



Crown Castle
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065

February 23, 2022

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

RE: **Notice of Exempt Modification for ATT
Crown#827050; ATT Site ID CTL01039
699 Old Main Street Rocky Hill, CT 06067
Latitude: 41° 40' 5.77" / Longitude: -72° 38 16.93"**

Dear Ms. Bachman:

ATT currently maintains nine (9) antennas at the 105-foot mount on the existing 150-foot monopole tower located at 699 Old Main Street Rocky Hill, CT. The property is owned by The Town of Rocky Hill and the tower is owned by Crown Castle. ATT now intends to add three (3) new antennas, replace nine (9) antennas and ancillary equipment at the 105ft level. 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.

Panned Modification:

Tower:

Installed New:

- (1) CCI – TPA-65R-BU6D-K Antenna
- (2) CCI – DMP65R-BU8DA-K Antennas
- (3) Ericsson - AIR6449 N77D Antennas
- (2) CCI – TPA-65R-BU8DA Antennas
- (1) CCI – DMP65R—BU6DA Antenna
- (3) Ericsson – AIR6419 N77G Antenna
- (3) Ericsson- 4415 B25 RRU
- (3) Ericsson- 4449 B5/B12 RRU
- (3) Ericsson- 4478 B14 RRU
- (3) Y Cables
- (1) Raycap-DC9-48-60-24-8C-EV Squid
- (3) Commscope-RR-FA2 back-to-back mounts
- (1) Fiber Cable
- (3) DC Cables (7/8")
- (3) Site Pro Mount Pipes.

Remove:

- (3) Powerwave-7750Antennas
- (1) CCI – HPA-65R-BUU-H6 Antennas
- (1) Quintel – QS66512-2 Antennas
- (2) CCI – HPA-65-BUU-H8 Antennas
- (2) CCI – TPA-65R-LCUUUU-H8 Antenna
- (6) Powerwave – LGP21401 TMAs
- (3) Ericsson 11 B12 RRU
- (3) Ericsson 32 B2 RRU
- (6) Powerwave LPG21901 Diplexers
- (3) Commscope – DBC0061FIVI-2 Diplexers
- (6) Coax Cables (1-5/8")
- (2) Coax Cables (3/8")
- (1) RET Cable (3/8")

Ground:

Install New:

- (1) 6673 FHG
- (1.) 6630 (+IDLE)
- (3-) Rectifies
- (1.) 19" Distribution Shelf

The facility was approved by the Town of Rocky Hill Planning and Zoning Commission on December 18, 1998.

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 Lisa J. Marotta - Mayor Town of Rocky Hill, Kimberley A. Ricci – Town Planner/Zoning Enforcement Officer Town of Rocky Hill. Crown Castle is the tower owner and Town of Rocky Hill is the property owner.

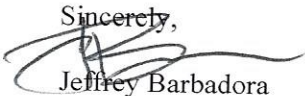
1. The proposed modifications will not result in an increase in the height of the existing tower.
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modification will not increase noise levels at the facility by six decibels or more, or to levels that exceed 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.

Melanie A. Bachman

Page 3

For the foregoing reasons, ATT 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). Please send approval/rejection letter to Attn: Jeffrey Barbadora.

Sincerely,



Jeffrey Barbadora
Site Acquisition Specialist
1800 W. Park Drive
Westborough, MA 01581
(781) 970-0053 Jeff.Barbadora@crowncastle.com

Attachments

cc:

Lisa J. Marotta - Mayor
Town of Rocky Hill
761 Old Main Street
Rocky Hill CT 06067
(860-258-2700

Kimberley A. Ricci – Town Planner/Zoning Enforcement Officer
Town of Rocky Hill
761 Old Main Street
Rocky Hill CT 06067
(860-258-2761

Town of Rocky Hill, Property Owner

Crown Castle, Tower Owner

FINAL
CERTIFICATE

OF

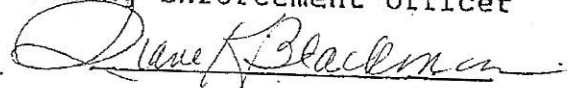
ZONING COMPLIANCE

This is to certify that a Final Certificate of Zoning Compliance is awarded to Omni Point Communications Inc. & Town of Rocky Hill for the development located at 699 Old Main St. more specifically described as Omni Point Tower located at Rocky Hill Town Hall

The issuance of this certificate is evidence that an inspection of the development was conducted on November 5, 1999.

A final Certificate of Zoning Compliance is being issued on this 5 day of November in the year 1999.

Zoning Enforcement Officer



Diane K. Blackman
Assistant Town Planner/ZEO



Town

P 200 717 074

699 OLD MAIN STREET • PO BOX 657 • ROCKY HILL

CERTIFIED

December 18, 1998

Mr. Thomas Gilligan
Omnipoint Communications, Inc.
100 Filley St.
Bloomfield, CT 06002

Ms. Barbara Gilbert Interium Town Manager
Town of Rocky Hill
699 Old Main St.
Rocky Hill, CT 06067

RE: Site Plan Application, 150' monopole Antenna, 699 Old Main Street

Dear Mr. Gilligan and Ms. Gilbert,

The Rocky Hill Planning and Zoning Commission at their regular meeting of December 16, 1998 voted to approve the aforementioned application. The applicants at the meeting indicated that the fenced-in area could be screened with shrubs and that the antenna could be painted, etc. to better blend with the environment. Please contact the undersigned with your intentions for screening.

Please prepare and submit two (2) sets of the final plans for the Commission's signature. One set of plans is to conform with the enclosed Map Requirements, and the other can be mylar for filing with the Planning and Engineering Departments. The plans are to have signature blocks for the Commission. In addition, there is a \$10.00 per sheet recording fee (one set only) due and payable to the Town of Rocky Hill. Upon receipt of the signed plans and the recording fee, Staff will gladly record the plans with the Town Clerk.

Should you have any questions, please do not hesitate to contact this office at 860-258-2761 or 860-258-2766.

Sincerely,

Kimberley A. Ricci
Kimberley A. Ricci, Town Planner/Assistant ZEO

KAR/mn

cc: Police Chief
Fire Chief

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to	
Omnipoint Comm	
Street & Number	
100 Filley	
Post Office, State, & ZIP Code	
Bloomfield, CT 06002	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

PS Form 3800, April 1995

PLANNING AND ZONING COMMISSION

ROCKY HILL, CONNECTICUT

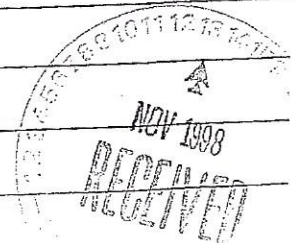
APPLICATION FOR SITE PLAN SUBMISSION

DATE: _____

Application is hereby made for the submission of a site plan
~~SHITLES~~ DEPICTING A PROPOSED 150' TOWER TO REPLACE THE EXISTING 77'
GUIDE TOWER. DWILLIAMS COMMUNICATIONS, INC. AND

1. Name and address of applicant: 100 FILLEY ST. BLOOMFIELD, CT
TOWN OF ROCKY HILL
699 OLD MAIN ST. ROCKY HILL, CT TEL. 860-692-7132 (7156) 258-2700
2. Name and address of owner of record: TOWN OF ROCKY HILL
699 OLD MAIN ST. ROCKY HILL, CT TEL. 258-2700
3. Name and address of engineer of surveyor: LAPATKA ASSOCIATES
12 ROUTE 17 NORTH PARAMUS, NJ 07652 TEL. 201-587-1600
4. Location: 699 OLD MAIN ST. - MUNICIPAL COMPLEX
5. Tax Assessor's Map No.: 22 Lot No.: 008/3
Block No.: 01
6. Total area of proposed development 2500 S.F. No. of Lots: N/A
7. Is there any water course within or contiguous to the property? NO
8. List any potential hazards within or contiguous to the property (Steep cliffs, easements for high pressure gas lines, power transmission lines, etc.) N/A
9. Does owner of record own or have any interest in a partnership or corporation owning abutting property? YES
10. Has any zoning variance been granted concerning this property?
NO

If so, please give full information: _____



PLANNING AND ZONING COMMISSION
(Cont'd)

11. Is there a proposed new street or improvement of existing street? NO
- (a) If so are copies or road profile submitted? _____
- (b) If so are copies of drainage plan submitted? _____
12. If not owner or record, has applicant been legally authorized to act as agent for the owner? _____
13. Has the application fee been submitted? N/A

Thomas M. Sullivan FOR OMNIPONT COMM.
Robert J. Sullivan Tom Sullivan
APPLICANT

NOTE: All applications and maps to be considered at a meeting of the Commission must be in the hands of the Secretary of the Commission at least twenty one (21) days before said meeting.

***** CERTIFICATE OF COMPLIANCE FORM, AS PER ROCKY HILL
ORDINANCE #132-85, COMPLETED AND ATTACHED

_____ YES

_____ NO

(Application will be deemed as incomplete until such time as the Certificate of Compliance is submitted).

Situs : 761 OLD MAIN STREET

PARCEL ID: 6852

Class: 901

Card: 1 of 7

Printed: March 5, 2020

CURRENT OWNER

ROCKY HILL TOWN OF
MUNICIPAL COMPLEX
761 OLD MAIN STREET
ROCKY HILL CT 06067

GENERAL INFORMATION

Living Units
Neighborhood C
Alternate ID 007389
Vol / Pg 10-045
Map/Lot R-20
Zoning EXEMPT
Class

Property Notes



10-045-002 12/07/2012

Land Information			
Type	Size	Influence Factors	Influence % Value
Primary	AC 8.5600		3,046,000
Total Acres: 8.56 Spot:			
Location:			

Assessment Information				
	Assessed	Appraised	Cost	Income Market
Land	2,132,200	3,046,000	3,046,000	3,046,000
Building	6,736,520	9,623,600	9,623,600	2,670,400
Total	8,868,720	12,669,600	12,669,600	5,716,400
Manual Override Reason				
Value Flag	COST APPROACH	Base Date of Value	Effective Date of Value	
Gross Building:				

Entrance Information		
Date	ID	Entry Code
10/01/14	CL	Office Review Change
10/09/12	ST	Measured + 1visit
05/23/07	ST	Reval Inspection

Permit Information		
Date Issued	Number	Price Purpose
07/25/19	2019-430	500 EL
07/18/19	2019-325	11,700 CA
01/29/19	2019-170	1,000 EL
01/16/19	2019-228	20,000 CM
12/20/18	2019-214	20,000 CM
% Complete		
Wired Electrical For Split Ac Unit F		
Pd Modular Server Room - 3 Ton E		
Installing A Double Duplex Outlet /		
Sprint To Replace Three (3) Antenn		
Verizon To Replace Six (6) Antenn		

Sales/Ownership History		
Transfer Date	Price Type	Validity
		No Consideration

Deed Reference		
Deed Reference	Deed Type	Grantee
	No Consideration	ROCKY HILL TOWN OF

Inspection Witnessed By _____

Situs : 761 OLD MAIN STREET

Parcel Id: 6852

Class: 901

Card: 1 of 7

Printed: March 5, 2020

Building Information

Year Built/Est Year 1965 /
Building # 1
Structure Type Office Bldg L/R 1-4s
Identical Units 1
Total Units 1
Grade C+
Covered Parking
Uncovered Parking
DBA TOWN
HALL/COMMUNITY

Building Other Features

Line	Type	Meas1	Meas2	# Stops	Ident Units	Line	Type	+/-	Meas1	Meas2	# Stops	Ident Units
1	Porch, Open	189	1	1	1							
1	Porch, Enclosed	54	1	1	1							
1	Porch, Enclosed	60	1	1	1							
1	Elevator Hydraulic Pasngi	2,500	100	2	2							

Interior/Exterior Information

Line	Level From - To	Int Fin	Area	Perim	Use Type	Wall Height	Ext Walls	Construction	Partitions	Heating	Cooling	Plumbing	Physical	Functional
1	01	01	28,902	680	Offices	12	Brick & Con	Fire Resistant	Normal	Hot Air	Central	Normal	5	3
2	02	02	18,196	540	Offices	12	Brick & Con	Fire Resistant	Normal	Hot Air	Central	Normal	4	3

Interior/Exterior Valuation Detail

Line	Area	Use Type	% Good	% Complete	Use Value/RCNLD
1	28,902	Offices	60		2,551,590
2	18,196	Offices	60		1,332,170

Outbuilding Data

Line	Type	Yr Blt	Meas1	Meas2	Qty	Area	Grade	Phy Fun	Value
1	Asph Pav	2002			1	127,781	C	G	175,700



Barbadora, Jeff

From: TrackingUpdates@fedex.com
Sent: Thursday, February 24, 2022 9:33 AM
To: Barbadora, Jeff
Subject: FedEx Shipment 776121242176: Your package has been delivered

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.



Hi. Your package was
delivered Thu, 02/24/2022 at
9:27am.



Delivered to 761 OLD MAIN ST, ROCKY HILL, CT 06067
Received by M.MAROTTA

OBTAIN PROOF OF DELIVERY

TRACKING NUMBER [776121242176](#)

FROM	Jeff Barbadora 1800 W. Park Drive WESTBOROUGH, MA, US, 01581
TO	Town of Rocky Hill Lisa J. Marotta - Mayor 761 Old Main Street ROCKY HILL, CT, US, 06067
REFERENCE	799001.7680
SHIPPER REFERENCE	799001.7680
SHIP DATE	Wed 2/23/2022 06:03 PM
DELIVERED TO	Receptionist/Front Desk
PACKAGING TYPE	FedEx Pak
ORIGIN	WESTBOROUGH, MA, US, 01581
DESTINATION	ROCKY HILL, CT, US, 06067
SPECIAL HANDLING	Deliver Weekday
NUMBER OF PIECES	1
TOTAL SHIPMENT WEIGHT	1.00 LB
SERVICE TYPE	FedEx Priority Overnight



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Barbadora, Jeff

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Sent: Thursday, February 24, 2022 9:31 AM
To: Barbadora, Jeff
Subject: FedEx Shipment 776121272087: Your package has been delivered

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Hi. Your package was
delivered Thu, 02/24/2022 at
9:27am.



Delivered to 761 OLD MAIN ST, ROCKY HILL, CT 06067
Received by M.MAROTTA

OBTAIN PROOF OF DELIVERY

TRACKING NUMBER [776121272087](#)

FROM Jeff Barbadora
1800 W. Park Drive
WESTBOROUGH, MA, US, 01581

TO Town of Rocky Hill
Kimberley A. Ricci - Town Planner
761 Old Main Street
ROCKY HILL, CT, US, 06067

REFERENCE 799001.7680

SHIPPER REFERENCE 799001.7680

SHIP DATE Wed 2/23/2022 06:03 PM

DELIVERED TO Receptionist/Front Desk

PACKAGING TYPE FedEx Pak

ORIGIN WESTBOROUGH, MA, US, 01581

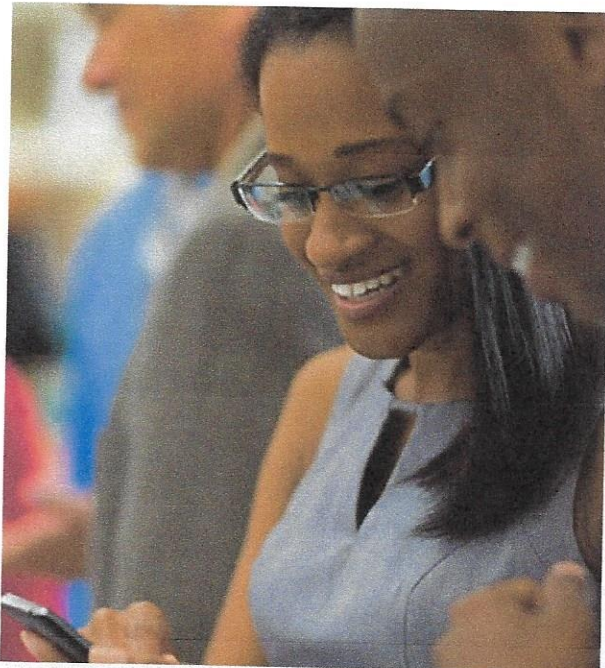
DESTINATION ROCKY HILL, CT, US, 06067

SPECIAL HANDLING Deliver Weekday

NUMBER OF PIECES 1

TOTAL SHIPMENT WEIGHT 1.00 LB

SERVICE TYPE FedEx Priority Overnight



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Date: **September 23, 2021**



Crown Castle
2000 Corporate Drive
Canonsburg, PA 15317
(724) 416-2000

Subject: **Structural Analysis Report**

Carrier Designation: **AT&T Mobility Co-Locate**
Site Number: CTL01039
Site Name: Rocky Hill/ Rte 160_1
FA Number: 10128682

Crown Castle Designation: **BU Number:** 827050
Site Name: Rocky Hill/ Rte 160_1
JDE Job Number: 649387
Work Order Number: 2018154
Order Number: 556527 Rev. 0

Engineering Firm Designation: **Crown Castle Project Number:** 2018154

Site Data: **699 Old Main St., Rocky Hill, Hartford County, CT**
Latitude 41° 40' 5.77", Longitude -72° 38' 16.93"
147.5 Foot - Monopole Tower

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

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

LC7: Proposed Equipment Configuration

Sufficient Capacity - 90.6%

This analysis has been performed in accordance with the 2018 Connecticut State 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".

Structural analysis prepared by: Steven Hu

Respectfully submitted by:

Barimani

Digitally signed by Maham Barimani
Date: 2021.09.24 16:09:44
+0400

Maham Barimani, P.E.
Senior Project Engineer

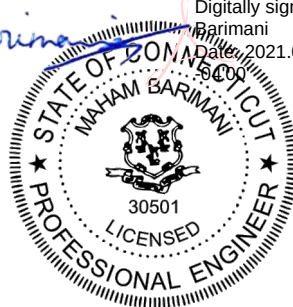


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1) INTRODUCTION

This tower is a 147.5 ft Monopole tower designed by Pirod Manufactures Inc. The tower has been modified multiple times to accommodate additional loading.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	118 mph
Exposure Category:	C
Topographic Factor:	1
Ice Thickness:	1.5 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)
102.0	105.0	1	cci antennas	DMP65R-BU6D w/ Mount Pipe	3 4 3 6	3/8 13/16 7/8 1-5/8
		2	cci antennas	DMP65R-BU8D w/ Mount Pipe		
		1	cci antennas	TPA65R-BU6D w/ Mount Pipe		
		2	cci antennas	TPA65R-BU8D w/ Mount Pipe		
		3	ericsson	AIR 6419 B77G w/ Mount Pipe		
		3	ericsson	AIR 6449 N77 w/ Mount Pipe		
		3	ericsson	RADIO 4478 B14		
		3	ericsson	RRUS 32 B30		
		3	ericsson	RRUS 32 B66		
		3	ericsson	RRUS 4415 B25		
		3	ericsson	RRUS 4449 B5/B12		
		2	raycap	DC6-48-60-18-8F		
		1	raycap	DC9-48-60-24-8C-EV		
	102.0	1	tower mounts	Platform Mount [LP 303-1]		

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)
150.0	167.0	2	dbspectra	DS4C06F36D-D	7 10	7/8 1-5/8
	154.0	1	rfs celwave	201-1N		
	150.0	3	commscope	SDX1926Q-43		
		3	ericsson	AIR 32 B2A/B66AA w/ Mount Pipe		
		3	ericsson	AIR6449 B41_T-MOBILE w/ Mount Pipe		
		3	ericsson	KRY 112 144/1		
		3	ericsson	RADIO 4449 B71 B85A_T-MOBILE		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
		3	ericsson	RRUS 4415 B25		
		3	rfs celwave	APXVAARR24_43-U-NA20 w/ Mount Pipe		
		1	tower mounts	Platform Mount [LP 405-1_HR-1]		
140.0	140.0	6	commscope	NNHH-65B-R4 w/ Mount Pipe	1 7	1-1/4 1-5/8
		1	raycap	RVZDC-6627-PF-48		
		1	rfs celwave	DB-T1-6Z-8AB-0Z		
		3	samsung telecommunications	CBRS w/ Mount Pipe		
		3	samsung telecommunications	MT6407-77A w/ Mount Pipe		
		3	samsung telecommunications	RFV01U-D1A		
		3	samsung telecommunications	RFV01U-D2A		
		1	tower mounts	Platform Mount [LP 303-1_KCKR]		
130.0	130.0	3	alcatel lucent	PCS 1900MHz 4x45W-65MHz	3 1	1-1/4 1-1/2
		6	alcatel lucent	RRH2X50-800		
		3	commscope	NNVV-65B-R4 w/ Mount Pipe		
		3	nokia	AAHC w/ Mount Pipe		
		1	tower mounts	Platform Mount [LP 405-1]		
120.0	120.0	3	fujitsu	TA08025-B604	1	1-1/2
		3	fujitsu	TA08025-B605		
		3	jma wireless	MX08FRO665-21 w/ Mount Pipe		
		1	raycap	RDIDC-9181-PF-48		
		1	tower mounts	Commscope MC-PK8-DSH		
95.0	95.0	3	rfs celwave	APXV18-206516S-C	6	1-5/8
		1	tower mounts	Pipe Mount [PM 601-3]		
89.0	95.0	1	rfs celwave	1142-2C	1	1/2
	89.0	1	tower mounts	Side Arm Mount [SO 701-1]		
72.0	74.0	1	gps	GPS_A	-	-
	72.0	1	tower mounts	Side Arm Mount [SO 701-1]		
54.0	64.0	1	rfs celwave	220-8N	2	7/8
	61.0	1	rfs celwave	201-1N		
	54.0	2	tower mounts	Side Arm Mount [SO 701-1]		
49.0	49.0	1	tower mounts	Yagi Mount	1	7/8
		1	decibel	DB436-C		
45.0	45.0	1	tower mounts	Yagi Mount	1	7/8
		1	decibel	DB436-C		
40.0	40.0	1	tower mounts	Yagi Mount	1	7/8
		1	decibel	DB436-C		
37.0	37.0	1	tower mounts	Yagi Mount	1	7/8

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
		1	decibel	DB436-C		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
4-GEOTECHNICAL REPORTS	3464587	CCISITES
4-POST-MODIFICATION INSPECTION	3774967	CCISITES
4-POST-MODIFICATION INSPECTION	3774968	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	3674483	CCISITES
4-TOWER MANUFACTURER DRAWINGS	3464619	CCISITES
4-TOWER PROPOSED REINFORCEMENT DESIGN/DRAWINGS/DATA	4424839	CCISITES
4-POST-MODIFICATION INSPECTION	5849862	CCISITES

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 included in Appendix C.

3.2) Assumptions

- 1) 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.

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

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
147.5 - 142.5	Pole	TP24x24x0.375	Pole	8.7%	Pass
142.5 - 137.5	Pole	TP24x24x0.375	Pole	15.5%	Pass
137.5 - 132.5	Pole	TP24x24x0.375	Pole	23.6%	Pass
132.5 - 127.5	Pole	TP24x24x0.375	Pole	33.7%	Pass
127.5 - 125	Pole	TP24x24x0.375	Pole	39.2%	Pass
125 - 120	Pole	TP30x30x0.375	Pole	33.4%	Pass
120 - 115	Pole	TP30x30x0.375	Pole	42.9%	Pass
115 - 110	Pole	TP30x30x0.375	Pole	52.3%	Pass
110 - 105	Pole	TP30x30x0.375	Pole	61.9%	Pass
105 - 100	Pole	TP30x30x0.375	Pole	74.3%	Pass
100 - 95	Pole	TP36x36x0.375	Pole	61.8%	Pass
95 - 94.25	Pole	TP36x36x0.375	Pole	63.2%	Pass
94.25 - 94	Pole + Reinf.	TP36x36x0.4938	Reinf. 5 Tension Rupture	52.1%	Pass
94 - 89	Pole + Reinf.	TP36x36x0.4938	Reinf. 5 Tension Rupture	59.7%	Pass
89 - 84	Pole + Reinf.	TP36x36x0.4938	Reinf. 5 Tension Rupture	67.6%	Pass
84 - 80	Pole + Reinf.	TP36x36x0.4938	Reinf. 5 Tension Rupture	74.2%	Pass
80 - 79.75	Pole + Reinf.	TP42x42x0.575	Pole	44.4%	Pass
79.75 - 74.75	Pole + Reinf.	TP42x42x0.575	Pole	49.4%	Pass
74.75 - 69.75	Pole + Reinf.	TP42x42x0.575	Pole	54.6%	Pass
69.75 - 64.75	Pole + Reinf.	TP42x42x0.575	Pole	59.9%	Pass
64.75 - 60	Pole + Reinf.	TP42x42x0.575	Pole	65.2%	Pass
60 - 59.75	Pole + Reinf.	TP48x48x0.6125	Pole	47.8%	Pass
59.75 - 54.75	Pole + Reinf.	TP48x48x0.6125	Pole	52.0%	Pass
54.75 - 49.75	Pole + Reinf.	TP48x48x0.6125	Pole	56.4%	Pass
49.75 - 44.75	Pole + Reinf.	TP48x48x0.6125	Pole	60.8%	Pass
44.75 - 40	Pole + Reinf.	TP48x48x0.6125	Pole	65.2%	Pass
40 - 39.75	Pole + Reinf.	TP54x54x0.65	Pole	49.3%	Pass
39.75 - 34.75	Pole + Reinf.	TP54x54x0.65	Pole	52.9%	Pass
34.75 - 29.75	Pole + Reinf.	TP54x54x0.65	Pole	56.6%	Pass
29.75 - 24.75	Pole + Reinf.	TP54x54x0.65	Pole	60.3%	Pass
24.75 - 20	Pole + Reinf.	TP54x54x0.65	Pole	64.0%	Pass
20 - 19.75	Pole + Reinf.	TP60x60x0.625	Pole	55.0%	Pass
19.75 - 14.75	Pole + Reinf.	TP60x60x0.625	Pole	58.4%	Pass
14.75 - 9.75	Pole + Reinf.	TP60x60x0.625	Pole	61.9%	Pass
9.75 - 4.75	Pole + Reinf.	TP60x60x0.625	Pole	65.4%	Pass
4.75 - 0	Pole + Reinf.	TP60x60x0.625	Pole	68.8%	Pass

			Summary	
		Pole	74.3%	Pass
		Reinforcement	74.2%	Pass
		Overall	74.3%	Pass

Table 5 - Tower Component Stresses vs. Capacity - LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Flange Bolts	125	37.0	Pass
1,2	Flange Plate		39.2	Pass
1	Flange Bolts	100	73.9	Pass
1,2	Flange Plate		74.3	Pass
1	Flange Bolts	80	32.8	Pass
1	Flange Plate		37.3	Pass
1	Bridge Stiffener		79.3	Pass
1	Flange Bolts	60	33.0	Pass
1	Flange Plate		38.3	Pass
1	Bridge Stiffener		77.7	Pass
1	Flange Bolts	40	39.0	Pass
1	Flange Plate		44.7	Pass
1	Bridge Stiffener		90.6	Pass
1	Flange Bolts	20	37.8	Pass
1	Flange Plate		47.4	Pass
1	Bridge Stiffener		76.4	Pass
1	Anchor Rods	0	72.2	Pass
1	Base Plate		74.6	Pass
1	Base Foundation (Structure)		76.4	Pass
1	Base Foundation (Soil Interaction)		30.7	Pass

Structure Rating (max from all components) =	90.6%
---	--------------

Notes:

- 1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed.
- 2) Flange plates are assumed to have the same capacity as their respective splice bolts or shaft.

4.1) Recommendations

The tower and its foundation have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.

APPENDIX A
TNXTOWER OUTPUT

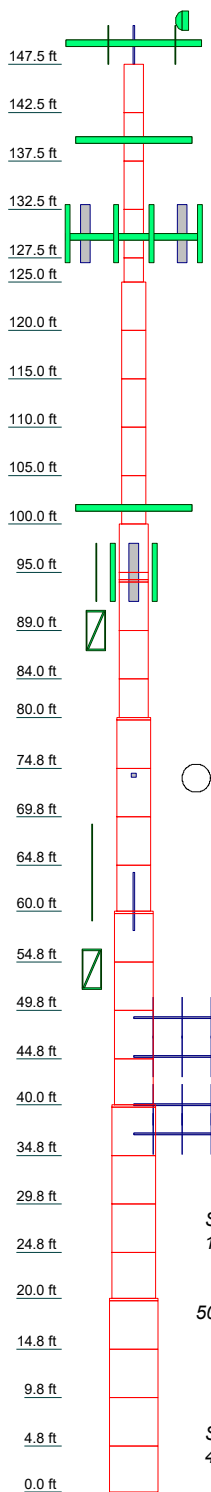
MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A53-B-42	42 ksi	63 ksi			

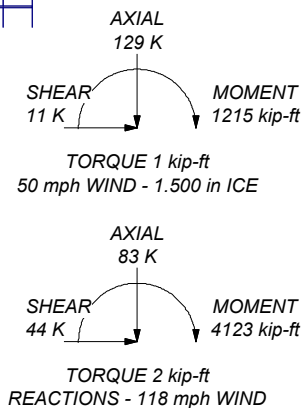
TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-H Standard.
3. Tower designed for a 118 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.000 ft
8. TOWER RATING: 74.3%

Section	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Size	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375	P50x0.375
Length (ft)	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000
Grade	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42	A53-B-42
Weight (K)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5



ALL REACTIONS
ARE FACTORED



CROWN CASTLE
The Pathway to Possible

Crown Castle
2000 Corporate Drive
Canonsburg, PA 15317
Phone: (724) 416-2000
FAX: (724) 416-4623

Job:	827050		
Project:			
Client:	Crown Castle	Drawn by:	Steven Hu
Code:	TIA-222-H	Date:	09/23/21
Path:	C:\Users\SHu\Documents\WFH\827050\WO 2018154 - SAIProd\827050_2018154.dwg		
App'd:		Scale:	NTS
		Dwg No.	E-1

Tower Input Data

The tower is a monopole.

This tower is designed using the TIA-222-H standard.

The following design criteria apply:

- Tower is located in Hartford County, Connecticut.
- Tower base elevation above sea level: 97.000 ft.
- Basic wind speed of 118 mph.
- Risk Category II.
- Exposure Category C.
- Simplified Topographic Factor Procedure for wind speed-up calculations is used.
- Topographic Category: 1.
- Crest Height: 0.000 ft.
- Nominal ice thickness of 1.500 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.
- TOWER RATING: 74.3%.
- 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	Retention 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

Pole Section Geometry

Section	Elevation ft	Section Length ft	Pole Size	Pole Grade	Socket Length ft
L1	147.500-142.500	5.000	P24x0.375	A53-B-42 (42 ksi)	
L2	142.500-137.500	5.000	P24x0.375	A53-B-42 (42 ksi)	
L3	137.500-132.500	5.000	P24x0.375	A53-B-42 (42 ksi)	
L4	132.500-127.500	5.000	P24x0.375	A53-B-42 (42 ksi)	
L5	127.500-125.000	2.500	P24x0.375	A53-B-42 (42 ksi)	
L6	125.000-120.000	5.000	P30x0.375	A53-B-42 (42 ksi)	
L7	120.000-115.000	5.000	P30x0.375	A53-B-42 (42 ksi)	
L8	115.000-110.000	5.000	P30x0.375	A53-B-42 (42 ksi)	
L9	110.000-105.000	5.000	P30x0.375	A53-B-42 (42 ksi)	
L10	105.000-100.000	5.000	P30x0.375	A53-B-42 (42 ksi)	
L11	100.000-95.000	5.000	P36x0.375	A53-B-42 (42 ksi)	
L12	95.000-94.250	0.750	P36x0.375	A53-B-42 (42 ksi)	
L13	94.250-94.000	0.250	P36x0.49375	A53-B-42 (42 ksi)	
L14	94.000-89.000	5.000	P36x0.49375	A53-B-42 (42 ksi)	
L15	89.000-84.000	5.000	P36x0.49375	A53-B-42 (42 ksi)	
L16	84.000-80.000	4.000	P36x0.49375	A53-B-42 (42 ksi)	
L17	80.000-79.750	0.250	P42x0.575	A53-B-42 (42 ksi)	
L18	79.750-74.750	5.000	P42x0.575	A53-B-42 (42 ksi)	
L19	74.750-69.750	5.000	P42x0.575	A53-B-42 (42 ksi)	
L20	69.750-64.750	5.000	P42x0.575	A53-B-42 (42 ksi)	
L21	64.750-60.000	4.750	P42x0.575	A53-B-42 (42 ksi)	
L22	60.000-59.750	0.250	P48x0.6125	A53-B-42 (42 ksi)	
L23	59.750-54.750	5.000	P48x0.6125	A53-B-42 (42 ksi)	
L24	54.750-49.750	5.000	P48x0.6125	A53-B-42 (42 ksi)	
L25	49.750-44.750	5.000	P48x0.6125	A53-B-42 (42 ksi)	
L26	44.750-40.000	4.750	P48x0.6125	A53-B-42 (42 ksi)	
L27	40.000-39.750	0.250	P54x0.65	A53-B-42 (42 ksi)	
L28	39.750-34.750	5.000	P54x0.65	A53-B-42 (42 ksi)	
L29	34.750-29.750	5.000	P54x0.65	A53-B-42 (42 ksi)	
L30	29.750-24.750	5.000	P54x0.65	A53-B-42 (42 ksi)	
L31	24.750-20.000	4.750	P54x0.65	A53-B-42 (42 ksi)	
L32	20.000-19.750	0.250	P60x0.625	A53-B-42 (42 ksi)	
L33	19.750-14.750	5.000	P60x0.625	A53-B-42 (42 ksi)	
L34	14.750-9.750	5.000	P60x0.625	A53-B-42 (42 ksi)	
L35	9.750-4.750	5.000	P60x0.625	A53-B-42	

Section	Elevation ft	Section Length ft	Pole Size	Pole Grade	Socket Length ft
L36	4.750-0.000	4.750	P60x0.625	(42 ksi) A53-B-42 (42 ksi)	

Tower Elevation ft	Gusset Area (per face) ft ²	Gusset Thickness in	Gusset Grade	Adjust. Factor A _r	Adjust. Factor A _r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontal in	Double Angle Stitch Bolt Spacing Redundants in
L1 147.500-142.500				1	1	1			
L2 142.500-137.500				1	1	1			
L3 137.500-132.500				1	1	1			
L4 132.500-127.500				1	1	1			
L5 127.500-125.000				1	1	1			
L6 125.000-120.000				1	1	1			
L7 120.000-115.000				1	1	1			
L8 115.000-110.000				1	1	1			
L9 110.000-105.000				1	1	1			
L10 105.000-100.000				1	1	1			
L11 100.000-95.000				1	1	1			
L12 95.000-94.250				1	1	1			
L13 94.250-94.000				1	1	0.979915			
L14 94.000-89.000				1	1	0.979915			
L15 89.000-84.000				1	1	0.979915			
L16 84.000-80.000				1	1	0.979915			
L17 80.000-79.750				1	1	0.976046			
L18 79.750-74.750				1	1	0.976046			
L19 74.750-69.750				1	1	0.976046			
L20 69.750-64.750				1	1	0.976046			
L21 64.750-60.000				1	1	0.976046			
L22 60.000-59.750				1	1	0.971735			
L23 59.750-54.750				1	1	0.971735			
L24 54.750-49.750				1	1	0.971735			
L25 49.750-44.750				1	1	0.971735			
L26 44.750-40.000				1	1	0.971735			
L27 40.000-39.750				1	1	0.970011			
L28 39.750-34.750				1	1	0.970011			
L29 34.750-29.750				1	1	0.970011			

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A_r	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
ft	ft ²	in							
L30 29.750- 24.750				1	1	0.970011			
L31 24.750- 20.000				1	1	0.970011			
L32 20.000- 19.750				1	1	0.967075			
L33 19.750- 14.750				1	1	0.967075			
L34 14.750- 9.750				1	1	0.967075			
L35 9.750- 4.750				1	1	0.967075			
L36 4.750- 0.000				1	1	0.967075			

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
AVA5-50(7/8)	C	No	Surface Ar (CaAa)	147.500 - 0.000	7	7	0.250 0.320	1.102		0.000
**										
*										
LDF7-50A(1-5/8)	C	No	Surface Ar (CaAa)	95.000 - 0.000	6	6	-0.300 -0.100	1.980		0.001
*										
CCI 8.5" x 1.25" Plate	A	No	Surface Af (CaAa)	26.958 - 14.042	1	1	0.000 0.030	8.500	19.500	0.036
CCI 8.5" x 1.25" Plate	A	No	Surface Af (CaAa)	26.958 - 14.042	1	1	0.000 0.030	8.500	19.500	0.036
CCI 8.5" x 1.25" Plate	B	No	Surface Af (CaAa)	26.958 - 14.042	1	1	0.000 0.030	8.500	19.500	0.036
CCI 8.5" x 1.25" Plate	C	No	Surface Af (CaAa)	26.958 - 14.042	1	1	0.000 0.030	8.500	19.500	0.036
*										
CCI 8.0" x 3.0" Plate	A	No	Surface Af (CaAa)	26.500 - 20.250	1	1	0.000 0.030	8.000	22.000	0.082
CCI 8.0" x 3.0" Plate	A	No	Surface Af (CaAa)	26.500 - 20.250	1	1	0.000 0.030	8.000	22.000	0.082
CCI 8.0" x 3.0" Plate	B	No	Surface Af (CaAa)	26.500 - 20.250	1	1	0.000 0.030	8.000	22.000	0.082
CCI 8.0" x 3.0" Plate	C	No	Surface Af (CaAa)	26.500 - 20.250	1	1	0.000 0.030	8.000	22.000	0.082
*										
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	46.042 - 35.458	1	1	0.000 0.030	6.500	15.500	0.028
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	46.042 - 35.458	1	1	0.000 0.030	6.500	15.500	0.028
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	46.042 - 35.458	1	1	0.000 0.030	6.500	15.500	0.028
CCI 6.5" x 1.25" Plate	C	No	Surface Af (CaAa)	46.042 - 35.458	1	1	0.000 0.030	6.500	15.500	0.028
*										
CCI 6.0" x 3.0" Plate	A	No	Surface Af (CaAa)	45.500 - 40.250	1	1	0.000 0.030	6.000	18.000	0.061
CCI 6.0" x 3.0" Plate	A	No	Surface Af (CaAa)	45.500 - 40.250	1	1	0.000 0.030	6.000	18.000	0.061
CCI 6.0" x 3.0" Plate	B	No	Surface Af (CaAa)	45.500 - 40.250	1	1	0.000 0.030	6.000	18.000	0.061
CCI 6.0" x 3.0" Plate	C	No	Surface Af (CaAa)	45.500 - 40.250	1	1	0.000 0.030	6.000	18.000	0.061

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
*										
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	66.042 - 55.458	1	1	0.000 0.030	6.500	15.500	0.028
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	66.042 - 55.458	1	1	0.000 0.030	6.500	15.500	0.028
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	66.042 - 55.458	1	1	0.000 0.030	6.500	15.500	0.028
CCI 6.5" x 1.25" Plate	C	No	Surface Af (CaAa)	66.042 - 55.458	1	1	0.000 0.030	6.500	15.500	0.028
*										
CCI 6.0" x 3.0" Plate	A	No	Surface Af (CaAa)	65.500 - 60.250	1	1	0.000 0.030	6.000	18.000	0.061
CCI 6.0" x 3.0" Plate	A	No	Surface Af (CaAa)	65.500 - 60.250	1	1	0.000 0.030	6.000	18.000	0.061
CCI 6.0" x 3.0" Plate	B	No	Surface Af (CaAa)	65.500 - 60.250	1	1	0.000 0.030	6.000	18.000	0.061
CCI 6.0" x 3.0" Plate	C	No	Surface Af (CaAa)	65.500 - 60.250	1	1	0.000 0.030	6.000	18.000	0.061
*										
CCI 6.0" x 1.0" Plate	A	No	Surface Af (CaAa)	84.917 - 76.333	1	1	0.000 0.030	6.000	14.000	0.020
CCI 6.0" x 1.0" Plate	A	No	Surface Af (CaAa)	84.917 - 76.333	1	1	0.000 0.030	6.000	14.000	0.020
CCI 6.0" x 1.0" Plate	B	No	Surface Af (CaAa)	84.917 - 76.333	1	1	0.000 0.030	6.000	14.000	0.020
CCI 6.0" x 1.0" Plate	C	No	Surface Af (CaAa)	84.917 - 76.333	1	1	0.000 0.030	6.000	14.000	0.020
*										
CCI 5.0" x 3.0" Plate	A	No	Surface Af (CaAa)	84.500 - 80.250	1	1	0.000 0.030	5.000	16.000	0.051
CCI 5.0" x 3.0" Plate	A	No	Surface Af (CaAa)	84.500 - 80.250	1	1	0.000 0.030	5.000	16.000	0.051
CCI 5.0" x 3.0" Plate	B	No	Surface Af (CaAa)	84.500 - 80.250	1	1	0.000 0.030	5.000	16.000	0.051
CCI 5.0" x 3.0" Plate	C	No	Surface Af (CaAa)	84.500 - 80.250	1	1	0.000 0.030	5.000	16.000	0.051
*										
CCI 8.5" x 1.25" Plate	A	No	Surface Af (CaAa)	19.750 - 0.000	1	1	0.050 0.100	8.500	19.500	0.000
CCI 8.5" x 1.25" Plate	A	No	Surface Af (CaAa)	19.750 - 0.000	1	1	0.050 0.100	8.500	19.500	0.000
CCI 8.5" x 1.25" Plate	B	No	Surface Af (CaAa)	19.750 - 0.000	1	1	0.050 0.100	8.500	19.500	0.000
CCI 8.5" x 1.25" Plate	C	No	Surface Af (CaAa)	19.750 - 0.000	1	1	0.050 0.100	8.500	19.500	0.000
*										
CCI 8.5" x 1.25" Plate	A	No	Surface Af (CaAa)	39.750 - 20.250	1	1	0.050 0.100	8.500	19.500	0.000
CCI 8.5" x 1.25" Plate	A	No	Surface Af (CaAa)	39.750 - 20.250	1	1	0.050 0.100	8.500	19.500	0.000
CCI 8.5" x 1.25" Plate	B	No	Surface Af (CaAa)	39.750 - 20.250	1	1	0.050 0.100	8.500	19.500	0.000
CCI 8.5" x 1.25" Plate	C	No	Surface Af (CaAa)	39.750 - 20.250	1	1	0.050 0.100	8.500	19.500	0.000
*										
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	59.750 - 40.250	1	1	0.050 0.100	6.500	15.500	0.000
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	59.750 - 40.250	1	1	0.050 0.100	6.500	15.500	0.000
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	59.750 - 40.250	1	1	0.050 0.100	6.500	15.500	0.000
CCI 6.5" x 1.25" Plate	C	No	Surface Af (CaAa)	59.750 - 40.250	1	1	0.050 0.100	6.500	15.500	0.000
*										
CCI 6" x 1" Plate	A	No	Surface Af (CaAa)	79.750 - 60.250	1	1	0.050 0.100	6.000	14.000	0.000
CCI 6" x 1" Plate	A	No	Surface Af (CaAa)	79.750 - 60.250	1	1	0.050 0.100	6.000	14.000	0.000

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
CCI 6" x 1" Plate	B	No	Surface Af (CaAa)	79.750 - 60.250	1	1	0.050 0.100	6.000	14.000	0.000
CCI 6" x 1" Plate	C	No	Surface Af (CaAa)	79.750 - 60.250	1	1	0.050 0.100	6.000	14.000	0.000
*										
CCI 4" x 0.75" Plate	A	No	Surface Af (CaAa)	95.250 - 80.250	1	1	0.050 0.100	4.000	9.500	0.000
CCI 4" x 0.75" Plate	A	No	Surface Af (CaAa)	95.250 - 80.250	1	1	0.050 0.100	4.000	9.500	0.000
CCI 4" x 0.75" Plate	B	No	Surface Af (CaAa)	95.250 - 80.250	1	1	0.050 0.100	4.000	9.500	0.000
CCI 4" x 0.75" Plate	C	No	Surface Af (CaAa)	95.250 - 80.250	1	1	0.050 0.100	4.000	9.500	0.000
*										
4.75" x 1.25" Plate	A	No	Surface Af (CaAa)	64.750 - 57.500	1	1	0.000 0.030	4.750	12.000	0.020
4.75" x 1.25" Plate	B	No	Surface Af (CaAa)	64.750 - 57.500	1	1	0.000 0.030	4.750	12.000	0.020
4.75" x 1.25" Plate	C	No	Surface Af (CaAa)	64.750 - 57.500	1	1	0.000 0.030	4.750	12.000	0.020
*										
4.75" x 3" Plate	A	No	Surface Af (CaAa)	64.750 - 60.250	1	1	0.000 0.030	4.750	15.500	0.048
4.75" x 3" Plate	B	No	Surface Af (CaAa)	64.750 - 60.250	1	1	0.000 0.030	4.750	15.500	0.048
4.75" x 3" Plate	C	No	Surface Af (CaAa)	64.750 - 60.250	1	1	0.000 0.030	4.750	15.500	0.048
**										
PWRT-606-S(7/8)	B	No	Surface Ar (CaAa)	102.000 - 0.000	7	5	0.250 0.400	0.920		0.001
FB-L98B-034-XXX(3/8)	B	No	Surface Ar (CaAa)	102.000 - 0.000	3	3	0.400 0.430	0.394		0.000
LDF7-50A(1-5/8)	B	No	Surface Ar (CaAa)	102.000 - 0.000	6	6	0.250 0.400	1.980		0.001

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		CAAA ft ² /ft	Weight klf
FLC 158-50J(1-5/8)	B	No	No	Inside Pole	147.500 - 0.000	10	No Ice 1/2" Ice 1" Ice 2" Ice	0.000 0.000 0.000 0.000	0.001 0.001 0.001 0.001
**									
LDF7-50A(1-5/8)	B	No	No	Inside Pole	140.000 - 0.000	8	No Ice 1/2" Ice 1" Ice 2" Ice	0.000 0.000 0.000 0.000	0.001 0.001 0.001 0.001
**									
MLC6C-06C-008R-008R(1-1/2)	C	No	No	Inside Pole	130.000 - 0.000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.000 0.000 0.000 0.000	0.002 0.002 0.002 0.002
HB114-1-08U4-M5F(1-1/4)	C	No	No	Inside Pole	130.000 - 0.000	3	No Ice 1/2" Ice 1" Ice 2" Ice	0.000 0.000 0.000 0.000	0.001 0.001 0.001 0.001
*									
LDF4-50A(1/2)	B	No	No	Inside Pole	89.000 - 0.000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000
*									

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C _{AA} ft ² /ft	Weight klf
LCF78-50A(7/8)	B	No	No	Inside Pole	54.000 - 0.000	2	No Ice 1/2" Ice 1" Ice 2" Ice	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000
*									
LCF78-50A(7/8)	B	No	No	Inside Pole	49.000 - 0.000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000
*									
LCF78-50A(7/8)	B	No	No	Inside Pole	45.000 - 0.000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000
*									
LCF78-50A(7/8)	B	No	No	Inside Pole	40.000 - 0.000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000
*									
LCF78-50A(7/8)	B	No	No	Inside Pole	37.000 - 0.000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000
**									
CU12PSM9P6XXX (1-1/2)	C	No	No	Inside Pole	120.000 - 0.000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.000 0.000 0.000 0.000	0.002 0.002 0.002 0.002

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
L1	147.500-142.500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.046
		C	0.000	0.000	3.857	0.000	0.011
L2	142.500-137.500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.062
		C	0.000	0.000	3.857	0.000	0.011
L3	137.500-132.500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.079
		C	0.000	0.000	3.857	0.000	0.011
L4	132.500-127.500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.079
		C	0.000	0.000	3.857	0.000	0.024
L5	127.500-125.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.039
		C	0.000	0.000	1.929	0.000	0.019
L6	125.000-120.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.079
		C	0.000	0.000	3.857	0.000	0.038
L7	120.000-115.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.079
		C	0.000	0.000	3.857	0.000	0.049
L8	115.000-110.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.079
		C	0.000	0.000	3.857	0.000	0.049
L9	110.000-105.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.079
		C	0.000	0.000	3.857	0.000	0.049

Tower Sectio n	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
L10	105.000-100.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	3.532	0.000	0.101
		C	0.000	0.000	3.857	0.000	0.049
L11	100.000-95.000	A	0.000	0.000	0.333	0.000	0.000
		B	0.000	0.000	8.997	0.000	0.135
		C	0.000	0.000	4.024	0.000	0.049
L12	95.000-94.250	A	0.000	0.000	1.000	0.000	0.000
		B	0.000	0.000	1.825	0.000	0.020
		C	0.000	0.000	1.970	0.000	0.011
L13	94.250-94.000	A	0.000	0.000	0.333	0.000	0.000
		B	0.000	0.000	0.608	0.000	0.007
		C	0.000	0.000	0.657	0.000	0.004
L14	94.000-89.000	A	0.000	0.000	6.667	0.000	0.000
		B	0.000	0.000	12.164	0.000	0.135
		C	0.000	0.000	13.130	0.000	0.074
L15	89.000-84.000	A	0.000	0.000	8.861	0.000	0.088
		B	0.000	0.000	13.261	0.000	0.180
		C	0.000	0.000	14.228	0.000	0.118
L16	84.000-80.000	A	0.000	0.000	16.481	0.000	0.546
		B	0.000	0.000	15.305	0.000	0.382
		C	0.000	0.000	16.078	0.000	0.332
L17	80.000-79.750	A	0.000	0.000	0.433	0.000	0.010
		B	0.000	0.000	0.658	0.000	0.012
		C	0.000	0.000	0.706	0.000	0.009
L18	79.750-74.750	A	0.000	0.000	15.914	0.000	0.139
		B	0.000	0.000	16.788	0.000	0.206
		C	0.000	0.000	17.754	0.000	0.144
L19	74.750-69.750	A	0.000	0.000	10.000	0.000	0.000
		B	0.000	0.000	13.831	0.000	0.136
		C	0.000	0.000	14.797	0.000	0.074
L20	69.750-64.750	A	0.000	0.000	13.637	0.000	0.163
		B	0.000	0.000	15.649	0.000	0.218
		C	0.000	0.000	16.616	0.000	0.156
L21	64.750-60.000	A	0.000	0.000	30.906	0.000	1.128
		B	0.000	0.000	26.818	0.000	0.850
		C	0.000	0.000	27.736	0.000	0.791
L22	60.000-59.750	A	0.000	0.000	0.663	0.000	0.019
		B	0.000	0.000	0.860	0.000	0.019
		C	0.000	0.000	0.908	0.000	0.016
L23	59.750-54.750	A	0.000	0.000	20.796	0.000	0.283
		B	0.000	0.000	20.011	0.000	0.300
		C	0.000	0.000	20.977	0.000	0.238
L24	54.750-49.750	A	0.000	0.000	10.833	0.000	0.000
		B	0.000	0.000	14.247	0.000	0.139
		C	0.000	0.000	15.214	0.000	0.074
L25	49.750-44.750	A	0.000	0.000	14.470	0.000	0.163
		B	0.000	0.000	16.066	0.000	0.223
		C	0.000	0.000	17.032	0.000	0.156
L26	44.750-40.000	A	0.000	0.000	25.703	0.000	0.814
		B	0.000	0.000	21.241	0.000	0.543
		C	0.000	0.000	22.159	0.000	0.477
L27	40.000-39.750	A	0.000	0.000	0.489	0.000	0.014
		B	0.000	0.000	0.686	0.000	0.014
		C	0.000	0.000	0.734	0.000	0.011
L28	39.750-34.750	A	0.000	0.000	22.564	0.000	0.237
		B	0.000	0.000	20.113	0.000	0.264
		C	0.000	0.000	21.079	0.000	0.193
L29	34.750-29.750	A	0.000	0.000	14.167	0.000	0.000
		B	0.000	0.000	15.914	0.000	0.146
		C	0.000	0.000	16.880	0.000	0.074
L30	29.750-24.750	A	0.000	0.000	23.103	0.000	0.446
		B	0.000	0.000	20.382	0.000	0.369
		C	0.000	0.000	21.348	0.000	0.297
L31	24.750-20.000	A	0.000	0.000	33.403	0.000	1.079
		B	0.000	0.000	25.091	0.000	0.678
		C	0.000	0.000	26.009	0.000	0.610
L32	20.000-19.750	A	0.000	0.000	0.626	0.000	0.018
		B	0.000	0.000	0.755	0.000	0.016
		C	0.000	0.000	0.803	0.000	0.013

Tower Sectio n	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
L33	19.750-14.750	A	0.000	0.000	26.690	0.000	0.362
		B	0.000	0.000	22.176	0.000	0.327
		C	0.000	0.000	23.142	0.000	0.255
L34	14.750-9.750	A	0.000	0.000	15.941	0.000	0.051
		B	0.000	0.000	16.801	0.000	0.172
		C	0.000	0.000	17.767	0.000	0.100
L35	9.750-4.750	A	0.000	0.000	14.167	0.000	0.000
		B	0.000	0.000	15.914	0.000	0.146
		C	0.000	0.000	16.880	0.000	0.074
L36	4.750-0.000	A	0.000	0.000	13.458	0.000	0.000
		B	0.000	0.000	15.118	0.000	0.139
		C	0.000	0.000	16.036	0.000	0.070

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Sectio n	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
L1	147.500-142.500	A	1.478	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.046
		C		0.000	0.000	6.669	0.000	0.075
L2	142.500-137.500	A	1.473	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.062
		C		0.000	0.000	6.663	0.000	0.075
L3	137.500-132.500	A	1.468	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.079
		C		0.000	0.000	6.656	0.000	0.074
L4	132.500-127.500	A	1.462	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.079
		C		0.000	0.000	6.649	0.000	0.088
L5	127.500-125.000	A	1.458	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.039
		C		0.000	0.000	3.322	0.000	0.050
L6	125.000-120.000	A	1.454	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.079
		C		0.000	0.000	6.638	0.000	0.101
L7	120.000-115.000	A	1.448	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.079
		C		0.000	0.000	6.631	0.000	0.112
L8	115.000-110.000	A	1.441	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.079
		C		0.000	0.000	6.623	0.000	0.112
L9	110.000-105.000	A	1.435	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.079
		C		0.000	0.000	6.615	0.000	0.112
L10	105.000-100.000	A	1.428	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	6.557	0.000	0.165
		C		0.000	0.000	6.606	0.000	0.111
L11	100.000-95.000	A	1.421	0.000	0.000	0.475	0.000	0.004
		B		0.000	0.000	16.604	0.000	0.297
		C		0.000	0.000	6.835	0.000	0.113
L12	95.000-94.250	A	1.417	0.000	0.000	1.425	0.000	0.012
		B		0.000	0.000	3.165	0.000	0.050
		C		0.000	0.000	3.081	0.000	0.040
L13	94.250-94.000	A	1.416	0.000	0.000	0.475	0.000	0.004
		B		0.000	0.000	1.055	0.000	0.017
		C		0.000	0.000	1.027	0.000	0.013
L14	94.000-89.000	A	1.412	0.000	0.000	9.490	0.000	0.082
		B		0.000	0.000	21.078	0.000	0.334
		C		0.000	0.000	20.521	0.000	0.268
L15	89.000-84.000	A	1.404	0.000	0.000	12.101	0.000	0.200
		B		0.000	0.000	22.354	0.000	0.393
		C		0.000	0.000	21.807	0.000	0.326
L16	84.000-80.000	A	1.396	0.000	0.000	20.938	0.000	0.777
		B		0.000	0.000	23.489	0.000	0.622
		C		0.000	0.000	23.059	0.000	0.568

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft ²	A_F ft ²	C_{AA} In Face ft ²	C_{AA} Out Face ft ²	Weight K
L17	80.000-79.750	A	1.393	0.000	0.000	0.507	0.000	0.015
		B		0.000	0.000	1.067	0.000	0.022
		C		0.000	0.000	1.040	0.000	0.019
L18	79.750-74.750	A	1.388	0.000	0.000	19.706	0.000	0.314
		B		0.000	0.000	26.097	0.000	0.448
		C		0.000	0.000	25.570	0.000	0.381
L19	74.750-69.750	A	1.379	0.000	0.000	12.758	0.000	0.103
		B		0.000	0.000	22.588	0.000	0.341
		C		0.000	0.000	22.073	0.000	0.274
L20	69.750-64.750	A	1.369	0.000	0.000	16.982	0.000	0.312
		B		0.000	0.000	24.663	0.000	0.445
		C		0.000	0.000	24.160	0.000	0.378
L21	64.750-60.000	A	1.359	0.000	0.000	37.472	0.000	1.525
		B		0.000	0.000	37.728	0.000	1.239
		C		0.000	0.000	37.262	0.000	1.175
L22	60.000-59.750	A	1.353	0.000	0.000	0.772	0.000	0.027
		B		0.000	0.000	1.297	0.000	0.031
		C		0.000	0.000	1.272	0.000	0.028
L23	59.750-54.750	A	1.347	0.000	0.000	25.052	0.000	0.504
		B		0.000	0.000	29.561	0.000	0.570
		C		0.000	0.000	29.085	0.000	0.504
L24	54.750-49.750	A	1.335	0.000	0.000	13.503	0.000	0.107
		B		0.000	0.000	22.796	0.000	0.340
		C		0.000	0.000	22.335	0.000	0.271
L25	49.750-44.750	A	1.322	0.000	0.000	17.700	0.000	0.314
		B		0.000	0.000	24.844	0.000	0.444
		C		0.000	0.000	24.400	0.000	0.373
L26	44.750-40.000	A	1.307	0.000	0.000	30.696	0.000	1.111
		B		0.000	0.000	30.492	0.000	0.829
		C		0.000	0.000	30.087	0.000	0.760
L27	40.000-39.750	A	1.299	0.000	0.000	0.559	0.000	0.019
		B		0.000	0.000	1.075	0.000	0.024
		C		0.000	0.000	1.054	0.000	0.020
L28	39.750-34.750	A	1.291	0.000	0.000	25.643	0.000	0.448
		B		0.000	0.000	28.699	0.000	0.512
		C		0.000	0.000	28.294	0.000	0.436
L29	34.750-29.750	A	1.272	0.000	0.000	16.041	0.000	0.120
		B		0.000	0.000	23.829	0.000	0.347
		C		0.000	0.000	23.447	0.000	0.271
L30	29.750-24.750	A	1.251	0.000	0.000	26.035	0.000	0.661
		B		0.000	0.000	28.746	0.000	0.614
		C		0.000	0.000	28.391	0.000	0.539
L31	24.750-20.000	A	1.226	0.000	0.000	37.527	0.000	1.406
		B		0.000	0.000	33.619	0.000	0.970
		C		0.000	0.000	33.310	0.000	0.898
L32	20.000-19.750	A	1.212	0.000	0.000	0.691	0.000	0.024
		B		0.000	0.000	1.125	0.000	0.026
		C		0.000	0.000	1.110	0.000	0.022
L33	19.750-14.750	A	1.195	0.000	0.000	29.855	0.000	0.585
		B		0.000	0.000	30.447	0.000	0.569
		C		0.000	0.000	30.161	0.000	0.494
L34	14.750-9.750	A	1.155	0.000	0.000	17.953	0.000	0.174
		B		0.000	0.000	24.345	0.000	0.359
		C		0.000	0.000	24.109	0.000	0.284
L35	9.750-4.750	A	1.096	0.000	0.000	15.942	0.000	0.101
		B		0.000	0.000	23.118	0.000	0.315
		C		0.000	0.000	22.956	0.000	0.241
L36	4.750-0.000	A	0.980	0.000	0.000	15.032	0.000	0.084
		B		0.000	0.000	21.493	0.000	0.281
		C		0.000	0.000	21.477	0.000	0.211

Feed Line Center of Pressure

Section	Elevation	CP _x	CP _z	CP _x Ice	CP _z Ice
	ft	in	in	in	in
L1	147.500-142.500	-2.760	4.062	-2.074	3.052
L2	142.500-137.500	-2.760	4.062	-2.074	3.051
L3	137.500-132.500	-2.760	4.062	-2.073	3.051
L4	132.500-127.500	-2.760	4.062	-2.073	3.050
L5	127.500-125.000	-2.760	4.062	-2.073	3.050
L6	125.000-120.000	-2.969	4.368	-2.267	3.336
L7	120.000-115.000	-2.969	4.368	-2.266	3.334
L8	115.000-110.000	-2.969	4.368	-2.265	3.333
L9	110.000-105.000	-2.969	4.368	-2.265	3.332
L10	105.000-100.000	1.454	3.967	1.261	2.969
L11	100.000-95.000	5.426	3.774	4.339	2.906
L12	95.000-94.250	3.118	3.520	2.935	3.026
L13	94.250-94.000	3.118	3.520	2.935	3.026
L14	94.000-89.000	3.118	3.520	2.935	3.026
L15	89.000-84.000	2.435	2.926	2.528	2.693
L16	84.000-80.000	0.223	0.923	0.942	1.404
L17	80.000-79.750	2.570	3.645	2.975	3.503
L18	79.750-74.750	0.980	1.473	1.821	2.088
L19	74.750-69.750	2.511	2.865	2.770	2.851
L20	69.750-64.750	1.346	1.775	2.150	2.355
L21	64.750-60.000	-0.236	0.379	0.505	0.950
L22	60.000-59.750	1.692	2.531	2.671	3.217
L23	59.750-54.750	0.533	1.096	1.488	1.833
L24	54.750-49.750	2.532	2.904	2.908	3.000
L25	49.750-44.750	1.589	2.130	2.251	2.479
L26	44.750-40.000	-0.386	0.422	0.592	1.177
L27	40.000-39.750	2.667	3.998	3.283	3.973
L28	39.750-34.750	0.217	0.787	1.414	1.786
L29	34.750-29.750	1.929	2.247	2.739	2.824
L30	29.750-24.750	0.134	0.723	1.330	1.723
L31	24.750-20.000	-1.104	-0.206	0.020	0.721
L32	20.000-19.750	2.002	3.507	2.951	3.790
L33	19.750-14.750	-0.302	0.432	0.964	1.492
L34	14.750-9.750	1.622	2.065	2.545	2.730
L35	9.750-4.750	2.081	2.426	2.849	2.969
L36	4.750-0.000	2.081	2.426	2.791	2.931

