50	MP7	Z	-19.28	%100
51	MP8	X	5.84	24
52	MP8	Z	-10.11	24
53	MP8	X	5.69	72
54	MP8	Z	-9.85	72
55	MP9	X	10.88	0
56	MP9	Z	-18.84	0
57	MP9	X	10.88	%100

Member Point Loads (BLC 28 : Ice Wind Load AZI 330) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
58	MP9	Z	-18.84	%100
59	R7	X	3.37	%50
60	R7	Z	-5.84	%50
61	R9	X	3.06	%50
62	R9	Z	-5.3	%50
63	R7	X	2.94	%50
64	R7	Z	-5.09	%50
65	R9	X	5.4	%50
66	R9	Z	-9.36	%50
67	SA8	X	4.01	%50
68	SA8	Z	-6.94	%50

Member Point Loads (BLC 31 : Seismic Load Z)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-13.727	0
2	MP1	Z	-13.727	%100
3	MP2	Z	-13.869	24
4	MP2	Z	-25.72	72
5	MP3	Z	-19.81	0
6	MP3	Z	-19.81	%100
7	R1	Z	-22.379	%50
8	R3	Z	-18.88	%50
9	R1	Z	-22.694	%50
10	R3	Z	-24.27	%50
11	SA1	Z	-5.957	%50
12	SA3	Z	-5.957	%50
13	MP4	Z	-13.727	0
14	MP4	Z	-13.727	%100
15	MP5	Z	-13.869	24
16	MP5	Z	-25.72	72
17	MP6	Z	-19.81	0
18	MP6	Z	-19.81	%100
19	R4	Z	-22.379	%50
20	R6	Z	-18.88	%50
21	R4	Z	-22.694	%50
22	R6	Z	-24.27	%50
23	SA5	Z	-5.957	%50
24	MP7	Z	-13.727	0
25	MP7	Z	-13.727	%100
26	MP8	Z	-13.869	24
27	MP8	Z	-25.72	72
28	MP9	Z	-19.81	0
29	MP9	Z	-19.81	%100
30	R7	Z	-22.379	%50
31	R9	Z	-18.88	%50
32	R7	Z	-22.694	%50
33	R9	Z	-24.27	%50
34	SA8	Z	-5.957	%50

Member Point Loads (BLC 32 : Seismic Load X)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-13.727	0
2	MP1	X	-13.727	%100
3	MP2	X	-13.869	24
4	MP2	X	-25.72	72
5	MP3	X	-19.81	0

Member Point Loads (BLC 32 : Seismic Load X) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
6	MP3	X	-19.81	%100
7	R1	X	-22.379	%50
8	R3	X	-18.88	%50
9	R1	X	-22.694	%50
10	R3	X	-24.27	%50
11	SA1	X	-5.957	%50
12	SA3	X	-5.957	%50
13	MP4	X	-13.727	0
14	MP4	X	-13.727	%100
15	MP5	X	-13.869	24
16	MP5	X	-25.72	72
17	MP6	X	-19.81	0
18	MP6	X	-19.81	%100
19	R4	X	-22.379	%50
20	R6	X	-18.88	%50
21	R4	X	-22.694	%50
22	R6	X	-24.27	%50
23	SA5	X	-5.957	%50
24	MP7	X	-13.727	0
25	MP7	X	-13.727	%100
26	MP8	X	-13.869	24
27	MP8	X	-25.72	72
28	MP9	X	-19.81	0
29	MP9	X	-19.81	%100
30	R7	X	-22.379	%50
31	R9	X	-18.88	%50
32	R7	X	-22.694	%50
33	R9	X	-24.27	%50
34	SA8	X	-5.957	%50

Member Distributed Loads (BLC 14 : Distr. Wind Load Z)

	Member Label	Direction	Start Magnitude...	End Magnitude[...	Start Location[i...	End Location[in...
1	M3	SZ	-45.462	-45.462	0	%100
2	M4	SZ	-45.462	-45.462	0	%100
3	M5	SZ	-45.462	-45.462	0	%100
4	M6	SZ	-45.462	-45.462	0	%100
5	M9	SZ	-45.462	-45.462	0	%100
6	M10	SZ	-45.462	-45.462	0	%100
7	M11	SZ	0	0	0	%100
8	M12	SZ	0	0	0	%100
9	M13	SZ	0	0	0	%100
10	M14	SZ	0	0	0	%100
11	SA4	SZ	-45.462	-45.462	0	%100
12	M16	SZ	0	0	0	%100
13	SA2	SZ	-45.462	-45.462	0	%100
14	M18	SZ	0	0	0	%100
15	M19	SZ	-75.77	-75.77	0	%100
16	M21	SZ	-75.77	-75.77	0	%100
17	M23	SZ	0	0	0	%100
18	M24	SZ	0	0	0	%100
19	M25	SZ	0	0	0	%100
20	M26	SZ	0	0	0	%100
21	M27	SZ	0	0	0	%100
22	R1	SZ	-45.462	-45.462	0	%100
23	M29	SZ	0	0	0	%100

Member Distributed Loads (BLC 14 : Distr. Wind Load Z) (Continued)

	Member Label	Direction	Start Magnitude..	End Magnitude[...	Start Location[i...	End Location[in...
24	SA3	SZ	-45.462	-45.462	0	%100
25	SA1	SZ	-45.462	-45.462	0	%100
26	R3	SZ	-45.462	-45.462	0	%100
27	M35	SZ	-75.77	-75.77	0	%100
28	M36	SZ	-75.77	-75.77	0	%100
29	M37	SZ	0	0	0	%100
30	M39	SZ	0	0	0	%100
31	HOR2	SZ	-45.462	-45.462	0	%100
32	HOR1	SZ	-45.462	-45.462	0	%100
33	M43A	SZ	-45.462	-45.462	0	%100
34	M44A	SZ	-45.462	-45.462	0	%100
35	VP1	SZ	-45.462	-45.462	0	%100
36	M44C	SZ	0	0	0	%100
37	M45	SZ	0	0	0	%100
38	M44D	SZ	-45.462	-45.462	0	%100
39	M45A	SZ	-45.462	-45.462	0	%100
40	M46	SZ	-45.462	-45.462	0	%100
41	M47	SZ	-45.462	-45.462	0	%100
42	M48	SZ	-45.462	-45.462	0	%100
43	M49	SZ	-45.462	-45.462	0	%100
44	M50	SZ	0	0	0	%100
45	M52	SZ	0	0	0	%100
46	SA12	SZ	-45.462	-45.462	0	%100
47	SA10	SZ	-45.462	-45.462	0	%100
48	M58	SZ	-75.77	-75.77	0	%100
49	M60	SZ	-75.77	-75.77	0	%100
50	M62	SZ	0	0	0	%100
51	M64	SZ	0	0	0	%100
52	M66	SZ	0	0	0	%100
53	M68	SZ	0	0	0	%100
54	SA11	SZ	-45.462	-45.462	0	%100
55	SA9	SZ	-45.462	-45.462	0	%100
56	M74	SZ	-75.77	-75.77	0	%100
57	M75	SZ	-75.77	-75.77	0	%100
58	M76	SZ	0	0	0	%100
59	M77	SZ	0	0	0	%100
60	HOR6	SZ	-45.462	-45.462	0	%100
61	HOR5	SZ	-45.462	-45.462	0	%100
62	M80	SZ	-45.462	-45.462	0	%100
63	M81	SZ	-45.462	-45.462	0	%100
64	VP3	SZ	-45.462	-45.462	0	%100
65	M84	SZ	0	0	0	%100
66	M85	SZ	0	0	0	%100
67	M87	SZ	-45.462	-45.462	0	%100
68	M88	SZ	-45.462	-45.462	0	%100
69	M89	SZ	-45.462	-45.462	0	%100
70	M90	SZ	-45.462	-45.462	0	%100
71	M91	SZ	-45.462	-45.462	0	%100
72	M92	SZ	-45.462	-45.462	0	%100
73	M93	SZ	0	0	0	%100
74	M95	SZ	0	0	0	%100
75	SA8	SZ	-45.462	-45.462	0	%100
76	SA6	SZ	-45.462	-45.462	0	%100
77	M101	SZ	-75.77	-75.77	0	%100
78	M103	SZ	-75.77	-75.77	0	%100
79	M105	SZ	0	0	0	%100
80	M107	SZ	0	0	0	%100

Member Distributed Loads (BLC 14 : Distr. Wind Load Z) (Continued)

	Member Label	Direction	Start Magnitude...	End Magnitude[...	Start Location[i...	End Location[in...
81	M109	SZ	0	0	0	%100
82	M111	SZ	0	0	0	%100
83	SA7	SZ	-45.462	-45.462	0	%100
84	SA5	SZ	-45.462	-45.462	0	%100
85	M117	SZ	-75.77	-75.77	0	%100
86	M118	SZ	-75.77	-75.77	0	%100
87	M119	SZ	0	0	0	%100
88	M120	SZ	0	0	0	%100
89	HOR4	SZ	-45.462	-45.462	0	%100
90	HOR3	SZ	-45.462	-45.462	0	%100
91	M123	SZ	-45.462	-45.462	0	%100
92	M124	SZ	-45.462	-45.462	0	%100
93	VP2	SZ	-45.462	-45.462	0	%100
94	M127	SZ	0	0	0	%100
95	M128	SZ	0	0	0	%100
96	M133	SZ	0	0	0	%100
97	M134	SZ	0	0	0	%100
98	M135	SZ	0	0	0	%100
99	M136	SZ	0	0	0	%100
100	M137	SZ	-45.462	-45.462	0	%100
101	M138	SZ	0	0	0	%100
102	M139	SZ	0	0	0	%100
103	M140	SZ	-45.462	-45.462	0	%100
104	M141	SZ	-45.462	-45.462	0	%100
105	M106	SZ	-45.462	-45.462	0	%100
106	M107A	SZ	-45.462	-45.462	0	%100
107	M108	SZ	-45.462	-45.462	0	%100
108	M109A	SZ	-45.462	-45.462	0	%100
109	MP1	SZ	-45.462	-45.462	0	%100
110	MP3	SZ	-45.462	-45.462	0	%100
111	M118A	SZ	0	0	0	%100
112	M119A	SZ	0	0	0	%100
113	M120A	SZ	0	0	0	%100
114	M121	SZ	0	0	0	%100
115	R7	SZ	-45.462	-45.462	0	%100
116	R9	SZ	-45.462	-45.462	0	%100
117	M124A	SZ	-45.462	-45.462	0	%100
118	M125	SZ	-45.462	-45.462	0	%100
119	M126	SZ	-45.462	-45.462	0	%100
120	M127A	SZ	-45.462	-45.462	0	%100
121	MP7	SZ	-45.462	-45.462	0	%100
122	MP9	SZ	-45.462	-45.462	0	%100
123	M136A	SZ	0	0	0	%100
124	M137A	SZ	0	0	0	%100
125	M138A	SZ	0	0	0	%100
126	M139A	SZ	0	0	0	%100
127	R4	SZ	-45.462	-45.462	0	%100
128	R6	SZ	-45.462	-45.462	0	%100
129	M142	SZ	-45.462	-45.462	0	%100
130	M143	SZ	-45.462	-45.462	0	%100
131	M144	SZ	-45.462	-45.462	0	%100
132	M145	SZ	-45.462	-45.462	0	%100
133	MP4	SZ	-45.462	-45.462	0	%100
134	MP6	SZ	-45.462	-45.462	0	%100
135	M154	SZ	0	0	0	%100
136	M155	SZ	0	0	0	%100
137	M157	SZ	0	0	0	%100

Member Distributed Loads (BLC 14 : Distr. Wind Load Z) (Continued)

	Member Label	Direction	Start Magnitude..	End Magnitude[...	Start Location[i...	End Location[in...
138	M158	SZ	0	0	0	%100
139	R2	SZ	-45.462	-45.462	0	%100
140	M140A	SZ	-45.462	-45.462	0	%100
141	M141A	SZ	-45.462	-45.462	0	%100
142	MP2	SZ	-45.462	-45.462	0	%100
143	R8	SZ	-45.462	-45.462	0	%100
144	M144A	SZ	-45.462	-45.462	0	%100
145	M145A	SZ	-45.462	-45.462	0	%100
146	MP8	SZ	-45.462	-45.462	0	%100
147	R5	SZ	-45.462	-45.462	0	%100
148	M148	SZ	-45.462	-45.462	0	%100
149	M149	SZ	-45.462	-45.462	0	%100
150	MP5	SZ	-45.462	-45.462	0	%100

Member Distributed Loads (BLC 15 : Distr. Wind Load X)

