



Northeast Site Solutions  
Denise Sabo  
4 Angela's Way, Burlington CT 06013  
203-435-3640  
denise@northeastsitesolutions.com

October 28, 2021

Members of the Siting Council  
Connecticut Siting Council  
Ten Franklin Square  
New Britain, CT 06051

RE: Exempt Modification Application  
101 Pierce Road, Preston CT 06365  
Latitude: 41.538183  
Longitude: -71.951667  
Site#: 876366\_Crown\_VZW

Dear Ms. Bachman:

Verizon Wireless is requesting to file an exempt modification for an existing tower located at 101 Pierce Road, Preston CT 06365. Verizon Wireless currently maintains twelve (12) antennas at the 134-foot level of the existing 155-foot tower. The property is owned by Panus Farm LLC and the tower is owned by Crown Castle. Verizon now intends to add three (3) new antenna. The new antennas would be installed at the 134-foot level of the tower. This modification includes B2, B5 hardware that is both 4G (LTE), and 5G capable. Mount modifications will be completed as shown in the attached mount analysis dated August 26, 2021 by Maser Consulting.

**Verizon Planned Modifications:**

Remove: (3) Nokia AHCA Airscale RRH

Remove and Replace:

(3) Nokia UHBA B13 RRH (REMOVE) - (3) Samsung RF4439D-25A RRH (REPLACE)  
(3) Nokia UHIE B66A RRH (REMOVE) - (3) Samsung RF4440D-13A RRH (REPLACE)

Install New:

(3) MT6407-77A Antenna  
(3) Diplexers

Existing to Remain:

(6) JAHH-65B-R3B Antenna  
(6) LPA 80080-4CF Antenna  
(1) Raycap  
(12) Coax  
(2) Hybrid



The facility was approved by the Town of Ashford Planning and Zoning Commission on November 12, 1996. Please see attached

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16- SOj-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-SOj-73, a copy of this letter is being sent to Sandra L. Allyn-Gauthier, First Selectwoman, and Tom Weber, Building Official, for the Town of Preston. A copy is also being sent to the tower owner, and property owner.

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

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading.

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

Sincerely,

Denise Sabo  
Mobile: 203-435-3640  
Fax: 413-521-0558  
Office: 4 Angela's Way, Burlington CT 06013  
Email: [denise@northeastsitesolutions.com](mailto:denise@northeastsitesolutions.com)



**NSS** **NORTHEAST**  
SITE SOLUTIONS  
*Turnkey Wireless Development*

Attachments

cc: Sandra L. Allyn-Gauthier, First Selectwoman  
Preston Town Hall  
389 Route 2 Preston, CT 06365 860-887-5581, Ext. 101

Tom Weber, Building Official  
Preston Town Hall  
389 Route 2 Preston, CT 06365 860-887-5581, ext. 130

Panus Farm LLC, Property Owner  
60 Pierce Rd Preston, CT 06365

Crown Castle, Tower Owner

# Exhibit A

## **Original Facility Approval**



TOWN OF PRESTON  
TOWN OFFICES  
389 ROUTE 2  
PRESTON, CONNECTICUT 06365-8830

*To Dan  
for signature  
9/1/99*

# FILE COPY

Date: August 10, 1999

Certified Mail

Sprint Spectrum, L.P.  
One International Blvd  
Suite 800 Mahwah New, Jersey 07495

Dear Attorney Regan:

At the regular meeting of the Preston Planning and Zoning Commission held on August 3, 1999, the Commission reviewed application Site Plan # 2-99 and Special Exception 4-99 for the installation of a monopole and other associated work at 101 Peirce Road. The Commission voted unanimously to approve the subject application with the following modifications:

1. Note sight distance for the driveway on the plan.
2. Gravel drive shall have 6" of gravel rather than 4". The driveway shall have a paved apron. A driveway permit is required for its installation.
3. An As-built plan must be provided for the project after the construction is completed. The as-built must be provided prior to the release of the bond.
4. A bond for the site work in the amount of \$28,000.00 must be submitted on forms as provided by the town with the final format to be approved by the town attorney.
5. A bond in the amount \$29,500.00 must be posted for the tower dismantling. This bond is to be renewed every two years and must be renewed by August 3, 2001. In the event the bond is not renewed it will be a violation of this permit.
6. The Commission requested that a company representative contact the First Selectmen to afford the town due consideration to address the town's emergency communication needs.

Please provide one mylar copy of the plan revised in accordance with the above noted and produced or reproduced in compliance with section 7-31 of the Connecticut General Statutes regarding requirements for the filing of a map. In addition, provide two (2) paper copies. After endorsement of the plan by the Chairman, the mylar copy of the plan must be filed with the Town Clerk's office.

**BONDING:** Prior to the endorsement of the plan the two bonds in the amount of \$28,000 and 29,500 must be filed with the Commission using the format as approved by the Commission (see attached forms). The Town will hold the bonds until such time the Commission approves their reduction or

release. Any plan filed without the appropriate bond will be considered to be in violation with the approved plan and zoning regulations. In order for the Commission to consider a bond release or reduction, a letter requesting a release or reduction must be submitted to the Planning and Zoning Office two (2) weeks prior to the regularly scheduled meeting. This will allow adequate time to conduct a site inspection of the completed work. Unauthorized work could result in delays with the bond release or reduction by the Commission.

**OTHER PERMITS REQUIRED:** Prior to the commencement of any work, a zoning permit and other subsequent town and state permits must be obtained.

**SITE INSPECTIONS:** During the construction of the project, inspections will be conducted of the progress by the town staff. A forty-eight hour notice is required for the inspections. In the event that there is concern with the location of the structure, parking etc, the Zoning Enforcement Officer may require that a land surveyor licensed in the State of Connecticut locate the structure prior to construction. Failure to provide notice to the town of the work and failure to construct the project as shown on the plan without prior approval of the changes could result in problems with the issuance of Certificate of Occupancy and the release or reduction of the bond. Please contact the Planning and Zoning Office at 889-2529 to schedule an appointment to inspect the project at the following times:

1. After the installation of the erosion and sediment control.
2. After the structure has been staked out and the footings are to be placed.
3. After the parking and sidewalks have been staked out.
4. Completion of the project.

If there are any questions regarding this application or if the staff can be of any assistance at any time during the project construction, please do not hesitate to contact the office.

Congratulations on the success completion of the application.

Very truly yours,



Daniel Kulesza  
Town Planner

- cc: ZEO  
 First Selectman  
 Inland Wetland Officer  
 Building Inspector  
 Walter and Ruth Panus

# Exhibit B

## Property Card

# 101 PIERCE RD

**Location** 101 PIERCE RD

**Mblu** 8-0/ PIE1/ 101/ /

**Acct#** 00059300

**Owner** PANUS FARM LLC

**Assessment** \$257,750

**Appraisal** \$1,137,200

**PID** 602

**Building Count** 1

## Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2017	\$92,400	\$1,044,800	\$1,137,200

Assessment			
Valuation Year	Improvements	Land	Total
2017	\$64,700	\$193,050	\$257,750

## Owner of Record

**Owner** PANUS FARM LLC  
**Co-Owner**  
**Address** 60 PIERCE RD  
PRESTON, CT 06365

**Sale Price** \$0  
**Certificate**  
**Book & Page** 0196/0038  
**Sale Date** 12/03/2015  
**Instrument** 01

## Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
PANUS FARM LLC	\$0		0196/0038	01	12/03/2015
SHEA JOAN	\$0		0193/0185	01	11/19/2014
SHEA JOAN - TRUSTEE	\$0		0193/0180	01	11/19/2014
PANUS RUTH L ESTATE OF	\$0		0190/0842		11/26/2013
PANUS RUTH L TRUSTEE	\$0		0188/0206		03/26/2013

## Building Information

### Building 1 : Section 1

**Year Built:** 1950

**Building Photo**

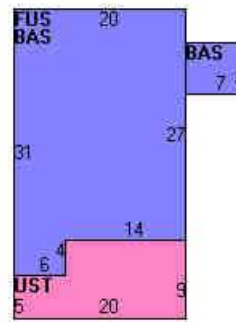


**Living Area:** 1,170  
**Replacement Cost:** \$89,164  
**Building Percent Good:** 65  
**Replacement Cost Less Depreciation:** \$58,000



(<http://images.vgsi.com/photos/PrestonCTPhotos/\00\00\34\36.jpg>)

### Building Layout



([http://images.vgsi.com/photos/PrestonCTPhotos//Sketches/602\\_602.jpg](http://images.vgsi.com/photos/PrestonCTPhotos//Sketches/602_602.jpg))

Building Attributes	
Field	Description
Style	Conventional
Model	Residential
Grade:	Below Average
Stories:	2 Stories
Occupancy	1
Exterior Wall 1	Wood Shingle
Exterior Wall 2	
Roof Structure:	Gable/Hip
Roof Cover	Asph/F Gls/Cmp
Interior Wall 1	Plastered
Interior Wall 2	Panel
Interior Flr 1	Carpet
Interior Flr 2	Vinyl/Asphalt
Heat Fuel	Gas
Heat Type:	Hot Water
AC Type:	None
Total Bedrooms:	4 Bedrooms
Total Bthrms:	1
Total Half Baths:	1
Total Xtra Fixtrs:	
Total Rooms:	6 Rooms
Bath Style:	Average
Kitchen Style:	Average
Num Kitchens	01
Cndtn	
Usrflid 103	
Usrflid 104	
Usrflid 105	
Usrflid 106	
Usrflid 107	
Num Park	
Fireplaces	
Usrflid 108	
Usrflid 101	
Usrflid 102	

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	606	606
FUS	Upper Story, Finished	564	564
UST	Utility, Storage, Unfinished	156	0
		1,326	1,170

Usrflid 100	
Usrflid 300	
Usrflid 301	

### Extra Features

Extra Features	<u>Legend</u>
No Data for Extra Features	

### Land

#### Land Use

<b>Use Code</b>	1010
<b>Description</b>	Single Fam MDL-01
<b>Zone</b>	R-80
<b>Neighborhood</b>	0050
<b>Alt Land Appr Category</b>	No

#### Land Line Valuation

<b>Size (Acres)</b>	198.45
<b>Frontage</b>	0
<b>Depth</b>	0
<b>Assessed Value</b>	\$193,050
<b>Appraised Value</b>	\$1,044,800

### Outbuildings

Outbuildings						<u>Legend</u>
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
FGR1	GARAGE-AVE			492.00 S.F.	\$2,400	1
FGR1	GARAGE-AVE			2088.00 S.F.	\$16,700	1
SLO1	SILO-WD OR CNC			3432.00 DIAxHT	\$4,800	1
BRN3	1 STORY W/LOFT			1744.00 S.F.	\$2,300	1
BRN8	POLE BARN			5124.00 S.F.	\$3,600	1
SHD1	SHED FRAME			270.00 S.F.	\$600	1
LNT	LEAN-TO			930.00 S.F.	\$300	1
SHD2	W/LIGHTS ETC			4090.00 S.F.	\$3,700	1

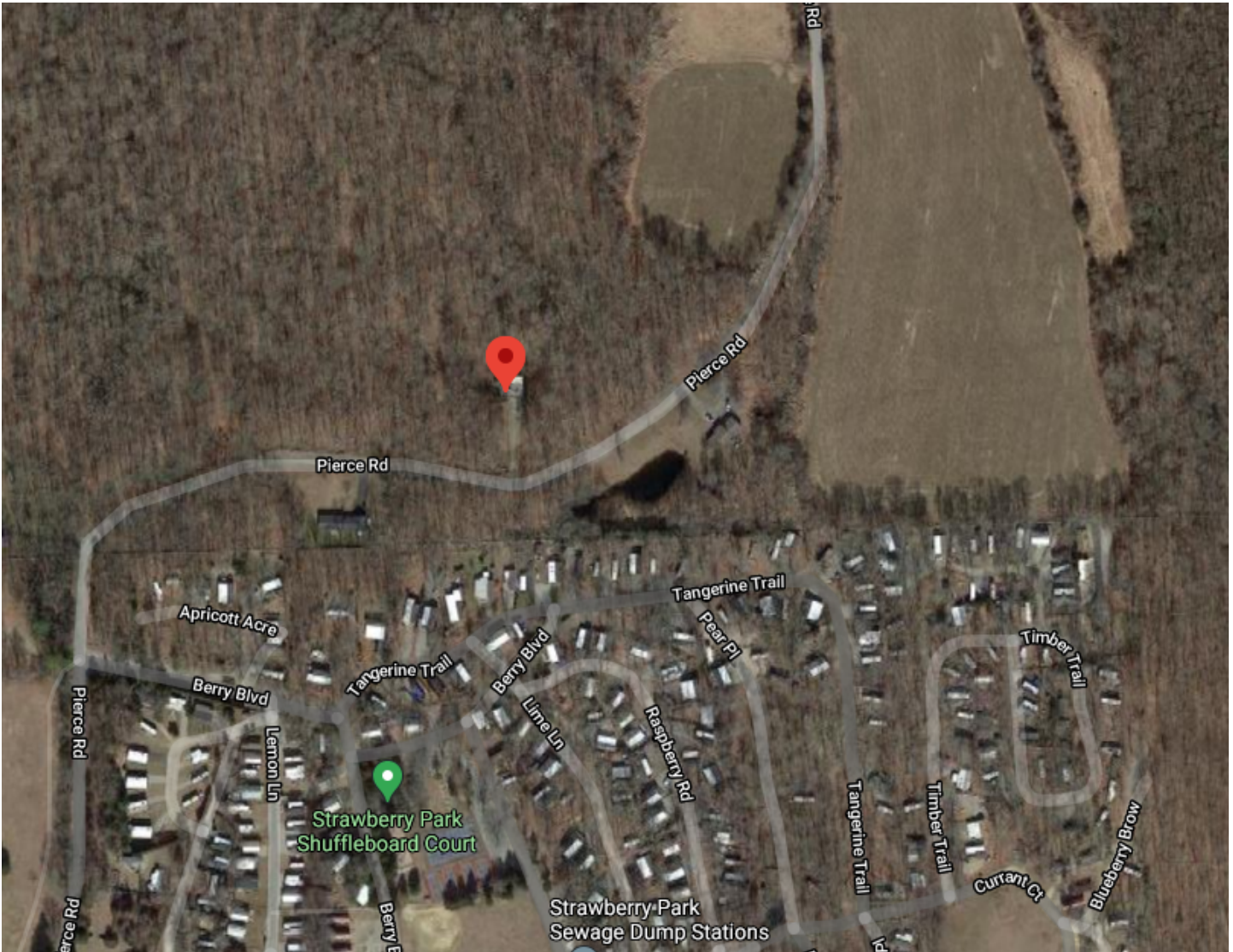
### Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2011	\$119,800	\$976,600	\$1,096,400
2006	\$101,600	\$493,500	\$595,100
2001	\$102,200	\$466,700	\$568,900

Assessment			
Valuation Year	Improvements	Land	Total
2011	\$83,900	\$91,600	\$175,500
2006	\$71,100	\$58,900	\$130,000

2001		\$71,500	\$46,900	\$118,400
------	--	----------	----------	-----------

(c) 2021 Vision Government Solutions, Inc. All rights reserved.



# Exhibit C

## **Construction Drawings**



**VERIZON SITE NUMBER:** 467767  
**VERIZON SITE NAME:** PRESTON CITY CT  
**SITE TYPE:** MONOPOLE  
**TOWER HEIGHT:** 155'-0"

**BUSINESS UNIT #:** 876366  
**SITE ADDRESS:** 101 PIERCE ROAD  
**COUNTY:** PRESTON, CT 06365  
**JURISDICTION:** NEW LONDON  
**CITY OF NEW LONDON**

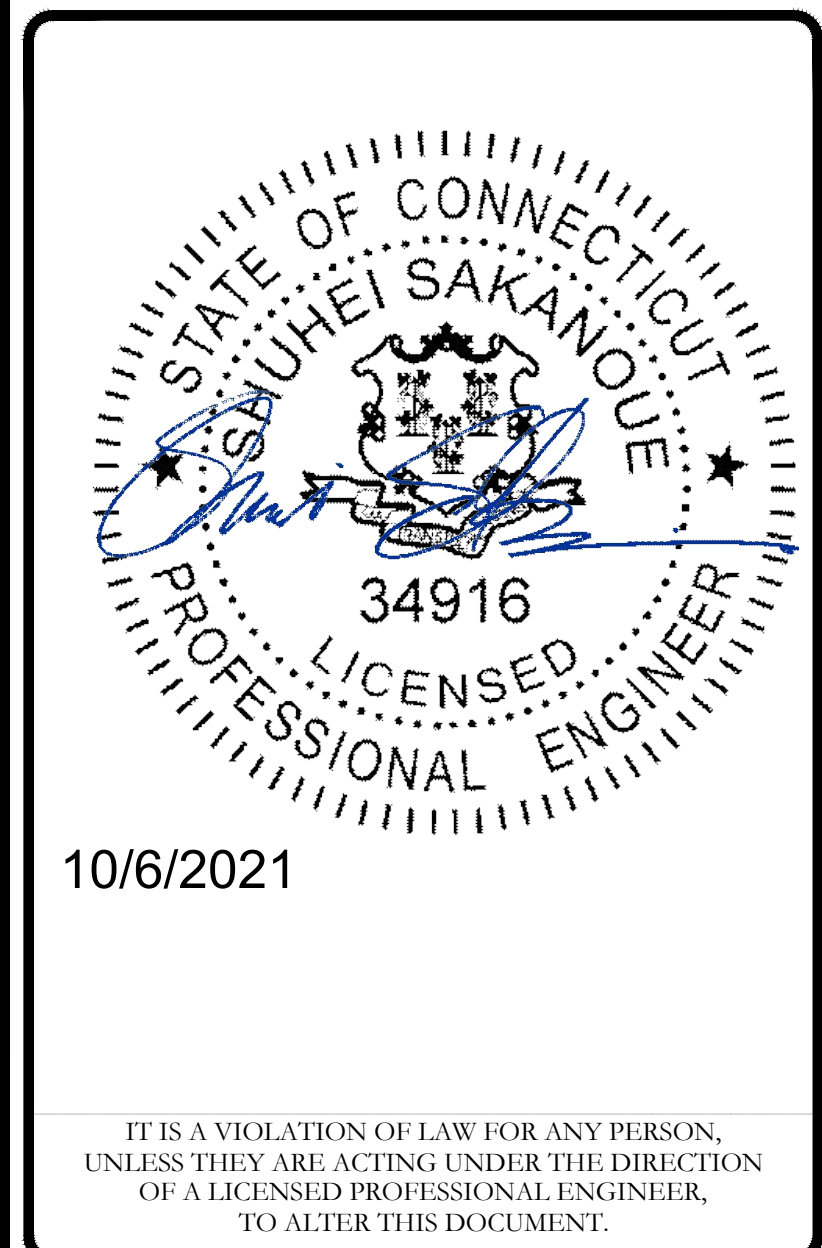
**VERIZON FUZE PROJECT #: 16272096**



**VERIZON SITE NUMBER:**  
467767  
  
**BU #:** 876366  
**WAPPINGERS FALLS/  
PRESTON CIT**  
  
 101 PIERCE ROAD  
 PRESTON, CT 06365  
  
 EXISTING 155'-0" MONOPOLE

**ISSUED FOR:**

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	10/04/21	RCD	FINAL CDs	-



**SHEET NUMBER:** T-1  
**REVISION:** 0

**SITE INFORMATION**

CROWN CASTLE USA INC. WAPPINGERS FALLS/ PRESTON CIT  
 SITE NAME:  
 SITE ADDRESS: 101 PIERCE ROAD  
 PRESTON, CT 06365  
 COUNTY: NEW LONDON  
 MAP/PARCEL #: VERIFY  
 AREA OF CONSTRUCTION: EXISTING  
 LATITUDE: 41° 32' 17.46" N (41.538183°)  
 LONGITUDE: -71° 57' 6.00" W (-71.951667°)  
 LAT/LONG TYPE: NAD83  
 GROUND ELEVATION: 285'-0"  
 CURRENT ZONING: TBD  
 JURISDICTION: CITY OF NEW LONDON  
 OCCUPANCY CLASSIFICATION: TBD  
 TYPE OF CONSTRUCTION: TBD  
 A.D.A. COMPLIANCE: FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION  
 PROPERTY OWNER: TBD  
 TOWER OWNER: CCAIT LLC  
 2000 CORPORATE DRIVE  
 CANONSBURG, PA 15317  
 CARRIER/APPLICANT: VERIZON WIRELESS  
 180 WASHINGTON VALLEY ROAD  
 BEDMINSTER, NJ 07921  
 ELECTRIC PROVIDER: TBD  
 TELCO PROVIDER: TBD

**DRAWING INDEX**

SHEET #	SHEET DESCRIPTION
T-1	TITLE SHEET
T-2	GENERAL NOTES
C-1	SITE PLAN
C-2	TOWER ELEVATION & ANTENNA PLANS
C-3	EQUIPMENT SCHEDULES
C-4	EQUIPMENT DETAILS
C-5	EQUIPMENT DETAILS
C-6	PLUMBING DIAGRAM
G-1	GROUNDING DETAILS
G-2	GROUNDING DETAILS

ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR 11X7. 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.