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	1	AVA5-50(7/8)	142.50 - 147.50	1.0000	1.0000
L2	1	AVA5-50(7/8)	137.50 - 142.50	1.0000	1.0000
L3	1	AVA5-50(7/8)	132.50 - 137.50	1.0000	1.0000
L4	1	AVA5-50(7/8)	127.50 - 132.50	1.0000	1.0000
L5	1	AVA5-50(7/8)	125.00 - 127.50	1.0000	1.0000
L6	1	AVA5-50(7/8)	120.00 - 125.00	1.0000	1.0000
L7	1	AVA5-50(7/8)	115.00 - 120.00	1.0000	1.0000
L8	1	AVA5-50(7/8)	110.00 - 115.00	1.0000	1.0000
L9	1	AVA5-50(7/8)	105.00 - 110.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L10	1	AVA5-50(7/8)	100.00 - 105.00	1.0000	1.0000
L10	104	PWRT-606-S(7/8)	100.00 - 102.00	1.0000	1.0000
L10	106	FB-L98B-034-XXX(3/8)	100.00 - 102.00	1.0000	1.0000
L10	108	LDF7-50A(1-5/8)	100.00 - 102.00	1.0000	1.0000
L11	1	AVA5-50(7/8)	95.00 - 100.00	1.0000	1.0000
L11	89	CCI 4" x 0.75" Plate	95.00 - 95.25	1.0000	1.0000
L11	90	CCI 4" x 0.75" Plate	95.00 - 95.25	1.0000	1.0000
L11	91	CCI 4" x 0.75" Plate	95.00 - 95.25	1.0000	1.0000
L11	92	CCI 4" x 0.75" Plate	95.00 - 95.25	1.0000	1.0000
L11	104	PWRT-606-S(7/8)	95.00 - 100.00	1.0000	1.0000
L11	106	FB-L98B-034-XXX(3/8)	95.00 - 100.00	1.0000	1.0000
L11	108	LDF7-50A(1-5/8)	95.00 - 100.00	1.0000	1.0000
L12	1	AVA5-50(7/8)	94.25 - 95.00	1.0000	1.0000
L12	15	LDF7-50A(1-5/8)	94.25 - 95.00	1.0000	1.0000
L12	89	CCI 4" x 0.75" Plate	94.25 - 95.00	1.0000	1.0000
L12	90	CCI 4" x 0.75" Plate	94.25 - 95.00	1.0000	1.0000
L12	91	CCI 4" x 0.75" Plate	94.25 - 95.00	1.0000	1.0000
L12	92	CCI 4" x 0.75" Plate	94.25 - 95.00	1.0000	1.0000
L12	104	PWRT-606-S(7/8)	94.25 - 95.00	1.0000	1.0000
L12	106	FB-L98B-034-XXX(3/8)	94.25 - 95.00	1.0000	1.0000
L12	108	LDF7-50A(1-5/8)	94.25 - 95.00	1.0000	1.0000
L13	1	AVA5-50(7/8)	94.00 - 94.25	1.0000	1.0000
L13	15	LDF7-50A(1-5/8)	94.00 - 94.25	1.0000	1.0000
L13	89	CCI 4" x 0.75" Plate	94.00 - 94.25	1.0000	1.0000
L13	90	CCI 4" x 0.75" Plate	94.00 - 94.25	1.0000	1.0000
L13	91	CCI 4" x 0.75" Plate	94.00 - 94.25	1.0000	1.0000
L13	92	CCI 4" x 0.75" Plate	94.00 - 94.25	1.0000	1.0000
L13	104	PWRT-606-S(7/8)	94.00 - 94.25	1.0000	1.0000
L13	106	FB-L98B-034-XXX(3/8)	94.00 - 94.25	1.0000	1.0000
L13	108	LDF7-50A(1-5/8)	94.00 - 94.25	1.0000	1.0000
L14	1	AVA5-50(7/8)	89.00 - 94.00	1.0000	1.0000
L14	15	LDF7-50A(1-5/8)	89.00 - 94.00	1.0000	1.0000
L14	89	CCI 4" x 0.75" Plate	89.00 - 94.00	1.0000	1.0000
L14	90	CCI 4" x 0.75" Plate	89.00 - 94.00	1.0000	1.0000
L14	91	CCI 4" x 0.75" Plate	89.00 - 94.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L14	92	CCI 4" x 0.75" Plate	94.00 89.00 -	1.0000	1.0000
L14	104	PWRT-606-S(7/8)	94.00 89.00 -	1.0000	1.0000
L14	106	FB-L98B-034-XXX(3/8)	94.00 89.00 -	1.0000	1.0000
L14	108	LDF7-50A(1-5/8)	94.00 89.00 -	1.0000	1.0000
L15	1	AVA5-50(7/8)	94.00 84.00 -	1.0000	1.0000
L15	15	LDF7-50A(1-5/8)	89.00 84.00 -	1.0000	1.0000
L15	59	CCI 6.0" x 1.0" Plate	89.00 84.00 -	1.0000	1.0000
L15	60	CCI 6.0" x 1.0" Plate	84.92 84.00 -	1.0000	1.0000
L15	61	CCI 6.0" x 1.0" Plate	84.92 84.00 -	1.0000	1.0000
L15	62	CCI 6.0" x 1.0" Plate	84.92 84.00 -	1.0000	1.0000
L15	64	CCI 5.0" x 3.0" Plate	84.92 84.00 -	1.0000	1.0000
L15	65	CCI 5.0" x 3.0" Plate	84.50 84.00 -	1.0000	1.0000
L15	66	CCI 5.0" x 3.0" Plate	84.50 84.00 -	1.0000	1.0000
L15	67	CCI 5.0" x 3.0" Plate	84.50 84.00 -	1.0000	1.0000
L15	89	CCI 4" x 0.75" Plate	84.50 84.00 -	1.0000	1.0000
L15	90	CCI 4" x 0.75" Plate	89.00 84.00 -	1.0000	1.0000
L15	91	CCI 4" x 0.75" Plate	89.00 84.00 -	1.0000	1.0000
L15	92	CCI 4" x 0.75" Plate	89.00 84.00 -	1.0000	1.0000
L15	104	PWRT-606-S(7/8)	89.00 84.00 -	1.0000	1.0000
L15	106	FB-L98B-034-XXX(3/8)	89.00 84.00 -	1.0000	1.0000
L15	108	LDF7-50A(1-5/8)	89.00 84.00 -	1.0000	1.0000
L16	1	AVA5-50(7/8)	89.00 80.00 -	1.0000	1.0000
L16	15	LDF7-50A(1-5/8)	84.00 80.00 -	1.0000	1.0000
L16	59	CCI 6.0" x 1.0" Plate	84.00 80.00 -	1.0000	1.0000
L16	60	CCI 6.0" x 1.0" Plate	84.00 80.00 -	1.0000	1.0000
L16	61	CCI 6.0" x 1.0" Plate	84.00 80.00 -	1.0000	1.0000
L16	62	CCI 6.0" x 1.0" Plate	84.00 80.00 -	1.0000	1.0000
L16	64	CCI 5.0" x 3.0" Plate	84.00 80.25 -	1.0000	1.0000
L16	65	CCI 5.0" x 3.0" Plate	84.00 80.25 -	1.0000	1.0000
L16	66	CCI 5.0" x 3.0" Plate	84.00 80.25 -	1.0000	1.0000
L16	67	CCI 5.0" x 3.0" Plate	84.00 80.25 -	1.0000	1.0000
L16	89	CCI 4" x 0.75" Plate	84.00 80.25 -	1.0000	1.0000
L16	90	CCI 4" x 0.75" Plate	84.00 80.25 -	1.0000	1.0000
L16	91	CCI 4" x 0.75" Plate	84.00 80.25 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L16	92	CCI 4" x 0.75" Plate	80.25 - 84.00	1.0000	1.0000
L16	104	PWRT-606-S(7/8)	80.00 - 84.00	1.0000	1.0000
L16	106	FB-L98B-034-XXX(3/8)	80.00 - 84.00	1.0000	1.0000
L16	108	LDF7-50A(1-5/8)	80.00 - 84.00	1.0000	1.0000
L17	1	AVA5-50(7/8)	79.75 - 80.00	1.0000	1.0000
L17	15	LDF7-50A(1-5/8)	79.75 - 80.00	1.0000	1.0000
L17	59	CCI 6.0" x 1.0" Plate	79.75 - 80.00	1.0000	1.0000
L17	60	CCI 6.0" x 1.0" Plate	79.75 - 80.00	1.0000	1.0000
L17	61	CCI 6.0" x 1.0" Plate	79.75 - 80.00	1.0000	1.0000
L17	62	CCI 6.0" x 1.0" Plate	79.75 - 80.00	1.0000	1.0000
L17	104	PWRT-606-S(7/8)	79.75 - 80.00	1.0000	1.0000
L17	106	FB-L98B-034-XXX(3/8)	79.75 - 80.00	1.0000	1.0000
L17	108	LDF7-50A(1-5/8)	79.75 - 80.00	1.0000	1.0000
L18	1	AVA5-50(7/8)	74.75 - 79.75	1.0000	1.0000
L18	15	LDF7-50A(1-5/8)	74.75 - 79.75	1.0000	1.0000
L18	59	CCI 6.0" x 1.0" Plate	76.33 - 79.75	1.0000	1.0000
L18	60	CCI 6.0" x 1.0" Plate	76.33 - 79.75	1.0000	1.0000
L18	61	CCI 6.0" x 1.0" Plate	76.33 - 79.75	1.0000	1.0000
L18	62	CCI 6.0" x 1.0" Plate	76.33 - 79.75	1.0000	1.0000
L18	84	CCI 6" x 1" Plate	74.75 - 79.75	1.0000	1.0000
L18	85	CCI 6" x 1" Plate	74.75 - 79.75	1.0000	1.0000
L18	86	CCI 6" x 1" Plate	74.75 - 79.75	1.0000	1.0000
L18	87	CCI 6" x 1" Plate	74.75 - 79.75	1.0000	1.0000
L18	104	PWRT-606-S(7/8)	74.75 - 79.75	1.0000	1.0000
L18	106	FB-L98B-034-XXX(3/8)	74.75 - 79.75	1.0000	1.0000
L18	108	LDF7-50A(1-5/8)	74.75 - 79.75	1.0000	1.0000
L19	1	AVA5-50(7/8)	69.75 - 74.75	1.0000	1.0000
L19	15	LDF7-50A(1-5/8)	69.75 - 74.75	1.0000	1.0000
L19	84	CCI 6" x 1" Plate	69.75 - 74.75	1.0000	1.0000
L19	85	CCI 6" x 1" Plate	69.75 - 74.75	1.0000	1.0000
L19	86	CCI 6" x 1" Plate	69.75 - 74.75	1.0000	1.0000
L19	87	CCI 6" x 1" Plate	69.75 - 74.75	1.0000	1.0000
L19	104	PWRT-606-S(7/8)	69.75 - 74.75	1.0000	1.0000
L19	106	FB-L98B-034-XXX(3/8)	69.75 - 74.75	1.0000	1.0000
L19	108	LDF7-50A(1-5/8)	69.75 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L20	1	AVA5-50(7/8)	74.75 64.75 - 69.75	1.0000	1.0000
L20	15	LDF7-50A(1-5/8)	64.75 - 69.75	1.0000	1.0000
L20	49	CCI 6.5" x 1.25" Plate	64.75 - 66.04	1.0000	1.0000
L20	50	CCI 6.5" x 1.25" Plate	64.75 - 66.04	1.0000	1.0000
L20	51	CCI 6.5" x 1.25" Plate	64.75 - 66.04	1.0000	1.0000
L20	52	CCI 6.5" x 1.25" Plate	64.75 - 66.04	1.0000	1.0000
L20	54	CCI 6.0" x 3.0" Plate	64.75 - 65.50	1.0000	1.0000
L20	55	CCI 6.0" x 3.0" Plate	64.75 - 65.50	1.0000	1.0000
L20	56	CCI 6.0" x 3.0" Plate	64.75 - 65.50	1.0000	1.0000
L20	57	CCI 6.0" x 3.0" Plate	64.75 - 65.50	1.0000	1.0000
L20	84	CCI 6" x 1" Plate	64.75 - 69.75	1.0000	1.0000
L20	85	CCI 6" x 1" Plate	64.75 - 69.75	1.0000	1.0000
L20	86	CCI 6" x 1" Plate	64.75 - 69.75	1.0000	1.0000
L20	87	CCI 6" x 1" Plate	64.75 - 69.75	1.0000	1.0000
L20	104	PWRT-606-S(7/8)	64.75 - 69.75	1.0000	1.0000
L20	106	FB-L98B-034-XXX(3/8)	64.75 - 69.75	1.0000	1.0000
L20	108	LDF7-50A(1-5/8)	64.75 - 69.75	1.0000	1.0000
L21	1	AVA5-50(7/8)	60.00 - 64.75	1.0000	1.0000
L21	15	LDF7-50A(1-5/8)	60.00 - 64.75	1.0000	1.0000
L21	49	CCI 6.5" x 1.25" Plate	60.00 - 64.75	1.0000	1.0000
L21	50	CCI 6.5" x 1.25" Plate	60.00 - 64.75	1.0000	1.0000
L21	51	CCI 6.5" x 1.25" Plate	60.00 - 64.75	1.0000	1.0000
L21	52	CCI 6.5" x 1.25" Plate	60.00 - 64.75	1.0000	1.0000
L21	54	CCI 6.0" x 3.0" Plate	60.25 - 64.75	1.0000	1.0000
L21	55	CCI 6.0" x 3.0" Plate	60.25 - 64.75	1.0000	1.0000
L21	56	CCI 6.0" x 3.0" Plate	60.25 - 64.75	1.0000	1.0000
L21	57	CCI 6.0" x 3.0" Plate	60.25 - 64.75	1.0000	1.0000
L21	84	CCI 6" x 1" Plate	60.25 - 64.75	1.0000	1.0000
L21	85	CCI 6" x 1" Plate	60.25 - 64.75	1.0000	1.0000
L21	86	CCI 6" x 1" Plate	60.25 - 64.75	1.0000	1.0000
L21	87	CCI 6" x 1" Plate	60.25 - 64.75	1.0000	1.0000
L21	94	4.75" x 1.25" Plate	60.00 - 64.75	1.0000	1.0000
L21	95	4.75" x 1.25" Plate	60.00 - 64.75	1.0000	1.0000
L21	96	4.75" x 1.25" Plate	60.00 - 64.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L21	98	4.75" x 3" Plate	60.25 - 64.75	1.0000	1.0000
L21	99	4.75" x 3" Plate	60.25 - 64.75	1.0000	1.0000
L21	100	4.75" x 3" Plate	60.25 - 64.75	1.0000	1.0000
L21	104	PWRT-606-S(7/8)	60.00 - 64.75	1.0000	1.0000
L21	106	FB-L98B-034-XXX(3/8)	60.00 - 64.75	1.0000	1.0000
L21	108	LDF7-50A(1-5/8)	60.00 - 64.75	1.0000	1.0000
L22	1	AVA5-50(7/8)	59.75 - 60.00	1.0000	1.0000
L22	15	LDF7-50A(1-5/8)	59.75 - 60.00	1.0000	1.0000
L22	49	CCI 6.5" x 1.25" Plate	59.75 - 60.00	1.0000	1.0000
L22	50	CCI 6.5" x 1.25" Plate	59.75 - 60.00	1.0000	1.0000
L22	51	CCI 6.5" x 1.25" Plate	59.75 - 60.00	1.0000	1.0000
L22	52	CCI 6.5" x 1.25" Plate	59.75 - 60.00	1.0000	1.0000
L22	94	4.75" x 1.25" Plate	59.75 - 60.00	1.0000	1.0000
L22	95	4.75" x 1.25" Plate	59.75 - 60.00	1.0000	1.0000
L22	96	4.75" x 1.25" Plate	59.75 - 60.00	1.0000	1.0000
L22	104	PWRT-606-S(7/8)	59.75 - 60.00	1.0000	1.0000
L22	106	FB-L98B-034-XXX(3/8)	59.75 - 60.00	1.0000	1.0000
L22	108	LDF7-50A(1-5/8)	59.75 - 60.00	1.0000	1.0000
L23	1	AVA5-50(7/8)	54.75 - 59.75	1.0000	1.0000
L23	15	LDF7-50A(1-5/8)	54.75 - 59.75	1.0000	1.0000
L23	49	CCI 6.5" x 1.25" Plate	55.46 - 59.75	1.0000	1.0000
L23	50	CCI 6.5" x 1.25" Plate	55.46 - 59.75	1.0000	1.0000
L23	51	CCI 6.5" x 1.25" Plate	55.46 - 59.75	1.0000	1.0000
L23	52	CCI 6.5" x 1.25" Plate	55.46 - 59.75	1.0000	1.0000
L23	79	CCI 6.5" x 1.25" Plate	54.75 - 59.75	1.0000	1.0000
L23	80	CCI 6.5" x 1.25" Plate	54.75 - 59.75	1.0000	1.0000
L23	81	CCI 6.5" x 1.25" Plate	54.75 - 59.75	1.0000	1.0000
L23	82	CCI 6.5" x 1.25" Plate	54.75 - 59.75	1.0000	1.0000
L23	94	4.75" x 1.25" Plate	57.50 - 59.75	1.0000	1.0000
L23	95	4.75" x 1.25" Plate	57.50 - 59.75	1.0000	1.0000
L23	96	4.75" x 1.25" Plate	57.50 - 59.75	1.0000	1.0000
L23	104	PWRT-606-S(7/8)	54.75 - 59.75	1.0000	1.0000
L23	106	FB-L98B-034-XXX(3/8)	54.75 - 59.75	1.0000	1.0000
L23	108	LDF7-50A(1-5/8)	54.75 - 59.75	1.0000	1.0000
L24	1	AVA5-50(7/8)	49.75 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L24	15	LDF7-50A(1-5/8)	54.75 49.75 -	1.0000	1.0000
L24	79	CCI 6.5" x 1.25" Plate	54.75 49.75 -	1.0000	1.0000
L24	80	CCI 6.5" x 1.25" Plate	54.75 49.75 -	1.0000	1.0000
L24	81	CCI 6.5" x 1.25" Plate	54.75 49.75 -	1.0000	1.0000
L24	82	CCI 6.5" x 1.25" Plate	54.75 49.75 -	1.0000	1.0000
L24	104	PWRT-606-S(7/8)	54.75 49.75 -	1.0000	1.0000
L24	106	FB-L98B-034-XXX(3/8)	54.75 49.75 -	1.0000	1.0000
L24	108	LDF7-50A(1-5/8)	54.75 49.75 -	1.0000	1.0000
L25	1	AVA5-50(7/8)	44.75 - 49.75	1.0000	1.0000
L25	15	LDF7-50A(1-5/8)	44.75 - 49.75	1.0000	1.0000
L25	39	CCI 6.5" x 1.25" Plate	44.75 - 46.04	1.0000	1.0000
L25	40	CCI 6.5" x 1.25" Plate	44.75 - 46.04	1.0000	1.0000
L25	41	CCI 6.5" x 1.25" Plate	44.75 - 46.04	1.0000	1.0000
L25	42	CCI 6.5" x 1.25" Plate	44.75 - 46.04	1.0000	1.0000
L25	44	CCI 6.0" x 3.0" Plate	44.75 - 45.50	1.0000	1.0000
L25	45	CCI 6.0" x 3.0" Plate	44.75 - 45.50	1.0000	1.0000
L25	46	CCI 6.0" x 3.0" Plate	44.75 - 45.50	1.0000	1.0000
L25	47	CCI 6.0" x 3.0" Plate	44.75 - 45.50	1.0000	1.0000
L25	79	CCI 6.5" x 1.25" Plate	44.75 - 49.75	1.0000	1.0000
L25	80	CCI 6.5" x 1.25" Plate	44.75 - 49.75	1.0000	1.0000
L25	81	CCI 6.5" x 1.25" Plate	44.75 - 49.75	1.0000	1.0000
L25	82	CCI 6.5" x 1.25" Plate	44.75 - 49.75	1.0000	1.0000
L25	104	PWRT-606-S(7/8)	44.75 - 49.75	1.0000	1.0000
L25	106	FB-L98B-034-XXX(3/8)	44.75 - 49.75	1.0000	1.0000
L25	108	LDF7-50A(1-5/8)	44.75 - 49.75	1.0000	1.0000
L26	1	AVA5-50(7/8)	40.00 - 44.75	1.0000	1.0000
L26	15	LDF7-50A(1-5/8)	40.00 - 44.75	1.0000	1.0000
L26	39	CCI 6.5" x 1.25" Plate	40.00 - 44.75	1.0000	1.0000
L26	40	CCI 6.5" x 1.25" Plate	40.00 - 44.75	1.0000	1.0000
L26	41	CCI 6.5" x 1.25" Plate	40.00 - 44.75	1.0000	1.0000
L26	42	CCI 6.5" x 1.25" Plate	40.00 - 44.75	1.0000	1.0000
L26	44	CCI 6.0" x 3.0" Plate	40.25 - 44.75	1.0000	1.0000
L26	45	CCI 6.0" x 3.0" Plate	40.25 - 44.75	1.0000	1.0000
L26	46	CCI 6.0" x 3.0" Plate	40.25 - 44.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L26	47	CCI 6.0" x 3.0" Plate	40.25 - 44.75	1.0000	1.0000
L26	79	CCI 6.5" x 1.25" Plate	40.25 - 44.75	1.0000	1.0000
L26	80	CCI 6.5" x 1.25" Plate	40.25 - 44.75	1.0000	1.0000
L26	81	CCI 6.5" x 1.25" Plate	40.25 - 44.75	1.0000	1.0000
L26	82	CCI 6.5" x 1.25" Plate	40.25 - 44.75	1.0000	1.0000
L26	104	PWRT-606-S(7/8)	40.00 - 44.75	1.0000	1.0000
L26	106	FB-L98B-034-XXX(3/8)	40.00 - 44.75	1.0000	1.0000
L26	108	LDF7-50A(1-5/8)	40.00 - 44.75	1.0000	1.0000
L27	1	AVA5-50(7/8)	39.75 - 40.00	1.0000	1.0000
L27	15	LDF7-50A(1-5/8)	39.75 - 40.00	1.0000	1.0000
L27	39	CCI 6.5" x 1.25" Plate	39.75 - 40.00	1.0000	1.0000
L27	40	CCI 6.5" x 1.25" Plate	39.75 - 40.00	1.0000	1.0000
L27	41	CCI 6.5" x 1.25" Plate	39.75 - 40.00	1.0000	1.0000
L27	42	CCI 6.5" x 1.25" Plate	39.75 - 40.00	1.0000	1.0000
L27	104	PWRT-606-S(7/8)	39.75 - 40.00	1.0000	1.0000
L27	106	FB-L98B-034-XXX(3/8)	39.75 - 40.00	1.0000	1.0000
L27	108	LDF7-50A(1-5/8)	39.75 - 40.00	1.0000	1.0000
L28	1	AVA5-50(7/8)	34.75 - 39.75	1.0000	1.0000
L28	15	LDF7-50A(1-5/8)	34.75 - 39.75	1.0000	1.0000
L28	39	CCI 6.5" x 1.25" Plate	35.46 - 39.75	1.0000	1.0000
L28	40	CCI 6.5" x 1.25" Plate	35.46 - 39.75	1.0000	1.0000
L28	41	CCI 6.5" x 1.25" Plate	35.46 - 39.75	1.0000	1.0000
L28	42	CCI 6.5" x 1.25" Plate	35.46 - 39.75	1.0000	1.0000
L28	74	CCI 8.5" x 1.25" Plate	34.75 - 39.75	1.0000	1.0000
L28	75	CCI 8.5" x 1.25" Plate	34.75 - 39.75	1.0000	1.0000
L28	76	CCI 8.5" x 1.25" Plate	34.75 - 39.75	1.0000	1.0000
L28	77	CCI 8.5" x 1.25" Plate	34.75 - 39.75	1.0000	1.0000
L28	104	PWRT-606-S(7/8)	34.75 - 39.75	1.0000	1.0000
L28	106	FB-L98B-034-XXX(3/8)	34.75 - 39.75	1.0000	1.0000
L28	108	LDF7-50A(1-5/8)	34.75 - 39.75	1.0000	1.0000
L29	1	AVA5-50(7/8)	29.75 - 34.75	1.0000	1.0000
L29	15	LDF7-50A(1-5/8)	29.75 - 34.75	1.0000	1.0000
L29	74	CCI 8.5" x 1.25" Plate	29.75 - 34.75	1.0000	1.0000
L29	75	CCI 8.5" x 1.25" Plate	29.75 - 34.75	1.0000	1.0000
L29	76	CCI 8.5" x 1.25" Plate	29.75 - 34.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L29	77	CCI 8.5" x 1.25" Plate	34.75 29.75 -	1.0000	1.0000
L29	104	PWRT-606-S(7/8)	34.75 29.75 -	1.0000	1.0000
L29	106	FB-L98B-034-XXX(3/8)	34.75 29.75 -	1.0000	1.0000
L29	108	LDF7-50A(1-5/8)	34.75 29.75 -	1.0000	1.0000
L30	1	AVA5-50(7/8)	34.75 24.75 -	1.0000	1.0000
L30	15	LDF7-50A(1-5/8)	29.75 24.75 -	1.0000	1.0000
L30	29	CCI 8.5" x 1.25" Plate	29.75 24.75 -	1.0000	1.0000
L30	30	CCI 8.5" x 1.25" Plate	26.96 24.75 -	1.0000	1.0000
L30	31	CCI 8.5" x 1.25" Plate	26.96 24.75 -	1.0000	1.0000
L30	32	CCI 8.5" x 1.25" Plate	26.96 24.75 -	1.0000	1.0000
L30	34	CCI 8.0" x 3.0" Plate	26.96 24.75 -	1.0000	1.0000
L30	35	CCI 8.0" x 3.0" Plate	26.50 24.75 -	1.0000	1.0000
L30	36	CCI 8.0" x 3.0" Plate	26.50 24.75 -	1.0000	1.0000
L30	37	CCI 8.0" x 3.0" Plate	26.50 24.75 -	1.0000	1.0000
L30	74	CCI 8.5" x 1.25" Plate	26.50 24.75 -	1.0000	1.0000
L30	75	CCI 8.5" x 1.25" Plate	29.75 24.75 -	1.0000	1.0000
L30	76	CCI 8.5" x 1.25" Plate	29.75 24.75 -	1.0000	1.0000
L30	77	CCI 8.5" x 1.25" Plate	29.75 24.75 -	1.0000	1.0000
L30	104	PWRT-606-S(7/8)	29.75 24.75 -	1.0000	1.0000
L30	106	FB-L98B-034-XXX(3/8)	29.75 24.75 -	1.0000	1.0000
L30	108	LDF7-50A(1-5/8)	29.75 24.75 -	1.0000	1.0000
L31	1	AVA5-50(7/8)	24.75 20.00 -	1.0000	1.0000
L31	15	LDF7-50A(1-5/8)	24.75 20.00 -	1.0000	1.0000
L31	29	CCI 8.5" x 1.25" Plate	24.75 20.00 -	1.0000	1.0000
L31	30	CCI 8.5" x 1.25" Plate	24.75 20.00 -	1.0000	1.0000
L31	31	CCI 8.5" x 1.25" Plate	24.75 20.00 -	1.0000	1.0000
L31	32	CCI 8.5" x 1.25" Plate	24.75 20.00 -	1.0000	1.0000
L31	34	CCI 8.0" x 3.0" Plate	24.75 20.25 -	1.0000	1.0000
L31	35	CCI 8.0" x 3.0" Plate	24.75 20.25 -	1.0000	1.0000
L31	36	CCI 8.0" x 3.0" Plate	24.75 20.25 -	1.0000	1.0000
L31	37	CCI 8.0" x 3.0" Plate	24.75 20.25 -	1.0000	1.0000
L31	74	CCI 8.5" x 1.25" Plate	24.75 20.25 -	1.0000	1.0000
L31	75	CCI 8.5" x 1.25" Plate	24.75 20.25 -	1.0000	1.0000
L31	76	CCI 8.5" x 1.25" Plate	24.75 20.25 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L31	77	CCI 8.5" x 1.25" Plate	20.25 - 24.75	1.0000	1.0000
L31	104	PWRT-606-S(7/8)	20.00 - 24.75	1.0000	1.0000
L31	106	FB-L98B-034-XXX(3/8)	20.00 - 24.75	1.0000	1.0000
L31	108	LDF7-50A(1-5/8)	20.00 - 24.75	1.0000	1.0000
L32	1	AVA5-50(7/8)	19.75 - 20.00	1.0000	1.0000
L32	15	LDF7-50A(1-5/8)	19.75 - 20.00	1.0000	1.0000
L32	29	CCI 8.5" x 1.25" Plate	19.75 - 20.00	1.0000	1.0000
L32	30	CCI 8.5" x 1.25" Plate	19.75 - 20.00	1.0000	1.0000
L32	31	CCI 8.5" x 1.25" Plate	19.75 - 20.00	1.0000	1.0000
L32	32	CCI 8.5" x 1.25" Plate	19.75 - 20.00	1.0000	1.0000
L32	104	PWRT-606-S(7/8)	19.75 - 20.00	1.0000	1.0000
L32	106	FB-L98B-034-XXX(3/8)	19.75 - 20.00	1.0000	1.0000
L32	108	LDF7-50A(1-5/8)	19.75 - 20.00	1.0000	1.0000
L33	1	AVA5-50(7/8)	14.75 - 19.75	1.0000	1.0000
L33	15	LDF7-50A(1-5/8)	14.75 - 19.75	1.0000	1.0000
L33	29	CCI 8.5" x 1.25" Plate	14.75 - 19.75	1.0000	1.0000
L33	30	CCI 8.5" x 1.25" Plate	14.75 - 19.75	1.0000	1.0000
L33	31	CCI 8.5" x 1.25" Plate	14.75 - 19.75	1.0000	1.0000
L33	32	CCI 8.5" x 1.25" Plate	14.75 - 19.75	1.0000	1.0000
L33	69	CCI 8.5" x 1.25" Plate	14.75 - 19.75	1.0000	1.0000
L33	70	CCI 8.5" x 1.25" Plate	14.75 - 19.75	1.0000	1.0000
L33	71	CCI 8.5" x 1.25" Plate	14.75 - 19.75	1.0000	1.0000
L33	72	CCI 8.5" x 1.25" Plate	14.75 - 19.75	1.0000	1.0000
L33	104	PWRT-606-S(7/8)	14.75 - 19.75	1.0000	1.0000
L33	106	FB-L98B-034-XXX(3/8)	14.75 - 19.75	1.0000	1.0000
L33	108	LDF7-50A(1-5/8)	14.75 - 19.75	1.0000	1.0000
L34	1	AVA5-50(7/8)	9.75 - 14.75	1.0000	1.0000
L34	15	LDF7-50A(1-5/8)	9.75 - 14.75	1.0000	1.0000
L34	29	CCI 8.5" x 1.25" Plate	14.04 - 14.75	1.0000	1.0000
L34	30	CCI 8.5" x 1.25" Plate	14.04 - 14.75	1.0000	1.0000
L34	31	CCI 8.5" x 1.25" Plate	14.04 - 14.75	1.0000	1.0000
L34	32	CCI 8.5" x 1.25" Plate	14.04 - 14.75	1.0000	1.0000
L34	69	CCI 8.5" x 1.25" Plate	9.75 - 14.75	1.0000	1.0000
L34	70	CCI 8.5" x 1.25" Plate	9.75 - 14.75	1.0000	1.0000
L34	71	CCI 8.5" x 1.25" Plate	9.75 - 14.75	1.0000	1.0000
L34	72	CCI 8.5" x 1.25" Plate	9.75 - 14.75	1.0000	1.0000
L34	104	PWRT-606-S(7/8)	9.75 - 14.75	1.0000	1.0000
L34	106	FB-L98B-034-XXX(3/8)	9.75 - 14.75	1.0000	1.0000
L34	108	LDF7-50A(1-5/8)	9.75 - 14.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L35	1	AVA5-50(7/8)	4.75 - 9.75	1.0000	1.0000
L35	15	LDF7-50A(1-5/8)	4.75 - 9.75	1.0000	1.0000
L35	69	CCI 8.5" x 1.25" Plate	4.75 - 9.75	1.0000	1.0000
L35	70	CCI 8.5" x 1.25" Plate	4.75 - 9.75	1.0000	1.0000
L35	71	CCI 8.5" x 1.25" Plate	4.75 - 9.75	1.0000	1.0000
L35	72	CCI 8.5" x 1.25" Plate	4.75 - 9.75	1.0000	1.0000
L35	104	PWRT-606-S(7/8)	4.75 - 9.75	1.0000	1.0000
L35	106	FB-L98B-034-XXX(3/8)	4.75 - 9.75	1.0000	1.0000
L35	108	LDF7-50A(1-5/8)	4.75 - 9.75	1.0000	1.0000
L36	1	AVA5-50(7/8)	0.00 - 4.75	1.0000	1.0000
L36	15	LDF7-50A(1-5/8)	0.00 - 4.75	1.0000	1.0000
L36	69	CCI 8.5" x 1.25" Plate	0.00 - 4.75	1.0000	1.0000
L36	70	CCI 8.5" x 1.25" Plate	0.00 - 4.75	1.0000	1.0000
L36	71	CCI 8.5" x 1.25" Plate	0.00 - 4.75	1.0000	1.0000
L36	72	CCI 8.5" x 1.25" Plate	0.00 - 4.75	1.0000	1.0000
L36	104	PWRT-606-S(7/8)	0.00 - 4.75	1.0000	1.0000
L36	106	FB-L98B-034-XXX(3/8)	0.00 - 4.75	1.0000	1.0000
L36	108	LDF7-50A(1-5/8)	0.00 - 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
L11	89	CCI 4" x 0.75" Plate	95.00 - 95.25	Auto	1.0000
L11	90	CCI 4" x 0.75" Plate	95.00 - 95.25	Auto	1.0000
L11	91	CCI 4" x 0.75" Plate	95.00 - 95.25	Auto	1.0000
L11	92	CCI 4" x 0.75" Plate	95.00 - 95.25	Auto	1.0000
L12	89	CCI 4" x 0.75" Plate	94.25 - 95.00	Auto	1.0000
L12	90	CCI 4" x 0.75" Plate	94.25 - 95.00	Auto	1.0000
L12	91	CCI 4" x 0.75" Plate	94.25 - 95.00	Auto	1.0000
L12	92	CCI 4" x 0.75" Plate	94.25 - 95.00	Auto	1.0000
L13	89	CCI 4" x 0.75" Plate	94.00 - 94.25	Auto	1.0000
L13	90	CCI 4" x 0.75" Plate	94.00 - 94.25	Auto	1.0000
L13	91	CCI 4" x 0.75" Plate	94.00 - 94.25	Auto	1.0000
L13	92	CCI 4" x 0.75" Plate	94.00 - 94.25	Auto	1.0000
L14	89	CCI 4" x 0.75" Plate	89.00 - 94.00	Auto	1.0000
L14	90	CCI 4" x 0.75" Plate	89.00 - 94.00	Auto	1.0000
L14	91	CCI 4" x 0.75" Plate	89.00 - 94.00	Auto	1.0000
L14	92	CCI 4" x 0.75" Plate	89.00 - 94.00	Auto	1.0000
L15	59	CCI 6.0" x 1.0" Plate	84.00 - 84.92	Auto	1.0000
L15	60	CCI 6.0" x 1.0" Plate	84.00 - 84.92	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L15	61	CCI 6.0" x 1.0" Plate	84.00 - 84.92	Auto	1.0000
L15	62	CCI 6.0" x 1.0" Plate	84.00 - 84.92	Auto	1.0000
L15	64	CCI 5.0" x 3.0" Plate	84.00 - 84.50	Auto	1.0000
L15	65	CCI 5.0" x 3.0" Plate	84.00 - 84.50	Auto	1.0000
L15	66	CCI 5.0" x 3.0" Plate	84.00 - 84.50	Auto	1.0000
L15	67	CCI 5.0" x 3.0" Plate	84.00 - 84.50	Auto	1.0000
L15	89	CCI 4" x 0.75" Plate	84.00 - 89.00	Auto	1.0000
L15	90	CCI 4" x 0.75" Plate	84.00 - 89.00	Auto	1.0000
L15	91	CCI 4" x 0.75" Plate	84.00 - 89.00	Auto	1.0000
L15	92	CCI 4" x 0.75" Plate	84.00 - 89.00	Auto	1.0000
L16	59	CCI 6.0" x 1.0" Plate	80.00 - 84.00	Auto	1.0000
L16	60	CCI 6.0" x 1.0" Plate	80.00 - 84.00	Auto	1.0000
L16	61	CCI 6.0" x 1.0" Plate	80.00 - 84.00	Auto	1.0000
L16	62	CCI 6.0" x 1.0" Plate	80.00 - 84.00	Auto	1.0000
L16	64	CCI 5.0" x 3.0" Plate	80.25 - 84.00	Auto	1.0000
L16	65	CCI 5.0" x 3.0" Plate	80.25 - 84.00	Auto	1.0000
L16	66	CCI 5.0" x 3.0" Plate	80.25 - 84.00	Auto	1.0000
L16	67	CCI 5.0" x 3.0" Plate	80.25 - 84.00	Auto	1.0000
L16	89	CCI 4" x 0.75" Plate	80.25 - 84.00	Auto	1.0000
L16	90	CCI 4" x 0.75" Plate	80.25 - 84.00	Auto	1.0000
L16	91	CCI 4" x 0.75" Plate	80.25 - 84.00	Auto	1.0000
L16	92	CCI 4" x 0.75" Plate	80.25 - 84.00	Auto	1.0000
L17	59	CCI 6.0" x 1.0" Plate	79.75 - 80.00	Auto	1.0000
L17	60	CCI 6.0" x 1.0" Plate	79.75 - 80.00	Auto	1.0000
L17	61	CCI 6.0" x 1.0" Plate	79.75 - 80.00	Auto	1.0000
L17	62	CCI 6.0" x 1.0" Plate	79.75 - 80.00	Auto	1.0000
L18	59	CCI 6.0" x 1.0" Plate	76.33 - 79.75	Auto	1.0000
L18	60	CCI 6.0" x 1.0" Plate	76.33 - 79.75	Auto	1.0000
L18	61	CCI 6.0" x 1.0" Plate	76.33 - 79.75	Auto	1.0000
L18	62	CCI 6.0" x 1.0" Plate	76.33 - 79.75	Auto	1.0000
L18	84	CCI 6" x 1" Plate	74.75 - 79.75	Auto	1.0000
L18	85	CCI 6" x 1" Plate	74.75 - 79.75	Auto	1.0000
L18	86	CCI 6" x 1" Plate	74.75 - 79.75	Auto	1.0000
L18	87	CCI 6" x 1" Plate	74.75 - 79.75	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L19	84	CCI 6" x 1" Plate	69.75 - 74.75	Auto	1.0000
L19	85	CCI 6" x 1" Plate	69.75 - 74.75	Auto	1.0000
L19	86	CCI 6" x 1" Plate	69.75 - 74.75	Auto	1.0000
L19	87	CCI 6" x 1" Plate	69.75 - 74.75	Auto	1.0000
L20	49	CCI 6.5" x 1.25" Plate	64.75 - 66.04	Auto	1.0000
L20	50	CCI 6.5" x 1.25" Plate	64.75 - 66.04	Auto	1.0000
L20	51	CCI 6.5" x 1.25" Plate	64.75 - 66.04	Auto	1.0000
L20	52	CCI 6.5" x 1.25" Plate	64.75 - 66.04	Auto	1.0000
L20	54	CCI 6.0" x 3.0" Plate	64.75 - 65.50	Auto	1.0000
L20	55	CCI 6.0" x 3.0" Plate	64.75 - 65.50	Auto	1.0000
L20	56	CCI 6.0" x 3.0" Plate	64.75 - 65.50	Auto	1.0000
L20	57	CCI 6.0" x 3.0" Plate	64.75 - 65.50	Auto	1.0000
L20	84	CCI 6" x 1" Plate	64.75 - 69.75	Auto	1.0000
L20	85	CCI 6" x 1" Plate	64.75 - 69.75	Auto	1.0000
L20	86	CCI 6" x 1" Plate	64.75 - 69.75	Auto	1.0000
L20	87	CCI 6" x 1" Plate	64.75 - 69.75	Auto	1.0000
L21	49	CCI 6.5" x 1.25" Plate	60.00 - 64.75	Auto	1.0000
L21	50	CCI 6.5" x 1.25" Plate	60.00 - 64.75	Auto	1.0000
L21	51	CCI 6.5" x 1.25" Plate	60.00 - 64.75	Auto	1.0000
L21	52	CCI 6.5" x 1.25" Plate	60.00 - 64.75	Auto	1.0000
L21	54	CCI 6.0" x 3.0" Plate	60.25 - 64.75	Auto	1.0000
L21	55	CCI 6.0" x 3.0" Plate	60.25 - 64.75	Auto	1.0000
L21	56	CCI 6.0" x 3.0" Plate	60.25 - 64.75	Auto	1.0000
L21	57	CCI 6.0" x 3.0" Plate	60.25 - 64.75	Auto	1.0000
L21	84	CCI 6" x 1" Plate	60.25 - 64.75	Auto	1.0000
L21	85	CCI 6" x 1" Plate	60.25 - 64.75	Auto	1.0000
L21	86	CCI 6" x 1" Plate	60.25 - 64.75	Auto	1.0000
L21	87	CCI 6" x 1" Plate	60.25 - 64.75	Auto	1.0000
L21	94	4.75" x 1.25" Plate	60.00 - 64.75	Auto	1.0000
L21	95	4.75" x 1.25" Plate	60.00 - 64.75	Auto	1.0000
L21	96	4.75" x 1.25" Plate	60.00 - 64.75	Auto	1.0000
L21	98	4.75" x 3" Plate	60.25 - 64.75	Auto	1.0000
L21	99	4.75" x 3" Plate	60.25 - 64.75	Auto	1.0000
L21	100	4.75" x 3" Plate	60.25 - 64.75	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L22	49	CCI 6.5" x 1.25" Plate	59.75 - 60.00	Auto	1.0000
L22	50	CCI 6.5" x 1.25" Plate	59.75 - 60.00	Auto	1.0000
L22	51	CCI 6.5" x 1.25" Plate	59.75 - 60.00	Auto	1.0000
L22	52	CCI 6.5" x 1.25" Plate	59.75 - 60.00	Auto	1.0000
L22	94	4.75" x 1.25" Plate	59.75 - 60.00	Auto	1.0000
L22	95	4.75" x 1.25" Plate	59.75 - 60.00	Auto	1.0000
L22	96	4.75" x 1.25" Plate	59.75 - 60.00	Auto	1.0000
L23	49	CCI 6.5" x 1.25" Plate	55.46 - 59.75	Auto	1.0000
L23	50	CCI 6.5" x 1.25" Plate	55.46 - 59.75	Auto	1.0000
L23	51	CCI 6.5" x 1.25" Plate	55.46 - 59.75	Auto	1.0000
L23	52	CCI 6.5" x 1.25" Plate	55.46 - 59.75	Auto	1.0000
L23	79	CCI 6.5" x 1.25" Plate	54.75 - 59.75	Auto	1.0000
L23	80	CCI 6.5" x 1.25" Plate	54.75 - 59.75	Auto	1.0000
L23	81	CCI 6.5" x 1.25" Plate	54.75 - 59.75	Auto	1.0000
L23	82	CCI 6.5" x 1.25" Plate	54.75 - 59.75	Auto	1.0000
L23	94	4.75" x 1.25" Plate	57.50 - 59.75	Auto	1.0000
L23	95	4.75" x 1.25" Plate	57.50 - 59.75	Auto	1.0000
L23	96	4.75" x 1.25" Plate	57.50 - 59.75	Auto	1.0000
L24	79	CCI 6.5" x 1.25" Plate	49.75 - 54.75	Auto	1.0000
L24	80	CCI 6.5" x 1.25" Plate	49.75 - 54.75	Auto	1.0000
L24	81	CCI 6.5" x 1.25" Plate	49.75 - 54.75	Auto	1.0000
L24	82	CCI 6.5" x 1.25" Plate	49.75 - 54.75	Auto	1.0000
L25	39	CCI 6.5" x 1.25" Plate	44.75 - 46.04	Auto	1.0000
L25	40	CCI 6.5" x 1.25" Plate	44.75 - 46.04	Auto	1.0000
L25	41	CCI 6.5" x 1.25" Plate	44.75 - 46.04	Auto	1.0000
L25	42	CCI 6.5" x 1.25" Plate	44.75 - 46.04	Auto	1.0000
L25	44	CCI 6.0" x 3.0" Plate	44.75 - 45.50	Auto	1.0000
L25	45	CCI 6.0" x 3.0" Plate	44.75 - 45.50	Auto	1.0000
L25	46	CCI 6.0" x 3.0" Plate	44.75 - 45.50	Auto	1.0000
L25	47	CCI 6.0" x 3.0" Plate	44.75 - 45.50	Auto	1.0000
L25	79	CCI 6.5" x 1.25" Plate	44.75 - 49.75	Auto	1.0000
L25	80	CCI 6.5" x 1.25" Plate	44.75 - 49.75	Auto	1.0000
L25	81	CCI 6.5" x 1.25" Plate	44.75 - 49.75	Auto	1.0000
L25	82	CCI 6.5" x 1.25" Plate	44.75 - 49.75	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L26	39	CCI 6.5" x 1.25" Plate	40.00 - 44.75	Auto	1.0000
L26	40	CCI 6.5" x 1.25" Plate	40.00 - 44.75	Auto	1.0000
L26	41	CCI 6.5" x 1.25" Plate	40.00 - 44.75	Auto	1.0000
L26	42	CCI 6.5" x 1.25" Plate	40.00 - 44.75	Auto	1.0000
L26	44	CCI 6.0" x 3.0" Plate	40.25 - 44.75	Auto	1.0000
L26	45	CCI 6.0" x 3.0" Plate	40.25 - 44.75	Auto	1.0000
L26	46	CCI 6.0" x 3.0" Plate	40.25 - 44.75	Auto	1.0000
L26	47	CCI 6.0" x 3.0" Plate	40.25 - 44.75	Auto	1.0000
L26	79	CCI 6.5" x 1.25" Plate	40.25 - 44.75	Auto	1.0000
L26	80	CCI 6.5" x 1.25" Plate	40.25 - 44.75	Auto	1.0000
L26	81	CCI 6.5" x 1.25" Plate	40.25 - 44.75	Auto	1.0000
L26	82	CCI 6.5" x 1.25" Plate	40.25 - 44.75	Auto	1.0000
L27	39	CCI 6.5" x 1.25" Plate	39.75 - 40.00	Auto	1.0000
L27	40	CCI 6.5" x 1.25" Plate	39.75 - 40.00	Auto	1.0000
L27	41	CCI 6.5" x 1.25" Plate	39.75 - 40.00	Auto	1.0000
L27	42	CCI 6.5" x 1.25" Plate	39.75 - 40.00	Auto	1.0000
L28	39	CCI 6.5" x 1.25" Plate	35.46 - 39.75	Auto	1.0000
L28	40	CCI 6.5" x 1.25" Plate	35.46 - 39.75	Auto	1.0000
L28	41	CCI 6.5" x 1.25" Plate	35.46 - 39.75	Auto	1.0000
L28	42	CCI 6.5" x 1.25" Plate	35.46 - 39.75	Auto	1.0000
L28	74	CCI 8.5" x 1.25" Plate	34.75 - 39.75	Auto	1.0000
L28	75	CCI 8.5" x 1.25" Plate	34.75 - 39.75	Auto	1.0000
L28	76	CCI 8.5" x 1.25" Plate	34.75 - 39.75	Auto	1.0000
L28	77	CCI 8.5" x 1.25" Plate	34.75 - 39.75	Auto	1.0000
L29	74	CCI 8.5" x 1.25" Plate	29.75 - 34.75	Auto	1.0000
L29	75	CCI 8.5" x 1.25" Plate	29.75 - 34.75	Auto	1.0000
L29	76	CCI 8.5" x 1.25" Plate	29.75 - 34.75	Auto	1.0000
L29	77	CCI 8.5" x 1.25" Plate	29.75 - 34.75	Auto	1.0000
L30	29	CCI 8.5" x 1.25" Plate	24.75 - 26.96	Auto	1.0000
L30	30	CCI 8.5" x 1.25" Plate	24.75 - 26.96	Auto	1.0000
L30	31	CCI 8.5" x 1.25" Plate	24.75 - 26.96	Auto	1.0000
L30	32	CCI 8.5" x 1.25" Plate	24.75 - 26.96	Auto	1.0000
L30	34	CCI 8.0" x 3.0" Plate	24.75 - 26.50	Auto	1.0000
L30	35	CCI 8.0" x 3.0" Plate	24.75 - 26.50	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L30	36	CCI 8.0" x 3.0" Plate	24.75 - 26.50	Auto	1.0000
L30	37	CCI 8.0" x 3.0" Plate	24.75 - 26.50	Auto	1.0000
L30	74	CCI 8.5" x 1.25" Plate	24.75 - 29.75	Auto	1.0000
L30	75	CCI 8.5" x 1.25" Plate	24.75 - 29.75	Auto	1.0000
L30	76	CCI 8.5" x 1.25" Plate	24.75 - 29.75	Auto	1.0000
L30	77	CCI 8.5" x 1.25" Plate	24.75 - 29.75	Auto	1.0000
L31	29	CCI 8.5" x 1.25" Plate	20.00 - 24.75	Auto	1.0000
L31	30	CCI 8.5" x 1.25" Plate	20.00 - 24.75	Auto	1.0000
L31	31	CCI 8.5" x 1.25" Plate	20.00 - 24.75	Auto	1.0000
L31	32	CCI 8.5" x 1.25" Plate	20.00 - 24.75	Auto	1.0000
L31	34	CCI 8.0" x 3.0" Plate	20.25 - 24.75	Auto	1.0000
L31	35	CCI 8.0" x 3.0" Plate	20.25 - 24.75	Auto	1.0000
L31	36	CCI 8.0" x 3.0" Plate	20.25 - 24.75	Auto	1.0000
L31	37	CCI 8.0" x 3.0" Plate	20.25 - 24.75	Auto	1.0000
L31	74	CCI 8.5" x 1.25" Plate	20.25 - 24.75	Auto	1.0000
L31	75	CCI 8.5" x 1.25" Plate	20.25 - 24.75	Auto	1.0000
L31	76	CCI 8.5" x 1.25" Plate	20.25 - 24.75	Auto	1.0000
L31	77	CCI 8.5" x 1.25" Plate	20.25 - 24.75	Auto	1.0000
L32	29	CCI 8.5" x 1.25" Plate	19.75 - 20.00	Auto	1.0000
L32	30	CCI 8.5" x 1.25" Plate	19.75 - 20.00	Auto	1.0000
L32	31	CCI 8.5" x 1.25" Plate	19.75 - 20.00	Auto	1.0000
L32	32	CCI 8.5" x 1.25" Plate	19.75 - 20.00	Auto	1.0000
L33	29	CCI 8.5" x 1.25" Plate	14.75 - 19.75	Auto	1.0000
L33	30	CCI 8.5" x 1.25" Plate	14.75 - 19.75	Auto	1.0000
L33	31	CCI 8.5" x 1.25" Plate	14.75 - 19.75	Auto	1.0000
L33	32	CCI 8.5" x 1.25" Plate	14.75 - 19.75	Auto	1.0000
L33	69	CCI 8.5" x 1.25" Plate	14.75 - 19.75	Auto	1.0000
L33	70	CCI 8.5" x 1.25" Plate	14.75 - 19.75	Auto	1.0000
L33	71	CCI 8.5" x 1.25" Plate	14.75 - 19.75	Auto	1.0000
L33	72	CCI 8.5" x 1.25" Plate	14.75 - 19.75	Auto	1.0000
L34	29	CCI 8.5" x 1.25" Plate	14.04 - 14.75	Auto	1.0000
L34	30	CCI 8.5" x 1.25" Plate	14.04 - 14.75	Auto	1.0000
L34	31	CCI 8.5" x 1.25" Plate	14.04 - 14.75	Auto	1.0000
L34	32	CCI 8.5" x 1.25" Plate	14.04 - 14.75	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L34	69	CCI 8.5" x 1.25" Plate	9.75 - 14.75	Auto	1.0000
L34	70	CCI 8.5" x 1.25" Plate	9.75 - 14.75	Auto	1.0000
L34	71	CCI 8.5" x 1.25" Plate	9.75 - 14.75	Auto	1.0000
L34	72	CCI 8.5" x 1.25" Plate	9.75 - 14.75	Auto	1.0000
L35	69	CCI 8.5" x 1.25" Plate	4.75 - 9.75	Auto	1.0000
L35	70	CCI 8.5" x 1.25" Plate	4.75 - 9.75	Auto	1.0000
L35	71	CCI 8.5" x 1.25" Plate	4.75 - 9.75	Auto	1.0000
L35	72	CCI 8.5" x 1.25" Plate	4.75 - 9.75	Auto	1.0000
L36	69	CCI 8.5" x 1.25" Plate	0.00 - 4.75	Auto	1.0000
L36	70	CCI 8.5" x 1.25" Plate	0.00 - 4.75	Auto	1.0000
L36	71	CCI 8.5" x 1.25" Plate	0.00 - 4.75	Auto	1.0000
L36	72	CCI 8.5" x 1.25" Plate	0.00 - 4.75	Auto	1.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
Lightning Rod 5/8" x 4'	A	From Leg	2.000 0.000 0.000	0.000	149.500	No Ice 1/2" Ice 1" Ice 2" Ice	0.250 0.664 0.973 1.494	0.250 0.664 0.973 1.494	0.031 0.034 0.039 0.059
Lightning Rod 5/8" x 4'	B	From Leg	4.000 0.000 0.000	0.000	149.500	No Ice 1/2" Ice 1" Ice 2" Ice	0.250 0.664 0.973 1.494	0.250 0.664 0.973 1.494	0.031 0.034 0.039 0.059
Lightning Rod 5/8" x 4'	C	From Leg	2.000 0.000 0.000	0.000	149.500	No Ice 1/2" Ice 1" Ice 2" Ice	0.250 0.664 0.973 1.494	0.250 0.664 0.973 1.494	0.031 0.034 0.039 0.059
4' x 2" Pipe Mount	A	From Leg	2.000 0.000 0.000	0.000	147.500	No Ice 1/2" Ice 1" Ice 2" Ice	0.785 1.028 1.281 1.814	0.785 1.028 1.281 1.814	0.029 0.035 0.044 0.072
4' x 2" Pipe Mount	C	From Leg	2.000 0.000 0.000	0.000	147.500	No Ice 1/2" Ice 1" Ice 2" Ice	0.785 1.028 1.281 1.814	0.785 1.028 1.281 1.814	0.029 0.035 0.044 0.072
*									
AIR 32 B2A/B66AA w/ Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice 2" Ice	3.760 4.120 4.480 5.240	3.150 3.490 3.840 4.580	0.194 0.252 0.320 0.485
AIR 32 B2A/B66AA w/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice 2" Ice	3.760 4.120 4.480 5.240	3.150 3.490 3.840 4.580	0.194 0.252 0.320 0.485
AIR 32 B2A/B66AA w/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice	3.760 4.120 4.480	3.150 3.490 3.840	0.194 0.252 0.320

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K
						1" Ice	5.240	4.580	0.485
						2" Ice			
APXVAARR24_43-U-NA20 w/ Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice	14.690	6.870	0.186
						1/2"	15.460	7.550	0.315
						Ice	16.230	8.250	0.458
						1" Ice	17.820	9.670	0.788
						2" Ice			
APXVAARR24_43-U-NA20 w/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice	14.690	6.870	0.186
						1/2"	15.460	7.550	0.315
						Ice	16.230	8.250	0.458
						1" Ice	17.820	9.670	0.788
						2" Ice			
APXVAARR24_43-U-NA20 w/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice	14.690	6.870	0.186
						1/2"	15.460	7.550	0.315
						Ice	16.230	8.250	0.458
						1" Ice	17.820	9.670	0.788
						2" Ice			
AIR6449 B41_T-MOBILE w/ Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice	5.190	2.710	0.128
						1/2"	5.590	3.040	0.174
						Ice	6.020	3.380	0.227
						1" Ice	6.900	4.120	0.354
						2" Ice			
AIR6449 B41_T-MOBILE w/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice	5.190	2.710	0.128
						1/2"	5.590	3.040	0.174
						Ice	6.020	3.380	0.227
						1" Ice	6.900	4.120	0.354
						2" Ice			
AIR6449 B41_T-MOBILE w/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice	5.190	2.710	0.128
						1/2"	5.590	3.040	0.174
						Ice	6.020	3.380	0.227
						1" Ice	6.900	4.120	0.354
						2" Ice			
RADIO 4449 B71 B85A_T- MOBILE	A	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice	1.970	1.587	0.073
						1/2"	2.147	1.749	0.093
						Ice	2.331	1.918	0.116
						1" Ice	2.721	2.280	0.170
						2" Ice			
RADIO 4449 B71 B85A_T- MOBILE	B	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice	1.970	1.587	0.073
						1/2"	2.147	1.749	0.093
						Ice	2.331	1.918	0.116
						1" Ice	2.721	2.280	0.170
						2" Ice			
RADIO 4449 B71 B85A_T- MOBILE	C	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice	1.970	1.587	0.073
						1/2"	2.147	1.749	0.093
						Ice	2.331	1.918	0.116
						1" Ice	2.721	2.280	0.170
						2" Ice			
KRY 112 144/1	A	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice	0.350	0.175	0.011
						1/2"	0.426	0.234	0.014
						Ice	0.509	0.301	0.019
						1" Ice	0.698	0.456	0.032
						2" Ice			
KRY 112 144/1	B	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice	0.350	0.175	0.011
						1/2"	0.426	0.234	0.014
						Ice	0.509	0.301	0.019
						1" Ice	0.698	0.456	0.032
						2" Ice			
KRY 112 144/1	C	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice	0.350	0.175	0.011
						1/2"	0.426	0.234	0.014
						Ice	0.509	0.301	0.019
						1" Ice	0.698	0.456	0.032
						2" Ice			
RRUS 4415 B25	A	From Leg	4.000 0.000 0.000	0.000	150.000	No Ice	1.644	0.679	0.044
						1/2"	1.804	0.791	0.056
						Ice	1.972	0.913	0.071

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K
						1" Ice	2.329	1.183	0.109
						2" Ice			
RRUS 4415 B25	B	From Leg	4.000	0.000	150.000	No Ice	1.644	0.679	0.044
			0.000			1/2"	1.804	0.791	0.056
			0.000			Ice	1.972	0.913	0.071
						1" Ice	2.329	1.183	0.109
						2" Ice			
RRUS 4415 B25	C	From Leg	4.000	0.000	150.000	No Ice	1.644	0.679	0.044
			0.000			1/2"	1.804	0.791	0.056
			0.000			Ice	1.972	0.913	0.071
						1" Ice	2.329	1.183	0.109
						2" Ice			
SDX1926Q-43	A	From Leg	4.000	0.000	150.000	No Ice	0.241	0.101	0.006
			0.000			1/2"	0.306	0.144	0.009
			0.000			Ice	0.379	0.195	0.012
						1" Ice	0.547	0.318	0.023
						2" Ice			
SDX1926Q-43	B	From Leg	4.000	0.000	150.000	No Ice	0.241	0.101	0.006
			0.000			1/2"	0.306	0.144	0.009
			0.000			Ice	0.379	0.195	0.012
						1" Ice	0.547	0.318	0.023
						2" Ice			
SDX1926Q-43	C	From Leg	4.000	0.000	150.000	No Ice	0.241	0.101	0.006
			0.000			1/2"	0.306	0.144	0.009
			0.000			Ice	0.379	0.195	0.012
						1" Ice	0.547	0.318	0.023
						2" Ice			
Platform Mount [LP 405-1_HR-1]	C	None		0.000	150.000	No Ice	25.330	25.330	2.056
						1/2"	33.790	33.790	2.634
						Ice	42.160	42.160	3.360
						1" Ice	58.770	58.770	5.254
						2" Ice			
*									
DS4C06F36D-D	A	From Leg	4.000	0.000	150.000	No Ice	5.820	5.820	0.050
			0.000			1/2"	7.793	7.793	0.092
			17.000			Ice	9.783	9.783	0.146
						1" Ice	13.813	13.813	0.292
						2" Ice			
DS4C06F36D-D	C	From Leg	4.000	0.000	150.000	No Ice	5.820	5.820	0.050
			0.000			1/2"	7.793	7.793	0.092
			17.000			Ice	9.783	9.783	0.146
						1" Ice	13.813	13.813	0.292
						2" Ice			
201-1N	B	From Leg	4.000	0.000	150.000	No Ice	1.489	1.489	0.006
			0.000			1/2"	2.408	2.408	0.018
			4.000			Ice	3.344	3.344	0.036
						1" Ice	4.751	4.751	0.089
						2" Ice			
4' x 2" Pipe Mount	A	From Leg	4.000	0.000	150.000	No Ice	0.785	0.785	0.029
			0.000			1/2"	1.028	1.028	0.035
			0.000			Ice	1.281	1.281	0.044
						1" Ice	1.814	1.814	0.072
						2" Ice			
4' x 2" Pipe Mount	B	From Leg	4.000	0.000	150.000	No Ice	0.785	0.785	0.029
			0.000			1/2"	1.028	1.028	0.035
			0.000			Ice	1.281	1.281	0.044
						1" Ice	1.814	1.814	0.072
						2" Ice			
4' x 2" Pipe Mount	C	From Leg	4.000	0.000	150.000	No Ice	0.785	0.785	0.029
			0.000			1/2"	1.028	1.028	0.035
			0.000			Ice	1.281	1.281	0.044
						1" Ice	1.814	1.814	0.072
						2" Ice			
*									
MT6407-77A w/ Mount	A	From Leg	4.000	0.000	140.000	No Ice	4.907	2.682	0.096

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K
Pipe			0.000 0.000			1/2" Ice 1" Ice 2" Ice	5.256 5.615 6.362	3.145 3.624 4.631	0.136 0.180 0.288
MT6407-77A w/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	140.000	No Ice 1/2" Ice 1" Ice 2" Ice	4.907 5.256 5.615 6.362	2.682 3.145 3.624 4.631	0.096 0.136 0.180 0.288
MT6407-77A w/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	140.000	No Ice 1/2" Ice 1" Ice 2" Ice	4.907 5.256 5.615 6.362	2.682 3.145 3.624 4.631	0.096 0.136 0.180 0.288
(2) NNHH-65B-R4 w/ Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	140.000	No Ice 1/2" Ice 1" Ice 2" Ice	7.550 8.040 8.530 9.560	4.230 4.670 5.120 6.050	0.110 0.197 0.296 0.529
(2) NNHH-65B-R4 w/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	140.000	No Ice 1/2" Ice 1" Ice 2" Ice	7.550 8.040 8.530 9.560	4.230 4.670 5.120 6.050	0.110 0.197 0.296 0.529
(2) NNHH-65B-R4 w/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	140.000	No Ice 1/2" Ice 1" Ice 2" Ice	7.550 8.040 8.530 9.560	4.230 4.670 5.120 6.050	0.110 0.197 0.296 0.529
CBRS w/ Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	140.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.450 1.670 1.900 2.420	0.990 1.180 1.390 1.850	0.032 0.048 0.068 0.123
CBRS w/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	140.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.450 1.670 1.900 2.420	0.990 1.180 1.390 1.850	0.032 0.048 0.068 0.123
CBRS w/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	140.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.450 1.670 1.900 2.420	0.990 1.180 1.390 1.850	0.032 0.048 0.068 0.123
RVZDC-6627-PF-48	A	From Leg	4.000 0.000 0.000	0.000	140.000	No Ice 1/2" Ice 1" Ice 2" Ice	3.792 4.044 4.303 4.844	2.514 2.727 2.947 3.417	0.032 0.063 0.099 0.181
DB-T1-6Z-8AB-0Z	B	From Leg	4.000 0.000 0.000	0.000	140.000	No Ice 1/2" Ice 1" Ice 2" Ice	4.800 5.070 5.348 5.926	2.000 2.193 2.393 2.815	0.044 0.080 0.120 0.213
RFV01U-D1A	B	From Leg	4.000 0.000 0.000	0.000	140.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.875 2.045 2.223 2.601	1.250 1.393 1.543 1.865	0.084 0.103 0.124 0.175
(2) RFV01U-D1A	C	From Leg	4.000 0.000 0.000	0.000	140.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.875 2.045 2.223 2.601	1.250 1.393 1.543 1.865	0.084 0.103 0.124 0.175
(2) RFV01U-D2A	A	From Leg	4.000	0.000	140.000	No Ice	1.875	1.013	0.070

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K
			0.000			1/2"	2.045	1.145	0.087
			0.000			Ice	2.223	1.284	0.106
						1" Ice	2.601	1.585	0.153
						2" Ice			
RFV01U-D2A	B	From Leg	4.000	0.000	140.000	No Ice	1.875	1.013	0.070
			0.000			1/2"	2.045	1.145	0.087
			0.000			Ice	2.223	1.284	0.106
						1" Ice	2.601	1.585	0.153
						2" Ice			
Platform Mount [LP 303-1_KCKR]	C	None		0.000	140.000	No Ice	25.910	25.910	1.525
						1/2"	32.230	32.230	1.986
						Ice	38.730	38.730	2.540
						1" Ice	52.330	52.330	3.937
						2" Ice			
*									
NNVV-65B-R4 w/ Mount Pipe	A	From Leg	4.000	0.000	130.000	No Ice	7.550	4.230	0.110
			0.000			1/2"	8.040	4.670	0.197
			0.000			Ice	8.530	5.120	0.296
						1" Ice	9.560	6.050	0.529
						2" Ice			
NNVV-65B-R4 w/ Mount Pipe	B	From Leg	4.000	0.000	130.000	No Ice	7.550	4.230	0.110
			0.000			1/2"	8.040	4.670	0.197
			0.000			Ice	8.530	5.120	0.296
						1" Ice	9.560	6.050	0.529
						2" Ice			
NNVV-65B-R4 w/ Mount Pipe	C	From Leg	4.000	0.000	130.000	No Ice	7.550	4.230	0.110
			0.000			1/2"	8.040	4.670	0.197
			0.000			Ice	8.530	5.120	0.296
						1" Ice	9.560	6.050	0.529
						2" Ice			
AAHC w/ Mount Pipe	A	From Leg	4.000	0.000	130.000	No Ice	4.409	2.691	0.115
			0.000			1/2"	4.727	3.079	0.156
			0.000			Ice	5.055	3.486	0.202
						1" Ice	5.743	4.359	0.310
						2" Ice			
AAHC w/ Mount Pipe	B	From Leg	4.000	0.000	130.000	No Ice	4.409	2.691	0.115
			0.000			1/2"	4.727	3.079	0.156
			0.000			Ice	5.055	3.486	0.202
						1" Ice	5.743	4.359	0.310
						2" Ice			
AAHC w/ Mount Pipe	C	From Leg	4.000	0.000	130.000	No Ice	4.409	2.691	0.115
			0.000			1/2"	4.727	3.079	0.156
			0.000			Ice	5.055	3.486	0.202
						1" Ice	5.743	4.359	0.310
						2" Ice			
(2) RRH2X50-800	A	From Leg	4.000	0.000	130.000	No Ice	1.701	1.282	0.053
			0.000			1/2"	1.864	1.428	0.070
			0.000			Ice	2.035	1.580	0.090
						1" Ice	2.398	1.908	0.138
						2" Ice			
(2) RRH2X50-800	B	From Leg	4.000	0.000	130.000	No Ice	1.701	1.282	0.053
			0.000			1/2"	1.864	1.428	0.070
			0.000			Ice	2.035	1.580	0.090
						1" Ice	2.398	1.908	0.138
						2" Ice			
(2) RRH2X50-800	A	From Leg	4.000	0.000	130.000	No Ice	1.701	1.282	0.053
			0.000			1/2"	1.864	1.428	0.070
			0.000			Ice	2.035	1.580	0.090
						1" Ice	2.398	1.908	0.138
						2" Ice			
PCS 1900MHz 4x45W-65MHz	A	From Leg	4.000	0.000	130.000	No Ice	2.322	2.238	0.060
			0.000			1/2"	2.527	2.441	0.083
			0.000			Ice	2.739	2.651	0.110
						1" Ice	3.185	3.093	0.173
						2" Ice			

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K
PCS 1900MHz 4x45W-65MHz	B	From Leg	4.000 0.000 0.000	0.000	130.000	No Ice 1/2" Ice 1" Ice 2" Ice	2.322 2.527 2.739 3.185	2.238 2.441 2.651 3.093	0.060 0.083 0.110 0.173
PCS 1900MHz 4x45W-65MHz	C	From Leg	4.000 0.000 0.000	0.000	130.000	No Ice 1/2" Ice 1" Ice 2" Ice	2.322 2.527 2.739 3.185	2.238 2.441 2.651 3.093	0.060 0.083 0.110 0.173
(2) 4' x 2" Pipe Mount	A	From Leg	4.000 0.000 0.000	0.000	130.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.785 1.028 1.281 1.814	0.785 1.028 1.281 1.814	0.029 0.035 0.044 0.072
(2) 4' x 2" Pipe Mount	B	From Leg	4.000 0.000 0.000	0.000	130.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.785 1.028 1.281 1.814	0.785 1.028 1.281 1.814	0.029 0.035 0.044 0.072
(2) 4' x 2" Pipe Mount	C	From Leg	4.000 0.000 0.000	0.000	130.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.785 1.028 1.281 1.814	0.785 1.028 1.281 1.814	0.029 0.035 0.044 0.072
Platform Mount [LP 405-1]	C	None		0.000	130.000	No Ice 1/2" Ice 1" Ice 2" Ice	20.880 28.890 37.040 53.730	20.880 28.890 37.040 53.730	1.800 2.277 2.868 4.394
* Ice Shields	C	From Leg	0.500 0.000 0.000	0.000	128.000	No Ice 1/2" Ice 1" Ice 2" Ice	2.700 2.904 3.115 3.559	3.600 3.837 4.081 4.593	0.020 0.060 0.105 0.207
** MX08FRO665-21 w/ Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	120.000	No Ice 1/2" Ice 1" Ice 2" Ice	8.010 8.520 9.040 10.110	4.230 4.690 5.160 6.120	0.108 0.194 0.292 0.522
MX08FRO665-21 w/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	120.000	No Ice 1/2" Ice 1" Ice 2" Ice	8.010 8.520 9.040 10.110	4.230 4.690 5.160 6.120	0.108 0.194 0.292 0.522
MX08FRO665-21 w/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	120.000	No Ice 1/2" Ice 1" Ice 2" Ice	8.010 8.520 9.040 10.110	4.230 4.690 5.160 6.120	0.108 0.194 0.292 0.522
TA08025-B604	A	From Leg	4.000 0.000 0.000	0.000	120.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.964 2.138 2.320 2.705	0.981 1.112 1.250 1.548	0.064 0.081 0.100 0.148
TA08025-B604	B	From Leg	4.000 0.000 0.000	0.000	120.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.964 2.138 2.320 2.705	0.981 1.112 1.250 1.548	0.064 0.081 0.100 0.148
TA08025-B604	C	From Leg	4.000 0.000 0.000	0.000	120.000	No Ice 1/2" Ice	1.964 2.138 2.320	0.981 1.112 1.250	0.064 0.081 0.100

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K
TA08025-B605	A	From Leg	4.000 0.000 0.000	0.000	120.000	1" Ice	2.705	1.548	0.148
						2" Ice			
						No Ice	1.964	1.129	0.075
						1/2"	2.138	1.267	0.093
						Ice	2.320	1.411	0.114
TA08025-B605	B	From Leg	4.000 0.000 0.000	0.000	120.000	1" Ice	2.705	1.723	0.164
						2" Ice			
						No Ice	1.964	1.129	0.075
						1/2"	2.138	1.267	0.093
						Ice	2.320	1.411	0.114
TA08025-B605	C	From Leg	4.000 0.000 0.000	0.000	120.000	1" Ice	2.705	1.723	0.164
						2" Ice			
						No Ice	1.964	1.129	0.075
						1/2"	2.138	1.267	0.093
						Ice	2.320	1.411	0.114
RDIDC-9181-PF-48	A	From Leg	4.000 0.000 0.000	0.000	120.000	1" Ice	2.705	1.723	0.164
						2" Ice			
						No Ice	2.312	1.293	0.022
						1/2"	2.502	1.448	0.041
						Ice	2.700	1.610	0.063
Commscope MC-PK8-DSH	C	None		0.000	120.000	1" Ice	3.118	1.957	0.117
						2" Ice			
						No Ice	34.240	34.240	1.749
						1/2"	62.950	62.950	2.099
						Ice	91.660	91.660	2.450
(2) 8' x 2" Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	120.000	1" Ice	149.080	149.080	3.151
						2" Ice			
						No Ice	1.900	1.900	0.029
						1/2"	2.728	2.728	0.044
						Ice	3.401	3.401	0.063
(2) 8' x 2" Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	120.000	1" Ice	4.396	4.396	0.119
						2" Ice			
						No Ice	1.900	1.900	0.029
						1/2"	2.728	2.728	0.044
						Ice	3.401	3.401	0.063
(2) 8' x 2" Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	120.000	1" Ice	4.396	4.396	0.119
						2" Ice			
						No Ice	1.900	1.900	0.029
						1/2"	2.728	2.728	0.044
						Ice	3.401	3.401	0.063
** DMP65R-BU6D w/ Mount Pipe	A	From Leg	4.000 0.000 3.000	0.000	102.000	1" Ice	4.396	4.396	0.119
						2" Ice			
						No Ice	11.960	5.970	0.115
						1/2"	12.700	6.630	0.201
						Ice	13.460	7.300	0.298
DMP65R-BU8D w/ Mount Pipe	B	From Leg	4.000 0.000 3.000	0.000	102.000	1" Ice	15.020	8.690	0.529
						2" Ice			
						No Ice	15.890	7.890	0.139
						1/2"	16.810	8.740	0.252
						Ice	17.760	9.600	0.380
DMP65R-BU8D w/ Mount Pipe	C	From Leg	4.000 0.000 3.000	0.000	102.000	1" Ice	19.700	11.370	0.679
						2" Ice			
						No Ice	15.890	7.890	0.139
						1/2"	16.810	8.740	0.252
						Ice	17.760	9.600	0.380
TPA65R-BU6D w/ Mount Pipe	A	From Leg	4.000 0.000 3.000	0.000	102.000	1" Ice	19.700	11.370	0.679
						2" Ice			
						No Ice	12.250	6.050	0.098
						1/2"	13.000	6.710	0.185
						Ice	13.760	7.390	0.284
TPA65R-BU8D w/ Mount Pipe	B	From Leg	4.000 0.000	0.000	102.000	1" Ice	15.340	8.790	0.517
						2" Ice			
						No Ice	15.940	7.910	0.120
						1/2"	16.870	8.760	0.235

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K
			3.000			Ice	17.820	9.630	0.364
						1" Ice	19.760	11.400	0.667
						2" Ice			
TPA65R-BU8D w/ Mount Pipe	C	From Leg	4.000 0.000 3.000	0.000	102.000	No Ice	15.940	7.910	0.120
						1/2"	16.870	8.760	0.235
						Ice	17.820	9.630	0.364
						1" Ice	19.760	11.400	0.667
						2" Ice			
AIR 6419 B77G w/ Mount Pipe	A	From Leg	4.000 0.000 3.000	0.000	102.000	No Ice	4.320	2.490	0.078
						1/2"	4.740	2.840	0.110
						Ice	5.170	3.210	0.147
						1" Ice	6.090	4.000	0.241
						2" Ice			
AIR 6419 B77G w/ Mount Pipe	B	From Leg	4.000 0.000 3.000	0.000	102.000	No Ice	4.320	2.490	0.078
						1/2"	4.740	2.840	0.110
						Ice	5.170	3.210	0.147
						1" Ice	6.090	4.000	0.241
						2" Ice			
AIR 6419 B77G w/ Mount Pipe	C	From Leg	4.000 0.000 3.000	0.000	102.000	No Ice	4.320	2.490	0.078
						1/2"	4.740	2.840	0.110
						Ice	5.170	3.210	0.147
						1" Ice	6.090	4.000	0.241
						2" Ice			
AIR 6449 N77 w/ Mount Pipe	A	From Leg	4.000 0.000 3.000	0.000	102.000	No Ice	3.650	2.720	0.110
						1/2"	3.990	3.030	0.150
						Ice	4.350	3.360	0.196
						1" Ice	5.110	4.050	0.310
						2" Ice			
AIR 6449 N77 w/ Mount Pipe	B	From Leg	4.000 0.000 3.000	0.000	102.000	No Ice	3.650	2.720	0.110
						1/2"	3.990	3.030	0.150
						Ice	4.350	3.360	0.196
						1" Ice	5.110	4.050	0.310
						2" Ice			
AIR 6449 N77 w/ Mount Pipe	C	From Leg	4.000 0.000 3.000	0.000	102.000	No Ice	3.650	2.720	0.110
						1/2"	3.990	3.030	0.150
						Ice	4.350	3.360	0.196
						1" Ice	5.110	4.050	0.310
						2" Ice			
RADIO 4478 B14	A	From Leg	4.000 0.000 3.000	0.000	102.000	No Ice	2.021	1.246	0.059
						1/2"	2.200	1.396	0.077
						Ice	2.386	1.554	0.097
						1" Ice	2.780	1.891	0.147
						2" Ice			
RADIO 4478 B14	B	From Leg	4.000 0.000 3.000	0.000	102.000	No Ice	2.021	1.246	0.059
						1/2"	2.200	1.396	0.077
						Ice	2.386	1.554	0.097
						1" Ice	2.780	1.891	0.147
						2" Ice			
RADIO 4478 B14	C	From Leg	4.000 0.000 3.000	0.000	102.000	No Ice	2.021	1.246	0.059
						1/2"	2.200	1.396	0.077
						Ice	2.386	1.554	0.097
						1" Ice	2.780	1.891	0.147
						2" Ice			
RRUS 4415 B25	A	From Leg	4.000 0.000 3.000	0.000	102.000	No Ice	1.644	0.679	0.044
						1/2"	1.804	0.791	0.056
						Ice	1.972	0.913	0.071
						1" Ice	2.329	1.183	0.109
						2" Ice			
RRUS 4415 B25	B	From Leg	4.000 0.000 3.000	0.000	102.000	No Ice	1.644	0.679	0.044
						1/2"	1.804	0.791	0.056
						Ice	1.972	0.913	0.071
						1" Ice	2.329	1.183	0.109
						2" Ice			
RRUS 4415 B25	C	From Leg	4.000 0.000	0.000	102.000	No Ice	1.644	0.679	0.044
						1/2"	1.804	0.791	0.056

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K
			3.000			Ice	1.972	0.913	0.071
						1" Ice	2.329	1.183	0.109
						2" Ice			
RRUS 4449 B5/B12	A	From Leg	4.000	0.000	102.000	No Ice	1.968	1.408	0.071
			0.000			1/2"	2.144	1.564	0.090
			3.000			Ice	2.328	1.727	0.111
						1" Ice	2.718	2.075	0.163
						2" Ice			
RRUS 4449 B5/B12	B	From Leg	4.000	0.000	102.000	No Ice	1.968	1.408	0.071
			0.000			1/2"	2.144	1.564	0.090
			3.000			Ice	2.328	1.727	0.111
						1" Ice	2.718	2.075	0.163
						2" Ice			
RRUS 4449 B5/B12	C	From Leg	4.000	0.000	102.000	No Ice	1.968	1.408	0.071
			0.000			1/2"	2.144	1.564	0.090
			3.000			Ice	2.328	1.727	0.111
						1" Ice	2.718	2.075	0.163
						2" Ice			
DC9-48-60-24-8C-EV	A	From Leg	4.000	0.000	102.000	No Ice	1.145	1.145	0.026
			0.000			1/2"	1.792	1.792	0.047
			3.000			Ice	2.002	2.002	0.070
						1" Ice	2.451	2.451	0.125
						2" Ice			
RRUS 32 B30	A	From Leg	4.000	0.000	102.000	No Ice	2.692	1.573	0.060
			0.000			1/2"	2.912	1.756	0.080
			3.000			Ice	3.138	1.945	0.104
						1" Ice	3.614	2.346	0.161
						2" Ice			
RRUS 32 B30	B	From Leg	4.000	0.000	102.000	No Ice	2.692	1.573	0.060
			0.000			1/2"	2.912	1.756	0.080
			3.000			Ice	3.138	1.945	0.104
						1" Ice	3.614	2.346	0.161
						2" Ice			
RRUS 32 B30	C	From Leg	4.000	0.000	102.000	No Ice	2.692	1.573	0.060
			0.000			1/2"	2.912	1.756	0.080
			3.000			Ice	3.138	1.945	0.104
						1" Ice	3.614	2.346	0.161
						2" Ice			
RRUS 32 B66	A	From Leg	4.000	0.000	102.000	No Ice	2.743	1.668	0.053
			0.000			1/2"	2.965	1.855	0.074
			3.000			Ice	3.194	2.049	0.098
						1" Ice	3.675	2.458	0.157
						2" Ice			
RRUS 32 B66	B	From Leg	4.000	0.000	102.000	No Ice	2.743	1.668	0.053
			0.000			1/2"	2.965	1.855	0.074
			3.000			Ice	3.194	2.049	0.098
						1" Ice	3.675	2.458	0.157
						2" Ice			
RRUS 32 B66	C	From Leg	4.000	0.000	102.000	No Ice	2.743	1.668	0.053
			0.000			1/2"	2.965	1.855	0.074
			3.000			Ice	3.194	2.049	0.098
						1" Ice	3.675	2.458	0.157
						2" Ice			
DC6-48-60-18-8F	A	From Leg	4.000	0.000	102.000	No Ice	1.212	1.212	0.020
			0.000			1/2"	1.892	1.892	0.042
			3.000			Ice	2.105	2.105	0.067
						1" Ice	2.570	2.570	0.126
						2" Ice			
DC6-48-60-18-8F	B	From Leg	4.000	0.000	102.000	No Ice	1.212	1.212	0.020
			0.000			1/2"	1.892	1.892	0.042
			3.000			Ice	2.105	2.105	0.067
						1" Ice	2.570	2.570	0.126
						2" Ice			
4' x 2" Pipe Mount	A	From Leg	2.000	0.000	102.000	No Ice	0.785	0.785	0.029
			0.000			1/2"	1.028	1.028	0.035

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
			0.000			Ice	1.281	1.281	0.044
						1" Ice	1.814	1.814	0.072
						2" Ice			
4' x 2" Pipe Mount	B	From Leg	2.000	0.000	102.000	No Ice	0.785	0.785	0.029
			0.000			1/2"	1.028	1.028	0.035
			0.000			Ice	1.281	1.281	0.044
						1" Ice	1.814	1.814	0.072
						2" Ice			
4' x 2" Pipe Mount	C	From Leg	2.000	0.000	102.000	No Ice	0.785	0.785	0.029
			0.000			1/2"	1.028	1.028	0.035
			0.000			Ice	1.281	1.281	0.044
						1" Ice	1.814	1.814	0.072
						2" Ice			
Side Arm Mount [SO 102-3]	C	None		0.000	102.000	No Ice	3.600	3.600	0.075
						1/2"	4.180	4.180	0.105
						Ice	4.750	4.750	0.135
						1" Ice	5.900	5.900	0.195
						2" Ice			
Platform Mount [LP 303-1]	C	None		0.000	102.000	No Ice	14.690	14.690	1.250
						1/2"	18.010	18.010	1.569
						Ice	21.340	21.340	1.942
						1" Ice	28.080	28.080	2.852
						2" Ice			
*									
APXV18-206516S-C	A	From Leg	1.000	0.000	95.000	No Ice	2.560	1.210	0.019
			0.000			1/2"	3.000	1.630	0.039
			0.000			Ice	3.460	2.050	0.063
						1" Ice	4.410	2.960	0.126
						2" Ice			
APXV18-206516S-C	B	From Leg	1.000	0.000	95.000	No Ice	2.560	1.210	0.019
			0.000			1/2"	3.000	1.630	0.039
			0.000			Ice	3.460	2.050	0.063
						1" Ice	4.410	2.960	0.126
						2" Ice			
APXV18-206516S-C	C	From Leg	1.000	0.000	95.000	No Ice	2.560	1.210	0.019
			0.000			1/2"	3.000	1.630	0.039
			0.000			Ice	3.460	2.050	0.063
						1" Ice	4.410	2.960	0.126
						2" Ice			
Pipe Mount [PM 601-3]	C	None		0.000	95.000	No Ice	3.170	3.170	0.195
						1/2"	3.790	3.790	0.232
						Ice	4.420	4.420	0.279
						1" Ice	5.760	5.760	0.401
						2" Ice			
*									
1142-2C	C	From Leg	3.000	0.000	89.000	No Ice	2.092	2.092	0.024
			0.000			1/2"	3.374	3.374	0.041
			6.000			Ice	4.673	4.673	0.066
						1" Ice	7.320	7.320	0.140
						2" Ice			
4' x 2" Pipe Mount	C	From Leg	3.000	0.000	89.000	No Ice	0.785	0.785	0.029
			0.000			1/2"	1.028	1.028	0.035
			0.000			Ice	1.281	1.281	0.044
						1" Ice	1.814	1.814	0.072
						2" Ice			
Side Arm Mount [SO 701-1]	C	From Leg	3.000	0.000	89.000	No Ice	0.850	1.670	0.065
			0.000			1/2"	1.140	2.340	0.079
			0.000			Ice	1.430	3.010	0.093
						1" Ice	2.010	4.350	0.121
						2" Ice			
*									
GPS_A	A	From Leg	1.500	0.000	72.000	No Ice	0.255	0.255	0.001
			0.000			1/2"	0.320	0.320	0.005
			2.000			Ice	0.393	0.393	0.010
						1" Ice	0.561	0.561	0.025

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K
Side Arm Mount [SO 701-1]	A	From Leg	1.500 0.000 0.000	0.000	72.000	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	0.850 1.140 1.430 2.010	1.670 2.340 3.010 4.350	0.065 0.079 0.093 0.121
* 201-1N	A	From Leg	3.000 0.000 7.000	0.000	54.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.489 2.408 3.344 4.751	1.489 2.408 3.344 4.751	0.006 0.018 0.036 0.089
220-8N	C	From Leg	3.000 0.000 10.000	0.000	54.000	No Ice 1/2" Ice 1" Ice 2" Ice	5.179 7.094 9.025 12.938	5.179 7.094 9.025 12.938	0.021 0.059 0.108 0.244
Side Arm Mount [SO 701-1]	A	From Leg	3.000 0.000 0.000	0.000	54.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.850 1.140 1.430 2.010	1.670 2.340 3.010 4.350	0.065 0.079 0.093 0.121
Side Arm Mount [SO 701-1]	C	From Leg	3.000 0.000 0.000	0.000	54.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.850 1.140 1.430 2.010	1.670 2.340 3.010 4.350	0.065 0.079 0.093 0.121
* DB436-C	A	From Leg	4.000 0.000 0.000	0.000	49.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.450 0.810 1.170 1.890	0.450 0.810 1.170 1.890	0.007 0.009 0.011 0.015
Yagi Mount	A	From Leg	0.500 0.000 0.000	0.000	49.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.320 1.580 1.840 2.400	1.320 1.580 1.840 2.400	0.065 0.077 0.093 0.134
* DB436-C	A	From Leg	4.000 0.000 0.000	0.000	45.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.450 0.810 1.170 1.890	0.450 0.810 1.170 1.890	0.007 0.009 0.011 0.015
Yagi Mount	A	From Leg	0.500 0.000 0.000	0.000	45.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.320 1.580 1.840 2.400	1.320 1.580 1.840 2.400	0.065 0.077 0.093 0.134
* DB436-C	A	From Leg	4.000 0.000 0.000	0.000	40.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.450 0.810 1.170 1.890	0.450 0.810 1.170 1.890	0.007 0.009 0.011 0.015
Yagi Mount	A	From Leg	0.500 0.000 0.000	0.000	40.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.320 1.580 1.840 2.400	1.320 1.580 1.840 2.400	0.065 0.077 0.093 0.134
* DB436-C	A	From Leg	4.000 0.000 0.000	0.000	37.000	No Ice 1/2" Ice 1" Ice	0.450 0.810 1.170 1.890	0.450 0.810 1.170 1.890	0.007 0.009 0.011 0.015

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
Yagi Mount	A	From Leg	0.500 0.000 0.000	0.000	37.000	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	1.320 1.580 1.840 2.400	1.320 1.580 1.840 2.400	0.065 0.077 0.093 0.134
*									

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft	Aperture Area ft ²	Weight K
HPD2-4.7	B	Paraboloid w/Shroud (HP)	From Leg	4.000 0.000 4.000	90.000		148.000	2.042	No Ice 1/2" Ice 1" Ice 2" Ice	0.027 0.045 0.063 0.100
*										

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

Comb. No.	Description
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	147.5 - 142.5	Pole	Max Tension	26	0.000	0.000	-0.000
			Max. Compression	26	-11.829	0.409	0.167
			Max. Mx	20	-5.486	52.995	-0.542
			Max. My	2	-5.479	-0.500	53.599
			Max. Vy	8	6.039	-52.882	1.037
			Max. Vx	2	-6.095	-0.500	53.599
			Max. Torque	16			-0.374
L2	142.5 - 137.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-21.145	-0.247	0.215
			Max. Mx	8	-9.598	-94.036	1.337
			Max. My	2	-9.601	-0.836	94.812
			Max. Vy	8	10.360	-94.036	1.337
			Max. Vx	2	-10.422	-0.836	94.812
			Max. Torque	25			-0.547
L3	137.5 - 132.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-22.113	-0.256	0.150
			Max. Mx	8	-10.269	-146.615	1.596
			Max. My	2	-10.273	-0.908	147.685
			Max. Vy	8	10.673	-146.615	1.596
			Max. Vx	2	-10.734	-0.908	147.685
			Max. Torque	25			-0.547
L4	132.5 - 127.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-30.851	-1.124	1.809
			Max. Mx	8	-14.581	-208.889	2.713
			Max. My	2	-14.584	-1.444	210.786
			Max. Vy	8	14.141	-208.889	2.713
			Max. Vx	2	-14.267	-1.444	210.786
			Max. Torque	25			-1.250
L5	127.5 - 125	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-31.350	-1.129	1.779
			Max. Mx	8	-14.945	-244.408	2.764
			Max. My	2	-14.948	-1.399	246.614
			Max. Vy	8	14.283	-244.408	2.764
			Max. Vx	2	-14.409	-1.399	246.614
			Max. Torque	25			-0.998
L6	125 - 120	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-32.545	-1.138	1.699
			Max. Mx	8	-15.804	-316.727	2.862

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L7	120 - 115	Pole	Max. My	2	-15.808	-1.309	319.542
			Max. Vy	8	14.651	-316.727	2.862
			Max. Vx	2	-14.776	-1.309	319.542
			Max. Torque	25			-0.997
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-39.634	-1.148	2.103
			Max. Mx	8	-19.733	-407.122	3.086
			Max. My	2	-19.738	-1.218	410.857
			Max. Vy	8	18.257	-407.122	3.086
			Max. Vx	2	-18.416	-1.218	410.857
L8	115 - 110	Pole	Max. Torque	11			1.207
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-40.840	-1.150	2.009
			Max. Mx	8	-20.632	-499.215	3.184
			Max. My	2	-20.639	-1.126	503.725
			Max. Vy	8	18.589	-499.215	3.184
			Max. Vx	2	-18.746	-1.126	503.725
			Max. Torque	11			1.207
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-42.044	-1.150	1.912
L9	110 - 105	Pole	Max. Mx	8	-21.546	-592.903	3.280
			Max. My	2	-21.554	-1.033	598.181
			Max. Vy	8	18.898	-592.903	3.280
			Max. Vx	2	-19.055	-1.033	598.181
			Max. Torque	11			1.206
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-52.865	-1.692	1.436
			Max. Mx	8	-26.628	-711.594	3.346
			Max. My	2	-26.648	-1.069	716.745
			Max. Vy	8	24.516	-711.594	3.346
L10	105 - 100	Pole	Max. Vx	2	-24.529	-1.069	716.745
			Max. Torque	11			1.206
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-54.497	-1.999	1.502
			Max. Mx	8	-27.763	-835.133	3.491
			Max. My	2	-27.784	-1.065	840.302
			Max. Vy	8	24.880	-835.133	3.491
			Max. Vx	2	-24.898	-1.065	840.302
			Max. Torque	25			-1.097
			Max Tension	1	0.000	0.000	0.000
L11	100 - 95	Pole	Max. Compression	26	-55.431	-2.038	1.489
			Max. Mx	8	-28.225	-854.106	3.506
			Max. My	2	-28.249	-1.064	859.251
			Max. Vy	8	25.344	-854.106	3.506
			Max. Vx	14	25.347	-1.218	-855.867
			Max. Torque	25			-1.097
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-55.539	-2.051	1.484
			Max. Mx	8	-28.298	-860.450	3.511
			Max. My	2	-28.323	-1.064	865.577
L12	95 - 94.25	Pole	Max. Vy	8	25.379	-860.450	3.511
			Max. Vx	14	25.382	-1.230	-862.208
			Max. Torque	25			-1.097
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-57.689	-2.309	1.395
			Max. Mx	8	-29.681	-989.365	3.609
			Max. My	2	-29.722	-1.059	993.082
			Max. Vy	8	26.158	-989.365	3.609
			Max. Vx	14	26.159	-1.476	-991.052
			Max. Torque	25			-1.097
L13	94.25 - 94	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-60.389	-1.382	0.733
			Max. Mx	8	-31.431	-1122.980	3.372
			Max. My	14	-31.431	-1.206	-1125.570
			Max. Vy	8	27.116	-1122.980	3.372
			Max. Vx	14	27.131	-1.206	-1125.570
			Max. Torque	25			-1.097
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-63.745	-1.028	1.007
			Max. Mx	8			
L14	94 - 89	Pole	Max. My	2			
			Max. Vy	8			
			Max. Vx	14			
			Max. Torque	25			
			Max Tension	1			
			Max. Compression	26			
			Max. Mx	8			
			Max. My	2			
			Max. Vy	8			
			Max. Vx	14			
L15	89 - 84	Pole	Max. Torque	25			
			Max Tension	1			
			Max. Compression	26			
			Max. Mx	8			
			Max. My	14			
			Max. Vy	8			
			Max. Vx	14			
			Max. Torque	25			
			Max Tension	1			
			Max. Compression	26			
L16	84 - 80	Pole	Max. Mx	8			
			Max. My	2			
			Max. Vy	8			
			Max. Vx	14			
			Max. Torque	25			
			Max Tension	1			
			Max. Compression	26			
			Max. Mx	8			
			Max. My	2			
			Max. Vy	8			

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L17	80 - 79.75	Pole	Max. Mx	8	-33.871	-1232.550	3.662
			Max. My	14	-33.872	-1.018	-1235.296
			Max. Vy	8	27.874	-1232.550	3.662
			Max. Vx	14	27.883	-1.018	-1235.296
			Max. Torque	16			-0.591
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-63.901	-1.032	1.008
			Max. Mx	8	-33.992	-1239.517	3.669
			Max. My	14	-33.993	-1.025	-1242.264
			Max. Vy	8	27.911	-1239.517	3.669
L18	79.75 - 74.75	Pole	Max. Vx	14	27.920	-1.025	-1242.264
			Max. Torque	16			-0.573
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-67.001	-1.129	1.032
			Max. Mx	8	-36.091	-1381.461	3.765
			Max. My	14	-36.093	-1.236	-1384.185
			Max. Vy	8	28.882	-1381.461	3.765
			Max. Vx	14	28.882	-1.236	-1384.185
			Max. Torque	16			-0.573
			Max Tension	1	0.000	0.000	0.000
L19	74.75 - 69.75	Pole	Max. Compression	26	-69.751	-1.406	1.374
			Max. Mx	8	-37.949	-1528.326	4.031
			Max. My	14	-37.952	-1.573	-1530.614
			Max. Vy	8	29.835	-1528.326	4.031
			Max. Vx	14	29.797	-1.573	-1530.614
			Max. Torque	16			-0.703
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-72.848	-1.491	1.405
			Max. Mx	8	-40.133	-1679.637	4.141
			Max. My	14	-40.136	-1.757	-1681.690
L20	69.75 - 64.75	Pole	Max. Vy	8	30.724	-1679.637	4.141
			Max. Vx	14	30.681	-1.757	-1681.690
			Max. Torque	16			-0.703
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-79.099	-0.817	1.897
			Max. Mx	8	-44.920	-1827.873	4.631
			Max. My	14	-44.928	-1.307	-1829.335
			Max. Vy	8	31.992	-1827.873	4.631
			Max. Vx	14	31.698	-1.307	-1829.335
			Max. Torque	16			-0.703
L21	64.75 - 60	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-79.306	-0.818	1.901
			Max. Mx	8	-45.085	-1835.866	4.640
			Max. My	14	-45.094	-1.310	-1837.254
			Max. Vy	8	32.031	-1835.866	4.640
			Max. Vx	14	31.737	-1.310	-1837.254
			Max. Torque	16			-0.703
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-83.263	-0.791	2.011
			Max. Mx	8	-47.911	-1998.502	4.807
L22	60 - 59.75	Pole	Max. My	14	-47.919	-1.413	-1998.393
			Max. Vy	8	33.084	-1998.502	4.807
			Max. Vx	14	32.783	-1.413	-1998.393
			Max. Torque	16			-0.703
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-86.684	0.108	2.084
			Max. Mx	8	-50.204	-2169.954	4.930
			Max. My	14	-50.212	-1.402	-2168.436
			Max. Vy	8	34.368	-2169.954	4.930
			Max. Vx	14	34.048	-1.402	-2168.436
L23	59.75 - 54.75	Pole	Max. Torque	16			-1.704
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-90.397	0.024	2.888
			Max. Mx	8	-50.204	-2169.954	4.930
			Max. My	14	-50.212	-1.402	-2168.436
			Max. Vy	8	34.368	-2169.954	4.930
			Max. Vx	14	34.048	-1.402	-2168.436
			Max. Torque	16			-1.704
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-90.397	0.024	2.888
L24	54.75 - 49.75	Pole	Max. Mx	8	-50.204	-2169.954	4.930
			Max. My	14	-50.212	-1.402	-2168.436
			Max. Vy	8	34.368	-2169.954	4.930
			Max. Vx	14	34.048	-1.402	-2168.436
			Max. Torque	16			-1.704
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-90.397	0.024	2.888
			Max. Mx	8	-50.204	-2169.954	4.930
			Max. My	14	-50.212	-1.402	-2168.436
			Max. Vy	8	34.368	-2169.954	4.930
L25	49.75 - 44.75	Pole	Max. Vx	14	34.048	-1.402	-2168.436
			Max. Torque	16			-1.704
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-90.397	0.024	2.888
			Max. Mx	8	-50.204	-2169.954	4.930
			Max. My	14	-50.212	-1.402	-2168.436
			Max. Vy	8	34.368	-2169.954	4.930
			Max. Vx	14	34.048	-1.402	-2168.436
			Max. Torque	16			-1.704
			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
L26	44.75 - 40	Pole	Max. Mx	8	-52.891	-2344.281	5.463
			Max. My	14	-52.899	-1.649	-2340.622
			Max. Vy	8	35.416	-2344.281	5.463
			Max. Vx	14	35.091	-1.649	-2340.622
			Max. Torque	16			-1.932
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-95.556	0.793	3.448
			Max. Mx	8	-56.872	-2514.013	5.946
			Max. My	14	-56.878	-1.176	-2509.026
			Max. Vy	8	36.394	-2514.013	5.946
L27	40 - 39.75	Pole	Max. Vx	14	36.060	-1.176	-2509.026
			Max. Torque	16			-1.936
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-95.889	0.793	3.831
			Max. Mx	8	-57.122	-2523.120	6.195
			Max. My	14	-57.129	-1.182	-2517.805
			Max. Vy	8	36.495	-2523.120	6.195
			Max. Vx	14	36.161	-1.182	-2517.805
			Max. Torque	16			-2.048
			Max Tension	1	0.000	0.000	0.000
L28	39.75 - 34.75	Pole	Max. Compression	26	-100.148	0.846	4.381
			Max. Mx	8	-60.240	-2708.159	6.570
			Max. My	14	-60.246	-1.339	-2700.872
			Max. Vy	8	37.595	-2708.159	6.570
			Max. Vx	14	37.251	-1.339	-2700.872
			Max. Torque	16			-2.164
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-103.517	0.537	4.295
			Max. Mx	8	-62.718	-2898.484	6.507
			Max. My	14	-62.723	-1.776	-2889.351
L29	34.75 - 29.75	Pole	Max. Vy	8	38.500	-2898.484	6.507
			Max. Vx	14	38.152	-1.776	-2889.351
			Max. Torque	16			-2.164
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-108.133	0.863	4.599
			Max. Mx	8	-66.273	-3092.891	6.773
			Max. My	14	-66.277	-1.677	-3082.086
			Max. Vy	8	39.443	-3092.891	6.773
			Max. Vx	14	39.087	-1.677	-3082.086
			Max. Torque	16			-2.164
L30	29.75 - 24.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-114.323	2.089	5.451
			Max. Mx	8	-71.229	-3281.280	7.509
			Max. My	14	-71.233	-0.796	-3269.134
			Max. Vy	8	40.396	-3281.280	7.509
			Max. Vx	14	40.025	-0.796	-3269.134
			Max. Torque	16			-2.194
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-114.542	2.096	5.460
			Max. Mx	8	-71.412	-3291.364	7.521
L31	24.75 - 20	Pole	Max. My	14	-71.415	-0.795	-3279.128
			Max. Vy	8	40.426	-3291.364	7.521
			Max. Vx	14	40.055	-0.795	-3279.128
			Max. Torque	16			-2.193
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-119.127	2.359	5.734
			Max. Mx	8	-74.901	-3495.509	7.743
			Max. My	14	-74.904	-0.775	-3481.439
			Max. Vy	8	41.373	-3495.509	7.743
			Max. Vx	14	40.990	-0.775	-3481.439
L32	20 - 19.75	Pole	Max. Torque	16			-2.193
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-122.742	2.119	5.696
			Max. Mx	8	-77.658	-3704.440	7.715
			Max. My	14	-77.660	-1.159	-3688.343
			Max. Vy	8			
			Max. Vx	14			
			Max. Torque	16			
			Max Tension	1			
			Max. Compression	26			
L33	19.75 - 14.75	Pole	Max. Mx	8			
			Max. My	14			
			Max. Vy	8			
			Max. Vx	14			
			Max. Torque	16			
			Max Tension	1			
			Max. Compression	26			
			Max. Mx	8			
			Max. My	14			
			Max. Vy	8			
L34	14.75 - 9.75	Pole	Max. Vx	14			
			Max. Torque	16			
			Max Tension	1			
			Max. Compression	26			
			Max. Mx	8			
			Max. My	14			
			Max. Vy	8			
			Max. Vx	14			
			Max. Torque	16			
			Max Tension	1			

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L35	9.75 - 4.75	Pole	Max. Vy	8	42.190	-3704.440	7.715
			Max. Vx	14	41.803	-1.159	-3688.343
			Max. Torque	16			-2.193
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-126.154	1.805	5.608
			Max. Mx	8	-80.299	-3917.443	7.643
			Max. My	14	-80.300	-1.610	-3899.274
			Max. Vy	8	42.977	-3917.443	7.643
			Max. Vx	14	42.587	-1.610	-3899.274
			Max. Torque	16			-2.193
L36	4.75 - 0	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-129.306	1.523	5.530
			Max. Mx	8	-82.814	-4123.396	7.574
			Max. My	14	-82.814	-2.039	-4103.246
			Max. Vy	8	43.711	-4123.396	7.574
			Max. Vx	14	43.319	-2.039	-4103.246
			Max. Torque	16			-2.193

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	26	129.306	-0.000	0.000
	Max. H _x	20	82.824	38.320	0.048
	Max. H _z	2	82.824	0.048	38.117
	Max. M _x	2	3881.246	0.048	38.117
	Max. M _z	8	4123.396	-43.691	-0.010
	Max. Torsion	4	1.971	-19.647	34.093
	Min. Vert	19	62.118	32.919	-18.973
	Min. H _x	8	82.824	-43.691	-0.010
	Min. H _z	14	82.824	-0.060	-43.299
	Min. M _x	14	-4103.246	-0.060	-43.299
	Min. M _z	20	-3883.378	38.320	0.048
	Min. Torsion	16	-2.193	21.192	-36.769

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	69.020	0.000	0.000	-4.290	2.860	0.000
1.2 Dead+1.0 Wind 0 deg - No Ice	82.824	-0.048	-38.117	-3881.246	7.087	-1.338
0.9 Dead+1.0 Wind 0 deg - No Ice	62.118	-0.048	-38.117	-3848.555	6.191	-1.327
1.2 Dead+1.0 Wind 30 deg - No Ice	82.824	19.647	-34.093	-3419.412	-1960.474	-1.971
0.9 Dead+1.0 Wind 30 deg - No Ice	62.118	19.647	-34.093	-3390.700	-1945.642	-1.965
1.2 Dead+1.0 Wind 60 deg - No Ice	82.824	37.389	-21.569	-2056.749	-3544.495	-1.869
0.9 Dead+1.0 Wind 60 deg - No Ice	62.118	37.389	-21.569	-2039.234	-3517.498	-1.871
1.2 Dead+1.0 Wind 90 deg - No Ice	82.824	43.691	0.010	-7.574	-4123.396	-1.162
0.9 Dead+1.0 Wind 90 deg - No Ice	62.118	43.691	0.010	-6.171	-4091.952	-1.170
1.2 Dead+1.0 Wind 120 deg - No Ice	82.824	37.494	21.704	2057.063	-3550.670	-0.541
0.9 Dead+1.0 Wind 120 deg	62.118	37.494	21.704	2042.189	-3523.639	-0.554