	Member Label	Direction	Start Magnitude..	End Magnitude[...	Start Location[i...	End Location[in...
1	M3	SX	-45.462	-45.462	0	%100
2	M4	SX	-45.462	-45.462	0	%100
3	M5	SX	-45.462	-45.462	0	%100
4	M6	SX	-45.462	-45.462	0	%100
5	M9	SX	-45.462	-45.462	0	%100
6	M10	SX	-45.462	-45.462	0	%100
7	M11	SX	0	0	0	%100
8	M12	SX	0	0	0	%100
9	M13	SX	0	0	0	%100
10	M14	SX	0	0	0	%100
11	SA4	SX	-45.462	-45.462	0	%100
12	M16	SX	0	0	0	%100
13	SA2	SX	-45.462	-45.462	0	%100
14	M18	SX	0	0	0	%100
15	M19	SX	-75.77	-75.77	0	%100
16	M21	SX	-75.77	-75.77	0	%100
17	M23	SX	0	0	0	%100
18	M24	SX	0	0	0	%100
19	M25	SX	0	0	0	%100
20	M26	SX	0	0	0	%100
21	M27	SX	0	0	0	%100
22	R1	SX	-45.462	-45.462	0	%100
23	M29	SX	0	0	0	%100
24	SA3	SX	-45.462	-45.462	0	%100
25	SA1	SX	-45.462	-45.462	0	%100
26	R3	SX	-45.462	-45.462	0	%100
27	M35	SX	-75.77	-75.77	0	%100
28	M36	SX	-75.77	-75.77	0	%100
29	M37	SX	0	0	0	%100
30	M39	SX	0	0	0	%100
31	HOR2	SX	-45.462	-45.462	0	%100
32	HOR1	SX	-45.462	-45.462	0	%100
33	M43A	SX	-45.462	-45.462	0	%100
34	M44A	SX	-45.462	-45.462	0	%100
35	VP1	SX	-45.462	-45.462	0	%100
36	M44C	SX	0	0	0	%100
37	M45	SX	0	0	0	%100
38	M44D	SX	-45.462	-45.462	0	%100
39	M45A	SX	-45.462	-45.462	0	%100
40	M46	SX	-45.462	-45.462	0	%100

Member Distributed Loads (BLC 15 : Distr. Wind Load X) (Continued)

	Member Label	Direction	Start Magnitude..	End Magnitude[...	Start Location[i...	End Location[in...
41	M47	SX	-45.462	-45.462	0	%100
42	M48	SX	-45.462	-45.462	0	%100
43	M49	SX	-45.462	-45.462	0	%100
44	M50	SX	0	0	0	%100
45	M52	SX	0	0	0	%100
46	SA12	SX	-45.462	-45.462	0	%100
47	SA10	SX	-45.462	-45.462	0	%100
48	M58	SX	-75.77	-75.77	0	%100
49	M60	SX	-75.77	-75.77	0	%100
50	M62	SX	0	0	0	%100
51	M64	SX	0	0	0	%100
52	M66	SX	0	0	0	%100
53	M68	SX	0	0	0	%100
54	SA11	SX	-45.462	-45.462	0	%100
55	SA9	SX	-45.462	-45.462	0	%100
56	M74	SX	-75.77	-75.77	0	%100
57	M75	SX	-75.77	-75.77	0	%100
58	M76	SX	0	0	0	%100
59	M77	SX	0	0	0	%100
60	HOR6	SX	-45.462	-45.462	0	%100
61	HOR5	SX	-45.462	-45.462	0	%100
62	M80	SX	-45.462	-45.462	0	%100
63	M81	SX	-45.462	-45.462	0	%100
64	VP3	SX	-45.462	-45.462	0	%100
65	M84	SX	0	0	0	%100
66	M85	SX	0	0	0	%100
67	M87	SX	-45.462	-45.462	0	%100
68	M88	SX	-45.462	-45.462	0	%100
69	M89	SX	-45.462	-45.462	0	%100
70	M90	SX	-45.462	-45.462	0	%100
71	M91	SX	-45.462	-45.462	0	%100
72	M92	SX	-45.462	-45.462	0	%100
73	M93	SX	0	0	0	%100
74	M95	SX	0	0	0	%100
75	SA8	SX	-45.462	-45.462	0	%100
76	SA6	SX	-45.462	-45.462	0	%100
77	M101	SX	-75.77	-75.77	0	%100
78	M103	SX	-75.77	-75.77	0	%100
79	M105	SX	0	0	0	%100
80	M107	SX	0	0	0	%100
81	M109	SX	0	0	0	%100
82	M111	SX	0	0	0	%100
83	SA7	SX	-45.462	-45.462	0	%100
84	SA5	SX	-45.462	-45.462	0	%100
85	M117	SX	-75.77	-75.77	0	%100
86	M118	SX	-75.77	-75.77	0	%100
87	M119	SX	0	0	0	%100
88	M120	SX	0	0	0	%100
89	HOR4	SX	-45.462	-45.462	0	%100
90	HOR3	SX	-45.462	-45.462	0	%100
91	M123	SX	-45.462	-45.462	0	%100
92	M124	SX	-45.462	-45.462	0	%100
93	VP2	SX	-45.462	-45.462	0	%100
94	M127	SX	0	0	0	%100
95	M128	SX	0	0	0	%100
96	M133	SX	0	0	0	%100
97	M134	SX	0	0	0	%100

Member Distributed Loads (BLC 15 : Distr. Wind Load X) (Continued)

	Member Label	Direction	Start Magnitude..	End Magnitude[...	Start Location[i...	End Location[in...
98	M135	SX	0	0	0	%100
99	M136	SX	0	0	0	%100
100	M137	SX	-45.462	-45.462	0	%100
101	M138	SX	0	0	0	%100
102	M139	SX	0	0	0	%100
103	M140	SX	-45.462	-45.462	0	%100
104	M141	SX	-45.462	-45.462	0	%100
105	M106	SX	-45.462	-45.462	0	%100
106	M107A	SX	-45.462	-45.462	0	%100
107	M108	SX	-45.462	-45.462	0	%100
108	M109A	SX	-45.462	-45.462	0	%100
109	MP1	SX	-45.462	-45.462	0	%100
110	MP3	SX	-45.462	-45.462	0	%100
111	M118A	SX	0	0	0	%100
112	M119A	SX	0	0	0	%100
113	M120A	SX	0	0	0	%100
114	M121	SX	0	0	0	%100
115	R7	SX	-45.462	-45.462	0	%100
116	R9	SX	-45.462	-45.462	0	%100
117	M124A	SX	-45.462	-45.462	0	%100
118	M125	SX	-45.462	-45.462	0	%100
119	M126	SX	-45.462	-45.462	0	%100
120	M127A	SX	-45.462	-45.462	0	%100
121	MP7	SX	-45.462	-45.462	0	%100
122	MP9	SX	-45.462	-45.462	0	%100
123	M136A	SX	0	0	0	%100
124	M137A	SX	0	0	0	%100
125	M138A	SX	0	0	0	%100
126	M139A	SX	0	0	0	%100
127	R4	SX	-45.462	-45.462	0	%100
128	R6	SX	-45.462	-45.462	0	%100
129	M142	SX	-45.462	-45.462	0	%100
130	M143	SX	-45.462	-45.462	0	%100
131	M144	SX	-45.462	-45.462	0	%100
132	M145	SX	-45.462	-45.462	0	%100
133	MP4	SX	-45.462	-45.462	0	%100
134	MP6	SX	-45.462	-45.462	0	%100
135	M154	SX	0	0	0	%100
136	M155	SX	0	0	0	%100
137	M157	SX	0	0	0	%100
138	M158	SX	0	0	0	%100
139	R2	SX	-45.462	-45.462	0	%100
140	M140A	SX	-45.462	-45.462	0	%100
141	M141A	SX	-45.462	-45.462	0	%100
142	MP2	SX	-45.462	-45.462	0	%100
143	R8	SX	-45.462	-45.462	0	%100
144	M144A	SX	-45.462	-45.462	0	%100
145	M145A	SX	-45.462	-45.462	0	%100
146	MP8	SX	-45.462	-45.462	0	%100
147	R5	SX	-45.462	-45.462	0	%100
148	M148	SX	-45.462	-45.462	0	%100
149	M149	SX	-45.462	-45.462	0	%100
150	MP5	SX	-45.462	-45.462	0	%100

Member Distributed Loads (BLC 16 : Ice Weight)

Member Label	Direction	Start Magnitude..	End Magnitude[...	Start Location[i...	End Location[in...

Member Distributed Loads (BLC 16 : Ice Weight) (Continued)

	Member Label	Direction	Start Magnitude..	End Magnitude[...	Start Location[i...	End Location[in...
1	M3	Y	-2.74	-2.74	0	%100
2	M4	Y	-2.74	-2.74	0	%100
3	M5	Y	-2.74	-2.74	0	%100
4	M6	Y	-2.74	-2.74	0	%100
5	M9	Y	-2.561	-2.561	0	%100
6	M10	Y	-2.561	-2.561	0	%100
7	M11	Y	-1.669	-1.669	0	%100
8	M12	Y	-1.669	-1.669	0	%100
9	M13	Y	-1.669	-1.669	0	%100
10	M14	Y	-1.669	-1.669	0	%100
11	SA4	Y	-5.06	-5.06	0	%100
12	M16	Y	-1.669	-1.669	0	%100
13	SA2	Y	-5.06	-5.06	0	%100
14	M18	Y	-1.669	-1.669	0	%100
15	M19	Y	-6.746	-6.746	0	%100
16	M21	Y	-6.746	-6.746	0	%100
17	M23	Y	-1.669	-1.669	0	%100
18	M24	Y	-1.669	-1.669	0	%100
19	M25	Y	-1.669	-1.669	0	%100
20	M26	Y	-1.669	-1.669	0	%100
21	M27	Y	-1.669	-1.669	0	%100
22	R1	Y	-5.06	-5.06	0	%100
23	M29	Y	-1.669	-1.669	0	%100
24	SA3	Y	-5.06	-5.06	0	%100
25	SA1	Y	-5.06	-5.06	0	%100
26	R3	Y	-5.06	-5.06	0	%100
27	M35	Y	-6.746	-6.746	0	%100
28	M36	Y	-6.746	-6.746	0	%100
29	M37	Y	-1.669	-1.669	0	%100
30	M39	Y	-1.669	-1.669	0	%100
31	HOR2	Y	-5.774	-5.774	0	%100
32	HOR1	Y	-5.774	-5.774	0	%100
33	M43A	Y	-2.561	-2.561	0	%100
34	M44A	Y	-2.561	-2.561	0	%100
35	VP1	Y	-8.095	-8.095	0	%100
36	M44C	Y	-1.669	-1.669	0	%100
37	M45	Y	-1.669	-1.669	0	%100
38	M44D	Y	-2.74	-2.74	0	%100
39	M45A	Y	-2.74	-2.74	0	%100
40	M46	Y	-2.74	-2.74	0	%100
41	M47	Y	-2.74	-2.74	0	%100
42	M48	Y	-2.561	-2.561	0	%100
43	M49	Y	-2.561	-2.561	0	%100
44	M50	Y	-1.669	-1.669	0	%100
45	M52	Y	-1.669	-1.669	0	%100
46	SA12	Y	-5.06	-5.06	0	%100
47	SA10	Y	-5.06	-5.06	0	%100
48	M58	Y	-6.746	-6.746	0	%100
49	M60	Y	-6.746	-6.746	0	%100
50	M62	Y	-1.669	-1.669	0	%100
51	M64	Y	-1.669	-1.669	0	%100
52	M66	Y	-1.669	-1.669	0	%100
53	M68	Y	-1.669	-1.669	0	%100
54	SA11	Y	-5.06	-5.06	0	%100
55	SA9	Y	-5.06	-5.06	0	%100
56	M74	Y	-6.746	-6.746	0	%100
57	M75	Y	-6.746	-6.746	0	%100

Member Distributed Loads (BLC 16 : Ice Weight) (Continued)