**APPROVALS**

SIGNATURE	DATE
_____	_____
_____	_____
_____	_____
_____	_____

**CONTRACTOR PMI REQUIREMENTS**

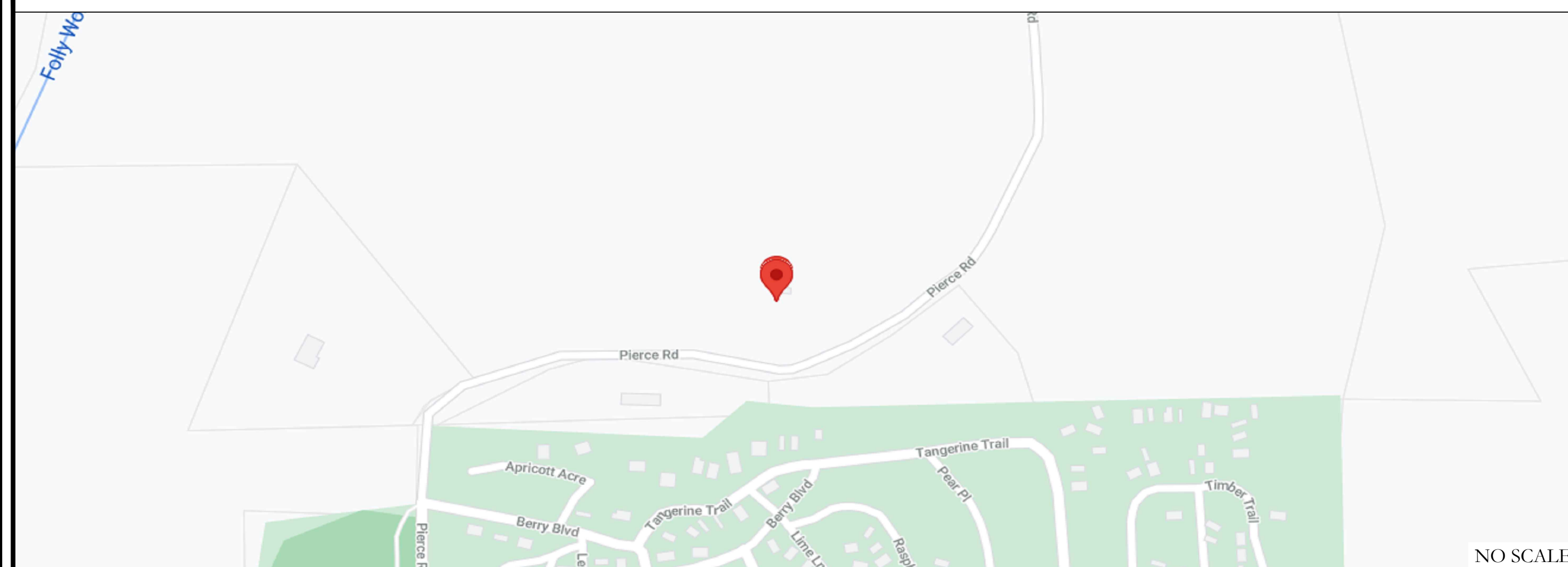
PMI ACCESSED AT	https://pmi.vxwsmart.com
SMART TOOL VENDOR	
PROJECT NUMBER	6039-Z0001-C
VzW LOCATION CODE (PSLC)	467767
*** PMI AND REQUIREMENTS ALSO EMBEDDED IN MOUNT ANALYSIS REPORT	

**MOUNT MODIFICATION REQUIRED** N

**VzW APPROVED SMART KIT VENDORS**

REFER TO MOUNT MODIFICATION DRAWINGS PAGE FOR VzW SMART KIT APPROVED VENDORS

**LOCATION MAP**



DRIVING DIRECTIONS FROM VERIZON LOCAL OFFICE (180 WASHINGTON VALLEY RD, BEDMINSTER, NJ 07921) DEPART AND HEAD TOWARD WASHINGTON VALLEY RD / COUNTY HWY-620, TURN LEFT ONTO WASHINGTON VALLEY RD / COUNTY HWY-620, BEAR RIGHT ONTO US-206 N / US-202 N / US HIGHWAY 202 206, BEAR RIGHT ONTO US-202 N / US-206 N / US HIGHWAY 202 206, TURN RIGHT ONTO SCHLEY MOUNTAIN RD, TAKE THE RAMP ON THE RIGHT FOR I-287 N, TAKE THE RAMP ON THE RIGHT FOR I-287 / I-87 SOUTH AND HEAD TOWARD NEW YORK CITY / TAPPAN ZEE BR, KEEP STRAIGHT TO GET ONTO I-287 E, TAKE THE RAMP FOR I-95 N, BEAR LEFT ONTO I-395 N, HEAD RIGHT ON THE RAMP FOR CT-2A EAST TOWARD LEDYARD / PRESTON, TURN LEFT ONTO CT-2A / CT-12 / ROUTE 12, BEAR RIGHT ONTO ROUTE 2A, BEAR RIGHT ONTO CT-2A / ROUTE 2A, KEEP LEFT TO STAY ON CT-2A / CT-117 / ROUTE 2A, TURN RIGHT ONTO CT-2 / ROUTE 2, TURN LEFT ONTO CT-164 / ROUTE 164, BEAR RIGHT ONTO CT-165 / ROUTE 165, TURN LEFT ONTO PIERCE RD, ARRIVE AT 101 PIERCE ROAD PRESTON, CT 06365.

**APPLICABLE CODES/REFERENCE DOCUMENTS**

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

CODE TYPE	CODE
BUILDING	2018 IBC
MECHANICAL	2018 IMC
ELECTRICAL	2015 NEC

**REFERENCE DOCUMENTS:**

STRUCTURAL ANALYSIS:	BY OTHERS
DATED:	--
MOUNT ANALYSIS:	MASER CONSULTING CONNECTICUT
DATED:	08/26/2021
RFDS REVISION:	0
DATED:	08/12/2021
ORDER ID:	583851
REVISION:	0

**PROJECT DESCRIPTION**

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

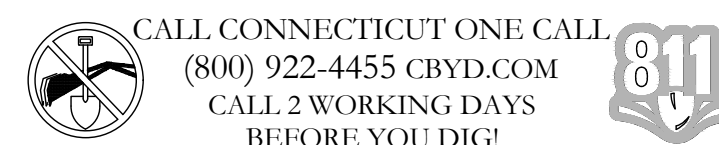
- TOWER SCOPE OF WORK:**
- RELOCATE (6) ANTENNAS
  - INSTALL (3) ANTENNAS
  - INSTALL (6) RRHS
  - INSTALL (3) DIPLEXERS
  - INSTALL (3) ANTENNA MOUNTS

**GROUND SCOPE OF WORK:**  
N/A

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

**PROJECT TEAM**

A&E FIRM: CROWN CASTLE USA INC.  
 2000 CORPORATE DRIVE  
 CANONSBURG, PA 15317  
 CROWNNAE.APPROVAL@CROWNCastle.COM  
 CROWN CASTLE USA INC. DISTRICT CONTACTS:  
 3 CORPORATE PARK DRIVE, SUITE 101  
 CLIFTON PARK, NY 12065  
 TBD - PROJECT MANAGER  
 TBD  
 TBD - CONSTRUCTION MANAGER  
 --  
 VERIZON CONTACT: TIMOTHY PARKS  
 TIMOTHY.PARKS@VERIZONWIRELESS.COM



CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:

- 1. NOTICE TO PROCEED- NO WORK SHALL COMMENCE PRIOR TO CROWN CASTLE USA INC. WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN CASTLE USA INC. NOC AT 800-788-7011 & THE CROWN CASTLE USA INC. CONSTRUCTION MANAGER.
2. "LOOK UP" - CROWN CASTLE USA INC. SAFETY CLIMB REQUIREMENT: THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION.

GREENFIELD GROUNDING NOTES:

- 1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
2. THE CONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.

GENERAL NOTES:

- 1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY: CONTRACTOR: GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION CARRIER: VERIZON TOWER OWNER: CROWN CASTLE USA INC.
2. THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES.

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

- 1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.

ELECTRICAL INSTALLATION NOTES:

- 1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.

Table with columns: SYSTEM, CONDUCTOR, COLOR. Rows include 120/240V, 10; 120/208V, 30; 277/480V, 30; DC VOLTAGE.

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

ABBREVIATIONS:

- ANT: ANTENNA
(E): EXISTING
FIF: FACILITY INTERFACE FRAME
GEN: GENERATOR
GPS: GLOBAL POSITIONING SYSTEM

verizon logo
180 WASHINGTON VALLEY ROAD
BEDMINSTER, NJ 07921

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

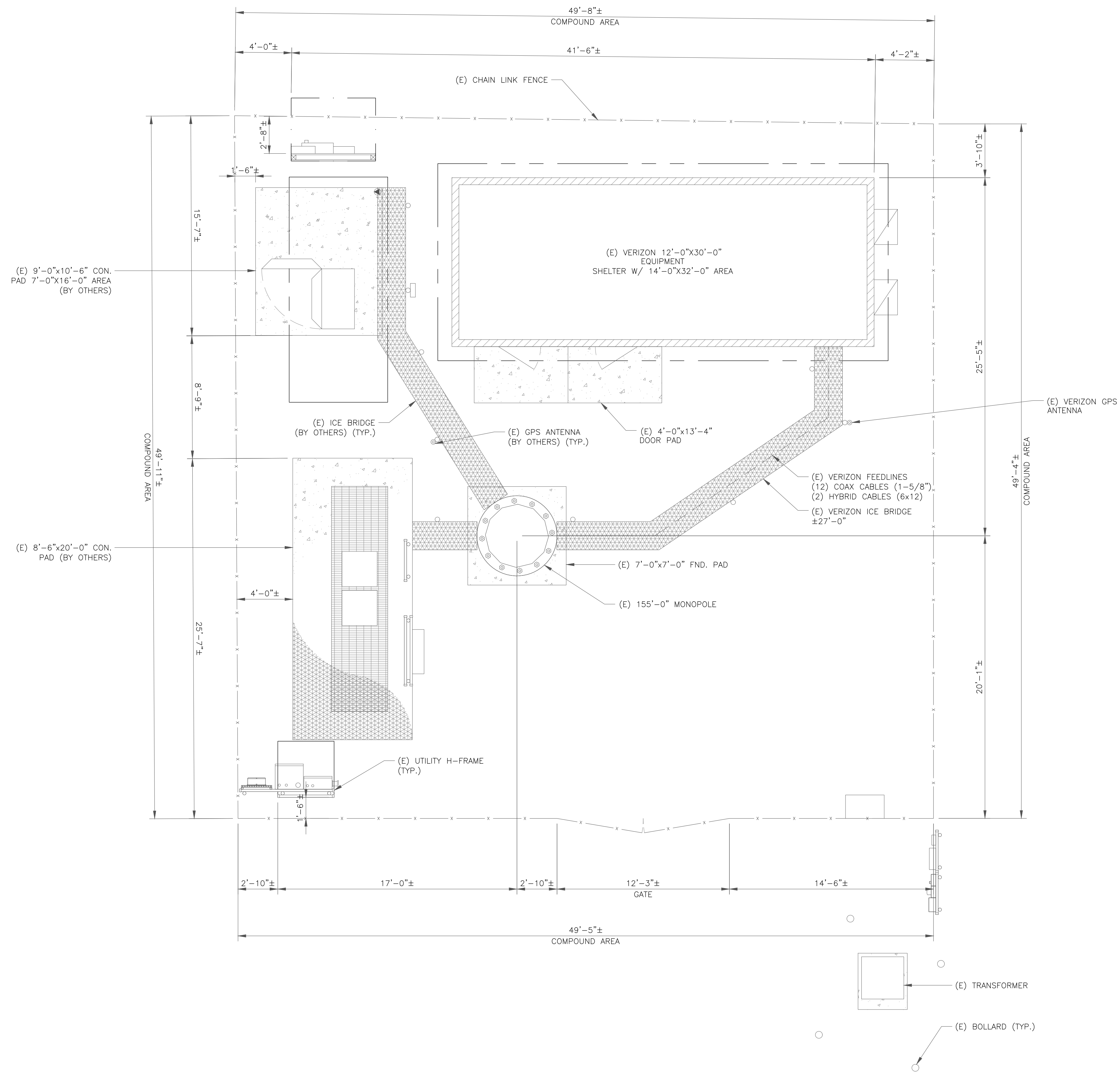
INFINIGY logo
FROM ZERO TO INFINIGY
the solutions are endless
BELLEVUE, WA 98004

VERIZON SITE NUMBER: 467767
BU #: 876366
WAPPINGERS FALLS/ PRESTON CIT
101 PIERCE ROAD
PRESTON, CT 06365
EXISTING 155'-0" MONOPOLE

Table with columns: REV, DATE, DRWN, DESCRIPTION, DES./QA. Row 1: 0, 10/04/21, RCD, FINAL CDs, .

ISSUED FOR:
STATE OF CONNECTICUT
HUHEI SAKANQUE
PROFESSIONAL ENGINEER
34916
10/6/2021
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-2
REVISION: 0



(E) 9'-0"x10'-6" CON. PAD 7'-0"x16'-0" AREA (BY OTHERS)

(E) 8'-6"x20'-0" CON. PAD (BY OTHERS)

(E) ICE BRIDGE (BY OTHERS) (TYP.)

(E) GPS ANTENNA (BY OTHERS) (TYP.)

(E) 4'-0"x13'-4" DOOR PAD

(E) VERIZON FEEDLINES (12) COAX CABLES (1-5/8") (2) HYBRID CABLES (6x12)  
(E) VERIZON ICE BRIDGE ±27'-0"

(E) 7'-0"x7'-0" FND. PAD

(E) 155'-0" MONOPOLE

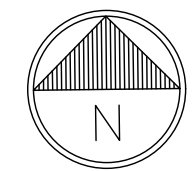
(E) VERIZON GPS ANTENNA

(E) UTILITY H-FRAME (TYP.)

(E) TRANSFORMER

(E) BOLLARD (TYP.)