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
- No Ice						
1.2 Dead+1.0 Wind 150 deg	82.824	21.755	37.647	3566.735	-2055.969	0.556
- No Ice						
0.9 Dead+1.0 Wind 150 deg	62.118	21.755	37.647	3540.022	-2040.708	0.542
- No Ice						
1.2 Dead+1.0 Wind 180 deg	82.824	0.060	43.299	4103.246	-2.039	1.611
- No Ice						
0.9 Dead+1.0 Wind 180 deg	62.118	0.060	43.299	4072.299	-2.887	1.599
- No Ice						
1.2 Dead+1.0 Wind 210 deg	82.824	-21.192	36.769	3538.192	2042.142	2.193
- No Ice						
0.9 Dead+1.0 Wind 210 deg	62.118	-21.192	36.769	3511.707	2025.267	2.188
- No Ice						
1.2 Dead+1.0 Wind 240 deg	82.824	-32.919	18.973	1923.495	3342.871	2.027
- No Ice						
0.9 Dead+1.0 Wind 240 deg	62.118	-32.919	18.973	1909.252	3315.041	2.029
- No Ice						
1.2 Dead+1.0 Wind 270 deg	82.824	-38.320	-0.048	-9.040	3883.378	1.271
- No Ice						
0.9 Dead+1.0 Wind 270 deg	62.118	-38.320	-0.048	-7.669	3851.244	1.280
- No Ice						
1.2 Dead+1.0 Wind 300 deg	82.824	-34.478	-19.923	-1985.546	3426.465	0.341
- No Ice						
0.9 Dead+1.0 Wind 300 deg	62.118	-34.478	-19.923	-1968.348	3398.224	0.354
- No Ice						
1.2 Dead+1.0 Wind 330 deg	82.824	-19.520	-33.853	-3409.293	1958.980	-0.319
- No Ice						
0.9 Dead+1.0 Wind 330 deg	62.118	-19.520	-33.853	-3380.599	1942.449	-0.305
- No Ice						
1.2 Dead+1.0 Ice+1.0 Temp	129.306	0.000	-0.000	-5.530	1.523	-0.000
1.2 Dead+1.0 Wind 0	129.306	-0.014	-11.001	-1194.961	2.419	-0.704
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 30	129.306	5.695	-9.879	-1054.709	-602.344	-0.859
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 60	129.306	9.688	-5.586	-604.351	-1034.025	-0.816
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 90	129.306	11.320	0.006	-6.250	-1202.238	-0.478
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 120	129.306	9.713	5.621	595.412	-1035.499	-0.116
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 150	129.306	5.646	9.766	1036.668	-599.687	0.356
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 180	129.306	0.017	11.209	1192.405	0.169	0.760
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 210	129.306	-5.743	9.962	1046.501	607.320	0.904
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 240	129.306	-9.512	5.482	586.904	1027.778	0.852
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 270	129.306	-11.078	-0.014	-6.719	1193.525	0.509
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 300	129.306	-9.602	-5.548	-602.972	1034.154	0.075
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 330	129.306	-5.566	-9.646	-1043.480	598.360	-0.305
deg+1.0 Ice+1.0 Temp						
Dead+Wind 0 deg - Service	69.020	-0.012	-9.286	-943.944	3.772	-0.322
Dead+Wind 30 deg - Service	69.020	4.786	-8.306	-832.025	-473.196	-0.483
Dead+Wind 60 deg - Service	69.020	9.108	-5.254	-501.735	-857.255	-0.463
Dead+Wind 90 deg - Service	69.020	10.643	0.003	-4.946	-997.613	-0.292
Dead+Wind 120 deg - Service	69.020	9.133	5.287	495.584	-858.755	-0.145
Dead+Wind 150 deg - Service	69.020	5.299	9.171	861.585	-496.391	0.121
Dead+Wind 180 deg - Service	69.020	0.015	10.548	991.652	1.557	0.382
Dead+Wind 210 deg - Service	69.020	-5.162	8.957	854.663	497.141	0.532
Dead+Wind 240 deg - Service	69.020	-8.019	4.622	463.145	812.381	0.502
Dead+Wind 270 deg -	69.020	-9.335	-0.012	-5.307	943.411	0.326

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
Service Dead+Wind 300 deg - Service	69.020	-8.399	-4.853	-484.440	832.682	0.101
Service Dead+Wind 330 deg - Service	69.020	-4.755	-8.247	-829.564	476.939	-0.066

Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.000	-69.020	0.000	0.000	69.020	0.000	0.000%
2	-0.048	-82.824	-38.117	0.048	82.824	38.117	0.000%
3	-0.048	-62.118	-38.117	0.048	62.118	38.117	0.000%
4	19.647	-82.824	-34.093	-19.647	82.824	34.093	0.000%
5	19.647	-62.118	-34.093	-19.647	62.118	34.093	0.000%
6	37.389	-82.824	-21.569	-37.389	82.824	21.569	0.000%
7	37.389	-62.118	-21.569	-37.389	62.118	21.569	0.000%
8	43.691	-82.824	0.010	-43.691	82.824	-0.010	0.000%
9	43.691	-62.118	0.010	-43.691	62.118	-0.010	0.000%
10	37.494	-82.824	21.704	-37.494	82.824	-21.704	0.000%
11	37.494	-62.118	21.704	-37.494	62.118	-21.704	0.000%
12	21.755	-82.824	37.647	-21.755	82.824	-37.647	0.000%
13	21.755	-62.118	37.647	-21.755	62.118	-37.647	0.000%
14	0.060	-82.824	43.299	-0.060	82.824	-43.299	0.000%
15	0.060	-62.118	43.299	-0.060	62.118	-43.299	0.000%
16	-21.192	-82.824	36.769	21.192	82.824	-36.769	0.000%
17	-21.192	-62.118	36.769	21.192	62.118	-36.769	0.000%
18	-32.919	-82.824	18.973	32.919	82.824	-18.973	0.000%
19	-32.919	-62.118	18.973	32.919	62.118	-18.973	0.000%
20	-38.320	-82.824	-0.048	38.320	82.824	0.048	0.000%
21	-38.320	-62.118	-0.048	38.320	62.118	0.048	0.000%
22	-34.478	-82.824	-19.923	34.478	82.824	19.923	0.000%
23	-34.478	-62.118	-19.923	34.478	62.118	19.923	0.000%
24	-19.520	-82.824	-33.853	19.520	82.824	33.853	0.000%
25	-19.520	-62.118	-33.853	19.520	62.118	33.853	0.000%
26	0.000	-129.306	0.000	-0.000	129.306	0.000	0.000%
27	-0.014	-129.306	-11.001	0.014	129.306	11.001	0.000%
28	5.695	-129.306	-9.879	-5.695	129.306	9.879	0.000%
29	9.688	-129.306	-5.586	-9.688	129.306	5.586	0.000%
30	11.320	-129.306	0.006	-11.320	129.306	-0.006	0.000%
31	9.713	-129.306	5.621	-9.713	129.306	-5.621	0.000%
32	5.646	-129.306	9.766	-5.646	129.306	-9.766	0.000%
33	0.017	-129.306	11.209	-0.017	129.306	-11.209	0.000%
34	-5.743	-129.306	9.962	5.743	129.306	-9.962	0.000%
35	-9.512	-129.306	5.482	9.512	129.306	-5.482	0.000%
36	-11.078	-129.306	-0.014	11.078	129.306	0.014	0.000%
37	-9.602	-129.306	-5.548	9.602	129.306	5.548	0.000%
38	-5.566	-129.306	-9.646	5.566	129.306	9.646	0.000%
39	-0.012	-69.020	-9.286	0.012	69.020	9.286	0.000%
40	4.786	-69.020	-8.306	-4.786	69.020	8.306	0.000%
41	9.108	-69.020	-5.254	-9.108	69.020	5.254	0.000%
42	10.643	-69.020	0.003	-10.643	69.020	-0.003	0.000%
43	9.133	-69.020	5.287	-9.133	69.020	-5.287	0.000%
44	5.299	-69.020	9.171	-5.299	69.020	-9.171	0.000%
45	0.015	-69.020	10.548	-0.015	69.020	-10.548	0.000%
46	-5.162	-69.020	8.957	5.162	69.020	-8.957	0.000%
47	-8.019	-69.020	4.622	8.019	69.020	-4.622	0.000%
48	-9.335	-69.020	-0.012	9.335	69.020	0.012	0.000%
49	-8.399	-69.020	-4.853	8.399	69.020	4.853	0.000%
50	-4.755	-69.020	-8.247	4.755	69.020	8.247	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	5	0.00000001	0.00009308
3	Yes	5	0.00000001	0.00003937
4	Yes	6	0.00000001	0.00006986
5	Yes	5	0.00000001	0.00078574
6	Yes	6	0.00000001	0.00007613
7	Yes	5	0.00000001	0.00085247
8	Yes	5	0.00000001	0.00009141
9	Yes	5	0.00000001	0.00003817
10	Yes	6	0.00000001	0.00007392
11	Yes	5	0.00000001	0.00082764
12	Yes	6	0.00000001	0.00007440
13	Yes	5	0.00000001	0.00083325
14	Yes	5	0.00000001	0.00010016
15	Yes	5	0.00000001	0.00004313
16	Yes	6	0.00000001	0.00007541
17	Yes	5	0.00000001	0.00084486
18	Yes	6	0.00000001	0.00006789
19	Yes	5	0.00000001	0.00076579
20	Yes	5	0.00000001	0.00009501
21	Yes	5	0.00000001	0.00004080
22	Yes	6	0.00000001	0.00007247
23	Yes	5	0.00000001	0.00081487
24	Yes	6	0.00000001	0.00007124
25	Yes	5	0.00000001	0.00080123
26	Yes	4	0.00000001	0.00007947
27	Yes	6	0.00000001	0.00019249
28	Yes	6	0.00000001	0.00020824
29	Yes	6	0.00000001	0.00020729
30	Yes	6	0.00000001	0.00019205
31	Yes	6	0.00000001	0.00020580
32	Yes	6	0.00000001	0.00020584
33	Yes	6	0.00000001	0.00019069
34	Yes	6	0.00000001	0.00020627
35	Yes	6	0.00000001	0.00020363
36	Yes	6	0.00000001	0.00019063
37	Yes	6	0.00000001	0.00020621
38	Yes	6	0.00000001	0.00020714
39	Yes	4	0.00000001	0.00035949
40	Yes	4	0.00000001	0.00079314
41	Yes	4	0.00000001	0.00089769
42	Yes	4	0.00000001	0.00036534
43	Yes	4	0.00000001	0.00083638
44	Yes	4	0.00000001	0.00084851
45	Yes	4	0.00000001	0.00036884
46	Yes	4	0.00000001	0.00088860
47	Yes	4	0.00000001	0.00076411
48	Yes	4	0.00000001	0.00035949
49	Yes	4	0.00000001	0.00084034
50	Yes	4	0.00000001	0.00081813

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	147.5 - 142.5	13.789	41	0.912	0.001
L2	142.5 - 137.5	12.838	42	0.905	0.001
L3	137.5 - 132.5	11.898	42	0.893	0.001
L4	132.5 - 127.5	10.975	42	0.871	0.001
L5	127.5 - 125	10.080	42	0.840	0.001
L6	125 - 120	9.646	42	0.819	0.001
L7	120 - 115	8.802	42	0.794	0.001

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L8	115 - 110	7.988	42	0.761	0.001
L9	110 - 105	7.212	42	0.720	0.001
L10	105 - 100	6.484	42	0.671	0.001
L11	100 - 95	5.811	42	0.612	0.000
L12	95 - 94.25	5.190	42	0.572	0.000
L13	94.25 - 94	5.101	42	0.566	0.000
L14	94 - 89	5.071	42	0.564	0.000
L15	89 - 84	4.499	42	0.527	0.000
L16	84 - 80	3.968	42	0.486	0.000
L17	80 - 79.75	3.577	42	0.448	0.000
L18	79.75 - 74.75	3.553	42	0.447	0.000
L19	74.75 - 69.75	3.100	42	0.419	0.000
L20	69.75 - 64.75	2.677	42	0.388	0.000
L21	64.75 - 60	2.289	42	0.353	0.000
L22	60 - 59.75	1.955	42	0.318	0.000
L23	59.75 - 54.75	1.938	42	0.317	0.000
L24	54.75 - 49.75	1.620	42	0.291	0.000
L25	49.75 - 44.75	1.330	42	0.263	0.000
L26	44.75 - 40	1.070	42	0.233	0.000
L27	40 - 39.75	0.854	42	0.202	0.000
L28	39.75 - 34.75	0.844	42	0.200	0.000
L29	34.75 - 29.75	0.646	42	0.177	0.000
L30	29.75 - 24.75	0.473	42	0.152	0.000
L31	24.75 - 20	0.327	42	0.126	0.000
L32	20 - 19.75	0.215	42	0.099	0.000
L33	19.75 - 14.75	0.210	42	0.098	0.000
L34	14.75 - 9.75	0.119	42	0.075	0.000
L35	9.75 - 4.75	0.053	42	0.051	0.000
L36	4.75 - 0	0.013	42	0.026	0.000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
152.000	HPD2-4.7	41	13.789	0.912	0.001	29754
150.000	AIR 32 B2A/B66AA w/ Mount Pipe	41	13.789	0.912	0.001	29754
149.500	Lightning Rod 5/8" x 4'	41	13.789	0.912	0.001	29754
147.500	4' x 2" Pipe Mount	41	13.789	0.912	0.001	29754
140.000	MT6407-77A w/ Mount Pipe	42	12.366	0.900	0.001	21447
130.000	NNVV-65B-R4 w/ Mount Pipe	42	10.523	0.857	0.001	8933
128.000	Ice Shields	42	10.168	0.844	0.001	8307
120.000	MX08FRO665-21 w/ Mount Pipe	42	8.802	0.794	0.001	9837
102.000	DMP65R-BU6D w/ Mount Pipe	42	6.073	0.634	0.000	5397
95.000	APXV18-206516S-C	42	5.190	0.572	0.000	7234
89.000	1142-2C	42	4.499	0.527	0.000	7271
72.000	GPS_A	42	2.863	0.402	0.000	9131
54.000	201-1N	42	1.574	0.287	0.000	10531
49.000	DB436-C	42	1.289	0.259	0.000	9713
45.000	DB436-C	42	1.082	0.234	0.000	9133
40.000	DB436-C	42	0.854	0.202	0.000	10274
37.000	DB436-C	42	0.732	0.188	0.000	11849

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	147.5 - 142.5	57.060	12	3.769	0.005
L2	142.5 - 137.5	53.130	12	3.741	0.005

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L3	137.5 - 132.5	49.241	12	3.690	0.005
L4	132.5 - 127.5	45.425	12	3.602	0.005
L5	127.5 - 125	41.721	12	3.473	0.004
L6	125 - 120	39.926	12	3.390	0.004
L7	120 - 115	36.431	12	3.286	0.004
L8	115 - 110	33.061	12	3.151	0.003
L9	110 - 105	29.849	12	2.982	0.003
L10	105 - 100	26.832	12	2.779	0.002
L11	100 - 95	24.046	12	2.537	0.002
L12	95 - 94.25	21.475	12	2.371	0.002
L13	94.25 - 94	21.105	12	2.344	0.002
L14	94 - 89	20.983	12	2.337	0.002
L15	89 - 84	18.614	12	2.185	0.002
L16	84 - 80	16.417	8	2.011	0.002
L17	80 - 79.75	14.798	8	1.856	0.001
L18	79.75 - 74.75	14.701	8	1.851	0.001
L19	74.75 - 69.75	12.824	8	1.735	0.001
L20	69.75 - 64.75	11.075	8	1.605	0.001
L21	64.75 - 60	9.469	8	1.463	0.001
L22	60 - 59.75	8.086	8	1.315	0.001
L23	59.75 - 54.75	8.018	8	1.310	0.001
L24	54.75 - 49.75	6.701	8	1.203	0.001
L25	49.75 - 44.75	5.501	8	1.087	0.001
L26	44.75 - 40	4.427	8	0.962	0.001
L27	40 - 39.75	3.533	8	0.834	0.001
L28	39.75 - 34.75	3.489	8	0.829	0.001
L29	34.75 - 29.75	2.671	8	0.733	0.001
L30	29.75 - 24.75	1.956	8	0.630	0.001
L31	24.75 - 20	1.353	8	0.520	0.000
L32	20 - 19.75	0.890	8	0.409	0.000
L33	19.75 - 14.75	0.869	8	0.405	0.000
L34	14.75 - 9.75	0.493	8	0.311	0.000
L35	9.75 - 4.75	0.220	8	0.211	0.000
L36	4.75 - 0	0.053	8	0.106	0.000

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
152.000	HPD2-4.7	12	57.060	3.769	0.006	7281
150.000	AIR 32 B2A/B66AA w/ Mount Pipe	12	57.060	3.769	0.006	7281
149.500	Lightning Rod 5/8" x 4'	12	57.060	3.769	0.006	7281
147.500	4' x 2" Pipe Mount	12	57.060	3.769	0.006	7281
140.000	MT6407-77A w/ Mount Pipe	12	51.179	3.720	0.005	5241
130.000	NNVV-65B-R4 w/ Mount Pipe	12	43.556	3.545	0.005	2189
128.000	Ice Shields	12	42.085	3.489	0.004	2040
120.000	MX08FRO665-21 w/ Mount Pipe	12	36.431	3.286	0.004	2406
102.000	DMP65R-BU6D w/ Mount Pipe	12	25.133	2.628	0.002	1313
95.000	APXV18-206516S-C	12	21.475	2.371	0.002	1758
89.000	1142-2C	12	18.614	2.185	0.002	1764
72.000	GPS_A	8	11.846	1.664	0.001	2208
54.000	201-1N	8	6.513	1.186	0.001	2543
49.000	DB436-C	8	5.331	1.070	0.001	2346
45.000	DB436-C	8	4.478	0.969	0.001	2206
40.000	DB436-C	8	3.533	0.834	0.001	2482
37.000	DB436-C	8	3.027	0.778	0.001	2863

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L _u ft	KI/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
L1	147.5 - 142.5 (1)	P24x0.375	5.000	0.000	0.0	27.833	-5.477	1052.070	0.005
L2	142.5 - 137.5 (2)	P24x0.375	5.000	0.000	0.0	27.833	-9.602	1052.070	0.009
L3	137.5 - 132.5 (3)	P24x0.375	5.000	0.000	0.0	27.833	-10.273	1052.070	0.010
L4	132.5 - 127.5 (4)	P24x0.375	5.000	0.000	0.0	27.833	-14.584	1052.070	0.014
L5	127.5 - 125 (5)	P24x0.375	2.500	0.000	0.0	27.833	-14.948	1052.070	0.014
L6	125 - 120 (6)	P30x0.375	5.000	0.000	0.0	34.901	-15.808	1311.060	0.012
L7	120 - 115 (7)	P30x0.375	5.000	0.000	0.0	34.901	-19.738	1311.060	0.015
L8	115 - 110 (8)	P30x0.375	5.000	0.000	0.0	34.901	-20.639	1311.060	0.016
L9	110 - 105 (9)	P30x0.375	5.000	0.000	0.0	34.901	-21.554	1311.060	0.016
L10	105 - 100 (10)	P30x0.375	5.000	0.000	0.0	34.901	-26.648	1311.060	0.020
L11	100 - 95 (11)	P36x0.375	5.000	0.000	0.0	41.970	-27.784	1490.100	0.019
L12	95 - 94.25 (12)	P36x0.375	0.750	0.000	0.0	41.970	-28.249	1490.100	0.019
L13	94.25 - 94 (13)	P36x0.49375	0.250	0.000	0.0	55.076	-28.323	2081.870	0.014
L14	94 - 89 (14)	P36x0.49375	5.000	0.000	0.0	55.076	-29.722	2081.870	0.014
L15	89 - 84 (15)	P36x0.49375	5.000	0.000	0.0	55.076	-31.428	2081.870	0.015
L16	84 - 80 (16)	P36x0.49375	4.000	0.000	0.0	55.076	-33.869	2081.870	0.016
L17	80 - 79.75 (17)	P42x0.575	0.250	0.000	0.0	74.831	-33.990	2828.600	0.012
L18	79.75 - 74.75 (18)	P42x0.575	5.000	0.000	0.0	74.831	-36.090	2828.600	0.013
L19	74.75 - 69.75 (19)	P42x0.575	5.000	0.000	0.0	74.831	-37.949	2828.600	0.013
L20	69.75 - 64.75 (20)	P42x0.575	5.000	0.000	0.0	74.831	-40.133	2828.600	0.014
L21	64.75 - 60 (21)	P42x0.575	4.750	0.000	0.0	74.831	-44.921	2828.600	0.016
L22	60 - 59.75 (22)	P48x0.6125	0.250	0.000	0.0	91.184	-45.086	3446.760	0.013
L23	59.75 - 54.75 (23)	P48x0.6125	5.000	0.000	0.0	91.184	-47.913	3446.760	0.014
L24	54.75 - 49.75 (24)	P48x0.6125	5.000	0.000	0.0	91.184	-50.206	3446.760	0.015
L25	49.75 - 44.75 (25)	P48x0.6125	5.000	0.000	0.0	91.184	-52.893	3446.760	0.015
L26	44.75 - 40 (26)	P48x0.6125	4.750	0.000	0.0	91.184	-56.874	3446.760	0.017
L27	40 - 39.75 (27)	P54x0.65	0.250	0.000	0.0	108.94 3	-57.124	4042.520	0.014
L28	39.75 - 34.75 (28)	P54x0.65	5.000	0.000	0.0	108.94 3	-60.242	4042.520	0.015
L29	34.75 - 29.75 (29)	P54x0.65	5.000	0.000	0.0	108.94 3	-62.718	4042.520	0.016
L30	29.75 - 24.75 (30)	P54x0.65	5.000	0.000	0.0	108.94 3	-66.273	4042.520	0.016
L31	24.75 - 20 (31)	P54x0.65	4.750	0.000	0.0	108.94 3	-71.228	4042.520	0.018
L32	20 - 19.75 (32)	P60x0.625	0.250	0.000	0.0	116.58 3	-71.412	4139.150	0.017
L33	19.75 - 14.75 (33)	P60x0.625	5.000	0.000	0.0	116.58 3	-74.901	4139.150	0.018
L34	14.75 - 9.75 (34)	P60x0.625	5.000	0.000	0.0	116.58 3	-77.658	4139.150	0.019
L35	9.75 - 4.75 (35)	P60x0.625	5.000	0.000	0.0	116.58 3	-80.299	4139.150	0.019
L36	4.75 - 0 (36)	P60x0.625	4.750	0.000	0.0	116.58 3	-82.814	4139.150	0.020

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	147.5 - 142.5 (1)	P24x0.375	53.684	623.717	0.086	0.000	623.717	0.000
L2	142.5 - 137.5 (2)	P24x0.375	94.951	623.717	0.152	0.000	623.717	0.000
L3	137.5 - 132.5 (3)	P24x0.375	147.688	623.717	0.237	0.000	623.717	0.000
L4	132.5 - 127.5 (4)	P24x0.375	210.792	623.717	0.338	0.000	623.717	0.000
L5	127.5 - 125 (5)	P24x0.375	246.618	623.717	0.395	0.000	623.717	0.000
L6	125 - 120 (6)	P30x0.375	319.544	947.858	0.337	0.000	947.858	0.000
L7	120 - 115 (7)	P30x0.375	410.858	947.858	0.433	0.000	947.858	0.000
L8	115 - 110 (8)	P30x0.375	503.726	947.858	0.531	0.000	947.858	0.000
L9	110 - 105 (9)	P30x0.375	598.182	947.858	0.631	0.000	947.858	0.000
L10	105 - 100 (10)	P30x0.375	716.746	947.858	0.756	0.000	947.858	0.000
L11	100 - 95 (11)	P36x0.375	840.300	1338.808	0.628	0.000	1338.808	0.000
L12	95 - 94.25 (12)	P36x0.375	859.250	1338.808	0.642	0.000	1338.808	0.000
L13	94.25 - 94 (13)	P36x0.49375	865.575	1816.958	0.476	0.000	1816.958	0.000
L14	94 - 89 (14)	P36x0.49375	993.083	1816.958	0.547	0.000	1816.958	0.000
L15	89 - 84 (15)	P36x0.49375	1127.058	1816.958	0.620	0.000	1816.958	0.000
L16	84 - 80 (16)	P36x0.49375	1236.767	1816.958	0.681	0.000	1816.958	0.000
L17	80 - 79.75 (17)	P42x0.575	1243.742	2879.408	0.432	0.000	2879.408	0.000
L18	79.75 - 74.75 (18)	P42x0.575	1385.775	2879.408	0.481	0.000	2879.408	0.000
L19	74.75 - 69.75 (19)	P42x0.575	1532.408	2879.408	0.532	0.000	2879.408	0.000
L20	69.75 - 64.75 (20)	P42x0.575	1683.600	2879.408	0.585	0.000	2879.408	0.000
L21	64.75 - 60 (21)	P42x0.575	1831.592	2879.408	0.636	0.000	2879.408	0.000
L22	60 - 59.75 (22)	P48x0.6125	1839.567	3972.717	0.463	0.000	3972.717	0.000
L23	59.75 - 54.75 (23)	P48x0.6125	2001.825	3972.717	0.504	0.000	3972.717	0.000
L24	54.75 - 49.75 (24)	P48x0.6125	2172.917	3972.717	0.547	0.000	3972.717	0.000
L25	49.75 - 44.75 (25)	P48x0.6125	2346.333	3972.717	0.591	0.000	3972.717	0.000
L26	44.75 - 40 (26)	P48x0.6125	2515.467	3972.717	0.633	0.000	3972.717	0.000
L27	40 - 39.75 (27)	P54x0.65	2524.333	5300.683	0.476	0.000	5300.683	0.000
L28	39.75 - 34.75 (28)	P54x0.65	2708.417	5300.683	0.511	0.000	5300.683	0.000
L29	34.75 - 29.75 (29)	P54x0.65	2898.492	5300.683	0.547	0.000	5300.683	0.000
L30	29.75 - 24.75 (30)	P54x0.65	3092.900	5300.683	0.583	0.000	5300.683	0.000
L31	24.75 - 20 (31)	P54x0.65	3281.292	5300.683	0.619	0.000	5300.683	0.000
L32	20 - 19.75 (32)	P60x0.625	3291.375	6198.183	0.531	0.000	6198.183	0.000
L33	19.75 - 14.75 (33)	P60x0.625	3495.517	6198.183	0.564	0.000	6198.183	0.000
L34	14.75 - 9.75 (34)	P60x0.625	3704.450	6198.183	0.598	0.000	6198.183	0.000
L35	9.75 - 4.75 (35)	P60x0.625	3917.450	6198.183	0.632	0.000	6198.183	0.000
L36	4.75 - 0 (36)	P60x0.625	4123.400	6198.183	0.665	0.000	6198.183	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	147.5 - 142.5 (1)	P24x0.375	6.111	315.621	0.019	0.169	655.568	0.000
L2	142.5 - 137.5 (2)	P24x0.375	10.393	315.621	0.033	0.033	655.568	0.000
L3	137.5 - 132.5 (3)	P24x0.375	10.734	315.621	0.034	0.264	655.568	0.000
L4	132.5 - 127.5 (4)	P24x0.375	14.267	315.621	0.045	0.666	655.568	0.001
L5	127.5 - 125 (5)	P24x0.375	14.409	315.621	0.046	0.447	655.568	0.001
L6	125 - 120 (6)	P30x0.375	14.776	395.779	0.037	0.447	994.725	0.000
L7	120 - 115 (7)	P30x0.375	18.416	395.779	0.047	0.447	994.725	0.000
L8	115 - 110 (8)	P30x0.375	18.746	395.779	0.047	0.447	994.725	0.000
L9	110 - 105 (9)	P30x0.375	19.055	395.779	0.048	0.447	994.725	0.000
L10	105 - 100 (10)	P30x0.375	24.529	395.779	0.062	0.651	994.725	0.001
L11	100 - 95 (11)	P36x0.375	24.898	454.187	0.055	0.651	1094.275	0.001
L12	95 - 94.25 (12)	P36x0.375	25.302	454.187	0.056	0.651	1094.275	0.001
L13	94.25 - 94 (13)	P36x0.49375	25.317	624.561	0.041	0.651	1949.658	0.000
L14	94 - 89 (14)	P36x0.49375	25.699	624.561	0.041	0.651	1949.658	0.000
L15	89 - 84 (15)	P36x0.49375	27.176	624.561	0.044	0.069	1949.658	0.000
L16	84 - 80 (16)	P36x0.49375	27.907	624.561	0.045	0.069	1949.658	0.000
L17	80 - 79.75 (17)	P42x0.575	27.943	848.581	0.033	0.069	3090.550	0.000
L18	79.75 - 74.75 (18)	P42x0.575	28.903	848.581	0.034	0.069	3090.550	0.000
L19	74.75 - 69.75 (19)	P42x0.575	29.825	848.581	0.035	0.061	3090.550	0.000
L20	69.75 - 64.75 (20)	P42x0.575	30.704	848.581	0.036	0.061	3090.550	0.000
L21	64.75 - 60 (21)	P42x0.575	31.937	848.581	0.038	0.054	3090.550	0.000
L22	60 - 59.75 (22)	P48x0.6125	31.975	1034.030	0.031	0.052	4306.692	0.000
L23	59.75 - 54.75 (23)	P48x0.6125	33.009	1034.030	0.032	0.052	4306.692	0.000
L24	54.75 - 49.75 (24)	P48x0.6125	34.287	1034.030	0.033	1.013	4306.692	0.000
L25	49.75 - 44.75 (25)	P48x0.6125	35.322	1034.030	0.034	0.898	4306.692	0.000
L26	44.75 - 40 (26)	P48x0.6125	36.268	1034.030	0.035	0.785	4306.692	0.000
L27	40 - 39.75 (27)	P54x0.65	36.368	1235.410	0.029	0.785	5711.983	0.000
L28	39.75 - 34.75 (28)	P54x0.65	37.456	1235.410	0.030	0.556	5711.983	0.000
L29	34.75 - 29.75 (29)	P54x0.65	38.500	1235.410	0.031	1.163	5711.983	0.000
L30	29.75 - 24.75 (30)	P54x0.65	39.443	1235.410	0.032	1.162	5711.983	0.000
L31	24.75 - 20 (31)	P54x0.65	40.396	1235.410	0.033	1.162	5711.983	0.000
L32	20 - 19.75 (32)	P60x0.625	40.426	1322.050	0.031	1.162	5985.250	0.000
L33	19.75 - 14.75 (33)	P60x0.625	41.373	1322.050	0.031	1.162	5985.250	0.000
L34	14.75 - 9.75 (34)	P60x0.625	42.190	1322.050	0.032	1.162	5985.250	0.000
L35	9.75 - 4.75 (35)	P60x0.625	42.977	1322.050	0.033	1.162	5985.250	0.000
L36	4.75 - 0 (36)	P60x0.625	43.711	1322.050	0.033	1.162	5985.250	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio P_u ϕP_n	Ratio M_{ux} ϕM_{nx}	Ratio M_{uy} ϕM_{ny}	Ratio V_u ϕV_n	Ratio T_u ϕT_n	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	147.5 - 142.5 (1)	0.005	0.086	0.000	0.019	0.000	0.092	1.050	4.8.2
L2	142.5 - 137.5 (2)	0.009	0.152	0.000	0.033	0.000	0.162	1.050	4.8.2
L3	137.5 - 132.5 (3)	0.010	0.237	0.000	0.034	0.000	0.248	1.050	4.8.2
L4	132.5 - 127.5 (4)	0.014	0.338	0.000	0.045	0.001	0.354	1.050	4.8.2
L5	127.5 - 125 (5)	0.014	0.395	0.000	0.046	0.001	0.412	1.050	4.8.2
L6	125 - 120 (6)	0.012	0.337	0.000	0.037	0.000	0.351	1.050	4.8.2
L7	120 - 115 (7)	0.015	0.433	0.000	0.047	0.000	0.451	1.050	4.8.2
L8	115 - 110 (8)	0.016	0.531	0.000	0.047	0.000	0.549	1.050	4.8.2
L9	110 - 105 (9)	0.016	0.631	0.000	0.048	0.000	0.650	1.050	4.8.2
L10	105 - 100 (10)	0.020	0.756	0.000	0.062	0.001	0.780	1.050	4.8.2
L11	100 - 95 (11)	0.019	0.628	0.000	0.055	0.001	0.649	1.050	4.8.2
L12	95 - 94.25 (12)	0.019	0.642	0.000	0.056	0.001	0.664	1.050	4.8.2
L13	94.25 - 94 (13)	0.014	0.476	0.000	0.041	0.000	0.492	1.050	4.8.2
L14	94 - 89 (14)	0.014	0.547	0.000	0.041	0.000	0.563	1.050	4.8.2
L15	89 - 84 (15)	0.015	0.620	0.000	0.044	0.000	0.637	1.050	4.8.2
L16	84 - 80 (16)	0.016	0.681	0.000	0.045	0.000	0.699	1.050	4.8.2
L17	80 - 79.75 (17)	0.012	0.432	0.000	0.033	0.000	0.445	1.050	4.8.2
L18	79.75 - 74.75 (18)	0.013	0.481	0.000	0.034	0.000	0.495	1.050	4.8.2
L19	74.75 - 69.75 (19)	0.013	0.532	0.000	0.035	0.000	0.547	1.050	4.8.2
L20	69.75 - 64.75 (20)	0.014	0.585	0.000	0.036	0.000	0.600	1.050	4.8.2
L21	64.75 - 60 (21)	0.016	0.636	0.000	0.038	0.000	0.653	1.050	4.8.2
L22	60 - 59.75 (22)	0.013	0.463	0.000	0.031	0.000	0.477	1.050	4.8.2
L23	59.75 - 54.75 (23)	0.014	0.504	0.000	0.032	0.000	0.519	1.050	4.8.2
L24	54.75 - 49.75 (24)	0.015	0.547	0.000	0.033	0.000	0.563	1.050	4.8.2
L25	49.75 - 44.75 (25)	0.015	0.591	0.000	0.034	0.000	0.607	1.050	4.8.2
L26	44.75 - 40 (26)	0.017	0.633	0.000	0.035	0.000	0.651	1.050	4.8.2
L27	40 - 39.75 (27)	0.014	0.476	0.000	0.029	0.000	0.491	1.050	4.8.2
L28	39.75 - 34.75 (28)	0.015	0.511	0.000	0.030	0.000	0.527	1.050	4.8.2
L29	34.75 - 29.75 (29)	0.016	0.547	0.000	0.031	0.000	0.563	1.050	4.8.2
L30	29.75 - 24.75 (30)	0.016	0.583	0.000	0.032	0.000	0.601	1.050	4.8.2
L31	24.75 - 20 (31)	0.018	0.619	0.000	0.033	0.000	0.638	1.050	4.8.2
L32	20 - 19.75 (32)	0.017	0.531	0.000	0.031	0.000	0.549	1.050	4.8.2
L33	19.75 - 14.75 (33)	0.018	0.564	0.000	0.031	0.000	0.583	1.050	4.8.2
L34	14.75 - 9.75 (34)	0.019	0.598	0.000	0.032	0.000	0.617	1.050	4.8.2
L35	9.75 - 4.75 (35)	0.019	0.632	0.000	0.033	0.000	0.653	1.050	4.8.2
L36	4.75 - 0 (36)	0.020	0.665	0.000	0.033	0.000	0.686	1.050	4.8.2

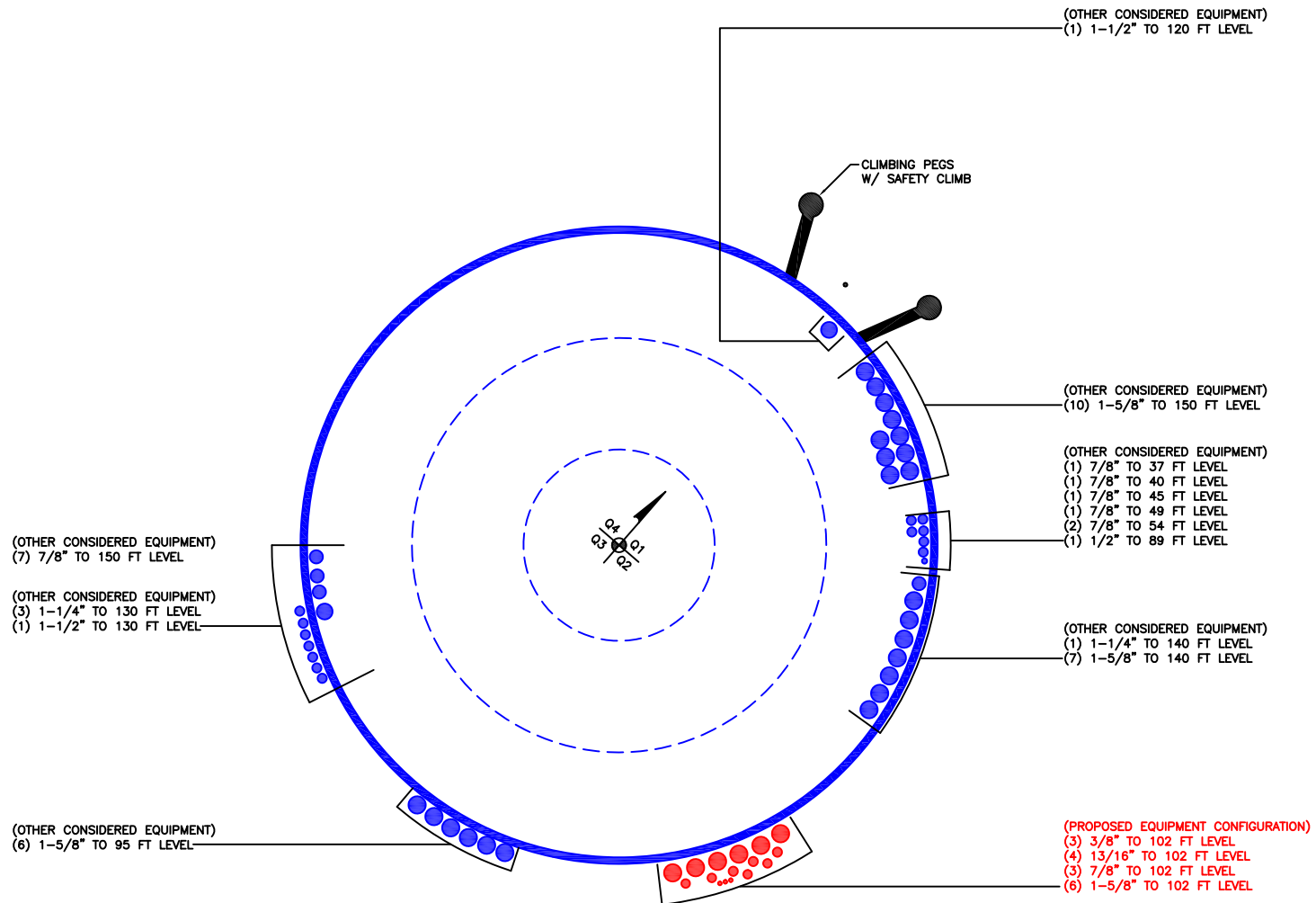
Section No.	Elevation ft	Ratio P_u ϕP_n	Ratio M_{ux} ϕM_{nx}	Ratio M_{uy} ϕM_{ny}	Ratio V_u ϕV_n	Ratio T_u ϕT_n	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
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Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	147.5 - 142.5	Pole	P24x0.375	1	-5.477	1104.673	8.7	Pass
L2	142.5 - 137.5	Pole	P24x0.375	2	-9.602	1104.673	15.5	Pass
L3	137.5 - 132.5	Pole	P24x0.375	3	-10.273	1104.673	23.6	Pass
L4	132.5 - 127.5	Pole	P24x0.375	4	-14.584	1104.673	33.7	Pass
L5	127.5 - 125	Pole	P24x0.375	5	-14.948	1104.673	39.2	Pass
L6	125 - 120	Pole	P30x0.375	6	-15.808	1376.613	33.4	Pass
L7	120 - 115	Pole	P30x0.375	7	-19.738	1376.613	42.9	Pass
L8	115 - 110	Pole	P30x0.375	8	-20.639	1376.613	52.3	Pass
L9	110 - 105	Pole	P30x0.375	9	-21.554	1376.613	61.9	Pass
L10	105 - 100	Pole	P30x0.375	10	-26.648	1376.613	74.3	Pass
L11	100 - 95	Pole	P36x0.375	11	-27.784	1564.605	61.8	Pass
L12	95 - 94.25	Pole	P36x0.375	12	-28.249	1564.605	63.2	Pass
L13	94.25 - 94	Pole	P36x0.49375	13	-28.323	2185.963	46.8	Pass
L14	94 - 89	Pole	P36x0.49375	14	-29.722	2185.963	53.6	Pass
L15	89 - 84	Pole	P36x0.49375	15	-31.428	2185.963	60.7	Pass
L16	84 - 80	Pole	P36x0.49375	16	-33.869	2185.963	66.6	Pass
L17	80 - 79.75	Pole	P42x0.575	17	-33.990	2970.030	42.4	Pass
L18	79.75 - 74.75	Pole	P42x0.575	18	-36.090	2970.030	47.2	Pass
L19	74.75 - 69.75	Pole	P42x0.575	19	-37.949	2970.030	52.1	Pass
L20	69.75 - 64.75	Pole	P42x0.575	20	-40.133	2970.030	57.2	Pass
L21	64.75 - 60	Pole	P42x0.575	21	-44.921	2970.030	62.2	Pass
L22	60 - 59.75	Pole	P48x0.6125	22	-45.086	3619.098	45.4	Pass
L23	59.75 - 54.75	Pole	P48x0.6125	23	-47.913	3619.098	49.4	Pass
L24	54.75 - 49.75	Pole	P48x0.6125	24	-50.206	3619.098	53.6	Pass
L25	49.75 - 44.75	Pole	P48x0.6125	25	-52.893	3619.098	57.8	Pass
L26	44.75 - 40	Pole	P48x0.6125	26	-56.874	3619.098	62.0	Pass
L27	40 - 39.75	Pole	P54x0.65	27	-57.124	4244.646	46.8	Pass
L28	39.75 - 34.75	Pole	P54x0.65	28	-60.242	4244.646	50.2	Pass
L29	34.75 - 29.75	Pole	P54x0.65	29	-62.718	4244.646	53.6	Pass
L30	29.75 - 24.75	Pole	P54x0.65	30	-66.273	4244.646	57.2	Pass
L31	24.75 - 20	Pole	P54x0.65	31	-71.228	4244.646	60.7	Pass
L32	20 - 19.75	Pole	P60x0.625	32	-71.412	4346.107	52.3	Pass
L33	19.75 - 14.75	Pole	P60x0.625	33	-74.901	4346.107	55.5	Pass
L34	14.75 - 9.75	Pole	P60x0.625	34	-77.658	4346.107	58.8	Pass
L35	9.75 - 4.75	Pole	P60x0.625	35	-80.299	4346.107	62.1	Pass
L36	4.75 - 0	Pole	P60x0.625	36	-82.814	4346.107	65.4	Pass
							Summary	
							Pole (L10)	74.3
							RATING =	74.3
								Pass

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

APPENDIX B
BASE LEVEL DRAWING



APPENDIX C

ADDITIONAL CALCULATIONS

Site BU: 827050
Work Order: 2018154



Pole Geometry

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	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	147.5	22.5		0	24	24	0.375		A53-B-42
2	125	25		0	30.00	30	0.375		A53-B-42
3	100	20		0	36.00	36	0.375		A53-B-42
4	80	20		0	42.00	42	0.375		A53-B-42
5	60	20		0	48.00	48	0.375		A53-B-42
6	40	20		0	54.00	54	0.375		A53-B-42
7	20	20		0	60.00	60	0.375		A53-B-42

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	20	plate	CCI-AFP-085125	4	60	150	240	330														
2	20	40	plate	CCI-AFP-085125	4	50	140	230	320														
3	40	60	plate	CCI-SFP-065125	4	50	140	230	320														
4	60	80	plate	CCI-SFP-060100	4	50	140	230	320														
5	80	94.25	plate	CCI-SFP-040075	4	50	140	230	320														
6																							
7																							
8																							
9																							
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	8.5	1.25	10.625	0.625	PC 8.8 - M20 (100)	51	PC 8.8 - M20 (100)	51.000	17.000	9.063	1.1875	A572-65
2	8.5	1.25	10.625	0.625	PC 8.8 - M20 (100)	51	PC 8.8 - M20 (100)	51.000	17.000	9.063	1.1875	A572-65
3	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
4	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
5	4	0.75	3	0.375	PC 8.8 - M20 (100)	12	PC 8.8 - M20 (100)	12.000	16.000	2.063	1.1875	A572-65

TNX Geometry Input

Increment (ft): [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	147.5 - 142.5	5		0	24.000	24.000	0.375	A53-B-42	1.000
2	142.5 - 137.5	5		0	24.000	24.000	0.375	A53-B-42	1.000
3	137.5 - 132.5	5		0	24.000	24.000	0.375	A53-B-42	1.000
4	132.5 - 127.5	5		0	24.000	24.000	0.375	A53-B-42	1.000
5	127.5 - 125	2.5	0	0	24.000	24.000	0.375	A53-B-42	1.000
6	125 - 120	5		0	30.000	30.000	0.375	A53-B-42	1.000
7	120 - 115	5		0	30.000	30.000	0.375	A53-B-42	1.000
8	115 - 110	5		0	30.000	30.000	0.375	A53-B-42	1.000
9	110 - 105	5		0	30.000	30.000	0.375	A53-B-42	1.000
10	105 - 100	5	0	0	30.000	30.000	0.375	A53-B-42	1.000
11	100 - 95	5		0	36.000	36.000	0.375	A53-B-42	1.000
12	95 - 94.25	0.75		0	36.000	36.000	0.375	A53-B-42	1.000
13	94.25 - 94	0.25		0	36.000	36.000	0.49375	A53-B-42	0.980
14	94 - 89	5		0	36.000	36.000	0.49375	A53-B-42	0.980
15	89 - 84	5		0	36.000	36.000	0.49375	A53-B-42	0.980
16	84 - 80	4	0	0	36.000	36.000	0.49375	A53-B-42	0.980
17	80 - 79.75	0.25		0	42.000	42.000	0.575	A53-B-42	0.976
18	79.75 - 74.75	5		0	42.000	42.000	0.575	A53-B-42	0.976
19	74.75 - 69.75	5		0	42.000	42.000	0.575	A53-B-42	0.976
20	69.75 - 64.75	5		0	42.000	42.000	0.575	A53-B-42	0.976
21	64.75 - 60	4.75	0	0	42.000	42.000	0.575	A53-B-42	0.976
22	60 - 59.75	0.25		0	48.000	48.000	0.6125	A53-B-42	0.972
23	59.75 - 54.75	5		0	48.000	48.000	0.6125	A53-B-42	0.972
24	54.75 - 49.75	5		0	48.000	48.000	0.6125	A53-B-42	0.972
25	49.75 - 44.75	5		0	48.000	48.000	0.6125	A53-B-42	0.972
26	44.75 - 40	4.75	0	0	48.000	48.000	0.6125	A53-B-42	0.972
27	40 - 39.75	0.25		0	54.000	54.000	0.65	A53-B-42	0.970
28	39.75 - 34.75	5		0	54.000	54.000	0.65	A53-B-42	0.970
29	34.75 - 29.75	5		0	54.000	54.000	0.65	A53-B-42	0.970
30	29.75 - 24.75	5		0	54.000	54.000	0.65	A53-B-42	0.970
31	24.75 - 20	4.75	0	0	54.000	54.000	0.65	A53-B-42	0.970
32	20 - 19.75	0.25		0	60.000	60.000	0.625	A53-B-42	0.967
33	19.75 - 14.75	5		0	60.000	60.000	0.625	A53-B-42	0.967
34	14.75 - 9.75	5		0	60.000	60.000	0.625	A53-B-42	0.967
35	9.75 - 4.75	5		0	60.000	60.000	0.625	A53-B-42	0.967
36	4.75 - 0	4.75		0	60.000	60.000	0.625	A53-B-42	0.967

TNX Section Forces

Increment (ft):		TNX Output		
	Section Height (ft)	P _u (K)	M _{ux} (kip-ft)	V _u (K)
1	147.5 - 142.5	5.48	53.68	6.11
2	142.5 - 137.5	9.60	94.95	10.39
3	137.5 - 132.5	10.27	147.69	10.73
4	132.5 - 127.5	14.58	210.79	14.27
5	127.5 - 125	14.95	246.62	14.41
6	125 - 120	15.81	319.54	14.78
7	120 - 115	19.74	410.86	18.42
8	115 - 110	20.64	503.73	18.75
9	110 - 105	21.55	598.18	19.05
10	105 - 100	26.65	716.75	24.53
11	100 - 95	27.78	840.30	24.90
12	95 - 94.25	28.25	859.25	25.30
13	94.25 - 94	28.32	865.58	25.32
14	94 - 89	29.72	993.08	25.70
15	89 - 84	31.43	1127.06	27.18
16	84 - 80	33.87	1236.77	27.91
17	80 - 79.75	33.99	1243.74	27.94
18	79.75 - 74.75	36.09	1385.77	28.90
19	74.75 - 69.75	37.95	1532.41	29.83
20	69.75 - 64.75	40.13	1683.60	30.70
21	64.75 - 60	44.92	1831.59	31.94
22	60 - 59.75	45.09	1839.57	31.97
23	59.75 - 54.75	47.91	2001.82	33.01
24	54.75 - 49.75	50.21	2172.92	34.29
25	49.75 - 44.75	52.89	2346.33	35.32
26	44.75 - 40	56.87	2515.47	36.27
27	40 - 39.75	57.12	2524.33	36.37
28	39.75 - 34.75	60.24	2708.41	37.46
29	34.75 - 29.75	62.72	2898.49	38.50
30	29.75 - 24.75	66.27	3092.90	39.44
31	24.75 - 20	71.23	3281.29	40.40
32	20 - 19.75	71.41	3291.37	40.43
33	19.75 - 14.75	74.90	3495.52	41.37
34	14.75 - 9.75	77.66	3704.45	42.19
35	9.75 - 4.75	80.30	3917.45	42.98
36	4.75 - 0	82.81	4123.40	43.71

Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
147.5 - 142.5	Pole	TP24x24x0.375	Pole	8.7%	Pass
142.5 - 137.5	Pole	TP24x24x0.375	Pole	15.5%	Pass
137.5 - 132.5	Pole	TP24x24x0.375	Pole	23.6%	Pass
132.5 - 127.5	Pole	TP24x24x0.375	Pole	33.7%	Pass
127.5 - 125	Pole	TP24x24x0.375	Pole	39.2%	Pass
125 - 120	Pole	TP30x30x0.375	Pole	33.4%	Pass
120 - 115	Pole	TP30x30x0.375	Pole	42.9%	Pass
115 - 110	Pole	TP30x30x0.375	Pole	52.3%	Pass
110 - 105	Pole	TP30x30x0.375	Pole	61.9%	Pass
105 - 100	Pole	TP30x30x0.375	Pole	74.3%	Pass
100 - 95	Pole	TP36x36x0.375	Pole	61.8%	Pass
95 - 94.25	Pole	TP36x36x0.375	Pole	63.2%	Pass
94.25 - 94	Pole + Reinf.	TP36x36x0.4938	Reinf. 5 Tension Rupture	52.1%	Pass
94 - 89	Pole + Reinf.	TP36x36x0.4938	Reinf. 5 Tension Rupture	59.7%	Pass
89 - 84	Pole + Reinf.	TP36x36x0.4938	Reinf. 5 Tension Rupture	67.6%	Pass
84 - 80	Pole + Reinf.	TP36x36x0.4938	Reinf. 5 Tension Rupture	74.2%	Pass
80 - 79.75	Pole + Reinf.	TP42x42x0.575	Pole	44.4%	Pass
79.75 - 74.75	Pole + Reinf.	TP42x42x0.575	Pole	49.4%	Pass
74.75 - 69.75	Pole + Reinf.	TP42x42x0.575	Pole	54.6%	Pass
69.75 - 64.75	Pole + Reinf.	TP42x42x0.575	Pole	59.9%	Pass
64.75 - 60	Pole + Reinf.	TP42x42x0.575	Pole	65.2%	Pass
60 - 59.75	Pole + Reinf.	TP48x48x0.6125	Pole	47.8%	Pass
59.75 - 54.75	Pole + Reinf.	TP48x48x0.6125	Pole	52.0%	Pass
54.75 - 49.75	Pole + Reinf.	TP48x48x0.6125	Pole	56.4%	Pass
49.75 - 44.75	Pole + Reinf.	TP48x48x0.6125	Pole	60.8%	Pass
44.75 - 40	Pole + Reinf.	TP48x48x0.6125	Pole	65.2%	Pass
40 - 39.75	Pole + Reinf.	TP54x54x0.65	Pole	49.3%	Pass
39.75 - 34.75	Pole + Reinf.	TP54x54x0.65	Pole	52.9%	Pass
34.75 - 29.75	Pole + Reinf.	TP54x54x0.65	Pole	56.6%	Pass
29.75 - 24.75	Pole + Reinf.	TP54x54x0.65	Pole	60.3%	Pass
24.75 - 20	Pole + Reinf.	TP54x54x0.65	Pole	64.0%	Pass
20 - 19.75	Pole + Reinf.	TP60x60x0.625	Pole	55.0%	Pass
19.75 - 14.75	Pole + Reinf.	TP60x60x0.625	Pole	58.4%	Pass
14.75 - 9.75	Pole + Reinf.	TP60x60x0.625	Pole	61.9%	Pass
9.75 - 4.75	Pole + Reinf.	TP60x60x0.625	Pole	65.4%	Pass
4.75 - 0	Pole + Reinf.	TP60x60x0.625	Pole	68.8%	Pass
				Summary	
			Pole	74.3%	Pass
			Reinforcement	74.2%	Pass
			Overall	74.3%	Pass

Additional Calculations

Section Elevation (ft)	Moment of Inertia (in ⁴)			Area (in ²)			% Capacity*					
	Pole	Reinf.	Total	Pole	Reinf.	Total	Pole	R1	R2	R3	R4	R5
147.5 - 142.5	1942	n/a	1942	27.83	n/a	27.83	8.7%					
142.5 - 137.5	1942	n/a	1942	27.83	n/a	27.83	15.5%					
137.5 - 132.5	1942	n/a	1942	27.83	n/a	27.83	23.6%					
132.5 - 127.5	1942	n/a	1942	27.83	n/a	27.83	33.7%					
127.5 - 125	1942	n/a	1942	27.83	n/a	27.83	39.2%					
125 - 120	3829	n/a	3829	34.90	n/a	34.90	33.4%					
120 - 115	3829	n/a	3829	34.90	n/a	34.90	42.9%					
115 - 110	3829	n/a	3829	34.90	n/a	34.90	52.3%					
110 - 105	3829	n/a	3829	34.90	n/a	34.90	61.9%					
105 - 100	3829	n/a	3829	34.90	n/a	34.90	74.3%					
100 - 95	6659	n/a	6659	41.97	n/a	41.97	61.8%					
95 - 94.25	6659	n/a	6659	41.97	n/a	41.97	63.2%					
94.25 - 94	6659	2034	8693	41.97	12.00	53.97	48.6%					52.1%
94 - 89	6659	2034	8693	41.97	12.00	53.97	55.6%					59.7%
89 - 84	6659	2034	8693	41.97	12.00	53.97	63.0%					67.6%
84 - 80	6659	2034	8693	41.97	12.00	53.97	69.1%					74.2%
80 - 79.75	10622	5584	16206	49.04	24.00	73.04	44.4%				40.9%	
79.75 - 74.75	10622	5584	16206	49.04	24.00	73.04	49.4%				45.5%	
74.75 - 69.75	10622	5584	16206	49.04	24.00	73.04	54.6%				50.2%	
69.75 - 64.75	10622	5584	16206	49.04	24.00	73.04	59.9%				55.1%	
64.75 - 60	10622	5584	16206	49.04	24.00	73.04	65.2%				60.0%	
60 - 59.75	15908	9913	25821	56.11	32.50	88.61	47.8%			42.7%		
59.75 - 54.75	15908	9913	25821	56.11	32.50	88.61	52.0%			46.4%		
54.75 - 49.75	15908	9913	25821	56.11	32.50	88.61	56.4%			50.3%		
49.75 - 44.75	15908	9913	25821	56.11	32.50	88.61	60.8%			54.3%		
44.75 - 40	15908	9913	25821	56.11	32.50	88.61	65.2%			58.2%		
40 - 39.75	22710	16347	39057	63.18	42.50	105.68	49.3%		41.3%			
39.75 - 34.75	22710	16347	39057	63.18	42.50	105.68	52.9%		44.2%			
34.75 - 29.75	22710	16347	39057	63.18	42.50	105.68	56.6%		47.3%			
29.75 - 24.75	22710	16347	39057	63.18	42.50	105.68	60.3%		50.5%			
24.75 - 20	22710	16347	39057	63.18	42.50	105.68	64.0%		53.6%			
20 - 19.75	31217	20061	51278	70.24	42.50	112.74	55.0%	45.5%				
19.75 - 14.75	31217	20061	51278	70.24	42.50	112.74	58.4%	48.3%				
14.75 - 9.75	31217	20061	51278	70.24	42.50	112.74	61.9%	51.2%				
9.75 - 4.75	31217	20061	51278	70.24	42.50	112.74	65.4%	54.1%				
4.75 - 0	31217	20061	51278	70.24	42.50	112.74	68.8%	56.9%				

Note: Section capacity checked using 5 degree increments.
Rating per TIA-222-H Section 15.5.

Monopole Flange Plate Connection

Elevation = 125 ft.

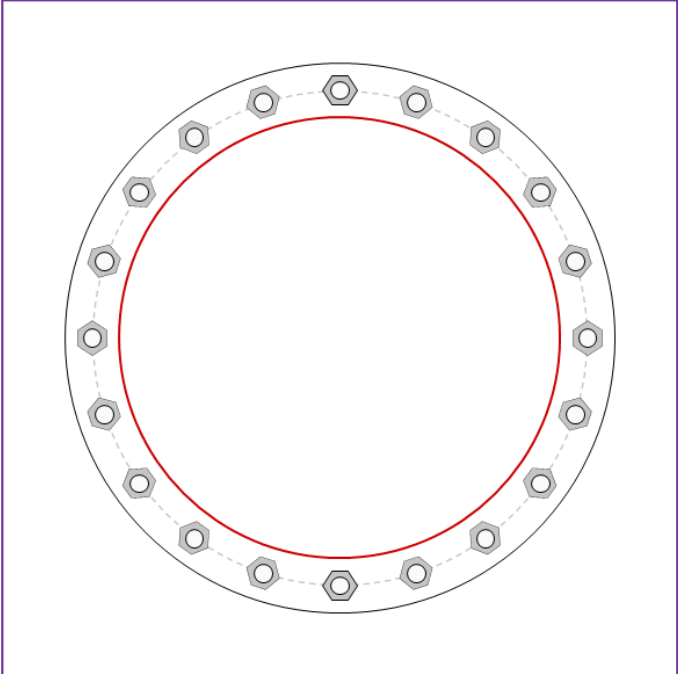


BU #	827050
Site Name	Rocky Hill/ Rte 160_1
Order #	556527 Rev. 0
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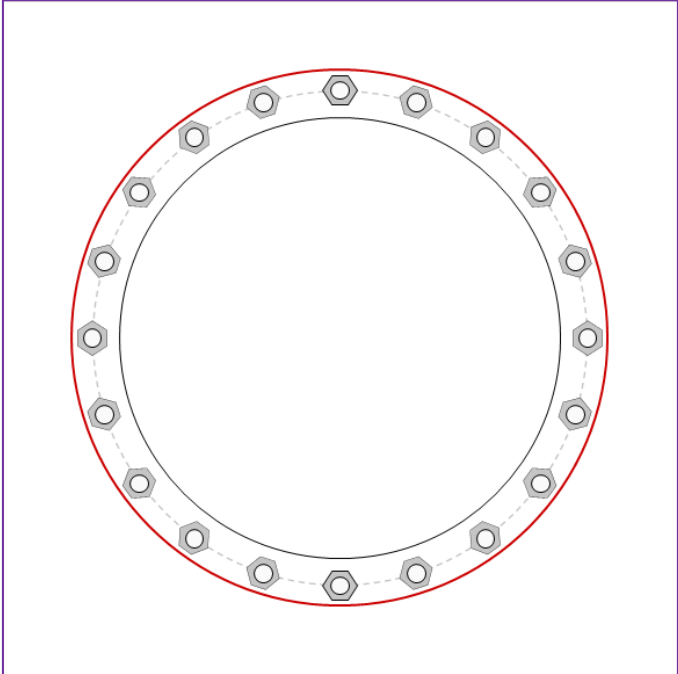
Applied Loads	
Moment (kip-ft)	246.62
Axial Force (kips)	14.95
Shear Force (kips)	14.41

*TIA-222-H Section 15.5 Applied

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(20) 1" $\varnothing$ bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 27" BC

Top Plate Data

30" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

N/A

Top Pole Data

24" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Plate Data

24" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Stiffener Data

N/A

Bottom Pole Data

30" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	21.16
Allowable (kips)	54.53
Stress Rating:	37.0% Pass

Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	N/A
Tension Side Stress Rating:	N/A

Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	N/A
Tension Side Stress Rating:	N/A

Monopole Flange Plate Connection

Elevation = 100 ft.



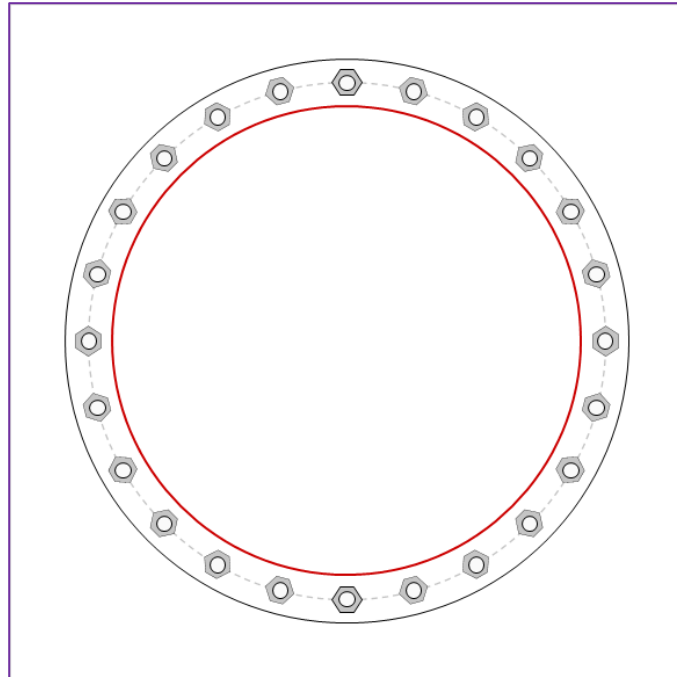
BU #	827050
Site Name	Rocky Hill/ Rte 160_1
Order #	556527 Rev. 0

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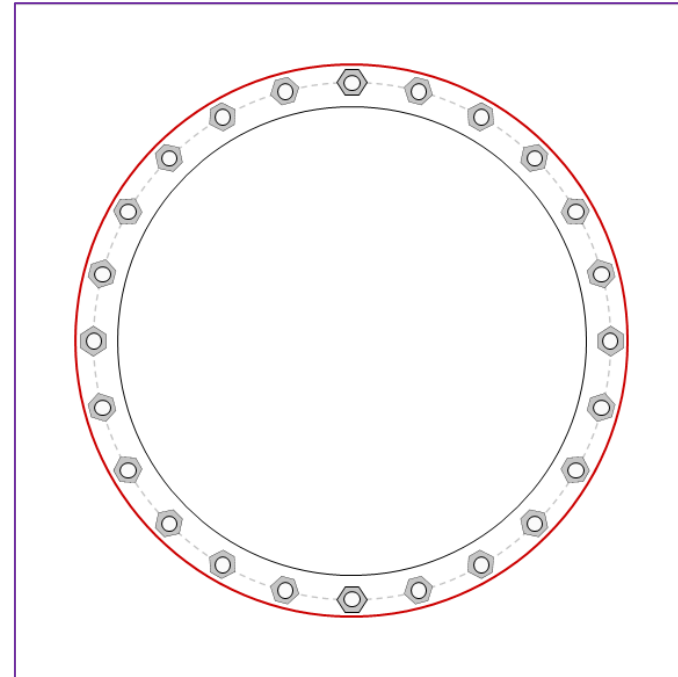
Applied Loads	
Moment (kip-ft)	716.75
Axial Force (kips)	26.65
Shear Force (kips)	24.53

*TIA-222-H Section 15.5 Applied

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(24) 1" $\varnothing$ bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 33" BC

Top Plate Data

36" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

N/A

Top Pole Data

30" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Plate Data

30" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Stiffener Data

N/A

Bottom Pole Data

36" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	42.31
Allowable (kips)	54.52
Stress Rating:	73.9% Pass

Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	N/A
Tension Side Stress Rating:	N/A

Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	N/A
Tension Side Stress Rating:	N/A

Monopole Flange Plate Connection

Elevation = 80 ft.



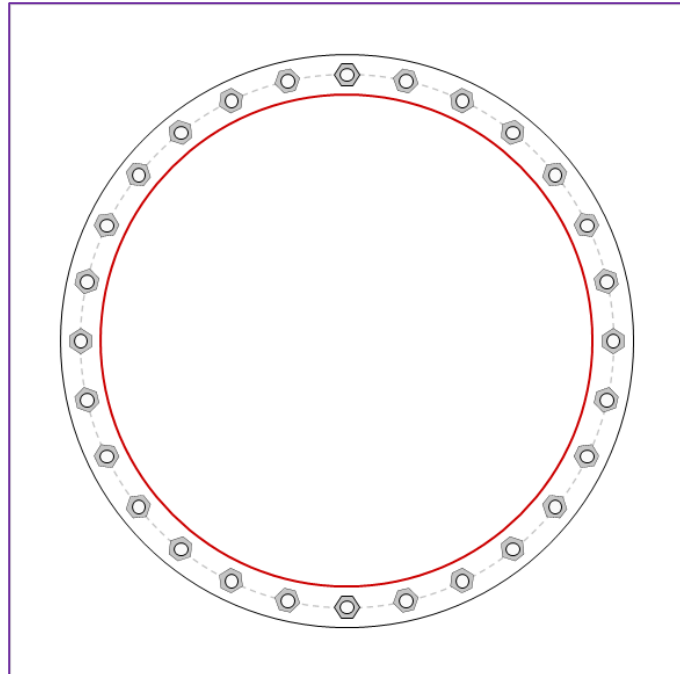
BU #	827050
Site Name	Rocky Hill/ Rte 160_1
Order #	556527 Rev. 0

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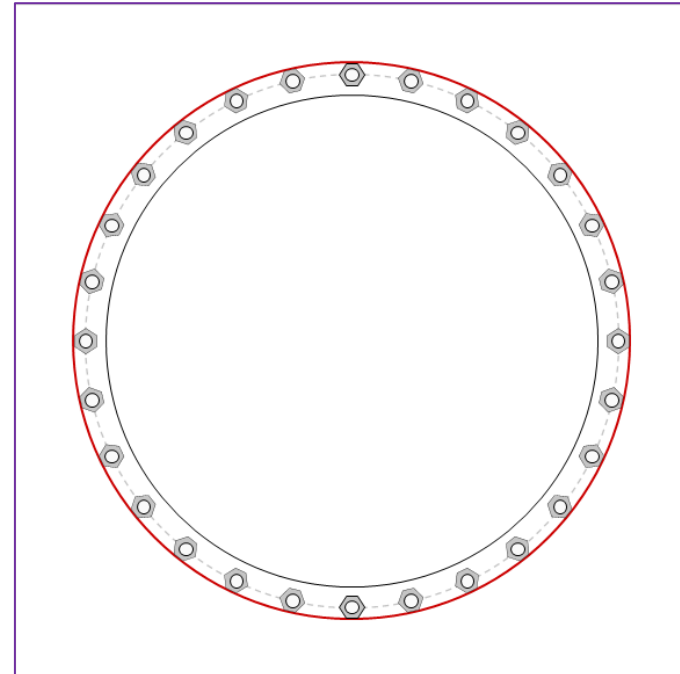
Applied Loads to Flange Connections		Applied Loads to Bridge Stiffeners	
Moment (kip-ft)	454.79	Moment (kip-ft)	781.98
Axial Force (kips)	33.87	Axial Force (kips)	0.00
Shear Force (kips)	27.91	Shear Force (kips)	0.00

*TIA-222-H Section 15.5 Applied

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(28) 1" ϕ bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 39" BC

Top Plate Data

42" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

N/A

Top Pole Data

36" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bridge Stiffener Group 1 Data

(4) Bolted, 6"x1", A572-65, Lu=16", Neglect Flange in MOI: No

Bottom Plate Data

36" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Stiffener Data

N/A

Bottom Pole Data

42" x 0.575" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	18.78
Allowable (kips)	54.52
Stress Rating:	32.8% Pass

Top Plate Capacity

Max Stress (ksi):	12.69	(Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	37.3%	Pass
Tension Side Stress Rating:	12.5%	Pass

Bridge Stiffener Group 1 Analysis Capacity

Max Compression (kip):	218.23	
Max Tension (kip):	218.23	
Comp. Capacity (kip):	262.12	
Tens. Capacity (kip):	285.00	(Rupture)
Comp. Stress Rating:	79.3%	Pass
Tens. Stress Rating:	72.9%	Pass

Bottom Plate Capacity

Max Stress (ksi):	10.95	(Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	32.2%	Pass
Tension Side Stress Rating:	N/A	

Monopole Flange Plate Connection

Elevation = 60 ft.



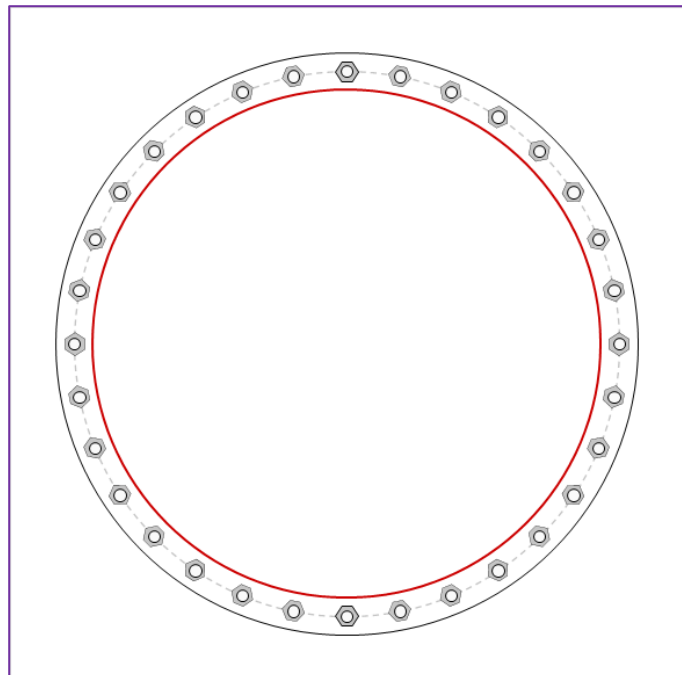
BU #	827050
Site Name	Rocky Hill/ Rte 160_1
Order #	556527 Rev. 0

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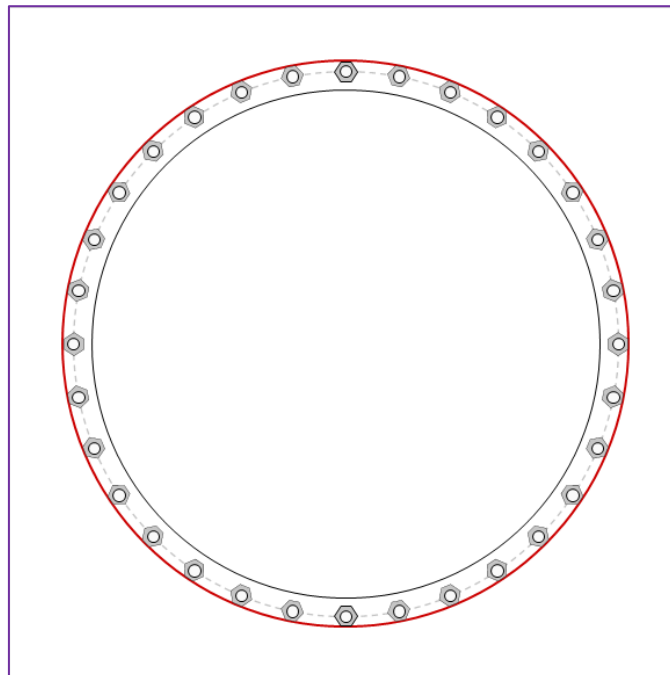
Applied Loads to Flange Connections		Applied Loads to Bridge Stiffeners	
Moment (kip-ft)	609.02	Moment (kip-ft)	1222.58
Axial Force (kips)	44.92	Axial Force (kips)	0.00
Shear Force (kips)	31.94	Shear Force (kips)	0.00

*TIA-222-H Section 15.5 Applied

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(32) 1" ϕ bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 45" BC

Top Plate Data

48" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

N/A

Top Pole Data

42" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bridge Stiffener Group 1 Data

(4) Bolted, 6.5"x1.25", A572-65, Lu=19", Neglect Flange in MOI: No

Bottom Plate Data

42" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Stiffener Data

N/A

Bottom Pole Data

48" x 0.6125" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	18.89
Allowable (kips)	54.52
Stress Rating:	33.0% Pass

Top Plate Capacity

Max Stress (ksi):	13.03	(Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	38.3%	Pass
Tension Side Stress Rating:	12.3%	Pass

Bridge Stiffener Group 1 Analysis Capacity

Max Compression (kip):	297.89	
Max Tension (kip):	297.89	
Comp. Capacity (kip):	365.20	
Tens. Capacity (kip):	393.75	(Rupture)
Comp. Stress Rating:	77.7%	Pass
Tens. Stress Rating:	72.1%	Pass

Bottom Plate Capacity

Max Stress (ksi):	10.84	(Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	31.9%	Pass
Tension Side Stress Rating:	N/A	

Monopole Flange Plate Connection

Elevation = 40 ft.



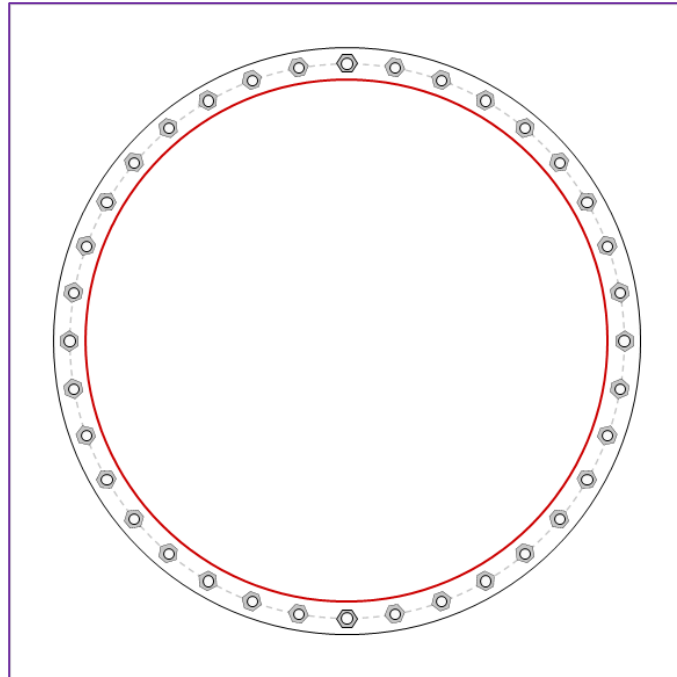
BU #	827050
Site Name	Rocky Hill/ Rte 160_1
Order #	556527 Rev. 0

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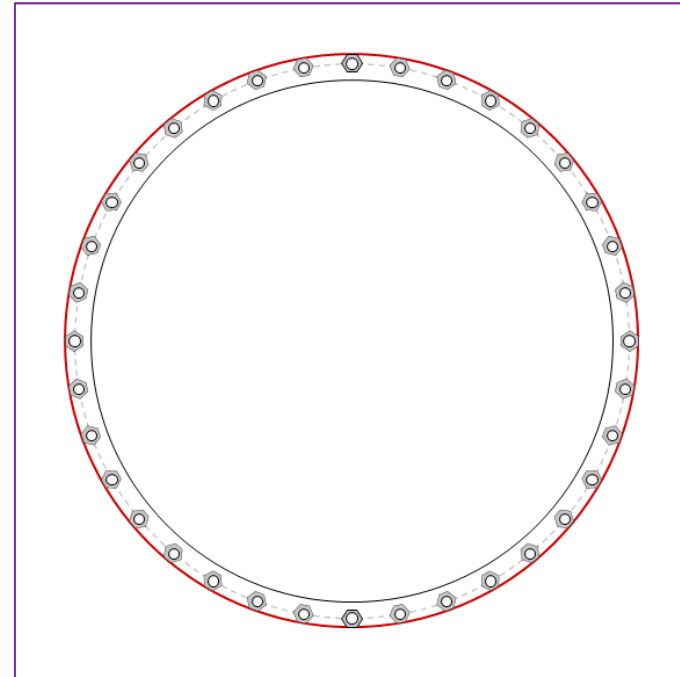
Applied Loads to Flange Connections		Applied Loads to Bridge Stiffeners	
Moment (kip-ft)	915.26	Moment (kip-ft)	1600.21
Axial Force (kips)	56.87	Axial Force (kips)	0.00
Shear Force (kips)	36.27	Shear Force (kips)	0.00

*TIA-222-H Section 15.5 Applied

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(36) 1" $\varnothing$ bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 51" BC

Top Plate Data

54" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

N/A

Top Pole Data

48" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bridge Stiffener Group 1 Data

(4) Bolted, 6.5"x1.25", A572-65, Lu=19", Neglect Flange in MOI: No

Bottom Plate Data

48" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Stiffener Data

N/A

Bottom Pole Data

54" x 0.65" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	22.34
Allowable (kips)	54.52
Stress Rating:	39.0% Pass

Top Plate Capacity

Max Stress (ksi):	15.22	(Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	44.7%	Pass
Tension Side Stress Rating:	14.3%	Pass

Bottom Plate Capacity

Max Stress (ksi):	12.61	(Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	37.1%	Pass
Tension Side Stress Rating:	N/A	

Bridge Stiffener Group 1 Analysis Capacity

Max Compression (kip):	347.56	
Max Tension (kip):	347.56	
Comp. Capacity (kip):	365.20	
Tens. Capacity (kip):	393.75	(Rupture)
Comp. Stress Rating:	90.6%	Pass
Tens. Stress Rating:	84.1%	Pass

Monopole Flange Plate Connection

Elevation = 20 ft.