	Member Label	Direction	Start Magnitude..	End Magnitude[...	Start Location[i...	End Location[in...
58	M76	Y	-1.669	-1.669	0	%100
59	M77	Y	-1.669	-1.669	0	%100
60	HOR6	Y	-5.774	-5.774	0	%100
61	HOR5	Y	-5.774	-5.774	0	%100
62	M80	Y	-2.561	-2.561	0	%100
63	M81	Y	-2.561	-2.561	0	%100
64	VP3	Y	-8.095	-8.095	0	%100
65	M84	Y	-1.669	-1.669	0	%100
66	M85	Y	-1.669	-1.669	0	%100
67	M87	Y	-2.74	-2.74	0	%100
68	M88	Y	-2.74	-2.74	0	%100
69	M89	Y	-2.74	-2.74	0	%100
70	M90	Y	-2.74	-2.74	0	%100
71	M91	Y	-2.561	-2.561	0	%100
72	M92	Y	-2.561	-2.561	0	%100
73	M93	Y	-1.669	-1.669	0	%100
74	M95	Y	-1.669	-1.669	0	%100
75	SA8	Y	-5.06	-5.06	0	%100
76	SA6	Y	-5.06	-5.06	0	%100
77	M101	Y	-6.746	-6.746	0	%100
78	M103	Y	-6.746	-6.746	0	%100
79	M105	Y	-1.669	-1.669	0	%100
80	M107	Y	-1.669	-1.669	0	%100
81	M109	Y	-1.669	-1.669	0	%100
82	M111	Y	-1.669	-1.669	0	%100
83	SA7	Y	-5.06	-5.06	0	%100
84	SA5	Y	-5.06	-5.06	0	%100
85	M117	Y	-6.746	-6.746	0	%100
86	M118	Y	-6.746	-6.746	0	%100
87	M119	Y	-1.669	-1.669	0	%100
88	M120	Y	-1.669	-1.669	0	%100
89	HOR4	Y	-5.774	-5.774	0	%100
90	HOR3	Y	-5.774	-5.774	0	%100
91	M123	Y	-2.561	-2.561	0	%100
92	M124	Y	-2.561	-2.561	0	%100
93	VP2	Y	-8.095	-8.095	0	%100
94	M127	Y	-1.669	-1.669	0	%100
95	M128	Y	-1.669	-1.669	0	%100
96	M133	Y	-1.669	-1.669	0	%100
97	M134	Y	-1.669	-1.669	0	%100
98	M135	Y	-1.669	-1.669	0	%100
99	M136	Y	-1.669	-1.669	0	%100
100	M137	Y	-5.06	-5.06	0	%100
101	M138	Y	-1.669	-1.669	0	%100
102	M139	Y	-1.669	-1.669	0	%100
103	M140	Y	-5.06	-5.06	0	%100
104	M141	Y	-5.06	-5.06	0	%100
105	M106	Y	-5.06	-5.06	0	%100
106	M107A	Y	-5.06	-5.06	0	%100
107	M108	Y	-5.06	-5.06	0	%100
108	M109A	Y	-5.06	-5.06	0	%100
109	MP1	Y	-5.06	-5.06	0	%100
110	MP3	Y	-5.06	-5.06	0	%100
111	M118A	Y	-1.669	-1.669	0	%100
112	M119A	Y	-1.669	-1.669	0	%100
113	M120A	Y	-1.669	-1.669	0	%100
114	M121	Y	-1.669	-1.669	0	%100

Member Distributed Loads (BLC 16 : Ice Weight) (Continued)

	Member Label	Direction	Start Magnitude..	End Magnitude[...	Start Location[i...	End Location[in...
115	R7	Y	-5.06	-5.06	0	%100
116	R9	Y	-5.06	-5.06	0	%100
117	M124A	Y	-5.06	-5.06	0	%100
118	M125	Y	-5.06	-5.06	0	%100
119	M126	Y	-5.06	-5.06	0	%100
120	M127A	Y	-5.06	-5.06	0	%100
121	MP7	Y	-5.06	-5.06	0	%100
122	MP9	Y	-5.06	-5.06	0	%100
123	M136A	Y	-1.669	-1.669	0	%100
124	M137A	Y	-1.669	-1.669	0	%100
125	M138A	Y	-1.669	-1.669	0	%100
126	M139A	Y	-1.669	-1.669	0	%100
127	R4	Y	-5.06	-5.06	0	%100
128	R6	Y	-5.06	-5.06	0	%100
129	M142	Y	-5.06	-5.06	0	%100
130	M143	Y	-5.06	-5.06	0	%100
131	M144	Y	-5.06	-5.06	0	%100
132	M145	Y	-5.06	-5.06	0	%100
133	MP4	Y	-5.06	-5.06	0	%100
134	MP6	Y	-5.06	-5.06	0	%100
135	M154	Y	-1.669	-1.669	0	%100
136	M155	Y	-1.669	-1.669	0	%100
137	M157	Y	-1.669	-1.669	0	%100
138	M158	Y	-1.669	-1.669	0	%100
139	R2	Y	-5.06	-5.06	0	%100
140	M140A	Y	-5.06	-5.06	0	%100
141	M141A	Y	-5.06	-5.06	0	%100
142	MP2	Y	-5.06	-5.06	0	%100
143	R8	Y	-5.06	-5.06	0	%100
144	M144A	Y	-5.06	-5.06	0	%100
145	M145A	Y	-5.06	-5.06	0	%100
146	MP8	Y	-5.06	-5.06	0	%100
147	R5	Y	-5.06	-5.06	0	%100
148	M148	Y	-5.06	-5.06	0	%100
149	M149	Y	-5.06	-5.06	0	%100
150	MP5	Y	-5.06	-5.06	0	%100

Member Distributed Loads (BLC 29 : Distr. Ice Wind Load Z)

	Member Label	Direction	Start Magnitude..	End Magnitude[...	Start Location[i...	End Location[in...
1	M3	SZ	-33.603	-33.603	0	%100
2	M4	SZ	-33.603	-33.603	0	%100
3	M5	SZ	-33.603	-33.603	0	%100
4	M6	SZ	-33.603	-33.603	0	%100
5	M9	SZ	-38.691	-38.691	0	%100
6	M10	SZ	-38.691	-38.691	0	%100
7	M11	SZ	0	0	0	%100
8	M12	SZ	0	0	0	%100
9	M13	SZ	0	0	0	%100
10	M14	SZ	0	0	0	%100
11	SA4	SZ	-16.196	-16.196	0	%100
12	M16	SZ	0	0	0	%100
13	SA2	SZ	-16.196	-16.196	0	%100
14	M18	SZ	0	0	0	%100
15	M19	SZ	-13.529	-13.529	0	%100
16	M21	SZ	-13.529	-13.529	0	%100
17	M23	SZ	0	0	0	%100

Member Distributed Loads (BLC 29 : Distr. Ice Wind Load Z) (Continued)

	Member Label	Direction	Start Magnitude...	End Magnitude[...	Start Location[i...	End Location[in...
18	M24	SZ	0	0	0	%100
19	M25	SZ	0	0	0	%100
20	M26	SZ	0	0	0	%100
21	M27	SZ	0	0	0	%100
22	R1	SZ	-16.196	-16.196	0	%100
23	M29	SZ	0	0	0	%100
24	SA3	SZ	-16.196	-16.196	0	%100
25	SA1	SZ	-16.196	-16.196	0	%100
26	R3	SZ	-16.196	-16.196	0	%100
27	M35	SZ	-13.529	-13.529	0	%100
28	M36	SZ	-13.529	-13.529	0	%100
29	M37	SZ	0	0	0	%100
30	M39	SZ	0	0	0	%100
31	HOR2	SZ	-14.799	-14.799	0	%100
32	HOR1	SZ	-14.799	-14.799	0	%100
33	M43A	SZ	-38.691	-38.691	0	%100
34	M44A	SZ	-38.691	-38.691	0	%100
35	VP1	SZ	-12.403	-12.403	0	%100
36	M44C	SZ	0	0	0	%100
37	M45	SZ	0	0	0	%100
38	M44D	SZ	-33.603	-33.603	0	%100
39	M45A	SZ	-33.603	-33.603	0	%100
40	M46	SZ	-33.603	-33.603	0	%100
41	M47	SZ	-33.603	-33.603	0	%100
42	M48	SZ	-38.691	-38.691	0	%100
43	M49	SZ	-38.691	-38.691	0	%100
44	M50	SZ	0	0	0	%100
45	M52	SZ	0	0	0	%100
46	SA12	SZ	-16.196	-16.196	0	%100
47	SA10	SZ	-16.196	-16.196	0	%100
48	M58	SZ	-13.529	-13.529	0	%100
49	M60	SZ	-13.529	-13.529	0	%100
50	M62	SZ	0	0	0	%100
51	M64	SZ	0	0	0	%100
52	M66	SZ	0	0	0	%100
53	M68	SZ	0	0	0	%100
54	SA11	SZ	-16.196	-16.196	0	%100
55	SA9	SZ	-16.196	-16.196	0	%100
56	M74	SZ	-13.529	-13.529	0	%100
57	M75	SZ	-13.529	-13.529	0	%100
58	M76	SZ	0	0	0	%100
59	M77	SZ	0	0	0	%100
60	HOR6	SZ	-14.799	-14.799	0	%100
61	HOR5	SZ	-14.799	-14.799	0	%100
62	M80	SZ	-38.691	-38.691	0	%100
63	M81	SZ	-38.691	-38.691	0	%100
64	VP3	SZ	-12.403	-12.403	0	%100
65	M84	SZ	0	0	0	%100
66	M85	SZ	0	0	0	%100
67	M87	SZ	-33.603	-33.603	0	%100
68	M88	SZ	-33.603	-33.603	0	%100
69	M89	SZ	-33.603	-33.603	0	%100
70	M90	SZ	-33.603	-33.603	0	%100
71	M91	SZ	-38.691	-38.691	0	%100
72	M92	SZ	-38.691	-38.691	0	%100
73	M93	SZ	0	0	0	%100
74	M95	SZ	0	0	0	%100

Member Distributed Loads (BLC 29 : Distr. Ice Wind Load Z) (Continued)

	Member Label	Direction	Start Magnitude..	End Magnitude[...	Start Location[i...	End Location[in...
75	SA8	SZ	-16.196	-16.196	0	%100
76	SA6	SZ	-16.196	-16.196	0	%100
77	M101	SZ	-13.529	-13.529	0	%100
78	M103	SZ	-13.529	-13.529	0	%100
79	M105	SZ	0	0	0	%100
80	M107	SZ	0	0	0	%100
81	M109	SZ	0	0	0	%100
82	M111	SZ	0	0	0	%100
83	SA7	SZ	-16.196	-16.196	0	%100
84	SA5	SZ	-16.196	-16.196	0	%100
85	M117	SZ	-13.529	-13.529	0	%100
86	M118	SZ	-13.529	-13.529	0	%100
87	M119	SZ	0	0	0	%100
88	M120	SZ	0	0	0	%100
89	HOR4	SZ	-14.799	-14.799	0	%100
90	HOR3	SZ	-14.799	-14.799	0	%100
91	M123	SZ	-38.691	-38.691	0	%100
92	M124	SZ	-38.691	-38.691	0	%100
93	VP2	SZ	-12.403	-12.403	0	%100
94	M127	SZ	0	0	0	%100
95	M128	SZ	0	0	0	%100
96	M133	SZ	0	0	0	%100
97	M134	SZ	0	0	0	%100
98	M135	SZ	0	0	0	%100
99	M136	SZ	0	0	0	%100
100	M137	SZ	-16.196	-16.196	0	%100
101	M138	SZ	0	0	0	%100
102	M139	SZ	0	0	0	%100
103	M140	SZ	-16.196	-16.196	0	%100
104	M141	SZ	-16.196	-16.196	0	%100
105	M106	SZ	-16.196	-16.196	0	%100
106	M107A	SZ	-16.196	-16.196	0	%100
107	M108	SZ	-16.196	-16.196	0	%100
108	M109A	SZ	-16.196	-16.196	0	%100
109	MP1	SZ	-16.196	-16.196	0	%100
110	MP3	SZ	-16.196	-16.196	0	%100
111	M118A	SZ	0	0	0	%100
112	M119A	SZ	0	0	0	%100
113	M120A	SZ	0	0	0	%100
114	M121	SZ	0	0	0	%100
115	R7	SZ	-16.196	-16.196	0	%100
116	R9	SZ	-16.196	-16.196	0	%100
117	M124A	SZ	-16.196	-16.196	0	%100
118	M125	SZ	-16.196	-16.196	0	%100
119	M126	SZ	-16.196	-16.196	0	%100
120	M127A	SZ	-16.196	-16.196	0	%100
121	MP7	SZ	-16.196	-16.196	0	%100
122	MP9	SZ	-16.196	-16.196	0	%100
123	M136A	SZ	0	0	0	%100
124	M137A	SZ	0	0	0	%100
125	M138A	SZ	0	0	0	%100
126	M139A	SZ	0	0	0	%100
127	R4	SZ	-16.196	-16.196	0	%100
128	R6	SZ	-16.196	-16.196	0	%100
129	M142	SZ	-16.196	-16.196	0	%100
130	M143	SZ	-16.196	-16.196	0	%100
131	M144	SZ	-16.196	-16.196	0	%100

Member Distributed Loads (BLC 29 : Distr. Ice Wind Load Z) (Continued)

	Member Label	Direction	Start Magnitude..	End Magnitude[...	Start Location[i...	End Location[in...
132	M145	SZ	-16.196	-16.196	0	%100
133	MP4	SZ	-16.196	-16.196	0	%100
134	MP6	SZ	-16.196	-16.196	0	%100
135	M154	SZ	0	0	0	%100
136	M155	SZ	0	0	0	%100
137	M157	SZ	0	0	0	%100
138	M158	SZ	0	0	0	%100
139	R2	SZ	-16.196	-16.196	0	%100
140	M140A	SZ	-16.196	-16.196	0	%100
141	M141A	SZ	-16.196	-16.196	0	%100
142	MP2	SZ	-16.196	-16.196	0	%100
143	R8	SZ	-16.196	-16.196	0	%100
144	M144A	SZ	-16.196	-16.196	0	%100
145	M145A	SZ	-16.196	-16.196	0	%100
146	MP8	SZ	-16.196	-16.196	0	%100
147	R5	SZ	-16.196	-16.196	0	%100
148	M148	SZ	-16.196	-16.196	0	%100
149	M149	SZ	-16.196	-16.196	0	%100
150	MP5	SZ	-16.196	-16.196	0	%100

Member Distributed Loads (BLC 30 : Distr. Ice Wind Load X)