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



**verizon**  
180 WASHINGTON VALLEY ROAD  
BEDMINSTER, NJ 07921

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

**INFINIGY**  
FROM ZERO TO INFINIGY  
the solutions are endless  
BELLEVUE, WA 98004

VERIZON SITE NUMBER:  
**467767**

BU #: 876366  
**WAPPINGERS FALLS/  
PRESTON CIT**

101 PIERCE ROAD  
PRESTON, CT 06365

EXISTING 155'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	10/04/21	RCD	FINAL CDs	-

SHUHEI SAKANOU  
34916  
LICENSED PROFESSIONAL ENGINEER

10/6/2021

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: **C-1** REVISION: **0**

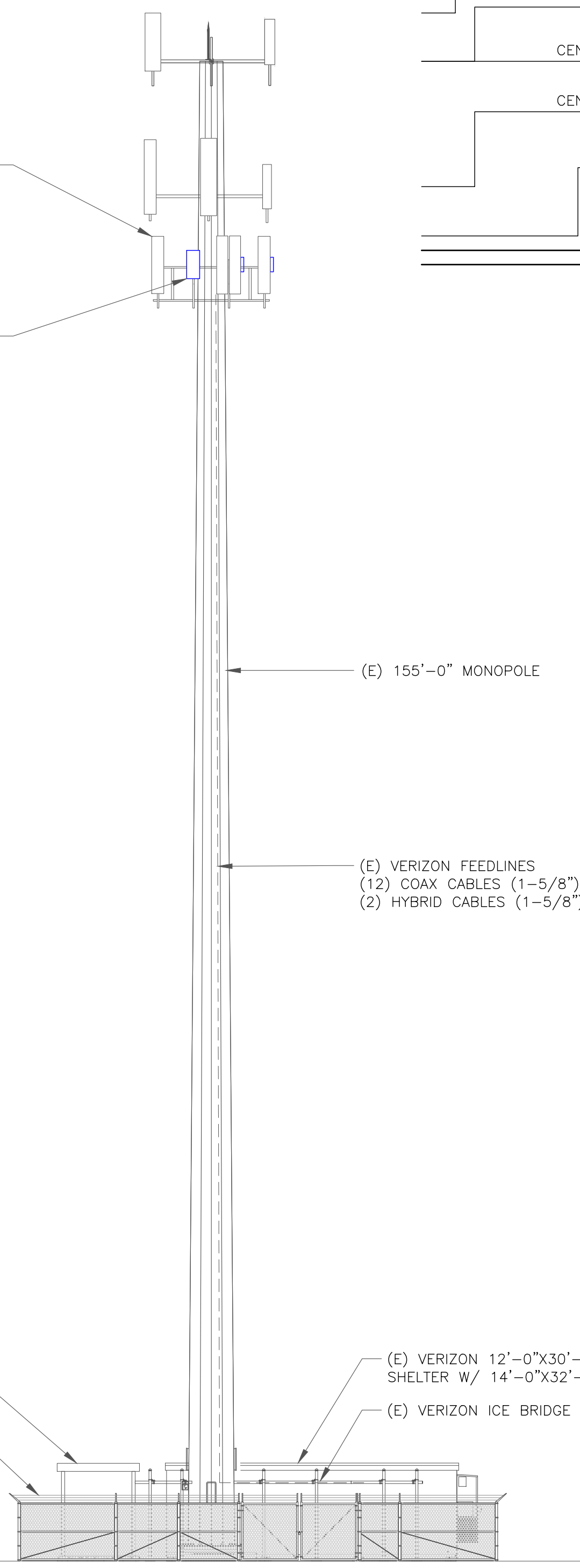
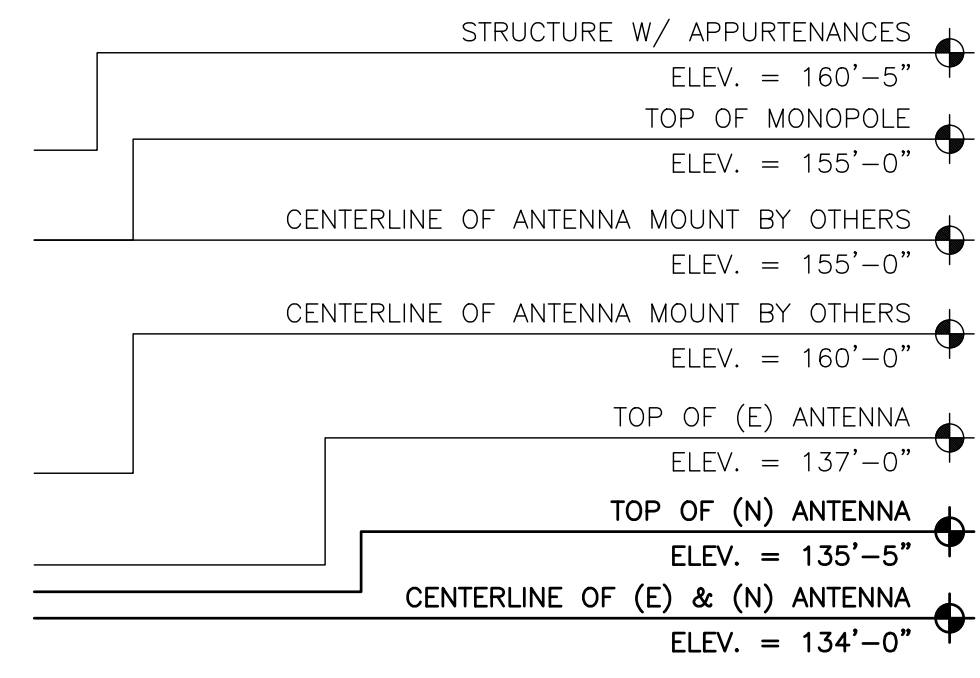
**NOTES:**

- THESE DRAWINGS ARE NOT INTENDED TO BE A VERIFICATION THAT THE STRUCTURE OR MOUNTS ARE ADEQUATE TO SUPPORT THE PROPOSED LOADING. VERIFICATION THAT THE EXISTING STRUCTURE AND MOUNTS CAN SUPPORT THE PROPOSED LOADING SHALL BE PERFORMED BY A REGISTERED PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION.
- CONTRACTOR TO REFER TO THE STRUCTURAL ANALYSIS AND MOUNT ASSESSMENT AND VERIFY LOADING WITH THE MOST RECENT RFDS PRIOR TO CONSTRUCTION

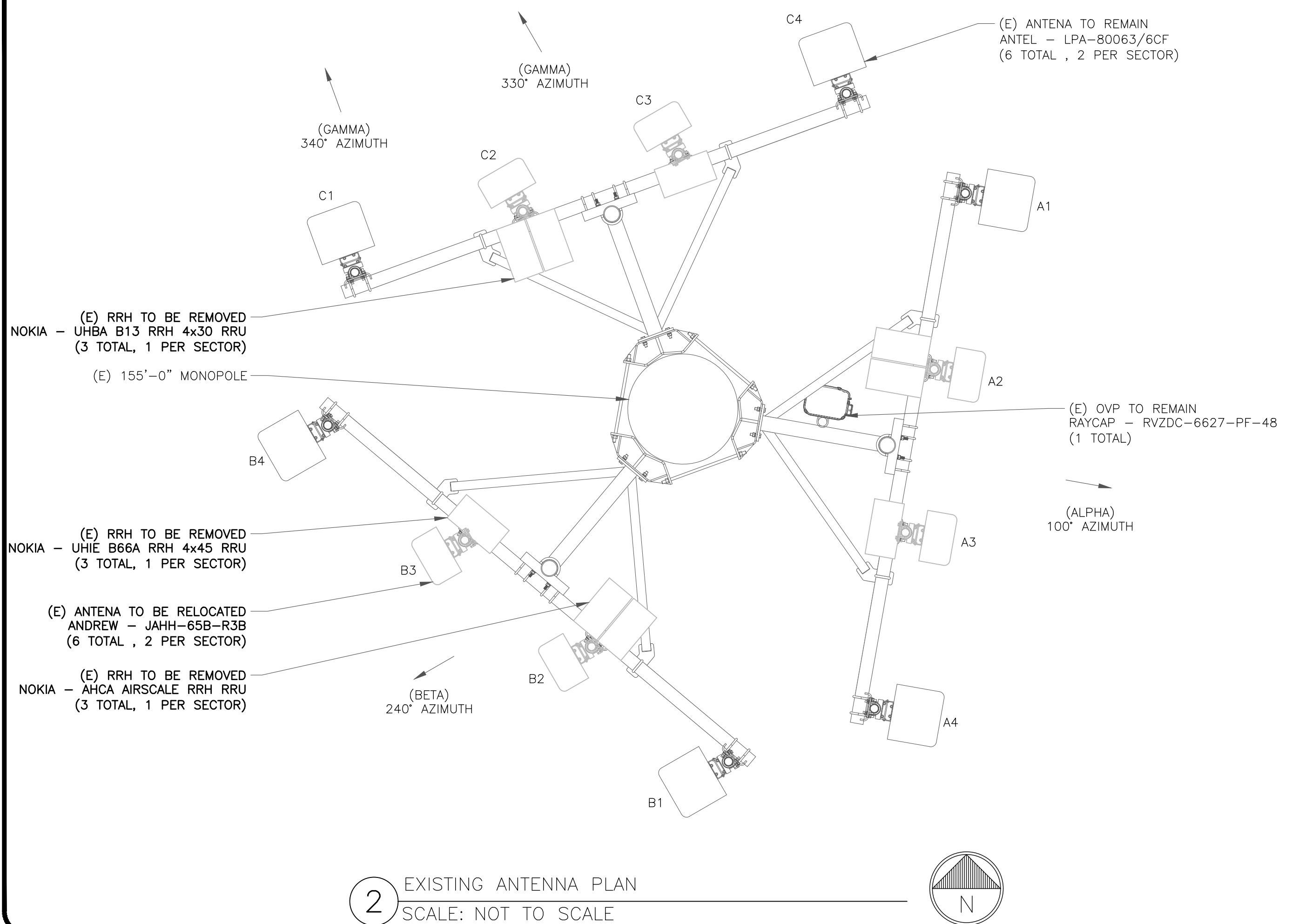
**VERIZON EQUIPMENT**

ANTENNA CL: 134'-0"  
MOUNT CL: 132'-0"

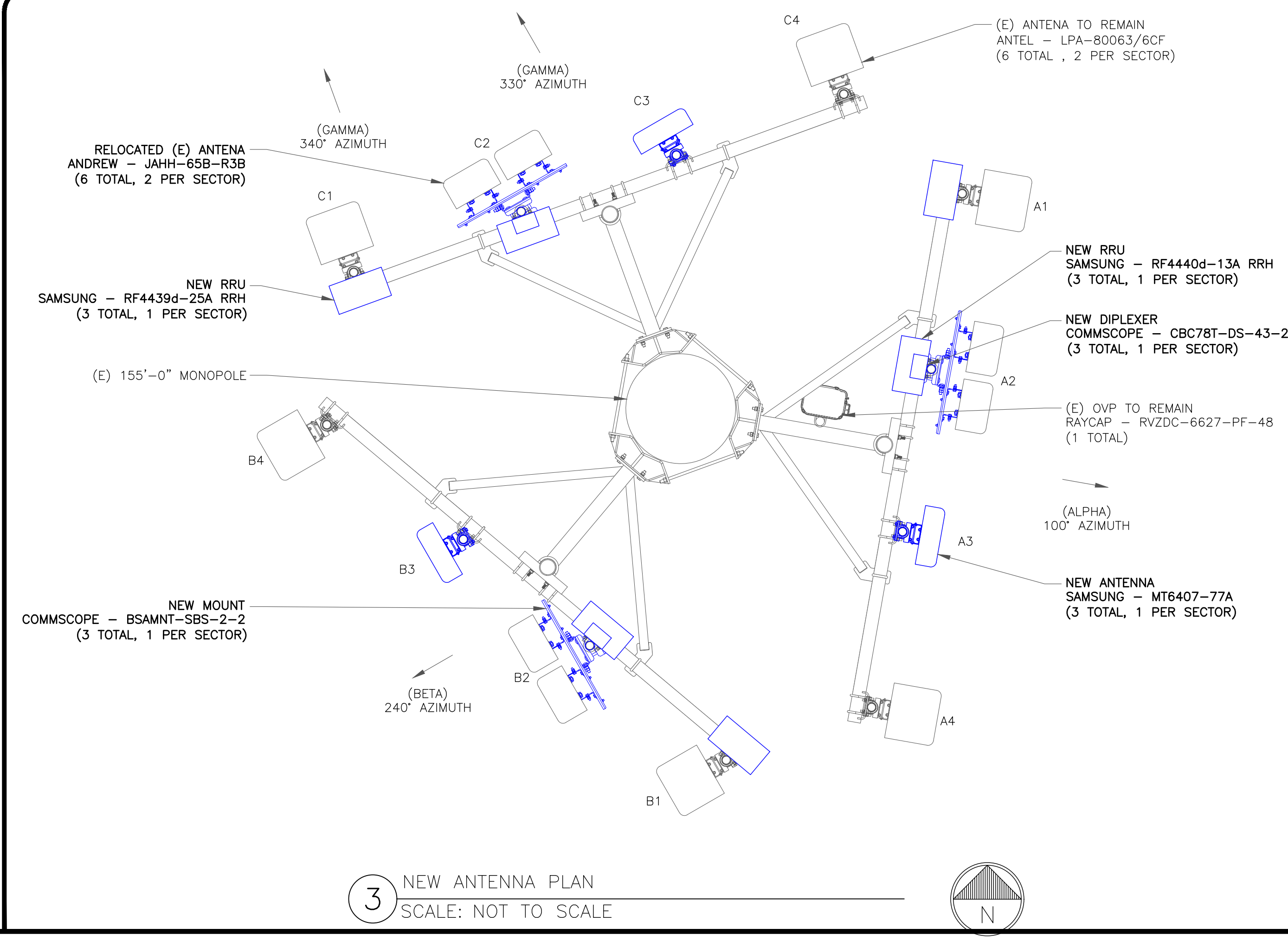
- (E) VERIZON EQUIPMENT TO REMAIN
- (6) ANDREW - JAHH-65B-R3B ANTENNAS
  - (6) ANTEL - LPA-80063/6CF ANTENNAS
  - (1) RAYCAP - RVZDC-6627-PF-48 OVP INSTALLED ON EXISTING MOUNTS
- NEW VERIZON EQUIPMENT
- (3) SAMSUNG - MT6407-77A ANTENNAS
  - (3) SAMSUNG - RF4440d-13A RRH
  - (3) SAMSUNG - RF4439d-25A RRH
  - (3) COMMSCOPE - CBC78T-DS-43-2X INSTALLED ON EXISTING MOUNTS



1 TOWER ELEVATION  
SCALE: NOT TO SCALE



2 EXISTING ANTENNA PLAN  
SCALE: NOT TO SCALE



3 NEW ANTENNA PLAN  
SCALE: NOT TO SCALE

**verizon**

180 WASHINGTON VALLEY ROAD  
BEDMINSTER, NJ 07921

**CROWN CASTLE**

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

**INFINIGY**

FROM ZERO TO INFINIGY  
the solutions are endless

BELLEVUE, WA 98004

VERIZON SITE NUMBER:  
**467767**

BU #: 876366  
**WAPPINGERS FALLS/  
PRESTON CIT**

101 PIERCE ROAD  
PRESTON, CT 06365

EXISTING 155'-0" MONOPOLE

**ISSUED FOR:**

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	10/04/21	RCD	FINAL CDs	-

STATE OF CONNECTICUT  
SHUHEI SAKANOU  
34916  
LICENSED PROFESSIONAL ENGINEER

10/6/2021

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: **C-2**      REVISION: **0**



ANTENNA/RRH SCHEDULE

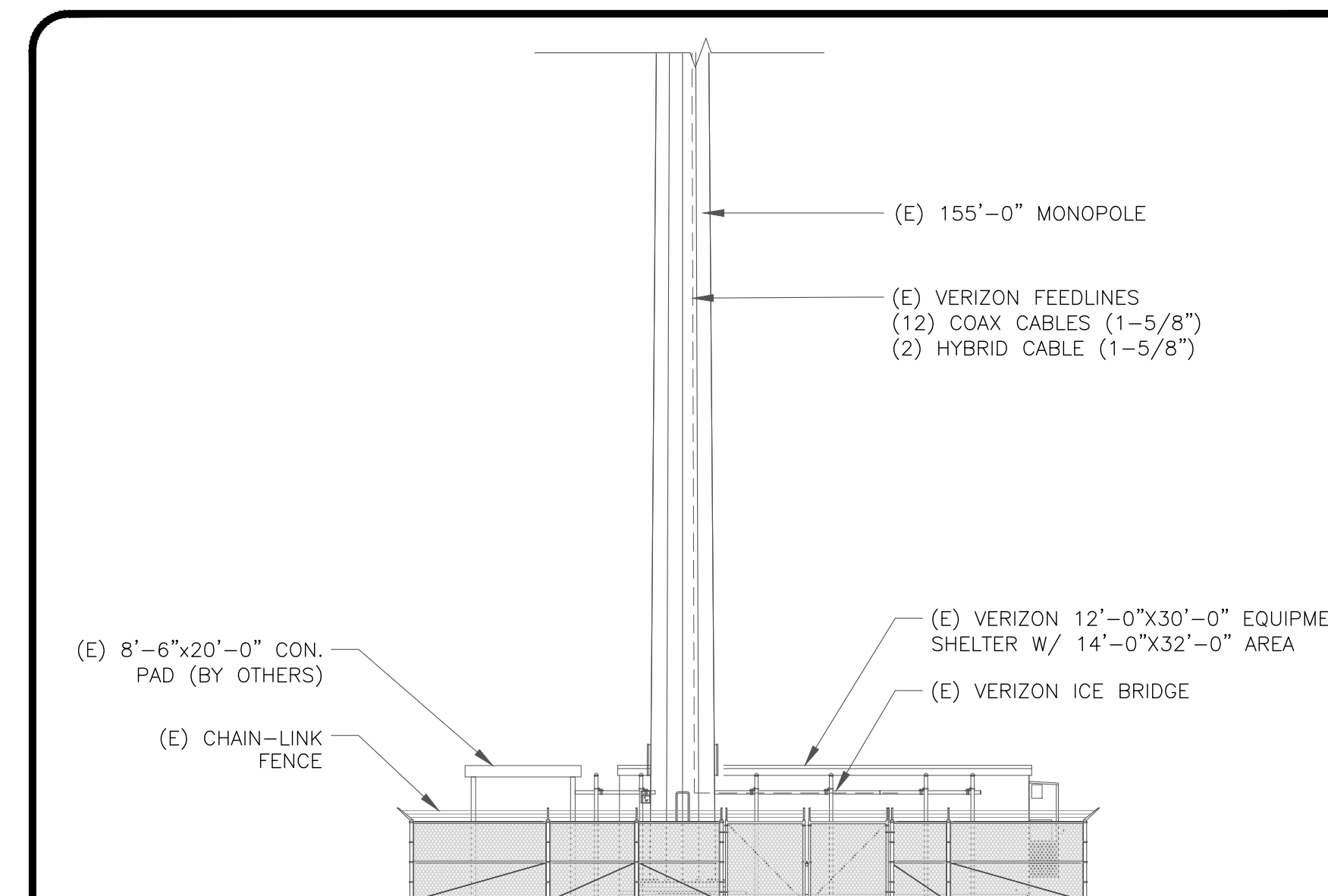
SECTOR	STATUS	ANTENNA MANUFACTURER	ANTENNA MODEL	ANTENNA CENTERLINE	AZIMUTH	MECHANICAL DOWNTILTS	ELECTRICAL DOWNTILTS	TOWER EQUIPMENT MANUFACTURER	TOWER EQUIPMENT QTY/MODEL
A1	EXISTING	ANTEL	LPA-80063/6CF	134'-0"	100°	0°	0°	-	-
A2	EXISTING	ANDREW	JAHH-65B-R3B	134'-0"	100°	0°	5°/5°/2°/2°/2°	SAMSUNG	(1) RF4440d-13A RRH
	EXISTING	ANDREW	JAHH-65B-R3B	134'-0"	100°	0°	5°/5°/2°/2°/2°	SAMSUNG COMMSCOPE	(1) RF4439d-25A RRH (1) CBC78T-DS-43-2X DIPLEXER
A3	NEW	SAMSUNG	MT6407-77A	134'-0"	100°	0°	6°	-	-
A4	EXISTING	ANTEL	LPA-80063/6CF	134'-0"	100°	0°	0°	RAYCAP	(1) RVZDC-6627-PF-48
B1	EXISTING	ANTEL	LPA-80063/6CF	134'-0"	240°	2°	0°	-	-
B2	EXISTING	ANDREW	JAHH-65B-R3B	134'-0"	240°	0°	2°/2°/2°/2°/2°	SAMSUNG	(1) RF4440d-13A RRH
	EXISTING	ANDREW	JAHH-65B-R3B	134'-0"	240°	0°	2°/2°/2°/2°/2°	SAMSUNG COMMSCOPE	(1) RF4439d-25A RRH (1) CBC78T-DS-43-2X DIPLEXER
B3	NEW	SAMSUNG	MT6407-77A	134'-0"	240°	0°	6°	-	-
B4	EXISTING	ANTEL	LPA-80063/6CF	134'-0"	240°	2°	0°	RAYCAP	-
C1	EXISTING	ANTEL	LPA-80063/6CF	134'-0"	340°	2°	0°	-	-
C2	EXISTING	ANDREW	JAHH-65B-R3B	134'-0"	330°	0°	5°/5°/2°/2°/2°	SAMSUNG	(1) RF4440d-13A RRH
	EXISTING	ANDREW	JAHH-65B-R3B	134'-0"	330°	0°	5°/5°/2°/2°/2°	SAMSUNG COMMSCOPE	(1) RF4439d-25A RRH (1) CBC78T-DS-43-2X DIPLEXER
C3	NEW	SAMSUNG	MT6407-77A	134'-0"	330°	0°	6°	-	-
C4	EXISTING	ANTEL	LPA-80063/6CF	134'-0"	340°	2°	0°	RAYCAP	-