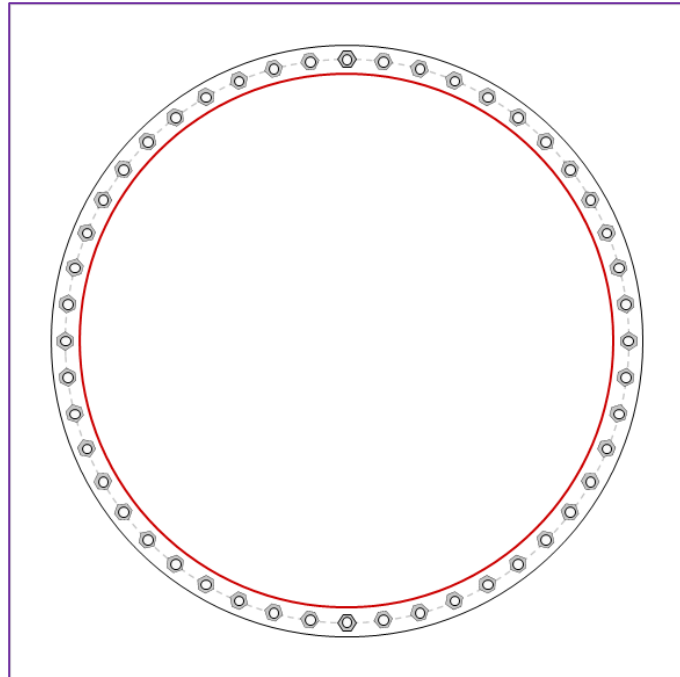
BU #	827050
Site Name	Rocky Hill/ Rte 160_1
Order #	556527 Rev. 0

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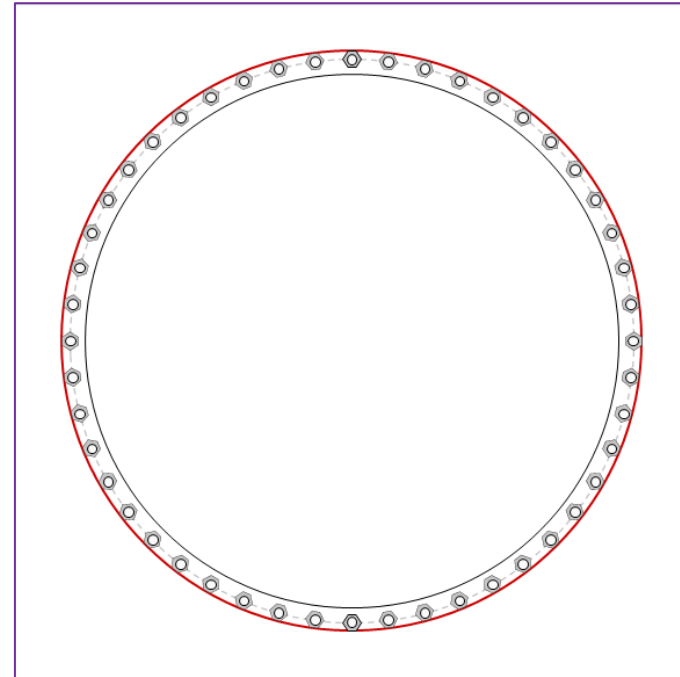
Applied Loads to Flange Connections		Applied Loads to Bridge Stiffeners	
Moment (kip-ft)	1221.13	Moment (kip-ft)	2060.16
Axial Force (kips)	71.23	Axial Force (kips)	0.00
Shear Force (kips)	40.40	Shear Force (kips)	0.00

*TIA-222-H Section 15.5 Applied

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(48) 1" ϕ bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 57" BC

Top Plate Data

60" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

N/A

Top Pole Data

54" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bridge Stiffener Group 1 Data

(4) Bolted, 8.5"x1.25", A572-65, Lu=17", Neglect Flange in MOI: No

Bottom Plate Data

54" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Stiffener Data

N/A

Bottom Pole Data

60" x 0.625" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	19.94
Allowable (kips)	54.52
Stress Rating:	34.8% Pass

Top Plate Capacity

Max Stress (ksi):	16.12	(Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	47.4%	Pass
Tension Side Stress Rating:	15.5%	Pass

Bridge Stiffener Group 1 Analysis Capacity

Max Compression (kip):	403.62	
Max Tension (kip):	403.62	
Comp. Capacity (kip):	503.34	
Tens. Capacity (kip):	543.75	(Rupture)
Comp. Stress Rating:	76.4%	Pass
Tens. Stress Rating:	70.7%	Pass

Bottom Plate Capacity

Max Stress (ksi):	13.34	(Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	39.2%	Pass
Tension Side Stress Rating:	N/A	

Monopole Base Plate Connection

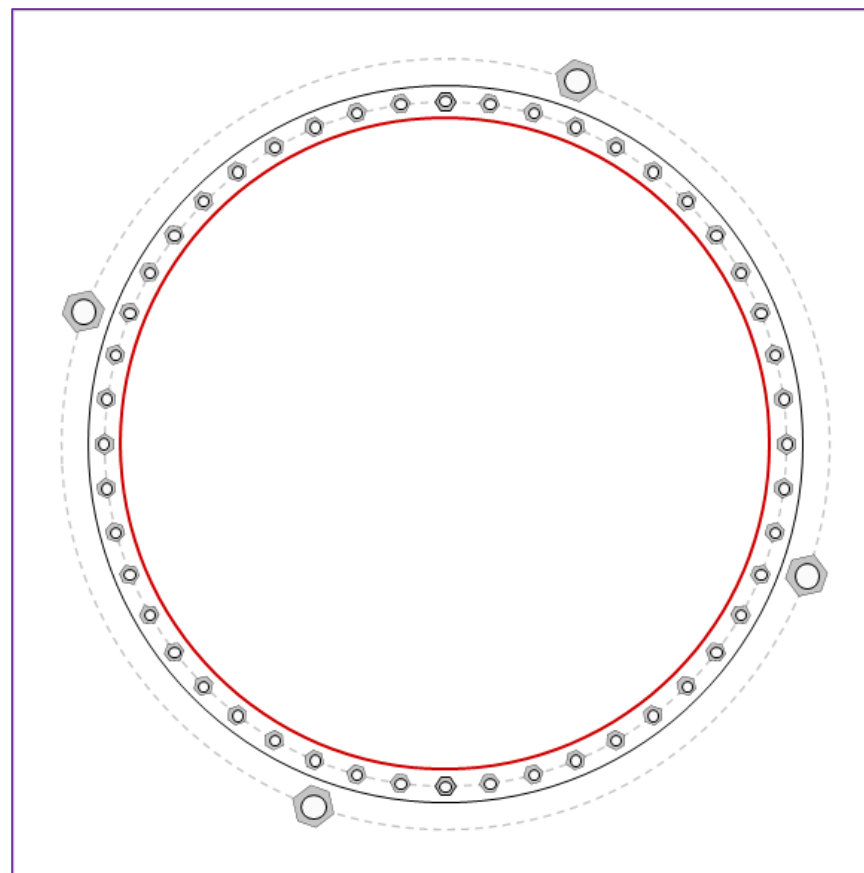


Site Info	
BU #	827050
Site Name	Rocky Hill/ Rte 160_1
Order #	556527 Rev. 0

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

Applied Loads	
Moment (kip-ft)	4123.40
Axial Force (kips)	82.81
Shear Force (kips)	43.71

*TIA-222-H Section 15.5 Applied



Connection Properties		Analysis Results	
Anchor Rod Data		Anchor Rod Summary <i>(units of kips, kip-in)</i>	
GROUP 1: (48) 1" ϕ bolts (A687 N; $F_y=105$ ksi, $F_u=125$ ksi) on 63" BC		GROUP 1:	
GROUP 2: (4) 2-1/4" ϕ bolts (Williams N; $F_y=125$ ksi, $F_u=125$ ksi) on 71" BC		$Pu_t = 36.48$	$\phi Pn_t = 56.81$ Stress Rating
Base Plate Data		$Vu = 0.91$	$\phi Vn = 36.82$ 61.2%
66" OD x 1.25" Plate (A36; $F_y=36$ ksi, $F_u=58$ ksi)		$Mu = 0.89$	$\phi Mn = 15.75$ Pass
Stiffener Data		GROUP 2:	
N/A		$Pu_t = 289.9$	$\phi Pn_t = 382.5$ Stress Rating
Pole Data		$Vu = 0$	$\phi Vn = 191.25$ 72.2%
60" x 0.375" round pole (A53-B-42; $F_y=42$ ksi, $F_u=63$ ksi)		$Mu = n/a$	$\phi Mn = n/a$ Pass
		Base Plate Summary	
		Max Stress (ksi):	25.37 (Flexural)
		Allowable Stress (ksi):	32.4
		Stress Rating:	74.6% Pass

Elevation (ft)

0

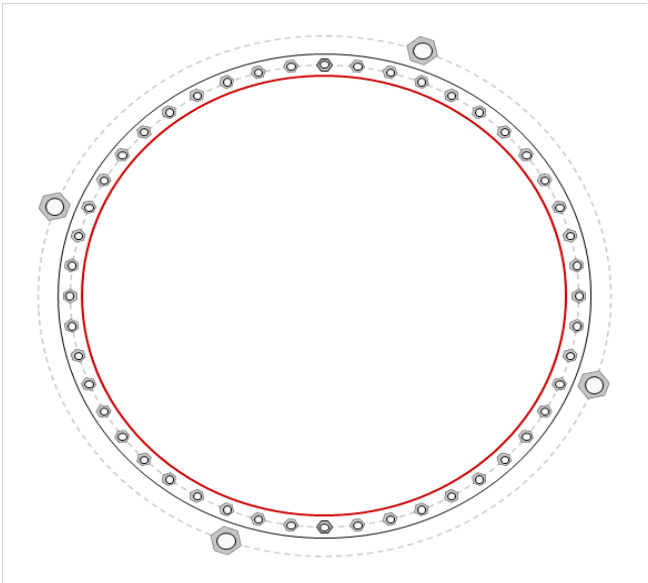
(Base)

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 :	I_{ar} (in):	Thread Type	Area Override, in^2	Tension Only
1	1	0	1	A687	63	0.5	1.5	N-Included		No
2	1	7.5	1	A687	63	0.5	1.5	N-Included		No
3	1	15	1	A687	63	0.5	1.5	N-Included		No
4	1	22.5	1	A687	63	0.5	1.5	N-Included		No
5	1	30	1	A687	63	0.5	1.5	N-Included		No
6	1	37.5	1	A687	63	0.5	1.5	N-Included		No
7	1	45	1	A687	63	0.5	1.5	N-Included		No
8	1	52.5	1	A687	63	0.5	1.5	N-Included		No
9	1	60	1	A687	63	0.5	1.5	N-Included		No
10	1	67.5	1	A687	63	0.5	1.5	N-Included		No
11	1	75	1	A687	63	0.5	1.5	N-Included		No
12	1	82.5	1	A687	63	0.5	1.5	N-Included		No
13	1	90	1	A687	63	0.5	1.5	N-Included		No
14	1	97.5	1	A687	63	0.5	1.5	N-Included		No
15	1	105	1	A687	63	0.5	1.5	N-Included		No
16	1	112.5	1	A687	63	0.5	1.5	N-Included		No
17	1	120	1	A687	63	0.5	1.5	N-Included		No
18	1	127.5	1	A687	63	0.5	1.5	N-Included		No
19	1	135	1	A687	63	0.5	1.5	N-Included		No
20	1	142.5	1	A687	63	0.5	1.5	N-Included		No
21	1	150	1	A687	63	0.5	1.5	N-Included		No
22	1	157.5	1	A687	63	0.5	1.5	N-Included		No
23	1	165	1	A687	63	0.5	1.5	N-Included		No
24	1	172.5	1	A687	63	0.5	1.5	N-Included		No
25	1	180	1	A687	63	0.5	1.5	N-Included		No
26	1	187.5	1	A687	63	0.5	1.5	N-Included		No
27	1	195	1	A687	63	0.5	1.5	N-Included		No
28	1	202.5	1	A687	63	0.5	1.5	N-Included		No
29	1	210	1	A687	63	0.5	1.5	N-Included		No
30	1	217.5	1	A687	63	0.5	1.5	N-Included		No
31	1	225	1	A687	63	0.5	1.5	N-Included		No
32	1	232.5	1	A687	63	0.5	1.5	N-Included		No
33	1	240	1	A687	63	0.5	1.5	N-Included		No
34	1	247.5	1	A687	63	0.5	1.5	N-Included		No
35	1	255	1	A687	63	0.5	1.5	N-Included		No
36	1	262.5	1	A687	63	0.5	1.5	N-Included		No
37	1	270	1	A687	63	0.5	1.5	N-Included		No
38	1	277.5	1	A687	63	0.5	1.5	N-Included		No
39	1	285	1	A687	63	0.5	1.5	N-Included		No
40	1	292.5	1	A687	63	0.5	1.5	N-Included		No
41	1	300	1	A687	63	0.5	1.5	N-Included		No
42	1	307.5	1	A687	63	0.5	1.5	N-Included		No
43	1	315	1	A687	63	0.5	1.5	N-Included		No
44	1	322.5	1	A687	63	0.5	1.5	N-Included		No
45	1	330	1	A687	63	0.5	1.5	N-Included		No
46	1	337.5	1	A687	63	0.5	1.5	N-Included		No
47	1	345	1	A687	63	0.5	1.5	N-Included		No
48	1	352.5	1	A687	63	0.5	1.5	N-Included		No
49	2	70	2.25	Williams	71	0.5	0	N-Included	4.08	No
50	2	160	2.25	Williams	71	0.5	0	N-Included	4.08	No
51	2	250	2.25	Williams	71	0.5	0	N-Included	4.08	No
52	2	340	2.25	Williams	71	0.5	0	N-Included	4.08	No

Plot Graphic



Drilled Pier Foundation

BU # :	827050
Site Name:	Rocky Hill/ Rte 160_1
Order Number:	556527 Rev. 0
TIA-222 Revision:	H
Tower Type:	Monopole



Applied Loads		
	Comp.	Uplift
Moment (kip-ft)	4123.4	
Axial Force (kips)	82.82	
Shear Force (kips)	43.69	

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

Rebar 2, Fy
Override
(ksi)

Pier Design Data	
Depth	36 ft
Ext. Above Grade	0.5 ft
Pier Section 1	
From 0.5' above grade to 23' below grade	
Pier Diameter	7 ft
Rebar Quantity	28
Rebar Size	9
Clear Cover to Ties	3 in
Tie Size	4
Tie Spacing	18 in
Rebar Quantity	4
Rebar Size	18
Rebar Cage Diameter	71 in
Pier Section 2	
From 23' below grade to 36' below grade	
Pier Diameter	7 ft
Rebar Quantity	28
Rebar Size	9
Clear Cover to Ties	3 in
Tie Size	4
Tie Spacing	18 in

Rebar & Pier Options

Embedded Pole Inputs

Belled Pier Inputs

Analysis Results		
Soil Lateral Check	Compression	Uplift
D _{v=0} (ft from TOC)	8.18	-
Soil Safety Factor	4.13	-
Max Moment (kip-ft)	4427.48	-
Rating*	30.7%	-

Soil Vertical Check	Compression	Uplift
Skin Friction (kips)	543.46	-
End Bearing (kips)	5157.89	-
Weight of Concrete (kips)	165.23	-
Total Capacity (kips)	5701.34	-
Axial (kips)	248.05	-
Rating*	4.1%	-

Reinforced Concrete Flexure	Compression	Uplift
Critical Depth (ft from TOC)	17.32	-
Critical Moment (kip-ft)	3820.47	-
Critical Moment Capacity	4765.23	-
Rating*	76.4%	-

Reinforced Concrete Shear	Compression	Uplift
Critical Depth (ft from TOC)	34.88	-
Critical Shear (kip)	397.27	-
Critical Shear Capacity	773.18	-
Rating*	48.9%	-

Structural Foundation Rating*	76.4%
Soil Interaction Rating*	30.7%

*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	5.6	# of Layers	11

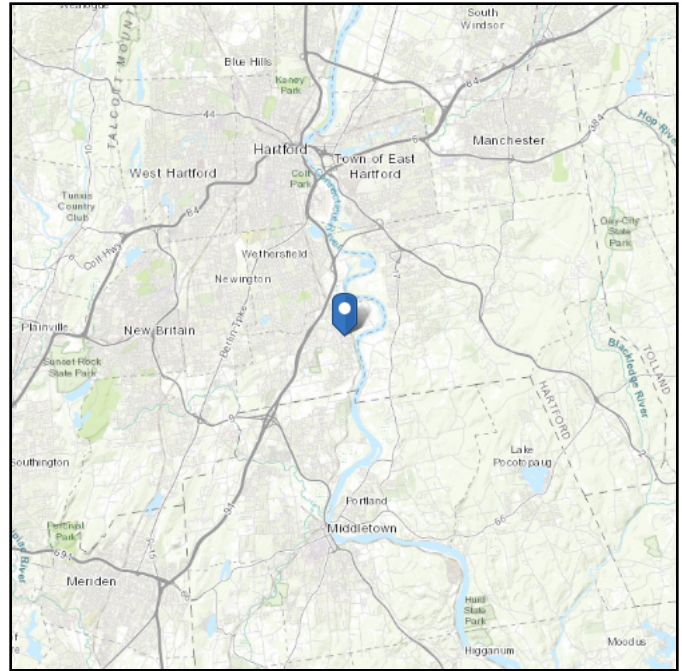
Layer	Top (ft)	Bottom (ft)	Thickness (ft)	V _{soil} (pcf)	V _{concrete} (pcf)	Cohesion (ksf)	Angle of Friction (degrees)	Calculated Ultimate Skin Friction Comp (ksf)	Calculated Ultimate Skin Friction Uplift (ksf)	Ultimate Skin Friction Comp Override (ksf)	Ultimate Skin Friction Uplift Override (ksf)	Ult. Gross Bearing Capacity (ksf)	SPT Blow Count	Soil Type
1	0	2	2	126	150	0	0	0.000	0.000	0.00	0.00			Cohesionless
2	2	3.5	1.5	117	150	0	0	0.000	0.000	0.00	0.00			Cohesionless
3	3.5	4	0.5	117	150	0	31	0.000	0.000	0.00	0.00			Cohesionless
4	4	5.6	1.6	124	150	0	35	0.000	0.000	0.88	0.88			Cohesionless
5	5.6	6	0.4	61.5	87.6	0	35	0.000	0.000	0.88	0.88			Cohesionless
6	6	8	2	57.5	87.6	0	33	0.000	0.000	0.88	0.88			Cohesionless
7	8	10	2	55.5	87.6	0	32	0.00	0.00	0.88	0.88			Cohesionless
8	10	15	5	52.5	87.6	0	29	0.00	0.00	0.49	0.49			Cohesionless
9	15	30	15	42.5	87.6	0.5	0	0.28	0.28	0.50	0.50			Cohesive
10	30	34	4	53.5	87.6	0	31	0.00	0.00	0.83	0.83			Cohesionless
11	34	36	2	92.5	87.6	20	0	9.00	9.00	7.20	7.20	178.7		Cohesive

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: 97.46 ft (NAVD 88)
Latitude: 41.668269
Longitude: -72.638036



Wind

Results:

Wind Speed:	118 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	90 Vmph
100-year MRI	98 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: Thu Sep 23 2021

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).

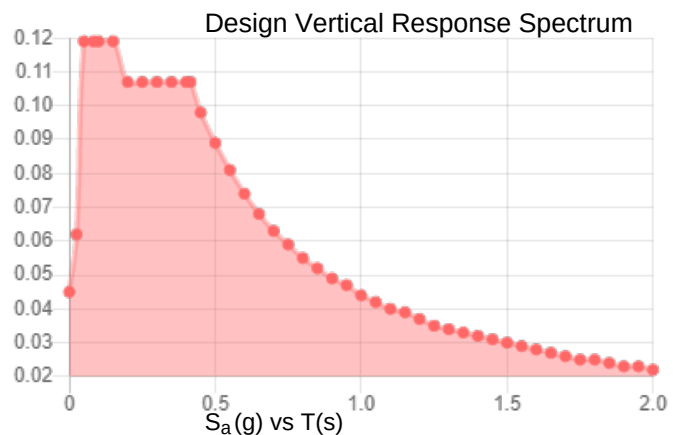
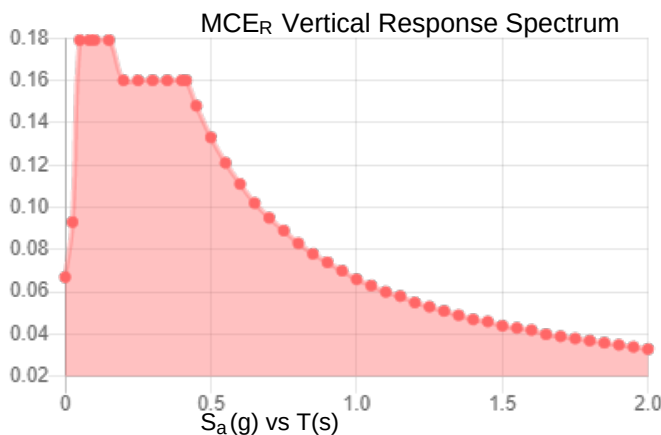
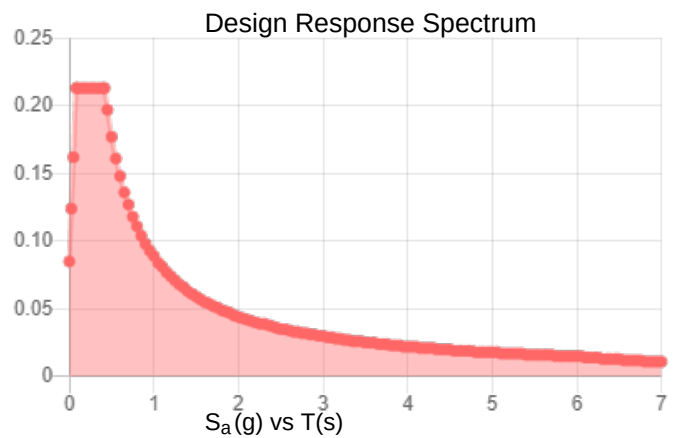
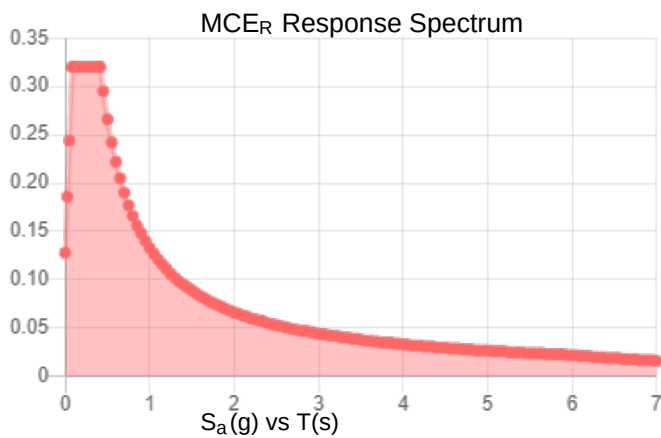
Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

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

Results:

S_S :	0.2	S_{D1} :	0.089
S_1 :	0.055	T_L :	6
F_a :	1.6	PGA :	0.11
F_v :	2.4	PGA _M :	0.173
S_{MS} :	0.32	F_{PGA} :	1.581
S_{M1} :	0.133	I_e :	1
S_{DS} :	0.213	C_v :	0.7

Seismic Design Category B



Data Accessed:

Thu Sep 23 2021

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.

Results:

Ice Thickness: 1.50 in.
Concurrent Temperature: 15 F
Gust Speed: 50 mph

Data Source: Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8

Date Accessed: Thu Sep 23 2021

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.

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Date: **September 13, 2021**

Darcy Tarr
Crown Castle
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Charlotte, NC 28277
(704) 405-6589

INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless
Infinigy Engineering, PLLC
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: CTL01039
Carrier Site Name: Rocky Hill/ Rte 160_1
Carrier FA Number: 10128682

Crown Castle Designation: Crown Castle BU Number: 827050
Crown Castle Site Name: Rocky Hill/ Rte 160_1
Crown Castle JDE Job Number: 649387
Crown Castle Order Number: 556527 Rev. 0

Engineering Firm Designation: Infinigy Engineering, PLLC Report Designation: 1039-Z0001-B

Site Data: 699 Old Main Street, Rocky Hill, Hartford County, CT, 06067
Latitude 41°40'5.77", Longitude -72°38'16.93"

Structure Information: Tower Height & Type: 147.5 ft Monopole
Mount Elevation: 102.0 ft
Mount Type: 12.5 ft Platform

Dear Darcy Tarr,

Infinigy Engineering, PLLC 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:

Platform

Sufficient

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: Andrew Gloriani, E.I.T.

Respectfully Submitted by:
Emmanuel Poulin, P.E.
518-690-0790
structural@infinigy.com
CT PE License No. 22947

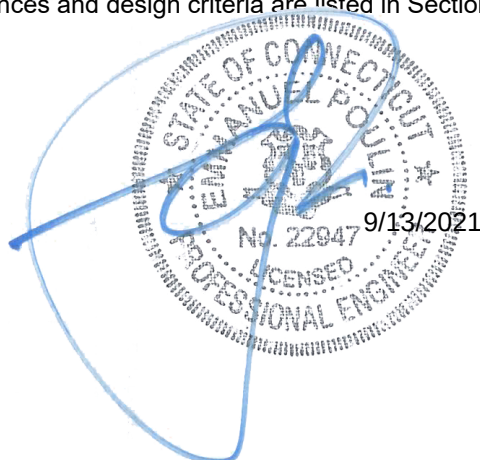


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Additional Calculations

1) INTRODUCTION

This is an existing 3 sector 12.5 ft Platform, mapped by Infinigy Engineering.

2) ANALYSIS CRITERIA

Building Code:	2018 IBC
TIA-222 Revision:	TIA-222-H
Risk Category:	II
Ultimate Wind Speed:	118 mph
Exposure Category:	C
Topographic Factor at Base:	1.0
Topographic Factor at Mount:	1.0
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Seismic S_s:	0.200
Seismic S₁:	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
102.0	105.0	1	CCI Antennas	DMP65R-BU6D	12.5 ft Platform Addition of (1) 8' pipe mount for Beta & Gamma sectors
		2	CCI Antennas	DMP65R-BU8D	
		1	CCI Antennas	TPA65R-BU6D	
		2	CCI Antennas	TPA65R-BU8D	
		3	Ericsson	AIR 6419 B77G	
		3	Ericsson	AIR 6449 N77	
		3	Ericsson	RADIO 4478 B14	
		3	Ericsson	RRUS 32 B30	
		3	Ericsson	RRUS 32 B66	
		3	Ericsson	RRUS 4415 B25	
		3	Ericsson	RRUS 4449 B5/B12	
		2	Raycap	DC6-48-60-18-8F	
		1	Raycap	DC9-48-60-24-8C-EV	

3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

Document	Remarks	Reference	Source
Crown Application	AT&T Mobility Application	556527 Rev. 0	CCI Sites
Loading Document	AT&T Mobility	RFDS ID: 4387620	TSA
Mount Mapping Documents	Infinigy Engineering	9731500	CCI Sites

3.1) Analysis Method

RISA-3D (Version 19.0.4), 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 V2.1.6, 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 *Tower Mount Analysis* (Revision B).

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	ASTM A36 (GR 36)
HSS (Rectangular)	ASTM A500 (GR B-46)
Pipe	ASTM A53 (GR 35)
Connection Bolts	ASTM A325

This analysis may be affected if any assumptions are not valid or have been made in error. Infinigy Engineering, PLLC 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 (Platform, All Sectors)

Notes	Component	Critical Member	Centerline (ft)	% Capacity	Pass / Fail
1, 2	Mount Pipe(s)	MP6	102.0	94.2	Pass
	Horizontal(s)	M4		37.4	Pass
	Standoff(s)	M1		78.6	Pass
	Mount Connection(s)	-		45.4	Pass

Structure Rating (max from all components) =	94.2%
---	--------------

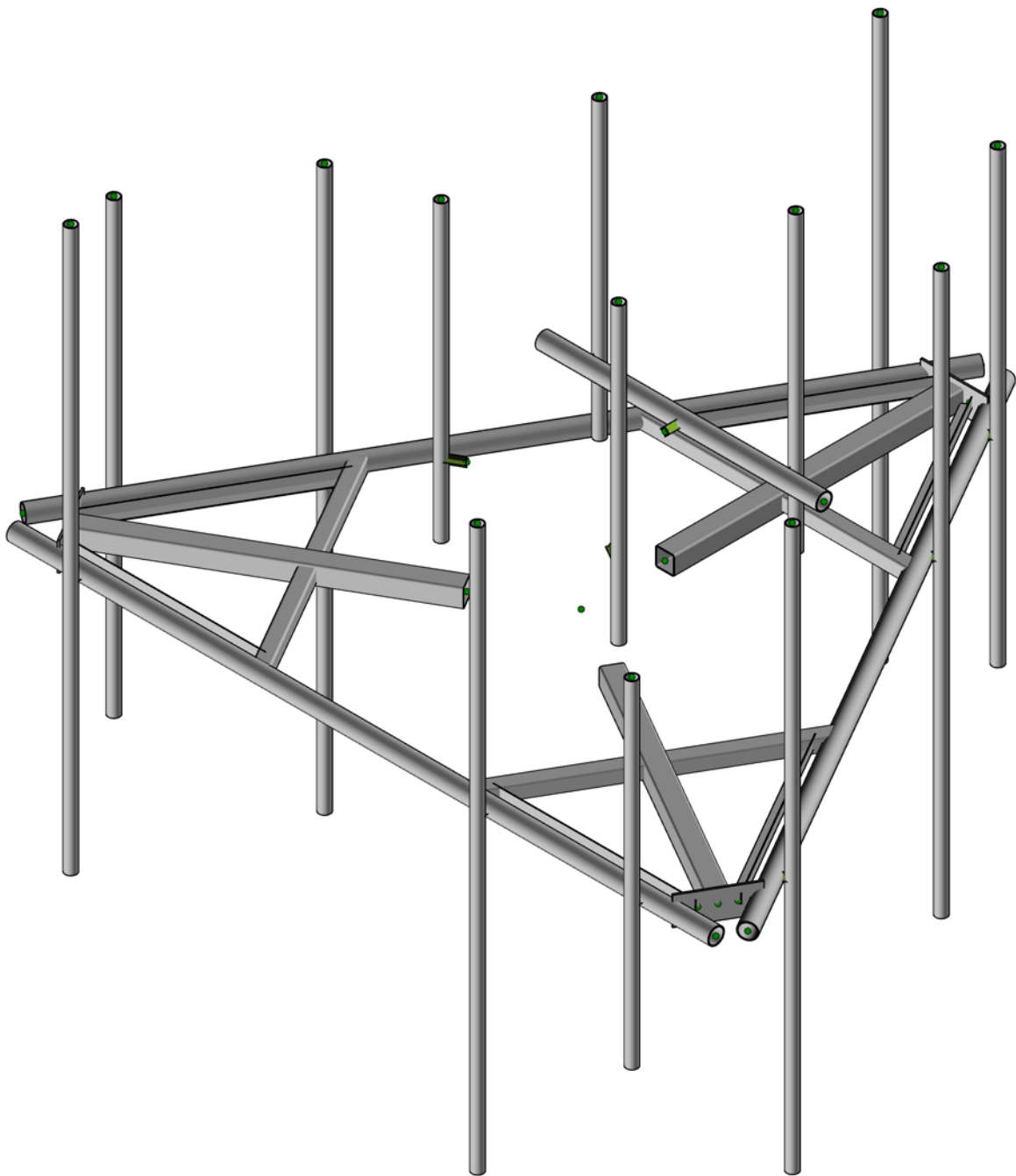
Notes:

- 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. No modifications are required at this time.

APPENDIX A
WIRE FRAME AND RENDERED MODELS



Infinigy Engineering, PLLC

AG

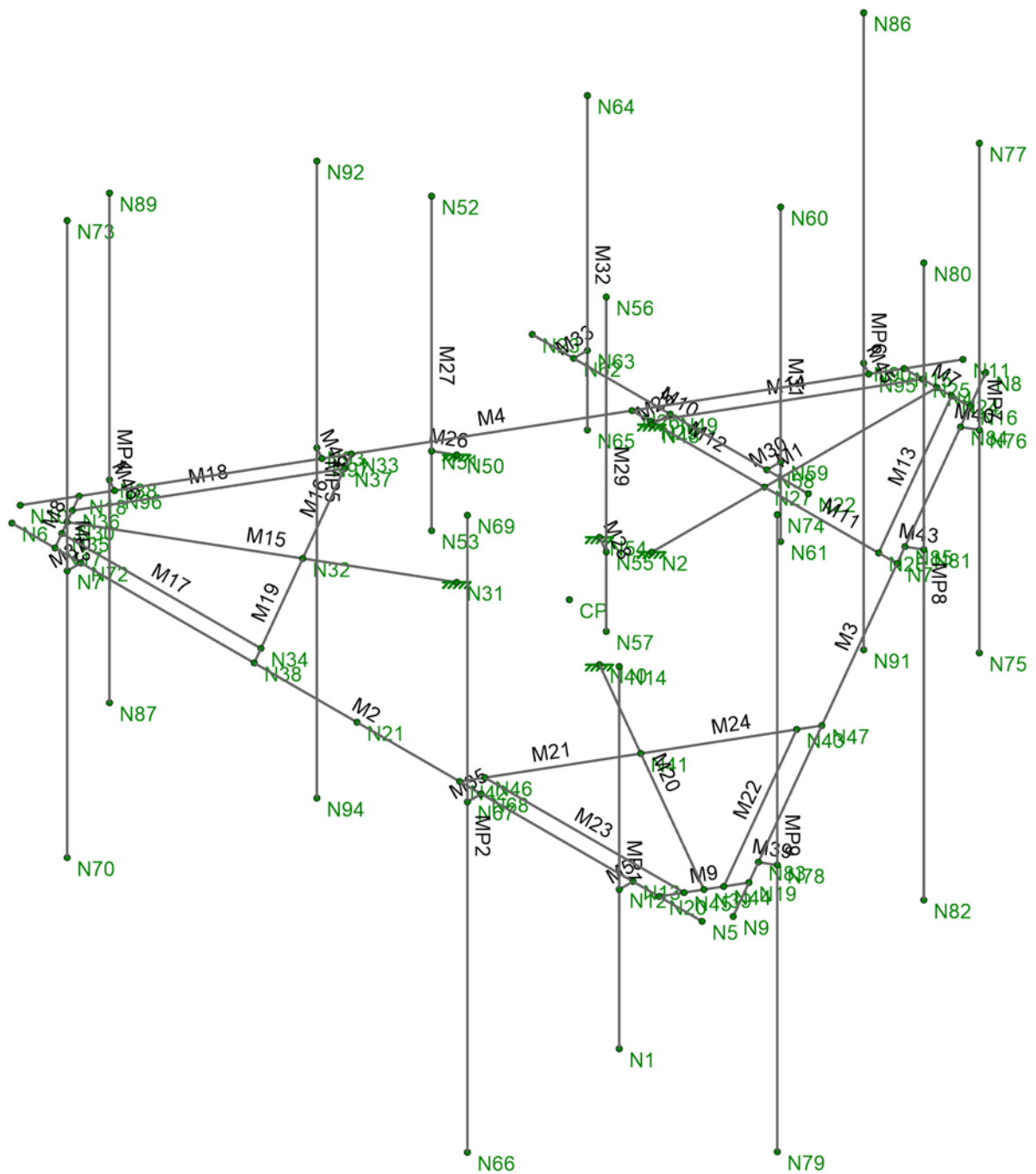
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Sep 13, 2021

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AG

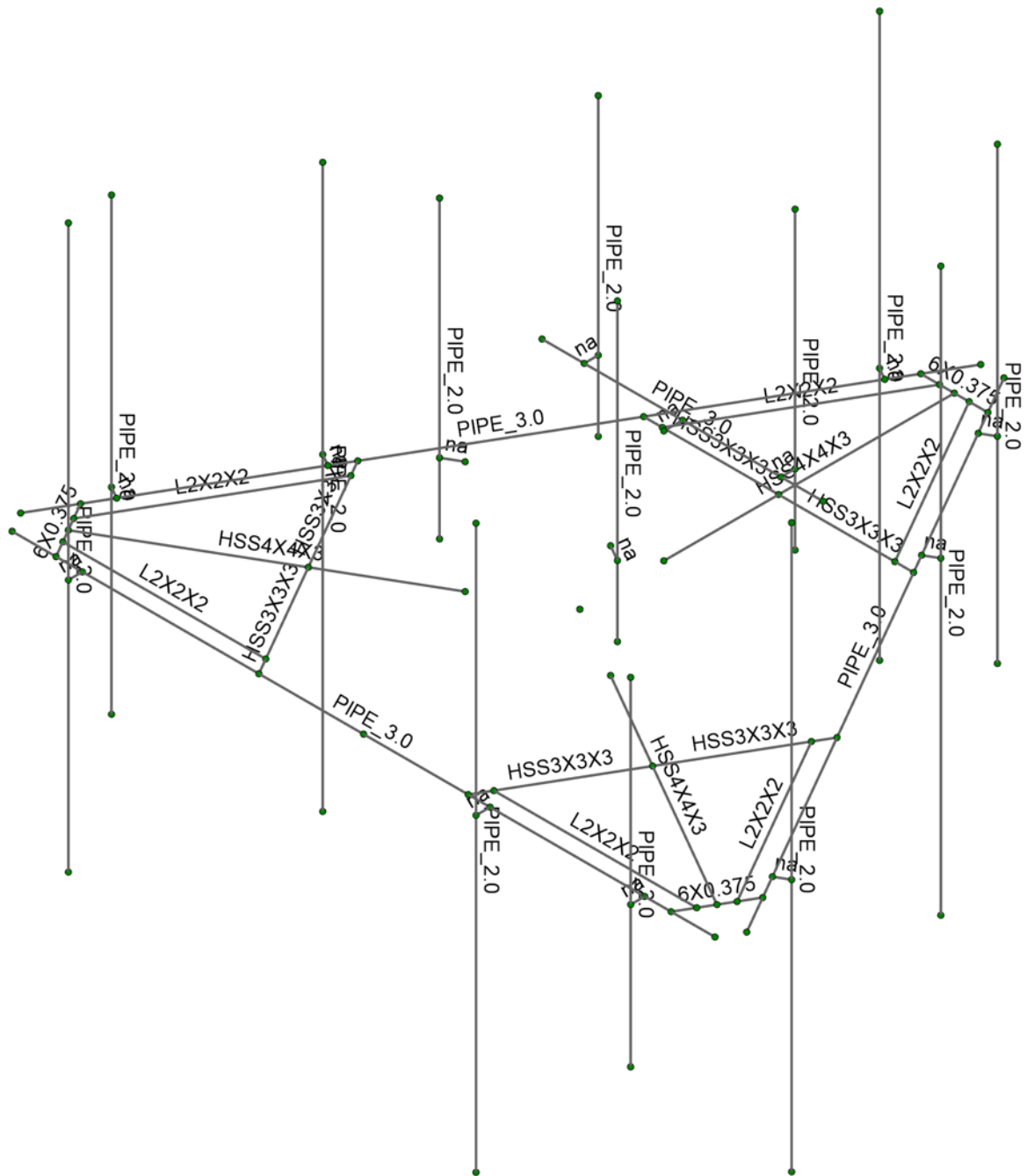
1039-Z0001-B

827050

Wireframe

Sep 13, 2021

827050_loaded.r3d



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AG

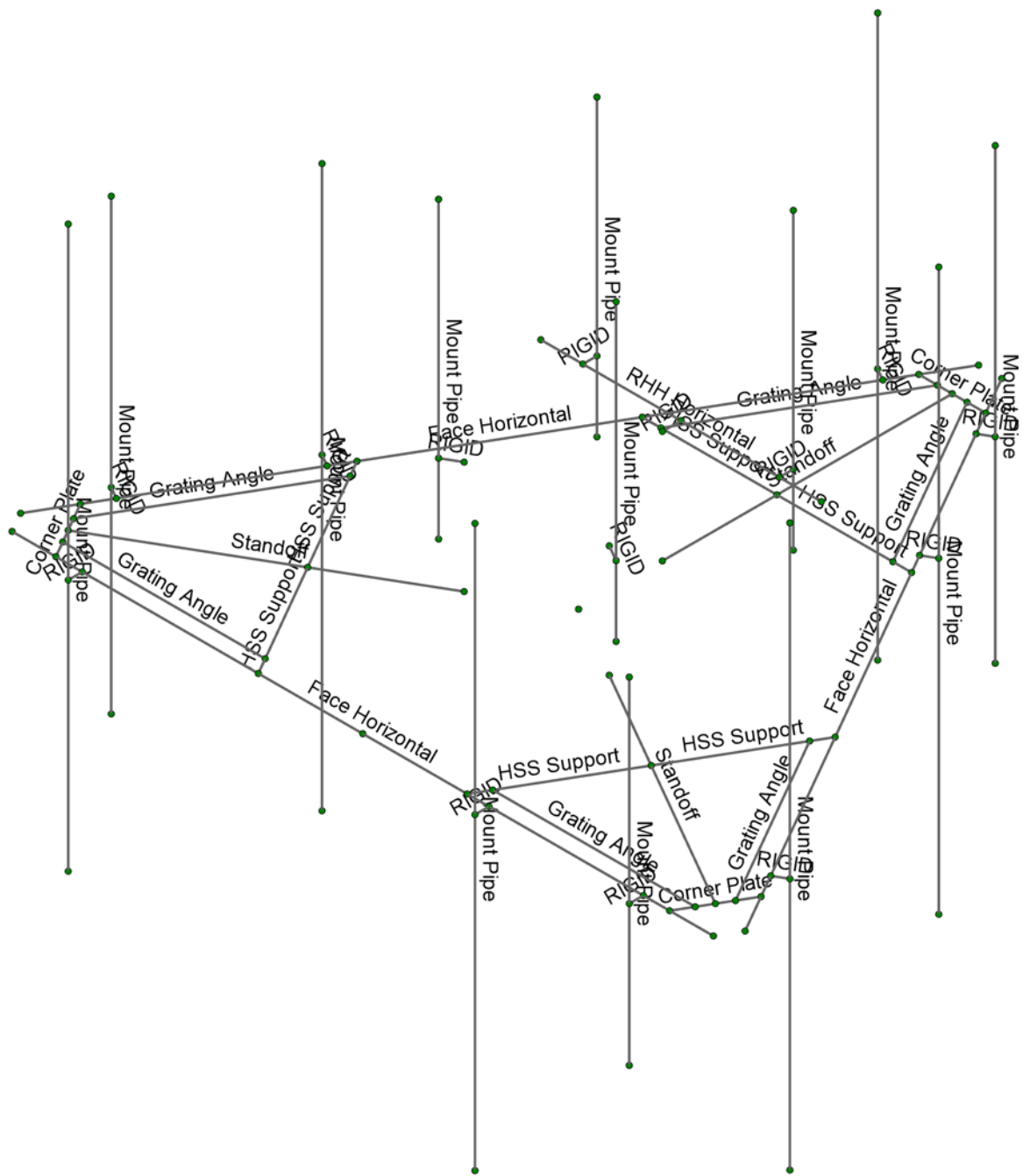
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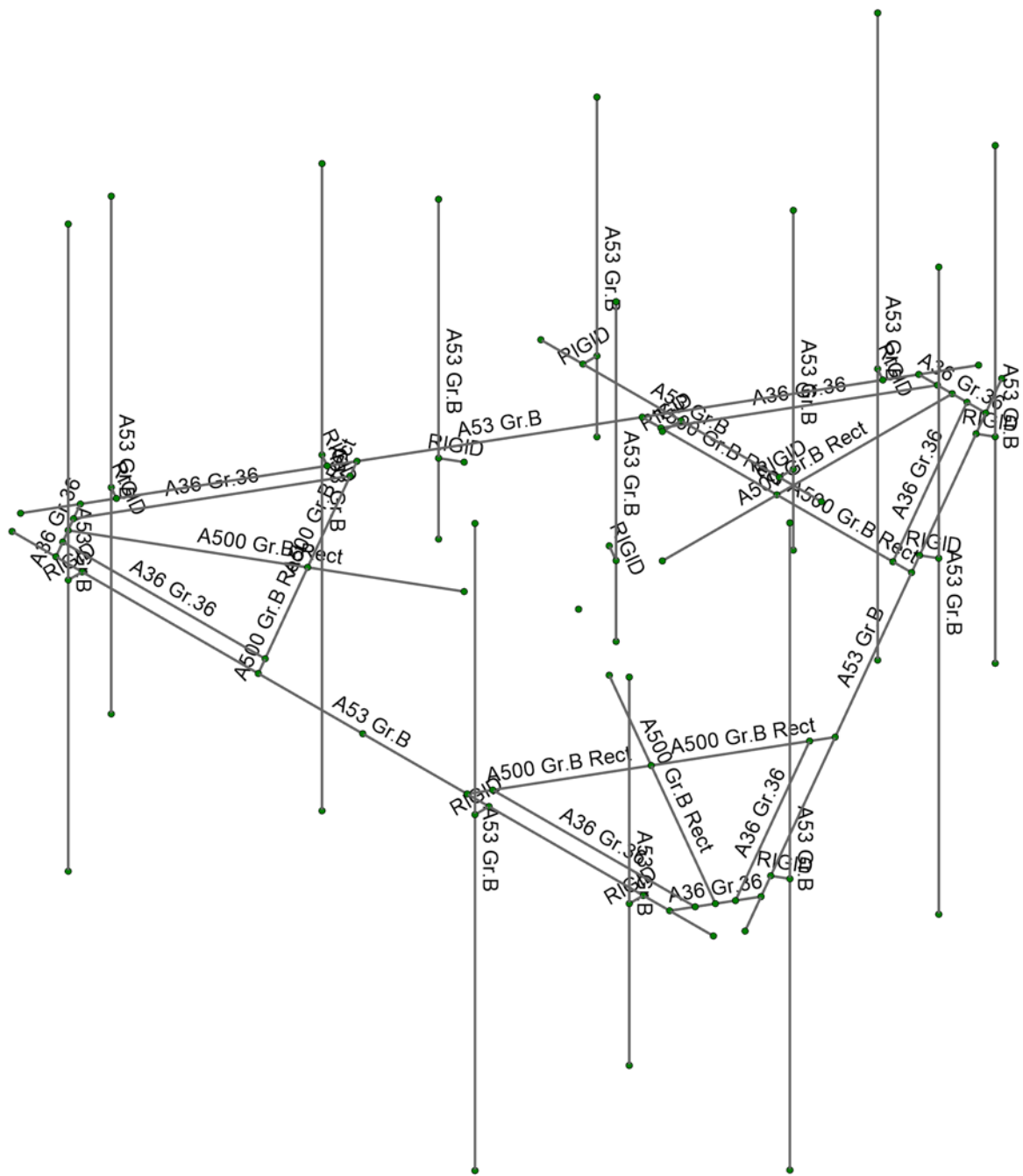
827050

Shape

Sep 13, 2021

827050_loaded.r3d





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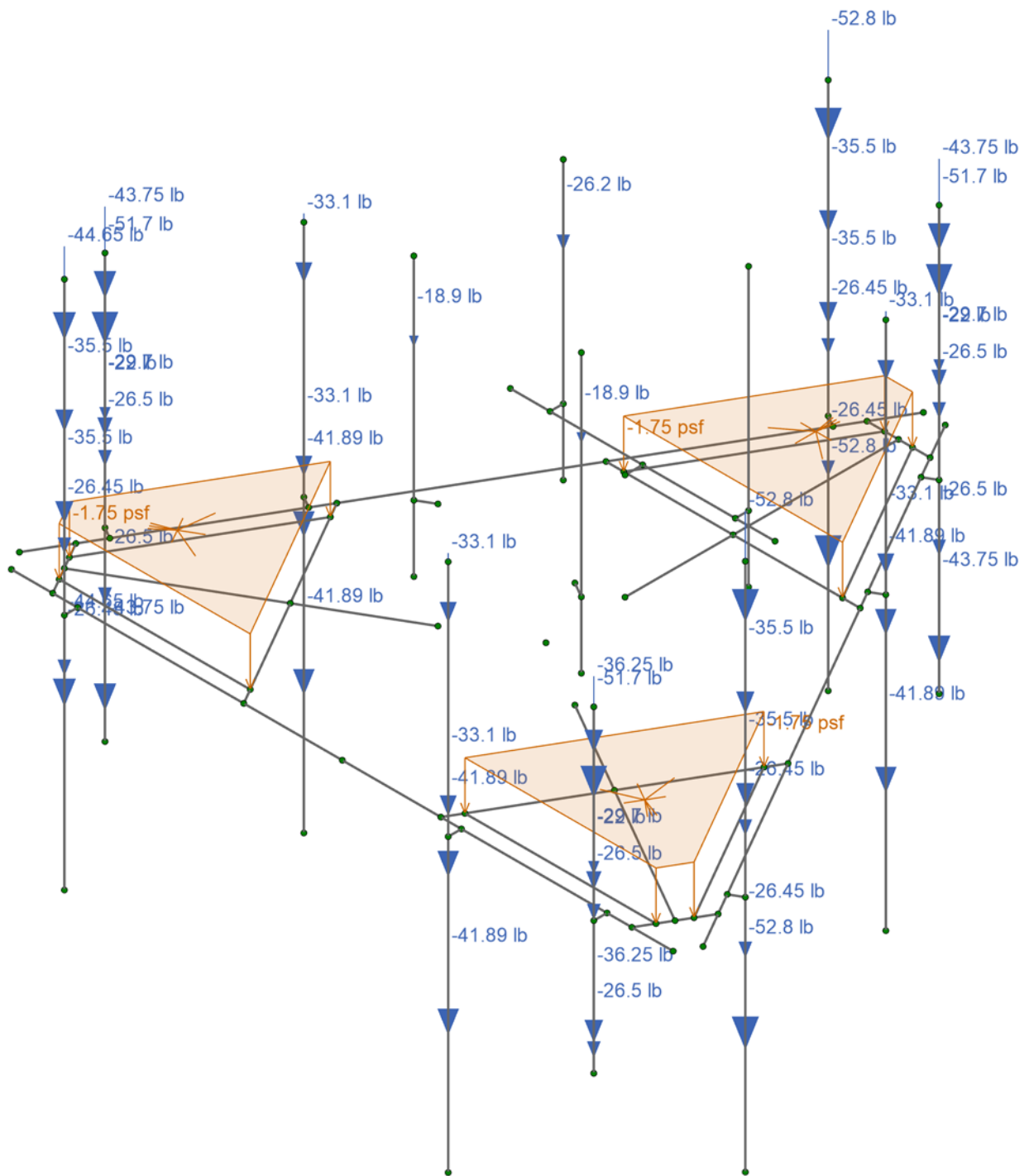
1039-Z0001-B

827050

Grade

Sep 13, 2021

827050_loaded.r3d



Loads: BLC 1, Self Weight

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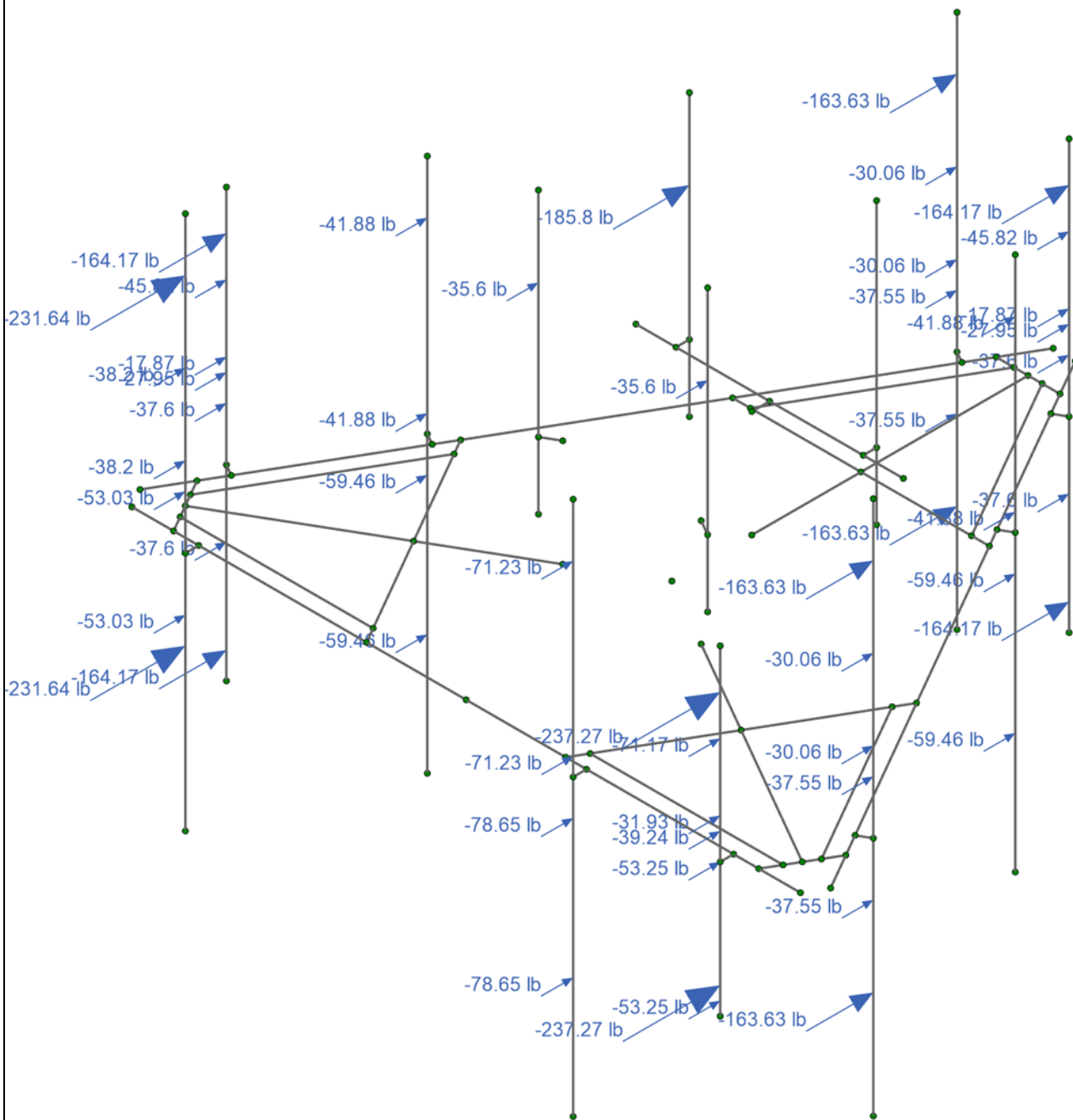
1039-Z0001-B

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Self Weight

Sep 13, 2021

827050_loaded.r3d



Loads: BLC 2, Wind Load AZI 0

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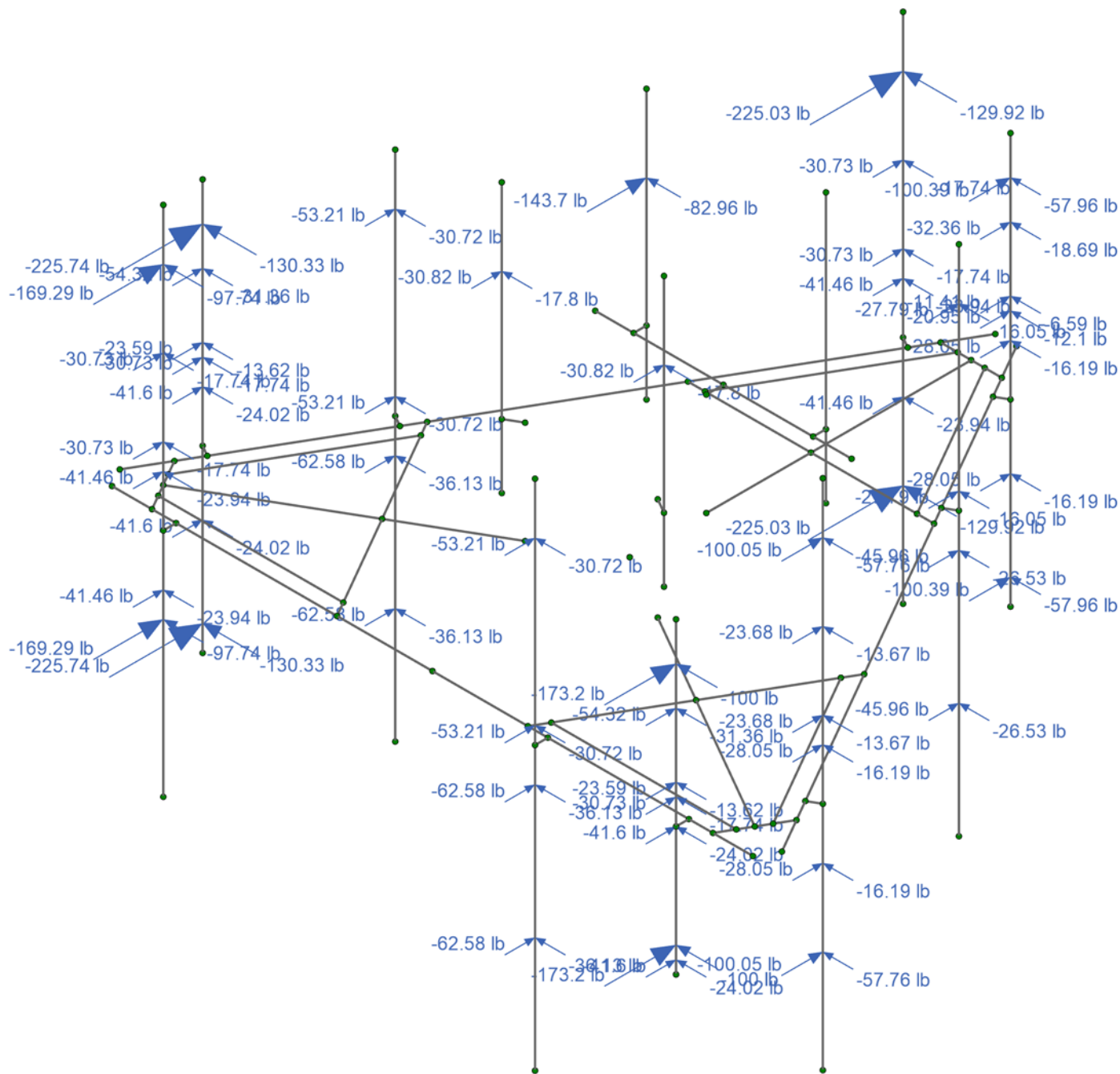
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827050

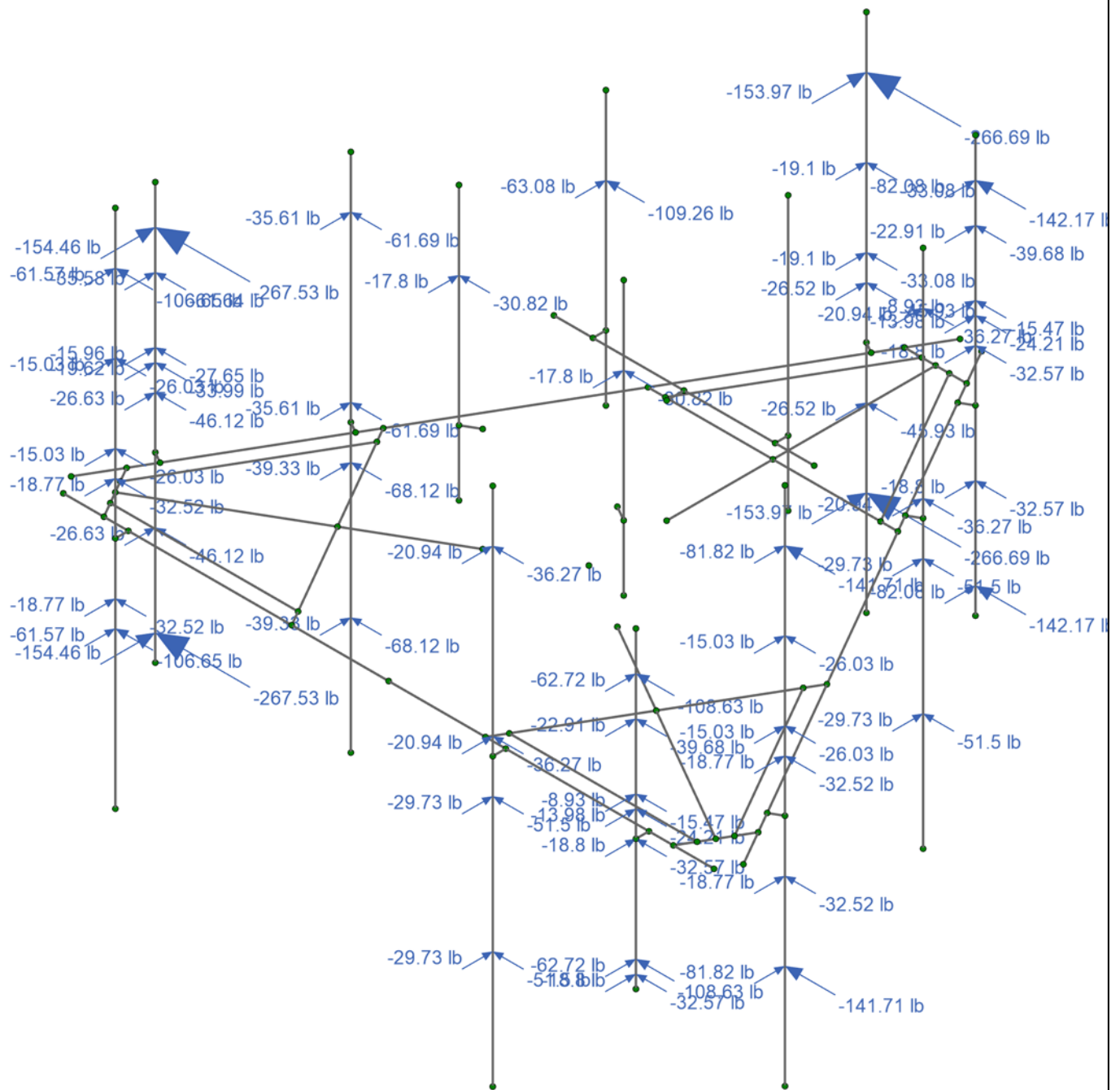
Wind Loading 0

Sep 13, 2021

827050_loaded.r3d



827050_loaded.r3d



Loads: BLC 4, Wind Load AZI 60

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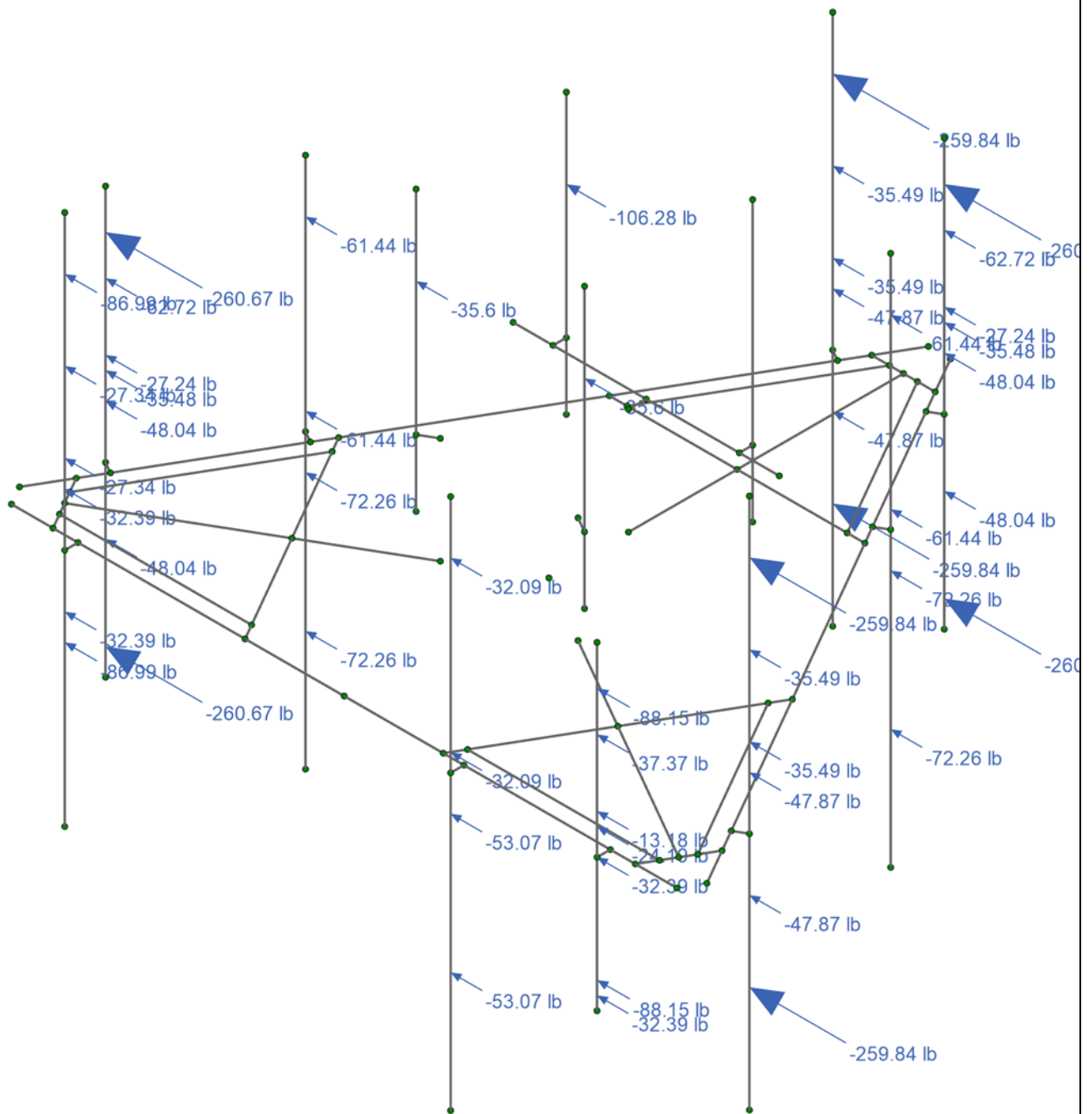
1039-Z0001-B

827050

Wind Loading 60

Sep 13, 2021

827050_loaded.r3d



Loads: BLC 5, Wind Load AZI 90

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AG

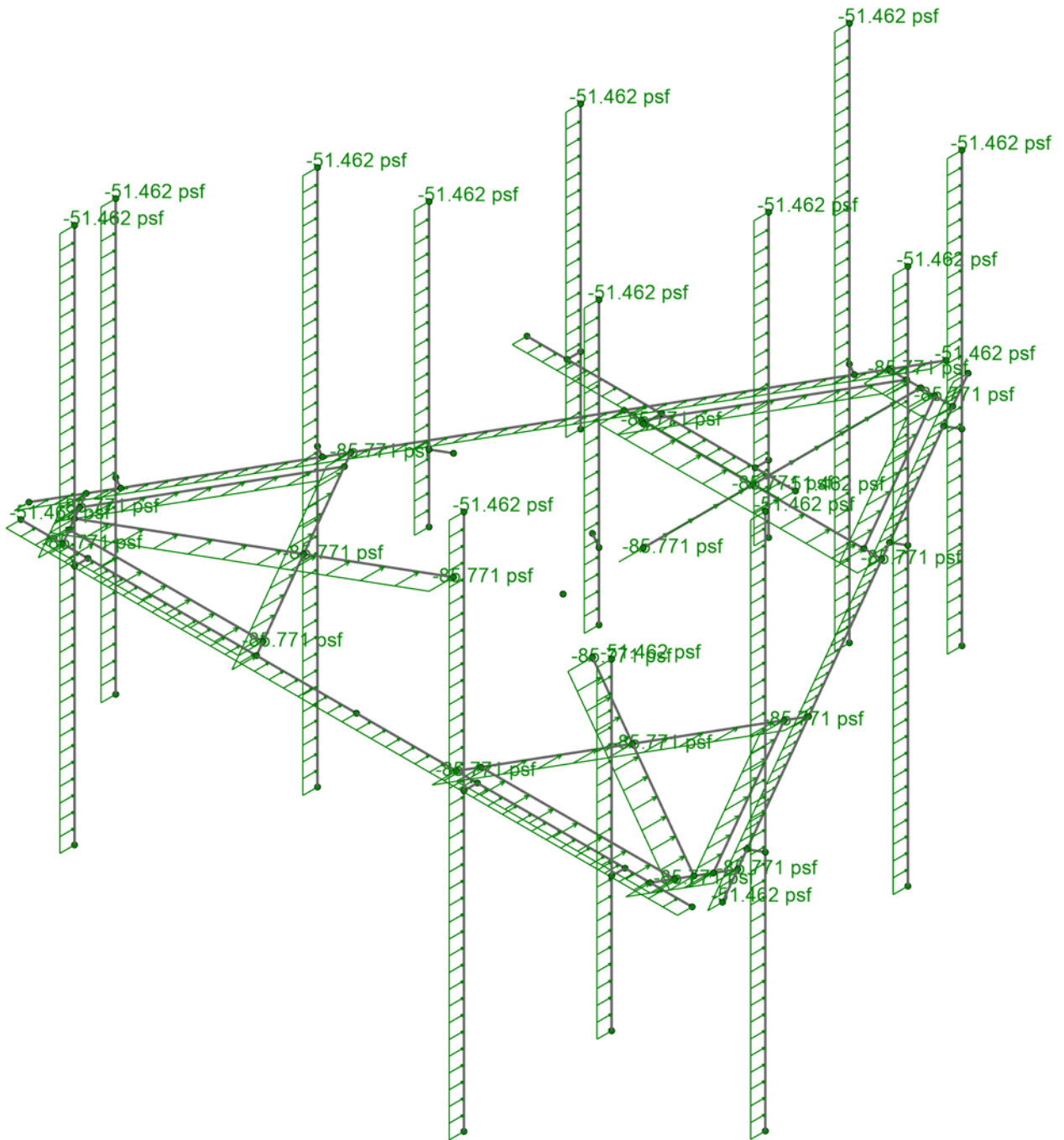
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827050

Wind Loading 90

Sep 13, 2021

827050_loaded.r3d



Loads: BLC 14, Distr. Wind Load Z

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AG

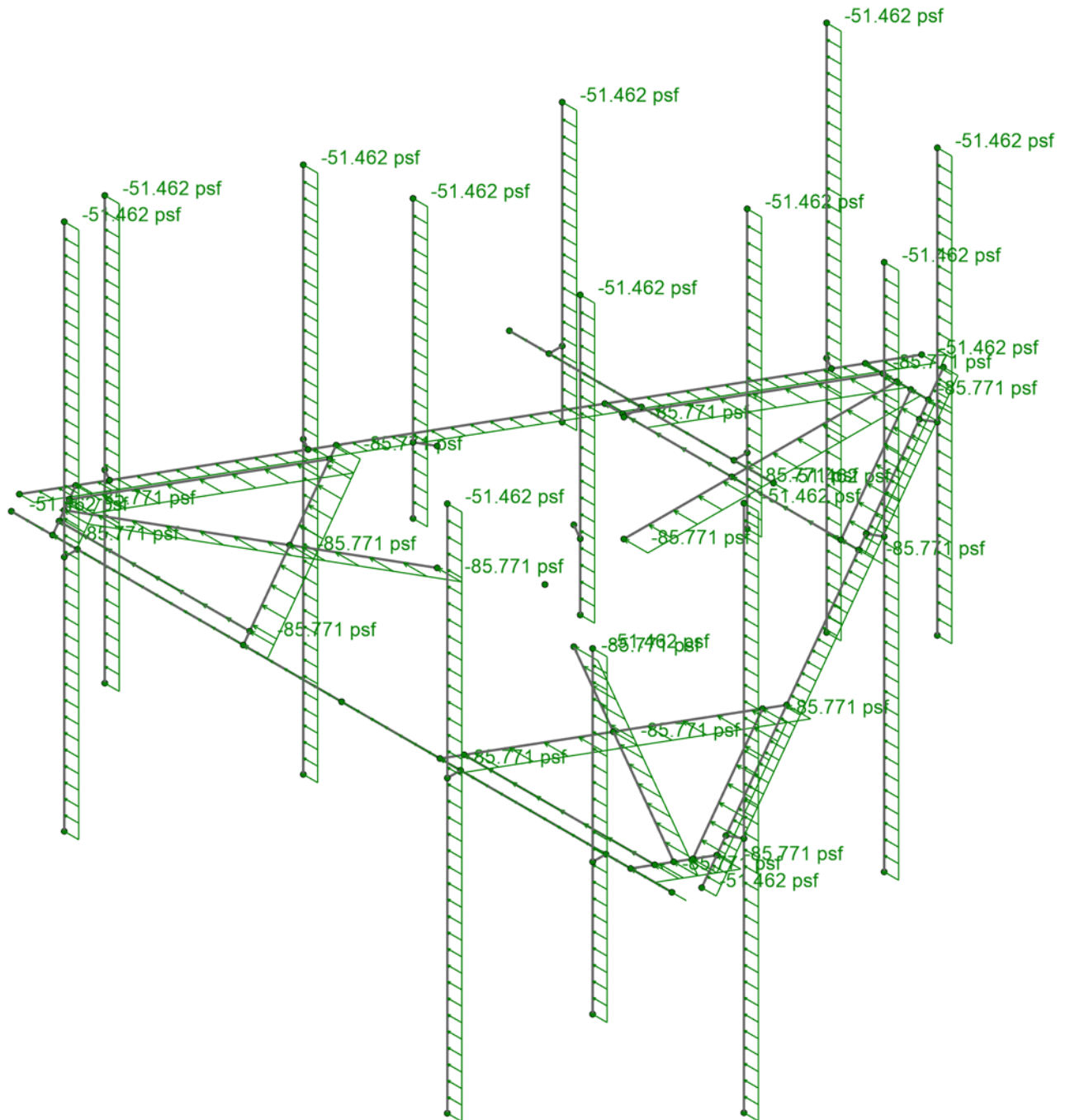
1039-Z0001-B

827050

Dist. Wind Loading 0

Sep 13, 2021

827050_loaded.r3d



Loads: BLC 15, Distr. Wind Load X

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AG

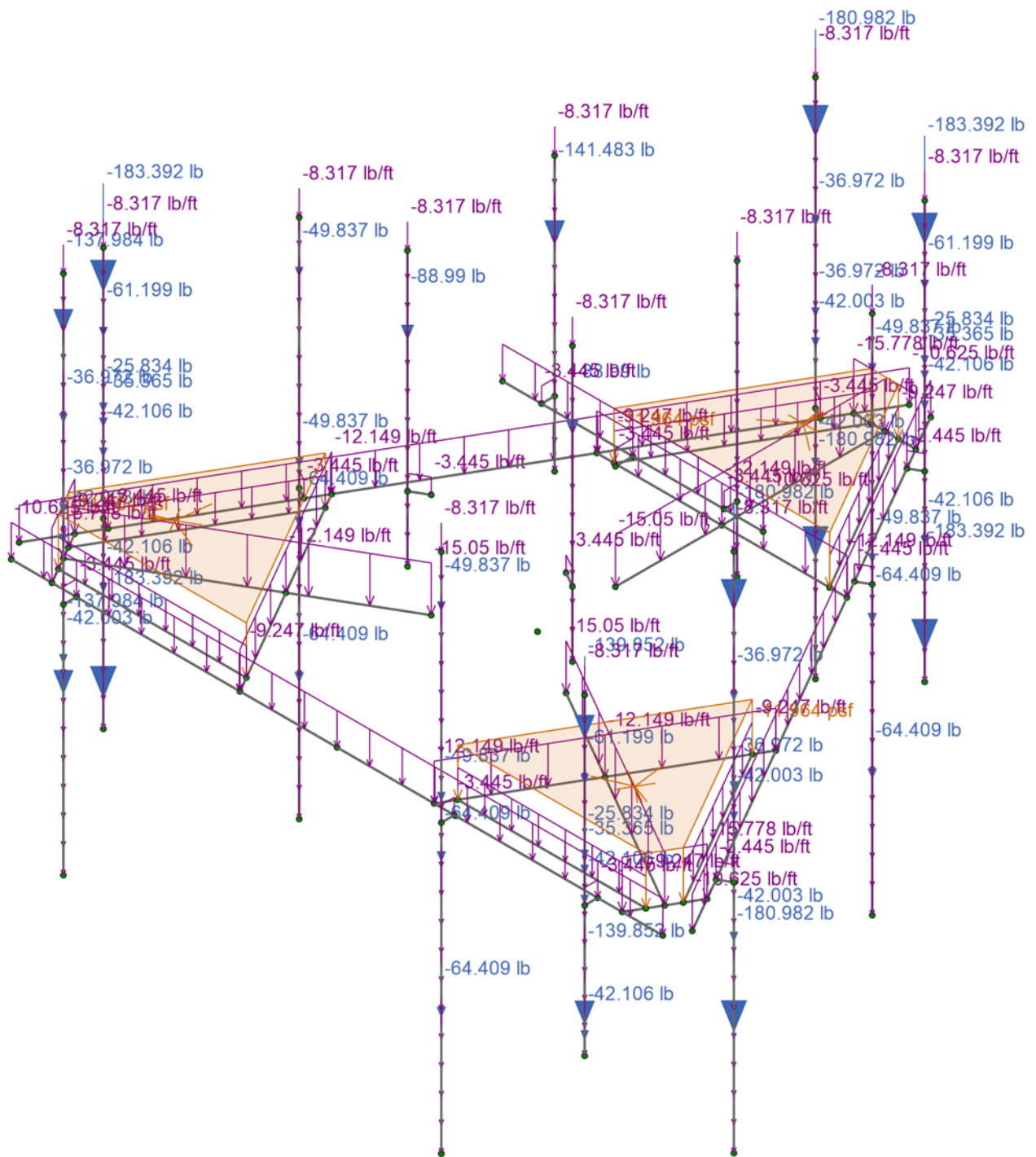
1039-Z0001-B

827050

Dist. Wind Loading 90

Sep 13, 2021

827050_loaded.r3d



Loads: BLC 16, Ice Weight

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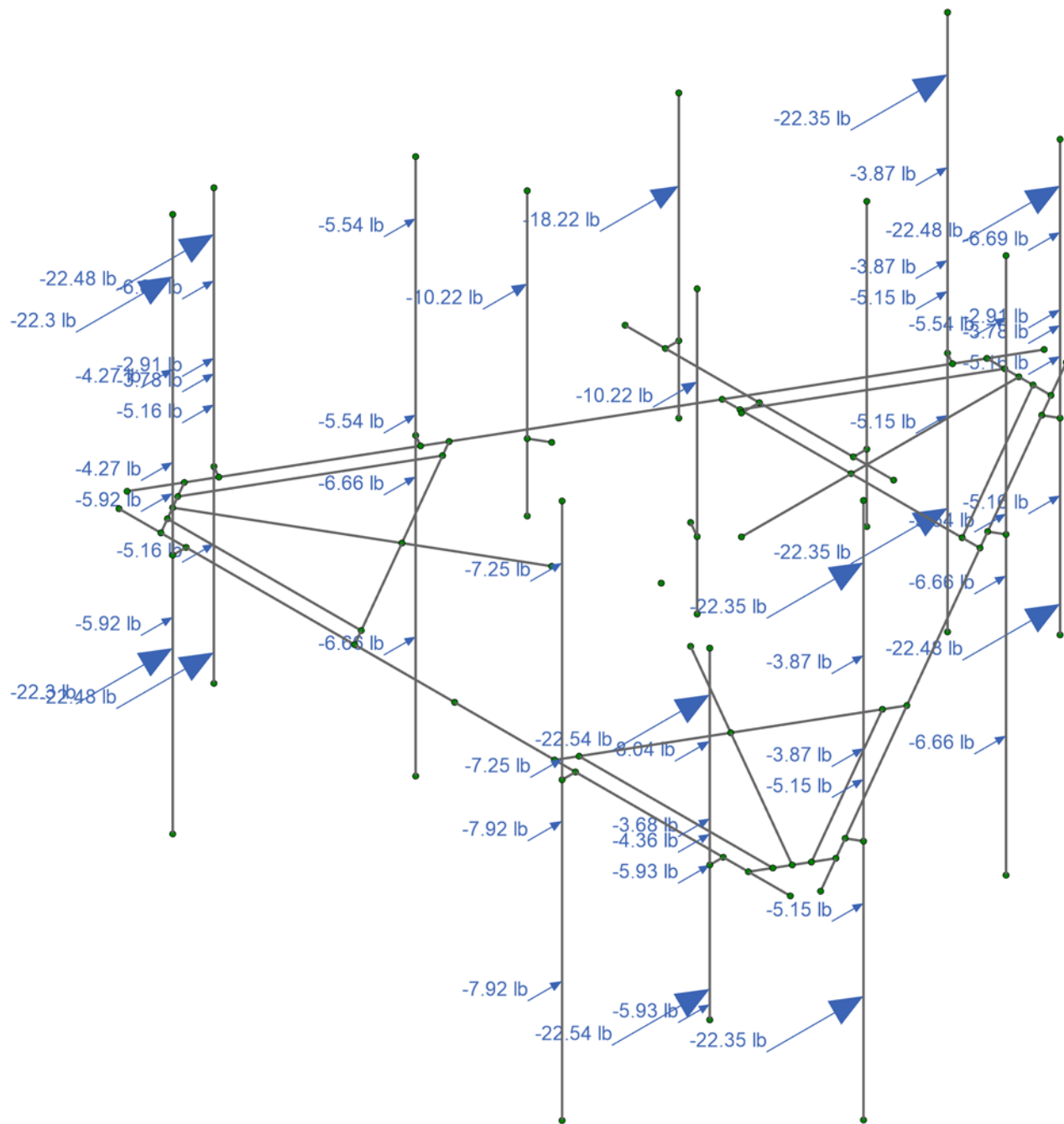
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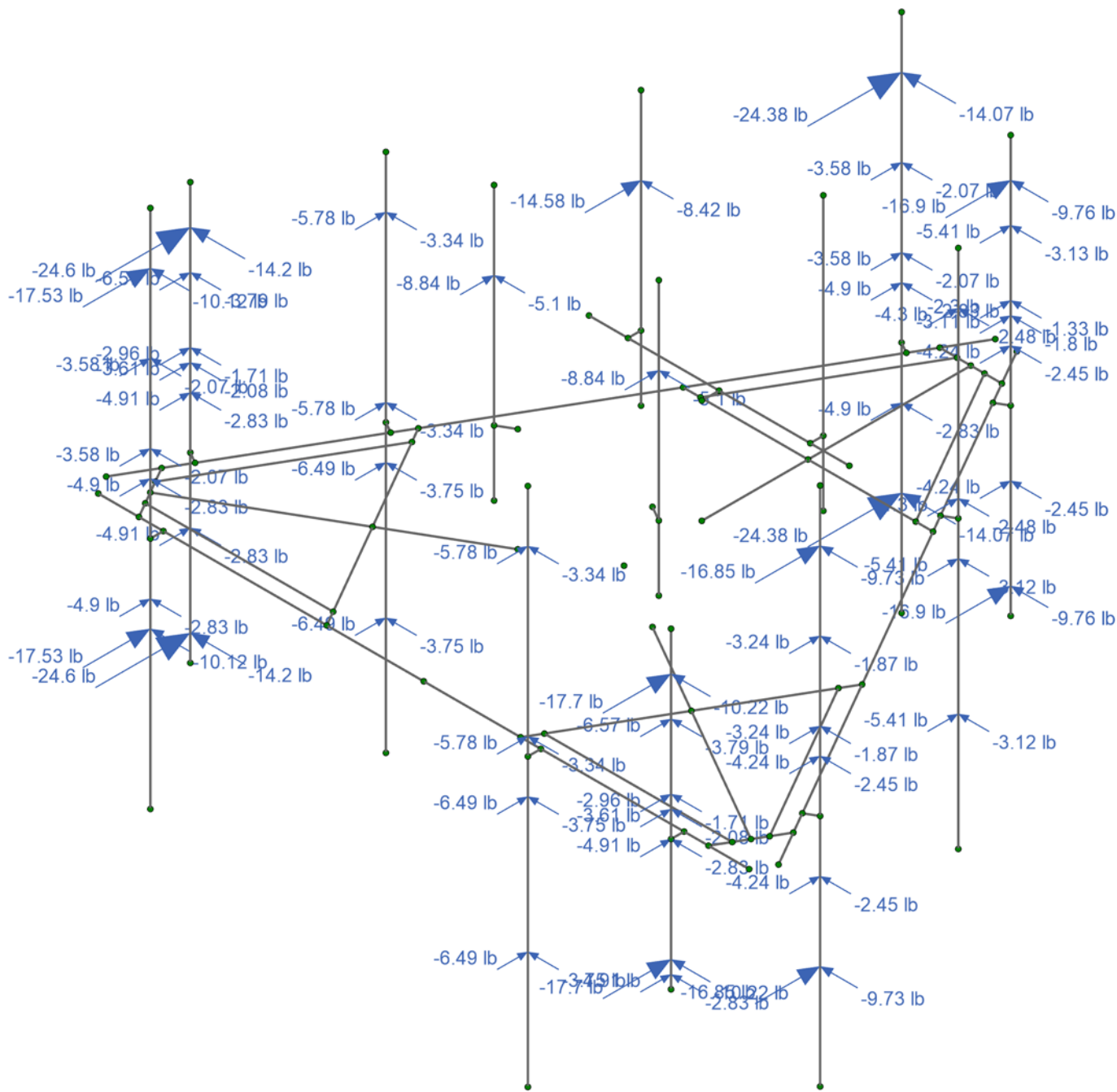
Ice Weight

Sep 13, 2021

827050_loaded.r3d



827050_loaded.r3d



Loads: BLC 18, Ice Wind Load AZI 30

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AG

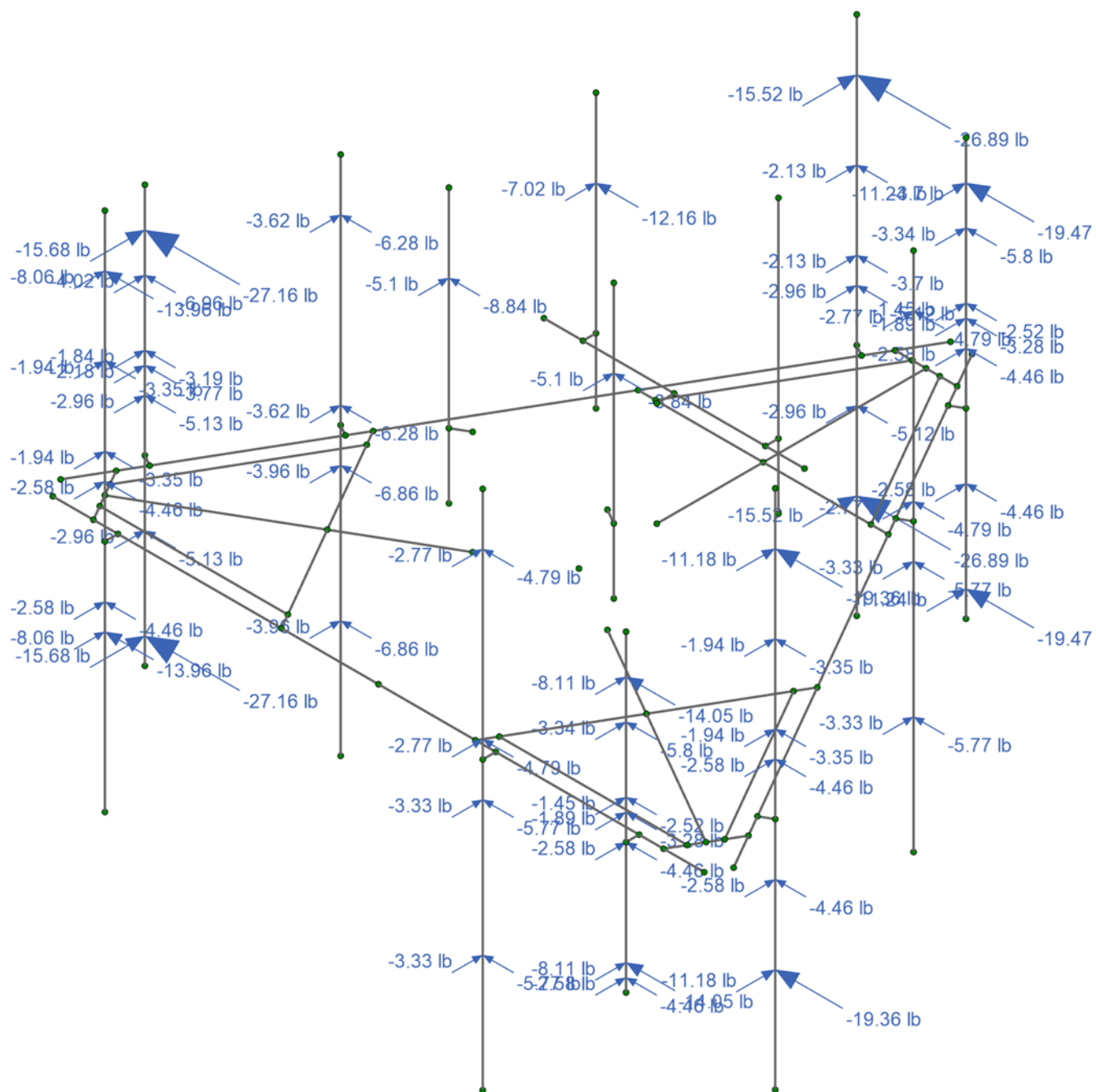
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827050