	Member Label	Direction	Start Magnitude..	End Magnitude[...	Start Location[i...	End Location[in...
1	M3	SX	-33.603	-33.603	0	%100
2	M4	SX	-33.603	-33.603	0	%100
3	M5	SX	-33.603	-33.603	0	%100
4	M6	SX	-33.603	-33.603	0	%100
5	M9	SX	-38.691	-38.691	0	%100
6	M10	SX	-38.691	-38.691	0	%100
7	M11	SX	0	0	0	%100
8	M12	SX	0	0	0	%100
9	M13	SX	0	0	0	%100
10	M14	SX	0	0	0	%100
11	SA4	SX	-16.196	-16.196	0	%100
12	M16	SX	0	0	0	%100
13	SA2	SX	-16.196	-16.196	0	%100
14	M18	SX	0	0	0	%100
15	M19	SX	-13.529	-13.529	0	%100
16	M21	SX	-13.529	-13.529	0	%100
17	M23	SX	0	0	0	%100
18	M24	SX	0	0	0	%100
19	M25	SX	0	0	0	%100
20	M26	SX	0	0	0	%100
21	M27	SX	0	0	0	%100
22	R1	SX	-16.196	-16.196	0	%100
23	M29	SX	0	0	0	%100
24	SA3	SX	-16.196	-16.196	0	%100
25	SA1	SX	-16.196	-16.196	0	%100
26	R3	SX	-16.196	-16.196	0	%100
27	M35	SX	-13.529	-13.529	0	%100
28	M36	SX	-13.529	-13.529	0	%100
29	M37	SX	0	0	0	%100
30	M39	SX	0	0	0	%100
31	HOR2	SX	-14.799	-14.799	0	%100
32	HOR1	SX	-14.799	-14.799	0	%100
33	M43A	SX	-38.691	-38.691	0	%100
34	M44A	SX	-38.691	-38.691	0	%100

Member Distributed Loads (BLC 30 : Distr. Ice Wind Load X) (Continued)

	Member Label	Direction	Start Magnitude...	End Magnitude[...	Start Location[i...	End Location[in...
35	VP1	SX	-12.403	-12.403	0	%100
36	M44C	SX	0	0	0	%100
37	M45	SX	0	0	0	%100
38	M44D	SX	-33.603	-33.603	0	%100
39	M45A	SX	-33.603	-33.603	0	%100
40	M46	SX	-33.603	-33.603	0	%100
41	M47	SX	-33.603	-33.603	0	%100
42	M48	SX	-38.691	-38.691	0	%100
43	M49	SX	-38.691	-38.691	0	%100
44	M50	SX	0	0	0	%100
45	M52	SX	0	0	0	%100
46	SA12	SX	-16.196	-16.196	0	%100
47	SA10	SX	-16.196	-16.196	0	%100
48	M58	SX	-13.529	-13.529	0	%100
49	M60	SX	-13.529	-13.529	0	%100
50	M62	SX	0	0	0	%100
51	M64	SX	0	0	0	%100
52	M66	SX	0	0	0	%100
53	M68	SX	0	0	0	%100
54	SA11	SX	-16.196	-16.196	0	%100
55	SA9	SX	-16.196	-16.196	0	%100
56	M74	SX	-13.529	-13.529	0	%100
57	M75	SX	-13.529	-13.529	0	%100
58	M76	SX	0	0	0	%100
59	M77	SX	0	0	0	%100
60	HOR6	SX	-14.799	-14.799	0	%100
61	HOR5	SX	-14.799	-14.799	0	%100
62	M80	SX	-38.691	-38.691	0	%100
63	M81	SX	-38.691	-38.691	0	%100
64	VP3	SX	-12.403	-12.403	0	%100
65	M84	SX	0	0	0	%100
66	M85	SX	0	0	0	%100
67	M87	SX	-33.603	-33.603	0	%100
68	M88	SX	-33.603	-33.603	0	%100
69	M89	SX	-33.603	-33.603	0	%100
70	M90	SX	-33.603	-33.603	0	%100
71	M91	SX	-38.691	-38.691	0	%100
72	M92	SX	-38.691	-38.691	0	%100
73	M93	SX	0	0	0	%100
74	M95	SX	0	0	0	%100
75	SA8	SX	-16.196	-16.196	0	%100
76	SA6	SX	-16.196	-16.196	0	%100
77	M101	SX	-13.529	-13.529	0	%100
78	M103	SX	-13.529	-13.529	0	%100
79	M105	SX	0	0	0	%100
80	M107	SX	0	0	0	%100
81	M109	SX	0	0	0	%100
82	M111	SX	0	0	0	%100
83	SA7	SX	-16.196	-16.196	0	%100
84	SA5	SX	-16.196	-16.196	0	%100
85	M117	SX	-13.529	-13.529	0	%100
86	M118	SX	-13.529	-13.529	0	%100
87	M119	SX	0	0	0	%100
88	M120	SX	0	0	0	%100
89	HOR4	SX	-14.799	-14.799	0	%100
90	HOR3	SX	-14.799	-14.799	0	%100
91	M123	SX	-38.691	-38.691	0	%100

Member Distributed Loads (BLC 30 : Distr. Ice Wind Load X) (Continued)

	Member Label	Direction	Start Magnitude..	End Magnitude[...	Start Location[i...	End Location[in...
92	M124	SX	-38.691	-38.691	0	%100
93	VP2	SX	-12.403	-12.403	0	%100
94	M127	SX	0	0	0	%100
95	M128	SX	0	0	0	%100
96	M133	SX	0	0	0	%100
97	M134	SX	0	0	0	%100
98	M135	SX	0	0	0	%100
99	M136	SX	0	0	0	%100
100	M137	SX	-16.196	-16.196	0	%100
101	M138	SX	0	0	0	%100
102	M139	SX	0	0	0	%100
103	M140	SX	-16.196	-16.196	0	%100
104	M141	SX	-16.196	-16.196	0	%100
105	M106	SX	-16.196	-16.196	0	%100
106	M107A	SX	-16.196	-16.196	0	%100
107	M108	SX	-16.196	-16.196	0	%100
108	M109A	SX	-16.196	-16.196	0	%100
109	MP1	SX	-16.196	-16.196	0	%100
110	MP3	SX	-16.196	-16.196	0	%100
111	M118A	SX	0	0	0	%100
112	M119A	SX	0	0	0	%100
113	M120A	SX	0	0	0	%100
114	M121	SX	0	0	0	%100
115	R7	SX	-16.196	-16.196	0	%100
116	R9	SX	-16.196	-16.196	0	%100
117	M124A	SX	-16.196	-16.196	0	%100
118	M125	SX	-16.196	-16.196	0	%100
119	M126	SX	-16.196	-16.196	0	%100
120	M127A	SX	-16.196	-16.196	0	%100
121	MP7	SX	-16.196	-16.196	0	%100
122	MP9	SX	-16.196	-16.196	0	%100
123	M136A	SX	0	0	0	%100
124	M137A	SX	0	0	0	%100
125	M138A	SX	0	0	0	%100
126	M139A	SX	0	0	0	%100
127	R4	SX	-16.196	-16.196	0	%100
128	R6	SX	-16.196	-16.196	0	%100
129	M142	SX	-16.196	-16.196	0	%100
130	M143	SX	-16.196	-16.196	0	%100
131	M144	SX	-16.196	-16.196	0	%100
132	M145	SX	-16.196	-16.196	0	%100
133	MP4	SX	-16.196	-16.196	0	%100
134	MP6	SX	-16.196	-16.196	0	%100
135	M154	SX	0	0	0	%100
136	M155	SX	0	0	0	%100
137	M157	SX	0	0	0	%100
138	M158	SX	0	0	0	%100
139	R2	SX	-16.196	-16.196	0	%100
140	M140A	SX	-16.196	-16.196	0	%100
141	M141A	SX	-16.196	-16.196	0	%100
142	MP2	SX	-16.196	-16.196	0	%100
143	R8	SX	-16.196	-16.196	0	%100
144	M144A	SX	-16.196	-16.196	0	%100
145	M145A	SX	-16.196	-16.196	0	%100
146	MP8	SX	-16.196	-16.196	0	%100
147	R5	SX	-16.196	-16.196	0	%100
148	M148	SX	-16.196	-16.196	0	%100

Member Distributed Loads (BLC 30 : Distr. Ice Wind Load X) (Continued)

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[i...	End Location[in...
149	M149	SX	-16.196	-16.196	0	%100
150	MP5	SX	-16.196	-16.196	0	%100

Member Area Loads

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

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

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*...	phi*...	phi*...	phi*...	...	Eqn
1	MP1	PIPE_2.0	.617	45	8	.034	45		8	9836..	32130	1871..	1871....		H1-...
2	MP7	PIPE_2.0	.608	45	12	.033	45		12	9836..	32130	1871..	1871....		H1-...
3	MP4	PIPE_2.0	.608	45	4	.033	45		4	9836..	32130	1871..	1871....		H1-...
4	MP3	PIPE_2.0	.569	45	8	.041	45		9	9836..	32130	1871..	1871....		H1-...
5	MP6	PIPE_2.0	.561	45	4	.044	45		9	9836..	32130	1871..	1871....		H1-...
6	MP9	PIPE_2.0	.561	45	12	.038	45		5	9836..	32130	1871..	1871....		H1-...
7	M92	0.625" S.R.	.536	15.313	8	.017	0		2	1757..	9946..	96.7...	96.7...	1	H1-...
8	M10	0.625" S.R.	.481	15.938	12	.015	0		4	1757..	9946..	96.7...	96.7...	1	H1-...
9	M118	PL3 1/2x5/8	.474	4.5	8	.199	0	y	138	6859..	70875	922....	5167....		H1-...
10	M109A	PIPE_2.0	.473	0	8	.220	0		13	3174..	32130	1871..	1871....		H1-...
11	M145	PIPE_2.0	.467	0	4	.229	0		9	3174..	32130	1871..	1871....		H1-...
12	M108	PIPE_2.0	.467	0	2	.218	0		7	3174..	32130	1871..	1871....		H1-...
13	M127A	PIPE_2.0	.467	0	12	.228	0		5	3174..	32130	1871..	1871....		H1-...
14	M126	PIPE_2.0	.462	0	6	.225	0		11	3174..	32130	1871..	1871....		H1-...
15	M144	PIPE_2.0	.460	0	10	.227	0		3	3174..	32130	1871..	1871....		H1-...
16	M107A	PIPE_2.0	.445	0	8	.234	12		7	3174..	32130	1871..	1871....		H1-...
17	M75	PL3 1/2x5/8	.443	4.5	4	.229	4.5	y	122	6859..	70875	922....	5167....		H1-...
18	M125	PIPE_2.0	.439	0	12	.241	12		11	3174..	32130	1871..	1871....		H1-...
19	M143	PIPE_2.0	.439	0	4	.245	12		2	3174..	32130	1871..	1871....		H1-...
20	M106	PIPE_2.0	.435	0	2	.205	12		13	3174..	32130	1871..	1871....		H1-...
21	M142	PIPE_2.0	.430	0	10	.209	12		9	3174..	32130	1871..	1871....		H1-...
22	M124A	PIPE_2.0	.428	0	6	.215	12		5	3174..	32130	1871..	1871....		H1-...
23	M36	PL3 1/2x5/8	.415	4.5	12	.215	0	y	94	6859..	70875	922....	5167....		H1-...
24	M91	0.625" S.R.	.414	15.313	8	.003	0		2	1757..	9946..	96.7...	96.7...	1	H1-...
25	HOR3	PIPE_2.5	.400	45.312	3	.154	45.312		8	5030..	50715	3596..	3596....		H1-...
26	R9	PIPE_2.0	.398	44	112	.244	4		10	2652..	32130	1871..	1871....		H1-...
27	HOR5	PIPE_2.5	.397	45.312	11	.146	45.312		16	5030..	50715	3596..	3596....		H1-...
28	M9	0.625" S.R.	.389	15.938	12	.002	0		7	1757..	9946..	96.7...	96.7...	1	H1-...
29	SA6	PIPE_2.0	.386	0	8	.100	31.537		8	2957..	32130	1871..	1871....		H1-...
30	HOR1	PIPE_2.5	.385	45.313	7	.140	34.375		10	5030..	50715	3596..	3596....		H1-...
31	R4	PIPE_2.0	.381	44	130	.182	4		8	2652..	32130	1871..	1871....		H1-...
32	R1	PIPE_2.0	.366	44	70	.173	4		12	2652..	32130	1871..	1871....		H1-...
33	SA10	PIPE_2.0	.365	0	4	.106	31.537		112	2957..	32130	1871..	1871....		H1-...
34	R3	PIPE_2.0	.362	44	93	.237	4		6	2652..	32130	1871..	1871....		H1-...
35	M48	0.625" S.R.	.361	15.938	4	.003	0		10	1757..	9946..	96.7...	96.7...	1	H1-...
36	SA5	PIPE_2.0	.338	0	8	.104	29.566		8	2957..	32130	1871..	1871....		H1-...
37	SA2	PIPE_2.0	.338	0	12	.091	31.537		12	2957..	32130	1871..	1871....		H1-...
38	R6	PIPE_2.0	.336	44	137	.263	4		2	2652..	32130	1871..	1871....		H1-...
39	R7	PIPE_2.0	.329	44	102	.183	4		4	2652..	32130	1871..	1871....		H1-...
40	HOR4	PIPE_2.5	.299	104.687	10	.085	45.312		8	4861..	50715	3596..	3596....		H1-...
41	SA9	PIPE_2.0	.297	0	4	.100	29.566		4	2957..	32130	1871..	1871....		H1-...
42	M103	PL3 1/2x5/8	.293	4.5	9	.185	0	y	140	6859..	70875	922....	5167....		H1-...
43	SA1	PIPE_2.0	.291	0	12	.096	1.971		12	2957..	32130	1871..	1871....		H1-...
44	HOR6	PIPE_2.5	.290	45.312	6	.077	45.312		4	1455..	50715	3596..	3596....		H1-...
45	M60	PL3 1/2x5/8	.287	4.5	5	.238	0	y	112	6859..	70875	922....	5167....		H1-...