1 VERIZON TOWER EQUIPMENT SCHEDULE  
SCALE: NOT TO SCALE

CABLE SCHEDULE

STATUS	CABLE TYPE	SIZE	LENGTH	QTY
EXISTING	COAX	1-5/8"	184'-0"±	12
EXISTING	HYBRID	1-5/8"	184'-0"±	2
TOTAL CABLE QTY:				14

2 BASE LEVEL DETAIL  
SCALE: NOT TO SCALE



**verizon**  
180 WASHINGTON VALLEY ROAD  
BEDMINSTER, NJ 07921

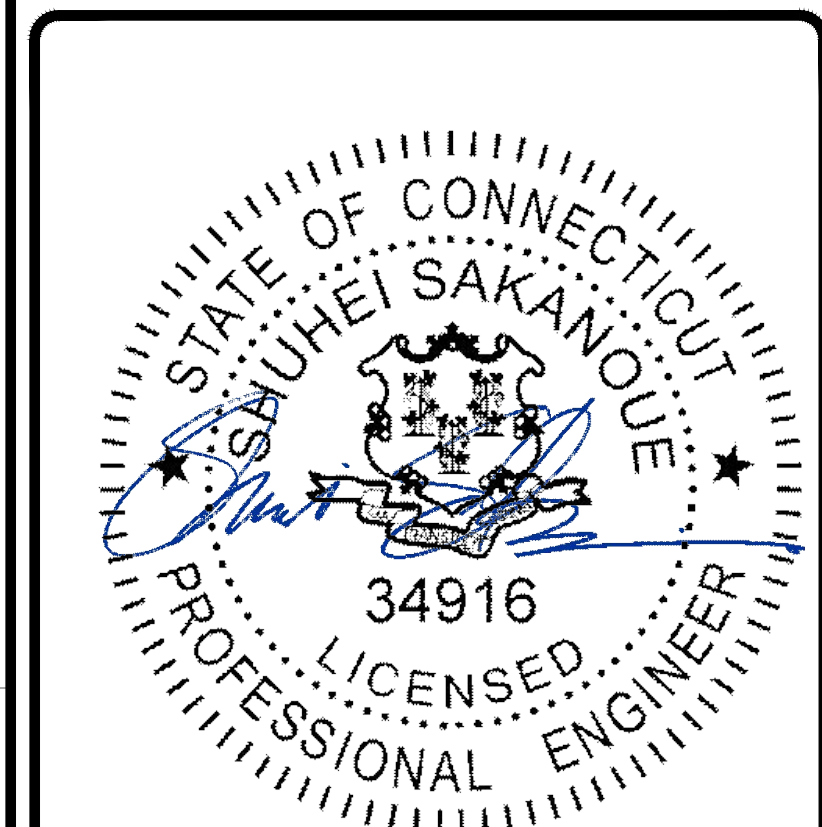
**CROWN CASTLE**  
3 CORPORATE PARK DRIVE, SUITE 101  
CLIFTON PARK, NY 12065

**INFINIGY**  
FROM ZERO TO INFINIGY  
the solutions are endless  
BELLEVUE, WA 98004

VERIZON SITE NUMBER:  
**467767**  
  
BU #: **876366**  
**WAPPINGERS FALLS/  
PRESTON CIT**  
  
101 PIERCE ROAD  
PRESTON, CT 06365  
EXISTING 155'-0" MONOPOLE

ISSUED FOR:

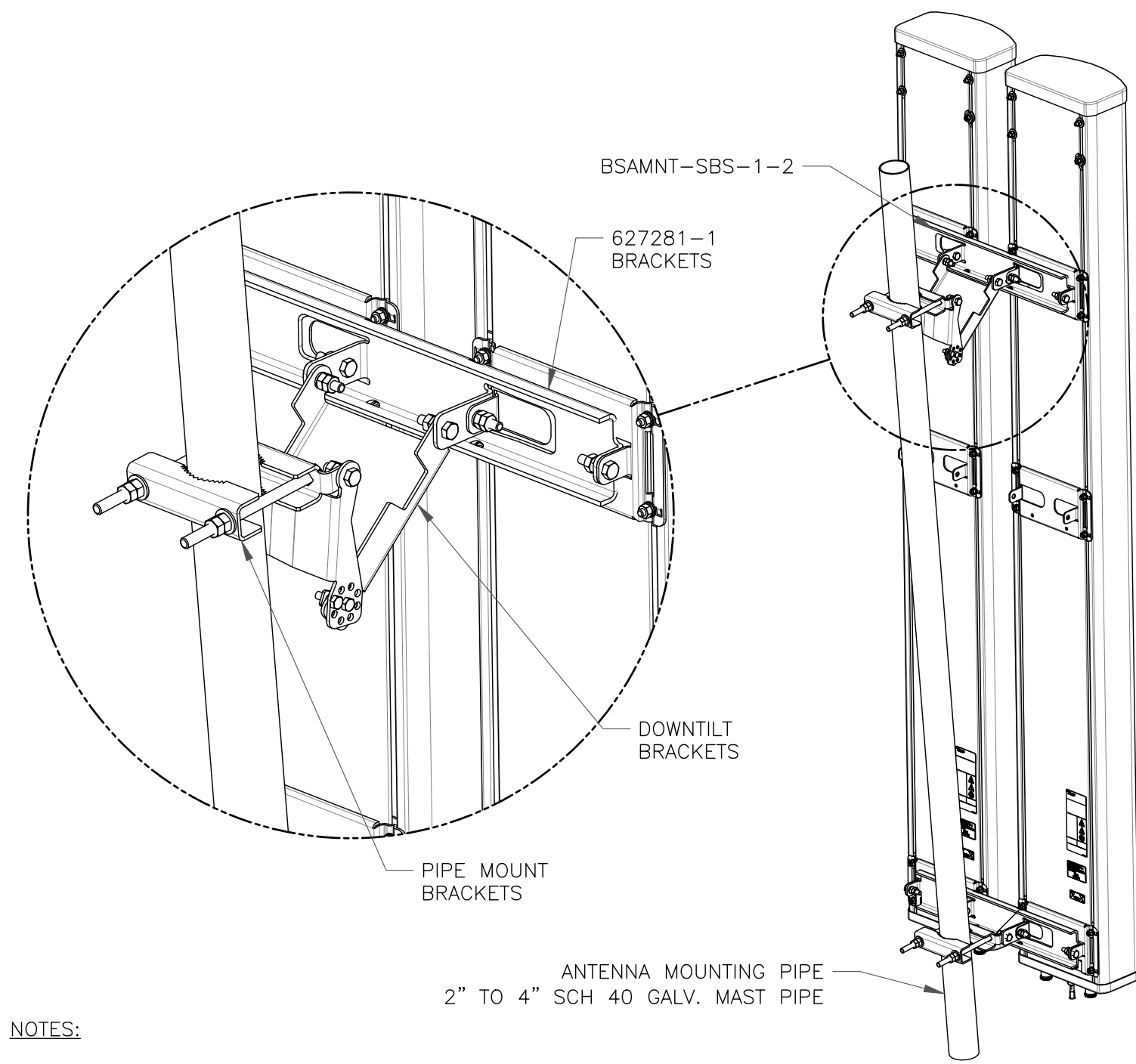
REV	DATE	DRWN	DESCRIPTION	DES./QA
0	10/04/21	RCD	FINAL CDs	-



10/6/2021

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: **C-3** REVISION: **0**

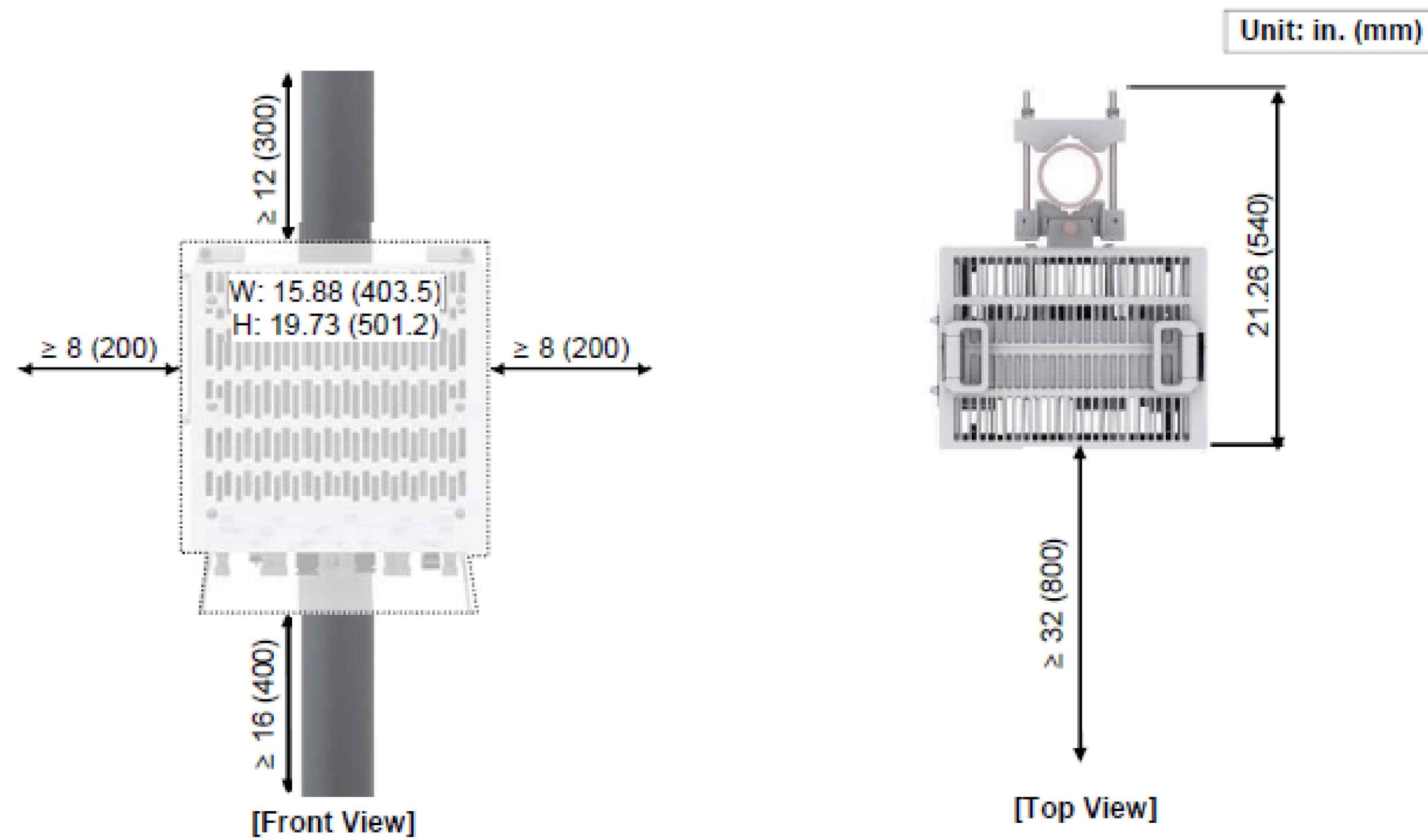


NOTES:

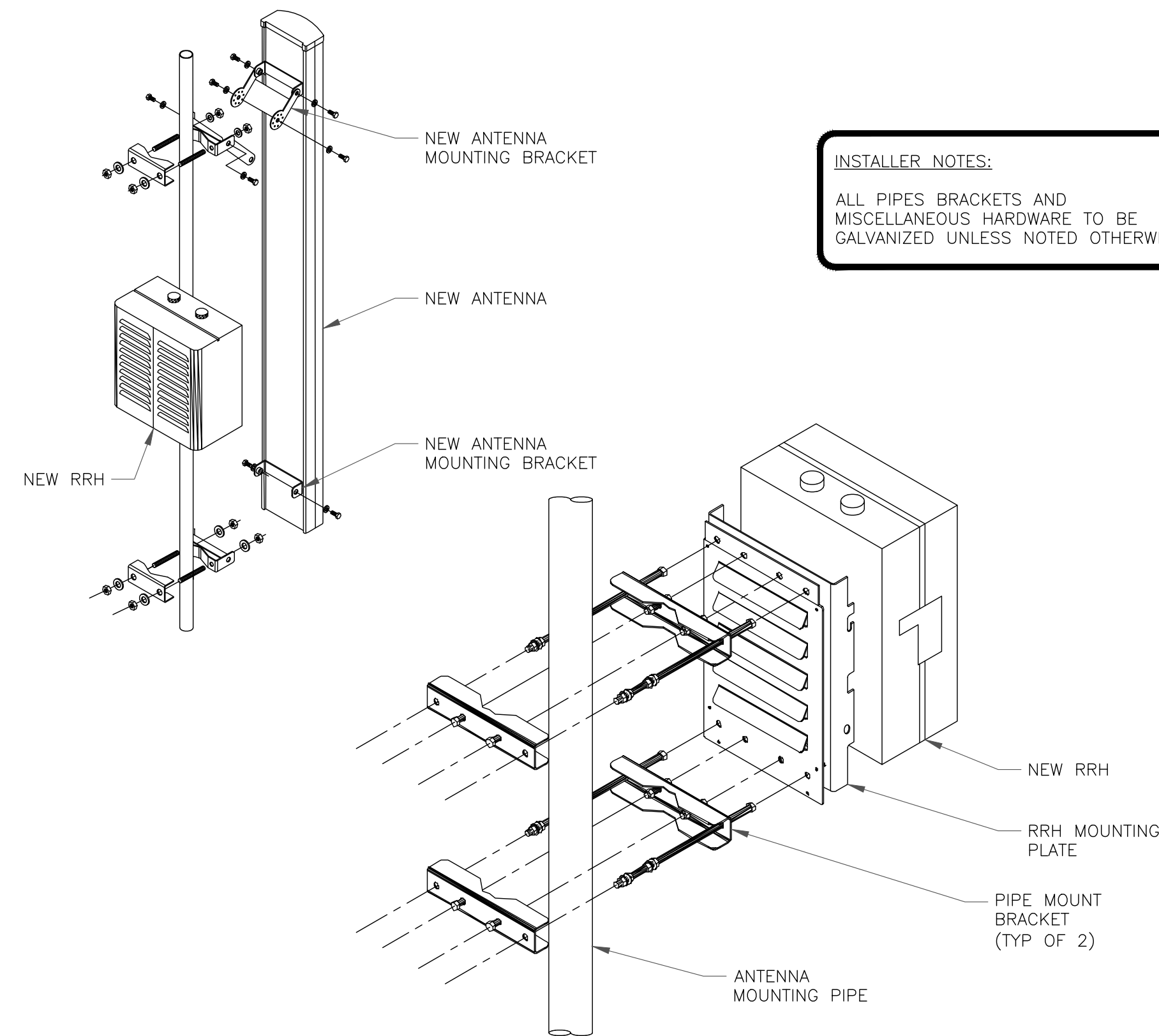
- BSAMNT-SBS-1-2 KIT CONTAINS (2) 627281 MOUNTING BRACKETS.
- TORQUE THE M10 BOLT ASSEMBLY TO 37 N.m. PER MANUFACTURE'S RECOMMENDATIONS.

1 COMMSCOPE – BSAMNT-SBS-1-2  
SCALE: NOT TO SCALE

2 NOT USED  
SCALE: NOT TO SCALE



3 SAMSUNG – FPKA BRACKET MOUNTING DETAIL  
SCALE: NOT TO SCALE



INSTALLER NOTES:  
ALL PIPES BRACKETS AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.