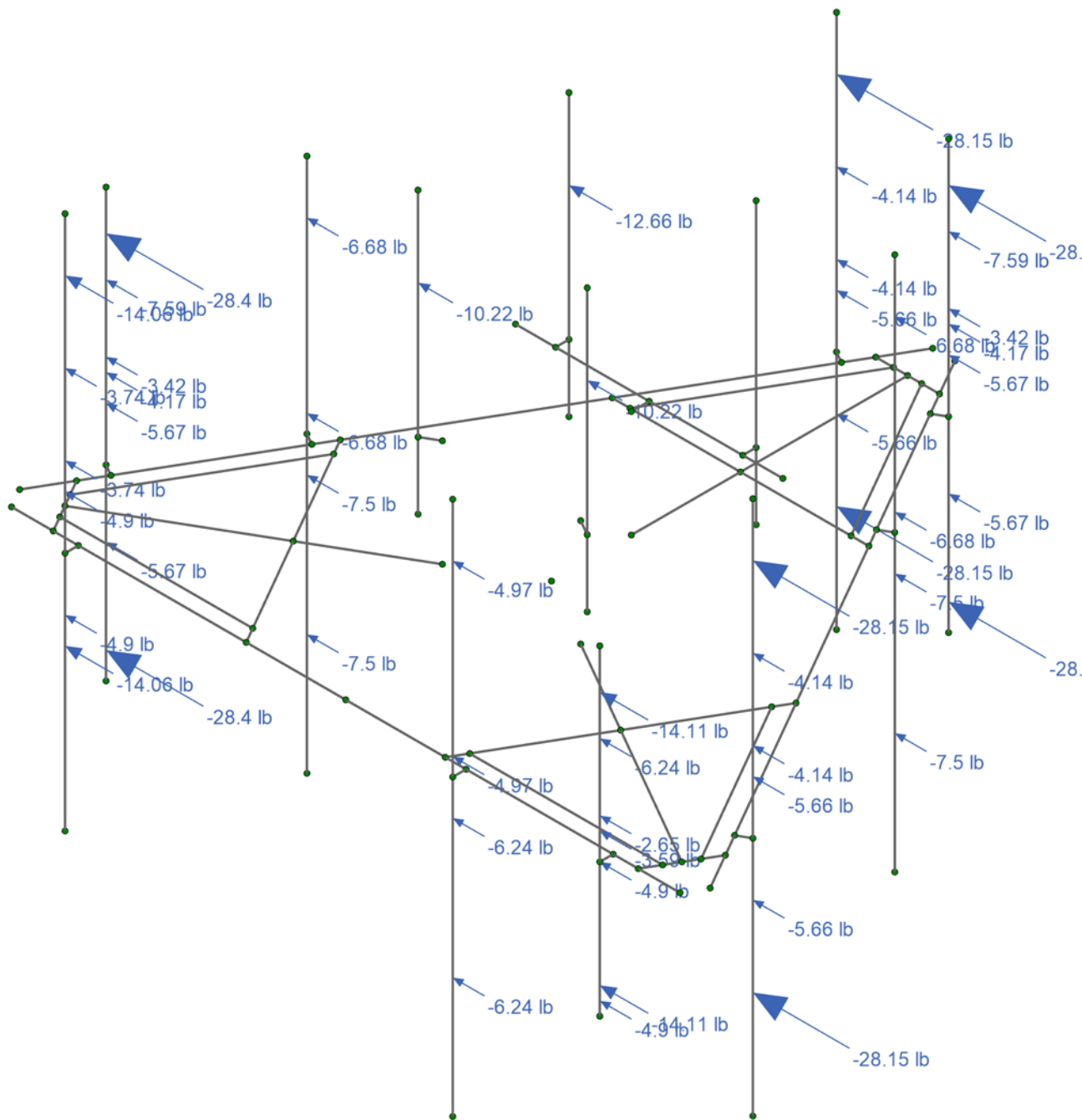
Ice Wind Loading 30

Sep 13, 2021

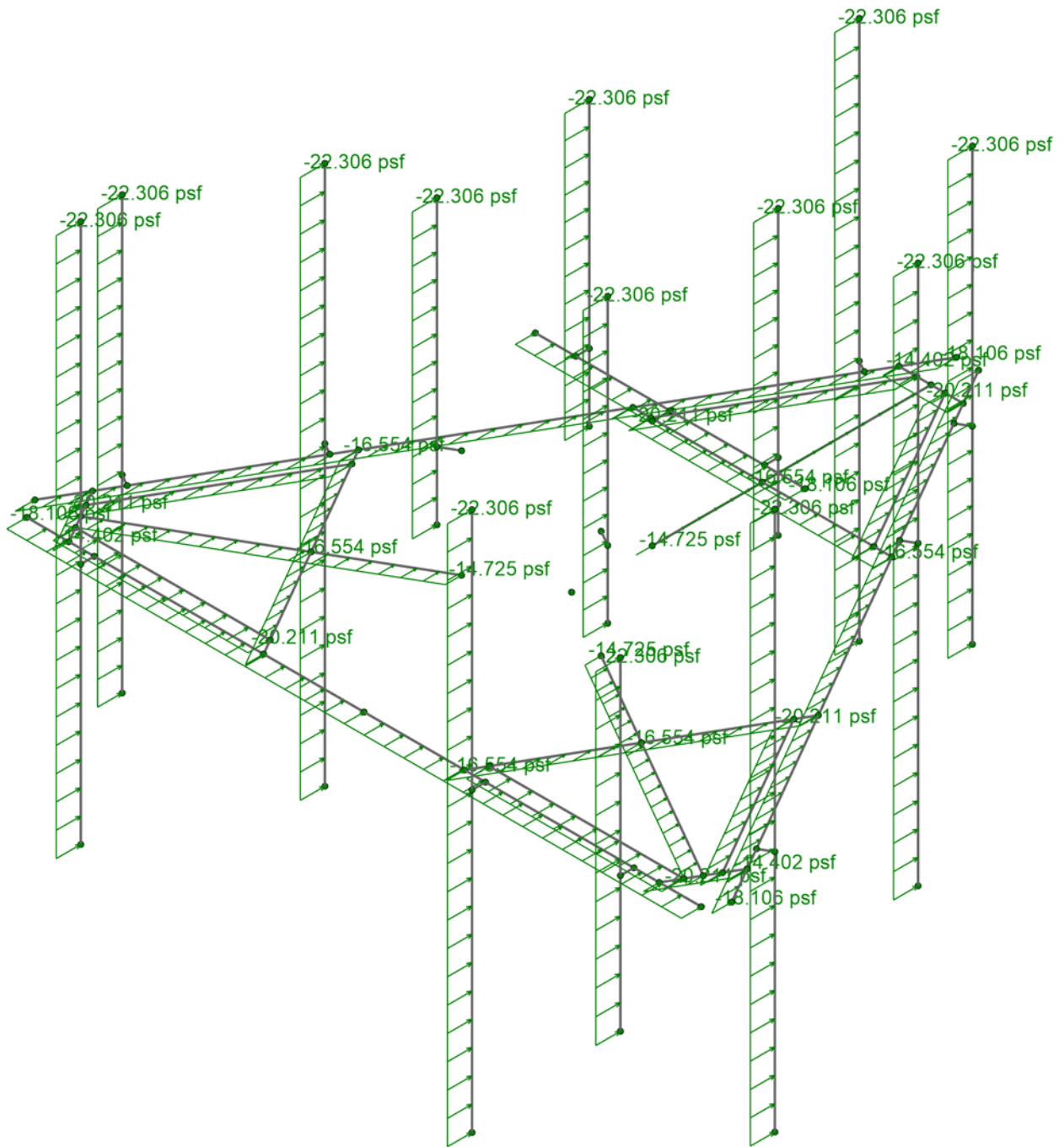
827050_loaded.r3d



827050_loaded.r3d



827050_loaded.r3d



Loads: BLC 29, Distr. Ice Wind Load Z

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AG

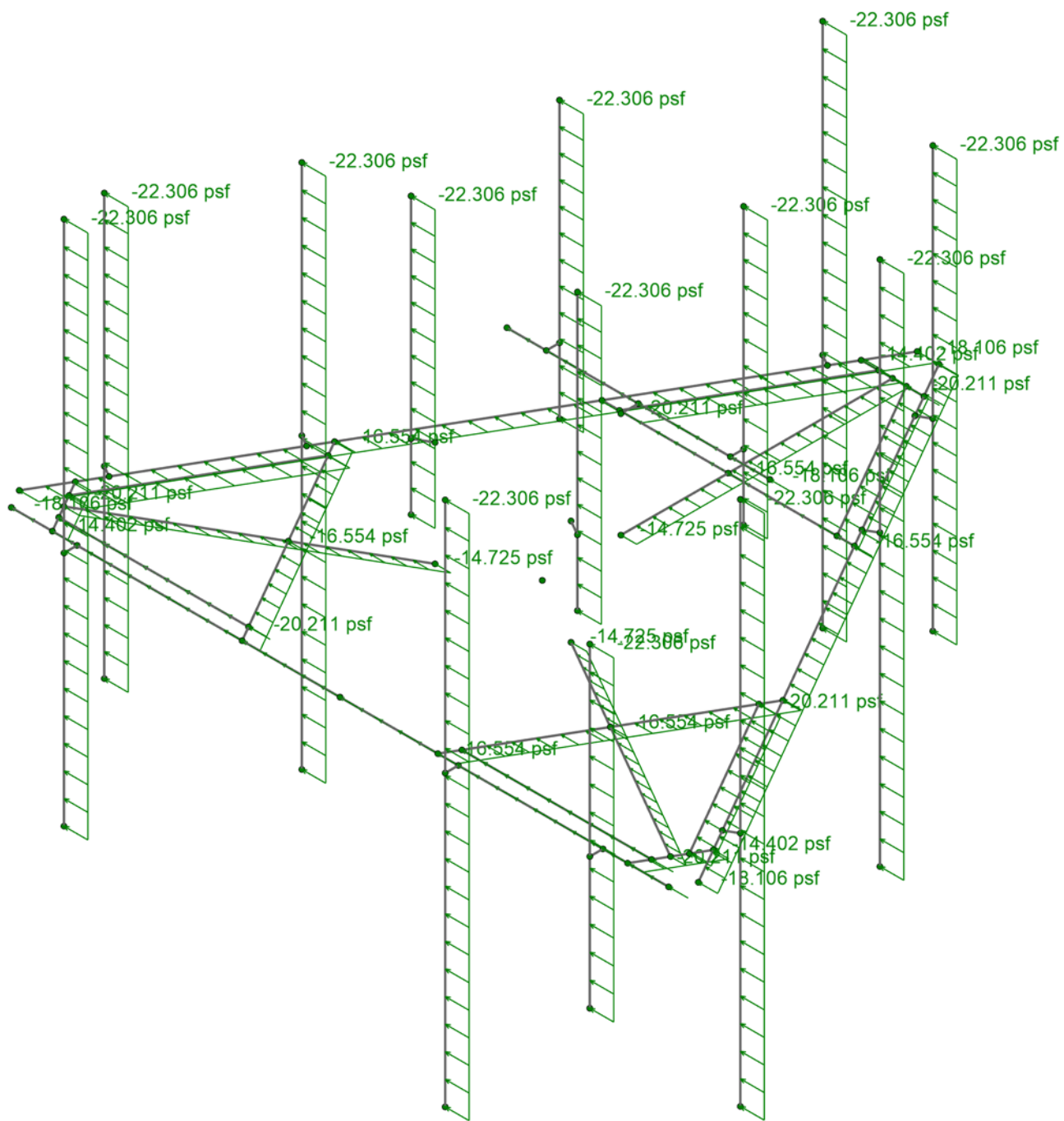
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827050

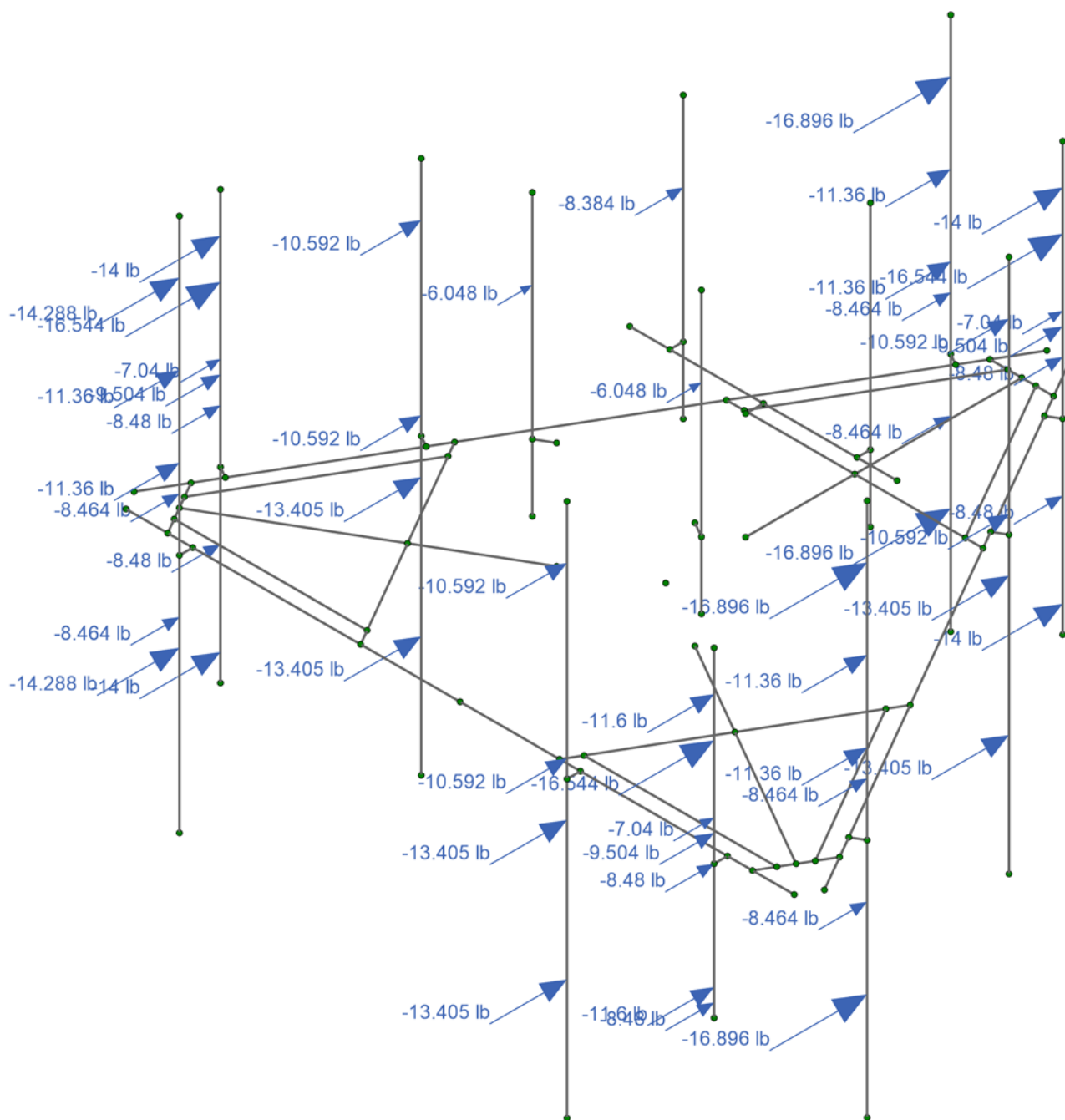
Dist. Ice Wind Loading 0

Sep 13, 2021

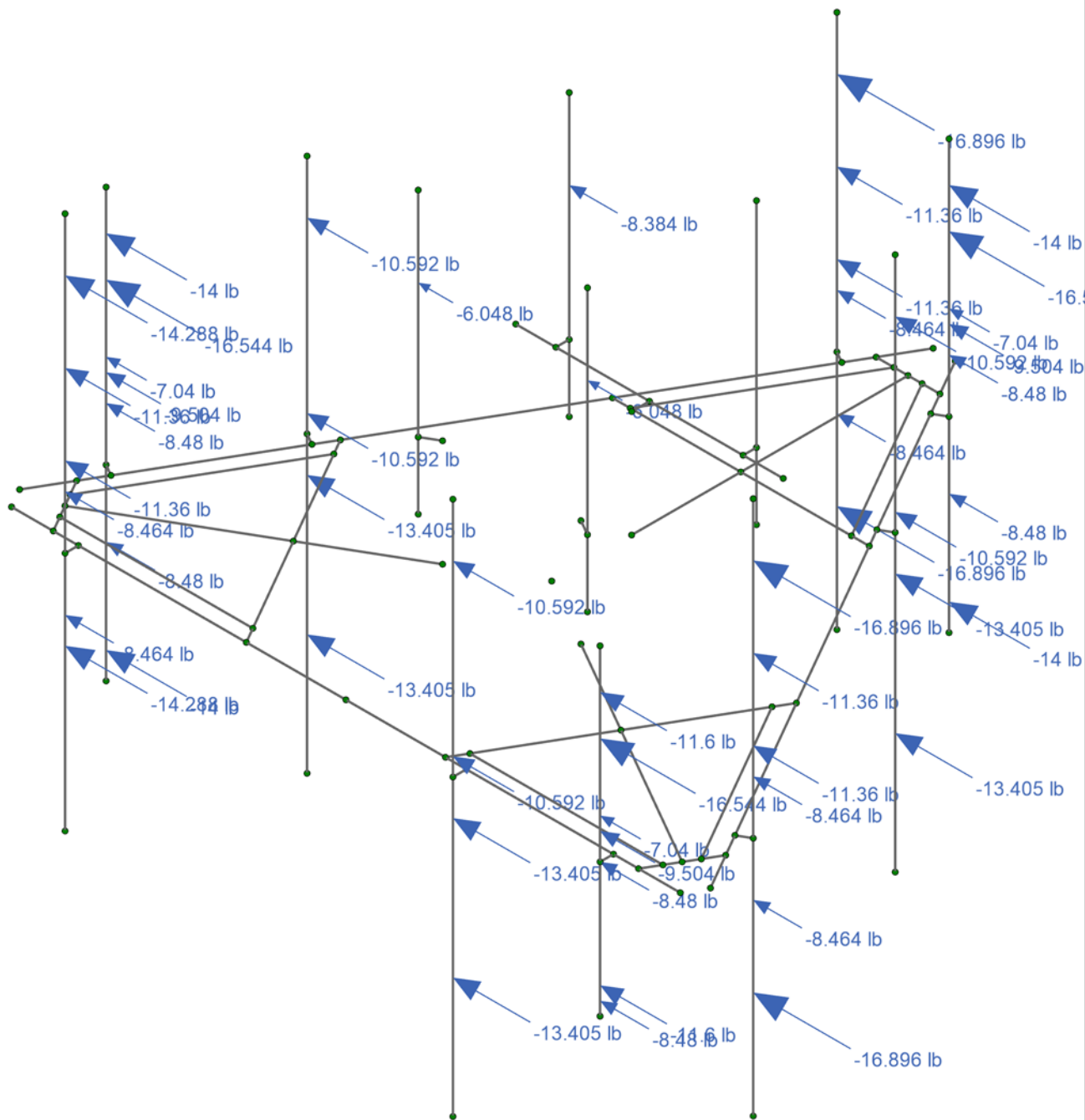
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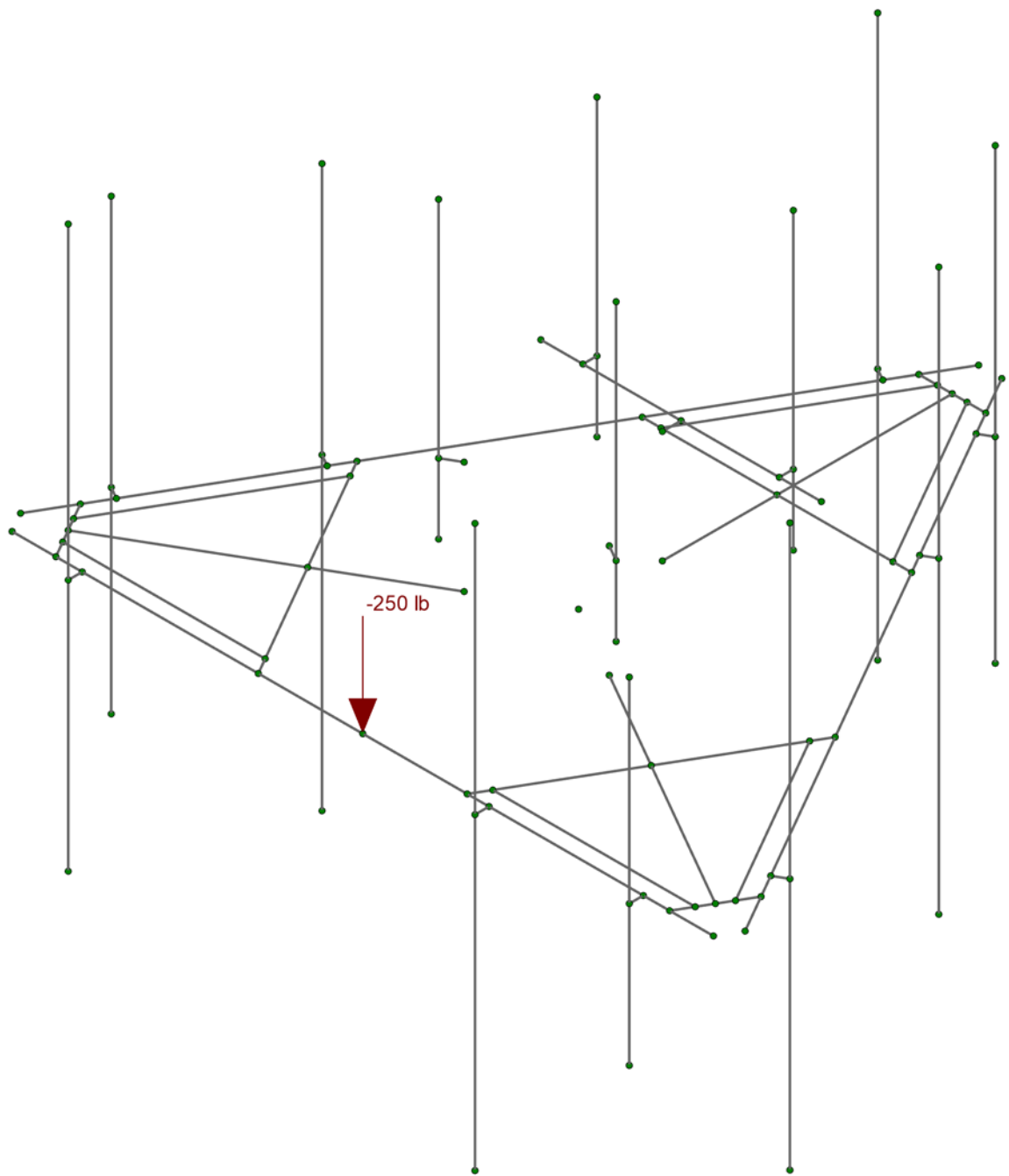
827050_loaded.r3d



827050_loaded.r3d



827050_loaded.r3d



Loads: BLC 33, Service Live Loads

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AG

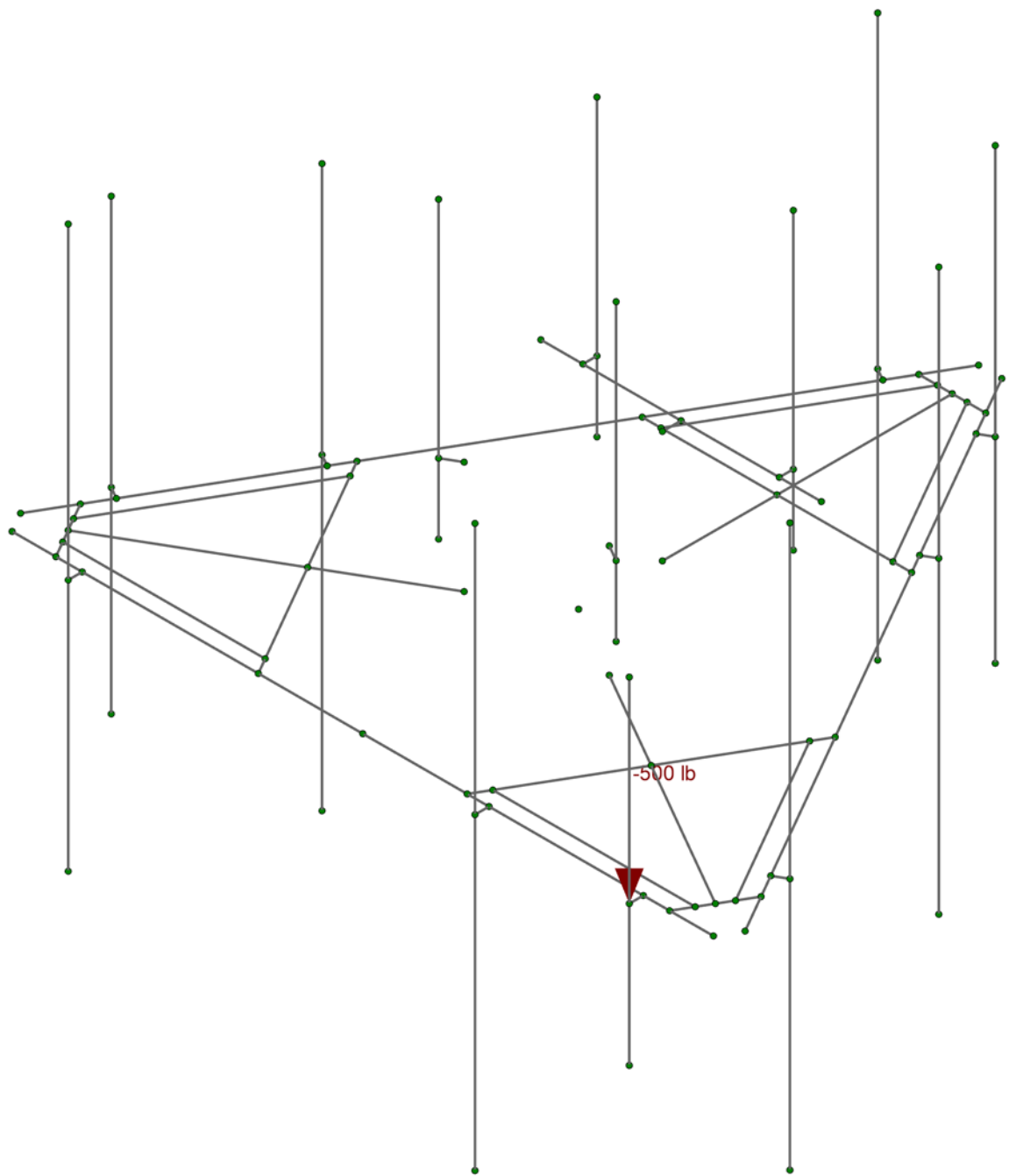
1039-Z0001-B

827050

Service Load

Sep 13, 2021

827050_loaded.r3d



Loads: BLC 34, Maintenance Load 1

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AG

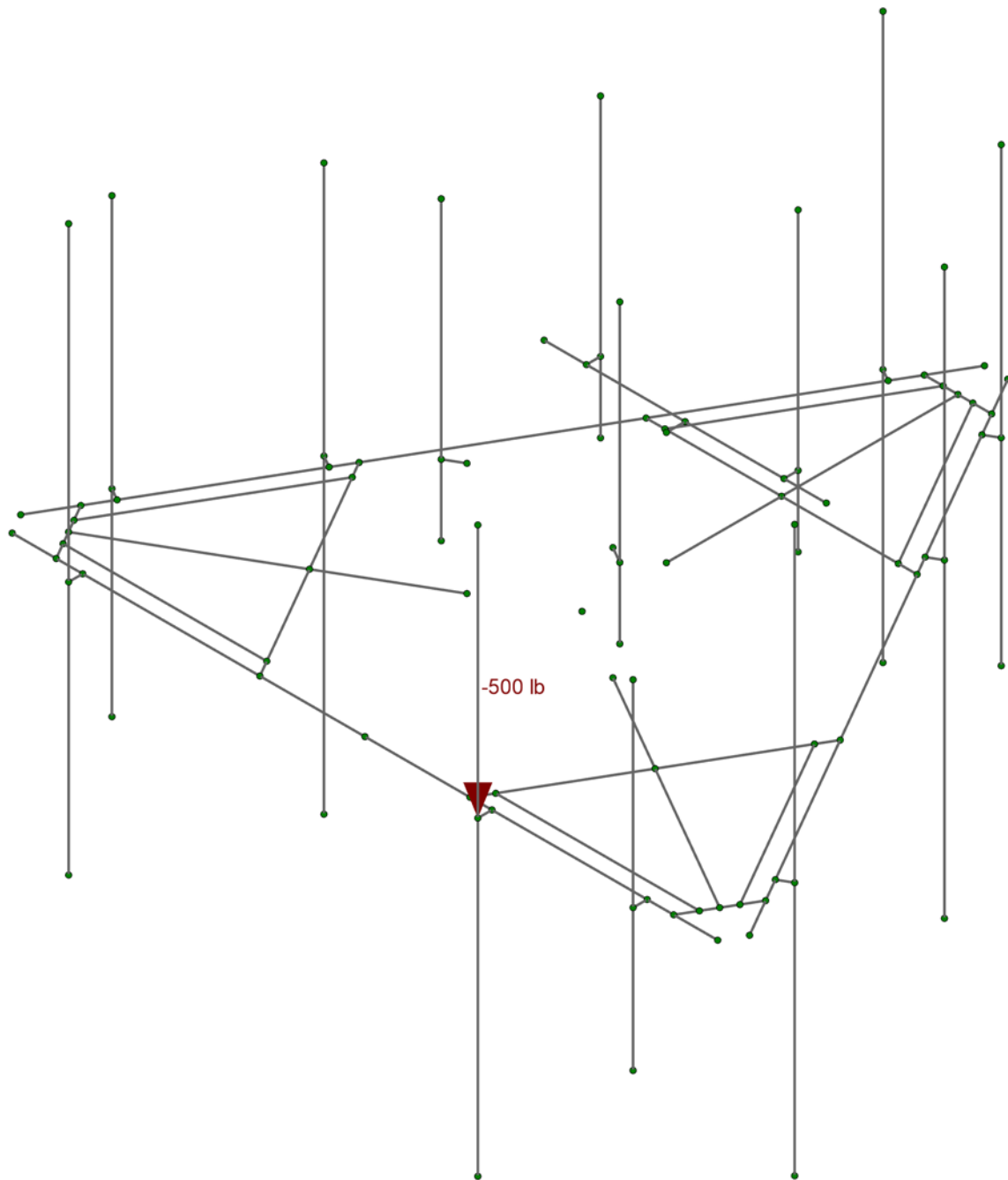
1039-Z0001-B

827050

Maintenance Load 1

Sep 13, 2021

827050_loaded.r3d



Loads: BLC 35, Maintenance Load 2

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AG

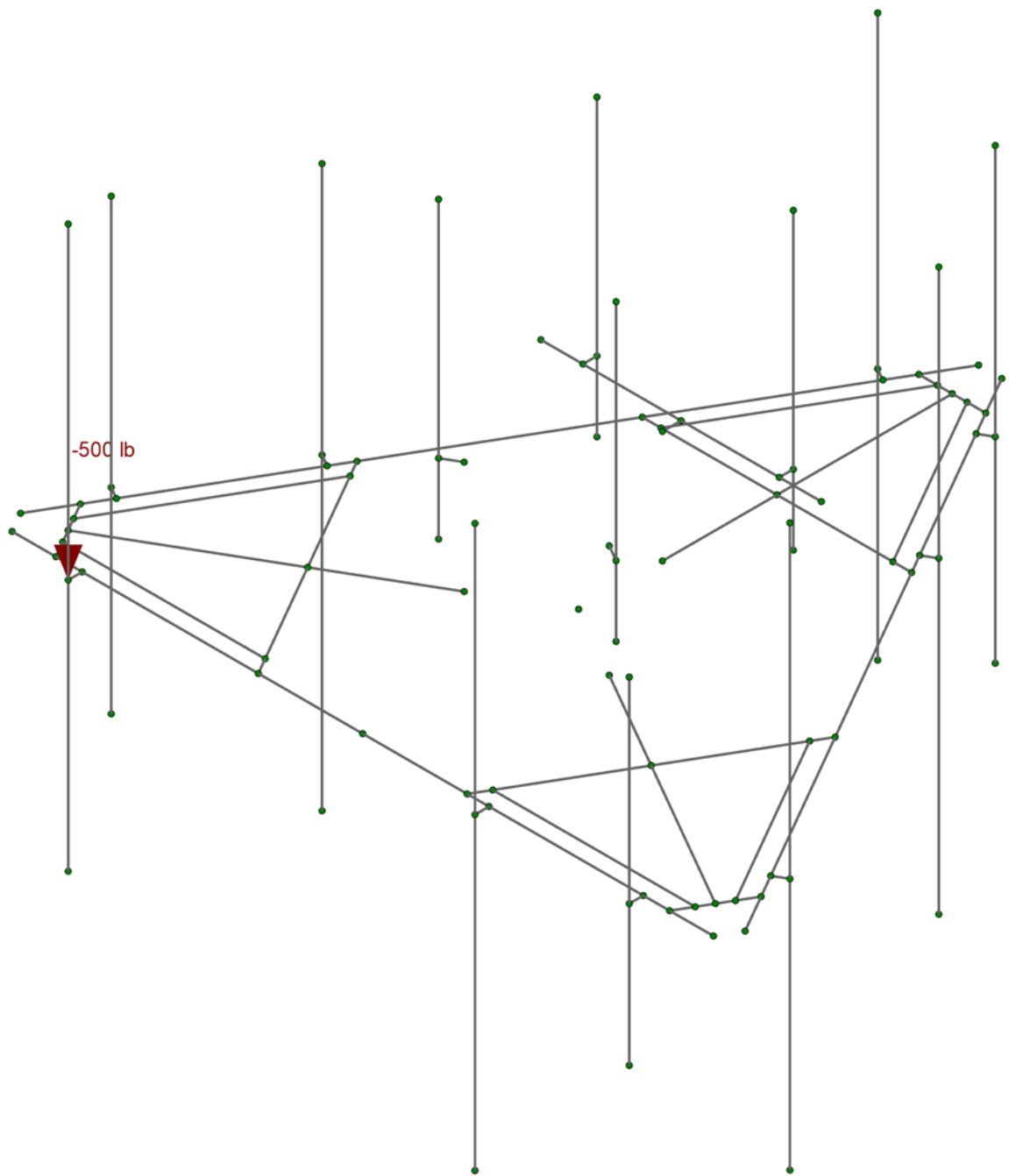
1039-Z0001-B

827050

Maintenance Load 2

Sep 13, 2021

827050_loaded.r3d



Loads: BLC 36, Maintenance Load 3

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AG

1039-Z0001-B

827050

Maintenance Load 3

Sep 13, 2021

827050_loaded.r3d

APPENDIX B
SOFTWARE INPUT CALCULATIONS

Program Inputs

PROJECT INFORMATION		
Client:	Crown Castle	
Carrier:	AT&T Mobility	
Engineer:	Andrew Gloriani	

SITE INFORMATION		
Risk Category:	II	
Exposure Category:	C	
Topo Factor Procedure:	Method 1, Category 1	
Site Class:	D - Stiff Soil (Assumed)	
Ground Elevation:	97.46	ft *Rev H

MOUNT INFORMATION		
Mount Type:	Platform	
Num Sectors:	3	
Centerline AGL:	102.00	ft
Tower Height AGL:	147.50	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):	0.996	*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	

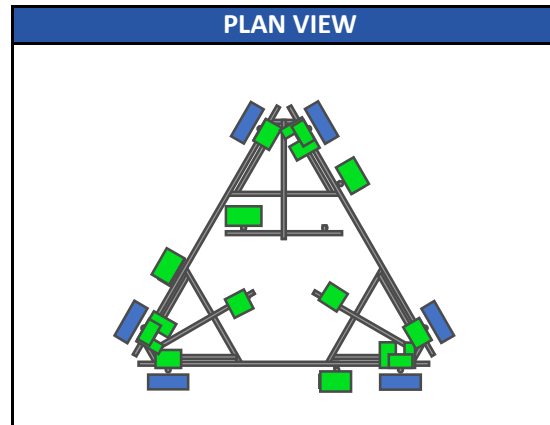
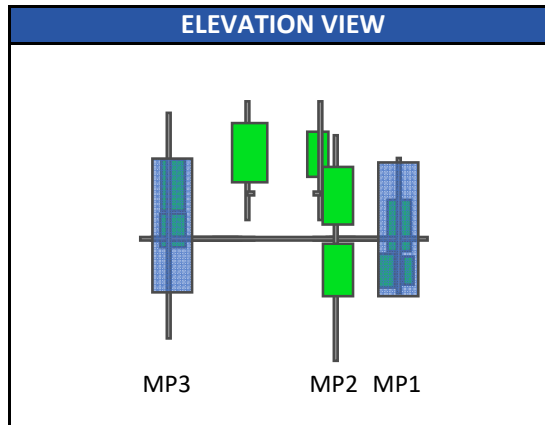
WIND AND ICE DATA		
Ultimate Wind (V_{ult}):	118	mph
Design Wind (V):	N/A	mph
Ice Wind (V_{ice}):	50	mph
Base Ice Thickness (t_i):	1.5	in
Flat Pressure:	85.771	psf
Round Pressure:	51.462	psf
Ice Wind Pressure:	9.240	psf

SEISMIC DATA		
Short-Period Accel. (S_s):	0.200	g
1-Second Accel. (S_1):	0.055	g
Short-Period Design (S_{DS}):	0.213	
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 Load Calculator V2.1.6

Program Inputs



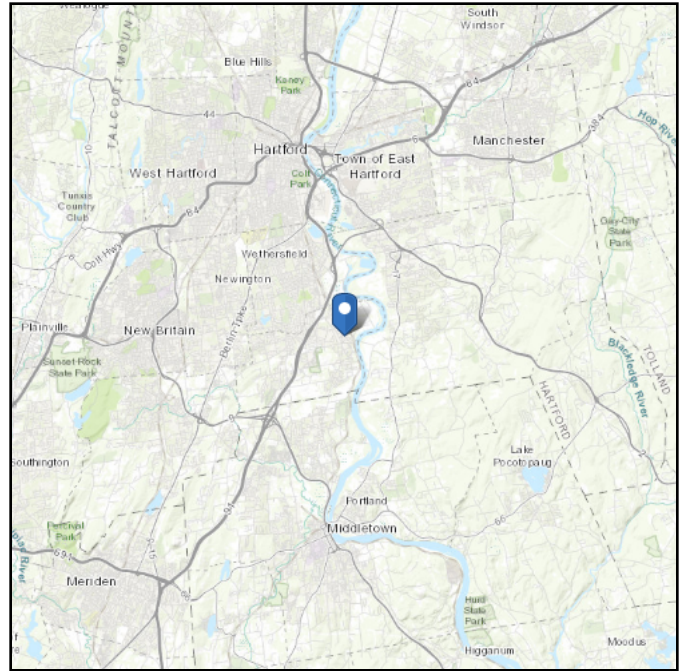
APPURTENANCE INFORMATION												
Appurtenance Name	Elevation	Qty.	K _a	q _z (psf)	EPA _N (ft ²)	EPA _T (ft ²)	Wind F _z (lbs)	Wind F _x (lbs)	Weight (lbs)	Seismic F (lbs)	Member (α sector)	
CCI ANTENNAS DMP65R-BU6D	105.0	1	0.90	43.15	11.93	4.48	463.28	173.97	89.30	28.58	MP3	
CCI ANTENNAS DMP65R-BU8D	105.0	2	0.90	43.15	15.86	5.95	615.89	231.06	105.60	33.79	Leg/Flush	
CCI ANTENNAS TPA65R-BU6D	105.0	1	0.90	43.15	12.22	4.54	474.54	176.30	72.50	23.20	MP1	
CCI ANTENNAS TPA65R-BU8D	105.0	2	0.90	43.15	15.91	5.97	617.83	231.83	87.50	28.00	Leg/Flush	
ERICSSON AIR 6419 B77G	105.0	3	0.90	43.15	3.67	1.65	142.46	64.19	66.20	21.18	MP2	
ERICSSON AIR 6449 N77	105.0	3	0.90	43.15	4.05	2.73	157.31	106.14	83.78	26.81	MP2	
ERICSSON RADIO 4478 B14	105.0	3	0.90	43.15	2.02	1.25	78.49	48.38	59.40	19.01	MP1	
ERICSSON TME-RRUS 32 B30	105.0	3	0.90	43.15	2.73	1.67	106.07	64.78	52.90	16.93	MP3	
ERICSSON TME-RRUS 32 B66	105.0	3	0.90	43.15	2.74	1.67	106.51	64.78	53.00	16.96	MP1	
ERICSSON RRUS 4415 B25	105.0	3	0.90	43.15	1.64	0.68	63.86	26.36	44.00	14.08	MP1	
ERICSSON RRUS 4449 B5/B12	105.0	3	0.90	43.15	1.97	1.41	76.40	54.68	71.00	22.72	MP3	
RAYCAP DC6-48-60-18-8F	105.0	2	0.90	43.15	0.92	0.92	35.60	35.60	18.90	6.05	M29	
RAYCAP TME-DC9-48-60-24-8C-EV	105.0	1	0.90	43.15	4.78	2.74	185.81	106.27	26.20	8.38	M32	

ASCE 7 Hazards Report

Address:
No Address at This
Location

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

Elevation: 97.46 ft (NAVD 88)
Latitude: 41.668269
Longitude: -72.638036



Wind

Results:

Wind Speed:	118 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	90 Vmph
100-year MRI	98 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 Sep 13 2021

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).

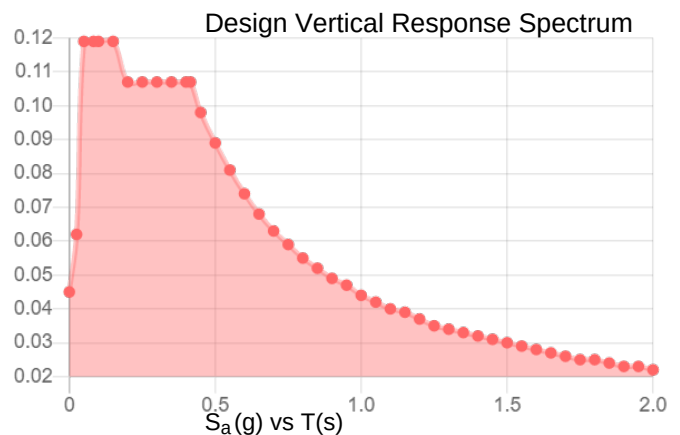
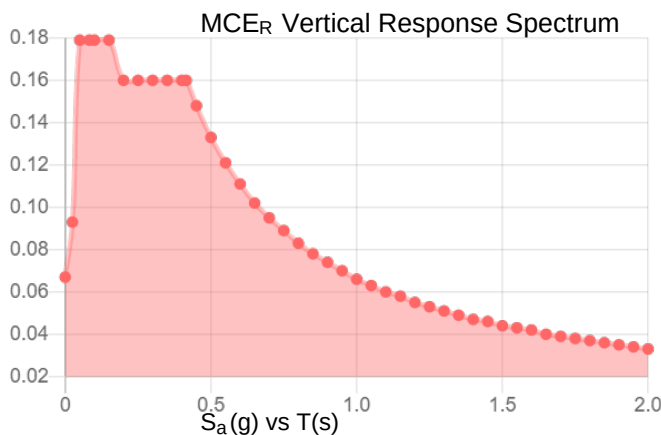
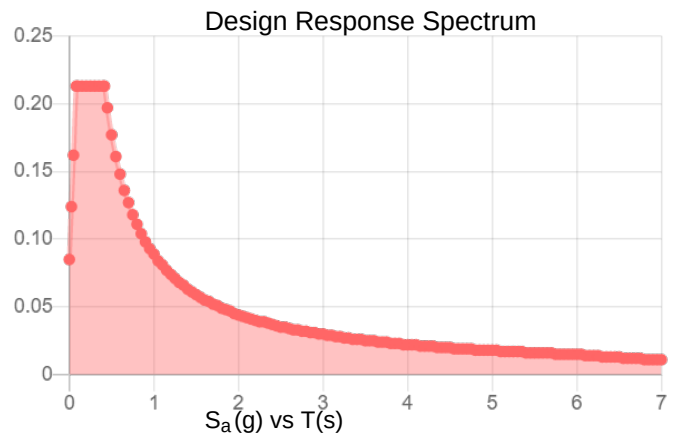
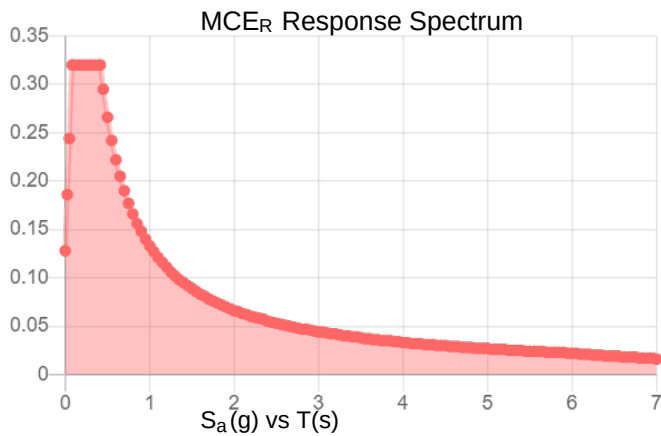
Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

Site Soil Class: D - Stiff Soil

Results:

S_S :	0.2	S_{D1} :	0.089
S_1 :	0.055	T_L :	6
F_a :	1.6	PGA :	0.11
F_v :	2.4	PGA _M :	0.173
S_{MS} :	0.32	F_{PGA} :	1.581
S_{M1} :	0.133	I_e :	1
S_{DS} :	0.213	C_v :	0.7

Seismic Design Category B



Data Accessed:

Mon Sep 13 2021

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: 1.50 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 Sep 13 2021

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.

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided "as is" and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE 7 standard.

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APPENDIX C
SOFTWARE ANALYSIS OUTPUT

Member Primary Data

	Label	I Node	J Node	Section/Shape	Type	Design List	Material	Design Rule
1	M1	N2	N4	Standoff	Beam	Tube	A500 Gr.B Rect	Typical
2	M2	N6	N5	Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
3	M3	N9	N8	Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
4	M4	N11	N10	Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
5	M5	N13	N12	RIGID	None	None	RIGID	Typical
6	MP1	N14	N1	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
7	M7	N15	N16	Corner Plate	Beam	RECT	A36 Gr.36	Typical
8	M8	N17	N18	Corner Plate	Beam	RECT	A36 Gr.36	Typical
9	M9	N19	N20	Corner Plate	Beam	RECT	A36 Gr.36	Typical
10	M10	N22	N23	RHH Horizontal	Beam	Pipe	A53 Gr.B	Typical
11	M11	N7	N27	HSS Support	Beam	Tube	A500 Gr.B Rect	Typical
12	M12	N27	N26	HSS Support	Beam	Tube	A500 Gr.B Rect	Typical
13	M13	N24	N28	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
14	M14	N29	N25	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
15	M15	N31	N30	Standoff	Beam	Tube	A500 Gr.B Rect	Typical
16	M16	N33	N32	HSS Support	Beam	Tube	A500 Gr.B Rect	Typical
17	M17	N34	N35	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
18	M18	N36	N37	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
19	M19	N32	N38	HSS Support	Beam	Tube	A500 Gr.B Rect	Typical
20	M20	N40	N39	Standoff	Beam	Tube	A500 Gr.B Rect	Typical
21	M21	N42	N41	HSS Support	Beam	Tube	A500 Gr.B Rect	Typical
22	M22	N43	N44	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
23	M23	N45	N46	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
24	M24	N41	N47	HSS Support	Beam	Tube	A500 Gr.B Rect	Typical
25	M25	N48	N49	RIGID	None	None	RIGID	Typical
26	M26	N50	N51	RIGID	None	None	RIGID	Typical
27	M27	N52	N53	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
28	M28	N54	N55	RIGID	None	None	RIGID	Typical
29	M29	N56	N57	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
30	M30	N58	N59	RIGID	None	None	RIGID	Typical
31	M31	N60	N61	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
32	M32	N64	N65	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
33	M33	N62	N63	RIGID	None	None	RIGID	Typical
34	MP2	N69	N66	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
35	M35	N68	N67	RIGID	None	None	RIGID	Typical
36	MP3	N73	N70	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
37	M37	N72	N71	RIGID	None	None	RIGID	Typical
38	MP9	N74	N79	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
39	M39	N83	N78	RIGID	None	None	RIGID	Typical
40	M40	N84	N76	RIGID	None	None	RIGID	Typical
41	MP7	N77	N75	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
42	MP8	N80	N82	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
43	M43	N85	N81	RIGID	None	None	RIGID	Typical
44	MP6	N86	N91	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
45	M45	N95	N90	RIGID	None	None	RIGID	Typical
46	M46	N96	N88	RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Section/Shape	Type	Design List	Material	Design Rule
47	MP4	N89	N87	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
48	MP5	N92	N94	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
49	M49	N97	N93	RIGID	None	None	RIGID	Typical

Member Advanced Data

	Label	Physical	Deflection Ratio Options	Seismic DR
1	M1	Yes	N/A	None
2	M2	Yes	N/A	None
3	M3	Yes	N/A	None
4	M4	Yes	N/A	None
5	M5	Yes	** NA **	None
6	MP1	Yes	** NA **	None
7	M7	Yes	N/A	None
8	M8	Yes	N/A	None
9	M9	Yes	N/A	None
10	M10	Yes	Default	None
11	M11	Yes	Default	None
12	M12	Yes	Default	None
13	M13	Yes	Default	None
14	M14	Yes	Default	None
15	M15	Yes	N/A	None
16	M16	Yes	Default	None
17	M17	Yes	Default	None
18	M18	Yes	Default	None
19	M19	Yes	Default	None
20	M20	Yes	N/A	None
21	M21	Yes	Default	None
22	M22	Yes	Default	None
23	M23	Yes	Default	None
24	M24	Yes	Default	None
25	M25	Yes	** NA **	None
26	M26	Yes	** NA **	None
27	M27	Yes	** NA **	None
28	M28	Yes	** NA **	None
29	M29	Yes	** NA **	None
30	M30	Yes	** NA **	None
31	M31	Yes	** NA **	None
32	M32	Yes	** NA **	None
33	M33	Yes	** NA **	None
34	MP2	Yes	** NA **	None
35	M35	Yes	** NA **	None
36	MP3	Yes	** NA **	None
37	M37	Yes	** NA **	None
38	MP9	Yes	** NA **	None
39	M39	Yes	** NA **	None
40	M40	Yes	** NA **	None

Member Advanced Data (Continued)

	Label	Physical	Deflection Ratio Options	Seismic DR
41	MP7	Yes	** NA **	None
42	MP8	Yes	** NA **	None
43	M43	Yes	** NA **	None
44	MP6	Yes	** NA **	None
45	M45	Yes	** NA **	None
46	M46	Yes	** NA **	None
47	MP4	Yes	** NA **	None
48	MP5	Yes	** NA **	None
49	M49	Yes	** NA **	None

Node Boundary Conditions

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
1	N2	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N31	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N40	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
4	N48	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
5	N50	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
6	N54	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Material Take-Off

	Material	Size	Pieces	Length[in]	Weight[LB]
1	General Members				
2	RIGID		14	45	0
3	Total General		14	45	0
4					
5	Hot Rolled Steel				
6	A36 Gr.36	6x0.375	3	42.9	27.392
7	A36 Gr.36	L2x2x2	6	259.8	36.173
8	A500 Gr.B Rect	HSS3X3X3	6	172.8	99.624
9	A500 Gr.B Rect	HSS4X4X3	3	186	146.352
10	A53 Gr.B	PIPE 2.0	13	1236	357.496
11	A53 Gr.B	PIPE 3.0	4	510	299.359
12	Total HR Steel		35	2407.6	966.397

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Nodal	Point	Distributed	Area(Member)
1	Self Weight	DL		-1			60		3
2	Wind Load AZI 0	WLZ					120		
3	Wind Load AZI 30	None					120		
4	Wind Load AZI 60	None					120		
5	Wind Load AZI 90	WLX					120		
6	Wind Load AZI 120	None					120		
7	Wind Load AZI 150	None					120		

Basic Load Cases (Continued)

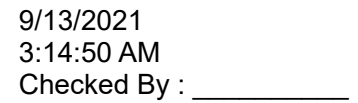
	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Nodal	Point	Distributed Area(Member)	
8	Wind Load AZI 180	None					120		
9	Wind Load AZI 210	None					120		
10	Wind Load AZI 240	None					120		
11	Wind Load AZI 270	None					120		
12	Wind Load AZI 300	None					120		
13	Wind Load AZI 330	None					120		
14	Distr. Wind Load Z	WLZ						49	
15	Distr. Wind Load X	WLX						49	
16	Ice Weight	OL1					60	49	3
17	Ice Wind Load AZI 0	OL2					120		
18	Ice Wind Load AZI 30	None					120		
19	Ice Wind Load AZI 60	None					120		
20	Ice Wind Load AZI 90	OL3					120		
21	Ice Wind Load AZI 120	None					120		
22	Ice Wind Load AZI 150	None					120		
23	Ice Wind Load AZI 180	None					120		
24	Ice Wind Load AZI 210	None					120		
25	Ice Wind Load AZI 240	None					120		
26	Ice Wind Load AZI 270	None					120		
27	Ice Wind Load AZI 300	None					120		
28	Ice Wind Load AZI 330	None					120		
29	Distr. Ice Wind Load Z	OL2						49	
30	Distr. Ice Wind Load X	OL3						49	
31	Seismic Load Z	ELZ			-0.32		60		
32	Seismic Load X	ELX	-0.32				60		
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			
43	BLC 1 Transient Area Loads	None						45	
44	BLC 16 Transient Area Loads	None						45	

Load Combinations

	Description	Solve	P-Delta	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor
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	0.866	15	0.5			
4	1.2DL + 1WL AZI 60	Yes	Y	1	1.2	4	1	14	0.5	15	0.866			
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	-0.5	15	0.866			

Load Combinations (Continued)

	Description	Solve	P-Delta	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor
7	1.2DL + 1WL AZI 150	Yes	Y	1	1.2	7	1	14	-0.866	15	0.5			
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	-0.866	15	-0.5			
10	1.2DL + 1WL AZI 240	Yes	Y	1	1.2	10	1	14	-0.5	15	-0.866			
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	0.5	15	-0.866			
13	1.2DL + 1WL AZI 330	Yes	Y	1	1.2	13	1	14	0.866	15	-0.5			
14	0.9DL + 1WL AZI 0	Yes	Y	1	0.9	2	1	14	1	15				
15	0.9DL + 1WL AZI 30	Yes	Y	1	0.9	3	1	14	0.866	15	0.5			
16	0.9DL + 1WL AZI 60	Yes	Y	1	0.9	4	1	14	0.5	15	0.866			
17	0.9DL + 1WL AZI 90	Yes	Y	1	0.9	5	1	14		15	1			
18	0.9DL + 1WL AZI 120	Yes	Y	1	0.9	6	1	14	-0.5	15	0.866			
19	0.9DL + 1WL AZI 150	Yes	Y	1	0.9	7	1	14	-0.866	15	0.5			
20	0.9DL + 1WL AZI 180	Yes	Y	1	0.9	8	1	14	-1	15				
21	0.9DL + 1WL AZI 210	Yes	Y	1	0.9	9	1	14	-0.866	15	-0.5			
22	0.9DL + 1WL AZI 240	Yes	Y	1	0.9	10	1	14	-0.5	15	-0.866			
23	0.9DL + 1WL AZI 270	Yes	Y	1	0.9	11	1	14		15	-1			
24	0.9DL + 1WL AZI 300	Yes	Y	1	0.9	12	1	14	0.5	15	-0.866			
25	0.9DL + 1WL AZI 330	Yes	Y	1	0.9	13	1	14	0.866	15	-0.5			
26	1.2D + 1.0Di	Yes	Y	1	1.2	16	1							
27	1.2D + 1.0Di + 1.0Wi AZI 0	Yes	Y	1	1.2	16	1	17	1	29	1	30		
28	1.2D + 1.0Di + 1.0Wi AZI 30	Yes	Y	1	1.2	16	1	18	1	29	0.866	30	0.5	
29	1.2D + 1.0Di + 1.0Wi AZI 60	Yes	Y	1	1.2	16	1	19	1	29	0.5	30	0.866	
30	1.2D + 1.0Di + 1.0Wi AZI 90	Yes	Y	1	1.2	16	1	20	1	29		30	1	
31	1.2D + 1.0Di + 1.0Wi AZI 120	Yes	Y	1	1.2	16	1	21	1	29	-0.5	30	0.866	
32	1.2D + 1.0Di + 1.0Wi AZI 150	Yes	Y	1	1.2	16	1	22	1	29	-0.866	30	0.5	
33	1.2D + 1.0Di + 1.0Wi AZI 180	Yes	Y	1	1.2	16	1	23	1	29	-1	30		
34	1.2D + 1.0Di + 1.0Wi AZI 210	Yes	Y	1	1.2	16	1	24	1	29	-0.866	30	-0.5	
35	1.2D + 1.0Di + 1.0Wi AZI 240	Yes	Y	1	1.2	16	1	25	1	29	-0.5	30	-0.866	
36	1.2D + 1.0Di + 1.0Wi AZI 270	Yes	Y	1	1.2	16	1	26	1	29		30	-1	
37	1.2D + 1.0Di + 1.0Wi AZI 300	Yes	Y	1	1.2	16	1	27	1	29	0.5	30	-0.866	
38	1.2D + 1.0Di + 1.0Wi AZI 330	Yes	Y	1	1.2	16	1	28	1	29	0.866	30	-0.5	
39	(1.2 + 0.2Sds)DL + 1.0E AZI 0	Yes	Y	1	1.243	31	1	32						
40	(1.2 + 0.2Sds)DL + 1.0E AZI 30	Yes	Y	1	1.243	31	0.866	32	0.5					
41	(1.2 + 0.2Sds)DL + 1.0E AZI 60	Yes	Y	1	1.243	31	0.5	32	0.866					
42	(1.2 + 0.2Sds)DL + 1.0E AZI 90	Yes	Y	1	1.243	31		32	1					
43	(1.2 + 0.2Sds)DL + 1.0E AZI 120	Yes	Y	1	1.243	31	-0.5	32	0.866					
44	(1.2 + 0.2Sds)DL + 1.0E AZI 150	Yes	Y	1	1.243	31	-0.866	32	0.5					
45	(1.2 + 0.2Sds)DL + 1.0E AZI 180	Yes	Y	1	1.243	31	-1	32						
46	(1.2 + 0.2Sds)DL + 1.0E AZI 210	Yes	Y	1	1.243	31	-0.866	32	-0.5					
47	(1.2 + 0.2Sds)DL + 1.0E AZI 240	Yes	Y	1	1.243	31	-0.5	32	-0.866					
48	(1.2 + 0.2Sds)DL + 1.0E AZI 270	Yes	Y	1	1.243	31		32	-1					
49	(1.2 + 0.2Sds)DL + 1.0E AZI 300	Yes	Y	1	1.243	31	0.5	32	-0.866					
50	(1.2 + 0.2Sds)DL + 1.0E AZI 330	Yes	Y	1	1.243	31	0.866	32	-0.5					
51	(0.9 - 0.2Sds)DL + 1.0E AZI 0	Yes	Y	1	0.857	31	1	32						
52	(0.9 - 0.2Sds)DL + 1.0E AZI 30	Yes	Y	1	0.857	31	0.866	32	0.5					



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Load Combinations (Continued)

	Description	Solve	P-Delta	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor
99	1.2DL + 1.5LM-MP2 + 1SWL (30 mph) AZI 330	Yes	Y	1	1.2	35	1.5	13	0.065	14	0.056	15	-0.032
100	1.2DL + 1.5LM-MP3 + 1SWL (30 mph) AZI 0	Yes	Y	1	1.2	36	1.5	2	0.065	14	0.065	15	
101	1.2DL + 1.5LM-MP3 + 1SWL (30 mph) AZI 30	Yes	Y	1	1.2	36	1.5	3	0.065	14	0.056	15	0.032
102	1.2DL + 1.5LM-MP3 + 1SWL (30 mph) AZI 60	Yes	Y	1	1.2	36	1.5	4	0.065	14	0.032	15	0.056
103	1.2DL + 1.5LM-MP3 + 1SWL (30 mph) AZI 90	Yes	Y	1	1.2	36	1.5	5	0.065	14		15	0.065
104	1.2DL + 1.5LM-MP3 + 1SWL (30 mph) AZI 120	Yes	Y	1	1.2	36	1.5	6	0.065	14	-0.032	15	0.056
105	1.2DL + 1.5LM-MP3 + 1SWL (30 mph) AZI 150	Yes	Y	1	1.2	36	1.5	7	0.065	14	-0.056	15	0.032
106	1.2DL + 1.5LM-MP3 + 1SWL (30 mph) AZI 180	Yes	Y	1	1.2	36	1.5	8	0.065	14	-0.065	15	
107	1.2DL + 1.5LM-MP3 + 1SWL (30 mph) AZI 210	Yes	Y	1	1.2	36	1.5	9	0.065	14	-0.056	15	-0.032
108	1.2DL + 1.5LM-MP3 + 1SWL (30 mph) AZI 240	Yes	Y	1	1.2	36	1.5	10	0.065	14	-0.032	15	-0.056
109	1.2DL + 1.5LM-MP3 + 1SWL (30 mph) AZI 270	Yes	Y	1	1.2	36	1.5	11	0.065	14		15	-0.065
110	1.2DL + 1.5LM-MP3 + 1SWL (30 mph) AZI 300	Yes	Y	1	1.2	36	1.5	12	0.065	14	0.032	15	-0.056
111	1.2DL + 1.5LM-MP3 + 1SWL (30 mph) AZI 330	Yes	Y	1	1.2	36	1.5	13	0.065	14	0.056	15	-0.032
112	1.2DL + 1.5LM-MP4 + 1SWL (30 mph) AZI 0	Yes	Y	1	1.2	37	1.5	2	0.065	14	0.065	15	
113	1.2DL + 1.5LM-MP4 + 1SWL (30 mph) AZI 30	Yes	Y	1	1.2	37	1.5	3	0.065	14	0.056	15	0.032
114	1.2DL + 1.5LM-MP4 + 1SWL (30 mph) AZI 60	Yes	Y	1	1.2	37	1.5	4	0.065	14	0.032	15	0.056
115	1.2DL + 1.5LM-MP4 + 1SWL (30 mph) AZI 90	Yes	Y	1	1.2	37	1.5	5	0.065	14		15	0.065
116	1.2DL + 1.5LM-MP4 + 1SWL (30 mph) AZI 120	Yes	Y	1	1.2	37	1.5	6	0.065	14	-0.032	15	0.056
117	1.2DL + 1.5LM-MP4 + 1SWL (30 mph) AZI 150	Yes	Y	1	1.2	37	1.5	7	0.065	14	-0.056	15	0.032
118	1.2DL + 1.5LM-MP4 + 1SWL (30 mph) AZI 180	Yes	Y	1	1.2	37	1.5	8	0.065	14	-0.065	15	
119	1.2DL + 1.5LM-MP4 + 1SWL (30 mph) AZI 210	Yes	Y	1	1.2	37	1.5	9	0.065	14	-0.056	15	-0.032
120	1.2DL + 1.5LM-MP4 + 1SWL (30 mph) AZI 240	Yes	Y	1	1.2	37	1.5	10	0.065	14	-0.032	15	-0.056
121	1.2DL + 1.5LM-MP4 + 1SWL (30 mph) AZI 270	Yes	Y	1	1.2	37	1.5	11	0.065	14		15	-0.065
122	1.2DL + 1.5LM-MP4 + 1SWL (30 mph) AZI 300	Yes	Y	1	1.2	37	1.5	12	0.065	14	0.032	15	-0.056
123	1.2DL + 1.5LM-MP4 + 1SWL (30 mph) AZI 330	Yes	Y	1	1.2	37	1.5	13	0.065	14	0.056	15	-0.032
124	1.2DL + 1.5LM-MP5 + 1SWL (30 mph) AZI 0	Yes	Y	1	1.2	38	1.5	2	0.065	14	0.065	15	
125	1.2DL + 1.5LM-MP5 + 1SWL (30 mph) AZI 30	Yes	Y	1	1.2	38	1.5	3	0.065	14	0.056	15	0.032
126	1.2DL + 1.5LM-MP5 + 1SWL (30 mph) AZI 60	Yes	Y	1	1.2	38	1.5	4	0.065	14	0.032	15	0.056
127	1.2DL + 1.5LM-MP5 + 1SWL (30 mph) AZI 90	Yes	Y	1	1.2	38	1.5	5	0.065	14		15	0.065
128	1.2DL + 1.5LM-MP5 + 1SWL (30 mph) AZI 120	Yes	Y	1	1.2	38	1.5	6	0.065	14	-0.032	15	0.056
129	1.2DL + 1.5LM-MP5 + 1SWL (30 mph) AZI 150	Yes	Y	1	1.2	38	1.5	7	0.065	14	-0.056	15	0.032
130	1.2DL + 1.5LM-MP5 + 1SWL (30 mph) AZI 180	Yes	Y	1	1.2	38	1.5	8	0.065	14	-0.065	15	
131	1.2DL + 1.5LM-MP5 + 1SWL (30 mph) AZI 210	Yes	Y	1	1.2	38	1.5	9	0.065	14	-0.056	15	-0.032
132	1.2DL + 1.5LM-MP5 + 1SWL (30 mph) AZI 240	Yes	Y	1	1.2	38	1.5	10	0.065	14	-0.032	15	-0.056
133	1.2DL + 1.5LM-MP5 + 1SWL (30 mph) AZI 270	Yes	Y	1	1.2	38	1.5	11	0.065	14		15	-0.065
134	1.2DL + 1.5LM-MP5 + 1SWL (30 mph) AZI 300	Yes	Y	1	1.2	38	1.5	12	0.065	14	0.032	15	-0.056
135	1.2DL + 1.5LM-MP5 + 1SWL (30 mph) AZI 330	Yes	Y	1	1.2	38	1.5	13	0.065	14	0.056	15	-0.032
136	1.2DL + 1.5LM-MP6 + 1SWL (30 mph) AZI 0	Yes	Y	1	1.2	39	1.5	2	0.065	14	0.065	15	
137	1.2DL + 1.5LM-MP6 + 1SWL (30 mph) AZI 30	Yes	Y	1	1.2	39	1.5	3	0.065	14	0.056	15	0.032
138	1.2DL + 1.5LM-MP6 + 1SWL (30 mph) AZI 60	Yes	Y	1	1.2	39	1.5	4	0.065	14	0.032	15	0.056
139	1.2DL + 1.5LM-MP6 + 1SWL (30 mph) AZI 90	Yes	Y	1	1.2	39	1.5	5	0.065	14		15	0.065
140	1.2DL + 1.5LM-MP6 + 1SWL (30 mph) AZI 120	Yes	Y	1	1.2	39	1.5	6	0.065	14	-0.032	15	0.056
141	1.2DL + 1.5LM-MP6 + 1SWL (30 mph) AZI 150	Yes	Y	1	1.2	39	1.5	7	0.065	14	-0.056	15	0.032
142	1.2DL + 1.5LM-MP6 + 1SWL (30 mph) AZI 180	Yes	Y	1	1.2	39	1.5	8	0.065	14	-0.065	15	
143	1.2DL + 1.5LM-MP6 + 1SWL (30 mph) AZI 210	Yes	Y	1	1.2	39	1.5	9	0.065	14	-0.056	15	-0.032
144	1.2DL + 1.5LM-MP6 + 1SWL (30 mph) AZI 240	Yes	Y	1	1.2	39	1.5	10	0.065	14	-0.032	15	-0.056

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
145	1.2DL + 1.5LM-MP6 + 1SWL (30 mph) AZI 270	Yes	Y	1	1.2	39	1.5	11	0.065	14		15	-0.065
146	1.2DL + 1.5LM-MP6 + 1SWL (30 mph) AZI 300	Yes	Y	1	1.2	39	1.5	12	0.065	14	0.032	15	-0.056
147	1.2DL + 1.5LM-MP6 + 1SWL (30 mph) AZI 330	Yes	Y	1	1.2	39	1.5	13	0.065	14	0.056	15	-0.032
148	1.2DL + 1.5LM-MP7 + 1SWL (30 mph) AZI 0	Yes	Y	1	1.2	40	1.5	2	0.065	14	0.065	15	
149	1.2DL + 1.5LM-MP7 + 1SWL (30 mph) AZI 30	Yes	Y	1	1.2	40	1.5	3	0.065	14	0.056	15	0.032
150	1.2DL + 1.5LM-MP7 + 1SWL (30 mph) AZI 60	Yes	Y	1	1.2	40	1.5	4	0.065	14	0.032	15	0.056
151	1.2DL + 1.5LM-MP7 + 1SWL (30 mph) AZI 90	Yes	Y	1	1.2	40	1.5	5	0.065	14		15	0.065
152	1.2DL + 1.5LM-MP7 + 1SWL (30 mph) AZI 120	Yes	Y	1	1.2	40	1.5	6	0.065	14	-0.032	15	0.056
153	1.2DL + 1.5LM-MP7 + 1SWL (30 mph) AZI 150	Yes	Y	1	1.2	40	1.5	7	0.065	14	-0.056	15	0.032
154	1.2DL + 1.5LM-MP7 + 1SWL (30 mph) AZI 180	Yes	Y	1	1.2	40	1.5	8	0.065	14	-0.065	15	
155	1.2DL + 1.5LM-MP7 + 1SWL (30 mph) AZI 210	Yes	Y	1	1.2	40	1.5	9	0.065	14	-0.056	15	-0.032
156	1.2DL + 1.5LM-MP7 + 1SWL (30 mph) AZI 240	Yes	Y	1	1.2	40	1.5	10	0.065	14	-0.032	15	-0.056
157	1.2DL + 1.5LM-MP7 + 1SWL (30 mph) AZI 270	Yes	Y	1	1.2	40	1.5	11	0.065	14		15	-0.065
158	1.2DL + 1.5LM-MP7 + 1SWL (30 mph) AZI 300	Yes	Y	1	1.2	40	1.5	12	0.065	14	0.032	15	-0.056
159	1.2DL + 1.5LM-MP7 + 1SWL (30 mph) AZI 330	Yes	Y	1	1.2	40	1.5	13	0.065	14	0.056	15	-0.032
160	1.2DL + 1.5LM-MP8 + 1SWL (30 mph) AZI 0	Yes	Y	1	1.2	41	1.5	2	0.065	14	0.065	15	
161	1.2DL + 1.5LM-MP8 + 1SWL (30 mph) AZI 30	Yes	Y	1	1.2	41	1.5	3	0.065	14	0.056	15	0.032
162	1.2DL + 1.5LM-MP8 + 1SWL (30 mph) AZI 60	Yes	Y	1	1.2	41	1.5	4	0.065	14	0.032	15	0.056
163	1.2DL + 1.5LM-MP8 + 1SWL (30 mph) AZI 90	Yes	Y	1	1.2	41	1.5	5	0.065	14		15	0.065
164	1.2DL + 1.5LM-MP8 + 1SWL (30 mph) AZI 120	Yes	Y	1	1.2	41	1.5	6	0.065	14	-0.032	15	0.056
165	1.2DL + 1.5LM-MP8 + 1SWL (30 mph) AZI 150	Yes	Y	1	1.2	41	1.5	7	0.065	14	-0.056	15	0.032
166	1.2DL + 1.5LM-MP8 + 1SWL (30 mph) AZI 180	Yes	Y	1	1.2	41	1.5	8	0.065	14	-0.065	15	
167	1.2DL + 1.5LM-MP8 + 1SWL (30 mph) AZI 210	Yes	Y	1	1.2	41	1.5	9	0.065	14	-0.056	15	-0.032
168	1.2DL + 1.5LM-MP8 + 1SWL (30 mph) AZI 240	Yes	Y	1	1.2	41	1.5	10	0.065	14	-0.032	15	-0.056
169	1.2DL + 1.5LM-MP8 + 1SWL (30 mph) AZI 270	Yes	Y	1	1.2	41	1.5	11	0.065	14		15	-0.065
170	1.2DL + 1.5LM-MP8 + 1SWL (30 mph) AZI 300	Yes	Y	1	1.2	41	1.5	12	0.065	14	0.032	15	-0.056
171	1.2DL + 1.5LM-MP8 + 1SWL (30 mph) AZI 330	Yes	Y	1	1.2	41	1.5	13	0.065	14	0.056	15	-0.032
172	1.2DL + 1.5LM-MP9 + 1SWL (30 mph) AZI 0	Yes	Y	1	1.2	42	1.5	2	0.065	14	0.065	15	
173	1.2DL + 1.5LM-MP9 + 1SWL (30 mph) AZI 30	Yes	Y	1	1.2	42	1.5	3	0.065	14	0.056	15	0.032
174	1.2DL + 1.5LM-MP9 + 1SWL (30 mph) AZI 60	Yes	Y	1	1.2	42	1.5	4	0.065	14	0.032	15	0.056
175	1.2DL + 1.5LM-MP9 + 1SWL (30 mph) AZI 90	Yes	Y	1	1.2	42	1.5	5	0.065	14		15	0.065
176	1.2DL + 1.5LM-MP9 + 1SWL (30 mph) AZI 120	Yes	Y	1	1.2	42	1.5	6	0.065	14	-0.032	15	0.056
177	1.2DL + 1.5LM-MP9 + 1SWL (30 mph) AZI 150	Yes	Y	1	1.2	42	1.5	7	0.065	14	-0.056	15	0.032
178	1.2DL + 1.5LM-MP9 + 1SWL (30 mph) AZI 180	Yes	Y	1	1.2	42	1.5	8	0.065	14	-0.065	15	
179	1.2DL + 1.5LM-MP9 + 1SWL (30 mph) AZI 210	Yes	Y	1	1.2	42	1.5	9	0.065	14	-0.056	15	-0.032
180	1.2DL + 1.5LM-MP9 + 1SWL (30 mph) AZI 240	Yes	Y	1	1.2	42	1.5	10	0.065	14	-0.032	15	-0.056
181	1.2DL + 1.5LM-MP9 + 1SWL (30 mph) AZI 270	Yes	Y	1	1.2	42	1.5	11	0.065	14		15	-0.065
182	1.2DL + 1.5LM-MP9 + 1SWL (30 mph) AZI 300	Yes	Y	1	1.2	42	1.5	12	0.065	14	0.032	15	-0.056

Member Point Loads (BLC 1 : Self Weight)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	Y	-44.65	12
2	MP3	Y	-44.65	84
3	MP1	Y	-36.25	9
4	MP1	Y	-36.25	66
5	MP2	Y	-33.1	12

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
6	MP2	Y	-33.1	50
7	MP2	Y	-41.89	62
8	MP2	Y	-41.89	93
9	MP1	Y	-29.7	18
10	MP1	Y	-29.7	36
11	MP3	Y	-26.45	54
12	MP3	Y	-26.45	78
13	MP1	Y	-26.5	42
14	MP1	Y	-26.5	69
15	MP1	Y	-22	18
16	MP1	Y	-22	33
17	MP3	Y	-35.5	30
18	MP3	Y	-35.5	48
19	M29	Y	-9.45	18
20	M29	Y	-9.45	18
21	M32	Y	-13.1	18
22	M32	Y	-13.1	18
23	MP6	Y	-52.8	12
24	MP6	Y	-52.8	96
25	MP4	Y	-43.75	9
26	MP4	Y	-43.75	90
27	MP5	Y	-33.1	12
28	MP5	Y	-33.1	50
29	MP5	Y	-41.89	62
30	MP5	Y	-41.89	93
31	MP4	Y	-29.7	18
32	MP4	Y	-29.7	36
33	MP6	Y	-26.45	54
34	MP6	Y	-26.45	78
35	MP4	Y	-26.5	42
36	MP4	Y	-26.5	69
37	MP4	Y	-22	18
38	MP4	Y	-22	33
39	MP6	Y	-35.5	30
40	MP6	Y	-35.5	48
41	M27	Y	-9.45	18
42	M27	Y	-9.45	18
43	MP9	Y	-52.8	12
44	MP9	Y	-52.8	96
45	MP7	Y	-43.75	9
46	MP7	Y	-43.75	90
47	MP8	Y	-33.1	12
48	MP8	Y	-33.1	50
49	MP8	Y	-41.89	62
50	MP8	Y	-41.89	93
51	MP7	Y	-29.7	18

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
52	MP7	Y	-29.7	36
53	MP9	Y	-26.45	54
54	MP9	Y	-26.45	78
55	MP7	Y	-26.5	42
56	MP7	Y	-26.5	69
57	MP7	Y	-22	18
58	MP7	Y	-22	33
59	MP9	Y	-35.5	30
60	MP9	Y	-35.5	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	0	12
2	MP3	Z	-231.64	12
3	MP3	X	0	84
4	MP3	Z	-231.64	84
5	MP1	X	0	9
6	MP1	Z	-237.27	9
7	MP1	X	0	66
8	MP1	Z	-237.27	66
9	MP2	X	0	12
10	MP2	Z	-71.23	12
11	MP2	X	0	50
12	MP2	Z	-71.23	50
13	MP2	X	0	62
14	MP2	Z	-78.65	62
15	MP2	X	0	93
16	MP2	Z	-78.65	93
17	MP1	X	0	18
18	MP1	Z	-39.24	18
19	MP1	X	0	36
20	MP1	Z	-39.24	36
21	MP3	X	0	54
22	MP3	Z	-53.03	54
23	MP3	X	0	78
24	MP3	Z	-53.03	78
25	MP1	X	0	42
26	MP1	Z	-53.25	42
27	MP1	X	0	69
28	MP1	Z	-53.25	69
29	MP1	X	0	18
30	MP1	Z	-31.93	18
31	MP1	X	0	33
32	MP1	Z	-31.93	33
33	MP3	X	0	30
34	MP3	Z	-38.2	30

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
35	MP3	X	0	48
36	MP3	Z	-38.2	48
37	M29	X	0	18
38	M29	Z	-17.8	18
39	M29	X	0	18
40	M29	Z	-17.8	18
41	M32	X	0	18
42	M32	Z	-92.9	18
43	M32	X	0	18
44	M32	Z	-92.9	18
45	MP6	X	0	12
46	MP6	Z	-163.63	12
47	MP6	X	0	96
48	MP6	Z	-163.63	96
49	MP4	X	0	9
50	MP4	Z	-164.17	9
51	MP4	X	0	90
52	MP4	Z	-164.17	90
53	MP5	X	0	12
54	MP5	Z	-41.88	12
55	MP5	X	0	50
56	MP5	Z	-41.88	50
57	MP5	X	0	62
58	MP5	Z	-59.46	62
59	MP5	X	0	93
60	MP5	Z	-59.46	93
61	MP4	X	0	18
62	MP4	Z	-27.95	18
63	MP4	X	0	36
64	MP4	Z	-27.95	36
65	MP6	X	0	54
66	MP6	Z	-37.55	54
67	MP6	X	0	78
68	MP6	Z	-37.55	78
69	MP4	X	0	42
70	MP4	Z	-37.6	42
71	MP4	X	0	69
72	MP4	Z	-37.6	69
73	MP4	X	0	18
74	MP4	Z	-17.87	18
75	MP4	X	0	33
76	MP4	Z	-17.87	33
77	MP6	X	0	30
78	MP6	Z	-30.06	30
79	MP6	X	0	48
80	MP6	Z	-30.06	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
81	M27	X	0	18
82	M27	Z	-17.8	18
83	M27	X	0	18
84	M27	Z	-17.8	18
85	MP9	X	0	12
86	MP9	Z	-163.63	12
87	MP9	X	0	96
88	MP9	Z	-163.63	96
89	MP7	X	0	9
90	MP7	Z	-164.17	9
91	MP7	X	0	90
92	MP7	Z	-164.17	90
93	MP8	X	0	12
94	MP8	Z	-41.88	12
95	MP8	X	0	50
96	MP8	Z	-41.88	50
97	MP8	X	0	62
98	MP8	Z	-59.46	62
99	MP8	X	0	93
100	MP8	Z	-59.46	93
101	MP7	X	0	18
102	MP7	Z	-27.95	18
103	MP7	X	0	36
104	MP7	Z	-27.95	36
105	MP9	X	0	54
106	MP9	Z	-37.55	54
107	MP9	X	0	78
108	MP9	Z	-37.55	78
109	MP7	X	0	42
110	MP7	Z	-37.6	42
111	MP7	X	0	69
112	MP7	Z	-37.6	69
113	MP7	X	0	18
114	MP7	Z	-17.87	18
115	MP7	X	0	33
116	MP7	Z	-17.87	33
117	MP9	X	0	30
118	MP9	Z	-30.06	30
119	MP9	X	0	48
120	MP9	Z	-30.06	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	-97.74	12
2	MP3	Z	-169.29	12
3	MP3	X	-97.74	84

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
4	MP3	Z	-169.29	84
5	MP1	X	-100	9
6	MP1	Z	-173.2	9
7	MP1	X	-100	66
8	MP1	Z	-173.2	66
9	MP2	X	-30.72	12
10	MP2	Z	-53.21	12
11	MP2	X	-30.72	50
12	MP2	Z	-53.21	50
13	MP2	X	-36.13	62
14	MP2	Z	-62.58	62
15	MP2	X	-36.13	93
16	MP2	Z	-62.58	93
17	MP1	X	-17.74	18
18	MP1	Z	-30.73	18
19	MP1	X	-17.74	36
20	MP1	Z	-30.73	36
21	MP3	X	-23.94	54
22	MP3	Z	-41.46	54
23	MP3	X	-23.94	78
24	MP3	Z	-41.46	78
25	MP1	X	-24.02	42
26	MP1	Z	-41.6	42
27	MP1	X	-24.02	69
28	MP1	Z	-41.6	69
29	MP1	X	-13.62	18
30	MP1	Z	-23.59	18
31	MP1	X	-13.62	33
32	MP1	Z	-23.59	33
33	MP3	X	-17.74	30
34	MP3	Z	-30.73	30
35	MP3	X	-17.74	48
36	MP3	Z	-30.73	48
37	M29	X	-8.9	18
38	M29	Z	-15.41	18
39	M29	X	-8.9	18
40	M29	Z	-15.41	18
41	M32	X	-41.48	18
42	M32	Z	-71.85	18
43	M32	X	-41.48	18
44	M32	Z	-71.85	18
45	MP6	X	-129.92	12
46	MP6	Z	-225.03	12
47	MP6	X	-129.92	96
48	MP6	Z	-225.03	96
49	MP4	X	-130.33	9

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
50	MP4	Z	-225.74	9
51	MP4	X	-130.33	90
52	MP4	Z	-225.74	90
53	MP5	X	-30.72	12
54	MP5	Z	-53.21	12
55	MP5	X	-30.72	50
56	MP5	Z	-53.21	50
57	MP5	X	-36.13	62
58	MP5	Z	-62.58	62
59	MP5	X	-36.13	93
60	MP5	Z	-62.58	93
61	MP4	X	-17.74	18
62	MP4	Z	-30.73	18
63	MP4	X	-17.74	36
64	MP4	Z	-30.73	36
65	MP6	X	-23.94	54
66	MP6	Z	-41.46	54
67	MP6	X	-23.94	78
68	MP6	Z	-41.46	78
69	MP4	X	-24.02	42
70	MP4	Z	-41.6	42
71	MP4	X	-24.02	69
72	MP4	Z	-41.6	69
73	MP4	X	-13.62	18
74	MP4	Z	-23.59	18
75	MP4	X	-13.62	33
76	MP4	Z	-23.59	33
77	MP6	X	-17.74	30
78	MP6	Z	-30.73	30
79	MP6	X	-17.74	48
80	MP6	Z	-30.73	48
81	M27	X	-8.9	18
82	M27	Z	-15.41	18
83	M27	X	-8.9	18
84	M27	Z	-15.41	18
85	MP9	X	-57.76	12
86	MP9	Z	-100.05	12
87	MP9	X	-57.76	96
88	MP9	Z	-100.05	96
89	MP7	X	-57.96	9
90	MP7	Z	-100.39	9
91	MP7	X	-57.96	90
92	MP7	Z	-100.39	90
93	MP8	X	-16.05	12
94	MP8	Z	-27.79	12
95	MP8	X	-16.05	50

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
96	MP8	Z	-27.79	50
97	MP8	X	-26.53	62
98	MP8	Z	-45.96	62
99	MP8	X	-26.53	93
100	MP8	Z	-45.96	93
101	MP7	X	-12.1	18
102	MP7	Z	-20.95	18
103	MP7	X	-12.1	36
104	MP7	Z	-20.95	36
105	MP9	X	-16.19	54
106	MP9	Z	-28.05	54
107	MP9	X	-16.19	78
108	MP9	Z	-28.05	78
109	MP7	X	-16.19	42
110	MP7	Z	-28.05	42
111	MP7	X	-16.19	69
112	MP7	Z	-28.05	69
113	MP7	X	-6.59	18
114	MP7	Z	-11.41	18
115	MP7	X	-6.59	33
116	MP7	Z	-11.41	33
117	MP9	X	-13.67	30
118	MP9	Z	-23.68	30
119	MP9	X	-13.67	48
120	MP9	Z	-23.68	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	-106.65	12
2	MP3	Z	-61.57	12
3	MP3	X	-106.65	84
4	MP3	Z	-61.57	84
5	MP1	X	-108.63	9
6	MP1	Z	-62.72	9
7	MP1	X	-108.63	66
8	MP1	Z	-62.72	66
9	MP2	X	-36.27	12
10	MP2	Z	-20.94	12
11	MP2	X	-36.27	50
12	MP2	Z	-20.94	50
13	MP2	X	-51.5	62
14	MP2	Z	-29.73	62
15	MP2	X	-51.5	93
16	MP2	Z	-29.73	93
17	MP1	X	-24.21	18
18	MP1	Z	-13.98	18

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
19	MP1	X	-24.21	36
20	MP1	Z	-13.98	36
21	MP3	X	-32.52	54
22	MP3	Z	-18.77	54
23	MP3	X	-32.52	78
24	MP3	Z	-18.77	78
25	MP1	X	-32.57	42
26	MP1	Z	-18.8	42
27	MP1	X	-32.57	69
28	MP1	Z	-18.8	69
29	MP1	X	-15.47	18
30	MP1	Z	-8.93	18
31	MP1	X	-15.47	33
32	MP1	Z	-8.93	33
33	MP3	X	-26.03	30
34	MP3	Z	-15.03	30
35	MP3	X	-26.03	48
36	MP3	Z	-15.03	48
37	M29	X	-15.41	18
38	M29	Z	-8.9	18
39	M29	X	-15.41	18
40	M29	Z	-8.9	18
41	M32	X	-54.63	18
42	M32	Z	-31.54	18
43	M32	X	-54.63	18
44	M32	Z	-31.54	18
45	MP6	X	-266.69	12
46	MP6	Z	-153.97	12
47	MP6	X	-266.69	96
48	MP6	Z	-153.97	96
49	MP4	X	-267.53	9
50	MP4	Z	-154.46	9
51	MP4	X	-267.53	90
52	MP4	Z	-154.46	90
53	MP5	X	-61.69	12
54	MP5	Z	-35.61	12
55	MP5	X	-61.69	50
56	MP5	Z	-35.61	50
57	MP5	X	-68.12	62
58	MP5	Z	-39.33	62
59	MP5	X	-68.12	93
60	MP5	Z	-39.33	93
61	MP4	X	-33.99	18
62	MP4	Z	-19.62	18
63	MP4	X	-33.99	36
64	MP4	Z	-19.62	36