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

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*...	phi*...	phi*...	phi*...	...	Eqn
46	HOR2	PIPE_2.5	.279	104.688	2	.074	45.313		12	4899..	50715	3596..	3596..		H1-..
47	M21	PL3 1/2x5/8	.277	4.5	13	.199	0	y	95	6859..	70875	922....	5167..		H1-..
48	SA8	PIPE_2.0	.260	0	8	.043	29.237		175	2957..	32130	1871..	1871..		H1-..
49	M101	PL3 1/2x5/8	.234	4.5	10	.208	0	y	126	6859..	70875	922....	5167..		H1-..
50	M19	PL3 1/2x5/8	.232	4.5	2	.192	0	y	82	6859..	70875	922....	5167..		H1-..
51	M58	PL3 1/2x5/8	.227	4.5	6	.177	4.5	y	110	6859..	70875	922....	5167..		H1-..
52	SA12	PIPE_2.0	.222	0	4	.039	1.971		8	2957..	32130	1871..	1871..		H1-..
53	SA4	PIPE_2.0	.215	0	4	.040	29.237		155	2957..	32130	1871..	1871..		H1-..
54	M117	PL3 1/2x5/8	.203	0	125	.224	4.5	y	126	6859..	70875	922....	5167..		H1-..
55	M35	PL3 1/2x5/8	.195	0	81	.209	0	y	82	6859..	70875	922....	5167..		H1-..
56	M74	PL3 1/2x5/8	.185	0	109	.192	0	y	110	6859..	70875	922....	5167..		H1-..
57	R5	PIPE_2.0	.172	4	2	.158	4		2	2652..	32130	1871..	1871..		H1-..
58	MP2	PIPE_2.0	.171	45	8	.024	45		25	9836..	32130	1871..	1871..		H1-..
59	MP8	PIPE_2.0	.169	45	12	.025	45		11	9836..	32130	1871..	1871..		H1-..
60	MP5	PIPE_2.0	.169	45	4	.025	45		9	9836..	32130	1871..	1871..		H1-..
61	R8	PIPE_2.0	.163	4	10	.154	4		10	2652..	32130	1871..	1871..		H1-..
62	M46	SR 3/4	.151	0	112	.014	0		2	1737..	1431..	178....	178....		H1-..
63	R2	PIPE_2.0	.150	4	6	.144	4		6	2652..	32130	1871..	1871..		H1-..
64	M149	PIPE_2.0	.145	12	180	.058	12		2	3174..	32130	1871..	1871..		H1-..
65	M141A	PIPE_2.0	.145	12	148	.054	12		152	3174..	32130	1871..	1871..		H1-..
66	M145A	PIPE_2.0	.145	12	164	.056	12		10	3174..	32130	1871..	1871..		H1-..
67	SA7	PIPE_2.0	.142	31.537	3	.046	31.537		181	2957..	32130	1871..	1871..		H1-..
68	SA3	PIPE_2.0	.135	31.537	81	.043	31.537		148	2957..	32130	1871..	1871..		H1-..
69	M144A	PIPE_2.0	.129	0	164	.065	12		4	3174..	32130	1871..	1871..		H1-..
70	M148	PIPE_2.0	.129	0	180	.065	12		8	3174..	32130	1871..	1871..		H1-..
71	M140A	PIPE_2.0	.129	0	148	.065	12		12	3174..	32130	1871..	1871..		H1-..
72	SA11	PIPE_2.0	.126	31.537	109	.040	31.537		164	2957..	32130	1871..	1871..		H1-..
73	M89	SR 3/4	.124	0	8	.015	44.937		8	1737..	1431..	178....	178....		H1-..
74	VP2	PIPE_4.0	.121	8.25	3	.238	63.75		8	8309..	93240	1063..	1063..		H1-..
75	VP1	PIPE_4.0	.121	8.25	7	.210	63.75		13	8309..	93240	1063..	1063..		H1-..
76	VP3	PIPE_4.0	.114	8.25	11	.216	63.75		4	8309..	93240	1063..	1063..		H1-..
77	M5	SR 3/4	.114	0	12	.013	44.937		10	1737..	1431..	178....	178....		H1-..
78	M80	0.625" S.R.	.097	30	2	.004	0		2	1757..	9946..	96.7...	96.7...	1	H1-..
79	M44A	0.625" S.R.	.078	30	20	.010	0		6	1757..	9946..	96.7...	96.7...	1	H1-..
80	M88	SR 3/4	.075	0	124	.023	0		2	1737..	1431..	178....	178....		H1-..
81	M140	PIPE_2.0	.073	0	14	.035	69.694		5	2144..	32130	1871..	1871..		H1-..
82	M4	SR 3/4	.072	0	80	.019	44.937		7	1737..	1431..	178....	178....		H1-..
83	M124	0.625" S.R.	.071	30	16	.011	0		2	1757..	9946..	96.7...	96.7...	1	H1-..
84	M45A	SR 3/4	.070	0	107	.020	44.937		10	1737..	1431..	178....	178....		H1-..
85	M81	0.625" S.R.	.068	30	24	.011	0		4	1757..	9946..	96.7...	96.7...	1	H1-..
86	M141	PIPE_2.0	.066	0	10	.042	70.518		123	2123..	32130	1871..	1871..		H1-..
87	M43A	0.625" S.R.	.065	30	10	.003	0		15	1757..	9946..	96.7...	96.7...	1	H1-..
88	M137	PIPE_2.0	.065	73.591	4	.036	73.591		9	2046..	32130	1871..	1871..		H1-..
89	M123	0.625" S.R.	.056	30	18	.005	0		2	1757..	9946..	96.7...	96.7...	1	H1-..
90	M90	SR 3/4	.039	0	14	.006	0		181	1737..	1431..	178....	178....		H1-..
91	M47	SR 3/4	.032	0	22	.007	44.937		165	1737..	1431..	178....	178....		H1-..
92	M6	SR 3/4	.029	44.937	18	.006	0		149	1737..	1431..	178....	178....		H1-..
93	M49	0.625" S.R.	.024	0	6	.015	0		8	1757..	9946..	96.7...	96.7...	1	H1-..
94	M3	SR 3/4	.000	0	182	.014	44.937		13	1737..	1431..	178....	178....		H1-..
95	M44D	SR 3/4	.000	0	182	.014	44.937		5	1737..	1431..	178....	178....		H1-..
96	M87	SR 3/4	.000	0	182	.016	44.937		9	1737..	1431..	178....	178....		H1-..

APPENDIX D

ADDITIONAL CALCUATIONS

INFINIGY

Bolt Calculation Tool, V1.6

PROJECT DATA	
Site Name:	876313
Site Number:	VEST HOUSE AVE. BURNT HOUS
Connection Description:	Sector Frame to Tower

MAXIMUM BOLT LOADS		
Bolt Tension:	2816.67	lbs
Bolt Shear:	955.46	lbs

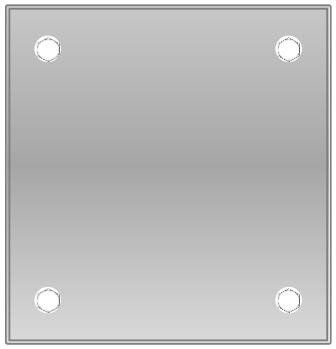
WORST CASE BOLT LOADS[1]		
Bolt Tension:	2816.67	lbs
Bolt Shear:	46.55	lbs

BOLT PROPERTIES		
Bolt Type:	Threaded Rod	-
Bolt Diameter:	0.625	in
Bolt Grade:	Other	-
Yield Strength:	57	ksi
Ultimate Strength:	74	ksi
# of Threaded Rods:	4	-
Threads Excluded?	No	-

[1] *Worst case bolt loads correspond to Load combination #3 on member M127 in RISA-3D, which causes the maximum demand on the bolts.*

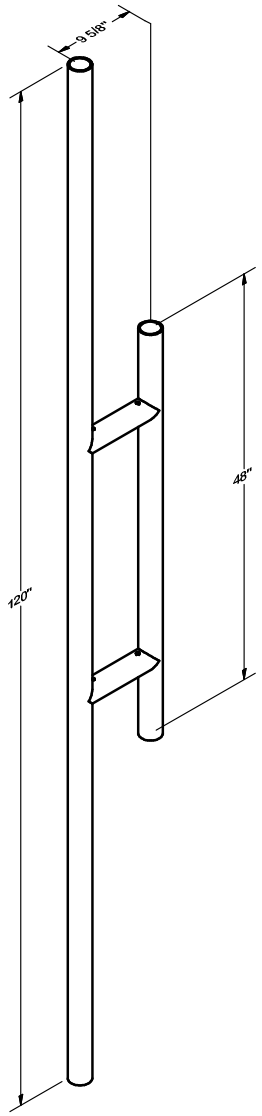
Member Information
J nodes of M44C, M45, M84, M85, M127, M128

BOLT CHECK		
Tensile Strength	12543.09	
Shear Strength	8513.59	
Max Tensile Usage	22.5%	
Max Shear Usage	11.2%	
Interaction Check (Worst Case)	0.05	***≤1.05***
Result	Pass	



APPENDIX E

MOUNT MODIFICATION DESIGN DRAWINGS (MDD) / SUPPLEMENTAL DRAWINGS



PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	1	X-PM1	PM1 STANDOFF MOUNT WELDMENT		59.45	59.45

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
A	120" LONG PIPE WAS 70" LONG		KC8	4-28-21

REVISION HISTORY

TOLERANCE NOTES

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

DESCRIPTION: 1' PANEL STAND-OFF MOUNT

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

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
	CEK 8/9/2019		PM1

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	02	CUSTOMER	BMC 8/21/2019	PM1

Exhibit F

Power Density/RF Emissions Report

Radio Frequency Safety Survey Report Predictive (RFSSRP) Prepared For AT&T

Site Name:	SOUTHINGTON- SOUTH
FA#	10092035
USID:	25915
Site ID:	CTL05264
Address:	1394 MERIDEN WATERBURY TPK SOUTHINGTON, CT 06479
County:	HARTFORD
Latitude:	41.5641919
Longitude:	-72.8918989
Structure Type:	MONOPOLE
Property Owner:	SOUTHINGTON TOWER DEVELOPMENT LLC
Pace Job:	MRCTB056467
RFDS Technology:	5G NR 1SR CBAND

Report Information

Report Writer: Sunita Sati

Report Generated Date: 07-12-2022

Compliance Statement

AT&T Mobility Compliance Statement: Based on the information collected, AT&T Mobility will be Compliant when the remediation recommended in section 5 or appropriate remediation determined by AT&T is implemented

Table of Contents

1. Executive Summary

1.1 Site Summary

Max Predictive Spatial Average MPE% & Location on Site (General Public)	423742.0% on Antennas Centerline Level & at AT&T Sec-B antenna no. #B3-2
Max Predictive Spatial Average MPE% at Ground Level (General Public)	0.8%
AT&T Mobility Site Compliance	AT&T Mobility will be Compliant by implementing remediation recommended as per section 5 in this report.