4 ANTENNA & RRH MOUNTING DETAIL  
SCALE: NOT TO SCALE

**verizon**  
180 WASHINGTON VALLEY ROAD  
BEDMINSTER, NJ 07921

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

**INFINIGY**  
FROM ZERO TO INFINIGY  
the solutions are endless  
BELLEVUE, WA 98004

VERIZON SITE NUMBER:  
**467767**

BU #: **876366**  
**WAPPINGERS FALLS/  
PRESTON CIT**

101 PIERCE ROAD  
PRESTON, CT 06365

EXISTING 155'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	10/04/21	RCD	FINAL CDs	-

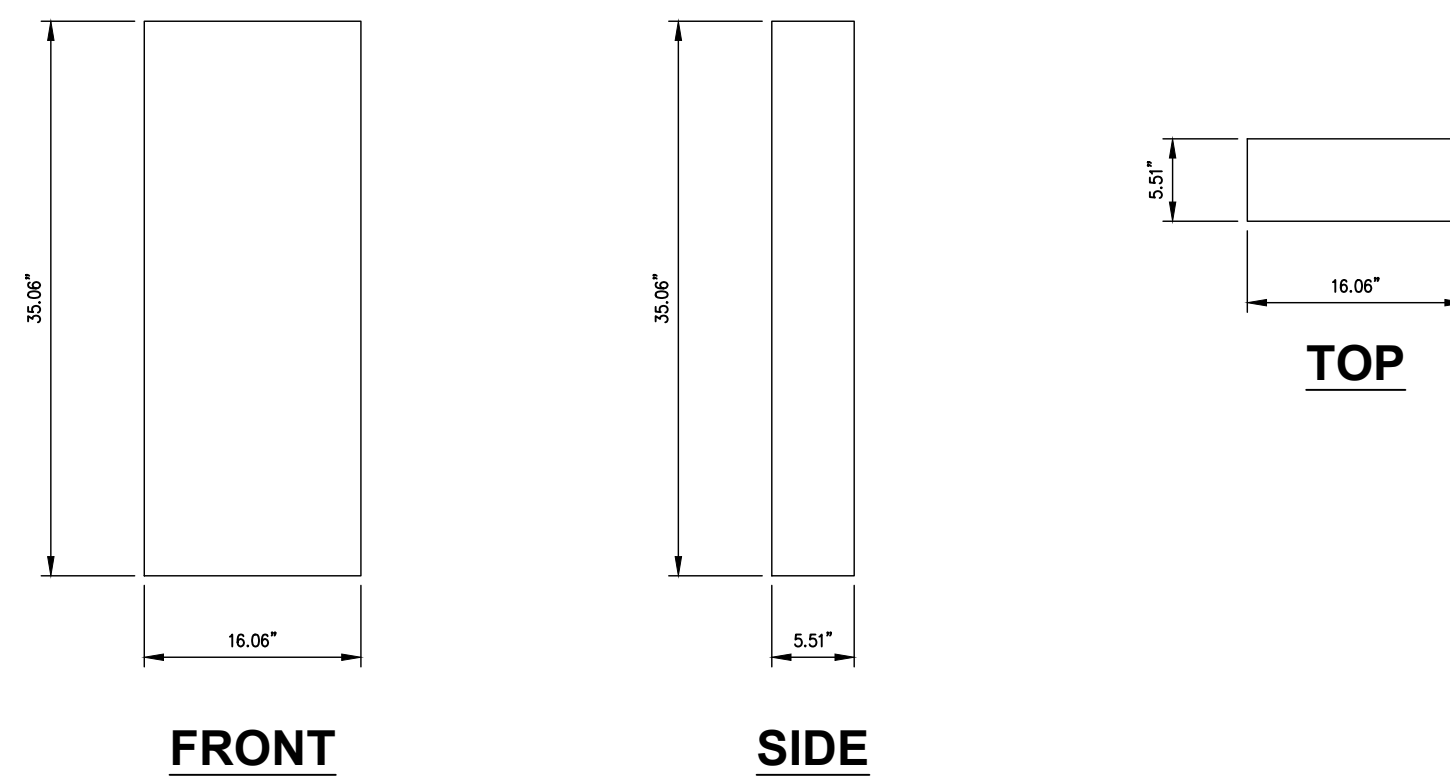
STATE OF CONNECTICUT  
SHUHEI SAKANQUE  
34916  
LICENSED PROFESSIONAL ENGINEER  
10/6/2021

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: **C-4** REVISION: **0**

**SAMSUNG PANEL ANTENNA (MT6407-77A)**

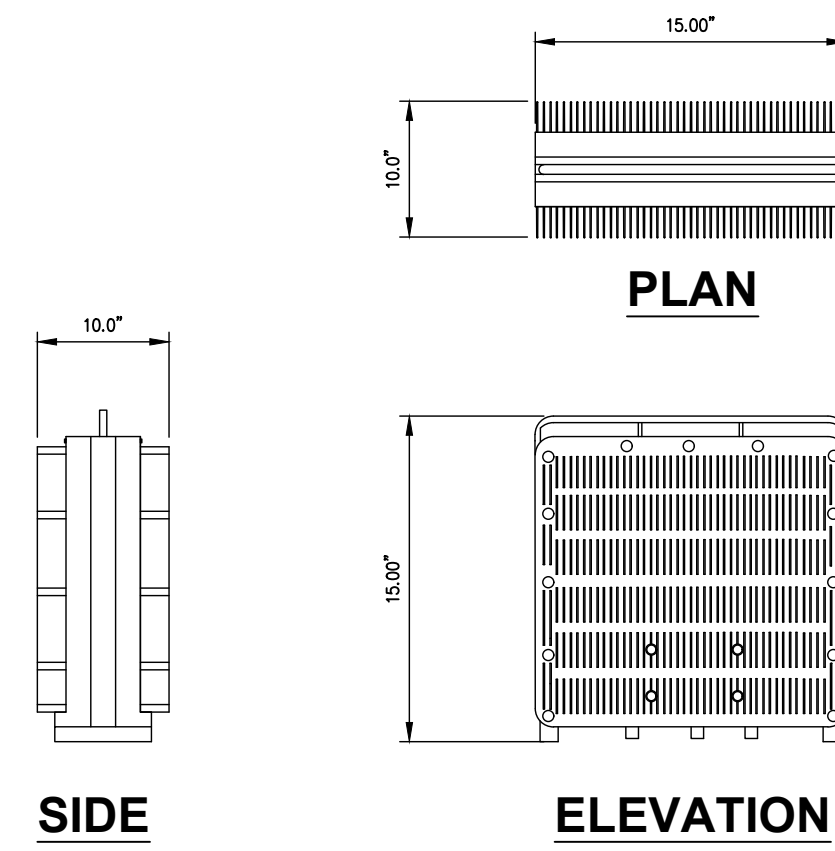
DIMENSIONS, HxWxD: 35.06"x16.06"x5.51"  
 WEIGHT, W/O BRACKETS: 81.57 lbs



1 SAMSUNG MT6407-77A ANTENNA DETAIL  
 SCALE: NOT TO SCALE

**SAMSUNG RF4439D-25A**

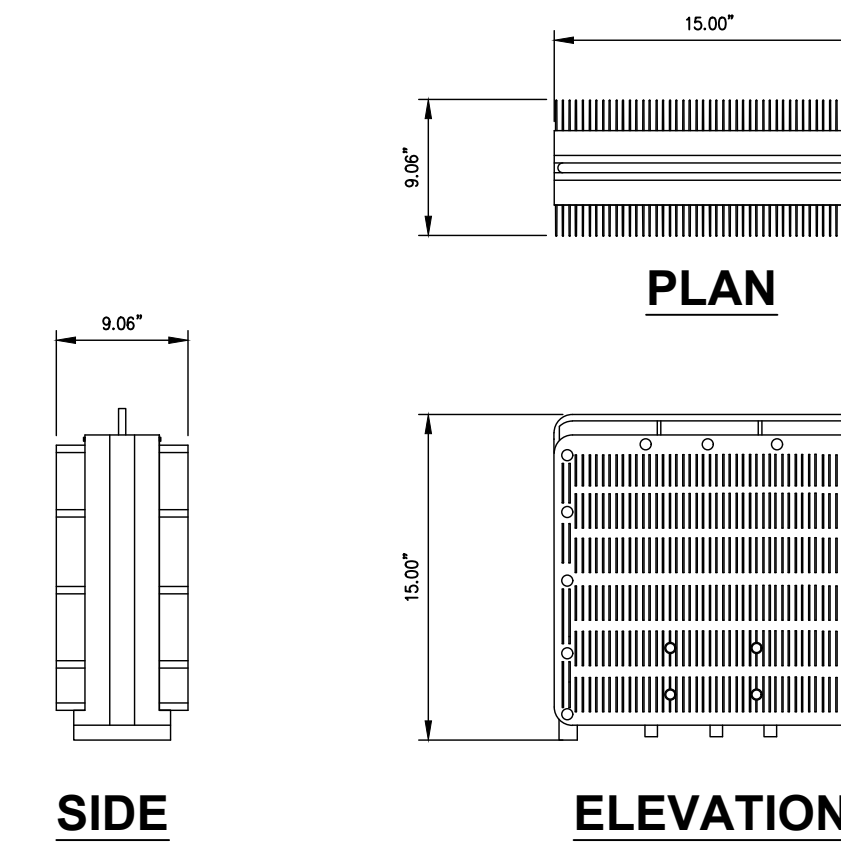
DIMENSIONS, WxDxH: 15.00" X 15.00" X 10.0"  
 TOTAL WEIGHT: 74.70 lbs  
 TEMPERATURE: -40° TO 55° C



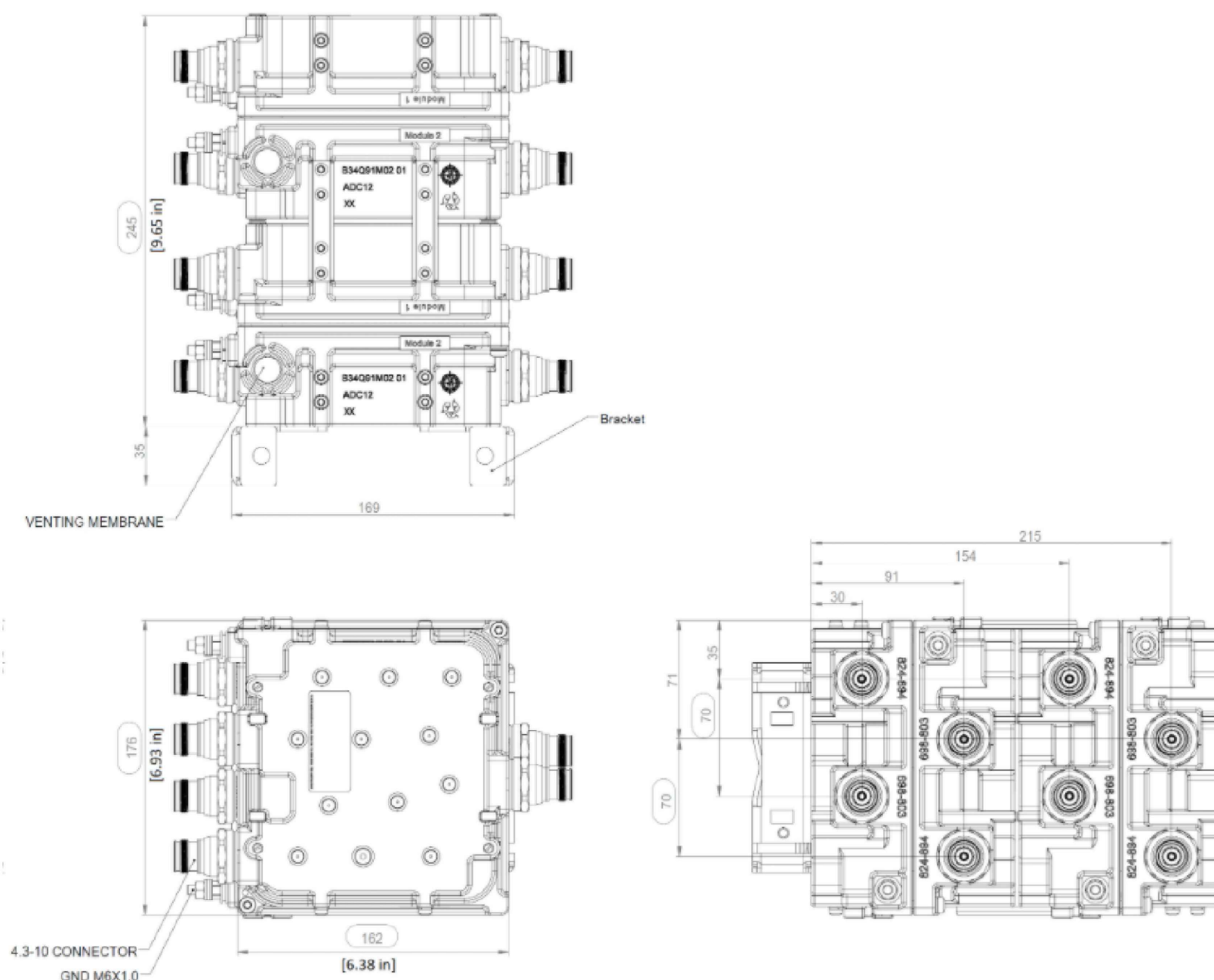
5 SAMSUNG RF4439D-25A RRH DETAIL  
 SCALE: NOT TO SCALE

**SAMSUNG RF4440D-13A**

DIMENSIONS, WxDxH: 15.00" X 15.00" X 9.06"  
 TOTAL WEIGHT: 72.50 lbs  
 TEMPERATURE: -40° TO 55° C



3 SAMSUNG RF4440D-13A RRH DETAIL  
 SCALE: NOT TO SCALE



4 CBC78T-DS-43-2X DIPLEXER DETAIL  
 SCALE: NOT TO SCALE

6 NOT USED  
 SCALE: NOT TO SCALE

6 NOT USED  
 SCALE: NOT TO SCALE

**verizon**  
 180 WASHINGTON VALLEY ROAD  
 BEDMINSTER, NJ 07921

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

**INFINIGY**  
 FROM ZERO TO INFINIGY  
 the solutions are endless  
 BELLEVUE, WA 98004

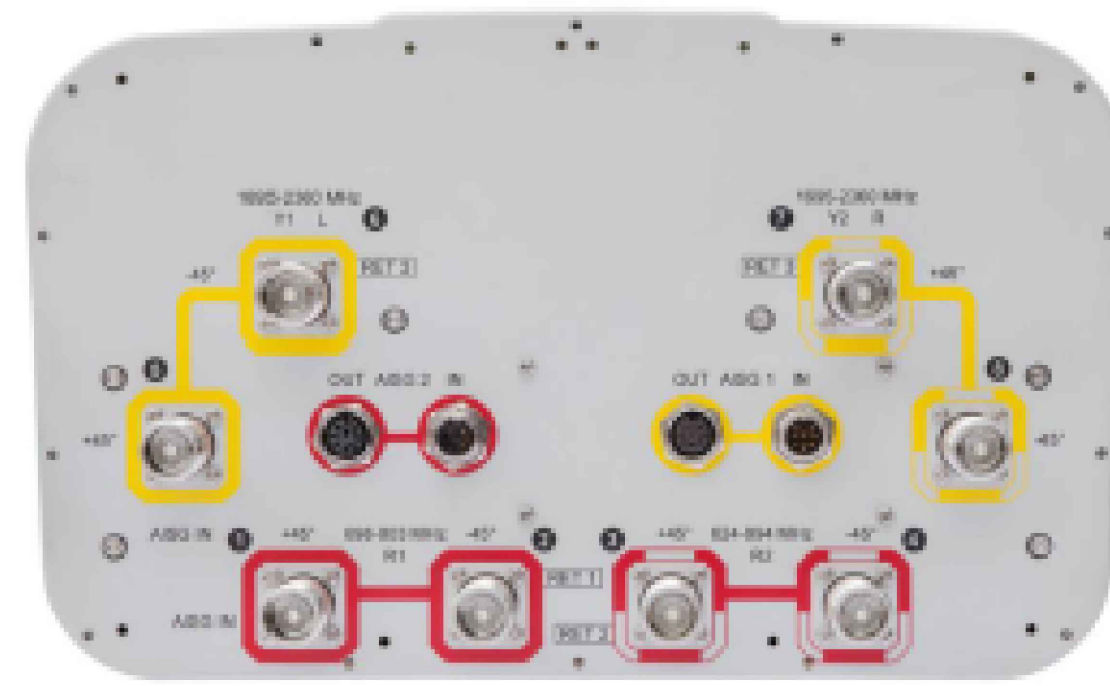
VERIZON SITE NUMBER:  
**467767**  
 BU #: 876366  
**WAPPINGERS FALLS/  
 PRESTON CIT**  
 101 PIERCE ROAD  
 PRESTON, CT 06365  
 EXISTING 155'-0" MONOPOLE

**ISSUED FOR:**

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	10/04/21	RCD	FINAL CDs	-

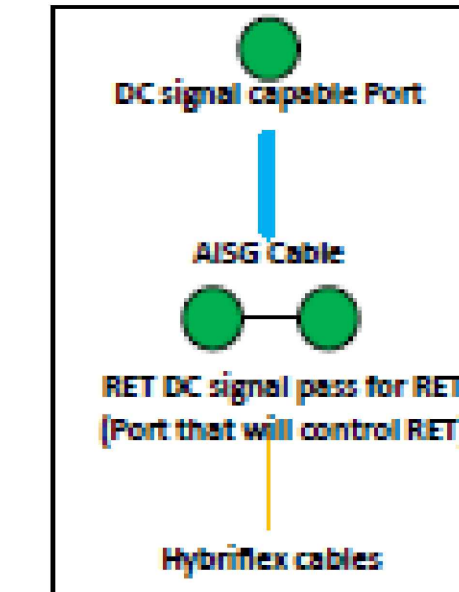
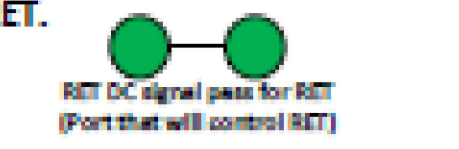
STATE OF CONNECTICUT  
 SHUHEI SAKANQUE  
 34916  
 LICENSED PROFESSIONAL ENGINEER  
 10/6/2021  
 IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER: **C-5** REVISION: **0**



BSAMNT-SBS-2-2

- Port 1 & 2 are for low band (698-896 MHz).
- Port 3,4,5, & 6 are for high band (1695-2360 MHz).
- Smart Bias Tee (SBT) is through port 1 & 3 for low band and port 1 for high band.
- AISG cable is only needed when drawn in the diagrams below, if it is not drawn then SBT is enough to control all RET motors.
- Not all SBT ports are needed to control RET, only green port connection to green port will control RET.