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
65	MP6	X	-45.93	54
66	MP6	Z	-26.52	54
67	MP6	X	-45.93	78
68	MP6	Z	-26.52	78
69	MP4	X	-46.12	42
70	MP4	Z	-26.63	42
71	MP4	X	-46.12	69
72	MP4	Z	-26.63	69
73	MP4	X	-27.65	18
74	MP4	Z	-15.96	18
75	MP4	X	-27.65	33
76	MP4	Z	-15.96	33
77	MP6	X	-33.08	30
78	MP6	Z	-19.1	30
79	MP6	X	-33.08	48
80	MP6	Z	-19.1	48
81	M27	X	-15.41	18
82	M27	Z	-8.9	18
83	M27	X	-15.41	18
84	M27	Z	-8.9	18
85	MP9	X	-141.71	12
86	MP9	Z	-81.82	12
87	MP9	X	-141.71	96
88	MP9	Z	-81.82	96
89	MP7	X	-142.17	9
90	MP7	Z	-82.08	9
91	MP7	X	-142.17	90
92	MP7	Z	-82.08	90
93	MP8	X	-36.27	12
94	MP8	Z	-20.94	12
95	MP8	X	-36.27	50
96	MP8	Z	-20.94	50
97	MP8	X	-51.5	62
98	MP8	Z	-29.73	62
99	MP8	X	-51.5	93
100	MP8	Z	-29.73	93
101	MP7	X	-24.21	18
102	MP7	Z	-13.98	18
103	MP7	X	-24.21	36
104	MP7	Z	-13.98	36
105	MP9	X	-32.52	54
106	MP9	Z	-18.77	54
107	MP9	X	-32.52	78
108	MP9	Z	-18.77	78
109	MP7	X	-32.57	42
110	MP7	Z	-18.8	42

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
111	MP7	X	-32.57	69
112	MP7	Z	-18.8	69
113	MP7	X	-15.47	18
114	MP7	Z	-8.93	18
115	MP7	X	-15.47	33
116	MP7	Z	-8.93	33
117	MP9	X	-26.03	30
118	MP9	Z	-15.03	30
119	MP9	X	-26.03	48
120	MP9	Z	-15.03	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	-86.99	12
2	MP3	Z	0	12
3	MP3	X	-86.99	84
4	MP3	Z	0	84
5	MP1	X	-88.15	9
6	MP1	Z	0	9
7	MP1	X	-88.15	66
8	MP1	Z	0	66
9	MP2	X	-32.09	12
10	MP2	Z	0	12
11	MP2	X	-32.09	50
12	MP2	Z	0	50
13	MP2	X	-53.07	62
14	MP2	Z	0	62
15	MP2	X	-53.07	93
16	MP2	Z	0	93
17	MP1	X	-24.19	18
18	MP1	Z	0	18
19	MP1	X	-24.19	36
20	MP1	Z	0	36
21	MP3	X	-32.39	54
22	MP3	Z	0	54
23	MP3	X	-32.39	78
24	MP3	Z	0	78
25	MP1	X	-32.39	42
26	MP1	Z	0	42
27	MP1	X	-32.39	69
28	MP1	Z	0	69
29	MP1	X	-13.18	18
30	MP1	Z	0	18
31	MP1	X	-13.18	33
32	MP1	Z	0	33
33	MP3	X	-27.34	30

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
34	MP3	Z	0	30
35	MP3	X	-27.34	48
36	MP3	Z	0	48
37	M29	X	-17.8	18
38	M29	Z	0	18
39	M29	X	-17.8	18
40	M29	Z	0	18
41	M32	X	-53.14	18
42	M32	Z	0	18
43	M32	X	-53.14	18
44	M32	Z	0	18
45	MP6	X	-259.84	12
46	MP6	Z	0	12
47	MP6	X	-259.84	96
48	MP6	Z	0	96
49	MP4	X	-260.67	9
50	MP4	Z	0	9
51	MP4	X	-260.67	90
52	MP4	Z	0	90
53	MP5	X	-61.44	12
54	MP5	Z	0	12
55	MP5	X	-61.44	50
56	MP5	Z	0	50
57	MP5	X	-72.26	62
58	MP5	Z	0	62
59	MP5	X	-72.26	93
60	MP5	Z	0	93
61	MP4	X	-35.48	18
62	MP4	Z	0	18
63	MP4	X	-35.48	36
64	MP4	Z	0	36
65	MP6	X	-47.87	54
66	MP6	Z	0	54
67	MP6	X	-47.87	78
68	MP6	Z	0	78
69	MP4	X	-48.04	42
70	MP4	Z	0	42
71	MP4	X	-48.04	69
72	MP4	Z	0	69
73	MP4	X	-27.24	18
74	MP4	Z	0	18
75	MP4	X	-27.24	33
76	MP4	Z	0	33
77	MP6	X	-35.49	30
78	MP6	Z	0	30
79	MP6	X	-35.49	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
80	MP6	Z	0	48
81	M27	X	-17.8	18
82	M27	Z	0	18
83	M27	X	-17.8	18
84	M27	Z	0	18
85	MP9	X	-259.84	12
86	MP9	Z	0	12
87	MP9	X	-259.84	96
88	MP9	Z	0	96
89	MP7	X	-260.67	9
90	MP7	Z	0	9
91	MP7	X	-260.67	90
92	MP7	Z	0	90
93	MP8	X	-61.44	12
94	MP8	Z	0	12
95	MP8	X	-61.44	50
96	MP8	Z	0	50
97	MP8	X	-72.26	62
98	MP8	Z	0	62
99	MP8	X	-72.26	93
100	MP8	Z	0	93
101	MP7	X	-35.48	18
102	MP7	Z	0	18
103	MP7	X	-35.48	36
104	MP7	Z	0	36
105	MP9	X	-47.87	54
106	MP9	Z	0	54
107	MP9	X	-47.87	78
108	MP9	Z	0	78
109	MP7	X	-48.04	42
110	MP7	Z	0	42
111	MP7	X	-48.04	69
112	MP7	Z	0	69
113	MP7	X	-27.24	18
114	MP7	Z	0	18
115	MP7	X	-27.24	33
116	MP7	Z	0	33
117	MP9	X	-35.49	30
118	MP9	Z	0	30
119	MP9	X	-35.49	48
120	MP9	Z	0	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	-106.65	12
2	MP3	Z	61.57	12

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
3	MP3	X	-106.65	84
4	MP3	Z	61.57	84
5	MP1	X	-108.63	9
6	MP1	Z	62.72	9
7	MP1	X	-108.63	66
8	MP1	Z	62.72	66
9	MP2	X	-36.27	12
10	MP2	Z	20.94	12
11	MP2	X	-36.27	50
12	MP2	Z	20.94	50
13	MP2	X	-51.5	62
14	MP2	Z	29.73	62
15	MP2	X	-51.5	93
16	MP2	Z	29.73	93
17	MP1	X	-24.21	18
18	MP1	Z	13.98	18
19	MP1	X	-24.21	36
20	MP1	Z	13.98	36
21	MP3	X	-32.52	54
22	MP3	Z	18.77	54
23	MP3	X	-32.52	78
24	MP3	Z	18.77	78
25	MP1	X	-32.57	42
26	MP1	Z	18.8	42
27	MP1	X	-32.57	69
28	MP1	Z	18.8	69
29	MP1	X	-15.47	18
30	MP1	Z	8.93	18
31	MP1	X	-15.47	33
32	MP1	Z	8.93	33
33	MP3	X	-26.03	30
34	MP3	Z	15.03	30
35	MP3	X	-26.03	48
36	MP3	Z	15.03	48
37	M29	X	-15.41	18
38	M29	Z	8.9	18
39	M29	X	-15.41	18
40	M29	Z	8.9	18
41	M32	X	-54.63	18
42	M32	Z	31.54	18
43	M32	X	-54.63	18
44	M32	Z	31.54	18
45	MP6	X	-141.71	12
46	MP6	Z	81.82	12
47	MP6	X	-141.71	96
48	MP6	Z	81.82	96

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
49	MP4	X	-142.17	9
50	MP4	Z	82.08	9
51	MP4	X	-142.17	90
52	MP4	Z	82.08	90
53	MP5	X	-36.27	12
54	MP5	Z	20.94	12
55	MP5	X	-36.27	50
56	MP5	Z	20.94	50
57	MP5	X	-51.5	62
58	MP5	Z	29.73	62
59	MP5	X	-51.5	93
60	MP5	Z	29.73	93
61	MP4	X	-24.21	18
62	MP4	Z	13.98	18
63	MP4	X	-24.21	36
64	MP4	Z	13.98	36
65	MP6	X	-32.52	54
66	MP6	Z	18.77	54
67	MP6	X	-32.52	78
68	MP6	Z	18.77	78
69	MP4	X	-32.57	42
70	MP4	Z	18.8	42
71	MP4	X	-32.57	69
72	MP4	Z	18.8	69
73	MP4	X	-15.47	18
74	MP4	Z	8.93	18
75	MP4	X	-15.47	33
76	MP4	Z	8.93	33
77	MP6	X	-26.03	30
78	MP6	Z	15.03	30
79	MP6	X	-26.03	48
80	MP6	Z	15.03	48
81	M27	X	-15.41	18
82	M27	Z	8.9	18
83	M27	X	-15.41	18
84	M27	Z	8.9	18
85	MP9	X	-266.69	12
86	MP9	Z	153.97	12
87	MP9	X	-266.69	96
88	MP9	Z	153.97	96
89	MP7	X	-267.53	9
90	MP7	Z	154.46	9
91	MP7	X	-267.53	90
92	MP7	Z	154.46	90
93	MP8	X	-61.69	12
94	MP8	Z	35.61	12

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
95	MP8	X	-61.69	50
96	MP8	Z	35.61	50
97	MP8	X	-68.12	62
98	MP8	Z	39.33	62
99	MP8	X	-68.12	93
100	MP8	Z	39.33	93
101	MP7	X	-33.99	18
102	MP7	Z	19.62	18
103	MP7	X	-33.99	36
104	MP7	Z	19.62	36
105	MP9	X	-45.93	54
106	MP9	Z	26.52	54
107	MP9	X	-45.93	78
108	MP9	Z	26.52	78
109	MP7	X	-46.12	42
110	MP7	Z	26.63	42
111	MP7	X	-46.12	69
112	MP7	Z	26.63	69
113	MP7	X	-27.65	18
114	MP7	Z	15.96	18
115	MP7	X	-27.65	33
116	MP7	Z	15.96	33
117	MP9	X	-33.08	30
118	MP9	Z	19.1	30
119	MP9	X	-33.08	48
120	MP9	Z	19.1	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	-97.74	12
2	MP3	Z	169.29	12
3	MP3	X	-97.74	84
4	MP3	Z	169.29	84
5	MP1	X	-100	9
6	MP1	Z	173.2	9
7	MP1	X	-100	66
8	MP1	Z	173.2	66
9	MP2	X	-30.72	12
10	MP2	Z	53.21	12
11	MP2	X	-30.72	50
12	MP2	Z	53.21	50
13	MP2	X	-36.13	62
14	MP2	Z	62.58	62
15	MP2	X	-36.13	93
16	MP2	Z	62.58	93
17	MP1	X	-17.74	18

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
18	MP1	Z	30.73	18
19	MP1	X	-17.74	36
20	MP1	Z	30.73	36
21	MP3	X	-23.94	54
22	MP3	Z	41.46	54
23	MP3	X	-23.94	78
24	MP3	Z	41.46	78
25	MP1	X	-24.02	42
26	MP1	Z	41.6	42
27	MP1	X	-24.02	69
28	MP1	Z	41.6	69
29	MP1	X	-13.62	18
30	MP1	Z	23.59	18
31	MP1	X	-13.62	33
32	MP1	Z	23.59	33
33	MP3	X	-17.74	30
34	MP3	Z	30.73	30
35	MP3	X	-17.74	48
36	MP3	Z	30.73	48
37	M29	X	-8.9	18
38	M29	Z	15.41	18
39	M29	X	-8.9	18
40	M29	Z	15.41	18
41	M32	X	-41.48	18
42	M32	Z	71.85	18
43	M32	X	-41.48	18
44	M32	Z	71.85	18
45	MP6	X	-57.76	12
46	MP6	Z	100.05	12
47	MP6	X	-57.76	96
48	MP6	Z	100.05	96
49	MP4	X	-57.96	9
50	MP4	Z	100.39	9
51	MP4	X	-57.96	90
52	MP4	Z	100.39	90
53	MP5	X	-16.05	12
54	MP5	Z	27.79	12
55	MP5	X	-16.05	50
56	MP5	Z	27.79	50
57	MP5	X	-26.53	62
58	MP5	Z	45.96	62
59	MP5	X	-26.53	93
60	MP5	Z	45.96	93
61	MP4	X	-12.1	18
62	MP4	Z	20.95	18
63	MP4	X	-12.1	36

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
64	MP4	Z	20.95	36
65	MP6	X	-16.19	54
66	MP6	Z	28.05	54
67	MP6	X	-16.19	78
68	MP6	Z	28.05	78
69	MP4	X	-16.19	42
70	MP4	Z	28.05	42
71	MP4	X	-16.19	69
72	MP4	Z	28.05	69
73	MP4	X	-6.59	18
74	MP4	Z	11.41	18
75	MP4	X	-6.59	33
76	MP4	Z	11.41	33
77	MP6	X	-13.67	30
78	MP6	Z	23.68	30
79	MP6	X	-13.67	48
80	MP6	Z	23.68	48
81	M27	X	-8.9	18
82	M27	Z	15.41	18
83	M27	X	-8.9	18
84	M27	Z	15.41	18
85	MP9	X	-129.92	12
86	MP9	Z	225.03	12
87	MP9	X	-129.92	96
88	MP9	Z	225.03	96
89	MP7	X	-130.33	9
90	MP7	Z	225.74	9
91	MP7	X	-130.33	90
92	MP7	Z	225.74	90
93	MP8	X	-30.72	12
94	MP8	Z	53.21	12
95	MP8	X	-30.72	50
96	MP8	Z	53.21	50
97	MP8	X	-36.13	62
98	MP8	Z	62.58	62
99	MP8	X	-36.13	93
100	MP8	Z	62.58	93
101	MP7	X	-17.74	18
102	MP7	Z	30.73	18
103	MP7	X	-17.74	36
104	MP7	Z	30.73	36
105	MP9	X	-23.94	54
106	MP9	Z	41.46	54
107	MP9	X	-23.94	78
108	MP9	Z	41.46	78
109	MP7	X	-24.02	42

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
110	MP7	Z	41.6	42
111	MP7	X	-24.02	69
112	MP7	Z	41.6	69
113	MP7	X	-13.62	18
114	MP7	Z	23.59	18
115	MP7	X	-13.62	33
116	MP7	Z	23.59	33
117	MP9	X	-17.74	30
118	MP9	Z	30.73	30
119	MP9	X	-17.74	48
120	MP9	Z	30.73	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	0	12
2	MP3	Z	231.64	12
3	MP3	X	0	84
4	MP3	Z	231.64	84
5	MP1	X	0	9
6	MP1	Z	237.27	9
7	MP1	X	0	66
8	MP1	Z	237.27	66
9	MP2	X	0	12
10	MP2	Z	71.23	12
11	MP2	X	0	50
12	MP2	Z	71.23	50
13	MP2	X	0	62
14	MP2	Z	78.65	62
15	MP2	X	0	93
16	MP2	Z	78.65	93
17	MP1	X	0	18
18	MP1	Z	39.24	18
19	MP1	X	0	36
20	MP1	Z	39.24	36
21	MP3	X	0	54
22	MP3	Z	53.03	54
23	MP3	X	0	78
24	MP3	Z	53.03	78
25	MP1	X	0	42
26	MP1	Z	53.25	42
27	MP1	X	0	69
28	MP1	Z	53.25	69
29	MP1	X	0	18
30	MP1	Z	31.93	18
31	MP1	X	0	33
32	MP1	Z	31.93	33

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
33	MP3	X	0	30
34	MP3	Z	38.2	30
35	MP3	X	0	48
36	MP3	Z	38.2	48
37	M29	X	0	18
38	M29	Z	17.8	18
39	M29	X	0	18
40	M29	Z	17.8	18
41	M32	X	0	18
42	M32	Z	92.9	18
43	M32	X	0	18
44	M32	Z	92.9	18
45	MP6	X	0	12
46	MP6	Z	163.63	12
47	MP6	X	0	96
48	MP6	Z	163.63	96
49	MP4	X	0	9
50	MP4	Z	164.17	9
51	MP4	X	0	90
52	MP4	Z	164.17	90
53	MP5	X	0	12
54	MP5	Z	41.88	12
55	MP5	X	0	50
56	MP5	Z	41.88	50
57	MP5	X	0	62
58	MP5	Z	59.46	62
59	MP5	X	0	93
60	MP5	Z	59.46	93
61	MP4	X	0	18
62	MP4	Z	27.95	18
63	MP4	X	0	36
64	MP4	Z	27.95	36
65	MP6	X	0	54
66	MP6	Z	37.55	54
67	MP6	X	0	78
68	MP6	Z	37.55	78
69	MP4	X	0	42
70	MP4	Z	37.6	42
71	MP4	X	0	69
72	MP4	Z	37.6	69
73	MP4	X	0	18
74	MP4	Z	17.87	18
75	MP4	X	0	33
76	MP4	Z	17.87	33
77	MP6	X	0	30
78	MP6	Z	30.06	30

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
79	MP6	X	0	48
80	MP6	Z	30.06	48
81	M27	X	0	18
82	M27	Z	17.8	18
83	M27	X	0	18
84	M27	Z	17.8	18
85	MP9	X	0	12
86	MP9	Z	163.63	12
87	MP9	X	0	96
88	MP9	Z	163.63	96
89	MP7	X	0	9
90	MP7	Z	164.17	9
91	MP7	X	0	90
92	MP7	Z	164.17	90
93	MP8	X	0	12
94	MP8	Z	41.88	12
95	MP8	X	0	50
96	MP8	Z	41.88	50
97	MP8	X	0	62
98	MP8	Z	59.46	62
99	MP8	X	0	93
100	MP8	Z	59.46	93
101	MP7	X	0	18
102	MP7	Z	27.95	18
103	MP7	X	0	36
104	MP7	Z	27.95	36
105	MP9	X	0	54
106	MP9	Z	37.55	54
107	MP9	X	0	78
108	MP9	Z	37.55	78
109	MP7	X	0	42
110	MP7	Z	37.6	42
111	MP7	X	0	69
112	MP7	Z	37.6	69
113	MP7	X	0	18
114	MP7	Z	17.87	18
115	MP7	X	0	33
116	MP7	Z	17.87	33
117	MP9	X	0	30
118	MP9	Z	30.06	30
119	MP9	X	0	48
120	MP9	Z	30.06	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	97.74	12
2	MP3	Z	169.29	12
3	MP3	X	97.74	84
4	MP3	Z	169.29	84
5	MP1	X	100	9
6	MP1	Z	173.2	9
7	MP1	X	100	66
8	MP1	Z	173.2	66
9	MP2	X	30.72	12
10	MP2	Z	53.21	12
11	MP2	X	30.72	50
12	MP2	Z	53.21	50
13	MP2	X	36.13	62
14	MP2	Z	62.58	62
15	MP2	X	36.13	93
16	MP2	Z	62.58	93
17	MP1	X	17.74	18
18	MP1	Z	30.73	18
19	MP1	X	17.74	36
20	MP1	Z	30.73	36
21	MP3	X	23.94	54
22	MP3	Z	41.46	54
23	MP3	X	23.94	78
24	MP3	Z	41.46	78
25	MP1	X	24.02	42
26	MP1	Z	41.6	42
27	MP1	X	24.02	69
28	MP1	Z	41.6	69
29	MP1	X	13.62	18
30	MP1	Z	23.59	18
31	MP1	X	13.62	33
32	MP1	Z	23.59	33
33	MP3	X	17.74	30
34	MP3	Z	30.73	30
35	MP3	X	17.74	48
36	MP3	Z	30.73	48
37	M29	X	8.9	18
38	M29	Z	15.41	18
39	M29	X	8.9	18
40	M29	Z	15.41	18
41	M32	X	41.48	18
42	M32	Z	71.85	18
43	M32	X	41.48	18
44	M32	Z	71.85	18
45	MP6	X	129.92	12
46	MP6	Z	225.03	12

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
47	MP6	X	129.92	96
48	MP6	Z	225.03	96
49	MP4	X	130.33	9
50	MP4	Z	225.74	9
51	MP4	X	130.33	90
52	MP4	Z	225.74	90
53	MP5	X	30.72	12
54	MP5	Z	53.21	12
55	MP5	X	30.72	50
56	MP5	Z	53.21	50
57	MP5	X	36.13	62
58	MP5	Z	62.58	62
59	MP5	X	36.13	93
60	MP5	Z	62.58	93
61	MP4	X	17.74	18
62	MP4	Z	30.73	18
63	MP4	X	17.74	36
64	MP4	Z	30.73	36
65	MP6	X	23.94	54
66	MP6	Z	41.46	54
67	MP6	X	23.94	78
68	MP6	Z	41.46	78
69	MP4	X	24.02	42
70	MP4	Z	41.6	42
71	MP4	X	24.02	69
72	MP4	Z	41.6	69
73	MP4	X	13.62	18
74	MP4	Z	23.59	18
75	MP4	X	13.62	33
76	MP4	Z	23.59	33
77	MP6	X	17.74	30
78	MP6	Z	30.73	30
79	MP6	X	17.74	48
80	MP6	Z	30.73	48
81	M27	X	8.9	18
82	M27	Z	15.41	18
83	M27	X	8.9	18
84	M27	Z	15.41	18
85	MP9	X	57.76	12
86	MP9	Z	100.05	12
87	MP9	X	57.76	96
88	MP9	Z	100.05	96
89	MP7	X	57.96	9
90	MP7	Z	100.39	9
91	MP7	X	57.96	90
92	MP7	Z	100.39	90

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
93	MP8	X	16.05	12
94	MP8	Z	27.79	12
95	MP8	X	16.05	50
96	MP8	Z	27.79	50
97	MP8	X	26.53	62
98	MP8	Z	45.96	62
99	MP8	X	26.53	93
100	MP8	Z	45.96	93
101	MP7	X	12.1	18
102	MP7	Z	20.95	18
103	MP7	X	12.1	36
104	MP7	Z	20.95	36
105	MP9	X	16.19	54
106	MP9	Z	28.05	54
107	MP9	X	16.19	78
108	MP9	Z	28.05	78
109	MP7	X	16.19	42
110	MP7	Z	28.05	42
111	MP7	X	16.19	69
112	MP7	Z	28.05	69
113	MP7	X	6.59	18
114	MP7	Z	11.41	18
115	MP7	X	6.59	33
116	MP7	Z	11.41	33
117	MP9	X	13.67	30
118	MP9	Z	23.68	30
119	MP9	X	13.67	48
120	MP9	Z	23.68	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	106.65	12
2	MP3	Z	61.57	12
3	MP3	X	106.65	84
4	MP3	Z	61.57	84
5	MP1	X	108.63	9
6	MP1	Z	62.72	9
7	MP1	X	108.63	66
8	MP1	Z	62.72	66
9	MP2	X	36.27	12
10	MP2	Z	20.94	12
11	MP2	X	36.27	50
12	MP2	Z	20.94	50
13	MP2	X	51.5	62
14	MP2	Z	29.73	62
15	MP2	X	51.5	93

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
16	MP2	Z	29.73	93
17	MP1	X	24.21	18
18	MP1	Z	13.98	18
19	MP1	X	24.21	36
20	MP1	Z	13.98	36
21	MP3	X	32.52	54
22	MP3	Z	18.77	54
23	MP3	X	32.52	78
24	MP3	Z	18.77	78
25	MP1	X	32.57	42
26	MP1	Z	18.8	42
27	MP1	X	32.57	69
28	MP1	Z	18.8	69
29	MP1	X	15.47	18
30	MP1	Z	8.93	18
31	MP1	X	15.47	33
32	MP1	Z	8.93	33
33	MP3	X	26.03	30
34	MP3	Z	15.03	30
35	MP3	X	26.03	48
36	MP3	Z	15.03	48
37	M29	X	15.41	18
38	M29	Z	8.9	18
39	M29	X	15.41	18
40	M29	Z	8.9	18
41	M32	X	54.63	18
42	M32	Z	31.54	18
43	M32	X	54.63	18
44	M32	Z	31.54	18
45	MP6	X	266.69	12
46	MP6	Z	153.97	12
47	MP6	X	266.69	96
48	MP6	Z	153.97	96
49	MP4	X	267.53	9
50	MP4	Z	154.46	9
51	MP4	X	267.53	90
52	MP4	Z	154.46	90
53	MP5	X	61.69	12
54	MP5	Z	35.61	12
55	MP5	X	61.69	50
56	MP5	Z	35.61	50
57	MP5	X	68.12	62
58	MP5	Z	39.33	62
59	MP5	X	68.12	93
60	MP5	Z	39.33	93
61	MP4	X	33.99	18

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
62	MP4	Z	19.62	18
63	MP4	X	33.99	36
64	MP4	Z	19.62	36
65	MP6	X	45.93	54
66	MP6	Z	26.52	54
67	MP6	X	45.93	78
68	MP6	Z	26.52	78
69	MP4	X	46.12	42
70	MP4	Z	26.63	42
71	MP4	X	46.12	69
72	MP4	Z	26.63	69
73	MP4	X	27.65	18
74	MP4	Z	15.96	18
75	MP4	X	27.65	33
76	MP4	Z	15.96	33
77	MP6	X	33.08	30
78	MP6	Z	19.1	30
79	MP6	X	33.08	48
80	MP6	Z	19.1	48
81	M27	X	15.41	18
82	M27	Z	8.9	18
83	M27	X	15.41	18
84	M27	Z	8.9	18
85	MP9	X	141.71	12
86	MP9	Z	81.82	12
87	MP9	X	141.71	96
88	MP9	Z	81.82	96
89	MP7	X	142.17	9
90	MP7	Z	82.08	9
91	MP7	X	142.17	90
92	MP7	Z	82.08	90
93	MP8	X	36.27	12
94	MP8	Z	20.94	12
95	MP8	X	36.27	50
96	MP8	Z	20.94	50
97	MP8	X	51.5	62
98	MP8	Z	29.73	62
99	MP8	X	51.5	93
100	MP8	Z	29.73	93
101	MP7	X	24.21	18
102	MP7	Z	13.98	18
103	MP7	X	24.21	36
104	MP7	Z	13.98	36
105	MP9	X	32.52	54
106	MP9	Z	18.77	54
107	MP9	X	32.52	78

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
108	MP9	Z	18.77	78
109	MP7	X	32.57	42
110	MP7	Z	18.8	42
111	MP7	X	32.57	69
112	MP7	Z	18.8	69
113	MP7	X	15.47	18
114	MP7	Z	8.93	18
115	MP7	X	15.47	33
116	MP7	Z	8.93	33
117	MP9	X	26.03	30
118	MP9	Z	15.03	30
119	MP9	X	26.03	48
120	MP9	Z	15.03	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	86.99	12
2	MP3	Z	0	12
3	MP3	X	86.99	84
4	MP3	Z	0	84
5	MP1	X	88.15	9
6	MP1	Z	0	9
7	MP1	X	88.15	66
8	MP1	Z	0	66
9	MP2	X	32.09	12
10	MP2	Z	0	12
11	MP2	X	32.09	50
12	MP2	Z	0	50
13	MP2	X	53.07	62
14	MP2	Z	0	62
15	MP2	X	53.07	93
16	MP2	Z	0	93
17	MP1	X	24.19	18
18	MP1	Z	0	18
19	MP1	X	24.19	36
20	MP1	Z	0	36
21	MP3	X	32.39	54
22	MP3	Z	0	54
23	MP3	X	32.39	78
24	MP3	Z	0	78
25	MP1	X	32.39	42
26	MP1	Z	0	42
27	MP1	X	32.39	69
28	MP1	Z	0	69
29	MP1	X	13.18	18
30	MP1	Z	0	18

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
31	MP1	X	13.18	33
32	MP1	Z	0	33
33	MP3	X	27.34	30
34	MP3	Z	0	30
35	MP3	X	27.34	48
36	MP3	Z	0	48
37	M29	X	17.8	18
38	M29	Z	0	18
39	M29	X	17.8	18
40	M29	Z	0	18
41	M32	X	53.14	18
42	M32	Z	0	18
43	M32	X	53.14	18
44	M32	Z	0	18
45	MP6	X	259.84	12
46	MP6	Z	0	12
47	MP6	X	259.84	96
48	MP6	Z	0	96
49	MP4	X	260.67	9
50	MP4	Z	0	9
51	MP4	X	260.67	90
52	MP4	Z	0	90
53	MP5	X	61.44	12
54	MP5	Z	0	12
55	MP5	X	61.44	50
56	MP5	Z	0	50
57	MP5	X	72.26	62
58	MP5	Z	0	62
59	MP5	X	72.26	93
60	MP5	Z	0	93
61	MP4	X	35.48	18
62	MP4	Z	0	18
63	MP4	X	35.48	36
64	MP4	Z	0	36
65	MP6	X	47.87	54
66	MP6	Z	0	54
67	MP6	X	47.87	78
68	MP6	Z	0	78
69	MP4	X	48.04	42
70	MP4	Z	0	42
71	MP4	X	48.04	69
72	MP4	Z	0	69
73	MP4	X	27.24	18
74	MP4	Z	0	18
75	MP4	X	27.24	33
76	MP4	Z	0	33

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
77	MP6	X	35.49	30
78	MP6	Z	0	30
79	MP6	X	35.49	48
80	MP6	Z	0	48
81	M27	X	17.8	18
82	M27	Z	0	18
83	M27	X	17.8	18
84	M27	Z	0	18
85	MP9	X	259.84	12
86	MP9	Z	0	12
87	MP9	X	259.84	96
88	MP9	Z	0	96
89	MP7	X	260.67	9
90	MP7	Z	0	9
91	MP7	X	260.67	90
92	MP7	Z	0	90
93	MP8	X	61.44	12
94	MP8	Z	0	12
95	MP8	X	61.44	50
96	MP8	Z	0	50
97	MP8	X	72.26	62
98	MP8	Z	0	62
99	MP8	X	72.26	93
100	MP8	Z	0	93
101	MP7	X	35.48	18
102	MP7	Z	0	18
103	MP7	X	35.48	36
104	MP7	Z	0	36
105	MP9	X	47.87	54
106	MP9	Z	0	54
107	MP9	X	47.87	78
108	MP9	Z	0	78
109	MP7	X	48.04	42
110	MP7	Z	0	42
111	MP7	X	48.04	69
112	MP7	Z	0	69
113	MP7	X	27.24	18
114	MP7	Z	0	18
115	MP7	X	27.24	33
116	MP7	Z	0	33
117	MP9	X	35.49	30
118	MP9	Z	0	30
119	MP9	X	35.49	48
120	MP9	Z	0	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	106.65	12
2	MP3	Z	-61.57	12
3	MP3	X	106.65	84
4	MP3	Z	-61.57	84
5	MP1	X	108.63	9
6	MP1	Z	-62.72	9
7	MP1	X	108.63	66
8	MP1	Z	-62.72	66
9	MP2	X	36.27	12
10	MP2	Z	-20.94	12
11	MP2	X	36.27	50
12	MP2	Z	-20.94	50
13	MP2	X	51.5	62
14	MP2	Z	-29.73	62
15	MP2	X	51.5	93
16	MP2	Z	-29.73	93
17	MP1	X	24.21	18
18	MP1	Z	-13.98	18
19	MP1	X	24.21	36
20	MP1	Z	-13.98	36
21	MP3	X	32.52	54
22	MP3	Z	-18.77	54
23	MP3	X	32.52	78
24	MP3	Z	-18.77	78
25	MP1	X	32.57	42
26	MP1	Z	-18.8	42
27	MP1	X	32.57	69
28	MP1	Z	-18.8	69
29	MP1	X	15.47	18
30	MP1	Z	-8.93	18
31	MP1	X	15.47	33
32	MP1	Z	-8.93	33
33	MP3	X	26.03	30
34	MP3	Z	-15.03	30
35	MP3	X	26.03	48
36	MP3	Z	-15.03	48
37	M29	X	15.41	18
38	M29	Z	-8.9	18
39	M29	X	15.41	18
40	M29	Z	-8.9	18
41	M32	X	54.63	18
42	M32	Z	-31.54	18
43	M32	X	54.63	18
44	M32	Z	-31.54	18
45	MP6	X	141.71	12
46	MP6	Z	-81.82	12

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
47	MP6	X	141.71	96
48	MP6	Z	-81.82	96
49	MP4	X	142.17	9
50	MP4	Z	-82.08	9
51	MP4	X	142.17	90
52	MP4	Z	-82.08	90
53	MP5	X	36.27	12
54	MP5	Z	-20.94	12
55	MP5	X	36.27	50
56	MP5	Z	-20.94	50
57	MP5	X	51.5	62
58	MP5	Z	-29.73	62
59	MP5	X	51.5	93
60	MP5	Z	-29.73	93
61	MP4	X	24.21	18
62	MP4	Z	-13.98	18
63	MP4	X	24.21	36
64	MP4	Z	-13.98	36
65	MP6	X	32.52	54
66	MP6	Z	-18.77	54
67	MP6	X	32.52	78
68	MP6	Z	-18.77	78
69	MP4	X	32.57	42
70	MP4	Z	-18.8	42
71	MP4	X	32.57	69
72	MP4	Z	-18.8	69
73	MP4	X	15.47	18
74	MP4	Z	-8.93	18
75	MP4	X	15.47	33
76	MP4	Z	-8.93	33
77	MP6	X	26.03	30
78	MP6	Z	-15.03	30
79	MP6	X	26.03	48
80	MP6	Z	-15.03	48
81	M27	X	15.41	18
82	M27	Z	-8.9	18
83	M27	X	15.41	18
84	M27	Z	-8.9	18
85	MP9	X	266.69	12
86	MP9	Z	-153.97	12
87	MP9	X	266.69	96
88	MP9	Z	-153.97	96
89	MP7	X	267.53	9
90	MP7	Z	-154.46	9
91	MP7	X	267.53	90
92	MP7	Z	-154.46	90

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
93	MP8	X	61.69	12
94	MP8	Z	-35.61	12
95	MP8	X	61.69	50
96	MP8	Z	-35.61	50
97	MP8	X	68.12	62
98	MP8	Z	-39.33	62
99	MP8	X	68.12	93
100	MP8	Z	-39.33	93
101	MP7	X	33.99	18
102	MP7	Z	-19.62	18
103	MP7	X	33.99	36
104	MP7	Z	-19.62	36
105	MP9	X	45.93	54
106	MP9	Z	-26.52	54
107	MP9	X	45.93	78
108	MP9	Z	-26.52	78
109	MP7	X	46.12	42
110	MP7	Z	-26.63	42
111	MP7	X	46.12	69
112	MP7	Z	-26.63	69
113	MP7	X	27.65	18
114	MP7	Z	-15.96	18
115	MP7	X	27.65	33
116	MP7	Z	-15.96	33
117	MP9	X	33.08	30
118	MP9	Z	-19.1	30
119	MP9	X	33.08	48
120	MP9	Z	-19.1	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	97.74	12
2	MP3	Z	-169.29	12
3	MP3	X	97.74	84
4	MP3	Z	-169.29	84
5	MP1	X	100	9
6	MP1	Z	-173.2	9
7	MP1	X	100	66
8	MP1	Z	-173.2	66
9	MP2	X	30.72	12
10	MP2	Z	-53.21	12
11	MP2	X	30.72	50
12	MP2	Z	-53.21	50
13	MP2	X	36.13	62
14	MP2	Z	-62.58	62
15	MP2	X	36.13	93

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
16	MP2	Z	-62.58	93
17	MP1	X	17.74	18
18	MP1	Z	-30.73	18
19	MP1	X	17.74	36
20	MP1	Z	-30.73	36
21	MP3	X	23.94	54
22	MP3	Z	-41.46	54
23	MP3	X	23.94	78
24	MP3	Z	-41.46	78
25	MP1	X	24.02	42
26	MP1	Z	-41.6	42
27	MP1	X	24.02	69
28	MP1	Z	-41.6	69
29	MP1	X	13.62	18
30	MP1	Z	-23.59	18
31	MP1	X	13.62	33
32	MP1	Z	-23.59	33
33	MP3	X	17.74	30
34	MP3	Z	-30.73	30
35	MP3	X	17.74	48
36	MP3	Z	-30.73	48
37	M29	X	8.9	18
38	M29	Z	-15.41	18
39	M29	X	8.9	18
40	M29	Z	-15.41	18
41	M32	X	41.48	18
42	M32	Z	-71.85	18
43	M32	X	41.48	18
44	M32	Z	-71.85	18
45	MP6	X	57.76	12
46	MP6	Z	-100.05	12
47	MP6	X	57.76	96
48	MP6	Z	-100.05	96
49	MP4	X	57.96	9
50	MP4	Z	-100.39	9
51	MP4	X	57.96	90
52	MP4	Z	-100.39	90
53	MP5	X	16.05	12
54	MP5	Z	-27.79	12
55	MP5	X	16.05	50
56	MP5	Z	-27.79	50
57	MP5	X	26.53	62
58	MP5	Z	-45.96	62
59	MP5	X	26.53	93
60	MP5	Z	-45.96	93
61	MP4	X	12.1	18

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
62	MP4	Z	-20.95	18
63	MP4	X	12.1	36
64	MP4	Z	-20.95	36
65	MP6	X	16.19	54
66	MP6	Z	-28.05	54
67	MP6	X	16.19	78
68	MP6	Z	-28.05	78
69	MP4	X	16.19	42
70	MP4	Z	-28.05	42
71	MP4	X	16.19	69
72	MP4	Z	-28.05	69
73	MP4	X	6.59	18
74	MP4	Z	-11.41	18
75	MP4	X	6.59	33
76	MP4	Z	-11.41	33
77	MP6	X	13.67	30
78	MP6	Z	-23.68	30
79	MP6	X	13.67	48
80	MP6	Z	-23.68	48
81	M27	X	8.9	18
82	M27	Z	-15.41	18
83	M27	X	8.9	18
84	M27	Z	-15.41	18
85	MP9	X	129.92	12
86	MP9	Z	-225.03	12
87	MP9	X	129.92	96
88	MP9	Z	-225.03	96
89	MP7	X	130.33	9
90	MP7	Z	-225.74	9
91	MP7	X	130.33	90
92	MP7	Z	-225.74	90
93	MP8	X	30.72	12
94	MP8	Z	-53.21	12
95	MP8	X	30.72	50
96	MP8	Z	-53.21	50
97	MP8	X	36.13	62
98	MP8	Z	-62.58	62
99	MP8	X	36.13	93
100	MP8	Z	-62.58	93
101	MP7	X	17.74	18
102	MP7	Z	-30.73	18
103	MP7	X	17.74	36
104	MP7	Z	-30.73	36
105	MP9	X	23.94	54
106	MP9	Z	-41.46	54
107	MP9	X	23.94	78

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
108	MP9	Z	-41.46	78
109	MP7	X	24.02	42
110	MP7	Z	-41.6	42
111	MP7	X	24.02	69
112	MP7	Z	-41.6	69
113	MP7	X	13.62	18
114	MP7	Z	-23.59	18
115	MP7	X	13.62	33
116	MP7	Z	-23.59	33
117	MP9	X	17.74	30
118	MP9	Z	-30.73	30
119	MP9	X	17.74	48
120	MP9	Z	-30.73	48

Member Point Loads (BLC 16 : Ice Weight)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	Y	-137.984	12
2	MP3	Y	-137.984	84
3	MP1	Y	-139.852	9
4	MP1	Y	-139.852	66
5	MP2	Y	-49.837	12
6	MP2	Y	-49.837	50
7	MP2	Y	-64.409	62
8	MP2	Y	-64.409	93
9	MP1	Y	-35.365	18
10	MP1	Y	-35.365	36
11	MP3	Y	-42.003	54
12	MP3	Y	-42.003	78
13	MP1	Y	-42.106	42
14	MP1	Y	-42.106	69
15	MP1	Y	-25.834	18
16	MP1	Y	-25.834	33
17	MP3	Y	-36.972	30
18	MP3	Y	-36.972	48
19	M29	Y	-44.495	18
20	M29	Y	-44.495	18
21	M32	Y	-70.741	18
22	M32	Y	-70.741	18
23	MP6	Y	-180.982	12
24	MP6	Y	-180.982	96
25	MP4	Y	-183.392	9
26	MP4	Y	-183.392	90
27	MP5	Y	-49.837	12
28	MP5	Y	-49.837	50
29	MP5	Y	-64.409	62
30	MP5	Y	-64.409	93

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
31	MP4	Y	-35.365	18
32	MP4	Y	-35.365	36
33	MP6	Y	-42.003	54
34	MP6	Y	-42.003	78
35	MP4	Y	-42.106	42
36	MP4	Y	-42.106	69
37	MP4	Y	-25.834	18
38	MP4	Y	-25.834	33
39	MP6	Y	-36.972	30
40	MP6	Y	-36.972	48
41	M27	Y	-44.495	18
42	M27	Y	-44.495	18
43	MP9	Y	-180.982	12
44	MP9	Y	-180.982	96
45	MP7	Y	-183.392	9
46	MP7	Y	-183.392	90
47	MP8	Y	-49.837	12
48	MP8	Y	-49.837	50
49	MP8	Y	-64.409	62
50	MP8	Y	-64.409	93
51	MP7	Y	-35.365	18
52	MP7	Y	-35.365	36
53	MP9	Y	-42.003	54
54	MP9	Y	-42.003	78
55	MP7	Y	-42.106	42
56	MP7	Y	-42.106	69
57	MP7	Y	-25.834	18
58	MP7	Y	-25.834	33
59	MP9	Y	-36.972	30
60	MP9	Y	-36.972	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	0	12
2	MP3	Z	-22.3	12
3	MP3	X	0	84
4	MP3	Z	-22.3	84
5	MP1	X	0	9
6	MP1	Z	-22.54	9
7	MP1	X	0	66
8	MP1	Z	-22.54	66
9	MP2	X	0	12
10	MP2	Z	-7.25	12
11	MP2	X	0	50
12	MP2	Z	-7.25	50
13	MP2	X	0	62

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
14	MP2	Z	-7.92	62
15	MP2	X	0	93
16	MP2	Z	-7.92	93
17	MP1	X	0	18
18	MP1	Z	-4.36	18
19	MP1	X	0	36
20	MP1	Z	-4.36	36
21	MP3	X	0	54
22	MP3	Z	-5.92	54
23	MP3	X	0	78
24	MP3	Z	-5.92	78
25	MP1	X	0	42
26	MP1	Z	-5.93	42
27	MP1	X	0	69
28	MP1	Z	-5.93	69
29	MP1	X	0	18
30	MP1	Z	-3.68	18
31	MP1	X	0	33
32	MP1	Z	-3.68	33
33	MP3	X	0	30
34	MP3	Z	-4.27	30
35	MP3	X	0	48
36	MP3	Z	-4.27	48
37	M29	X	0	18
38	M29	Z	-5.11	18
39	M29	X	0	18
40	M29	Z	-5.11	18
41	M32	X	0	18
42	M32	Z	-9.11	18
43	M32	X	0	18
44	M32	Z	-9.11	18
45	MP6	X	0	12
46	MP6	Z	-22.35	12
47	MP6	X	0	96
48	MP6	Z	-22.35	96
49	MP4	X	0	9
50	MP4	Z	-22.48	9
51	MP4	X	0	90
52	MP4	Z	-22.48	90
53	MP5	X	0	12
54	MP5	Z	-5.54	12
55	MP5	X	0	50
56	MP5	Z	-5.54	50
57	MP5	X	0	62
58	MP5	Z	-6.66	62
59	MP5	X	0	93

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
60	MP5	Z	-6.66	93
61	MP4	X	0	18
62	MP4	Z	-3.78	18
63	MP4	X	0	36
64	MP4	Z	-3.78	36
65	MP6	X	0	54
66	MP6	Z	-5.15	54
67	MP6	X	0	78
68	MP6	Z	-5.15	78
69	MP4	X	0	42
70	MP4	Z	-5.16	42
71	MP4	X	0	69
72	MP4	Z	-5.16	69
73	MP4	X	0	18
74	MP4	Z	-2.91	18
75	MP4	X	0	33
76	MP4	Z	-2.91	33
77	MP6	X	0	30
78	MP6	Z	-3.87	30
79	MP6	X	0	48
80	MP6	Z	-3.87	48
81	M27	X	0	18
82	M27	Z	-5.11	18
83	M27	X	0	18
84	M27	Z	-5.11	18
85	MP9	X	0	12
86	MP9	Z	-22.35	12
87	MP9	X	0	96
88	MP9	Z	-22.35	96
89	MP7	X	0	9
90	MP7	Z	-22.48	9
91	MP7	X	0	90
92	MP7	Z	-22.48	90
93	MP8	X	0	12
94	MP8	Z	-5.54	12
95	MP8	X	0	50
96	MP8	Z	-5.54	50
97	MP8	X	0	62
98	MP8	Z	-6.66	62
99	MP8	X	0	93
100	MP8	Z	-6.66	93
101	MP7	X	0	18
102	MP7	Z	-3.78	18
103	MP7	X	0	36
104	MP7	Z	-3.78	36
105	MP9	X	0	54

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
106	MP9	Z	-5.15	54
107	MP9	X	0	78
108	MP9	Z	-5.15	78
109	MP7	X	0	42
110	MP7	Z	-5.16	42
111	MP7	X	0	69
112	MP7	Z	-5.16	69
113	MP7	X	0	18
114	MP7	Z	-2.91	18
115	MP7	X	0	33
116	MP7	Z	-2.91	33
117	MP9	X	0	30
118	MP9	Z	-3.87	30
119	MP9	X	0	48
120	MP9	Z	-3.87	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	-10.12	12
2	MP3	Z	-17.53	12
3	MP3	X	-10.12	84
4	MP3	Z	-17.53	84
5	MP1	X	-10.22	9
6	MP1	Z	-17.7	9
7	MP1	X	-10.22	66
8	MP1	Z	-17.7	66
9	MP2	X	-3.34	12
10	MP2	Z	-5.78	12
11	MP2	X	-3.34	50
12	MP2	Z	-5.78	50
13	MP2	X	-3.75	62
14	MP2	Z	-6.49	62
15	MP2	X	-3.75	93
16	MP2	Z	-6.49	93
17	MP1	X	-2.08	18
18	MP1	Z	-3.61	18
19	MP1	X	-2.08	36
20	MP1	Z	-3.61	36
21	MP3	X	-2.83	54
22	MP3	Z	-4.9	54
23	MP3	X	-2.83	78
24	MP3	Z	-4.9	78
25	MP1	X	-2.83	42
26	MP1	Z	-4.91	42
27	MP1	X	-2.83	69
28	MP1	Z	-4.91	69

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
29	MP1	X	-1.71	18
30	MP1	Z	-2.96	18
31	MP1	X	-1.71	33
32	MP1	Z	-2.96	33
33	MP3	X	-2.07	30
34	MP3	Z	-3.58	30
35	MP3	X	-2.07	48
36	MP3	Z	-3.58	48
37	M29	X	-2.55	18
38	M29	Z	-4.42	18
39	M29	X	-2.55	18
40	M29	Z	-4.42	18
41	M32	X	-4.21	18
42	M32	Z	-7.29	18
43	M32	X	-4.21	18
44	M32	Z	-7.29	18
45	MP6	X	-14.07	12
46	MP6	Z	-24.38	12
47	MP6	X	-14.07	96
48	MP6	Z	-24.38	96
49	MP4	X	-14.2	9
50	MP4	Z	-24.6	9
51	MP4	X	-14.2	90
52	MP4	Z	-24.6	90
53	MP5	X	-3.34	12
54	MP5	Z	-5.78	12
55	MP5	X	-3.34	50
56	MP5	Z	-5.78	50
57	MP5	X	-3.75	62
58	MP5	Z	-6.49	62
59	MP5	X	-3.75	93
60	MP5	Z	-6.49	93
61	MP4	X	-2.08	18
62	MP4	Z	-3.61	18
63	MP4	X	-2.08	36
64	MP4	Z	-3.61	36
65	MP6	X	-2.83	54
66	MP6	Z	-4.9	54
67	MP6	X	-2.83	78
68	MP6	Z	-4.9	78
69	MP4	X	-2.83	42
70	MP4	Z	-4.91	42
71	MP4	X	-2.83	69
72	MP4	Z	-4.91	69
73	MP4	X	-1.71	18
74	MP4	Z	-2.96	18

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
75	MP4	X	-1.71	33
76	MP4	Z	-2.96	33
77	MP6	X	-2.07	30
78	MP6	Z	-3.58	30
79	MP6	X	-2.07	48
80	MP6	Z	-3.58	48
81	M27	X	-2.55	18
82	M27	Z	-4.42	18
83	M27	X	-2.55	18
84	M27	Z	-4.42	18
85	MP9	X	-9.73	12
86	MP9	Z	-16.85	12
87	MP9	X	-9.73	96
88	MP9	Z	-16.85	96
89	MP7	X	-9.76	9
90	MP7	Z	-16.9	9
91	MP7	X	-9.76	90
92	MP7	Z	-16.9	90
93	MP8	X	-2.48	12
94	MP8	Z	-4.3	12
95	MP8	X	-2.48	50
96	MP8	Z	-4.3	50
97	MP8	X	-3.12	62
98	MP8	Z	-5.41	62
99	MP8	X	-3.12	93
100	MP8	Z	-5.41	93
101	MP7	X	-1.8	18
102	MP7	Z	-3.11	18
103	MP7	X	-1.8	36
104	MP7	Z	-3.11	36
105	MP9	X	-2.45	54
106	MP9	Z	-4.24	54
107	MP9	X	-2.45	78
108	MP9	Z	-4.24	78
109	MP7	X	-2.45	42
110	MP7	Z	-4.24	42
111	MP7	X	-2.45	69
112	MP7	Z	-4.24	69
113	MP7	X	-1.33	18
114	MP7	Z	-2.3	18
115	MP7	X	-1.33	33
116	MP7	Z	-2.3	33
117	MP9	X	-1.87	30
118	MP9	Z	-3.24	30
119	MP9	X	-1.87	48
120	MP9	Z	-3.24	48



Company : Infinigy Engineering, PLLC
Designer : AG
Job Number : 1039-Z0001-B
Model Name : 827050

9/13/2021
3:14:50 AM
Checked By : _____

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

Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
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Member Point Loads (BLC 19 : Ice Wind Load AZI 60)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	-13.96	12
2	MP3	Z	-8.06	12
3	MP3	X	-13.96	84
4	MP3	Z	-8.06	84
5	MP1	X	-14.05	9
6	MP1	Z	-8.11	9
7	MP1	X	-14.05	66
8	MP1	Z	-8.11	66
9	MP2	X	-4.79	12
10	MP2	Z	-2.77	12
11	MP2	X	-4.79	50
12	MP2	Z	-2.77	50
13	MP2	X	-5.77	62
14	MP2	Z	-3.33	62
15	MP2	X	-5.77	93
16	MP2	Z	-3.33	93
17	MP1	X	-3.28	18
18	MP1	Z	-1.89	18
19	MP1	X	-3.28	36
20	MP1	Z	-1.89	36
21	MP3	X	-4.46	54
22	MP3	Z	-2.58	54
23	MP3	X	-4.46	78
24	MP3	Z	-2.58	78
25	MP1	X	-4.46	42
26	MP1	Z	-2.58	42
27	MP1	X	-4.46	69
28	MP1	Z	-2.58	69
29	MP1	X	-2.52	18
30	MP1	Z	-1.45	18
31	MP1	X	-2.52	33
32	MP1	Z	-1.45	33
33	MP3	X	-3.35	30
34	MP3	Z	-1.94	30
35	MP3	X	-3.35	48
36	MP3	Z	-1.94	48
37	M29	X	-4.42	18
38	M29	Z	-2.55	18
39	M29	X	-4.42	18
40	M29	Z	-2.55	18
41	M32	X	-6.08	18
42	M32	Z	-3.51	18
43	M32	X	-6.08	18
44	M32	Z	-3.51	18
45	MP6	X	-26.89	12
46	MP6	Z	-15.52	12

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
47	MP6	X	-26.89	96
48	MP6	Z	-15.52	96
49	MP4	X	-27.16	9
50	MP4	Z	-15.68	9
51	MP4	X	-27.16	90
52	MP4	Z	-15.68	90
53	MP5	X	-6.28	12
54	MP5	Z	-3.62	12
55	MP5	X	-6.28	50
56	MP5	Z	-3.62	50
57	MP5	X	-6.86	62
58	MP5	Z	-3.96	62
59	MP5	X	-6.86	93
60	MP5	Z	-3.96	93
61	MP4	X	-3.77	18
62	MP4	Z	-2.18	18
63	MP4	X	-3.77	36
64	MP4	Z	-2.18	36
65	MP6	X	-5.12	54
66	MP6	Z	-2.96	54
67	MP6	X	-5.12	78
68	MP6	Z	-2.96	78
69	MP4	X	-5.13	42
70	MP4	Z	-2.96	42
71	MP4	X	-5.13	69
72	MP4	Z	-2.96	69
73	MP4	X	-3.19	18
74	MP4	Z	-1.84	18
75	MP4	X	-3.19	33
76	MP4	Z	-1.84	33
77	MP6	X	-3.7	30
78	MP6	Z	-2.13	30
79	MP6	X	-3.7	48
80	MP6	Z	-2.13	48
81	M27	X	-4.42	18
82	M27	Z	-2.55	18
83	M27	X	-4.42	18
84	M27	Z	-2.55	18
85	MP9	X	-19.36	12
86	MP9	Z	-11.18	12
87	MP9	X	-19.36	96
88	MP9	Z	-11.18	96
89	MP7	X	-19.47	9
90	MP7	Z	-11.24	9
91	MP7	X	-19.47	90
92	MP7	Z	-11.24	90

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
93	MP8	X	-4.79	12
94	MP8	Z	-2.77	12
95	MP8	X	-4.79	50
96	MP8	Z	-2.77	50
97	MP8	X	-5.77	62
98	MP8	Z	-3.33	62
99	MP8	X	-5.77	93
100	MP8	Z	-3.33	93
101	MP7	X	-3.28	18
102	MP7	Z	-1.89	18
103	MP7	X	-3.28	36
104	MP7	Z	-1.89	36
105	MP9	X	-4.46	54
106	MP9	Z	-2.58	54
107	MP9	X	-4.46	78
108	MP9	Z	-2.58	78
109	MP7	X	-4.46	42
110	MP7	Z	-2.58	42
111	MP7	X	-4.46	69
112	MP7	Z	-2.58	69
113	MP7	X	-2.52	18
114	MP7	Z	-1.45	18
115	MP7	X	-2.52	33
116	MP7	Z	-1.45	33
117	MP9	X	-3.35	30
118	MP9	Z	-1.94	30
119	MP9	X	-3.35	48
120	MP9	Z	-1.94	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	-14.06	12
2	MP3	Z	0	12
3	MP3	X	-14.06	84
4	MP3	Z	0	84
5	MP1	X	-14.11	9
6	MP1	Z	0	9
7	MP1	X	-14.11	66
8	MP1	Z	0	66
9	MP2	X	-4.97	12
10	MP2	Z	0	12
11	MP2	X	-4.97	50
12	MP2	Z	0	50
13	MP2	X	-6.24	62
14	MP2	Z	0	62
15	MP2	X	-6.24	93

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
16	MP2	Z	0	93
17	MP1	X	-3.59	18
18	MP1	Z	0	18
19	MP1	X	-3.59	36
20	MP1	Z	0	36
21	MP3	X	-4.9	54
22	MP3	Z	0	54
23	MP3	X	-4.9	78
24	MP3	Z	0	78
25	MP1	X	-4.9	42
26	MP1	Z	0	42
27	MP1	X	-4.9	69
28	MP1	Z	0	69
29	MP1	X	-2.65	18
30	MP1	Z	0	18
31	MP1	X	-2.65	33
32	MP1	Z	0	33
33	MP3	X	-3.74	30
34	MP3	Z	0	30
35	MP3	X	-3.74	48
36	MP3	Z	0	48
37	M29	X	-5.11	18
38	M29	Z	0	18
39	M29	X	-5.11	18
40	M29	Z	0	18
41	M32	X	-6.33	18
42	M32	Z	0	18
43	M32	X	-6.33	18
44	M32	Z	0	18
45	MP6	X	-28.15	12
46	MP6	Z	0	12
47	MP6	X	-28.15	96
48	MP6	Z	0	96
49	MP4	X	-28.4	9
50	MP4	Z	0	9
51	MP4	X	-28.4	90
52	MP4	Z	0	90
53	MP5	X	-6.68	12
54	MP5	Z	0	12
55	MP5	X	-6.68	50
56	MP5	Z	0	50
57	MP5	X	-7.5	62
58	MP5	Z	0	62
59	MP5	X	-7.5	93
60	MP5	Z	0	93
61	MP4	X	-4.17	18

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
62	MP4	Z	0	18
63	MP4	X	-4.17	36
64	MP4	Z	0	36
65	MP6	X	-5.66	54
66	MP6	Z	0	54
67	MP6	X	-5.66	78
68	MP6	Z	0	78
69	MP4	X	-5.67	42
70	MP4	Z	0	42
71	MP4	X	-5.67	69
72	MP4	Z	0	69
73	MP4	X	-3.42	18
74	MP4	Z	0	18
75	MP4	X	-3.42	33
76	MP4	Z	0	33
77	MP6	X	-4.14	30
78	MP6	Z	0	30
79	MP6	X	-4.14	48
80	MP6	Z	0	48
81	M27	X	-5.11	18
82	M27	Z	0	18
83	M27	X	-5.11	18
84	M27	Z	0	18
85	MP9	X	-28.15	12
86	MP9	Z	0	12
87	MP9	X	-28.15	96
88	MP9	Z	0	96
89	MP7	X	-28.4	9
90	MP7	Z	0	9
91	MP7	X	-28.4	90
92	MP7	Z	0	90
93	MP8	X	-6.68	12
94	MP8	Z	0	12
95	MP8	X	-6.68	50
96	MP8	Z	0	50
97	MP8	X	-7.5	62
98	MP8	Z	0	62
99	MP8	X	-7.5	93
100	MP8	Z	0	93
101	MP7	X	-4.17	18
102	MP7	Z	0	18
103	MP7	X	-4.17	36
104	MP7	Z	0	36
105	MP9	X	-5.66	54
106	MP9	Z	0	54
107	MP9	X	-5.66	78

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
108	MP9	Z	0	78
109	MP7	X	-5.67	42
110	MP7	Z	0	42
111	MP7	X	-5.67	69
112	MP7	Z	0	69
113	MP7	X	-3.42	18
114	MP7	Z	0	18
115	MP7	X	-3.42	33
116	MP7	Z	0	33
117	MP9	X	-4.14	30
118	MP9	Z	0	30
119	MP9	X	-4.14	48
120	MP9	Z	0	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	-13.96	12
2	MP3	Z	8.06	12
3	MP3	X	-13.96	84
4	MP3	Z	8.06	84
5	MP1	X	-14.05	9
6	MP1	Z	8.11	9
7	MP1	X	-14.05	66
8	MP1	Z	8.11	66
9	MP2	X	-4.79	12
10	MP2	Z	2.77	12
11	MP2	X	-4.79	50
12	MP2	Z	2.77	50
13	MP2	X	-5.77	62
14	MP2	Z	3.33	62
15	MP2	X	-5.77	93
16	MP2	Z	3.33	93
17	MP1	X	-3.28	18
18	MP1	Z	1.89	18
19	MP1	X	-3.28	36
20	MP1	Z	1.89	36
21	MP3	X	-4.46	54
22	MP3	Z	2.58	54
23	MP3	X	-4.46	78
24	MP3	Z	2.58	78
25	MP1	X	-4.46	42
26	MP1	Z	2.58	42
27	MP1	X	-4.46	69
28	MP1	Z	2.58	69
29	MP1	X	-2.52	18
30	MP1	Z	1.45	18

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
31	MP1	X	-2.52	33
32	MP1	Z	1.45	33
33	MP3	X	-3.35	30
34	MP3	Z	1.94	30
35	MP3	X	-3.35	48
36	MP3	Z	1.94	48
37	M29	X	-4.42	18
38	M29	Z	2.55	18
39	M29	X	-4.42	18
40	M29	Z	2.55	18
41	M32	X	-6.08	18
42	M32	Z	3.51	18
43	M32	X	-6.08	18
44	M32	Z	3.51	18
45	MP6	X	-19.36	12
46	MP6	Z	11.18	12
47	MP6	X	-19.36	96
48	MP6	Z	11.18	96
49	MP4	X	-19.47	9
50	MP4	Z	11.24	9
51	MP4	X	-19.47	90
52	MP4	Z	11.24	90
53	MP5	X	-4.79	12
54	MP5	Z	2.77	12
55	MP5	X	-4.79	50
56	MP5	Z	2.77	50
57	MP5	X	-5.77	62
58	MP5	Z	3.33	62
59	MP5	X	-5.77	93
60	MP5	Z	3.33	93
61	MP4	X	-3.28	18
62	MP4	Z	1.89	18
63	MP4	X	-3.28	36
64	MP4	Z	1.89	36
65	MP6	X	-4.46	54
66	MP6	Z	2.58	54
67	MP6	X	-4.46	78
68	MP6	Z	2.58	78
69	MP4	X	-4.46	42
70	MP4	Z	2.58	42
71	MP4	X	-4.46	69
72	MP4	Z	2.58	69
73	MP4	X	-2.52	18
74	MP4	Z	1.45	18
75	MP4	X	-2.52	33
76	MP4	Z	1.45	33

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
77	MP6	X	-3.35	30
78	MP6	Z	1.94	30
79	MP6	X	-3.35	48
80	MP6	Z	1.94	48
81	M27	X	-4.42	18
82	M27	Z	2.55	18
83	M27	X	-4.42	18
84	M27	Z	2.55	18
85	MP9	X	-26.89	12
86	MP9	Z	15.52	12
87	MP9	X	-26.89	96
88	MP9	Z	15.52	96
89	MP7	X	-27.16	9
90	MP7	Z	15.68	9
91	MP7	X	-27.16	90
92	MP7	Z	15.68	90
93	MP8	X	-6.28	12
94	MP8	Z	3.62	12
95	MP8	X	-6.28	50
96	MP8	Z	3.62	50
97	MP8	X	-6.86	62
98	MP8	Z	3.96	62
99	MP8	X	-6.86	93
100	MP8	Z	3.96	93
101	MP7	X	-3.77	18
102	MP7	Z	2.18	18
103	MP7	X	-3.77	36
104	MP7	Z	2.18	36
105	MP9	X	-5.12	54
106	MP9	Z	2.96	54
107	MP9	X	-5.12	78
108	MP9	Z	2.96	78
109	MP7	X	-5.13	42
110	MP7	Z	2.96	42
111	MP7	X	-5.13	69
112	MP7	Z	2.96	69
113	MP7	X	-3.19	18
114	MP7	Z	1.84	18
115	MP7	X	-3.19	33
116	MP7	Z	1.84	33
117	MP9	X	-3.7	30
118	MP9	Z	2.13	30
119	MP9	X	-3.7	48
120	MP9	Z	2.13	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	-10.12	12
2	MP3	Z	17.53	12
3	MP3	X	-10.12	84
4	MP3	Z	17.53	84
5	MP1	X	-10.22	9
6	MP1	Z	17.7	9
7	MP1	X	-10.22	66
8	MP1	Z	17.7	66
9	MP2	X	-3.34	12
10	MP2	Z	5.78	12
11	MP2	X	-3.34	50
12	MP2	Z	5.78	50
13	MP2	X	-3.75	62
14	MP2	Z	6.49	62
15	MP2	X	-3.75	93
16	MP2	Z	6.49	93
17	MP1	X	-2.08	18
18	MP1	Z	3.61	18
19	MP1	X	-2.08	36
20	MP1	Z	3.61	36
21	MP3	X	-2.83	54
22	MP3	Z	4.9	54
23	MP3	X	-2.83	78
24	MP3	Z	4.9	78
25	MP1	X	-2.83	42
26	MP1	Z	4.91	42
27	MP1	X	-2.83	69
28	MP1	Z	4.91	69
29	MP1	X	-1.71	18
30	MP1	Z	2.96	18
31	MP1	X	-1.71	33
32	MP1	Z	2.96	33
33	MP3	X	-2.07	30
34	MP3	Z	3.58	30
35	MP3	X	-2.07	48
36	MP3	Z	3.58	48
37	M29	X	-2.55	18
38	M29	Z	4.42	18
39	M29	X	-2.55	18
40	M29	Z	4.42	18
41	M32	X	-4.21	18
42	M32	Z	7.29	18
43	M32	X	-4.21	18
44	M32	Z	7.29	18
45	MP6	X	-9.73	12
46	MP6	Z	16.85	12

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
47	MP6	X	-9.73	96
48	MP6	Z	16.85	96
49	MP4	X	-9.76	9
50	MP4	Z	16.9	9
51	MP4	X	-9.76	90
52	MP4	Z	16.9	90
53	MP5	X	-2.48	12
54	MP5	Z	4.3	12
55	MP5	X	-2.48	50
56	MP5	Z	4.3	50
57	MP5	X	-3.12	62
58	MP5	Z	5.41	62
59	MP5	X	-3.12	93
60	MP5	Z	5.41	93
61	MP4	X	-1.8	18
62	MP4	Z	3.11	18
63	MP4	X	-1.8	36
64	MP4	Z	3.11	36
65	MP6	X	-2.45	54
66	MP6	Z	4.24	54
67	MP6	X	-2.45	78
68	MP6	Z	4.24	78
69	MP4	X	-2.45	42
70	MP4	Z	4.24	42
71	MP4	X	-2.45	69
72	MP4	Z	4.24	69
73	MP4	X	-1.33	18
74	MP4	Z	2.3	18
75	MP4	X	-1.33	33
76	MP4	Z	2.3	33
77	MP6	X	-1.87	30
78	MP6	Z	3.24	30
79	MP6	X	-1.87	48
80	MP6	Z	3.24	48
81	M27	X	-2.55	18
82	M27	Z	4.42	18
83	M27	X	-2.55	18
84	M27	Z	4.42	18
85	MP9	X	-14.07	12
86	MP9	Z	24.38	12
87	MP9	X	-14.07	96
88	MP9	Z	24.38	96
89	MP7	X	-14.2	9
90	MP7	Z	24.6	9
91	MP7	X	-14.2	90
92	MP7	Z	24.6	90

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
93	MP8	X	-3.34	12
94	MP8	Z	5.78	12
95	MP8	X	-3.34	50
96	MP8	Z	5.78	50
97	MP8	X	-3.75	62
98	MP8	Z	6.49	62
99	MP8	X	-3.75	93
100	MP8	Z	6.49	93
101	MP7	X	-2.08	18
102	MP7	Z	3.61	18
103	MP7	X	-2.08	36
104	MP7	Z	3.61	36
105	MP9	X	-2.83	54
106	MP9	Z	4.9	54
107	MP9	X	-2.83	78
108	MP9	Z	4.9	78
109	MP7	X	-2.83	42
110	MP7	Z	4.91	42
111	MP7	X	-2.83	69
112	MP7	Z	4.91	69
113	MP7	X	-1.71	18
114	MP7	Z	2.96	18
115	MP7	X	-1.71	33
116	MP7	Z	2.96	33
117	MP9	X	-2.07	30
118	MP9	Z	3.58	30
119	MP9	X	-2.07	48
120	MP9	Z	3.58	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	0	12
2	MP3	Z	22.3	12
3	MP3	X	0	84
4	MP3	Z	22.3	84
5	MP1	X	0	9
6	MP1	Z	22.54	9
7	MP1	X	0	66
8	MP1	Z	22.54	66
9	MP2	X	0	12
10	MP2	Z	7.25	12
11	MP2	X	0	50
12	MP2	Z	7.25	50
13	MP2	X	0	62
14	MP2	Z	7.92	62
15	MP2	X	0	93

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
16	MP2	Z	7.92	93
17	MP1	X	0	18
18	MP1	Z	4.36	18
19	MP1	X	0	36
20	MP1	Z	4.36	36
21	MP3	X	0	54
22	MP3	Z	5.92	54
23	MP3	X	0	78
24	MP3	Z	5.92	78
25	MP1	X	0	42
26	MP1	Z	5.93	42
27	MP1	X	0	69
28	MP1	Z	5.93	69
29	MP1	X	0	18
30	MP1	Z	3.68	18
31	MP1	X	0	33
32	MP1	Z	3.68	33
33	MP3	X	0	30
34	MP3	Z	4.27	30
35	MP3	X	0	48
36	MP3	Z	4.27	48
37	M29	X	0	18
38	M29	Z	5.11	18
39	M29	X	0	18
40	M29	Z	5.11	18
41	M32	X	0	18
42	M32	Z	9.11	18
43	M32	X	0	18
44	M32	Z	9.11	18
45	MP6	X	0	12
46	MP6	Z	22.35	12
47	MP6	X	0	96
48	MP6	Z	22.35	96
49	MP4	X	0	9
50	MP4	Z	22.48	9
51	MP4	X	0	90
52	MP4	Z	22.48	90
53	MP5	X	0	12
54	MP5	Z	5.54	12
55	MP5	X	0	50
56	MP5	Z	5.54	50
57	MP5	X	0	62
58	MP5	Z	6.66	62
59	MP5	X	0	93
60	MP5	Z	6.66	93
61	MP4	X	0	18

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
62	MP4	Z	3.78	18
63	MP4	X	0	36
64	MP4	Z	3.78	36
65	MP6	X	0	54
66	MP6	Z	5.15	54
67	MP6	X	0	78
68	MP6	Z	5.15	78
69	MP4	X	0	42
70	MP4	Z	5.16	42
71	MP4	X	0	69
72	MP4	Z	5.16	69
73	MP4	X	0	18
74	MP4	Z	2.91	18
75	MP4	X	0	33
76	MP4	Z	2.91	33
77	MP6	X	0	30
78	MP6	Z	3.87	30
79	MP6	X	0	48
80	MP6	Z	3.87	48
81	M27	X	0	18
82	M27	Z	5.11	18
83	M27	X	0	18
84	M27	Z	5.11	18
85	MP9	X	0	12
86	MP9	Z	22.35	12
87	MP9	X	0	96
88	MP9	Z	22.35	96
89	MP7	X	0	9
90	MP7	Z	22.48	9
91	MP7	X	0	90
92	MP7	Z	22.48	90
93	MP8	X	0	12
94	MP8	Z	5.54	12
95	MP8	X	0	50
96	MP8	Z	5.54	50
97	MP8	X	0	62
98	MP8	Z	6.66	62
99	MP8	X	0	93
100	MP8	Z	6.66	93
101	MP7	X	0	18
102	MP7	Z	3.78	18
103	MP7	X	0	36
104	MP7	Z	3.78	36
105	MP9	X	0	54
106	MP9	Z	5.15	54
107	MP9	X	0	78

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
108	MP9	Z	5.15	78
109	MP7	X	0	42
110	MP7	Z	5.16	42
111	MP7	X	0	69
112	MP7	Z	5.16	69
113	MP7	X	0	18
114	MP7	Z	2.91	18
115	MP7	X	0	33
116	MP7	Z	2.91	33
117	MP9	X	0	30
118	MP9	Z	3.87	30
119	MP9	X	0	48
120	MP9	Z	3.87	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	10.12	12
2	MP3	Z	17.53	12
3	MP3	X	10.12	84
4	MP3	Z	17.53	84
5	MP1	X	10.22	9
6	MP1	Z	17.7	9
7	MP1	X	10.22	66
8	MP1	Z	17.7	66
9	MP2	X	3.34	12
10	MP2	Z	5.78	12
11	MP2	X	3.34	50
12	MP2	Z	5.78	50
13	MP2	X	3.75	62
14	MP2	Z	6.49	62
15	MP2	X	3.75	93
16	MP2	Z	6.49	93
17	MP1	X	2.08	18
18	MP1	Z	3.61	18
19	MP1	X	2.08	36
20	MP1	Z	3.61	36
21	MP3	X	2.83	54
22	MP3	Z	4.9	54
23	MP3	X	2.83	78
24	MP3	Z	4.9	78
25	MP1	X	2.83	42
26	MP1	Z	4.91	42
27	MP1	X	2.83	69
28	MP1	Z	4.91	69
29	MP1	X	1.71	18
30	MP1	Z	2.96	18

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
31	MP1	X	1.71	33
32	MP1	Z	2.96	33
33	MP3	X	2.07	30
34	MP3	Z	3.58	30
35	MP3	X	2.07	48
36	MP3	Z	3.58	48
37	M29	X	2.55	18
38	M29	Z	4.42	18
39	M29	X	2.55	18
40	M29	Z	4.42	18
41	M32	X	4.21	18
42	M32	Z	7.29	18
43	M32	X	4.21	18
44	M32	Z	7.29	18
45	MP6	X	14.07	12
46	MP6	Z	24.38	12
47	MP6	X	14.07	96
48	MP6	Z	24.38	96
49	MP4	X	14.2	9
50	MP4	Z	24.6	9
51	MP4	X	14.2	90
52	MP4	Z	24.6	90
53	MP5	X	3.34	12
54	MP5	Z	5.78	12
55	MP5	X	3.34	50
56	MP5	Z	5.78	50
57	MP5	X	3.75	62
58	MP5	Z	6.49	62
59	MP5	X	3.75	93
60	MP5	Z	6.49	93
61	MP4	X	2.08	18
62	MP4	Z	3.61	18
63	MP4	X	2.08	36
64	MP4	Z	3.61	36
65	MP6	X	2.83	54
66	MP6	Z	4.9	54
67	MP6	X	2.83	78
68	MP6	Z	4.9	78
69	MP4	X	2.83	42
70	MP4	Z	4.91	42
71	MP4	X	2.83	69
72	MP4	Z	4.91	69
73	MP4	X	1.71	18
74	MP4	Z	2.96	18
75	MP4	X	1.71	33
76	MP4	Z	2.96	33

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
77	MP6	X	2.07	30
78	MP6	Z	3.58	30
79	MP6	X	2.07	48
80	MP6	Z	3.58	48
81	M27	X	2.55	18
82	M27	Z	4.42	18
83	M27	X	2.55	18
84	M27	Z	4.42	18
85	MP9	X	9.73	12
86	MP9	Z	16.85	12
87	MP9	X	9.73	96
88	MP9	Z	16.85	96
89	MP7	X	9.76	9
90	MP7	Z	16.9	9
91	MP7	X	9.76	90
92	MP7	Z	16.9	90
93	MP8	X	2.48	12
94	MP8	Z	4.3	12
95	MP8	X	2.48	50
96	MP8	Z	4.3	50
97	MP8	X	3.12	62
98	MP8	Z	5.41	62
99	MP8	X	3.12	93
100	MP8	Z	5.41	93
101	MP7	X	1.8	18
102	MP7	Z	3.11	18
103	MP7	X	1.8	36
104	MP7	Z	3.11	36
105	MP9	X	2.45	54
106	MP9	Z	4.24	54
107	MP9	X	2.45	78
108	MP9	Z	4.24	78
109	MP7	X	2.45	42
110	MP7	Z	4.24	42
111	MP7	X	2.45	69
112	MP7	Z	4.24	69
113	MP7	X	1.33	18
114	MP7	Z	2.3	18
115	MP7	X	1.33	33
116	MP7	Z	2.3	33
117	MP9	X	1.87	30
118	MP9	Z	3.24	30
119	MP9	X	1.87	48
120	MP9	Z	3.24	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	13.96	12
2	MP3	Z	8.06	12
3	MP3	X	13.96	84
4	MP3	Z	8.06	84
5	MP1	X	14.05	9
6	MP1	Z	8.11	9
7	MP1	X	14.05	66
8	MP1	Z	8.11	66
9	MP2	X	4.79	12
10	MP2	Z	2.77	12
11	MP2	X	4.79	50
12	MP2	Z	2.77	50
13	MP2	X	5.77	62
14	MP2	Z	3.33	62
15	MP2	X	5.77	93
16	MP2	Z	3.33	93
17	MP1	X	3.28	18
18	MP1	Z	1.89	18
19	MP1	X	3.28	36
20	MP1	Z	1.89	36
21	MP3	X	4.46	54
22	MP3	Z	2.58	54
23	MP3	X	4.46	78
24	MP3	Z	2.58	78
25	MP1	X	4.46	42
26	MP1	Z	2.58	42
27	MP1	X	4.46	69
28	MP1	Z	2.58	69
29	MP1	X	2.52	18
30	MP1	Z	1.45	18
31	MP1	X	2.52	33
32	MP1	Z	1.45	33
33	MP3	X	3.35	30
34	MP3	Z	1.94	30
35	MP3	X	3.35	48
36	MP3	Z	1.94	48
37	M29	X	4.42	18
38	M29	Z	2.55	18
39	M29	X	4.42	18
40	M29	Z	2.55	18
41	M32	X	6.08	18
42	M32	Z	3.51	18
43	M32	X	6.08	18
44	M32	Z	3.51	18
45	MP6	X	26.89	12
46	MP6	Z	15.52	12

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
47	MP6	X	26.89	96
48	MP6	Z	15.52	96
49	MP4	X	27.16	9
50	MP4	Z	15.68	9
51	MP4	X	27.16	90
52	MP4	Z	15.68	90
53	MP5	X	6.28	12
54	MP5	Z	3.62	12
55	MP5	X	6.28	50
56	MP5	Z	3.62	50
57	MP5	X	6.86	62
58	MP5	Z	3.96	62
59	MP5	X	6.86	93
60	MP5	Z	3.96	93
61	MP4	X	3.77	18
62	MP4	Z	2.18	18
63	MP4	X	3.77	36
64	MP4	Z	2.18	36
65	MP6	X	5.12	54
66	MP6	Z	2.96	54
67	MP6	X	5.12	78
68	MP6	Z	2.96	78
69	MP4	X	5.13	42
70	MP4	Z	2.96	42
71	MP4	X	5.13	69
72	MP4	Z	2.96	69
73	MP4	X	3.19	18
74	MP4	Z	1.84	18
75	MP4	X	3.19	33
76	MP4	Z	1.84	33
77	MP6	X	3.7	30
78	MP6	Z	2.13	30
79	MP6	X	3.7	48
80	MP6	Z	2.13	48
81	M27	X	4.42	18
82	M27	Z	2.55	18
83	M27	X	4.42	18
84	M27	Z	2.55	18
85	MP9	X	19.36	12
86	MP9	Z	11.18	12
87	MP9	X	19.36	96
88	MP9	Z	11.18	96
89	MP7	X	19.47	9
90	MP7	Z	11.24	9
91	MP7	X	19.47	90
92	MP7	Z	11.24	90

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
93	MP8	X	4.79	12
94	MP8	Z	2.77	12
95	MP8	X	4.79	50
96	MP8	Z	2.77	50
97	MP8	X	5.77	62
98	MP8	Z	3.33	62
99	MP8	X	5.77	93
100	MP8	Z	3.33	93
101	MP7	X	3.28	18
102	MP7	Z	1.89	18
103	MP7	X	3.28	36
104	MP7	Z	1.89	36
105	MP9	X	4.46	54
106	MP9	Z	2.58	54
107	MP9	X	4.46	78
108	MP9	Z	2.58	78
109	MP7	X	4.46	42
110	MP7	Z	2.58	42
111	MP7	X	4.46	69
112	MP7	Z	2.58	69
113	MP7	X	2.52	18
114	MP7	Z	1.45	18
115	MP7	X	2.52	33
116	MP7	Z	1.45	33
117	MP9	X	3.35	30
118	MP9	Z	1.94	30
119	MP9	X	3.35	48
120	MP9	Z	1.94	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	14.06	12
2	MP3	Z	0	12
3	MP3	X	14.06	84
4	MP3	Z	0	84
5	MP1	X	14.11	9
6	MP1	Z	0	9
7	MP1	X	14.11	66
8	MP1	Z	0	66
9	MP2	X	4.97	12
10	MP2	Z	0	12
11	MP2	X	4.97	50
12	MP2	Z	0	50
13	MP2	X	6.24	62
14	MP2	Z	0	62
15	MP2	X	6.24	93

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
16	MP2	Z	0	93
17	MP1	X	3.59	18
18	MP1	Z	0	18
19	MP1	X	3.59	36
20	MP1	Z	0	36
21	MP3	X	4.9	54
22	MP3	Z	0	54
23	MP3	X	4.9	78
24	MP3	Z	0	78
25	MP1	X	4.9	42
26	MP1	Z	0	42
27	MP1	X	4.9	69
28	MP1	Z	0	69
29	MP1	X	2.65	18
30	MP1	Z	0	18
31	MP1	X	2.65	33
32	MP1	Z	0	33
33	MP3	X	3.74	30
34	MP3	Z	0	30
35	MP3	X	3.74	48
36	MP3	Z	0	48
37	M29	X	5.11	18
38	M29	Z	0	18
39	M29	X	5.11	18
40	M29	Z	0	18
41	M32	X	6.33	18
42	M32	Z	0	18
43	M32	X	6.33	18
44	M32	Z	0	18
45	MP6	X	28.15	12
46	MP6	Z	0	12
47	MP6	X	28.15	96
48	MP6	Z	0	96
49	MP4	X	28.4	9
50	MP4	Z	0	9
51	MP4	X	28.4	90
52	MP4	Z	0	90
53	MP5	X	6.68	12
54	MP5	Z	0	12
55	MP5	X	6.68	50
56	MP5	Z	0	50
57	MP5	X	7.5	62
58	MP5	Z	0	62
59	MP5	X	7.5	93
60	MP5	Z	0	93
61	MP4	X	4.17	18

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
62	MP4	Z	0	18
63	MP4	X	4.17	36
64	MP4	Z	0	36
65	MP6	X	5.66	54
66	MP6	Z	0	54
67	MP6	X	5.66	78
68	MP6	Z	0	78
69	MP4	X	5.67	42
70	MP4	Z	0	42
71	MP4	X	5.67	69
72	MP4	Z	0	69
73	MP4	X	3.42	18
74	MP4	Z	0	18
75	MP4	X	3.42	33
76	MP4	Z	0	33
77	MP6	X	4.14	30
78	MP6	Z	0	30
79	MP6	X	4.14	48
80	MP6	Z	0	48
81	M27	X	5.11	18
82	M27	Z	0	18
83	M27	X	5.11	18
84	M27	Z	0	18
85	MP9	X	28.15	12
86	MP9	Z	0	12
87	MP9	X	28.15	96
88	MP9	Z	0	96
89	MP7	X	28.4	9
90	MP7	Z	0	9
91	MP7	X	28.4	90
92	MP7	Z	0	90
93	MP8	X	6.68	12
94	MP8	Z	0	12
95	MP8	X	6.68	50
96	MP8	Z	0	50
97	MP8	X	7.5	62
98	MP8	Z	0	62
99	MP8	X	7.5	93
100	MP8	Z	0	93
101	MP7	X	4.17	18
102	MP7	Z	0	18
103	MP7	X	4.17	36
104	MP7	Z	0	36
105	MP9	X	5.66	54
106	MP9	Z	0	54
107	MP9	X	5.66	78

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
108	MP9	Z	0	78
109	MP7	X	5.67	42
110	MP7	Z	0	42
111	MP7	X	5.67	69
112	MP7	Z	0	69
113	MP7	X	3.42	18
114	MP7	Z	0	18
115	MP7	X	3.42	33
116	MP7	Z	0	33
117	MP9	X	4.14	30
118	MP9	Z	0	30
119	MP9	X	4.14	48
120	MP9	Z	0	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	13.96	12
2	MP3	Z	-8.06	12
3	MP3	X	13.96	84
4	MP3	Z	-8.06	84
5	MP1	X	14.05	9
6	MP1	Z	-8.11	9
7	MP1	X	14.05	66
8	MP1	Z	-8.11	66
9	MP2	X	4.79	12
10	MP2	Z	-2.77	12
11	MP2	X	4.79	50
12	MP2	Z	-2.77	50
13	MP2	X	5.77	62
14	MP2	Z	-3.33	62
15	MP2	X	5.77	93
16	MP2	Z	-3.33	93
17	MP1	X	3.28	18
18	MP1	Z	-1.89	18
19	MP1	X	3.28	36
20	MP1	Z	-1.89	36
21	MP3	X	4.46	54
22	MP3	Z	-2.58	54
23	MP3	X	4.46	78
24	MP3	Z	-2.58	78
25	MP1	X	4.46	42
26	MP1	Z	-2.58	42
27	MP1	X	4.46	69
28	MP1	Z	-2.58	69
29	MP1	X	2.52	18
30	MP1	Z	-1.45	18