TABLE 1: Site Summary

1.2 Signage Summary (Proposed)

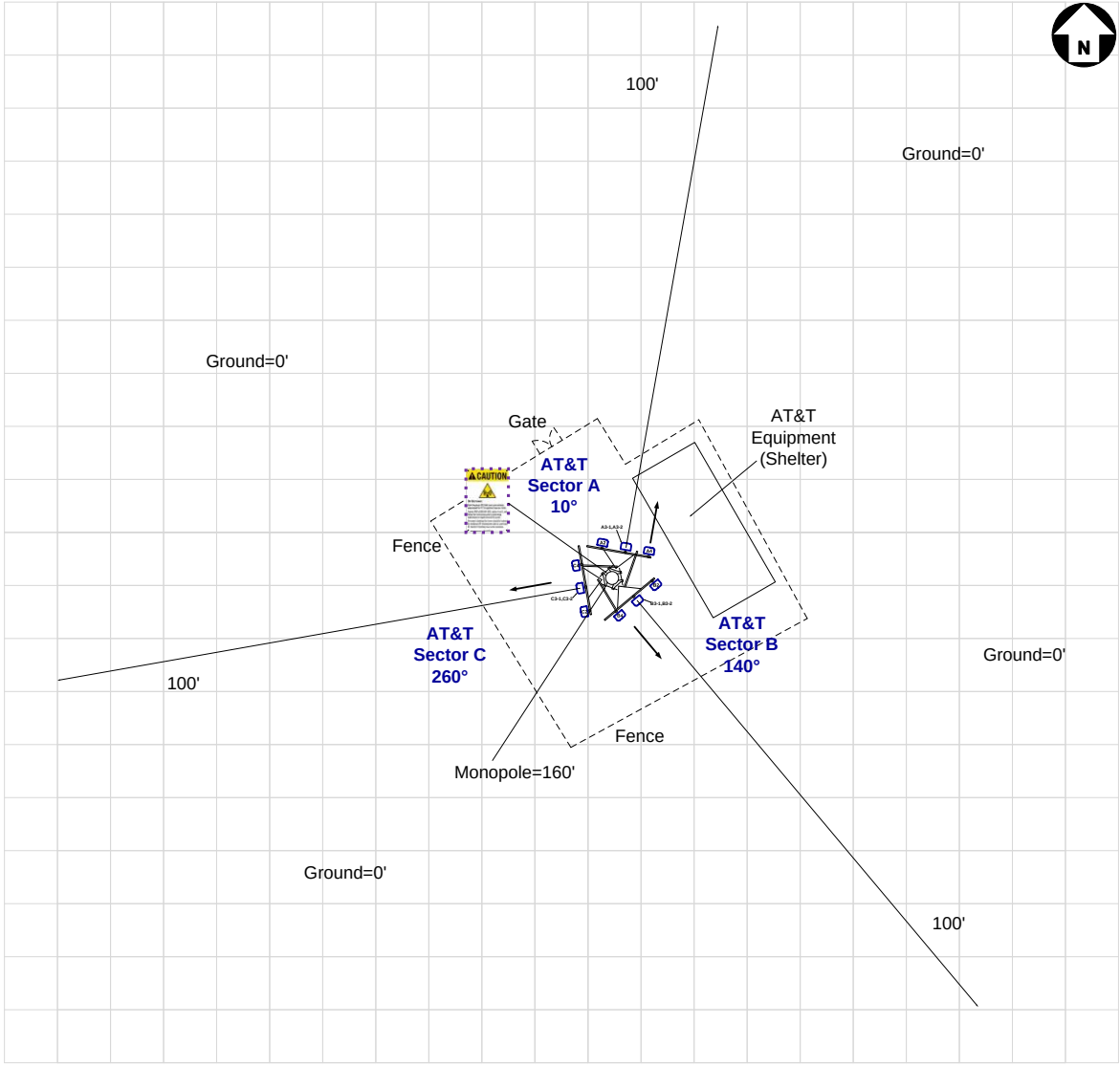
AT&T Signage Locations	Sign Type									
	Safety Instructions	Notice Sign 2	Caution Sign 2	Caution Sign 2B	Caution Sign 2C	Caution 7"x7"	Warning Sign 1B	RF Exposure Map	Lock	Barriers
Access Point(s)				1						
Alpha										
Beta										
Gamma										

TABLE 2: Signage Summary (Proposed)

1.3 List of Documents used to prepare this Report

- *876313 CD*
- *876313_586312 RFDS*

2. Site Scale Map



AT&T Antenna	Proposed	Proposed Signage									
Panel	Barrier	Safety Instructions	Notice 2	Caution 2	Caution 2B	Caution 2C	Caution 7"x7"	Warning 1B	RF Exposure Map	Lock	***Map Scale = 10 ft***
OMNI	Posts										

3. Antenna Inventory

Ant ID	Operator	Antenna Mfg	Antenna Model	Antenna Type	FREQ. (MHz)	TECH.	AZ. (0)	HBW (0)	Antenna Gain (dBd)	Antenna Aperture (ft)	Transmitter Power (Watts)	Total Loss (dB)	Total ERP (Watts)	Total EIRP (Watts)
A2	AT&T	CCI	TPA65R-BU8D	Panel	700	LTE(FN)	10	73	13.45	8	120.00	0.5	2366.91	3883.12
A2	AT&T	CCI	TPA65R-BU8D	Panel	1900	LTE/5G	10	66	15.95	8	120.00	0.5	4209.02	6905.28
A2	AT&T	CCI	TPA65R-BU8D	Panel	2100	LTE/5G	10	66	16.15	8	120.00	0.5	4407.39	7230.72
A3-1	AT&T	Ericsson	AIR 6419 B77G^	Panel	3450	5G	10	11	23.5	2.55	108.44*	0	24277.05*	39828.68*
A3-2	AT&T	Ericsson	AIR 6449 B77D^	Panel	3840	5G	10	11	23.5	2.55	108.44*	0	24277.05*	39828.68*
A4	AT&T	Kathrein	80010966	Panel	700	LTE(B12)	10	66	13.55	8	120.00	0.5	2422.04	3973.57
A4	AT&T	Kathrein	80010966	Panel	850	5G	10	65	14.25	8	120.00	0.5	2845.65	4668.54
A4	AT&T	Kathrein	80010966	Panel	2300	LTE	10	57	15.95	8	75.00	0.5	2630.64	4315.80
B2	AT&T	CCI	TPA65R-BU8D	Panel	700	LTE(FN)	140	73	13.45	8	120.00	0.5	2366.91	3883.12
B2	AT&T	CCI	TPA65R-BU8D	Panel	1900	LTE/5G	140	66	15.95	8	120.00	0.5	4209.02	6905.28
B2	AT&T	CCI	TPA65R-BU8D	Panel	2100	LTE/5G	140	66	16.15	8	120.00	0.5	4407.39	7230.72
B3-1	AT&T	Ericsson	AIR 6419 B77G^	Panel	3450	5G	140	11	23.5	2.55	108.44*	0	24277.05*	39828.68*
B3-2	AT&T	Ericsson	AIR 6449 B77D^	Panel	3840	5G	140	11	23.5	2.55	108.44*	0	24277.05*	39828.68*
B4	AT&T	Kathrein	80010966	Panel	700	LTE(B12)	140	66	13.55	8	120.00	0.5	2422.04	3973.57
B4	AT&T	Kathrein	80010966	Panel	850	5G	140	65	14.25	8	120.00	0.5	2845.65	4668.54
B4	AT&T	Kathrein	80010966	Panel	2300	LTE	140	57	15.95	8	75.00	0.5	2630.64	4315.80
C2	AT&T	CCI	TPA65R-BU8D	Panel	700	LTE(FN)	260	73	13.45	8	120.00	0.5	2366.91	3883.12
C2	AT&T	CCI	TPA65R-BU8D	Panel	1900	LTE/5G	260	66	15.95	8	120.00	0.5	4209.02	6905.28
C2	AT&T	CCI	TPA65R-BU8D	Panel	2100	LTE/5G	260	66	16.15	8	120.00	0.5	4407.39	7230.72
C3-1	AT&T	Ericsson	AIR 6419 B77G^	Panel	3450	5G	260	11	23.5	2.55	108.44*	0	24277.05*	39828.68*
C3-2	AT&T	Ericsson	AIR 6449 B77D^	Panel	3840	5G	260	11	23.5	2.55	108.44*	0	24277.05*	39828.68*
C4	AT&T	Kathrein	80010966	Panel	700	LTE(B12)	260	66	13.55	8	120.00	0.5	2422.04	3973.57
C4	AT&T	Kathrein	80010966	Panel	850	5G	260	65	14.25	8	120.00	0.5	2845.65	4668.54
C4	AT&T	Kathrein	80010966	Panel	2300	LTE	260	57	15.95	8	75.00	0.5	2630.64	4315.80

Table 3.1: Antenna Inventory Table

Note: **^ Mechanical Tilt value of "0°" MUST be retained for C-BAND and/or DoD AAS antenna(s) at all times to ensure that "EME (Predictive) Study" shall remain valid.**
* 75% TDD duty Cycle, 1.5dB Power Tolerance & 0.32 Power Reduction factor[1] are used to calculate Transmitter Power & ERP/EiRP

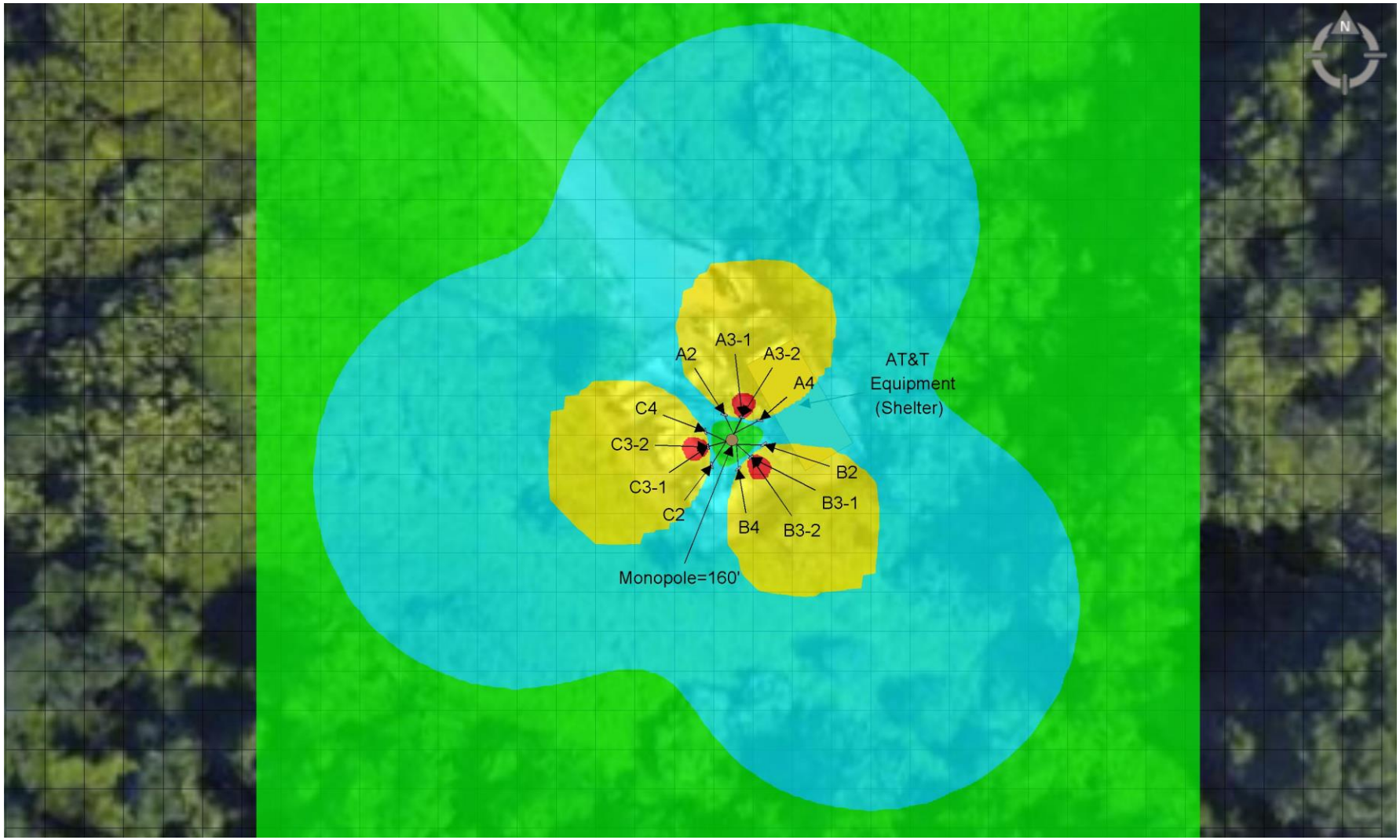
Antenna Heights (Z)

Ant ID	Operator	Antenna Radiation Centerline	Z-Height from Ground
A2	AT&T	158.00	154.00
A3-1	AT&T	159.75	158.48
A3-2	AT&T	156.25	154.98
A4	AT&T	158.00	154.00
B2	AT&T	158.00	154.00
B3-1	AT&T	159.75	158.48
B3-2	AT&T	156.25	154.98
B4	AT&T	158.00	154.00
C2	AT&T	158.00	154.00
C3-1	AT&T	159.75	158.48
C3-2	AT&T	156.25	154.98
C4	AT&T	158.00	154.00