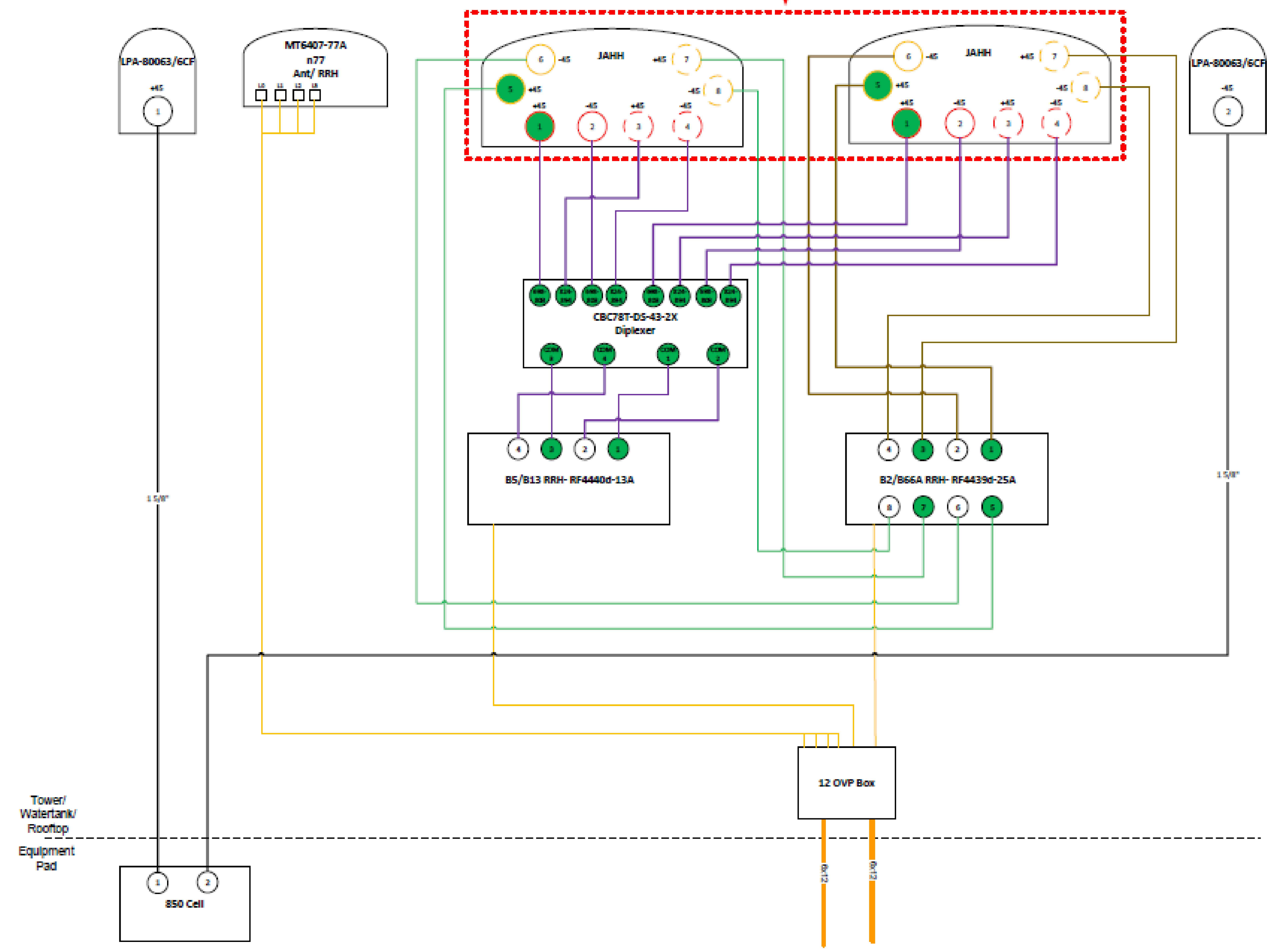
**Comments:**

Diagram shows antenna port configuration as viewed from below antennas.

Antenna positions are indicated as viewed from IN FRONT of antennas.

Cap and weatherproof unused antenna ports.

All plumbing diagram colors are irrelevant except for AISG & Hybriflex cable. (For the coax colors follow Coax Colors guide above)



1 PLUMBING DIAGRAM  
SCALE: NOT TO SCALE

**verizon**  
180 WASHINGTON VALLEY ROAD  
BEDMINSTER, NJ 07921

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

**INFINIGY**  
FROM ZERO TO INFINIGY  
the solutions are endless  
BELLEVUE, WA 98004

VERIZON SITE NUMBER:  
467767

BU #: 876366  
WAPPINGERS FALLS/  
PRESTON CIT

101 PIERCE ROAD  
PRESTON, CT 06365

EXISTING 155'-0" MONOPOLE

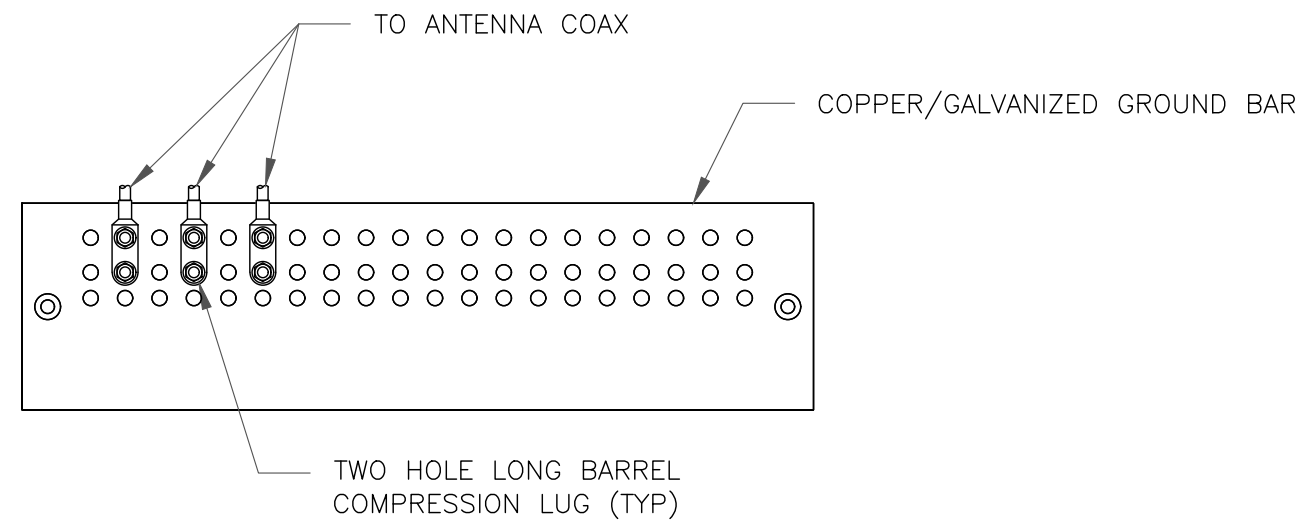
ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	10/04/21	RCD	FINAL CDS	-

STATE OF CONNECTICUT  
SHUHEI SAKANQUE  
34916  
LICENSED PROFESSIONAL ENGINEER  
10/6/2021

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: **C-6** REVISION: **0**



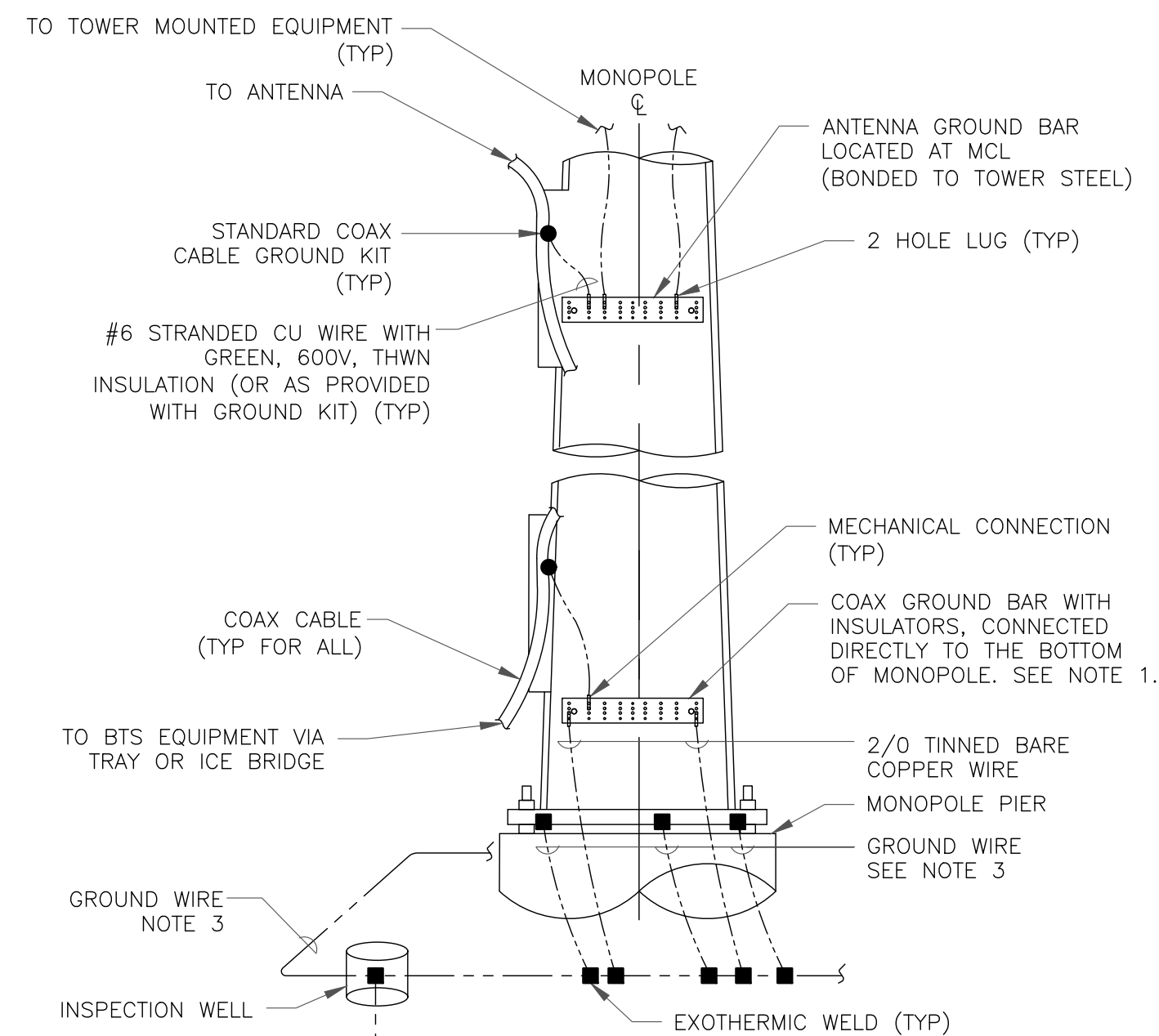
**NOTES:**

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

1 ANTENNA SECTOR GROUND BAR DETAIL  
SCALE: NOT TO SCALE

2 NOT USED  
SCALE: NOT TO SCALE

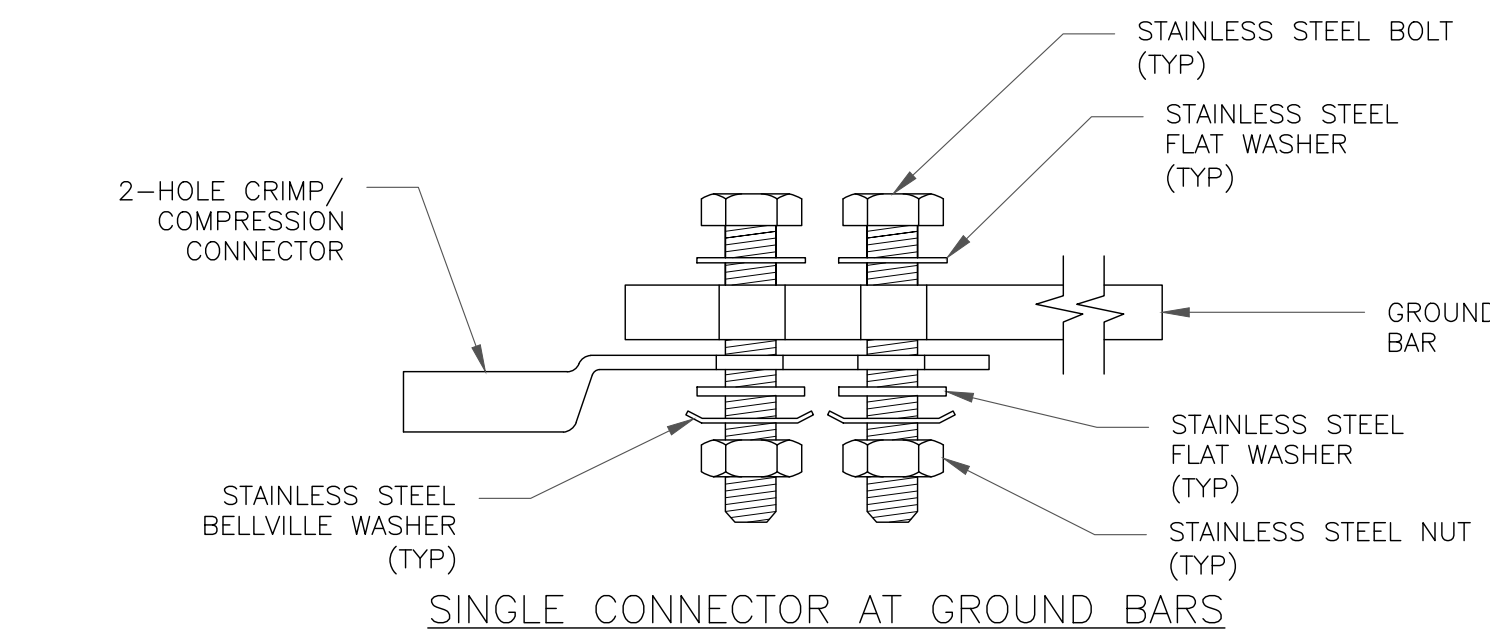
3 NOT USED  
SCALE: NOT TO SCALE



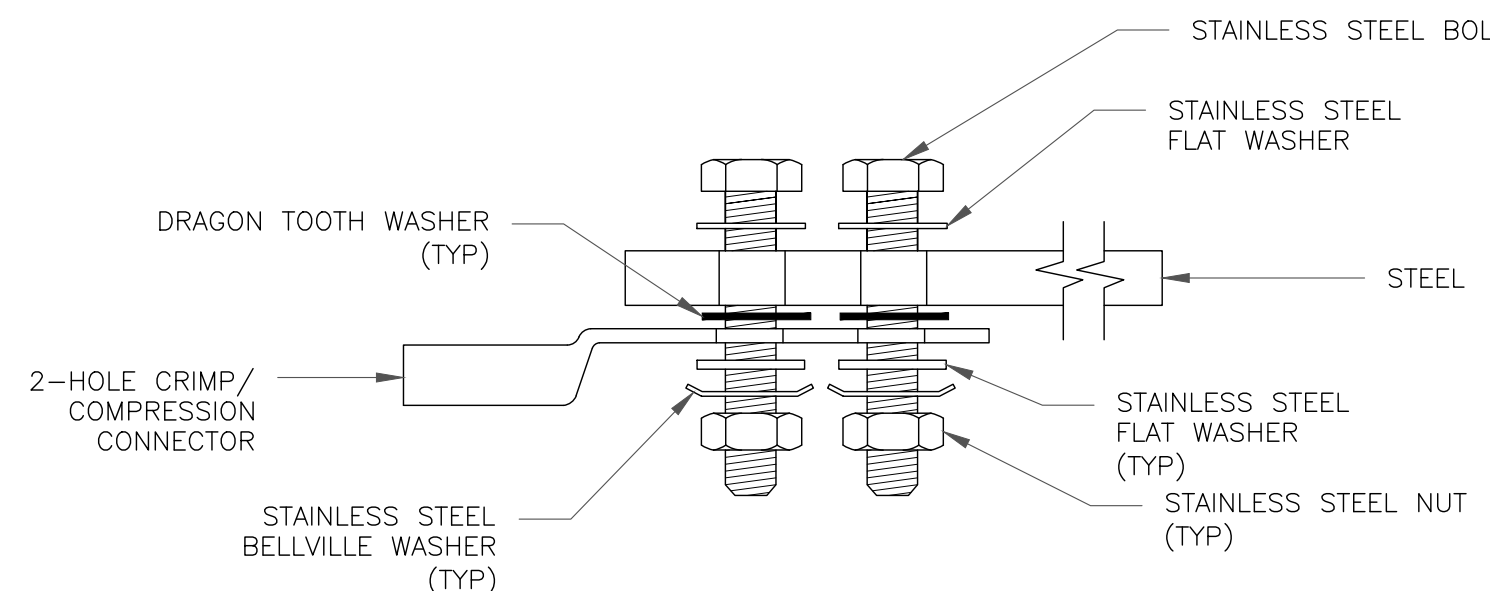
**NOTES:**

1. NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATIONS AND CONNECTION ORIENTATION. COAXIAL CABLES EXCEEDING 200 FEET ON THE TOWER SHALL HAVE GROUND KITS AT THE MIDPOINT. PROVIDE AS REQUIRED.
2. ONLY MECHANICAL CONNECTIONS ARE ALLOWED TO BE MADE TO CROWN CASTLE USA INC. TOWERS. ALL MECHANICAL CONNECTIONS SHALL BE TREATED WITH AN ANTI-OXIDANT COATING.
3. ALL TOWER GROUNDING SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF THE RECOGNIZED EDITION OF ANSI/TIA 222 AND NFPA 780.