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
31	MP1	X	2.52	33
32	MP1	Z	-1.45	33
33	MP3	X	3.35	30
34	MP3	Z	-1.94	30
35	MP3	X	3.35	48
36	MP3	Z	-1.94	48
37	M29	X	4.42	18
38	M29	Z	-2.55	18
39	M29	X	4.42	18
40	M29	Z	-2.55	18
41	M32	X	6.08	18
42	M32	Z	-3.51	18
43	M32	X	6.08	18
44	M32	Z	-3.51	18
45	MP6	X	19.36	12
46	MP6	Z	-11.18	12
47	MP6	X	19.36	96
48	MP6	Z	-11.18	96
49	MP4	X	19.47	9
50	MP4	Z	-11.24	9
51	MP4	X	19.47	90
52	MP4	Z	-11.24	90
53	MP5	X	4.79	12
54	MP5	Z	-2.77	12
55	MP5	X	4.79	50
56	MP5	Z	-2.77	50
57	MP5	X	5.77	62
58	MP5	Z	-3.33	62
59	MP5	X	5.77	93
60	MP5	Z	-3.33	93
61	MP4	X	3.28	18
62	MP4	Z	-1.89	18
63	MP4	X	3.28	36
64	MP4	Z	-1.89	36
65	MP6	X	4.46	54
66	MP6	Z	-2.58	54
67	MP6	X	4.46	78
68	MP6	Z	-2.58	78
69	MP4	X	4.46	42
70	MP4	Z	-2.58	42
71	MP4	X	4.46	69
72	MP4	Z	-2.58	69
73	MP4	X	2.52	18
74	MP4	Z	-1.45	18
75	MP4	X	2.52	33
76	MP4	Z	-1.45	33

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
77	MP6	X	3.35	30
78	MP6	Z	-1.94	30
79	MP6	X	3.35	48
80	MP6	Z	-1.94	48
81	M27	X	4.42	18
82	M27	Z	-2.55	18
83	M27	X	4.42	18
84	M27	Z	-2.55	18
85	MP9	X	26.89	12
86	MP9	Z	-15.52	12
87	MP9	X	26.89	96
88	MP9	Z	-15.52	96
89	MP7	X	27.16	9
90	MP7	Z	-15.68	9
91	MP7	X	27.16	90
92	MP7	Z	-15.68	90
93	MP8	X	6.28	12
94	MP8	Z	-3.62	12
95	MP8	X	6.28	50
96	MP8	Z	-3.62	50
97	MP8	X	6.86	62
98	MP8	Z	-3.96	62
99	MP8	X	6.86	93
100	MP8	Z	-3.96	93
101	MP7	X	3.77	18
102	MP7	Z	-2.18	18
103	MP7	X	3.77	36
104	MP7	Z	-2.18	36
105	MP9	X	5.12	54
106	MP9	Z	-2.96	54
107	MP9	X	5.12	78
108	MP9	Z	-2.96	78
109	MP7	X	5.13	42
110	MP7	Z	-2.96	42
111	MP7	X	5.13	69
112	MP7	Z	-2.96	69
113	MP7	X	3.19	18
114	MP7	Z	-1.84	18
115	MP7	X	3.19	33
116	MP7	Z	-1.84	33
117	MP9	X	3.7	30
118	MP9	Z	-2.13	30
119	MP9	X	3.7	48
120	MP9	Z	-2.13	48

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	10.12	12
2	MP3	Z	-17.53	12
3	MP3	X	10.12	84
4	MP3	Z	-17.53	84
5	MP1	X	10.22	9
6	MP1	Z	-17.7	9
7	MP1	X	10.22	66
8	MP1	Z	-17.7	66
9	MP2	X	3.34	12
10	MP2	Z	-5.78	12
11	MP2	X	3.34	50
12	MP2	Z	-5.78	50
13	MP2	X	3.75	62
14	MP2	Z	-6.49	62
15	MP2	X	3.75	93
16	MP2	Z	-6.49	93
17	MP1	X	2.08	18
18	MP1	Z	-3.61	18
19	MP1	X	2.08	36
20	MP1	Z	-3.61	36
21	MP3	X	2.83	54
22	MP3	Z	-4.9	54
23	MP3	X	2.83	78
24	MP3	Z	-4.9	78
25	MP1	X	2.83	42
26	MP1	Z	-4.91	42
27	MP1	X	2.83	69
28	MP1	Z	-4.91	69
29	MP1	X	1.71	18
30	MP1	Z	-2.96	18
31	MP1	X	1.71	33
32	MP1	Z	-2.96	33
33	MP3	X	2.07	30
34	MP3	Z	-3.58	30
35	MP3	X	2.07	48
36	MP3	Z	-3.58	48
37	M29	X	2.55	18
38	M29	Z	-4.42	18
39	M29	X	2.55	18
40	M29	Z	-4.42	18
41	M32	X	4.21	18
42	M32	Z	-7.29	18
43	M32	X	4.21	18
44	M32	Z	-7.29	18
45	MP6	X	9.73	12
46	MP6	Z	-16.85	12

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
47	MP6	X	9.73	96
48	MP6	Z	-16.85	96
49	MP4	X	9.76	9
50	MP4	Z	-16.9	9
51	MP4	X	9.76	90
52	MP4	Z	-16.9	90
53	MP5	X	2.48	12
54	MP5	Z	-4.3	12
55	MP5	X	2.48	50
56	MP5	Z	-4.3	50
57	MP5	X	3.12	62
58	MP5	Z	-5.41	62
59	MP5	X	3.12	93
60	MP5	Z	-5.41	93
61	MP4	X	1.8	18
62	MP4	Z	-3.11	18
63	MP4	X	1.8	36
64	MP4	Z	-3.11	36
65	MP6	X	2.45	54
66	MP6	Z	-4.24	54
67	MP6	X	2.45	78
68	MP6	Z	-4.24	78
69	MP4	X	2.45	42
70	MP4	Z	-4.24	42
71	MP4	X	2.45	69
72	MP4	Z	-4.24	69
73	MP4	X	1.33	18
74	MP4	Z	-2.3	18
75	MP4	X	1.33	33
76	MP4	Z	-2.3	33
77	MP6	X	1.87	30
78	MP6	Z	-3.24	30
79	MP6	X	1.87	48
80	MP6	Z	-3.24	48
81	M27	X	2.55	18
82	M27	Z	-4.42	18
83	M27	X	2.55	18
84	M27	Z	-4.42	18
85	MP9	X	14.07	12
86	MP9	Z	-24.38	12
87	MP9	X	14.07	96
88	MP9	Z	-24.38	96
89	MP7	X	14.2	9
90	MP7	Z	-24.6	9
91	MP7	X	14.2	90
92	MP7	Z	-24.6	90

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
93	MP8	X	3.34	12
94	MP8	Z	-5.78	12
95	MP8	X	3.34	50
96	MP8	Z	-5.78	50
97	MP8	X	3.75	62
98	MP8	Z	-6.49	62
99	MP8	X	3.75	93
100	MP8	Z	-6.49	93
101	MP7	X	2.08	18
102	MP7	Z	-3.61	18
103	MP7	X	2.08	36
104	MP7	Z	-3.61	36
105	MP9	X	2.83	54
106	MP9	Z	-4.9	54
107	MP9	X	2.83	78
108	MP9	Z	-4.9	78
109	MP7	X	2.83	42
110	MP7	Z	-4.91	42
111	MP7	X	2.83	69
112	MP7	Z	-4.91	69
113	MP7	X	1.71	18
114	MP7	Z	-2.96	18
115	MP7	X	1.71	33
116	MP7	Z	-2.96	33
117	MP9	X	2.07	30
118	MP9	Z	-3.58	30
119	MP9	X	2.07	48
120	MP9	Z	-3.58	48

Member Point Loads (BLC 31 : Seismic Load Z)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	Z	-14.288	12
2	MP3	Z	-14.288	84
3	MP1	Z	-11.6	9
4	MP1	Z	-11.6	66
5	MP2	Z	-10.592	12
6	MP2	Z	-10.592	50
7	MP2	Z	-13.405	62
8	MP2	Z	-13.405	93
9	MP1	Z	-9.504	18
10	MP1	Z	-9.504	36
11	MP3	Z	-8.464	54
12	MP3	Z	-8.464	78
13	MP1	Z	-8.48	42
14	MP1	Z	-8.48	69
15	MP1	Z	-7.04	18

Member Point Loads (BLC 31 : Seismic Load Z) (Continued)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
16	MP1	Z	-7.04	33
17	MP3	Z	-11.36	30
18	MP3	Z	-11.36	48
19	M29	Z	-3.024	18
20	M29	Z	-3.024	18
21	M32	Z	-4.192	18
22	M32	Z	-4.192	18
23	MP6	Z	-16.896	12
24	MP6	Z	-16.896	96
25	MP4	Z	-14	9
26	MP4	Z	-14	90
27	MP5	Z	-10.592	12
28	MP5	Z	-10.592	50
29	MP5	Z	-13.405	62
30	MP5	Z	-13.405	93
31	MP4	Z	-9.504	18
32	MP4	Z	-9.504	36
33	MP6	Z	-8.464	54
34	MP6	Z	-8.464	78
35	MP4	Z	-8.48	42
36	MP4	Z	-8.48	69
37	MP4	Z	-7.04	18
38	MP4	Z	-7.04	33
39	MP6	Z	-11.36	30
40	MP6	Z	-11.36	48
41	M27	Z	-3.024	18
42	M27	Z	-3.024	18
43	MP9	Z	-16.896	12
44	MP9	Z	-16.896	96
45	MP7	Z	-14	9
46	MP7	Z	-14	90
47	MP8	Z	-10.592	12
48	MP8	Z	-10.592	50
49	MP8	Z	-13.405	62
50	MP8	Z	-13.405	93
51	MP7	Z	-9.504	18
52	MP7	Z	-9.504	36
53	MP9	Z	-8.464	54
54	MP9	Z	-8.464	78
55	MP7	Z	-8.48	42
56	MP7	Z	-8.48	69
57	MP7	Z	-7.04	18
58	MP7	Z	-7.04	33
59	MP9	Z	-11.36	30
60	MP9	Z	-11.36	48

Member Point Loads (BLC 32 : Seismic Load X)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
1	MP3	X	-14.288	12
2	MP3	X	-14.288	84
3	MP1	X	-11.6	9
4	MP1	X	-11.6	66
5	MP2	X	-10.592	12
6	MP2	X	-10.592	50
7	MP2	X	-13.405	62
8	MP2	X	-13.405	93
9	MP1	X	-9.504	18
10	MP1	X	-9.504	36
11	MP3	X	-8.464	54
12	MP3	X	-8.464	78
13	MP1	X	-8.48	42
14	MP1	X	-8.48	69
15	MP1	X	-7.04	18
16	MP1	X	-7.04	33
17	MP3	X	-11.36	30
18	MP3	X	-11.36	48
19	M29	X	-3.024	18
20	M29	X	-3.024	18
21	M32	X	-4.192	18
22	M32	X	-4.192	18
23	MP6	X	-16.896	12
24	MP6	X	-16.896	96
25	MP4	X	-14	9
26	MP4	X	-14	90
27	MP5	X	-10.592	12
28	MP5	X	-10.592	50
29	MP5	X	-13.405	62
30	MP5	X	-13.405	93
31	MP4	X	-9.504	18
32	MP4	X	-9.504	36
33	MP6	X	-8.464	54
34	MP6	X	-8.464	78
35	MP4	X	-8.48	42
36	MP4	X	-8.48	69
37	MP4	X	-7.04	18
38	MP4	X	-7.04	33
39	MP6	X	-11.36	30
40	MP6	X	-11.36	48
41	M27	X	-3.024	18
42	M27	X	-3.024	18
43	MP9	X	-16.896	12
44	MP9	X	-16.896	96
45	MP7	X	-14	9
46	MP7	X	-14	90

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

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [(in, %)]
47	MP8	X	-10.592	12
48	MP8	X	-10.592	50
49	MP8	X	-13.405	62
50	MP8	X	-13.405	93
51	MP7	X	-9.504	18
52	MP7	X	-9.504	36
53	MP9	X	-8.464	54
54	MP9	X	-8.464	78
55	MP7	X	-8.48	42
56	MP7	X	-8.48	69
57	MP7	X	-7.04	18
58	MP7	X	-7.04	33
59	MP9	X	-11.36	30
60	MP9	X	-11.36	48

Member Area Loads (BLC 1 : Self Weight)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [psf]
1	N36	N37	N34	N35	Y	Two Way	-1.75
2	N29	N25	N24	N28	Y	Two Way	-1.75
3	N43	N44	N45	N46	Y	Two Way	-1.75

Member Area Loads (BLC 16 : Ice Weight)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [psf]
1	N36	N37	N34	N35	Y	Two Way	-11.964
2	N29	N25	N24	N28	Y	Two Way	-11.964
3	N43	N44	N45	N46	Y	Two Way	-11.964

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

	Node Label	L, D, M	Direction	Magnitude [(lb, lb-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	N21	L	Y	-250

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

	Node Label	L, D, M	Direction	Magnitude [(lb, lb-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	N12	L	Y	-500

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

	Node Label	L, D, M	Direction	Magnitude [(lb, lb-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	N67	L	Y	-500

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

	Node Label	L, D, M	Direction	Magnitude [(lb, lb-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	N71	L	Y	-500

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

	Node Label	L, D, M	Direction	Magnitude [(lb, lb-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	N78	L	Y	-500

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

	Node Label	L, D, M	Direction	Magnitude [(lb, lb-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	N76	L	Y	-500

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

	Node Label	L, D, M	Direction	Magnitude [(lb, lb-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	N81	L	Y	-500

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

	Node Label	L, D, M	Direction	Magnitude [(lb, lb-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	N90	L	Y	-500

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

	Node Label	L, D, M	Direction	Magnitude [(lb, lb-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	N88	L	Y	-500

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

	Node Label	L, D, M	Direction	Magnitude [(lb, lb-ft), (in, rad), (lb*s ² /in, lb*s ² *in)]
1	N93	L	Y	-500

Envelope Node Reactions

	Node Label		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N2	max	1568.338	17	3183.08	27	2833.135	14	9662.76	27	2344.059	23	819.943	145
2		min	-1569.379	11	626.26	20	-2856.665	8	1650.646	20	-2344.757	5	-553.423	17
3	N31	max	2486.53	18	3012.065	31	1454.881	12	-434.542	14	1933.883	15	-1292.742	23
4		min	-2506.421	12	598.165	24	-1443.252	18	-4369.177	33	-1934.408	9	-8092.78	30
5	N40	max	2401.197	4	2981.441	35	1734.492	2	-685.584	14	1911.603	19	7783.111	36
6		min	-2380.761	22	588.363	16	-1723.485	20	-4644.933	33	-1912.538	13	1316.415	17
7	N48	max	213.225	5	402.246	36	367.795	2	670.112	2	331.135	25	371.969	23
8		min	-213.225	11	83.901	54	-367.795	8	-568.787	20	-330.987	7	-468.054	5

Envelope Node Reactions (Continued)

	Node Label		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
9	N50	max	89.073	17	178.35	30	89.073	14	157.056	14	29.687	15	152.98	23
10		min	-89.073	11	31.826	58	-89.073	8	-170.082	8	-29.687	9	-175.517	5
11	N54	max	89.073	17	178.35	37	89.073	14	157.056	14	29.687	19	175.517	11
12		min	-89.073	23	31.826	62	-89.073	8	-170.082	8	-29.687	13	-152.98	17
13	Totals:	max	6465.445	17	9848.184	28	6516.304	14						
14		min	-6465.445	11	2492.665	58	-6516.304	8						

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

Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
1	MP6 PIPE_2.0	0.942	65	4	0.051	65		4	9836.597	32130	1871.625	1871.625	1.733	H1-1b
2	MP9 PIPE_2.0	0.942	65	12	0.051	65		12	9836.597	32130	1871.625	1871.625	1.733	H1-1b
3	MP4 PIPE_2.0	0.893	54	4	0.057	54		4	14916.096	32130	1871.625	1871.625	1.662	H1-1b
4	MP7 PIPE_2.0	0.893	54	12	0.057	54		12	14916.096	32130	1871.625	1871.625	1.662	H1-1b
5	M1 HSS4X4X3	0.786	0	37	0.139	0	y	145	103844.845	106812	12661.5	12661.5	1	H1-1b
6	MP3 PIPE_2.0	0.759	65	8	0.043	65		8	9836.597	32130	1871.625	1871.625	1.504	H1-1b
7	M15 HSS4X4X3	0.739	0	33	0.139	0	y	173	103844.845	106812	12661.5	12661.5	1	H1-1b
8	M20 HSS4X4X3	0.731	0	33	0.135	0	y	93	103844.845	106812	12661.5	12661.5	1	H1-1b
9	M9 6x0.375	0.571	7.156	11	0.123	3.876	y	5	8015.894	72900	569.531	6830.656	1	H1-1b
10	M7 6x0.375	0.569	7.156	3	0.127	3.876	y	10	8015.894	72900	569.531	6830.656	1	H1-1b
11	M8 6x0.375	0.545	7.156	7	0.127	3.876	y	2	8015.894	72900	569.531	6830.656	1	H1-1b
12	MP1 PIPE_2.0	0.488	42	8	0.043	42		8	20866.733	32130	1871.625	1871.625	1.599	H1-1b
13	M13 L2x2x2	0.442	0	25	0.021	43.301	z	6	8341.08	15908.4	402.563	749.625	1.5	H2-1
14	M18 L2x2x2	0.437	0	17	0.021	43.301	z	10	8341.08	15908.4	402.563	749.625	1.5	H2-1
15	M14 L2x2x2	0.417	43.301	15	0.021	0	z	10	8341.08	15908.4	402.563	749.625	1.5	H2-1
16	M22 L2x2x2	0.412	43.301	23	0.02	0	z	6	8341.08	15908.4	402.563	749.625	1.5	H2-1
17	M23 L2x2x2	0.4	0	21	0.021	43.301	z	2	8341.08	15908.4	402.563	749.625	1.5	H2-1
18	M17 L2x2x2	0.377	43.301	19	0.023	0	z	2	8341.08	15908.4	402.563	749.625	1.5	H2-1
19	M4 PIPE_3.0	0.374	53.125	27	0.167	9.375		4	59302.836	65205	5748.75	5748.75	1	H1-1b
20	M2 PIPE_3.0	0.361	53.125	29	0.166	9.375		8	59302.836	65205	5748.75	5748.75	1	H1-1b
21	M3 PIPE_3.0	0.357	53.125	35	0.172	9.375		12	59302.836	65205	5748.75	5748.75	1	H1-1b
22	M11 HSS3X3X3	0.327	28.805	31	0.104	3.901	z	6	74961.54	78246	6796.5	6796.5	1.902	H1-1b
23	M16 HSS3X3X3	0.312	28.805	35	0.104	3.901	z	10	74961.54	78246	6796.5	6796.5	1.873	H1-1b
24	M12 HSS3X3X3	0.307	0	34	0.109	24.906	z	10	74961.159	78246	6796.5	6796.5	1.766	H1-1b
25	M21 HSS3X3X3	0.306	28.805	34	0.094	3.901	z	2	74961.54	78246	6796.5	6796.5	1.87	H1-1b
26	M32 PIPE_2.0	0.292	47.906	2	0.024	47.906		2	23088.171	32130	1871.625	1871.625	1.377	H1-1b
27	M24 HSS3X3X3	0.291	0	30	0.106	24.906	z	6	74961.159	78246	6796.5	6796.5	1.732	H1-1b
28	M19 HSS3X3X3	0.289	0	38	0.106	24.906	z	2	74961.159	78246	6796.5	6796.5	1.766	H1-1b
29	MP5 PIPE_2.0	0.24	55	4	0.022	55		4	9836.597	32130	1871.625	1871.625	1.784	H1-1b
30	MP8 PIPE_2.0	0.24	55	12	0.022	55		12	9836.597	32130	1871.625	1871.625	1.785	H1-1b
31	MP2 PIPE_2.0	0.239	55	8	0.022	55		8	9836.597	32130	1871.625	1871.625	1.439	H1-1b
32	M10 PIPE_3.0	0.095	30	7	0.122	30		2	57037.472	65205	5748.75	5748.75	1.397	H1-1b
33	M27 PIPE_2.0	0.092	47.906	8	0.008	47.906		8	23088.171	32130	1871.625	1871.625	1	H1-1b
34	M29 PIPE_2.0	0.092	47.906	8	0.008	47.906		8	23088.171	32130	1871.625	1871.625	1	H1-1b
35	M31 PIPE_2.0	0.044	47.906	11	0.004	47.906		11	23088.171	32130	1871.625	1871.625	1.673	H1-1b

APPENDIX D
ADDITIONAL CALCUATIONS

Bolt Calculation Tool, V1.5.1

PROJECT DATA	
Site Name:	Rocky Hill/ Rte 160_1
Site Number:	827050
Connection Description:	Standoff to Collar

MAXIMUM BOLT LOADS		
Bolt Tension:	9229.77	lbs
Bolt Shear:	939.69	lbs

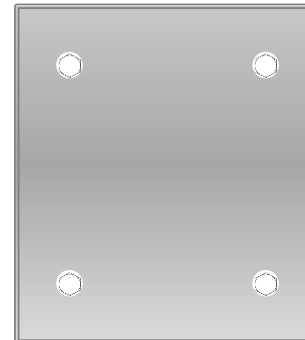
WORST CASE BOLT LOADS ¹		
Bolt Tension:	9229.77	lbs
Bolt Shear:	692.46	lbs

BOLT PROPERTIES		
Bolt Type:	Bolt	-
Bolt Diameter:	0.625	in
Bolt Grade:	A325	-
# of Bolts:	4	-
Threads Excluded?	No	-

¹ Worst case bolt loads correspond to Load combination #37 on member M1 in RISA-3D, which causes the maximum demand on the bolts.

Member Information	
I nodes of M1, M15, M20	

BOLT CHECK		
Tensile Strength	20340.15	
Shear Strength	13805.83	
Max Tensile Usage	45.4%	
Max Shear Usage	6.8%	
Interaction Check (Worst Case)	0.21	≤1.05
Result	Pass	



**RADIO FREQUENCY EMISSIONS ANALYSIS REPORT
EVALUATION OF HUMAN EXPOSURE POTENTIAL
TO NON-IONIZING EMISSIONS**

AT&T Existing Facility

Site ID: CTL01039

827050

**699 Old Main Street
Rocky Hill, Connecticut 06067**

February 18, 2022

EBI Project Number: 6222000321

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	63.90%

February 18, 2022

AT&T

Emissions Analysis for Site: CTL01039 - 827050

EBI Consulting was directed to analyze the proposed AT&T facility located at **699 Old Main Street** in **Rocky Hill, Connecticut** for the purpose of determining whether the emissions from the Proposed AT&T Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ 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 population 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 population 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 ($\mu\text{W}/\text{cm}^2$). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately $400 \mu\text{W}/\text{cm}^2$ and $467 \mu\text{W}/\text{cm}^2$, respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is $1000 \mu\text{W}/\text{cm}^2$. 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 and can exercise control over their exposure.

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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed AT&T Wireless antenna facility located at 699 Old Main Street in Rocky Hill, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since AT&T is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower. For power density calculations, the broadcast footprint of the AIR6449 antenna has been considered. Due to the beamforming nature of this antenna, the actual beam locations vary depending on demand and are narrow in nature. Using the broadcast footprint accounts for the potential location of beams at any given time.

For all calculations, all equipment was calculated using the following assumptions:

- 1) 4 LTE channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 2) 4 LTE FN channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 3) 4 5G channels (850 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 4) 4 LTE / 5G channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 5) 4 LTE / 5G channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 6) 4 LTE channels (WCS Band – 2300 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 25 Watts per Channel.



- 7) 2 C-Band Channels (3700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 144.58 Watts per Channel.
- 8) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 9) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 10) The antennas used in this modeling are the CCI TPA-65R-BU6D for the 700 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6419 for the 3700 MHz channel(s), the Ericsson AIR 6449 for the 3700 MHz channel(s), the CCI DMP65R-BU6DA for the 700 MHz / 850 MHz / 2300 MHz channel(s) in Sector A, the CCI TPA-65R-BU8DA-K for the 700 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6419 for the 3700 MHz channel(s), the Ericsson AIR 6449 for the 3700 MHz channel(s), the CCI DMP65R-BU6DA for the 700 MHz / 850 MHz / 2300 MHz channel(s) in Sector B, the CCI TPA-65R-BU8DA-K for the 700 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6419 for the 3700 MHz channel(s), the Ericsson AIR 6449 for the 3700 MHz channel(s), the CCI DMP65R-BU8DA for the 700 MHz / 850 MHz / 2300 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 11) The antenna mounting height centerline of the proposed antennas is 105 feet above ground level (AGL).
- 12) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.



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environmental | engineering | due diligence

13) All calculations were done with respect to uncontrolled / general population threshold limits.



AT&T Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	CCI TPA-65R-BU6D	Make / Model:	CCI TPA-65R-BU8DA-K	Make / Model:	CCI TPA-65R-BU8DA-K
Frequency Bands:	700 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	700 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	700 MHz / 1900 MHz / 2100 MHz
Gain:	12.35 dBd / 15.95 dBd / 16.25 dBd	Gain:	13.45 dBd / 15.95 dBd / 16.15 dBd	Gain:	13.45 dBd / 15.95 dBd / 16.15 dBd
Height (AGL):	105 feet	Height (AGL):	105 feet	Height (AGL):	105 feet
Channel Count:	12	Channel Count:	12	Channel Count:	12
Total TX Power (W):	480.00 Watts	Total TX Power (W):	480.00 Watts	Total TX Power (W):	480.00 Watts
ERP (W):	15,792.60	ERP (W):	16,431.31	ERP (W):	16,431.31
Antenna A1 MPE %:	6.94%	Antenna B1 MPE %:	7.51%	Antenna C1 MPE %:	7.51%
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	Ericsson AIR 6419	Make / Model:	Ericsson AIR 6419	Make / Model:	Ericsson AIR 6419
Frequency Bands:	3700 MHz	Frequency Bands:	3700 MHz	Frequency Bands:	3700 MHz
Gain:	23.45 dBd	Gain:	23.45 dBd	Gain:	23.45 dBd
Height (AGL):	105 feet	Height (AGL):	105 feet	Height (AGL):	105 feet
Channel Count:	1	Channel Count:	1	Channel Count:	1
Total TX Power (W):	144.58 Watts	Total TX Power (W):	144.58 Watts	Total TX Power (W):	144.58 Watts
ERP (W):	31,996.92	ERP (W):	31,996.92	ERP (W):	31,996.92
Antenna A2 MPE %:	11.74%	Antenna B2 MPE %:	11.74%	Antenna C2 MPE %:	11.74%
Antenna #:	3	Antenna #:	3	Antenna #:	3
Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449
Frequency Bands:	3700 MHz	Frequency Bands:	3700 MHz	Frequency Bands:	3700 MHz
Gain:	23.45 dBd	Gain:	23.45 dBd	Gain:	23.45 dBd
Height (AGL):	105 feet	Height (AGL):	105 feet	Height (AGL):	105 feet
Channel Count:	1	Channel Count:	1	Channel Count:	1
Total TX Power (W):	144.58 Watts	Total TX Power (W):	144.58 Watts	Total TX Power (W):	144.58 Watts
ERP (W):	31,996.92	ERP (W):	31,996.92	ERP (W):	31,996.92
Antenna A3 MPE %:	11.74%	Antenna B3 MPE %:	11.74%	Antenna C3 MPE %:	11.74%
Antenna #:	4	Antenna #:	4	Antenna #:	4
Make / Model:	CCI DMP65R-BU6DA	Make / Model:	CCI DMP65R-BU6DA	Make / Model:	CCI DMP65R-BU8DA
Frequency Bands:	700 MHz / 850 MHz / 2300 MHz	Frequency Bands:	700 MHz / 850 MHz / 2300 MHz	Frequency Bands:	700 MHz / 850 MHz / 2300 MHz
Gain:	11.85 dBd / 12.45 dBd / 16.25 dBd	Gain:	11.85 dBd / 12.45 dBd / 15.95 dBd	Gain:	11.85 dBd / 12.45 dBd / 15.95 dBd
Height (AGL):	105 feet	Height (AGL):	105 feet	Height (AGL):	105 feet
Channel Count:	12	Channel Count:	12	Channel Count:	12
Total TX Power (W):	420.00 Watts	Total TX Power (W):	420.00 Watts	Total TX Power (W):	420.00 Watts
ERP (W):	9,479.38	ERP (W):	9,197.92	ERP (W):	9,197.92
Antenna A4 MPE %:	5.29%	Antenna B4 MPE %:	5.19%	Antenna C4 MPE %:	5.19%

- An adjusted power reduction factor of 0.32 was applied to the AIR 6449 antennas per guidance from AT&T.
- Specifications were not available for the Ericsson AIR 6419 antenna. Per AT&T, specifications for the AIR 6449 antenna were used to model the 6419 due to its similarity.



EBI Consulting

environmental | engineering | due diligence

Site Composite MPE %	
Carrier	MPE %
AT&T (Max at Sector B):	36.17%
Dish	0.02%
Various Others	2.85%
Sprint	3.33%
T-Mobile	9.84%
Metro PCS	1.54%
Verizon	9.51%
Nextel	0.64%
Site Total MPE % :	63.90%

AT&T MPE % Per Sector	
AT&T Sector A Total:	35.71%
AT&T Sector B Total:	36.17%
AT&T Sector C Total:	36.17%
Site Total MPE % :	63.90%

AT&T Maximum MPE Power Values (Sector B)

AT&T Frequency Band / Technology (Sector B)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
AT&T 700 MHz LTE FN	4	885.24	105.0	12.99	700 MHz LTE FN	467	2.78%
AT&T 1900 MHz LTE/5G	4	1574.20	105.0	23.10	1900 MHz LTE/5G	1000	2.31%
AT&T 2100 MHz LTE/5G	4	1648.39	105.0	24.19	2100 MHz LTE/5G	1000	2.42%
AT&T 3700 MHz C-Band	1	31996.92	105.0	117.37	3700 MHz C-Band	1000	11.74%
AT&T 3700 MHz C-Band	1	31996.92	105.0	117.37	3700 MHz C-Band	1000	11.74%
AT&T 700 MHz LTE	4	612.43	105.0	8.99	700 MHz LTE	467	1.92%
AT&T 850 MHz 5G	4	703.17	105.0	10.32	850 MHz 5G	567	1.82%
AT&T 2300 MHz LTE	4	983.88	105.0	14.44	2300 MHz LTE	1000	1.44%
						Total:	36.17%

• NOTE: Totals may vary by approximately 0.01% due to summation of remainders in calculations.



Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the AT&T facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

AT&T Sector	Power Density Value (%)
Sector A:	35.71%
Sector B:	36.17%
Sector C:	36.17%
AT&T Maximum MPE % (Sector B):	36.17%
Site Total:	63.90%
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **63.90%** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

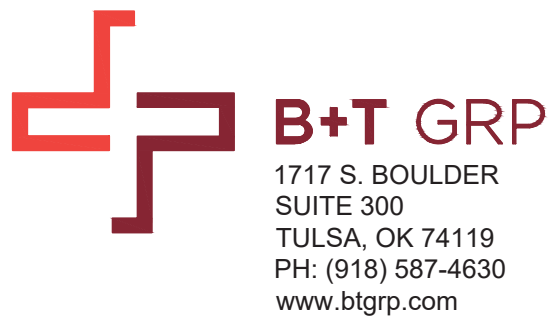


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DISCLAIMER PROVIDED BY AT&T. THIS STATEMENT DOES NOT CONSTITUTE ENGINEERING ANALYSIS OR DESIGN.



AT&T SITE NUMBER: CTL01039
AT&T SITE NAME: ROCKY HILL/ RTE 160_1
AT&T FA CODE: 10128682
AT&T PACE NUMBER: MRCTB052075, MRCTB051133, MRCTB050789, MRCT051474, MRCTB050941, MRCTB051461
AT&T PROJECT: 5G NR RADIO/5G NR 1SR CBAND, CELL SITE RF MODIFICATIONS/BBU ADD, ANTENNA MODIFICATIONS/4TX4RX SOFTWARE RETROFIT, LTE NEXT CARRIER/LTE 5C, 5G NR RADIO/5G NR 1DR-1, 5G NR RADIO/5G NR 1SR CBAND

BUSINESS UNIT #: 827050
SITE ADDRESS: 699 OLD MAIN ST. ROCKY HILL, CT 06067
COUNTY: HARTFORD
SITE TYPE: MONOPOLE
TOWER HEIGHT: 150'-10"



AT&T SITE NUMBER:
CTL01039

BU #: 827050
ROCKY HILL/ RTE 160_1

699 OLD MAIN ST.
ROCKY HILL, CT 06067

EXISTING
150'-10" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	10/4/21	AN/SA	PRELIMINARY REVIEW	JHW
B	10/12/21	JHW	PRELIMINARY REVIEW	JHW
0	12/22/21	JHW	CONSTRUCTION	JHW



B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/22

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

SHEET NUMBER:

T-1

REVISION:

0

SITE INFORMATION

CROWN CASTLE USA INC. SITE NAME:	ROCKY HILL/ RTE 160_1
SITE ADDRESS:	699 OLD MAIN ST. ROCKY HILL, CT 06067
COUNTY:	HARTFORD
MAP/PARCEL #:	10-045
AREA OF CONSTRUCTION:	EXISTING
LATITUDE:	41° 40' 5.77"
LONGITUDE:	-72° 38' 16.93"
LAT/LONG TYPE:	NAD83
GROUND ELEVATION:	100'
CURRENT ZONING:	R-20
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:	ROCKY HILL TOWN OF 761 OLD MAIN STREET ROCKY HILL, CT 06067
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:	N/A
TELCO PROVIDER:	N/A

DRAWING INDEX

SHEET #	SHEET DESCRIPTION
T-1	TITLE SHEET
T-2	GENERAL NOTES
C-1.1	SITE PLAN
C-1.2	EXISTING & FINAL EQUIPMENT PLANS
C-2	FINAL ELEVATION & ANTENNA PLANS
C-3	FINAL EQUIPMENT SCHEDULE
C-4	EQUIPMENT MOUNTING DETAILS
C-5.1 TO C-5.2	EQUIPMENT SPECS
G-1	GROUNDING SCHEMATIC
G-2	GROUNDING DETAILS
ATTACHED	PLUMBING DIAGRAM
ATTACHED	MOUNT SPEC

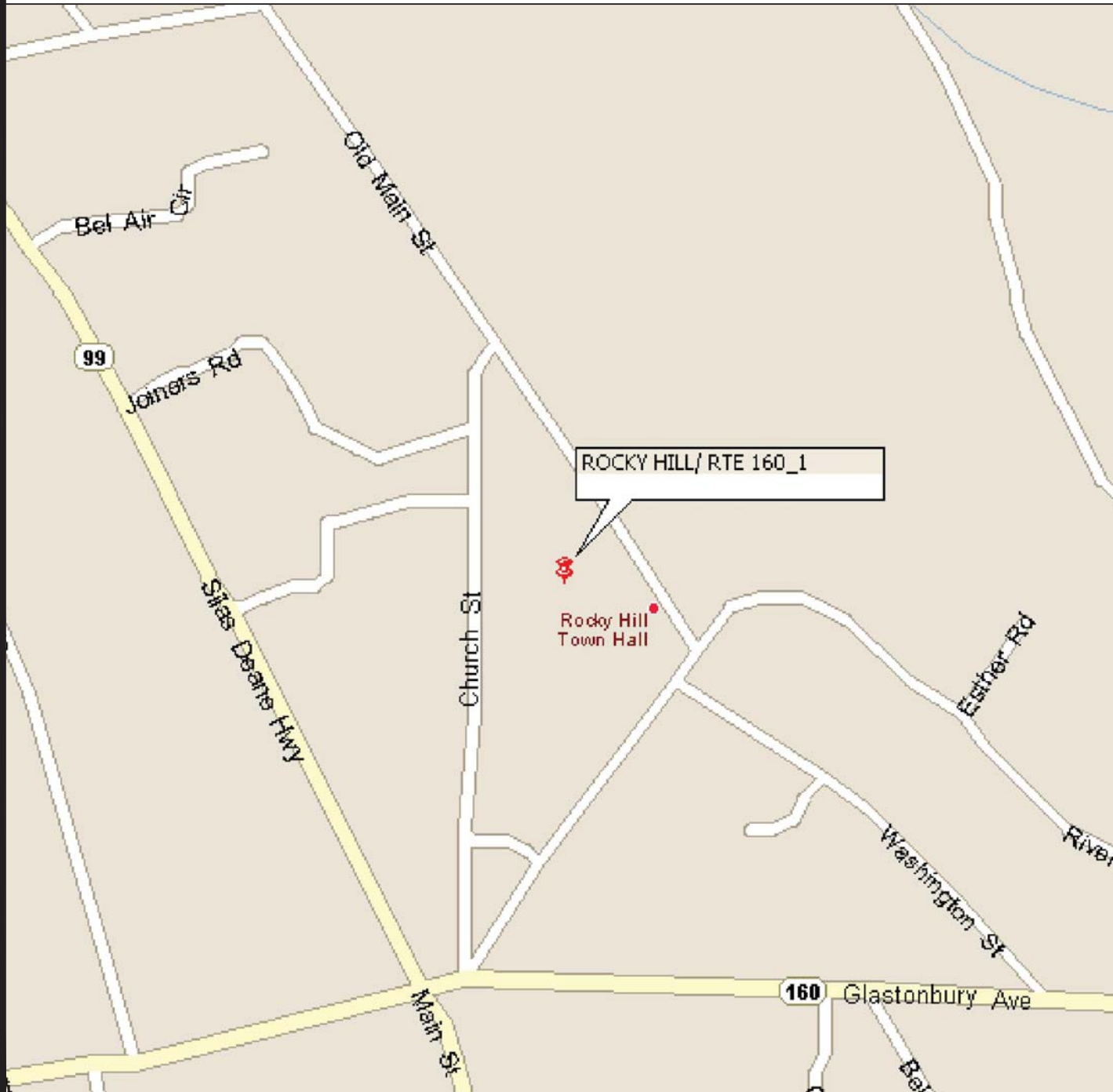
ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR FULL SIZE. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.



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



LOCATION MAP



NO SCALE

SITE PHOTO



PROJECT TEAM

A&E FIRM:	B+T GROUP 1717 S BOULDER AVE, SUITE 300 TULSA, OK 74119 MARVIN PHILLIPS marvin.phillips@btgrp.com
CROWN CASTLE USA INC. DISTRICT CONTACTS:	3530 TORINGDON WAY, SUITE 300 CHARLOTTE, NC 28277
	PAUL PEDICONE - PROJECT MANAGER PAUL.PEDICONE@CROWNCastle.COM
	JASON D'AMICO - CONSTRUCTION MANAGER JASON.DAMICO@CROWNCastle.COM

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

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) POWERWAVE - 7750 ANTENNAS
- REMOVE (1) CCI - HPA-65R-BU1-H6 ANTENNAS
- REMOVE (1) QUINTEL - QS6612-2 ANTENNA
- REMOVE (2) CCI - HPA-65R-BU1-H8 ANTENNAS
- REMOVE (2) CCI - TPA-65R-LCUUUU-H8 ANTENNA
- REMOVE (3) ERICSSON - RRUS-11 B12 RADIOS
- REMOVE (3) ERICSSON - RRUS-32 B2 RADIOS
- REMOVE (6) POWERWAVE - LGP21401 TMAS
- REMOVE (6) POWERWAVE - LGP21901 DIPLEXERS
- REMOVE (3) COMMSCOPE - DB0061FHV1-2 DIPLEXERS
- REMOVE (6) COAX CABLES (1.5/8")
- REMOVE (2) COAX CABLES (3/8")
- REMOVE (1) RET CABLE (3/8")
- RELOCATE (3) ERICSSON - RRUS-32 B66A RADIOS
- INSTALL (1) CCI - TPA-65R-BU6D-K ANTENNA
- INSTALL (2) CCI - TPA-65R-BU8DA-K ANTENNAS
- INSTALL (2) CCI - DMP65R-BU8DA ANTENNAS
- INSTALL (1) CCI - DMP65R-BU6DA ANTENNA
- INSTALL (3) ERICSSON - AIR649 N71D ANTENNAS
- INSTALL (3) ERICSSON - AIR6419 N77G ANTENNAS
- INSTALL (3) ERICSSON - 4478 B14 RADIOS
- INSTALL (3) ERICSSON - 4415 B25 RADIOS
- INSTALL (3) ERICSSON - 4449 B5/B12 RADIOS
- INSTALL (3) Y-CABLES

TOWER COPE OF WORK CONTINUED:

- INSTALL (1) RAYCAP - DC9-48-60-24-8C-EV SQUID
- INSTALL (3) DC CABLES (7/8")
- INSTALL (1) FIBER CABLE
- INSTALL (3) COMMSCOPE - RR-FA2 BACK TO BACK MOUNTS
- INSTALL (3) SITE PRO1 - SMAST-6 MOUNT PIPES

GROUND SCOPE OF WORK:

- INSTALL (1) 6673 FHG
- INSTALL (1) 6630 (+HDL)
- INSTALL (3) RECTIFIERS IN EXISTING POWER PLANT
- INSTALL (1) 19" DISTRIBUTION SHELF

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.

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	2015 IBC W/AMENDMENTS
MECHANICAL	2015 IMC W/AMENDMENTS
ELECTRICAL	2017 NEC

REFERENCE DOCUMENTS:

STRUCTURAL ANALYSIS:	CROWN CASTLE
DATED:	9/29/21
MOUNT ANALYSIS:	INFINIGY ENGINEERING, PLLC
DATED:	9/13/21
AC ELECTRICAL POWER DESIGN:	N/A
DATED:	N/A
RFDS REVISION:	PRELIMINARY
DATED:	8/5/21
ORDER ID:	556527
REVISION:	0

CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:

- 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.
- "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.
- 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.
- 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).
- 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." 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.
- 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.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- 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.
- ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
- 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.
- 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.
- 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.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- 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.
- 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.
- 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.
- 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.
- CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
- 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.

GREENFIELD GROUNDING NOTES:

- 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.
- 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.
- 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.
- METAL CONDUIT AND TRAY SHALL BE GROUNDDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
- 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.
- 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.
- 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.
- ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
- ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
- USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
- EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
- ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
- COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
- ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
- APPROVED ANTIOXIDANT COATINGS (i.e. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
- ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
- MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
- BOND ALL METALLIC OBJECTS WITHIN 6 ft. OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.
- 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.
- 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).
- 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).

GENERAL NOTES:

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- 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.
- 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.
- 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.
- 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.
- CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

- 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.
- UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.
- 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.
- 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.
- ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615. ALL WELDED WIRE FABRIC (WFF) 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
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"
- 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.

ELECTRICAL INSTALLATION NOTES:

- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
- CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
- WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
- ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
- ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.
- 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. VERIFY 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.
- 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.
- 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).
- PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
- ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- ALL POWER AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE COPPER CONDUCTOR (#14 OR LARGER) WIRE TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
- 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.
- POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI-CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.
- POWER AND CONTROL WIRING FOR USE IN CABLE TRAY SHALL BE MULTI-CONDUCTOR, TYPE TO CABLE (#14 OR LARGER), WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
- 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).
- RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
- ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- ELECTRICAL METALLIC TUBING (EMT) OR METAL-CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
- LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS NOT ALLOWABLE.
- CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND THE NEC.
- WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOLD SPECIMATE WIREWAY).
- SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "AT&T".
- ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.

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

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

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
RUU	REMOTE RADIO UNIT
SIAD	SMART INTEGRATED DEVICE
TMA	TOWER MOUNTED AMPLIFIER
TYP	TYPICAL
UMTS	UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
W.P.	WORK POINT

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



AT&T

575 MOROSGO DRIVE
ATLANTA, GA 30324-3300



CROWN CASTLE

3 CORPORATE PARK DRIVE, SUITE 101
CLIFTON PARK, NY 12065



B+T GRP

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AT&T SITE NUMBER:
CTL01039

BU #: **827050**
ROCKY HILL/ RTE
160_1

699 OLD MAIN ST.
ROCKY HILL, CT 06067

EXISTING
150'-10" MONOPOLE

ISSUED FOR:

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A	10/4/21	AN/SA	PRELIMINARY REVIEW	JHW
B	10/12/21	JHW	PRELIMINARY REVIEW	JHW
0	12/22/21	JHW	CONSTRUCTION	JHW



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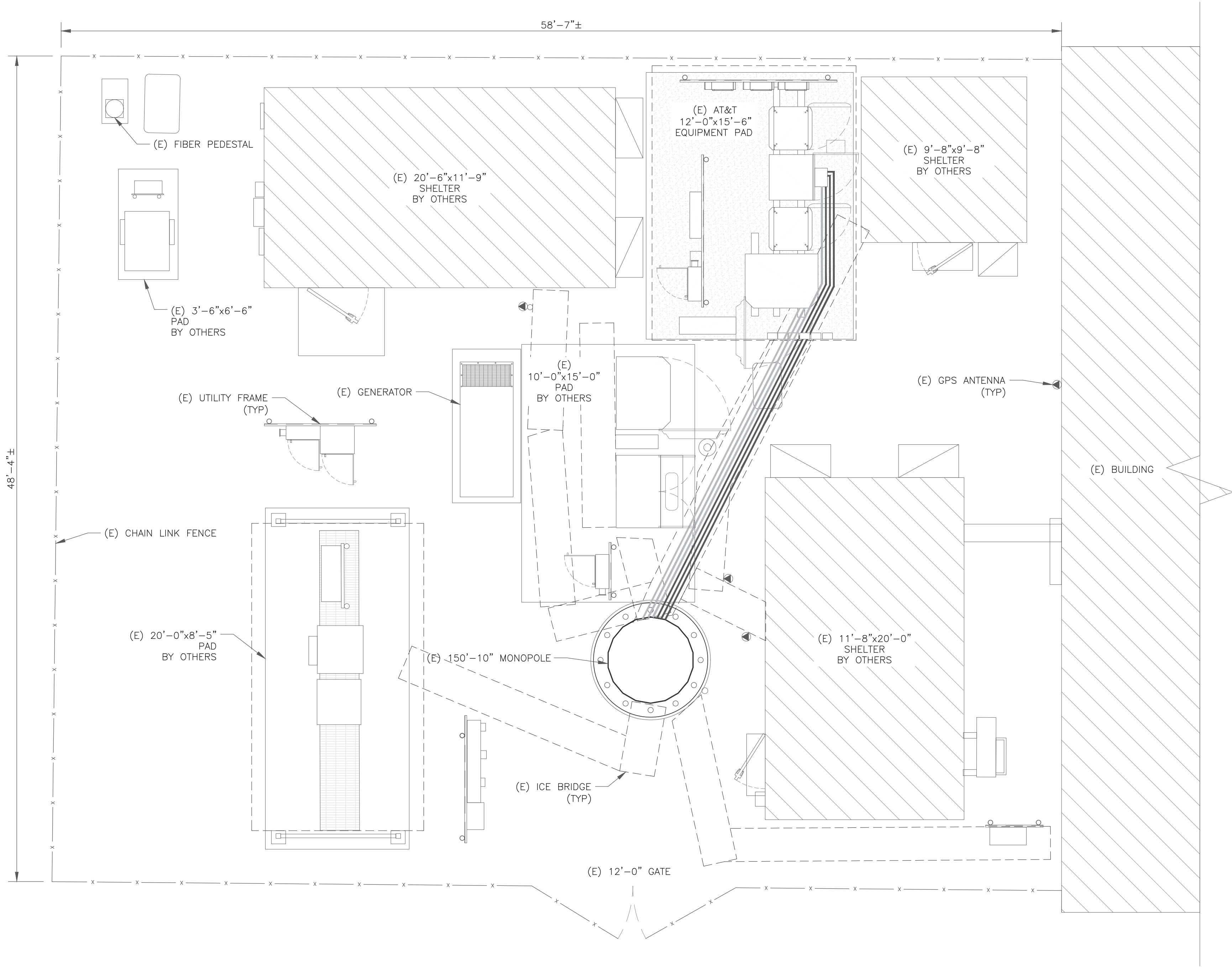
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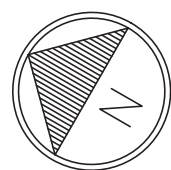
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1 SITE PLAN

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



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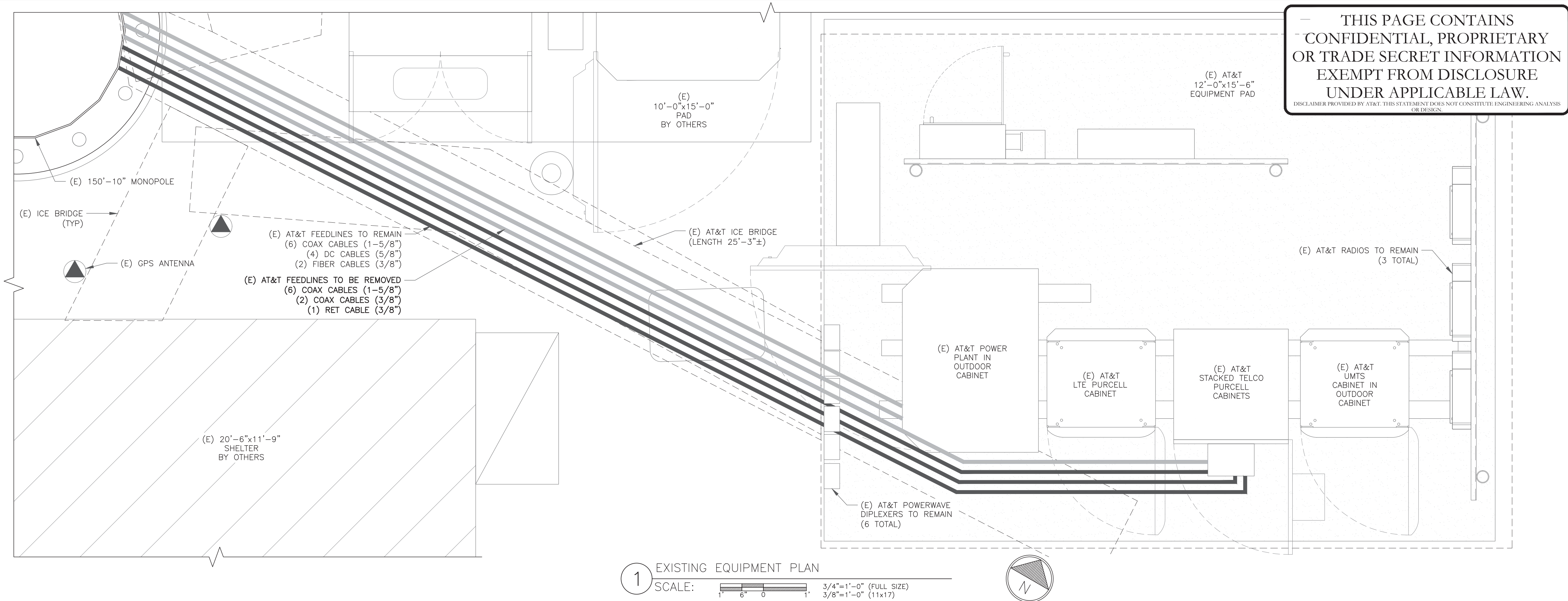
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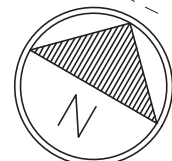
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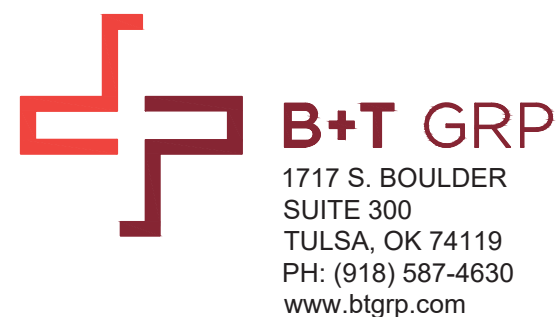
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1 EXISTING EQUIPMENT PLAN
SCALE: 3/4"=1'-0" (FULL SIZE)
3/8"=1'-0" (11x17)



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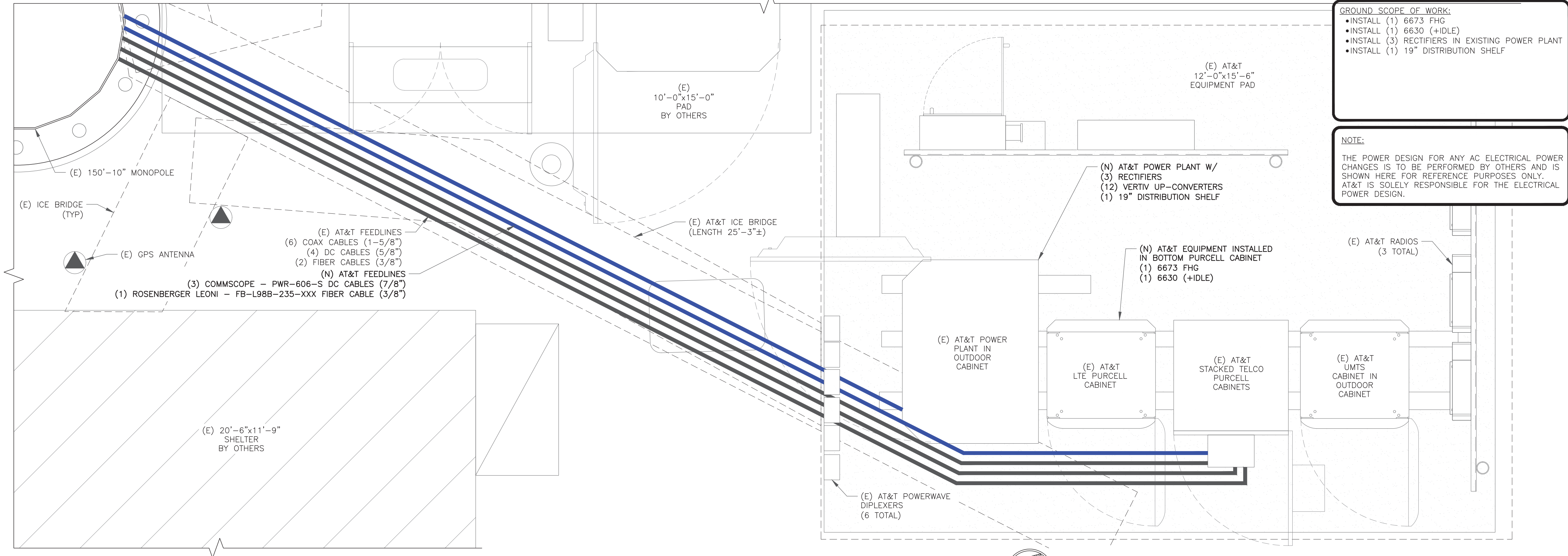


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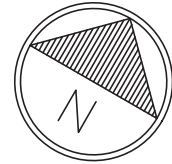
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2 FINAL EQUIPMENT PLAN
SCALE: 3/4"=1'-0" (FULL SIZE)
3/8"=1'-0" (11x17)



- GROUND SCOPE OF WORK:
- INSTALL (1) 6673 FHG
 - INSTALL (1) 6630 (+IDLE)
 - INSTALL (3) RECTIFIERS IN EXISTING POWER PLANT
 - INSTALL (1) 19" DISTRIBUTION SHELF

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.

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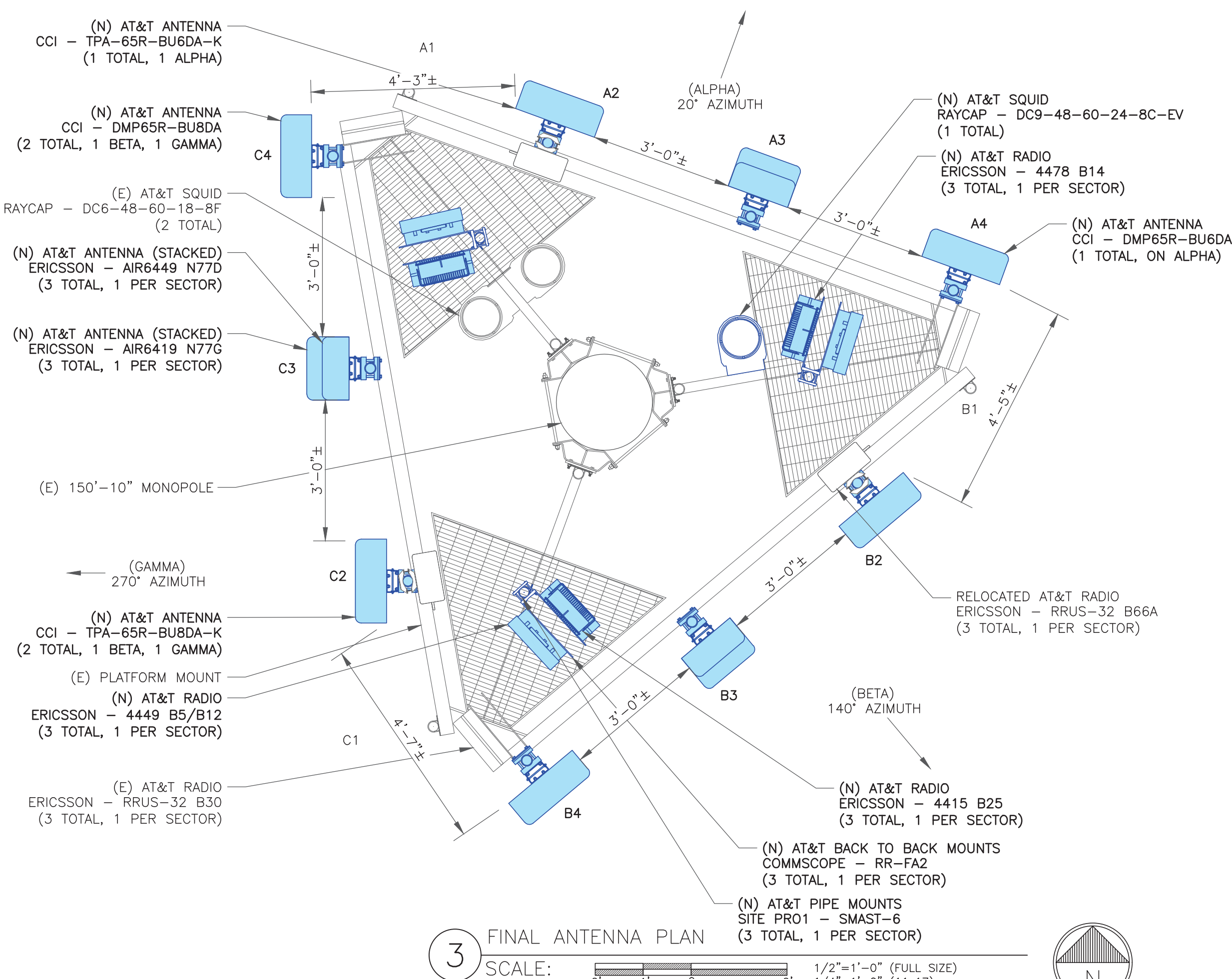
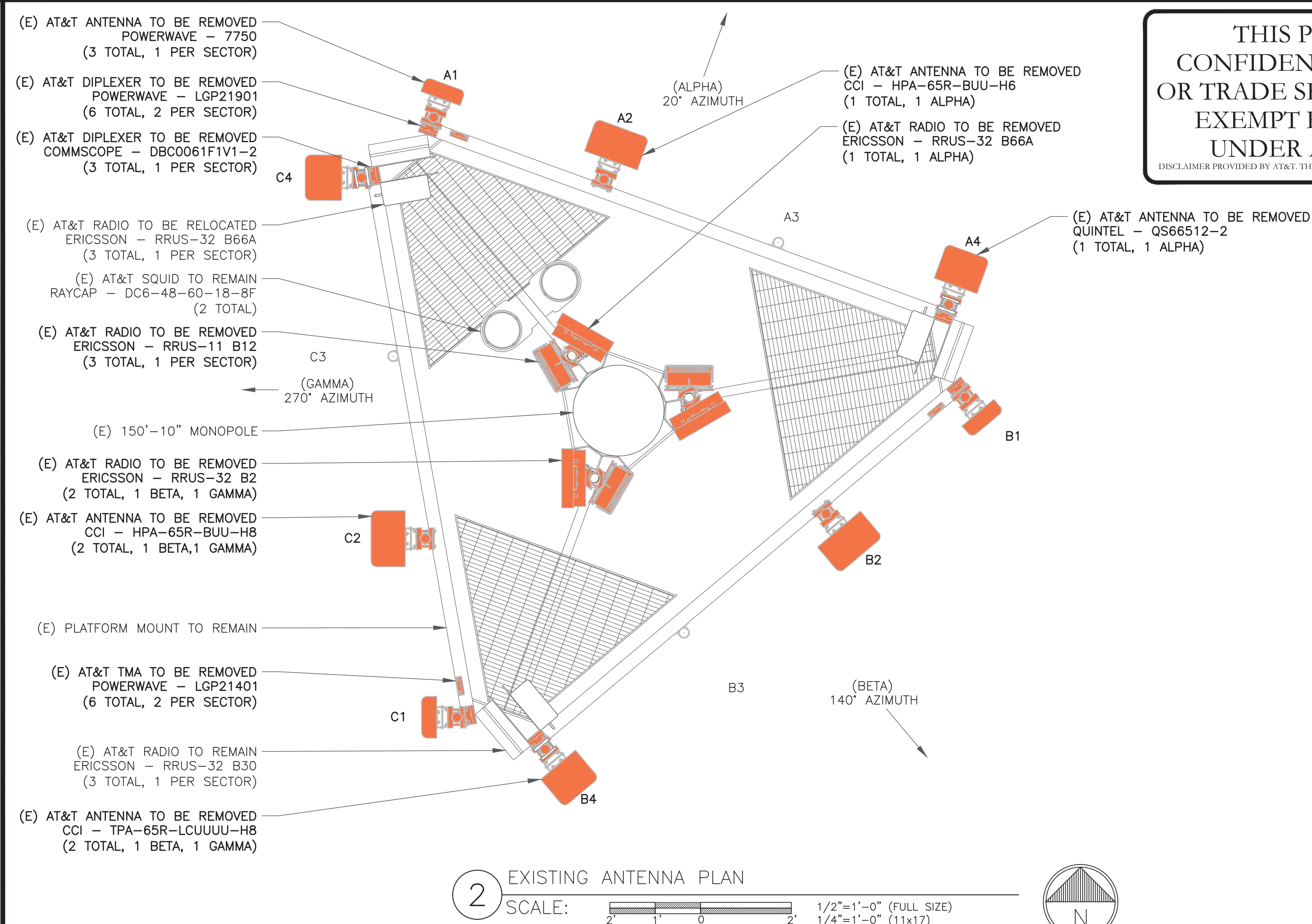
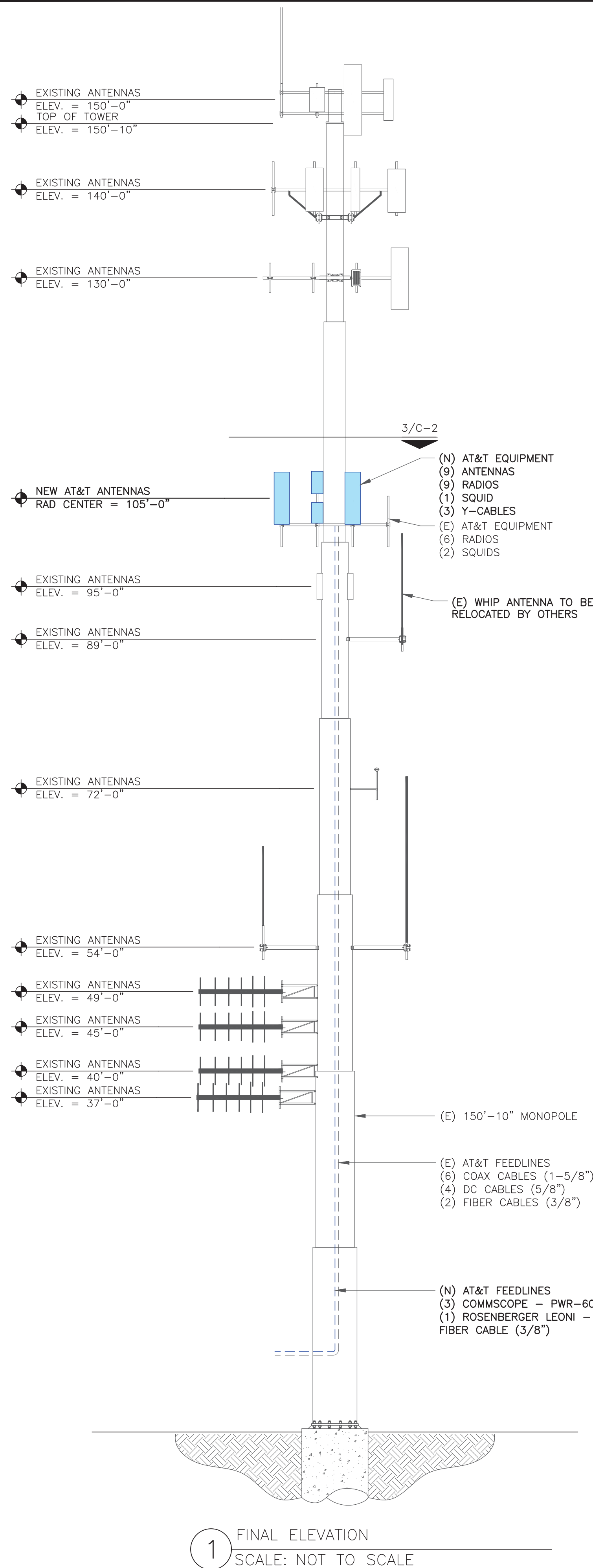
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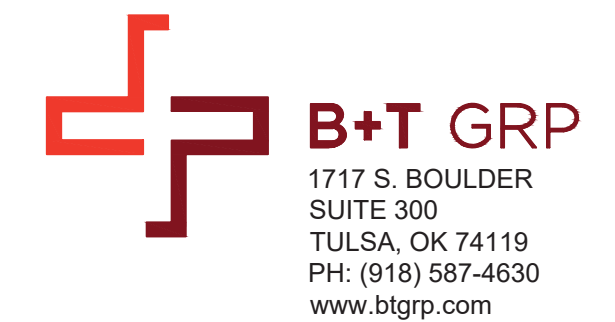
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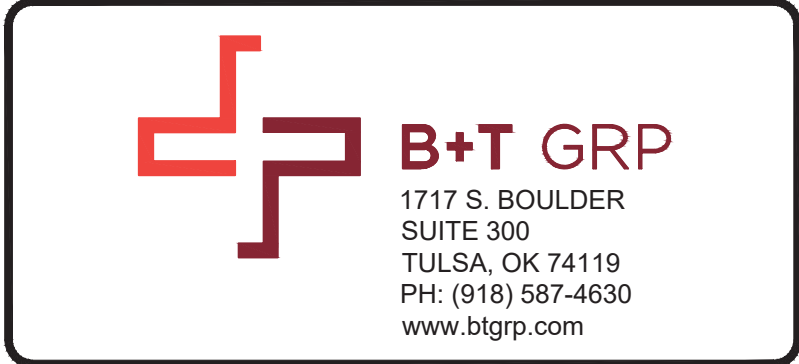
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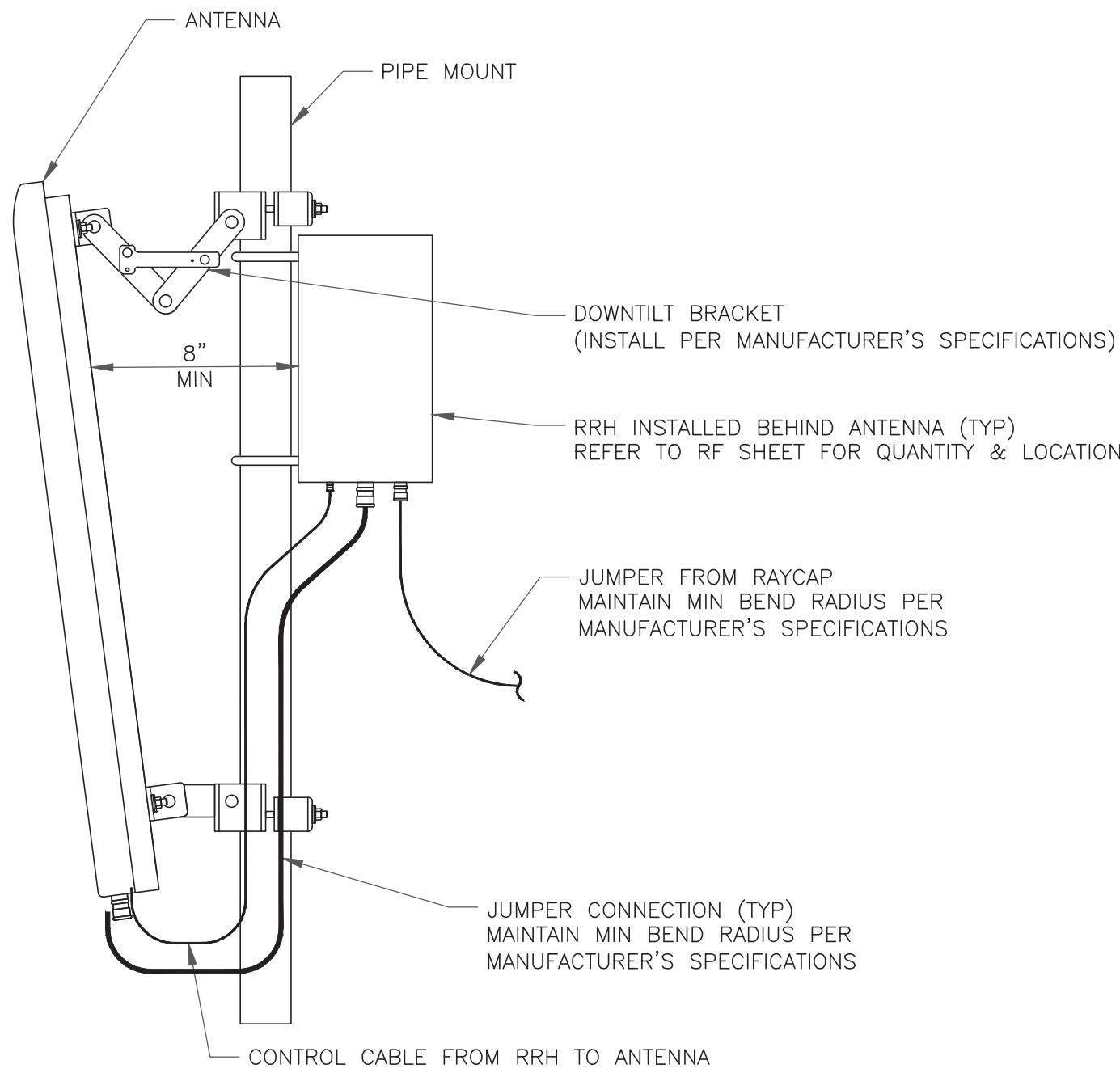
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SHEET NUMBER:
C-3

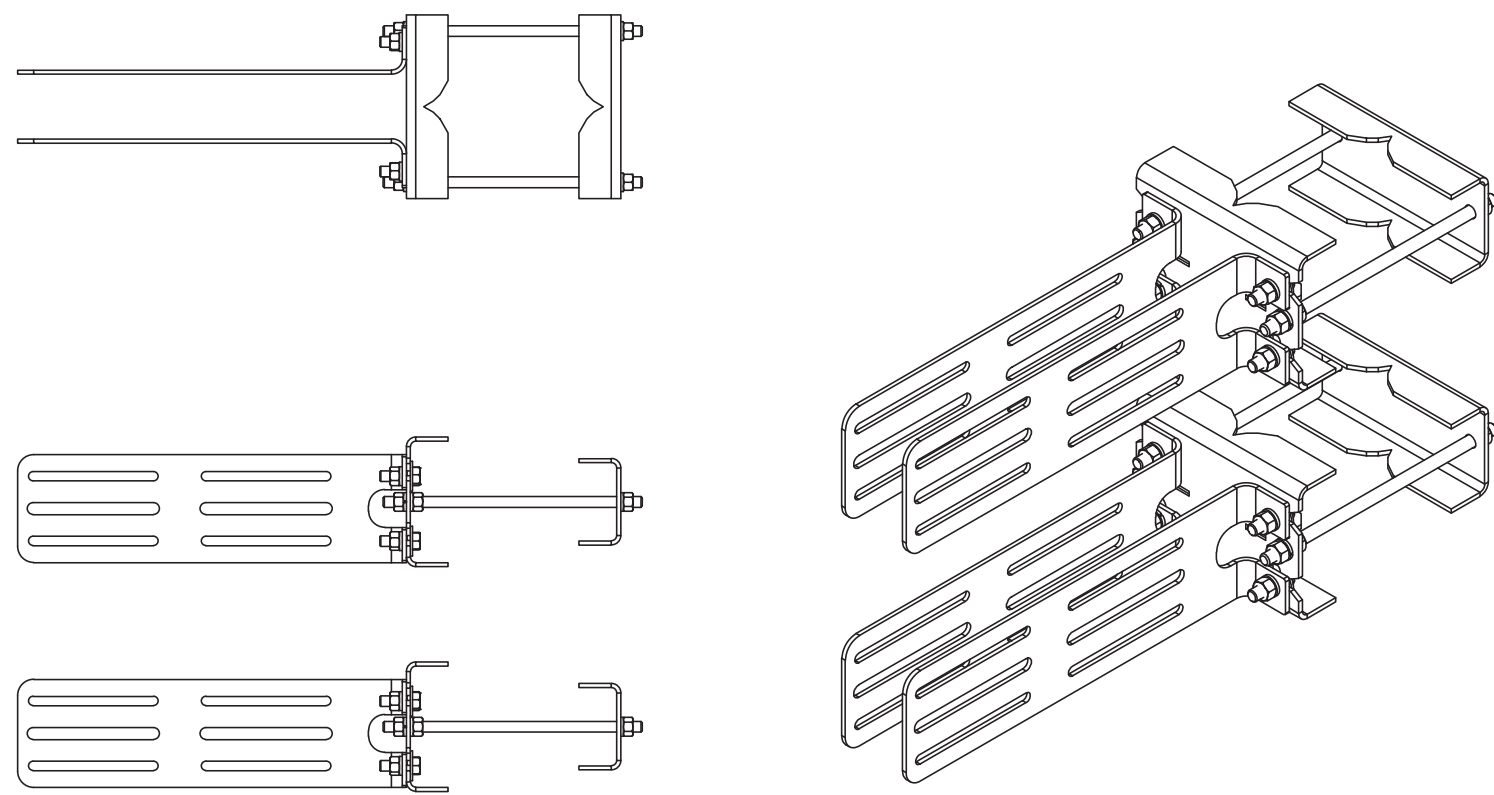
REVISION:
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FINAL ANTENNA AND FEEDLINE SCHEDULE																		
POS.	TECH	STATUS	AZIMUTH	ANTENNA TYPE	ANTENNA RAD CENTER	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	MAIN COAX SIZE	MAIN COAX LENGTH	COAX QTY	TMA QTY AND MODEL	SURGE PROTECTION	DC/FIBER CABLES	RRHs QTY & MODEL ON TOWER	LOCATION	DIPLEXER ON TOWER	DIPLEXER ON GROUND	RET CABLE
ALPHA SECTOR																		
A1	—	—	—	—	—	—	—	—	—	—	—	(2) RAYCAP — DC6—48—60—18—8F (1) RAYCAP — DC9—48—60—24—8C—EV	(3) PWR—606—S DC CABLES (2) FB—L98B—034—XXX FIBER CABLES (4) PWRT—608—S DC CABLES (1) FB—L98B—235—XXX FIBER CABLE	—	TOWER	N	N	N
A2	LTE 700 LTE 1900 LTE AWS 5G 1900 5G AWS	NEW	20°	CCI — TPA—65R—BU6DA—K	105'—0"	0°	9°/4°/4°/4°/4°	1—5/8"	155'—0"	2	—			(1) ERICSSON — 4478 B14 (1) ERICSSON — 4415 B25 (1) ERICSSON — RRUS—32 B66A	TOWER	N	N	N
A3	5G CBAND 5G DOD	NEW	20°	ERICSSON — AIR6449 N77D ERICSSON — AIR6419 N77G	105'—0"	—	0°/0°	—	—	—	—			—	TOWER	N	N	N
A4	LTE 700 5G 850 LTE WCS	NEW	20°	CCI — DMP65R—BU6DA	105'—0"	0°	9°/9°/3°	—	—	—	—			(1) ERICSSON — 4449 B5/B12 (1) ERICSSON — RRUS—32 B30	TOWER	N	N	N
BETA SECTOR																		
B1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	TOWER	N	N	N
B2	LTE 700 LTE 1900 LTE AWS 5G 1900 5G AWS	NEW	140°	CCI — TPA—65R—BU8DA—K	105'—0"	0°	2°/6°/6°/4°/6°/4°	1—5/8"	155'—0"	2	—			(1) ERICSSON — 4478 B14 (1) ERICSSON — 4415 B25 (1) ERICSSON — RRUS—32 B66A	TOWER	N	N	N
B3	5G CBAND 5G DOD	NEW	140°	ERICSSON — AIR6449 N77D ERICSSON — AIR6419 N77G	105'—0"	—	0°/0°	—	—	—	—			—	TOWER	N	N	N
B4	LTE 700 5G 850 LTE WCS	NEW	140°	CCI — DMP65R—BU8DA	105'—0"	0°	2°/2°/3°	—	—	—	—			(1) ERICSSON — 4449 B5/B12 (1) ERICSSON — RRUS—32 B30	TOWER	N	N	N
GAMMA SECTOR																		
C1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	TOWER	N	N	N
C2	LTE 700 LTE 1900 LTE AWS 5G 1900 5G AWS	NEW	270°	CCI — TPA—65R—BU8DA—K	105'—0"	0°	2°/2°/2°/4°/2°/4°	1—5/8"	155'—0"	2	—			(1) ERICSSON — 4478 B14 (1) ERICSSON — 4415 B25 (1) ERICSSON — RRUS—32 B66A	TOWER	N	N	N
C3	5G CBAND 5G DOD	NEW	270°	ERICSSON — AIR6449 N77D ERICSSON — AIR6419 N77G	105'—0"	—	0°/0°	—	—	—	—			—	TOWER	N	N	N
C4	LTE 700 5G 850 LTE WCS	NEW	270°	CCI — DMP65R—BU8DA	105'—0"	0°	2°/2°/3°	—	—	—	—			(1) ERICSSON — 4449 B5/B12 (1) ERICSSON — RRUS—32 B30	TOWER	N	N	N

NOTE: BOLD DENOTES NEW EQUIPMENT

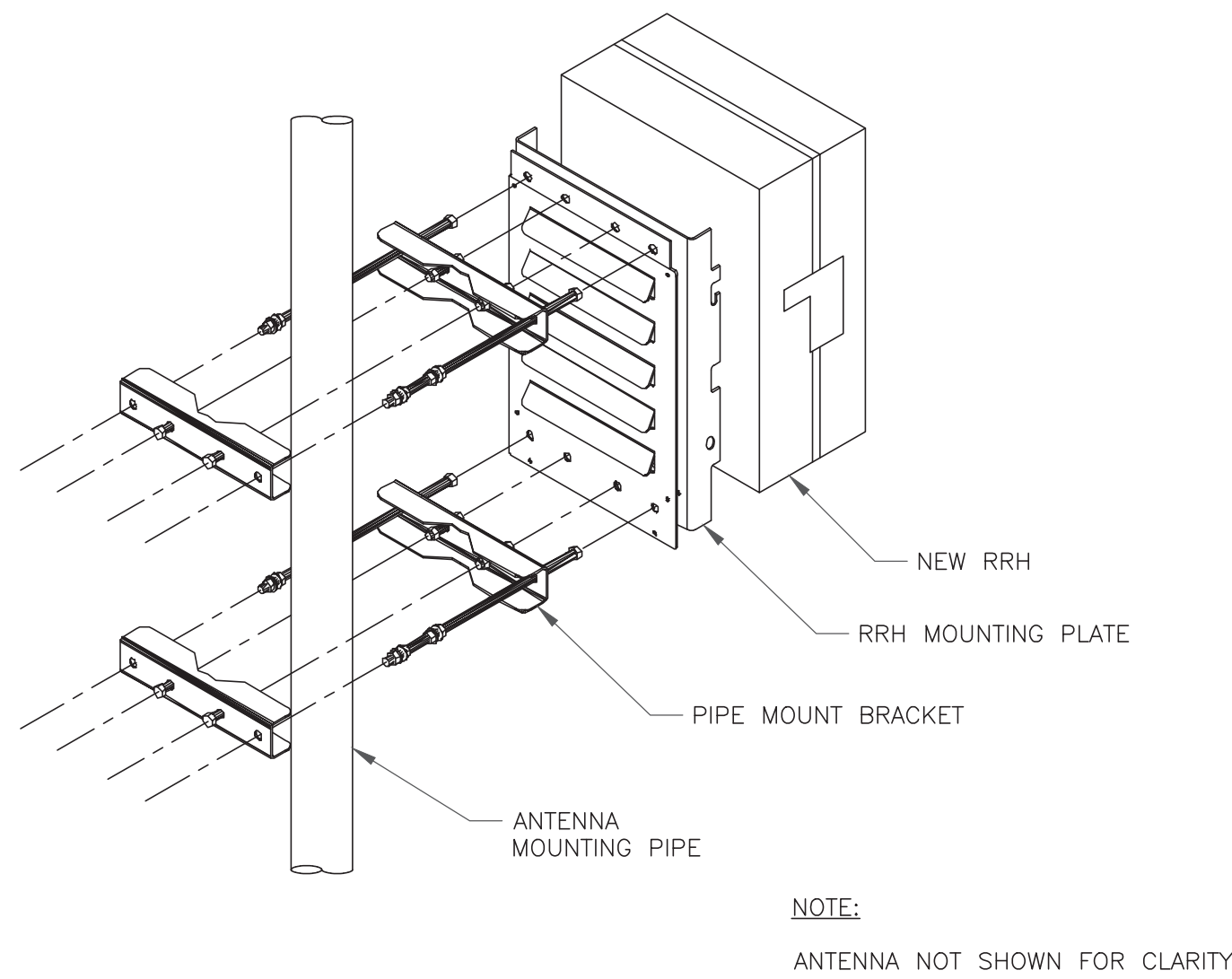


1 GENERIC ANTENNA MOUNTING ELEVATION
SCALE: NOT TO SCALE

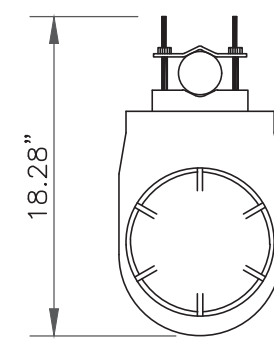


COMMSCOPE - RR-FA2
FAST ACCESS DUAL RRH MOUNT

2 COMMSCOPE - RR-FA2
SCALE: NOT TO SCALE



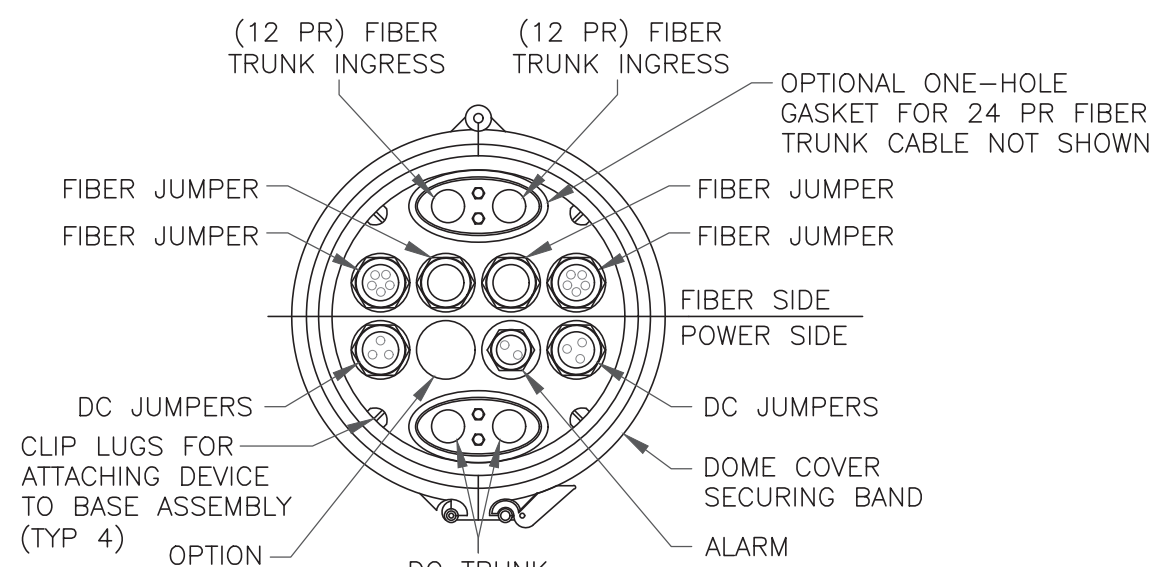
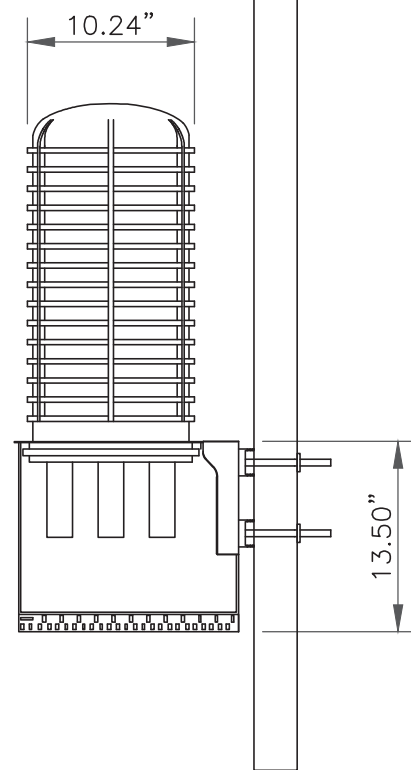
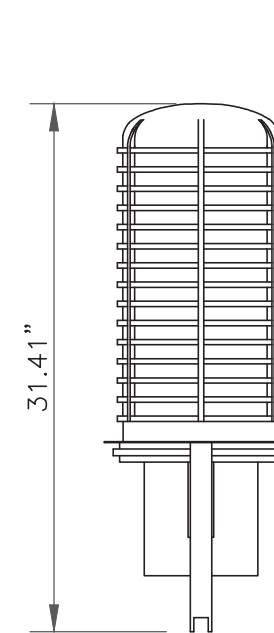
3 SINGLE RRH MOUNTING DETAIL
SCALE: NOT TO SCALE



RAYCAP
DC9-48-60-24-8C-EV

RAYCAP - DC9-48-60-24-8C-EV
SIZE: 10.24x31.40 IN.
WEIGHT: 26.2 LBS
NOMINAL OPERATING VOLTAGE: 48 VDC
VOLTAGE PROTECTION RATING: 330 V
WIND LOADING: 150 MPH SUSTAINED (105.7 LBS)
WIND LOADING: 195 MPH GUST (213.6 LBS)

CONTRACTOR TO USE "THREAD LUBRICANT" ON
MOUNTING BOLTS DURING INSTALLATION



7 SQUID MOUNTING DETAIL
SCALE: NOT TO SCALE

INSTALLER NOTES:

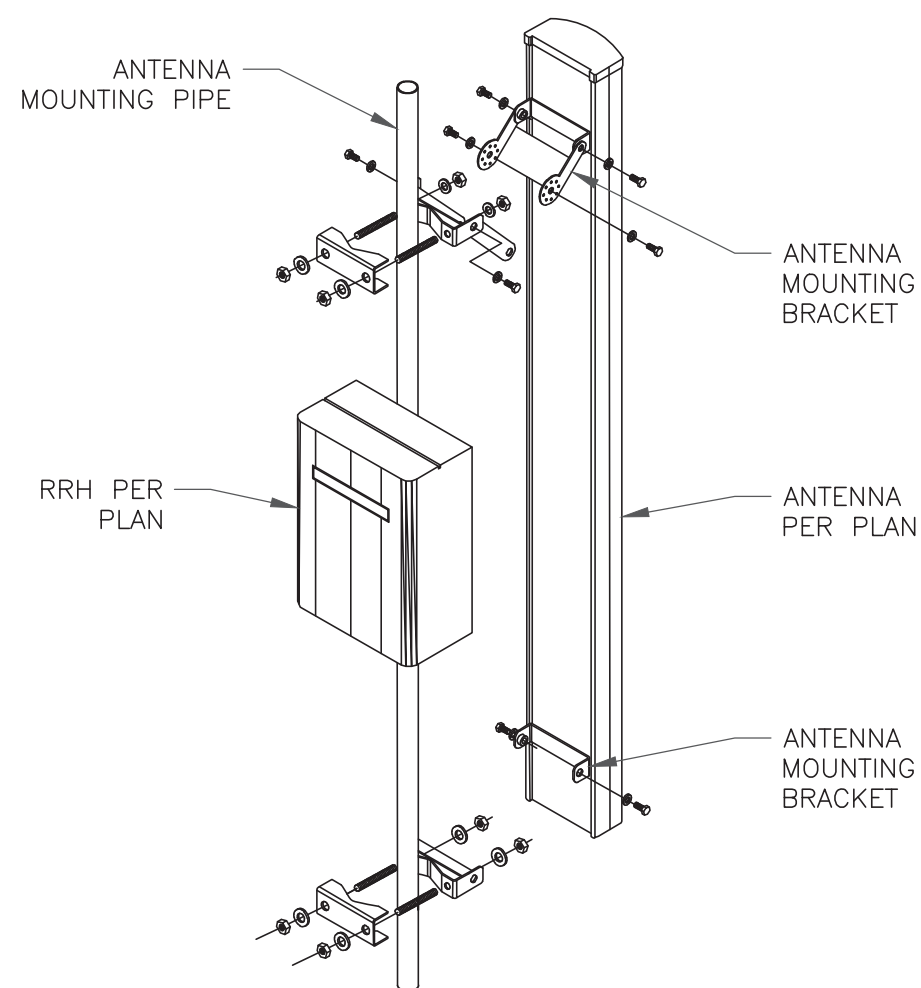
1. COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRHs RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING.
2. DO NOT OPEN RRH PACKAGES IN THE RAIN.
3. ALL PIPES, BRACKETS, AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.