Table 3.2: Antenna Height(s) Summary Table

4. Predicted Emission

4.1 Predictive Cumulative MPE Contribution from All Sources at Antennas Centerline Level (156.25 ft.)



Max. Predictive Spatial Average MPE% = **423742.0%**

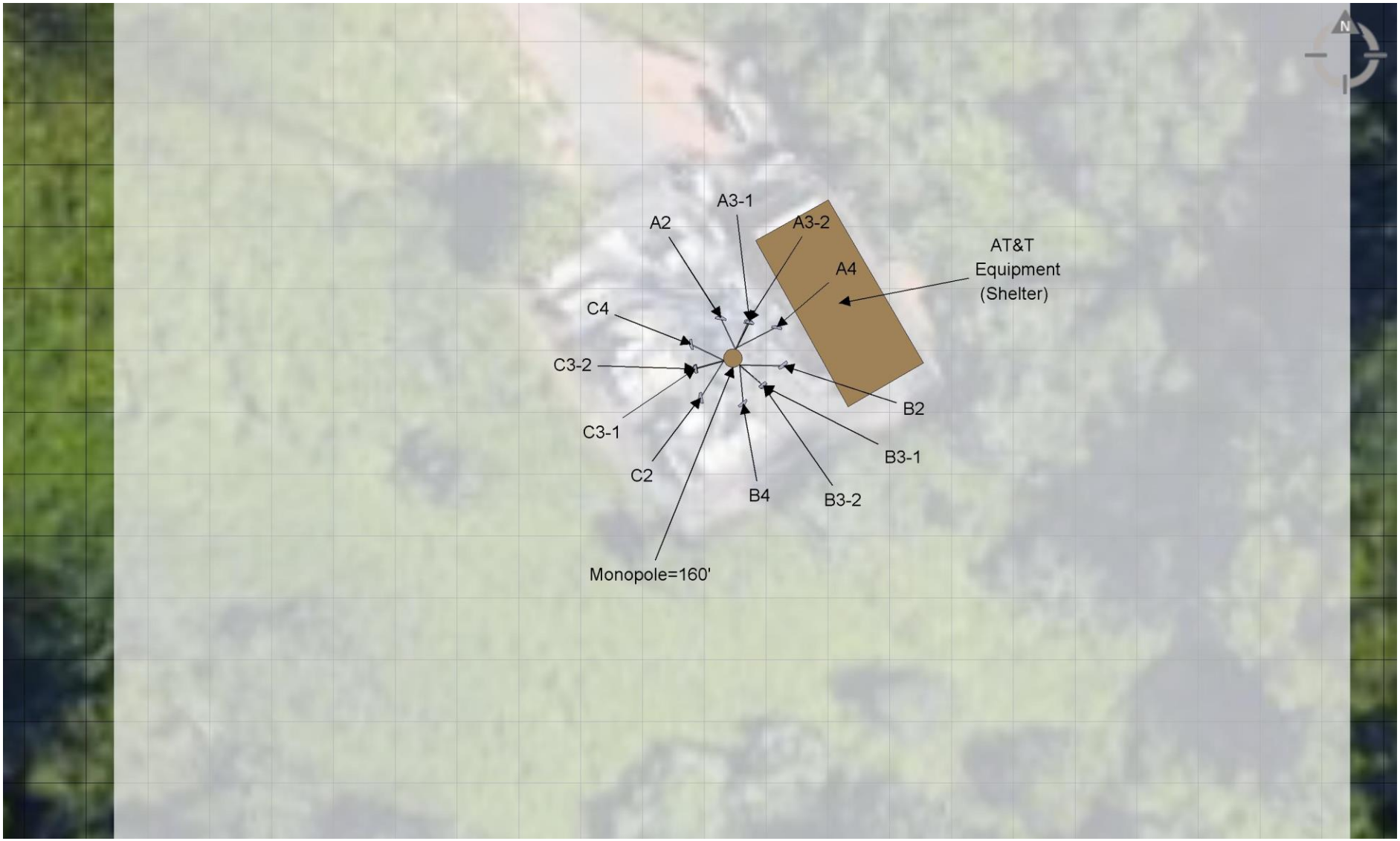
Proposed Barrier
Proposed Posts

% of FCC General Public Exposure Limit (Predictive Spatial Average)

Non-Simulated	0-1	1-100	100-500	500-5000	>5000

Map Scale = 10 ft

4.2 Predictive Cumulative MPE Contribution from All Sources at Ground Level (0 ft.)



Max. Predictive Spatial Average MPE% = **0.8%**

Proposed Barrier
Proposed Posts

% of FCC General Public Exposure Limit (Predictive Spatial Average)

Non-Simulated	0-1	1-100	100-500	500-5000	>5000

Map Scale = 10 ft

5. Statement of Compliance

5.1 Statement of AT&T Mobility Compliance

At the time of our Analysis, AT&T Mobility is required to take action to fulfill their Obligations to comply with the FCC's mandate as defined in OET-65

Recommendations

AT&T Alpha Sector:

- No Action Required

AT&T Beta Sector:

- No Action Required

AT&T Gamma Sector:

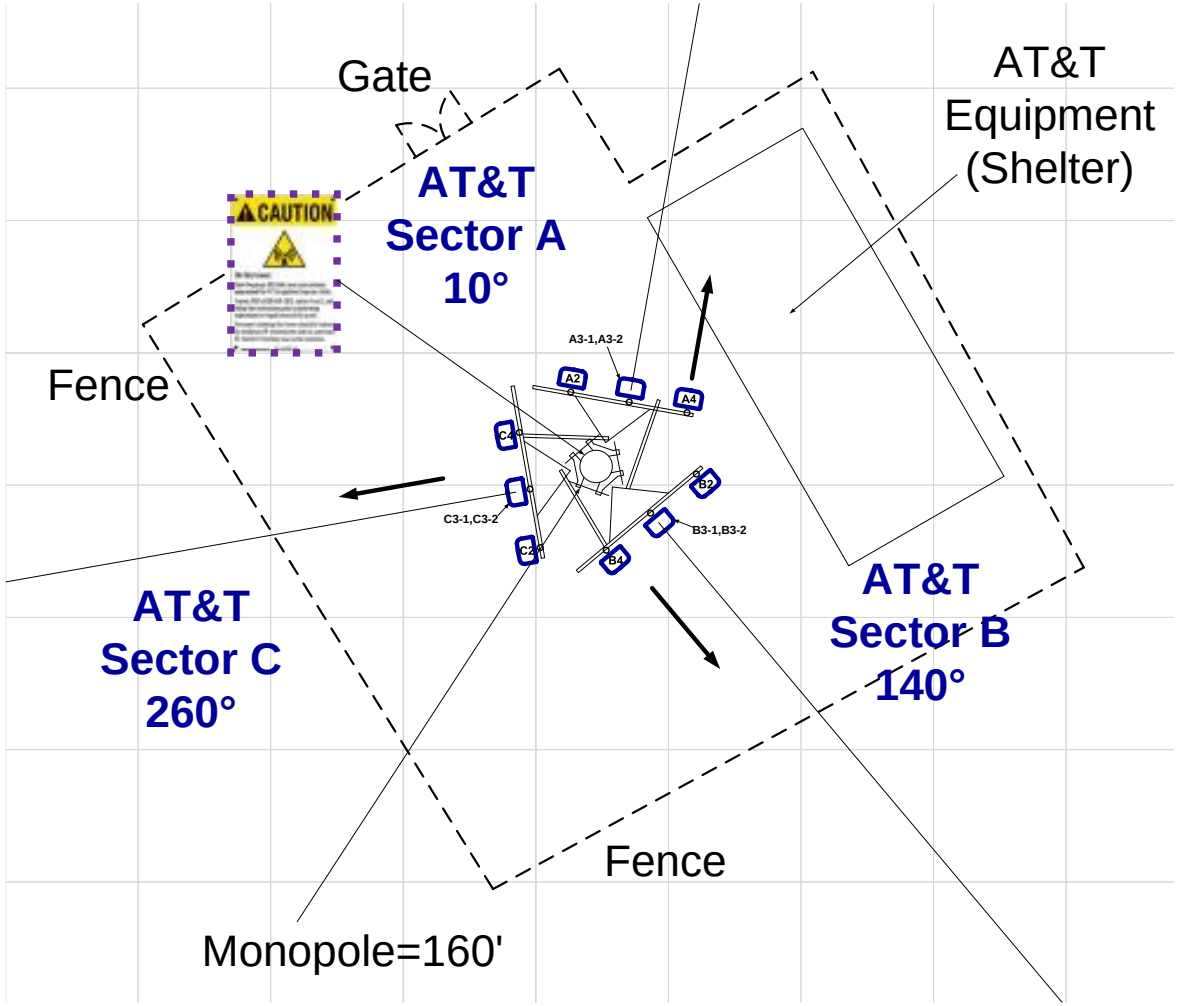
- No Action Required

Monopole:

- One Caution 2B Sign to be posted on the Monopole at climbing access, facing outwards so approaching people can see as shown in "Recommendations Map – Detailed View" on page 10. (1 Total Sign)

Recommendations Map – Detailed View

AT&T Alpha, Beta & Gamma Sectors



AT&T Antenna	Proposed	Proposed Signage									
Panel	Barrier	Safety Instructions	Notice 2	Caution 2	Caution 2B	Caution 2C	Caution 7"x7"	Warning 1B	RF Exposure Map	Lock	*Map Scale = 10 ft*
OMNI	Posts										

Appendix A – Statement of Limiting Conditions

General Model Assumptions

In this site compliance report, it is assumed that all antennas are operating at full power at all times. AT&T has further recommended to assume a 75% duty cycle of maximum radiated power for all LTE & 5G carriers (& consider 100% duty cycle for all UMTS carriers).

In this site compliance report, it is assumed that Mechanical Tilt value of "0°" MUST be retained for C-BAND and/or DoD AAS^ antenna(s) at all times to ensure that "EME (Predictive) Study" shall remain valid.

AT&T recommended to consider - For C-BAND and/or DoD AAS^ antenna(s) 75% TDD duty Cycle, 1.5dB Power Tolerance & 0.32 Power Reduction factor[1] are used to calculate Transmitter Power & ERP/EiRP.

AT&T recommended to use worst-case tilts for the simulations.

*[1] **Power Reduction Factor**: IEC Standard 62232: 2017 allows for a statistically conservative power density model to more realistically define the RF exposure area. AT&T recommends a "0.32" factor to calculate the "Actual Maximum" (time averaged) power value, which accounts for "Beam Scanning," "Scheduling," and "RBS Utilization" This recommended value is a conservative figure modelled and supported by other vendors and through measurements published in scientific articles and white papers by IEEE and others. Those publication are listed below:*

1. IEEE Access, Time-Averaged Realistic Maximum Power Levels for the Assessment of RF Exposure for 5G Radio Base Stations Using Massive MIMO (Published Sept. 18, 2017 / BJÖRN THORS, ANDERS FURUSKÄR, DAVIDE COLOMBI, AND CHRISTER TÖRNEVIK)
2. IEEE Explore, A Statistical Approach for RF Exposure Compliance Boundary Assessment in Massive MIMO Systems (Published Jan. 25, 2018 / Paolo Baracca, Andreas Weber, Thorsten Wild, Christophe Grangeat)
3. IEEE Access, In-situ Measurement Methodology for the Assessment of 5G NR Massive MIMO Base Station Exposure at Sub-6 GHz Frequencies (Published Dec. 20, 2019 / SAM AERTS, LEEN VERLOOCK, MATTHIAS VAN DEN BOSSCHE, DAVIDE COLOMBI, LUC MARTENS, CHRISTER TÖRNEVIK AND WOUT JOSEPH)
4. Applied Sciences, Analysis of the Actual Power and EMF Exposure from Base Stations in a Commercial 5G Network (Published July 30, 2020 / Davide Colombi, Paramananda Joshi, Bo Xu, Fatemeh Ghasemifard, Vignesh Narasaraju and Christer Törnevik)
5. Ofcom Technical Report, Electromagnetic Field (EMF) measurements near 5G mobile phone base stations (Published Feb. 21, 2020 / Davide Colombi, Paramananda Joshi, Bo Xu, Fatemeh Ghasemifard, Vignesh Narasaraju and Christer Törnevik)

MobileComm believes these areas to be safe for entry by occupationally trained personnel utilizing appropriate personal protective equipment (in most cases, a personal monitor). Thus, at any time, if power density measurements were made, we believe the real time measurements would indicate levels below those depicted in the RF emission diagram(s) in this report. By modelling in this way, MobileComm has conservatively shown exclusion areas – areas that should not be entered without the use of a personal monitor, carriers reducing power, or performing real-time measurements to indicate real-time exposure levels.

Use of Generic Antennas

For the purposes of this report, the use of "Generic" as an antenna model, or "Other Carrier" for an operator means the information about a carrier, their FCC license and/or antenna information was not provided and could not be obtained while on site. In the event of unknown information, MobileComm will use our industry specific knowledge of equipment, antenna models, and transmit power to model the site. Information about similar facilities is used when the service is identified and associated with a particular antenna. If no information is available regarding the transmitting service associated with an unidentified antenna, using the antenna manufacturer's published data regarding the antenna's physical characteristics makes more conservative assumptions.

Where the frequency is unknown, MobileComm uses the closest frequency in the antenna's range that corresponds to the highest Maximum Exposure Limit (MPE), resulting in a conservative analysis.

Appendix B – FCC Guidelines and Emissions Threshold Limits

All power density values used in this report were analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (µW/cm2).The number of µW/cm2 calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

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

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter (µW/cm2). The general population exposure limit for the 700 and 800 MHz Bands is approximately 467 µW/cm2 and 567 µW/cm2 respectively, and the general population exposure limit for the 1900 MHz PCS and 2100 MHz AWS bands is 1000 µW/cm2. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/Controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure, have been properly trained in RF safety and can exercise control over their exposure. Occupational/Controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure, have been trained in RF safety and can exercise control over his or her exposure by leaving the area or by some other appropriate means. The Occupational/Controlled exposure limits all utilized frequency bands is five (5) times the FCC's General Public / Uncontrolled exposure limit.