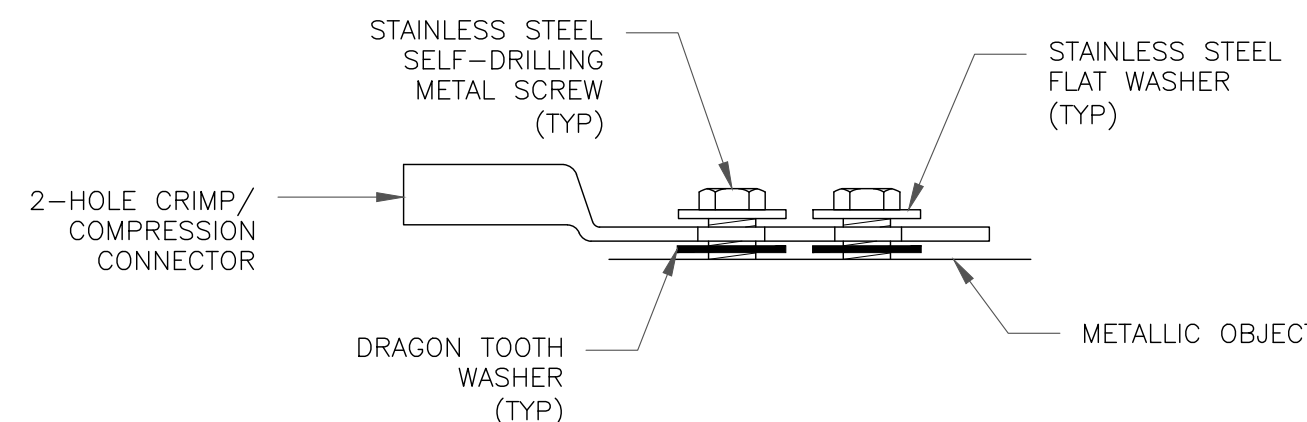
4 TYPICAL ANTENNA CABLE GROUNDING  
SCALE: NOT TO SCALE



SINGLE CONNECTOR AT GROUND BARS



SINGLE CONNECTOR AT STEEL OBJECTS



SINGLE CONNECTOR AT METALLIC/STEEL OBJECTS

5 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS  
SCALE: NOT TO SCALE

6 NOT USED  
SCALE: NOT TO SCALE

**verizon**  
180 WASHINGTON VALLEY ROAD  
BEDMINSTER, NJ 07921

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

**INFINIGY**  
FROM ZERO TO INFINIGY  
the solutions are endless  
BELLEVUE, WA 98004

VERIZON SITE NUMBER:  
**467767**

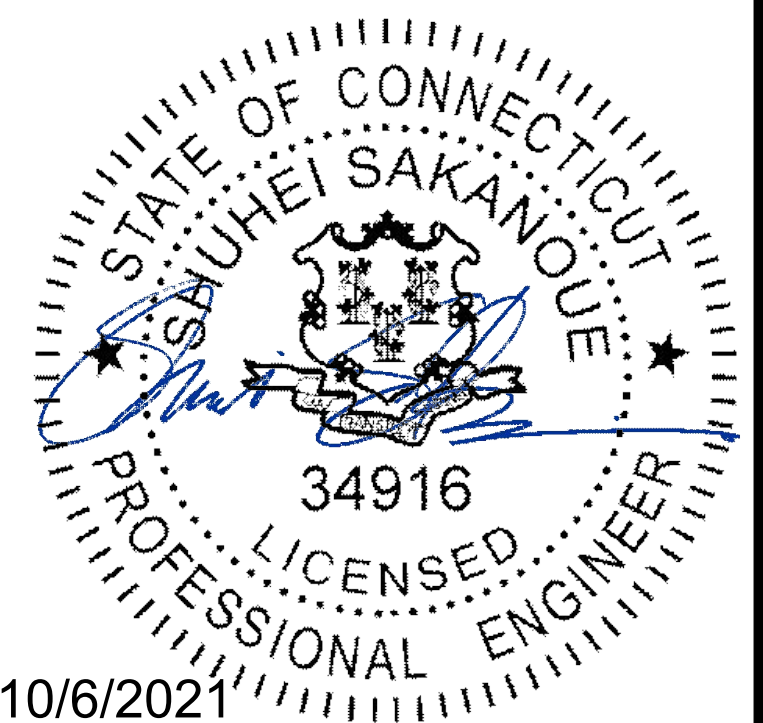
BU #: 876366  
**WAPPINGERS FALLS/  
PRESTON CIT**

101 PIERCE ROAD  
PRESTON, CT 06365

EXISTING 155'-0" MONOPOLE

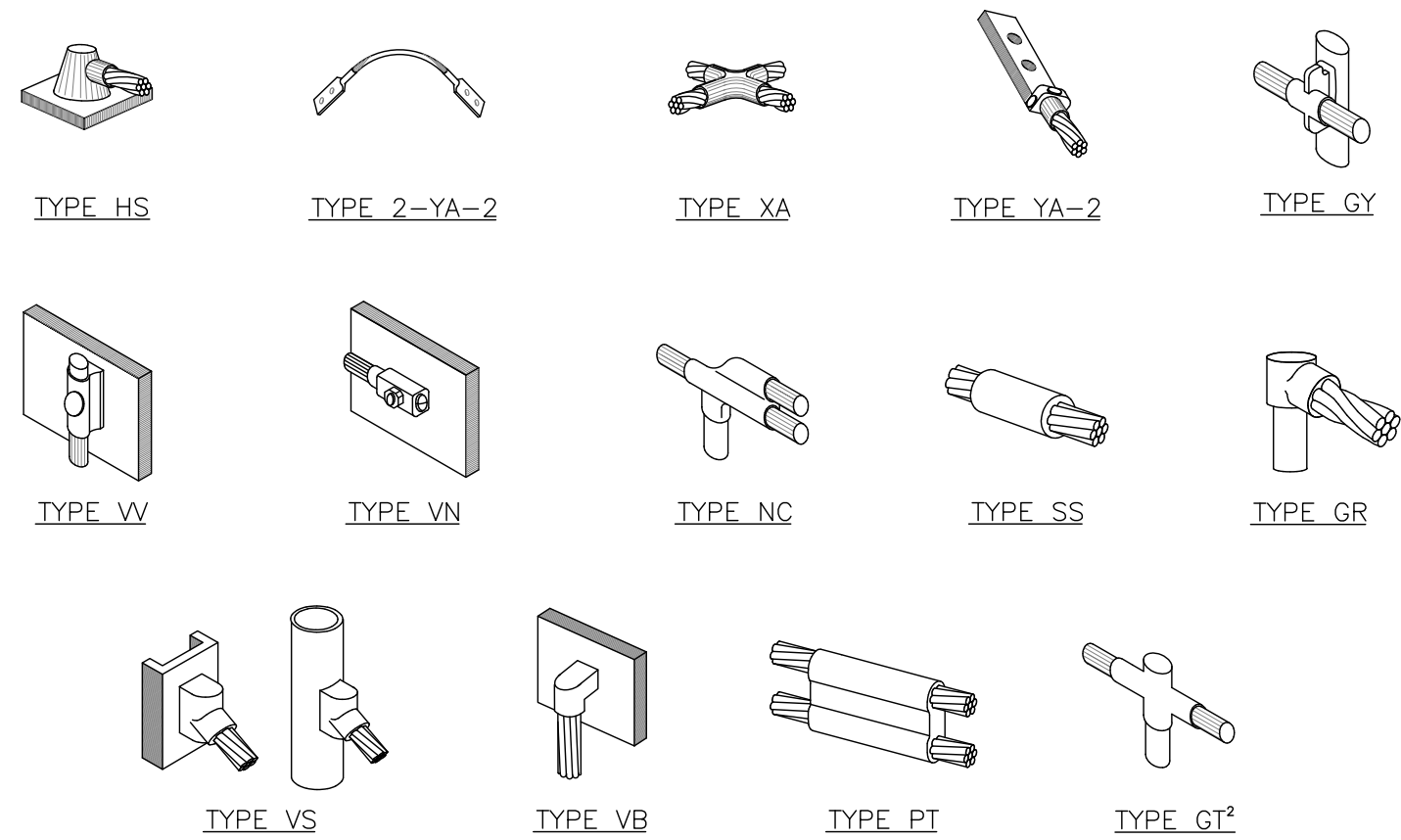
**ISSUED FOR:**

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	10/04/21	RCD	FINAL CDs	-



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.

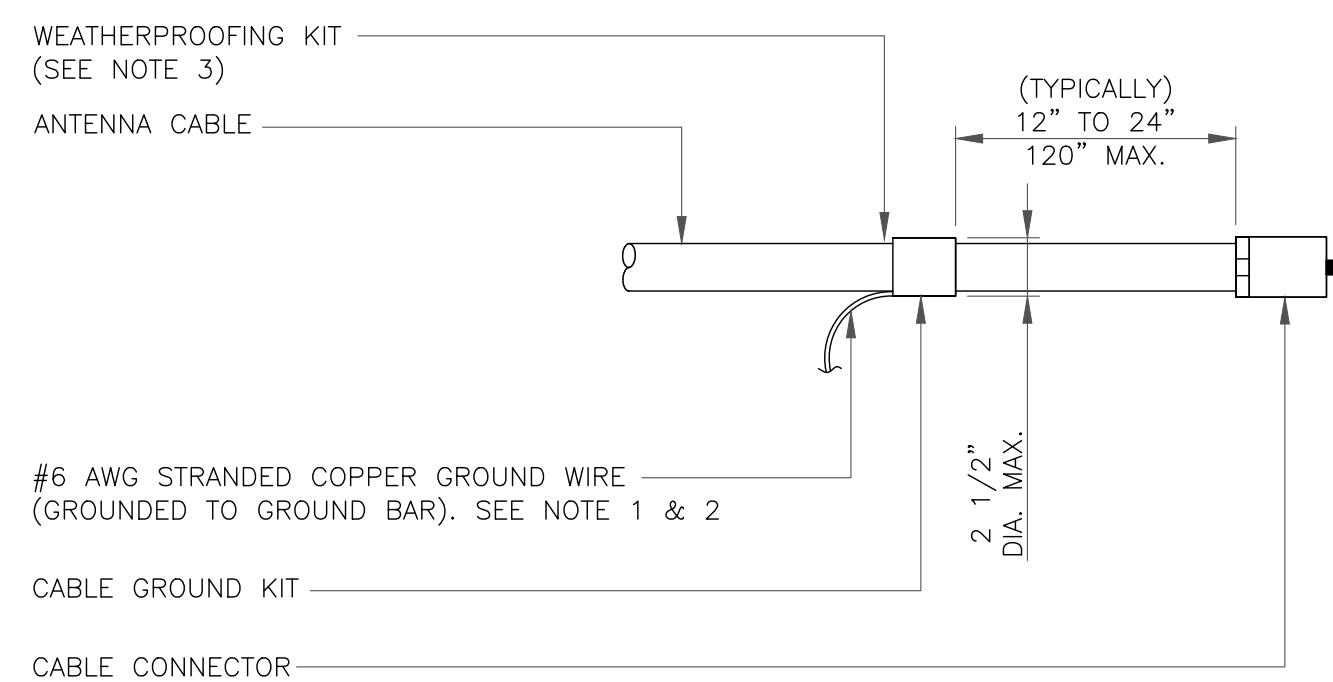
SHEET NUMBER: **G-1** REVISION: **0**



**NOTE:**

1. ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH CONSTRUCTION MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.
2. MOLD TYPE ONLY TO BE USED BELOW GRADE WHEN CONNECTING GROUND RING TO GROUND ROD.

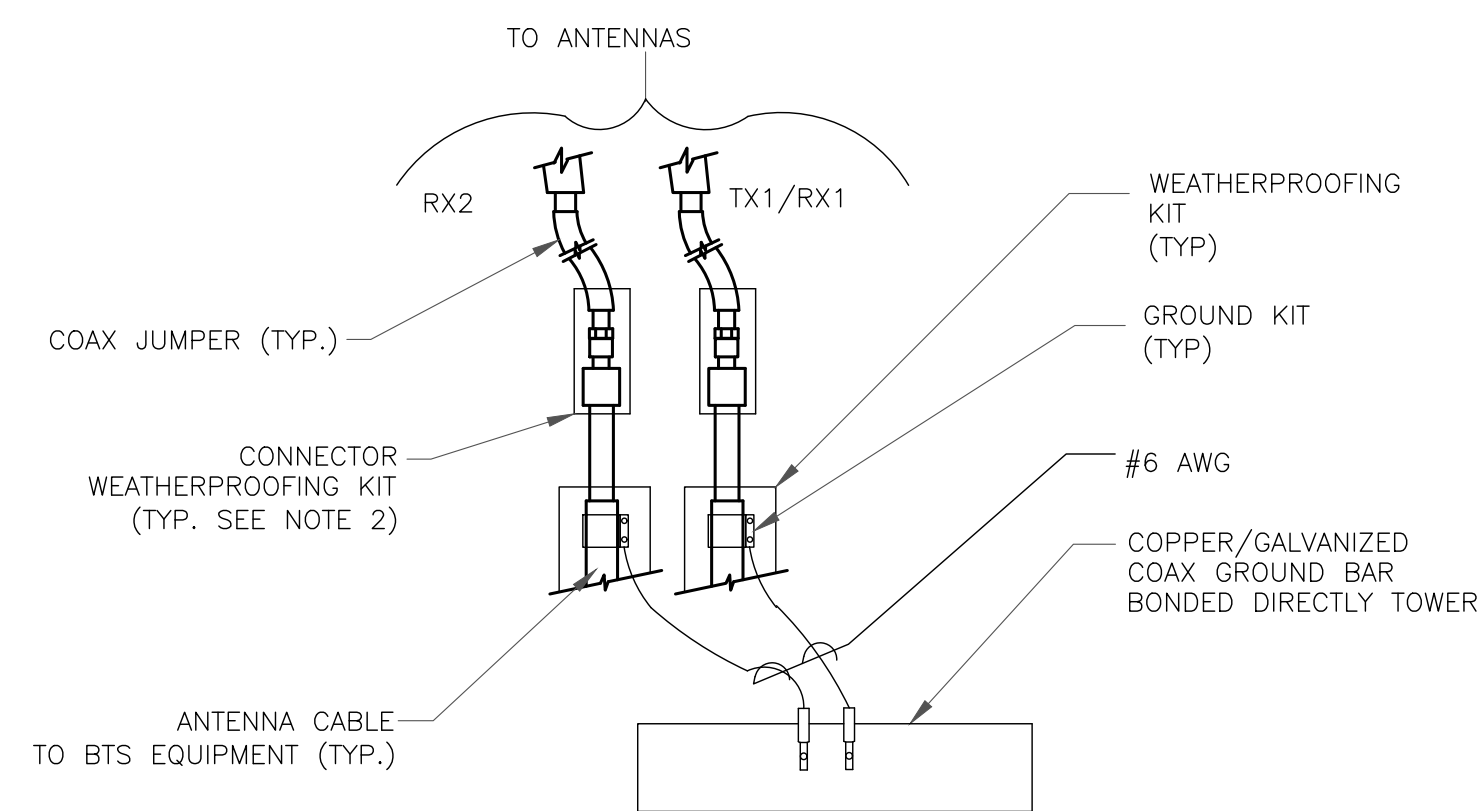
**1** CADWELD GROUNDING CONNECTIONS  
SCALE: NOT TO SCALE



**NOTES:**

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

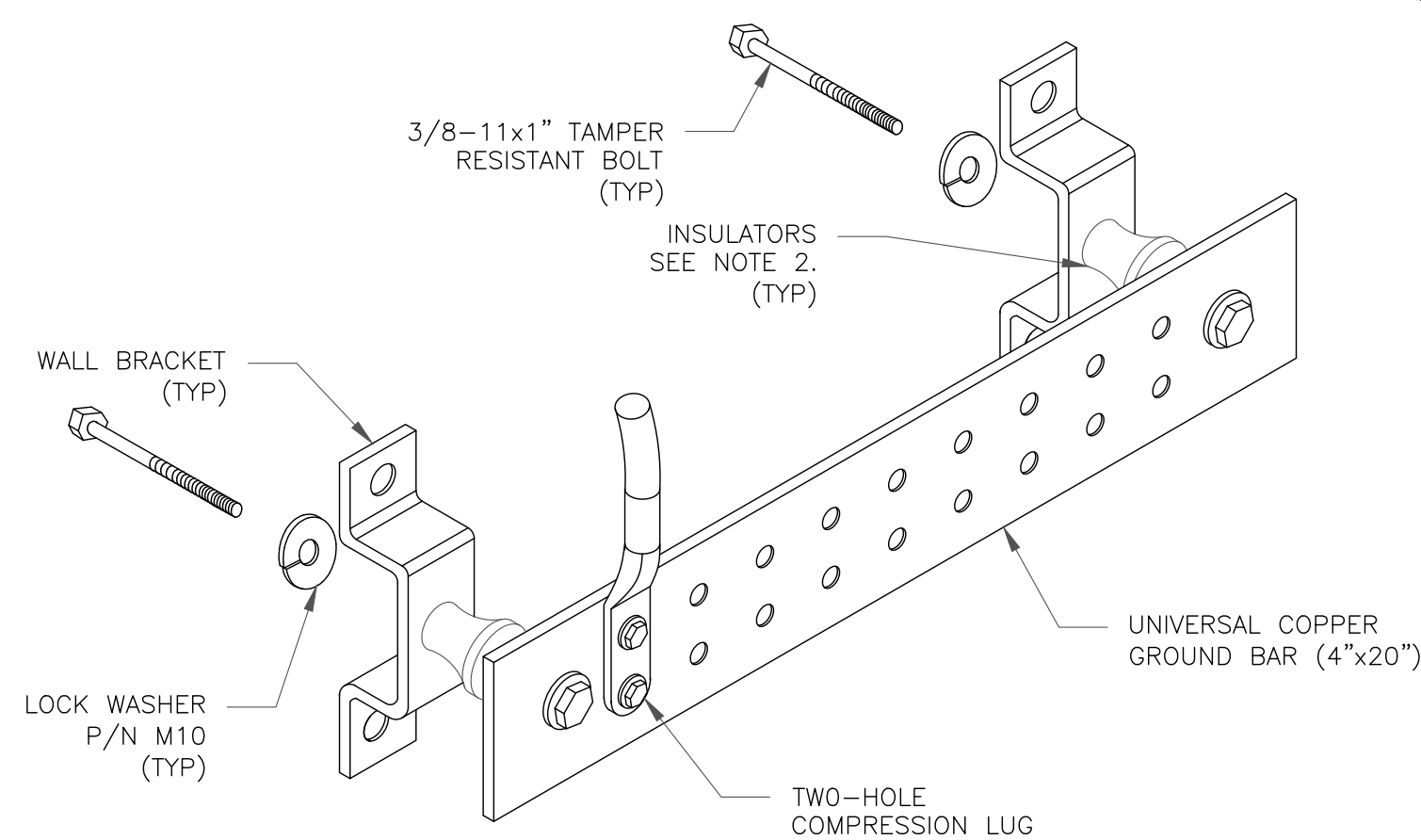
**3** CABLE GROUND KIT CONNECTION  
SCALE: NOT TO SCALE



**NOTES:**

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO ANTENNA GROUND BAR.
2. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT. COLD SHRINK SHALL NOT BE USED.