INSTALLER NOTES:

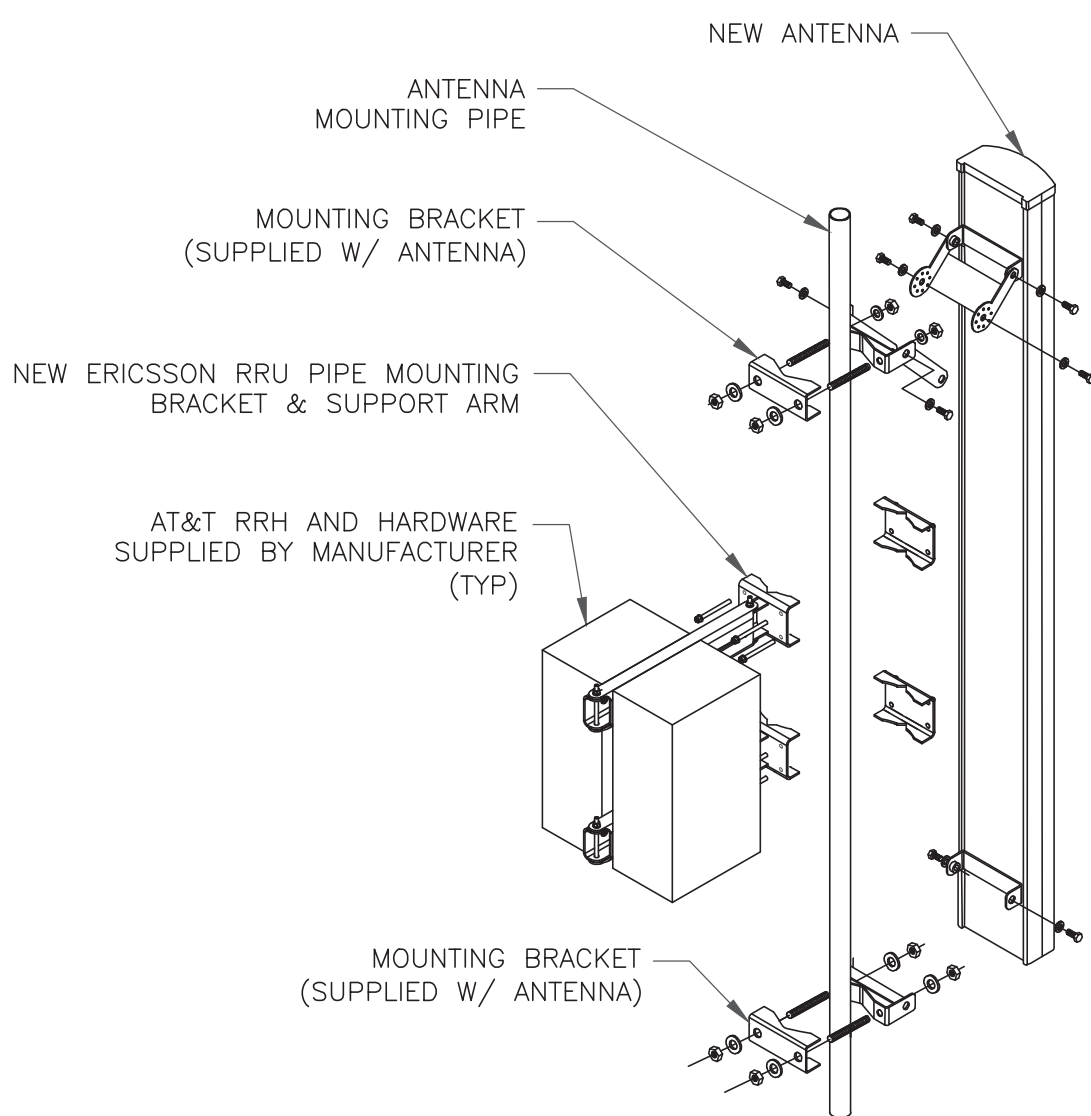
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2. DO NOT OPEN RRH PACKAGES IN THE RAIN.
3. ALL PIPES, BRACKETS, AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.

INSTALLER NOTES:

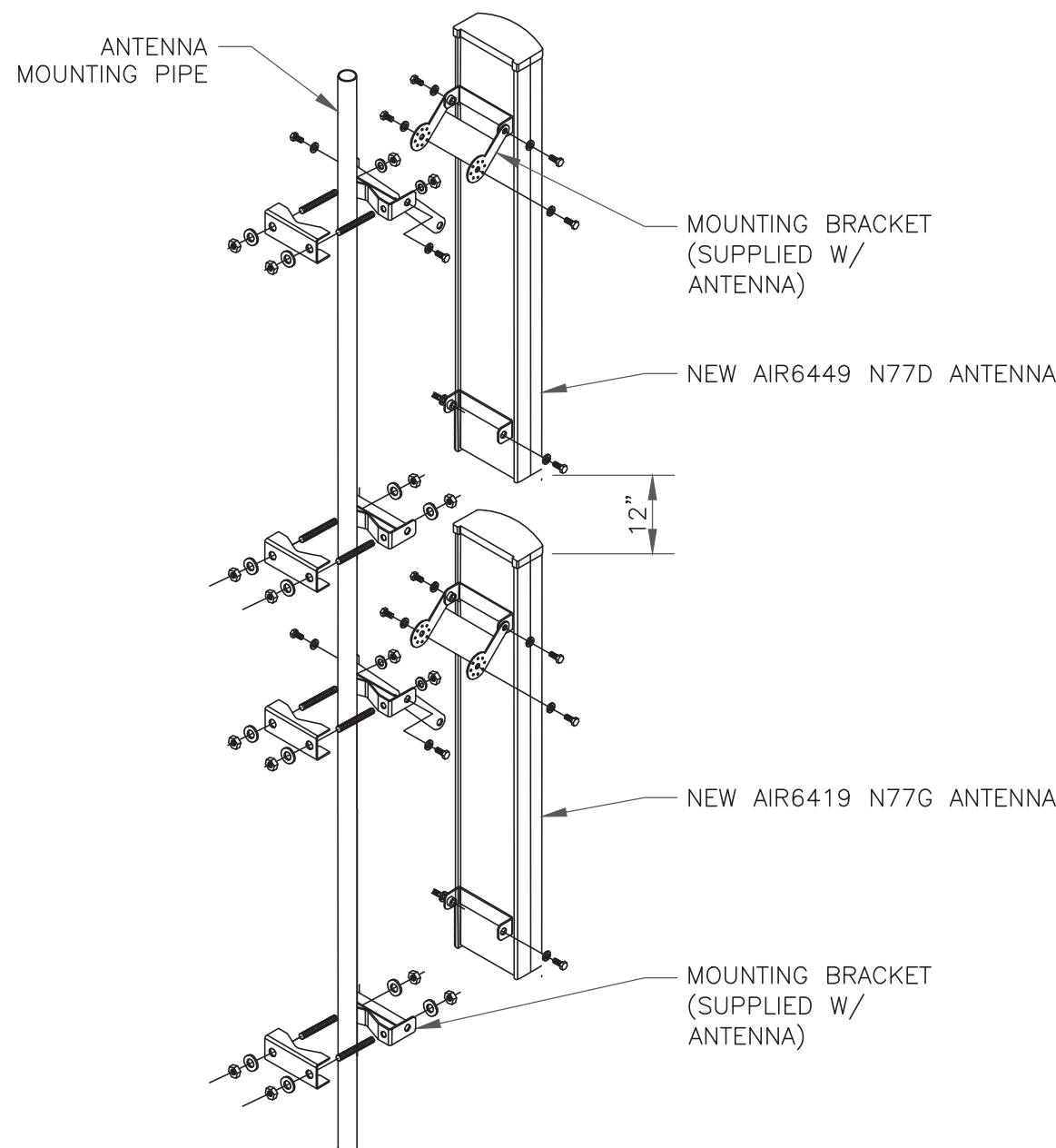
1. COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRHs RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING.
2. DO NOT OPEN RRH PACKAGES IN THE RAIN.
3. ALL PIPES, BRACKETS, AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.



4 ANTENNA WITH RRH MOUNTING DETAIL
SCALE: NOT TO SCALE



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

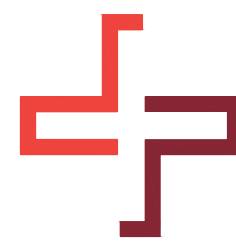


6 STACKED ANTENNA MOUNTING DETAIL
SCALE: NOT TO SCALE

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ATLANTA, GA 30324-3300

 **CROWN CASTLE**
3 CORPORATE PARK DRIVE, SUITE 101
CLIFTON PARK, NY 12065

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

AT&T SITE NUMBER:
CTL01039

BU #: 827050
**ROCKY HILL/ RTE
160_1**

699 OLD MAIN ST.
ROCKY HILL, CT 06067

EXISTING
150'-10" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	10/4/21	AN/SA	PRELIMINARY REVIEW	JHW
B	10/12/21	JHW	PRELIMINARY REVIEW	JHW
0	12/22/21	JHW	CONSTRUCTION	JHW



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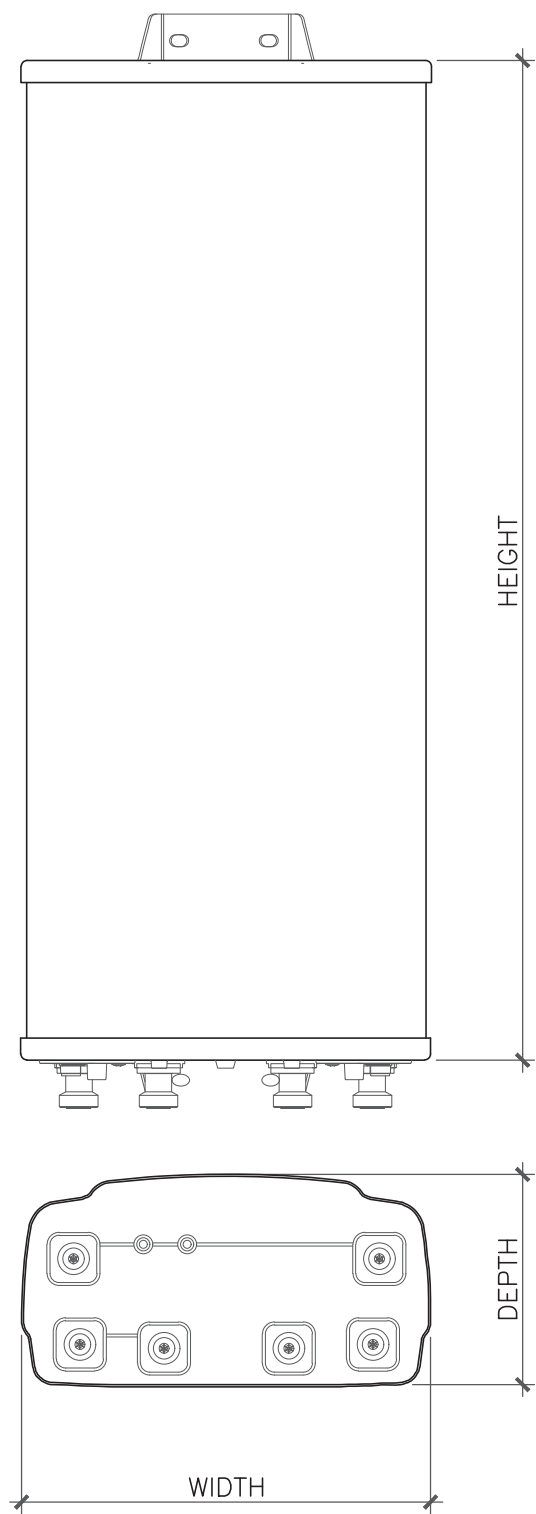
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REVISION:

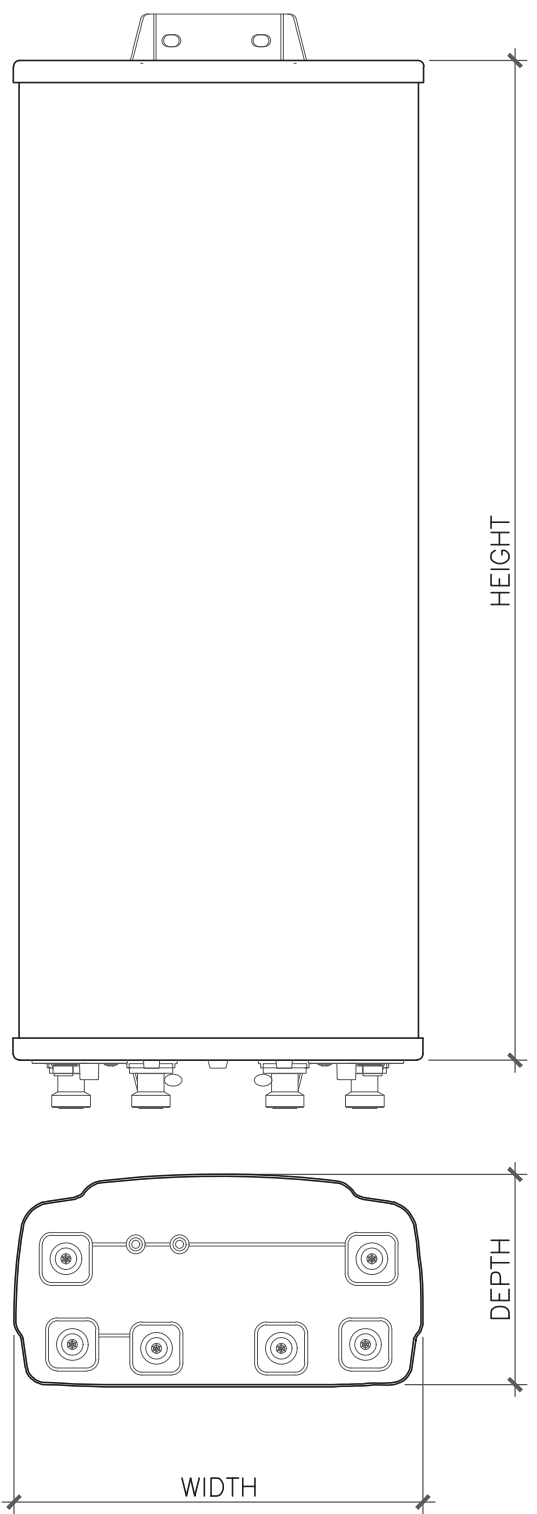
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140124.004.01_ROCKY HILL RTE 160_1.dwg - Sheet: C-5.1 - User: jackie.weeter - Dec 22, 2021 - 11:37am



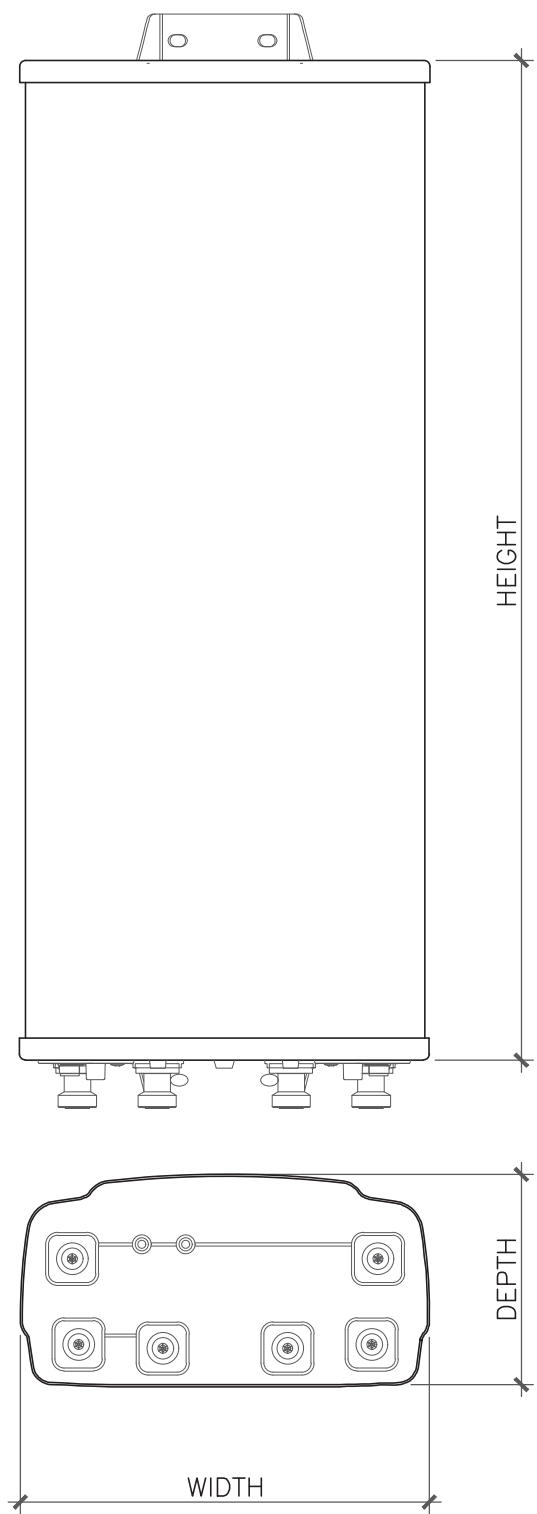
ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
TPA-65R-BU6DA-K	71.2"	21.0"	7.8"	72.50 lbs

1 ANTENNA DETAIL
SCALE: NOT TO SCALE



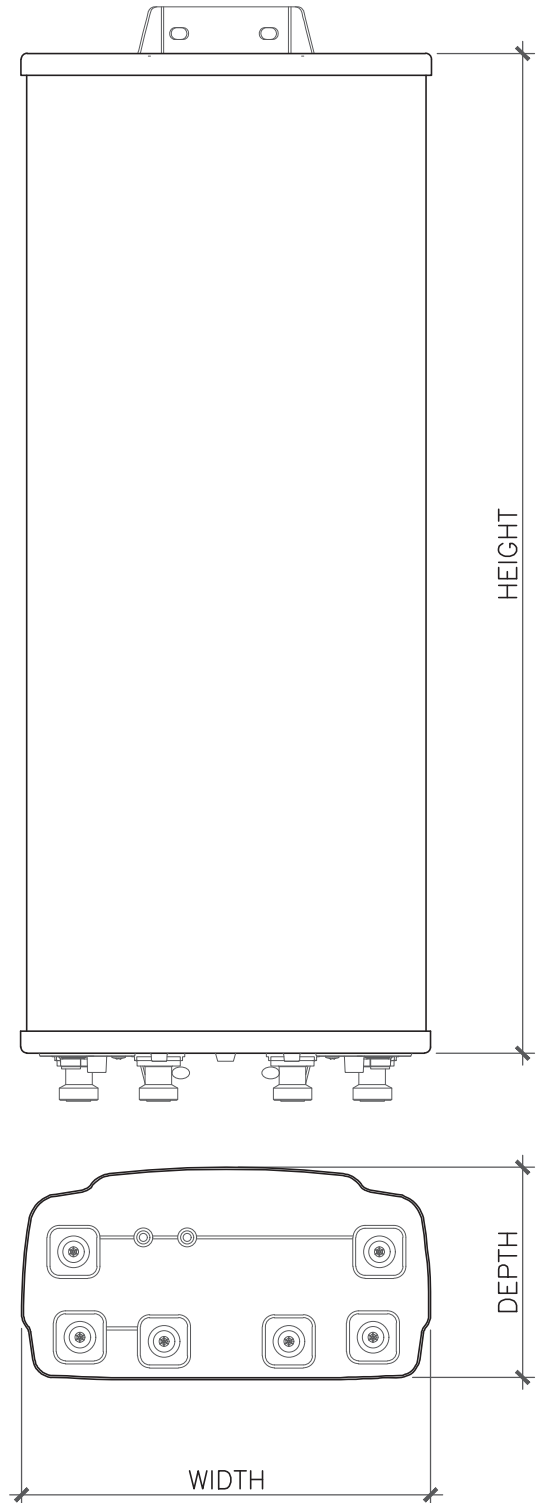
ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
AIR6449 N77D	30.63"	15.87"	10.55"	83.78 lbs

2 ANTENNA DETAIL
SCALE: NOT TO SCALE



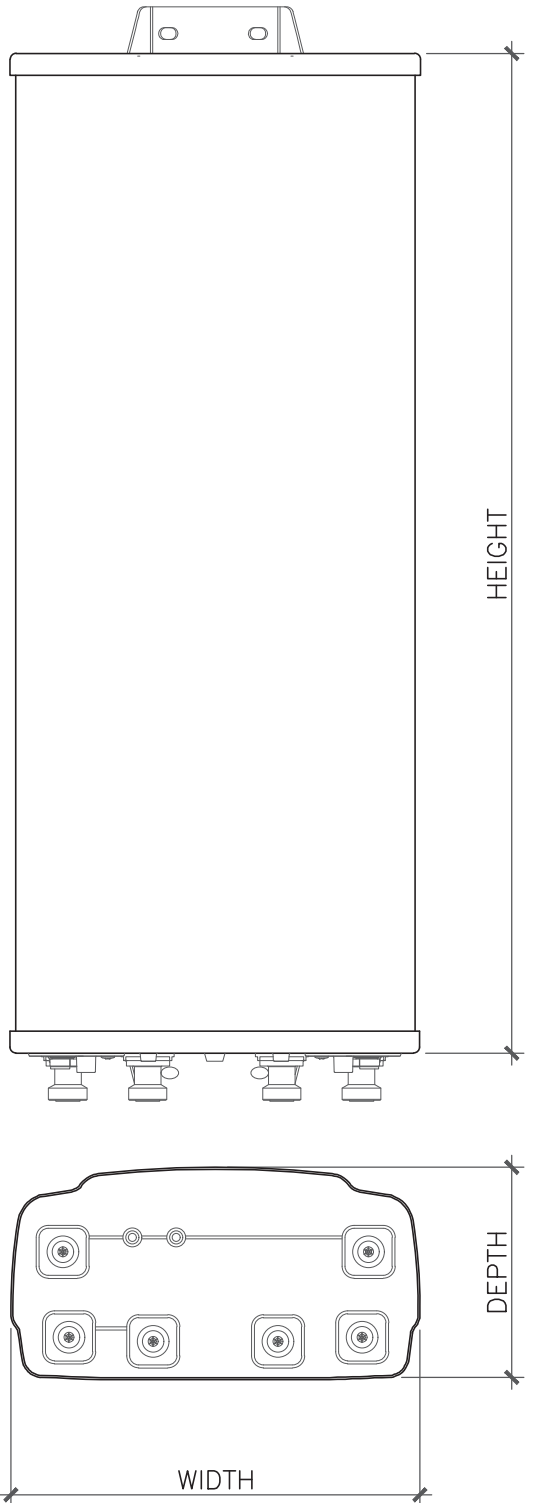
ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
AIR6419 N77G	27.95"	15.75"	6.68"	66.20 lbs

3 ANTENNA DETAIL
SCALE: NOT TO SCALE



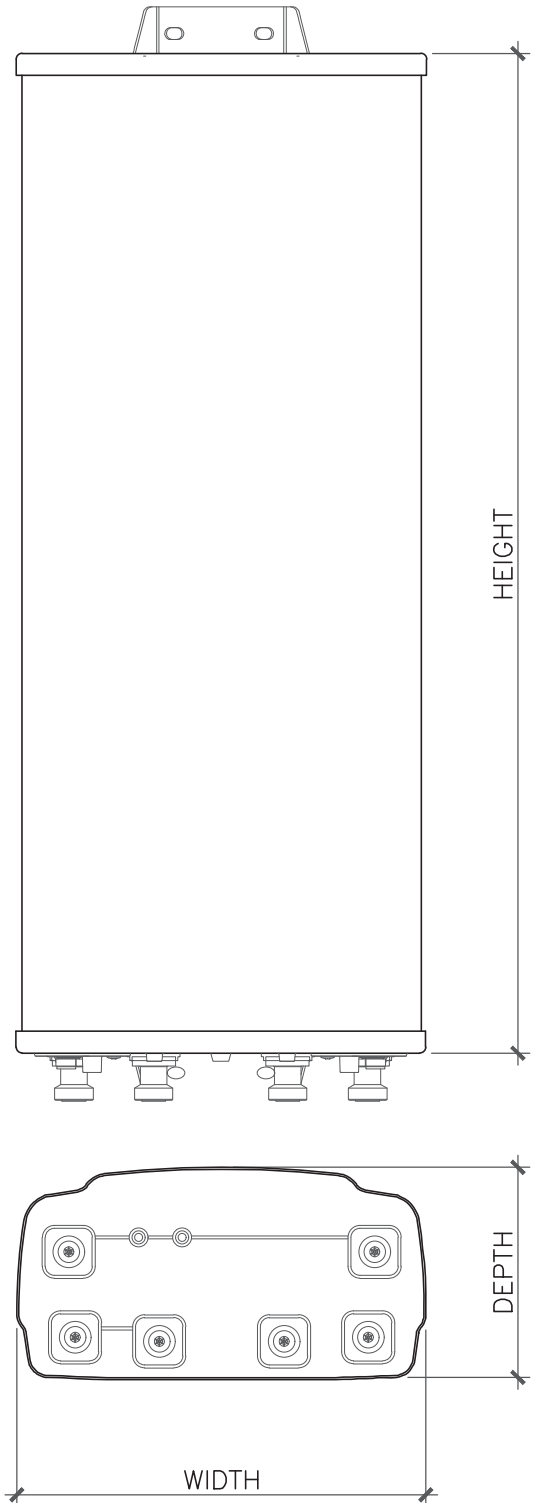
ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
DMP65R-BU6DA	71.20"	20.7"	7.7"	89.30 lbs

4 ANTENNA DETAIL
SCALE: NOT TO SCALE



ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
TPA-65R-BU8DA-K	96"	21.0"	7.8"	87.5 lbs

5 ANTENNA DETAIL
SCALE: NOT TO SCALE



ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
DMP65R-BU8DA	96"	20.7"	7.7"	105.6 lbs

6 ANTENNA DETAIL
SCALE: NOT TO SCALE

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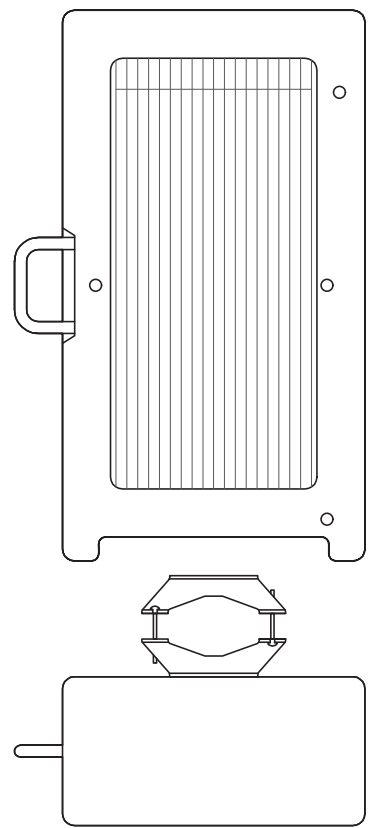


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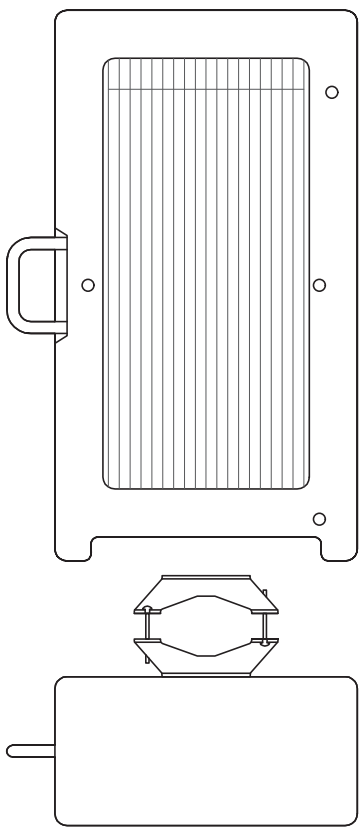
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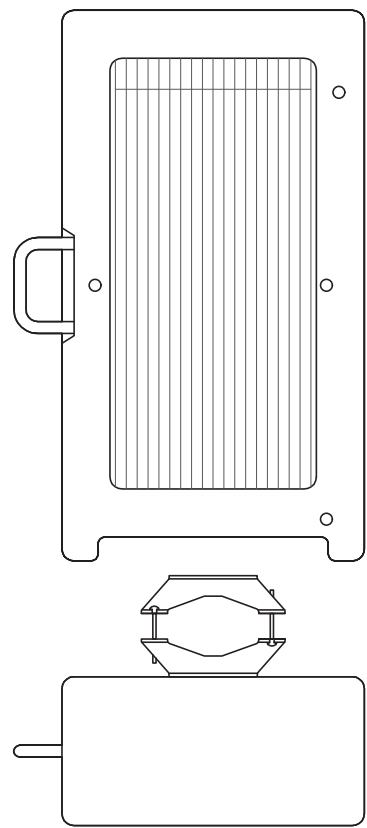
ERICSSON – 4478 B14
WEIGHT (FULLY EQUIPPED): 59.40 LBS
SIZE (HxWxD): 118.10x13.40x8.26 IN.
CONNECTOR TYPE: 4.3–10 FEMALE (4 TOTAL PORTS)

1 ERICSSON – 4478 B14
SCALE: NOT TO SCALE



ERICSSON – 4415 B25
WEIGHT (FULLY EQUIPPED): 44.0 LBS
SIZE (HxWxD): 14.96x13.19x5.39 IN.
CONNECTOR TYPE: 4.3–10 FEMALE (4 TOTAL PORTS)

2 ERICSSON – 4415 B25
SCALE: NOT TO SCALE



ERICSSON – 4449 B5/B12
WEIGHT (FULLY EQUIPPED): 71.0 LBS
SIZE (HxWxD): 17.9x13.19x9.44 IN.
CONNECTOR TYPE: 4.3–10 FEMALE (4 TOTAL PORTS)

3 ERICSSON – 4449 B5/B12
SCALE: NOT TO SCALE



OVP SPECIFICATIONS

MANUFACTURER	RAYCAP
MODEL #	DC9–48–60–24–8C EV
WIDTH	10.24"
DEPTH	18.28"
HEIGHT	31.41"
WEIGHT	26.20 LBS

4 OVP SPECS
SCALE: NOT TO SCALE

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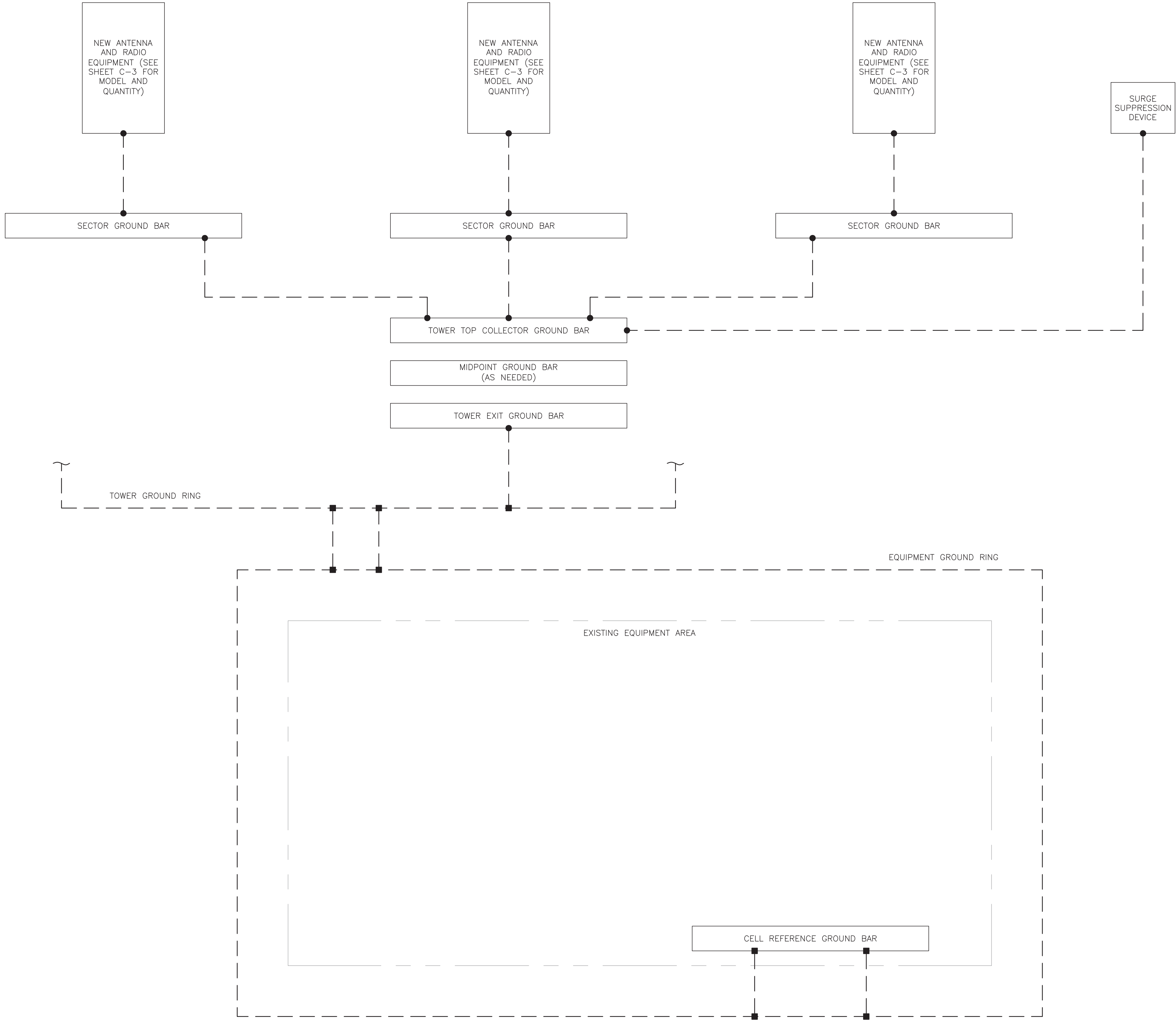
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GROUNDING PLAN LEGEND:

- 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.



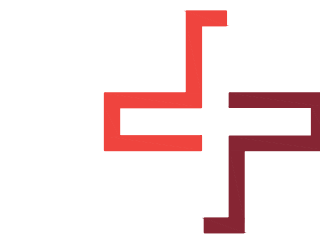
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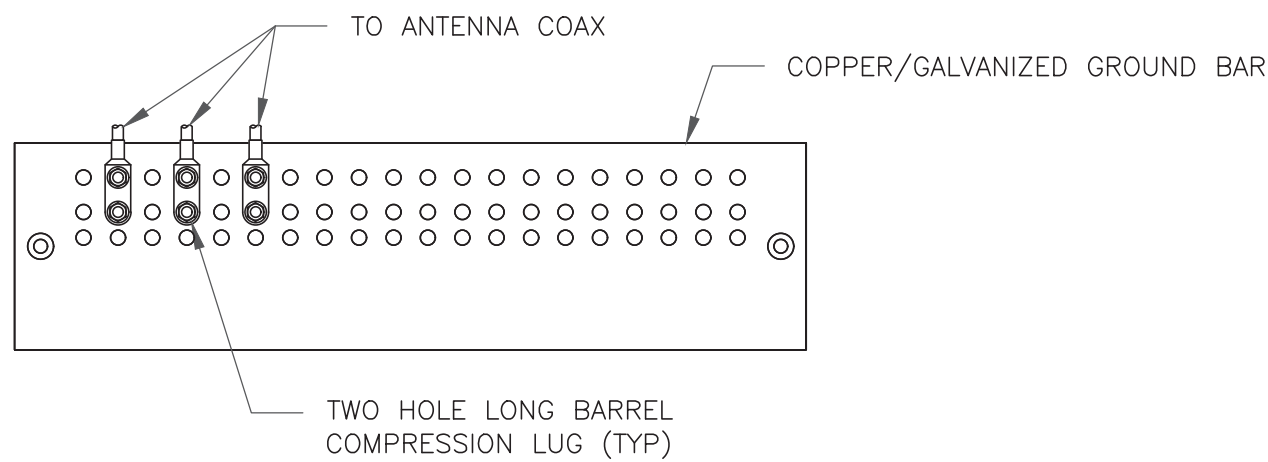
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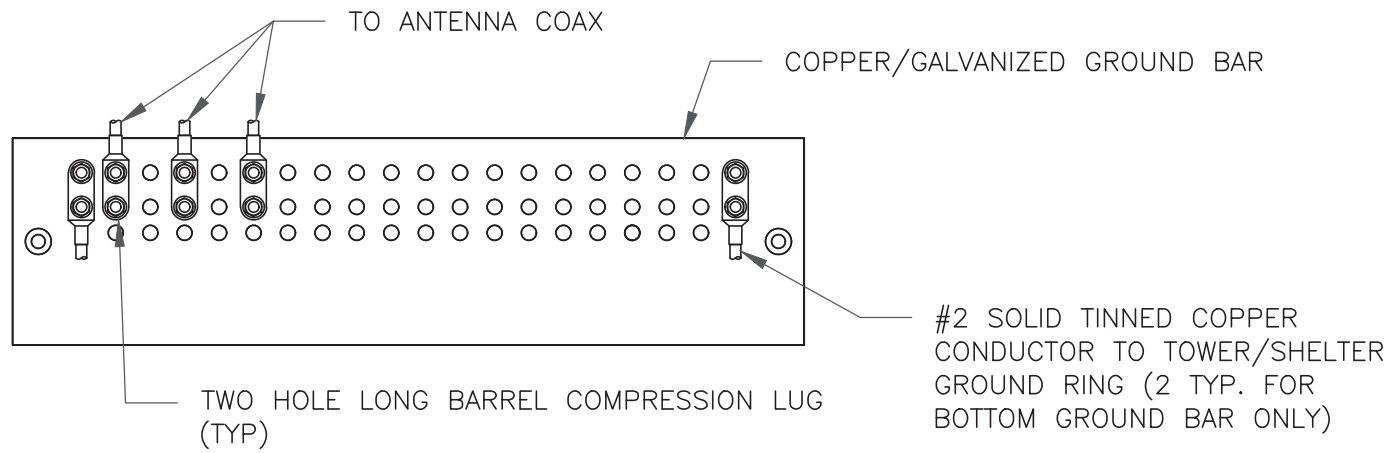
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1 GROUNDING SCHEMATIC
SCALE: NOT TO SCALE



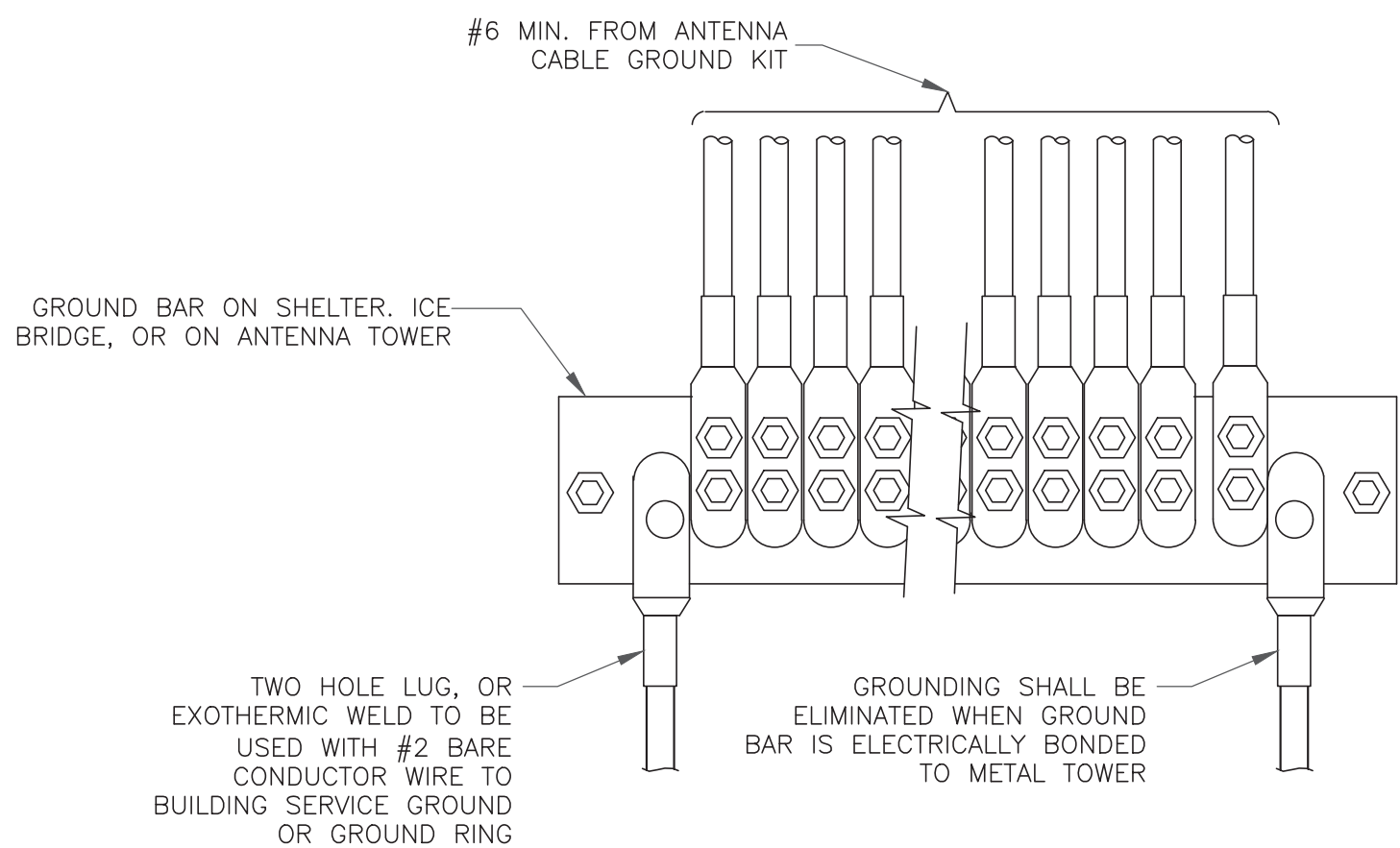
- NOTES:
- DOUBLING UP "OR STACKING" OF CONNECTIONS IS NOT PERMITTED.
 - EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
 - GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO ANTENNA MOUNT STEEL.

1 ANTENNA SECTOR GROUND BAR DETAIL
SCALE: NOT TO SCALE

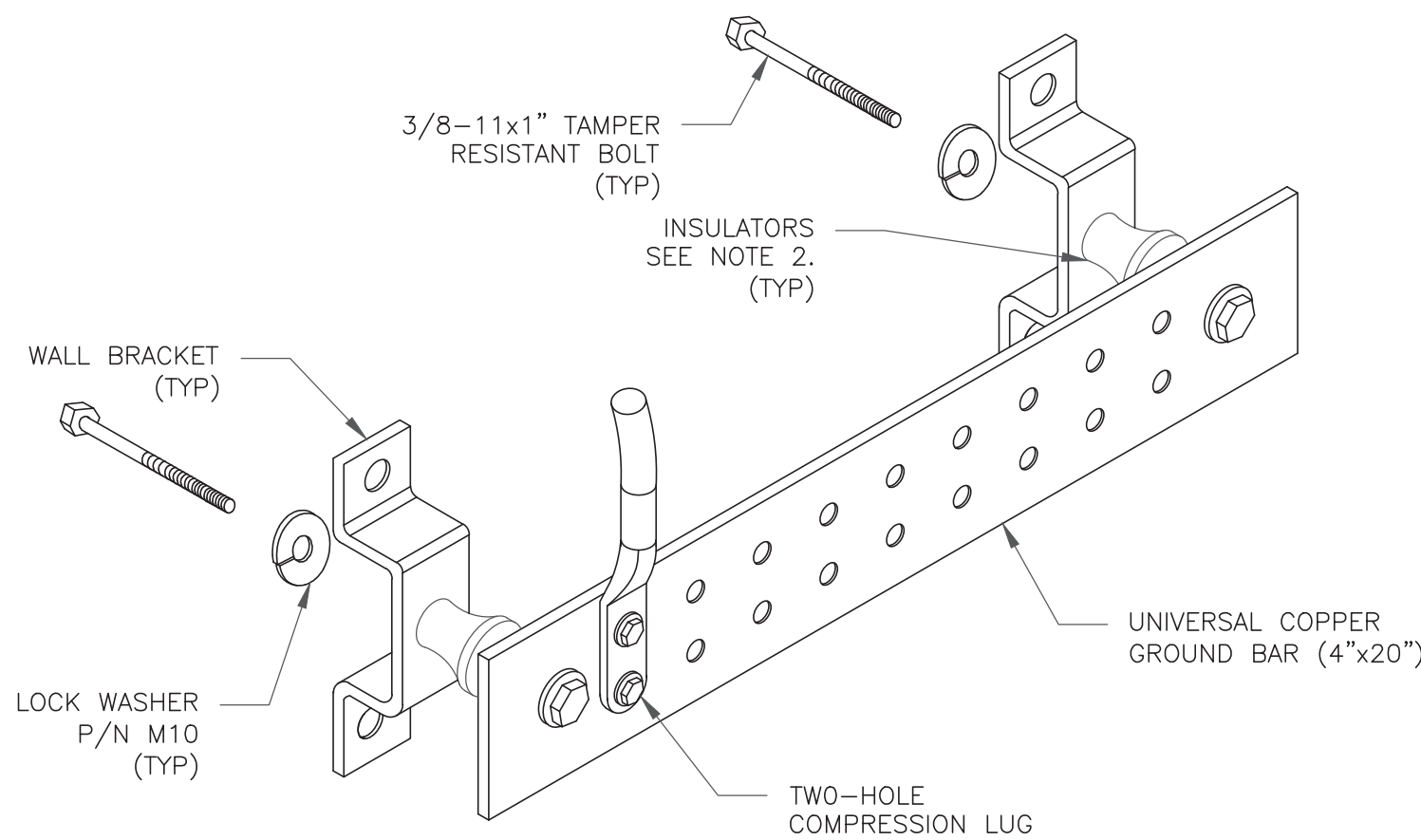


- NOTES:
- EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
 - GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL (TOWER ONLY).
 - GROUND BAR SHALL BE ISOLATED FROM BUILDING OR SHELTER.

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



4 GROUNDWIRE INSTALLATION
SCALE: NOT TO SCALE

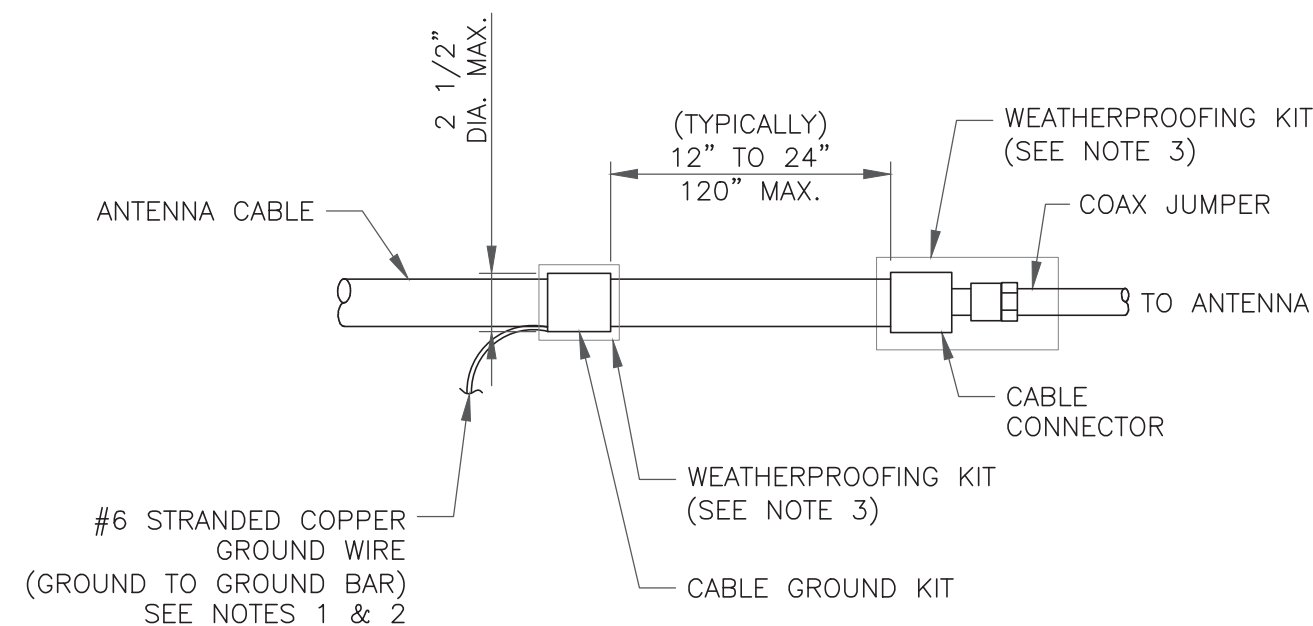


- NOTES:
- DOWN LEAD (HOME RUN) CONDUCTORS ARE NOT TO BE INSTALLED ON CROWN CASTLE USA INC. TOWER, PER THE GROUNDING DOWN CONDUCTOR POLICY QAS-STD-10091. NO MODIFICATION OR DRILLING TO TOWER STEEL IS ALLOWED IN ANY FORM OR FASHION, CAD-WELDING ON THE TOWER AND/OR IN THE AIR ARE NOT PERMITTED.
 - OMIT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

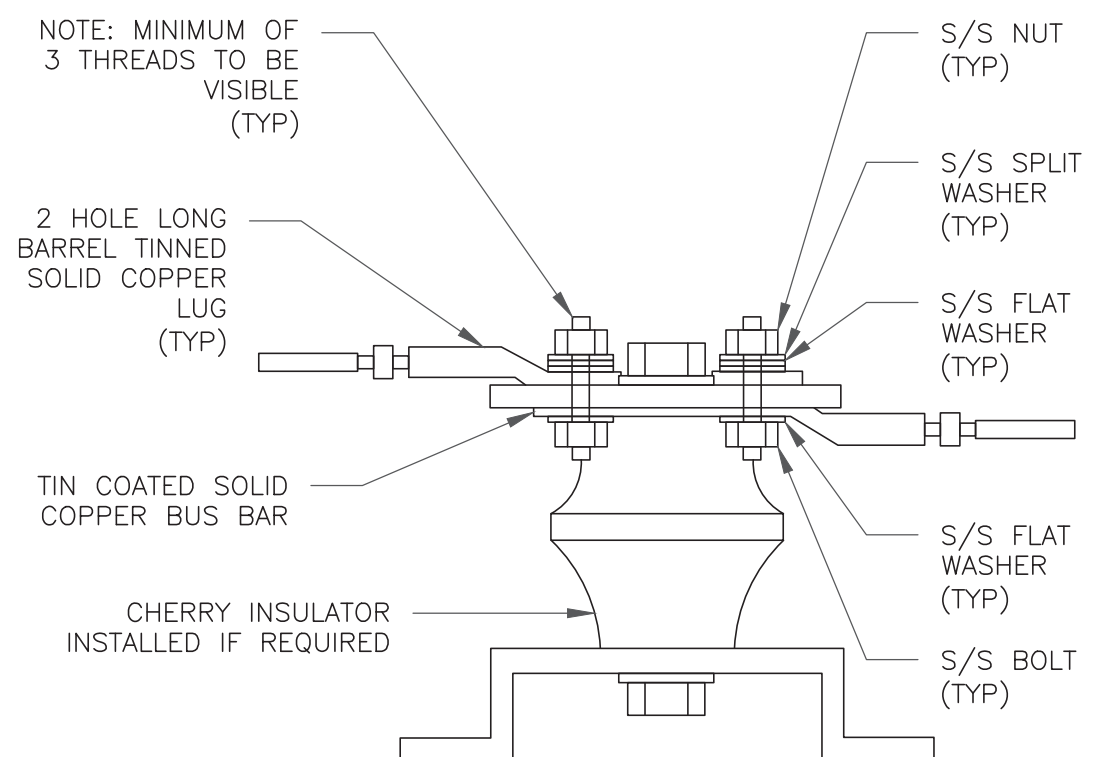
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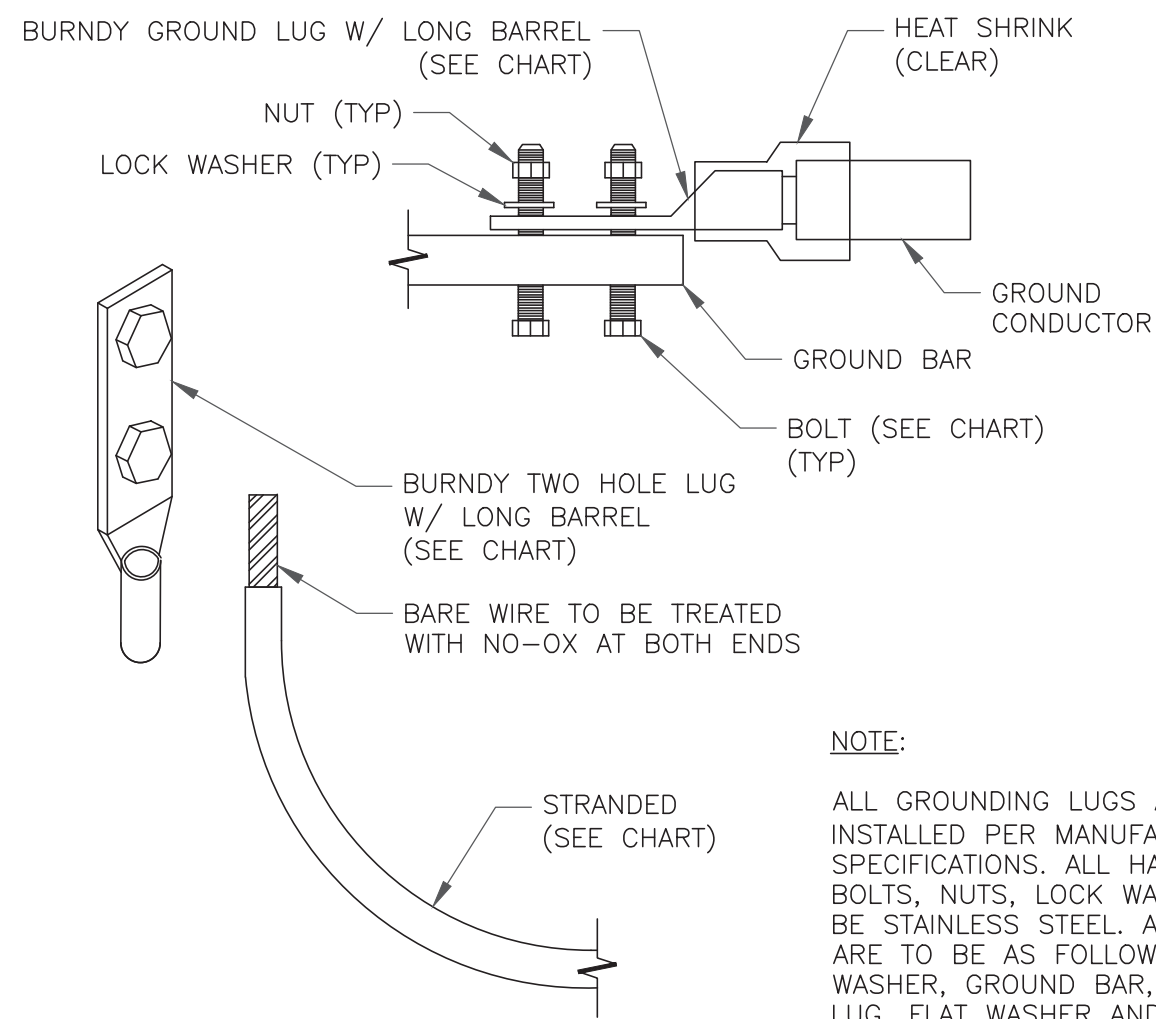
- NOTES:
- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
 - GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
 - WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

6 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE



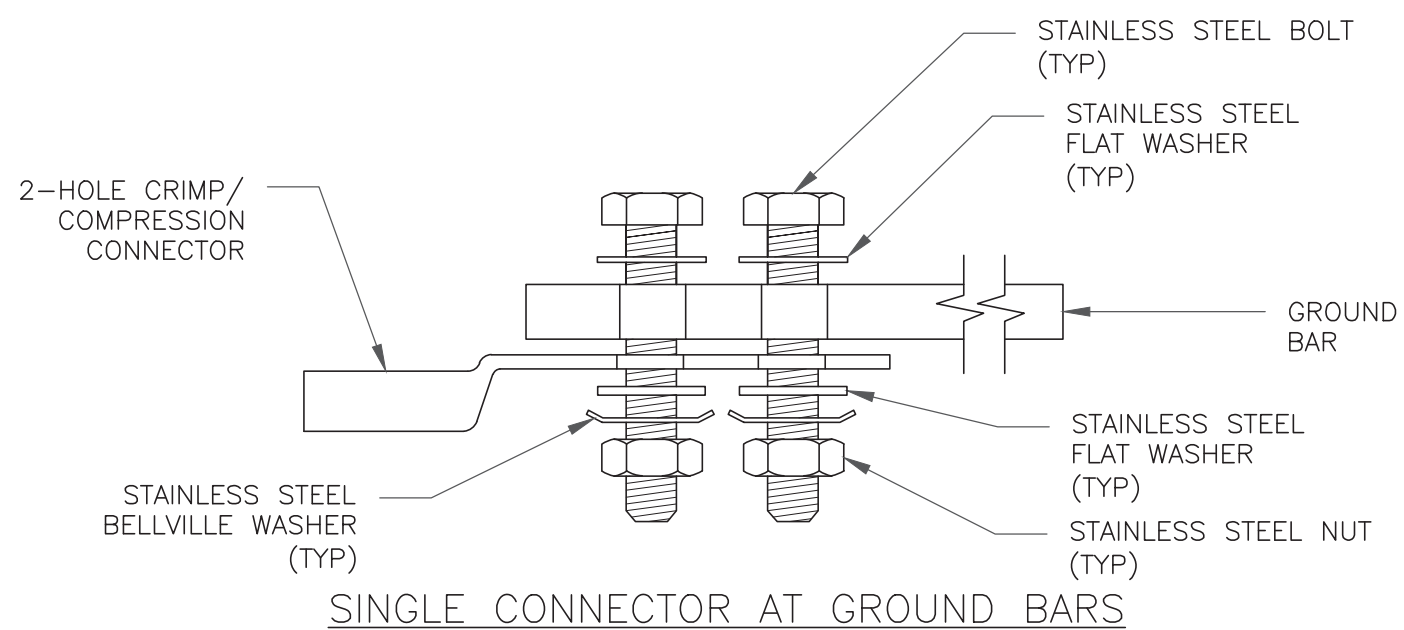
7 LUG DETAIL
SCALE: NOT TO SCALE

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

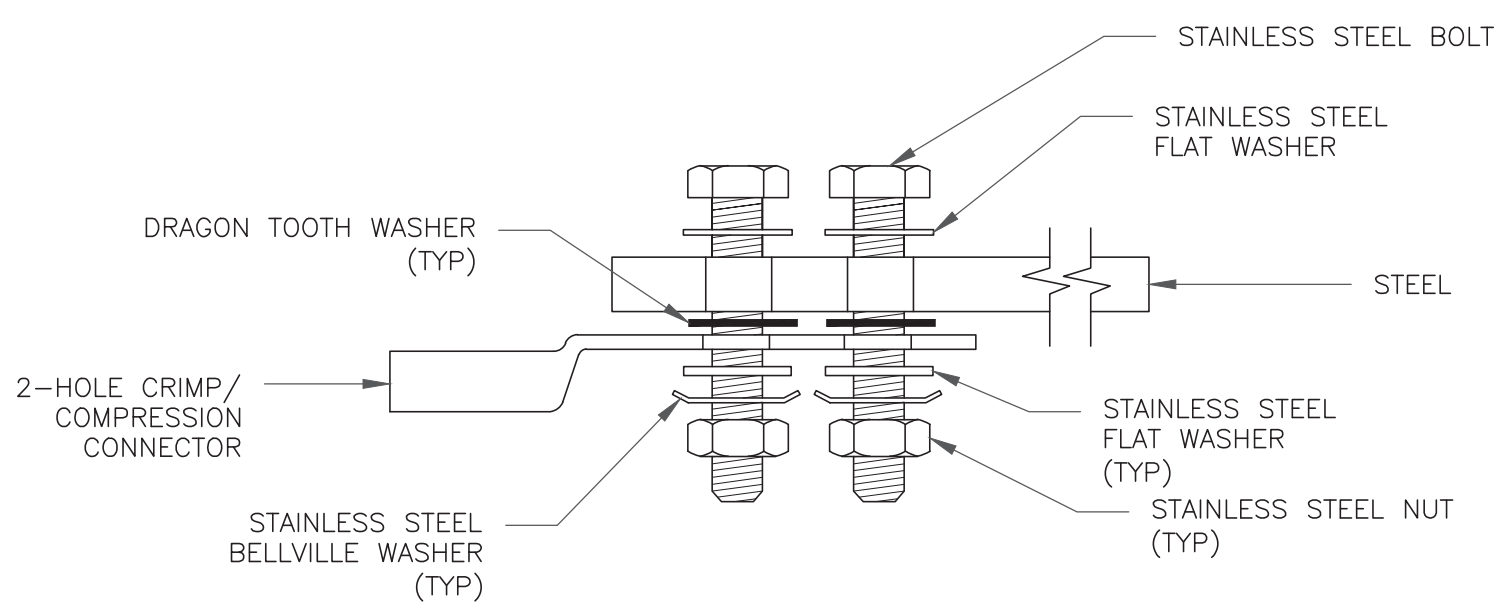


- NOTE:
- ALL GROUNDING LUGS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL HARDWARE BOLTS, NUTS, LOCK WASHERS SHALL BE STAINLESS STEEL. ALL HARDWARE ARE TO BE AS FOLLOWS: BOLT, FLAT WASHER, GROUND BAR, GROUND LUG, FLAT WASHER AND NUT.

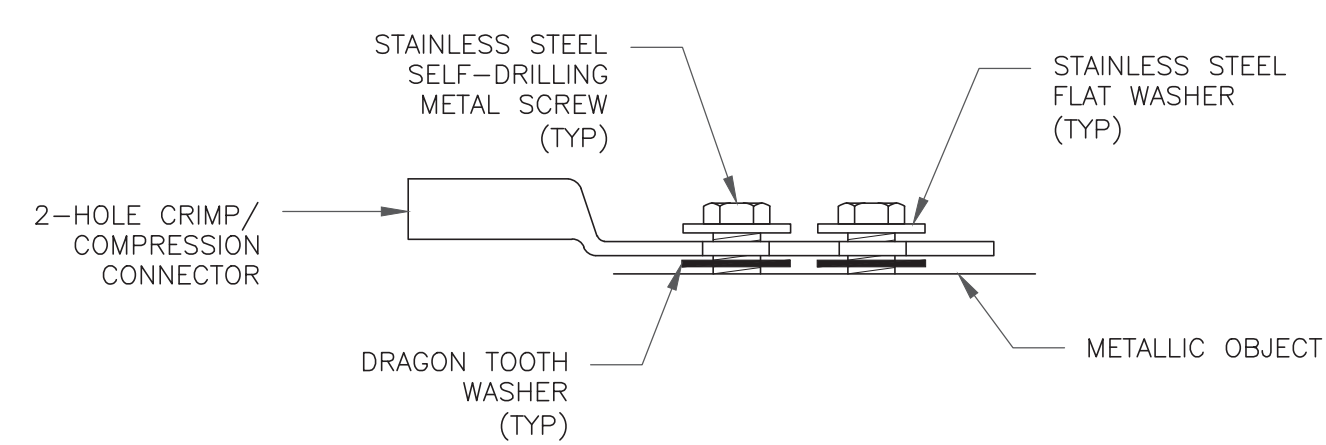
3 MECHANICAL LUG CONNECTION
SCALE: NOT TO SCALE



SINGLE CONNECTOR AT GROUND BARS

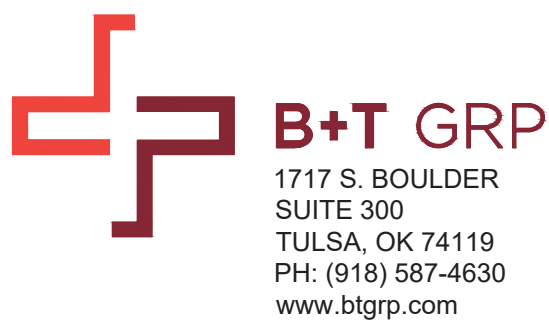


SINGLE CONNECTOR AT STEEL OBJECTS



SINGLE CONNECTOR AT METALLIC/STEEL OBJECTS

8 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE



AT&T SITE NUMBER:
CTL01039

BU #: 827050
ROCKY HILL/ RTE
160_1

699 OLD MAIN ST.
ROCKY HILL, CT 06067

EXISTING
150'-10" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	10/4/21	AN/SA	PRELIMINARY REVIEW	JHW
B	10/12/21	JHW	PRELIMINARY REVIEW	JHW
0	12/22/21	JHW	CONSTRUCTION	JHW



B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/22

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

SHEET NUMBER:

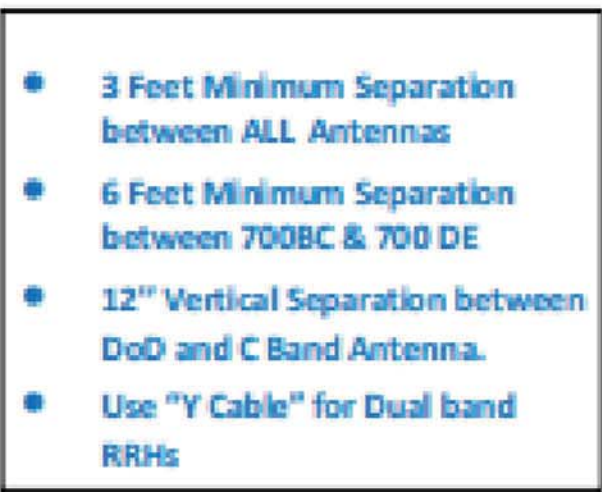
G-2

REVISION:

0

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OR DESIGN

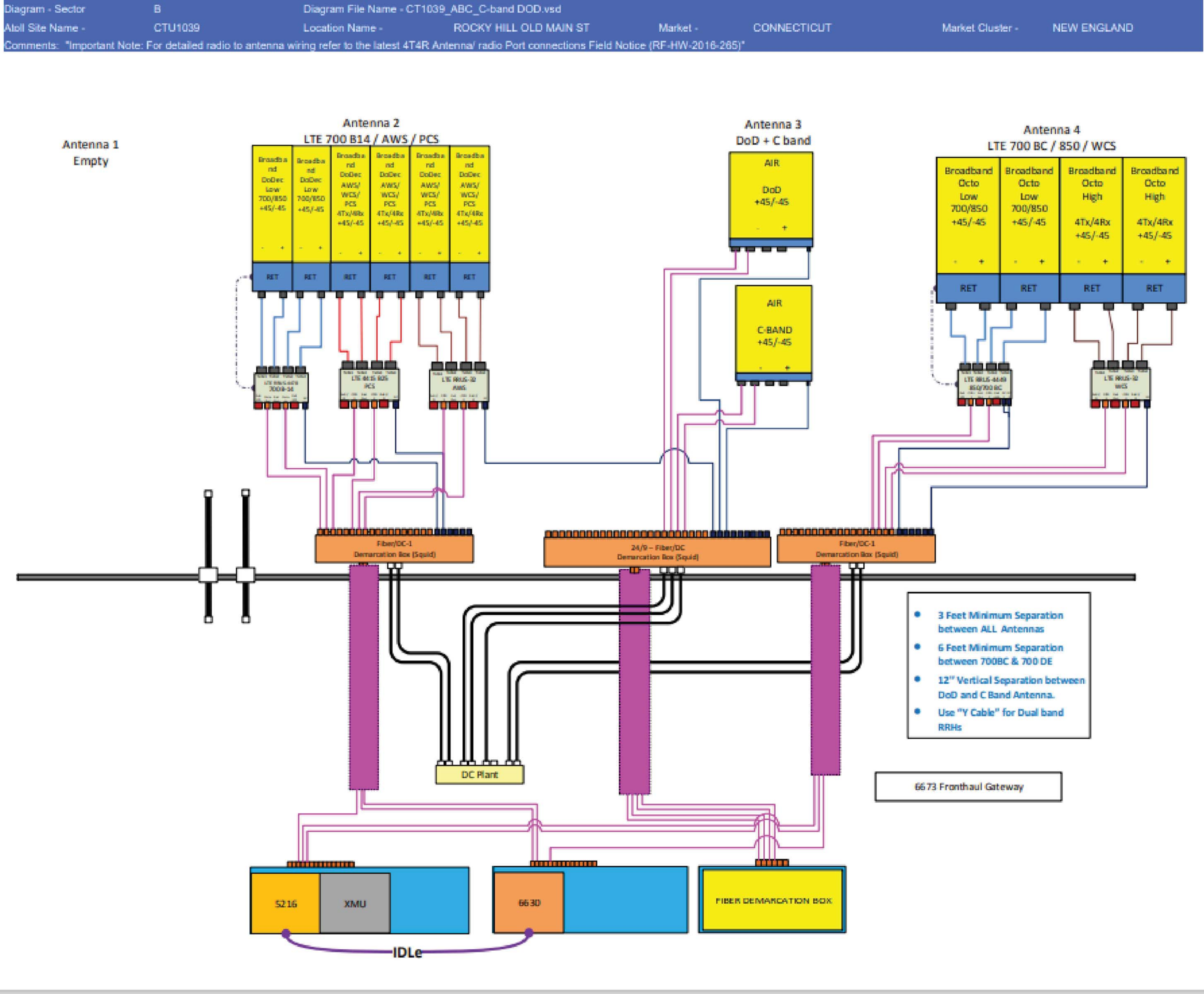
Comments: "Important Note: For detailed radio to antenna wiring refer to the latest 4T4R Antenna/ radio Port connections Field Notice (RF-HW-2016-285)"



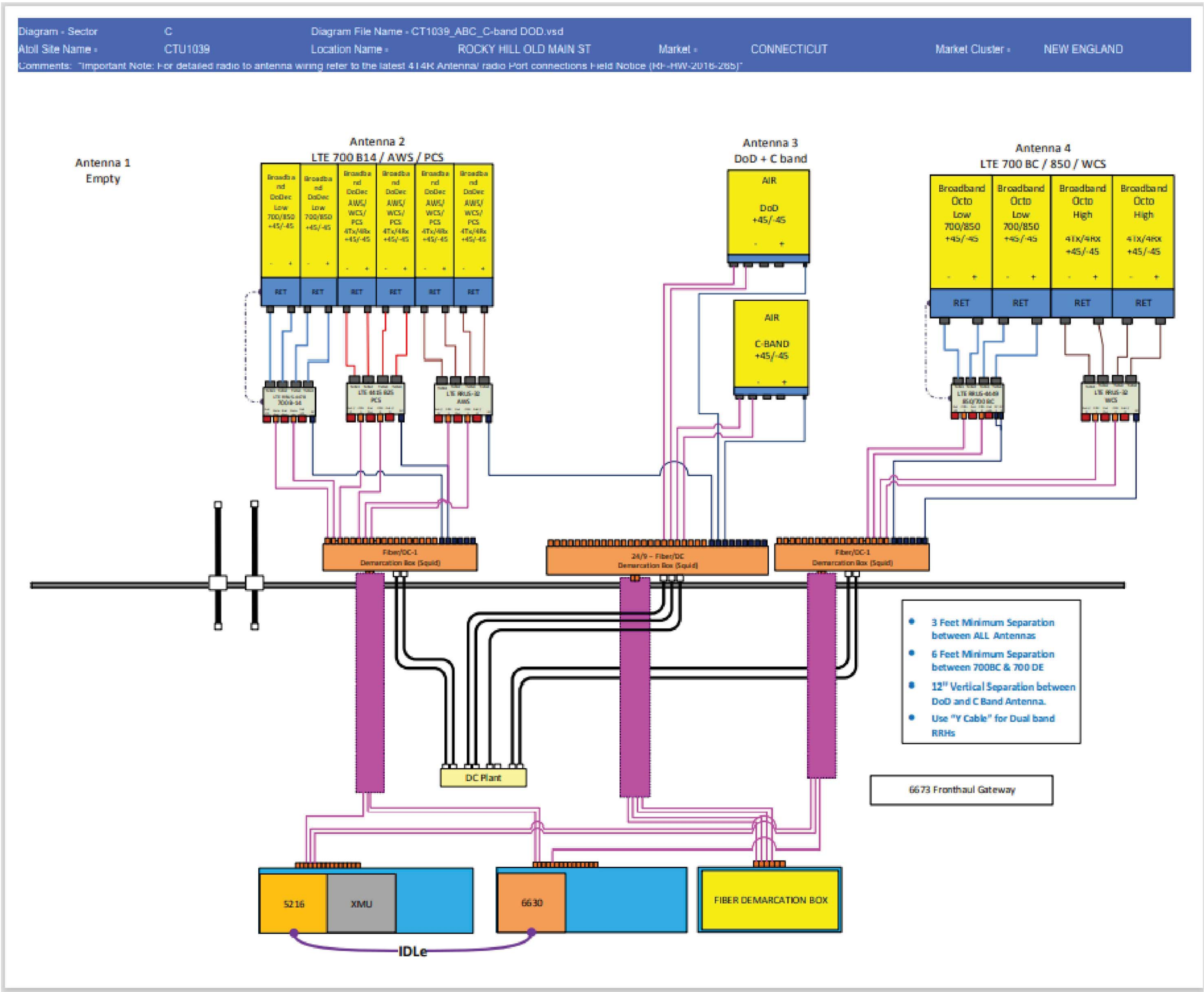
6673 Fronthaul Gateway

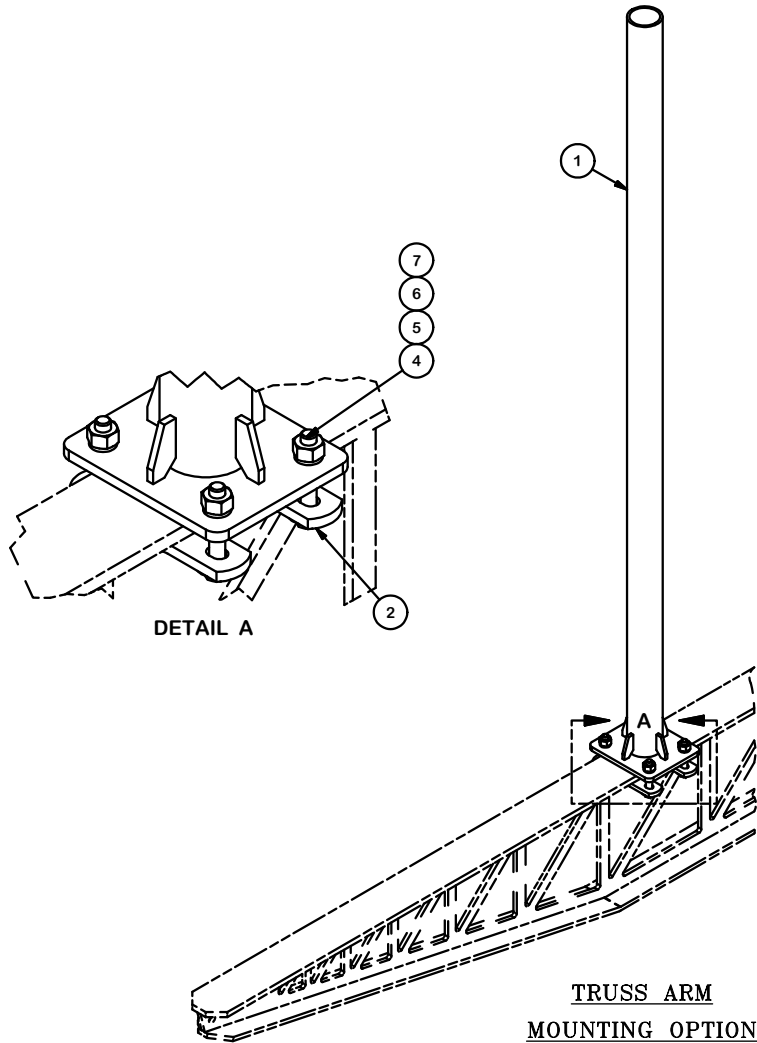
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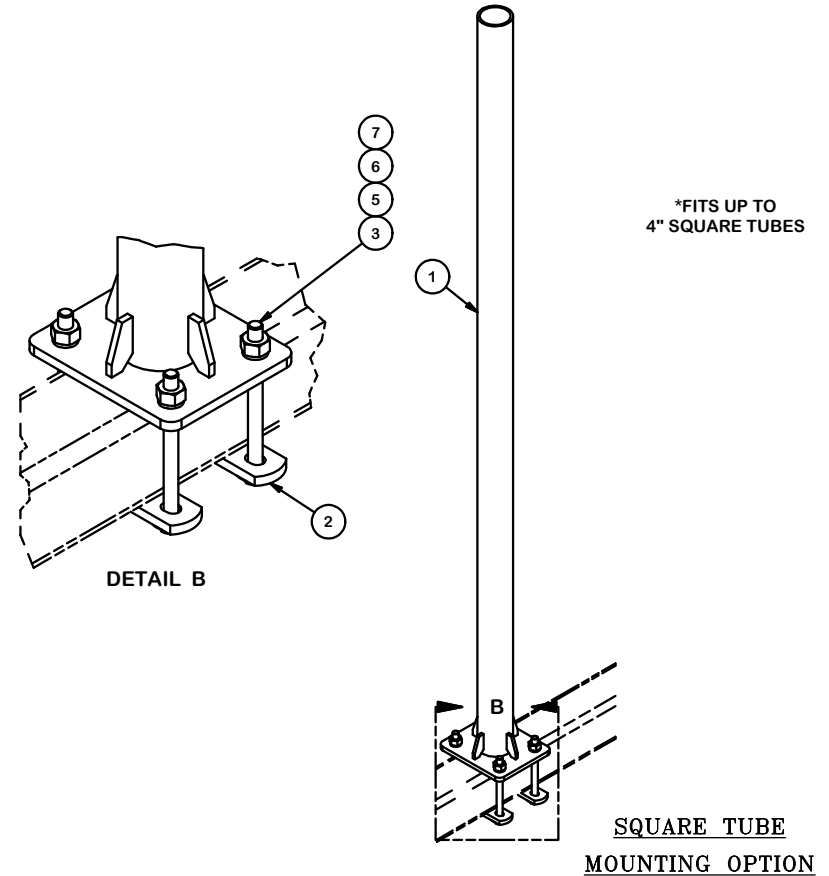


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OR DESIGN.





PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	1	X-SAMAST-6	6' STANDOFF ARM MAST WELDMENT		23.19	23.19
2	2	X-115765	5" V-CLAMP	7 1/16 in	1.03	2.05
3	4	G1206	1/2" x 6" HDG HEX BOLT GR5 FULL THREAD	2 in	0.38	1.53
4	4	G1203	1/2" x 3" HDG HEX BOLT GR5 FULL THREAD	3 in	0.22	0.87
5	4	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	0.14
6	4	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	0.06
7	4	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.29
					TOTAL WT. #	28.11



TOLERANCE NOTES

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

PROPRIETARY NOTE:
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DESCRIPTION

6' STANDOFF
ARM MAST

CPD NO.	DRAWN BY	ENG. APPROVAL
CLASS	DRAWING USAGE	CHECKED BY
81	02	CUSTOMER
		BMC 6/19/2019



Engineering
Support Team:
1-888-753-7446

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

PART NO.	SAMAST-6
DWG. NO.	SAMAST-6