Additional details can be found in FCC OET 65.

Table 1: Limits for Maximum Permissible Exposure (MPE)				
(A) Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	**Electric Field Strength (E) (V/m)**	**Magnetic Field Strength (H) (A/m)**	**Power Density (S) (mW/cm^2)**	**Averaging Time $[E]^2$, $[H]^2$, or S (minutes)**
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-I,500	--	--	f/300	6
1,500-100,000	--	--	5	6
(B) Limits for General Public/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (E) (V/m)**	**Magnetic Field Strength (H) (A/m)**	**Power Density (S) (mW/cm^2)**	**Averaging Time $[E]^2$, $[H]^2$, or S (minutes)**
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-I,500	--	--	f/1,500	30
1,500-100,000	--	--	1.0	30

Appendix C – Rules & Regulations

Explanation of Applicable Rules and Regulations

FCC has set forth guidelines in OET Bulletin 65 for human exposure to radio frequency electromagnetic fields. Currently, there are two different levels of MPE - General Public MPE and Occupational MPE. An individual classified as Occupational can be defined as an individual who has received appropriate RF training and meets the conditions outlined below. General Public is defined as anyone who does not meet the conditions of being Occupational. FCC Rules and Regulations define compliance in terms of total exposure to total RF energy, regardless of location of or proximity to the sources of energy.

It is the responsibility of all licensees to ensure these guidelines are maintained at all times. It is the ongoing responsibility of all licensees composing the site to maintain ongoing compliance with FCC rules and regulations.

A building owner or site manager can use this report as part of an overall RF Health and Safety Policy. It is important for building owners/site managers to identify areas in excess of the General Population MPE and ensure that only persons qualified as Occupational are granted access to those areas.

Occupational Environment Explained

The FCC definition of Occupational exposure limits apply to persons who:

- *are exposed to RF energy as a consequence of their employment;*
- *have been made aware of the possibility of exposure; and*
- *can exercise control over their exposure.*

FCC guidelines go further to state that persons must complete RF Safety Awareness training and must be trained in the use of appropriate personal protective equipment.

In order to consider this site an Occupational Environment, the site must be controlled to prevent access by any individuals classified as the General Public. Compliance is also maintained when any non-occupational individuals (the General Public) are prevented from accessing areas indicated as Red or Yellow in the attached RF Emissions diagram. In addition, a person must be aware of the RF environment into which they are entering. This can be accomplished by an RF Safety Awareness class, and by appropriate written documentation such as this Site Compliance Report.

Appendix D – General Safety Recommendations

The following are general recommendations appropriate for any site with accessible areas in excess of 100% General Public MPE. These recommendations are not specific to this site. These are safety recommendations appropriate for typical site management, building management, and other tenant operations.

1. All individuals needing access to the main site should be instructed to read and obey all posted placards and signs.

2. The site should be routinely inspected and this or similar report updated with the addition of any antennas or upon any changes to the RF environment including:

- *adding new antennas that may have been located on the site*
- *removing of any existing antennas*
- *changes in the radiating power or number of RF emitters*

3. Post the appropriate SAFETY INSTRUCTIONS, NOTICE, CAUTION & WARNING sign at the main site access point(s) and other locations as required. Note: Please refer to RF Exposure Diagrams in the report section above, to inform everyone who has access to this site that beyond posted signs there may be levels in excess of the limits prescribed by the FCC. The signs below are examples of signs meeting FCC guidelines.

4. Ensure that the site door remains locked (or appropriately controlled) to deny access to the general public if deemed as policy by the building/site owner.

5. For a General Public environment the five color levels identified in measured RF emission diagram can be interpreted in the following manner:

- *White represents areas predicted to be greater than or equal to 0% and less than 1% of the MPE general public limits*
- *Green represents areas predicted to be greater than or equal to 1% and less than 100% of the MPE general public limits*
- *Blue represents areas predicted to be greater than or equal to 100% and lesser than 500% of the MPE general public limits.*
- *Yellow represents areas predicted to be greater than or equal to 500% and lesser than 5000% of the MPE general public limits.*
- *Red areas indicates predicted levels greater than or equal to 5000% of the MPE general public limits.*

Appendix E – References

1 - FCC Definition

FCC defines an Occupational or Controlled environment as one where persons are exposed to RF fields as a consequence of their employment and where those persons exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Typical criteria for an Occupational or Controlled environment is restricted access (i.e. locked doors, gates, etc.) to areas where antennas are located coupled with proper RF warning signage.

FCC defines a site as a General Public or Uncontrolled environment when human exposure to RF fields occurs to the general public or in which persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over the exposure. Typical criteria for a General Public or Uncontrolled environment are unrestricted access (i.e. unlocked or no restrictions) to areas where antennas are located without proper RF warning signage being posted.

2 - Physical Testing measurement procedure and Tools

The Narda Broadband Field Meter NBM-550 can make rapid conformance measurements with evaluation in the time domain when used in conjunction EA5091 probe. This probe is a so-called Shaped Probe, i.e. it is frequency weighted so that it automatically takes account of the FCC Occupational limit values. To collect data, the probe is pointed towards the potential source(s) of EME radiation and moved slowly from ground level up to slightly above head height (approx. 6 ft).

Spatial Average Measurement A technique used to average a minimum of ten (10) measurements taken in a ten (10) second interval from zero (0) to six (6) feet. This measurement is intended to model the average energy an average sized human body will absorb while present in an electromagnetic field of energy.

3 - Site Safety Procedures

The following items are general safety recommendations that should be administered on a site by site basis as needed by the carrier.

General Maintenance Work: *Any maintenance personnel required to work immediately in front of antennas and / or in areas indicated as above 100% of the Occupational MPE limits should coordinate with the wireless operators to disable transmitters during their work activities.*

Training and Qualification Verification: *All personnel accessing areas indicated as exceeding the General Population MPE limits should have a basic understanding of EME awareness and RF Safety procedures when working around transmitting antennas. Awareness training increases a workers understanding to potential RF exposure scenarios. Awareness can be achieved in a number of ways (e.g. videos, formal classroom lecture or internet based courses).*

Physical Access Control: *Access restrictions to transmitting antennas locations is the primary element in a site safety plan. Examples of access restrictions are as follows:*

- *Locked door or gate*
- *Alarmed door*
- *Locked ladder access*
- *Restrictive Barrier at antenna locations (e.g. Chain link with posted RF Sign)*

RF Signage: *Everyone should obey all posted signs at all times. RF signs play an important role in properly warning a worker prior to entering into a potential RF Exposure area.*

Assume all antennas are active: *Due to the nature of telecommunications transmissions, an antenna transmits intermittently. Always assume an antenna is transmitting. Never stop in front of an antenna. If you have to pass by an antenna, move through as quickly and safely as possible thereby reducing any exposure to a minimum.*

Maintain a 3 foot clearance from all antennas: *There is a direct correlation between the strength of an EME field and the distance from the transmitting antenna. The further away from an antenna, the lower the corresponding EME field is.*

Rooftop RF Emissions Diagram: *Section 4 of this report contains an RF Emissions Diagram that outlines various theoretical Maximum Permissible Exposure (MPE) areas on the rooftop. This analysis is all theoretical and assumes a duty cycle of 75% for each transmitting antenna at full power. This analysis is a worst case scenario. This analysis is based on one of two access control criteria: General Public criteria means the access to the site is uncontrolled and anyone can gain access. Occupational criteria means the access is restricted and only properly trained individuals can gain access to the antenna locations.*

4 - Definitions

Compliance- *The determination of whether a site is safe or not with regards to Human Exposure to Radio Frequency Radiation from transmitting antennas.*

Decibel (dB) – *A unit for measuring power or strength of a signal.*

Duty Cycle – *The percent of pulse duration to the pulse period of a periodic pulse train. Also, may be a measure of the temporal transmission characteristic of an intermittently transmitting RF source such as a paging antenna by dividing average transmission duration by the average period for transmission. A duty cycle of 75% corresponds to continuous operation.*

Effective (or Equivalent) Isotropic Radiated Power (EIRP) – *The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna, this product is divided by the cable losses*

Effective Radiated Power (ERP) – *In a given direction, the relative gain of a transmitting antenna with respect to the maximum directivity of a half wave dipole multiplied by the net power accepted by the antenna from the connecting transmitter.*

Gain (of an antenna in dbd) – *The ratio of the maximum intensity in a given direction to the maximum radiation in the same direction from a reference dipole. Gain is a measure of the relative efficiency of a directional antennas as compared to a reference dipole.*

General Population/Uncontrolled Environment – *Defined by the FCC, as an area where RFR exposure may occur to persons who are unaware of the potential for exposure and who have no control of their exposure. General Population is also referenced as General Public.*

Generic Antenna – *For the purposes of this report, the use of "Generic" as an antenna model means the antenna information was not provided and could not be obtained while on site. In the event of unknown information, MobileComm will use our industry specific knowledge of antenna models to select a worst case scenario antenna to model the site.*

Isotropic Antenna – *An antenna that is completely non-directional. In other words, an antenna that radiates energy equally in all directions.*

Maximum Measurement – *This measurement represents the single largest measurement recorded when performing a spatial average measurement.*

Maximum Exposure Limit (MPE) – *The RMS and peak electric and magnetic field strength, their squares, or the plane-wave equivalent power densities associated with these fields to which a person may be exposed without harmful effect and with acceptable safety factor.*

Occupational/Controlled Environment – *Defined by the FCC, as an area where Radio Frequency Radiation (RFR) exposure may occur to persons who are aware of the potential for exposure as a condition of employment or specific activity and can exercise control over their exposure.*

Radio Frequency Radiation – *Electromagnetic waves that are propagated from antennas through space.*

Spatial Average Measurement – *A technique used to average a minimum of ten (10) measurements taken in a ten (10) second interval from zero (0) to six (6) feet. This measurement is intended to model the average energy an average sized human body will absorb while present in an electromagnetic field of energy.*

Transmitter Power Output (TPO) – *The radio frequency output power of a transmitter's final radio frequency stage as measured at the output terminal while connected to a load.*

Appendix F – Proprietary Statement

This report was prepared for the use of AT&T Mobility, LLC to meet requirements specified in AT&T's corporate RF safety guidelines. It was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same locale under like circumstances. The conclusions provided by MobileComm are based solely on the information provided by AT&T Mobility and all observations in this report are valid on the date of the investigation. Any additional information that becomes available concerning the site should be provided to MobileComm so that our conclusions may be revised and modified, if necessary. This report has been prepared in accordance with Standard Conditions for Engagement and authorized proposal, both of which are integral parts of this report. No other warranty, expressed or implied, is made.

July 26, 2022

Dear Customer,

The following is the proof-of-delivery for tracking number: 777451081782

Delivery Information:

Status:	Delivered	**Delivered To:**	
Signed for by:	Signature release on file	**Delivery Location:**	196 N MAIN ST
Service type:	FedEx 2Day		
Special Handling:	Deliver Weekday		SOUTHINGTON, CT, 06489
		Delivery date:	Jul 25, 2022 11:45

Shipping Information:

Tracking number:	777451081782	**Ship Date:**	Jul 21, 2022
		Weight:	1.0 LB/0.45 KG

Recipient:
Matthew A. Reimondo, Municipal Center
196 North Main Street
SOUTHINGTON, CT, US, 06489

Shipper:
Ersilia Davis, Crown Castle
1777 Sentry Parkway W
VEVA 17, Suite 400
BLUE BELL, PA, US, 19422

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Signed for by:	T.MOSLEY	**Delivery Location:**	754 PEACHTREE ST NE
Service type:	FedEx 2Day		
Special Handling:	Deliver Weekday		ATLANTA, GA, 30308
		Delivery date:	Jul 25, 2022 10:23

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Tracking number:	777451249719	**Ship Date:**	Jul 21, 2022
		Weight:	1.0 LB/0.45 KG

Recipient:
Southington Tower Development LLC,
754 Peachtree Street NE
16th Floor
ATLANTA, GA, US, 30308

Shipper:
Ersilia Davis, Crown Castle
1777 Sentry Parkway W
VEVA 17, Suite 400
BLUE BELL, PA, US, 19422

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Signed for by:	Signature not required	**Delivery Location:**	33 BELLEVIEW AVE
Service type:	FedEx 2Day		
Special Handling:	Deliver Weekday; Residential Delivery		SOUTHINGTON, CT, 06489
		Delivery date:	Jul 25, 2022 13:05

Shipping Information:

Tracking number:	777451164576	**Ship Date:**	Jul 21, 2022
		Weight:	1.0 LB/0.45 KG

Recipient:
Victoria Triano, Southington Town Council
33 Bellevue Avenue
SOUTHINGTON, CT, US, 06489

Shipper:
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1777 Sentry Parkway W
VEVA 17, Suite 400
BLUE BELL, PA, US, 19422

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