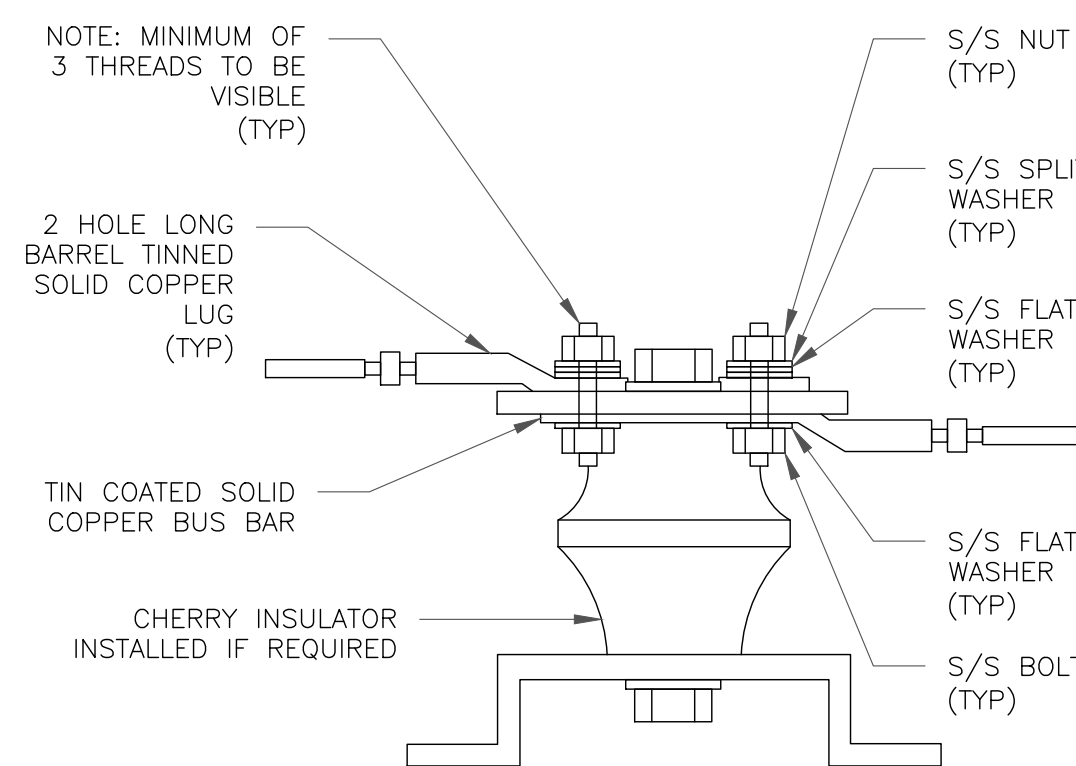
**4** GROUND CABLE CONNECTION  
SCALE: NOT TO SCALE



**NOTES:**

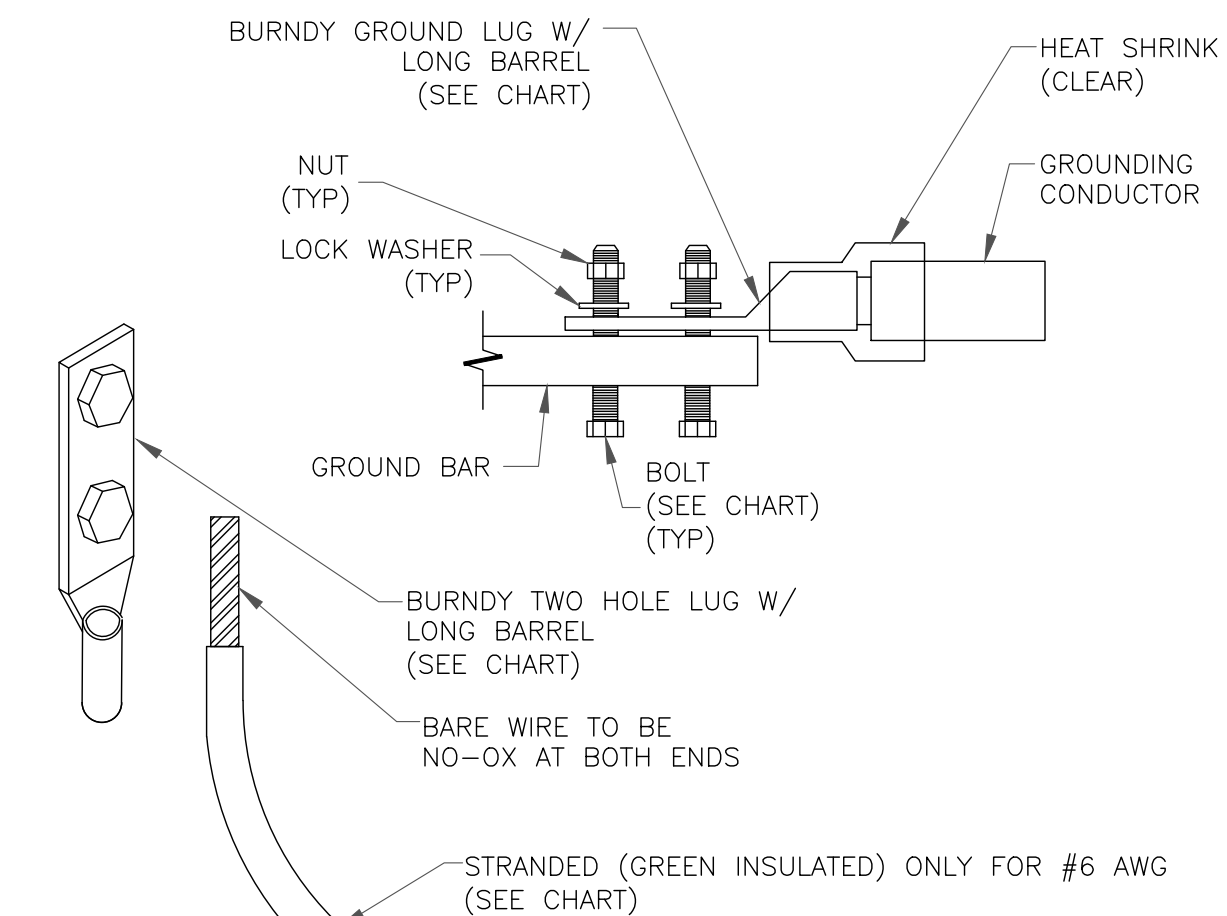
1. DOWN LEAD (HOME RUN) CONDUCTORS ARE NOT TO BE INSTALLED ON CROWN CASTLE USA INC. TOWER, PER THE GROUNDING DOWN CONDUCTOR POLICY QAS-STD-10091. NO MODIFICATION OR DRILLING TO TOWER STEEL IS ALLOWED IN ANY FORM OR FASHION. CAD-WELDING ON THE TOWER AND/OR IN THE AIR ARE NOT PERMITTED.
2. OMIT INSULATOR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

**6** GROUND BAR DETAIL  
SCALE: NOT TO SCALE



**7** LUG DETAIL  
SCALE: NOT TO SCALE

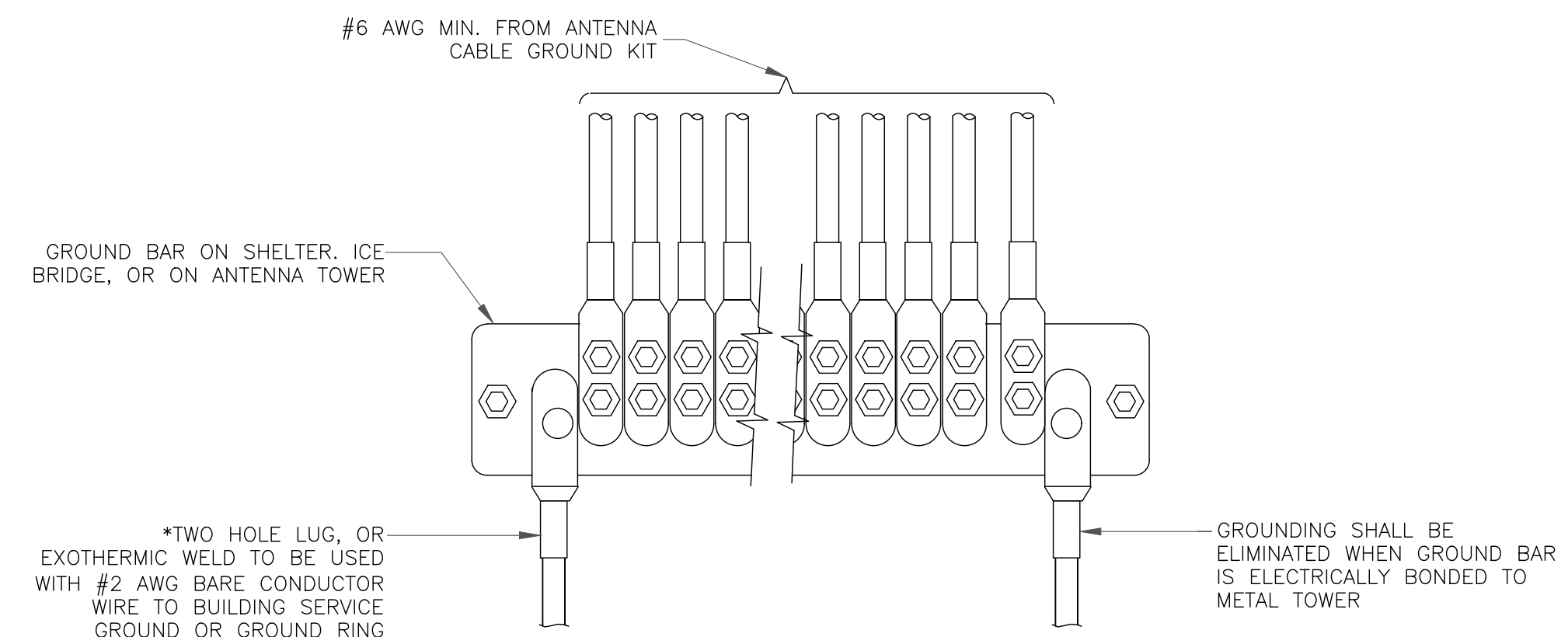
WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 AWG GREEN INSULATED	YA6C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG SOLID TINNED	YA3C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG STRANDED	YA2C-2TC38	3/8" - 16 NC S 2 BOLT
#2/0 AWG STRANDED	YA26-2TC38	3/8" - 16 NC S 2 BOLT
#4/0 AWG STRANDED	YA28-2N	1/2" - 16 NC S 2 BOLT



**NOTES:**

1. 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.

**2** MECHANICAL LUG CONNECTION  
SCALE: NOT TO SCALE



**5** GROUNDWIRE INSTALLATION  
SCALE: NOT TO SCALE

**8** NOT USED  
SCALE: NOT TO SCALE

**verizon**  
180 WASHINGTON VALLEY ROAD  
BEDMINSTER, NJ 07921

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

**INFINIGY**  
FROM ZERO TO INFINIGY  
the solutions are endless  
BELLEVUE, WA 98004

VERIZON SITE NUMBER:  
**467767**  
  
BU #: 876366  
**WAPPINGERS FALLS/  
PRESTON CIT**  
  
101 PIERCE ROAD  
PRESTON, CT 06365  
  
EXISTING 155'-0" MONOPOLE

**ISSUED FOR:**

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	10/04/21	RCD	FINAL CDs	-

STATE OF CONNECTICUT  
SHUHEI SAKANQUE  
34916  
LICENSED PROFESSIONAL ENGINEER  
10/6/2021

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**

# Exhibit D

## **Structural Analysis Report**



Date: **September 18, 2021**

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

**Subject:** **Structural Analysis Report**

**Carrier Designation:** **Verizon Wireless Co-Locate**  
**Site Number:** 467767  
**Site Name:** PRESTON CITY CT

**Crown Castle Designation:** **BU Number:** 876366  
**Site Name:** Wappingers Falls / Preston CIT  
**JDE Job Number:** 684156  
**Work Order Number:** 2012504  
**Order Number:** 583851 Rev. 0

**Engineering Firm Designation:** **B+T Group. Project Number:** 147460.004.01

**Site Data:** **101 Pierce Road, Preston, New London County, CT**  
**Latitude 41° 32' 17.46", Longitude -71° 57' 6"**  
**155 Foot - Monopole Tower**

B+T Group is pleased to submit this “**Structural Analysis Report**” to determine the structural integrity of the above-mentioned tower.

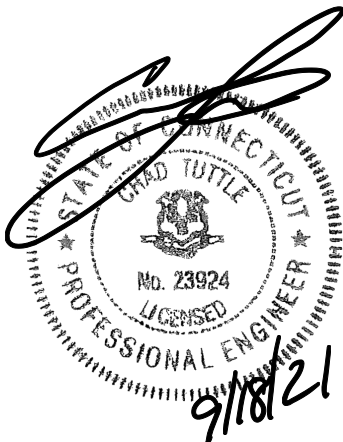
The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC7: Proposed Equipment Configuration **Sufficient Capacity – 99.8%**

This analysis has been performed in accordance with the 2018 Connecticut State Building Code based upon an ultimate 3-second gust wind speed of 135 mph. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by Jacob Johnson, E.I.T.

Respectfully submitted by: B+T Engineering, Inc.  
COA: PEC.0001564 Expires: 02/10/2022



Chad E. Tuttle, P.E.



## TABLE OF CONTENTS

### 1) INTRODUCTION

### 2) ANALYSIS CRITERIA

Table 1 - Proposed Equipment Configuration

Table 2 - Other Considered Equipment

### 3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

3.1) Analysis Method

3.2) Assumptions

### 4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Table 5 – Tower Component Stresses vs. Capacity

4.1) Recommendations

### 5) APPENDIX A

tnxTower Output

### 6) APPENDIX B

Base Level Drawing

### 7) APPENDIX C

Additional Calculations

## 1) INTRODUCTION

This is a 155 ft. Monopole tower designed by Engineered Endeavors, Inc., and mapped by TEP. The tower has been modified as per drawing by PSG in June 2008. The reinforcement consists of adding base plate stiffeners. The tower was also modified by Black & Veatch in November 2015. The reinforcement consists of adding flat plate reinforcement from 45' to 70', 84' to 99' and adding new anchor rods and brackets.

## 2) ANALYSIS CRITERIA

<b>TIA-222 Revision:</b>	TIA-222-H
<b>Risk Category:</b>	II
<b>Wind Speed:</b>	135 mph
<b>Exposure Category:</b>	B
<b>Topographic Factor:</b>	1
<b>Ice Thickness:</b>	1.5 in
<b>Wind Speed with Ice:</b>	50 mph
<b>Service Wind Speed:</b>	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)
128.0	134.0	1	Raycap	RVZDC-6627-PF-48	14	1-5/8
		6	Antel	LPA-80063/6CF		
	131.0	3	Commscope	CBC78T-DS-43-2X		
		6	Commscope	JAHH-65B-R3B		
		3	Samsung Tele.	MT6407-77A		
		3	Samsung Tele.	RF4439D-25A		
		3	Samsung Tele.	RF4440D-13A		
	128.0	1	--	Side Arm Mount [SO 102-3]		
		1	--	T-Arm Mount [TA 602-3]		

**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)
155.0	159.0	1	Site Pro 1	HRK-12 Handrail Kit	4	1-5/8
		3	Ericsson	AIR6449 B41_T-MOBILE		
	157.0	3	Ericsson	RADIO 4415 B66A		
		3	Ericsson	RADIO 4424 B25_TMO		
		3	Ericsson	RADIO 4449 B71 B85A_T-MOBILE		
		3	RFS Celwave	APX16DWV-16DWV-S-E-A20		
		3	RFS Celwave	APXVAALL24_43-U-NA20_TMO		
	155.0	3	--	8' Long Pipe 2.0 STD		
155.0	1	--	Platform Mount [LP 712-1]			
139.0	141.0	3	CCI Antennas	HPA-65R-BUU-H8	12 4 2	1-1/4 3/4 3/8
		3	Kathrein	80010966		
	140.0	3	Ericsson	RRUS 32 B2		
		3	Ericsson	RRUS 4478 B14		
		3	Ericsson	RRUS 11		
		3	Powerwave Tech	7770.00		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
139.0	140.0	6	Powerwave Tech	LGP21401	--	--
		2	Raycap	DC6-48-60-18-8F		
		1	--	Platform Mount [LP 303-1]		
74.0	74.0	1	Lucent	KS24019-L112A	1	1/2
		1	--	Side Arm Mount [SO 701-1]		

### 3) ANALYSIS PROCEDURE

**Table 3 - Documents Provided**

Document	Reference	Source
Tower Manufacturer Drawing / Mapping	2174297	CCI Sites
Tower Modification Drawing	2271037	CCI Sites
Post Modification Inspection	2391519	CCI Sites
Tower Modification Drawing	5971889	CCI Sites
Post Modification Inspection	6133027	CCI Sites
Foundation Drawing	2208798	CCI Sites
Geotech Report	2194336	CCI Sites
Crown Cad Package	Date: 08/17/2021	CCI Sites

#### 3.1) Analysis Method

tnxTower (version 8.0.7.5), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A. When applicable, Crown Castle has calculated and provided the effective area for panel antennas using approved methods following the intent of the TIA-222 standard.

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

#### 3.2) Assumptions

- 1) The tower and structures were maintained in accordance with the - TIA-222 standard.
- 2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.

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

### 4) ANALYSIS RESULTS

**Table 4 - Section Capacity (Summary)**

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L1	155 - 150	Pole	TP19.036x18x0.188	1	-3.481	--	13.6	Pass
L2	150 - 145	Pole	TP20.073x19.036x0.188	2	-3.741	--	21.9	Pass
L3	145 - 140	Pole	TP21.109x20.073x0.188	3	-4.020	--	29.3	Pass
L4	140 - 135	Pole	TP22.146x21.109x0.188	4	-7.009	--	42.7	Pass
L5	135 - 130	Pole	TP23.182x22.146x0.188	5	-7.458	--	53.8	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L6	130 - 126.79	Pole	TP24.59x23.182x0.188	6	-10.464	--	65.8	Pass
L7	126.79 - 121.79	Pole	TP24.671x23.473x0.25	7	-11.295	--	57.6	Pass
L8	121.79 - 116.79	Pole	TP25.87x24.671x0.25	8	-12.026	--	66.5	Pass
L9	116.79 - 111.79	Pole	TP27.068x25.87x0.25	9	-12.788	--	74.2	Pass
L10	111.79 - 106.79	Pole	TP28.267x27.068x0.25	10	-13.579	--	80.8	Pass
L11	106.79 - 101.79	Pole	TP29.465x28.267x0.25	11	-14.403	--	86.6	Pass
L12	101.79 - 97.5	Pole	TP30.494x29.465x0.25	12	-15.130	--	91.0	Pass
L13	97.5 - 92.25	Pole	TP30.554x30.494x0.25	13	-15.191	--	91.2	Pass
L14	92.25 - 87.41	Pole	TP31.752x30.554x0.25	14	-16.050	--	95.8	Pass
L15	87.41 - 81.58	Pole	TP33.825x31.752x0.25	15	-16.917	--	99.8	Pass
L16	81.58 - 76.58	Pole	TP33.825x32.412x0.313	16	-18.548	--	79.8	Pass
L17	76.58 - 71.58	Pole	TP35.037x33.825x0.313	17	-19.593	--	81.9	Pass
L18	71.58 - 68	Pole	TP36.249x35.037x0.313	18	-20.744	--	83.9	Pass
L19	68 - 67.75	Pole	TP37.117x36.249x0.313	19	-21.525	--	85.2	Pass
L20	67.75 - 62.75	Pole + Reinf.	TP37.178x37.117x0.488	20	-21.614	--	82.9	Pass
L21	62.75 - 57.75	Pole + Reinf.	TP38.39x37.178x0.475	21	-23.026	--	84.5	Pass
L22	57.75 - 52.75	Pole + Reinf.	TP39.602x38.39x0.475	22	-24.474	--	86.0	Pass
L23	52.75 - 48.96	Pole + Reinf.	TP40.814x39.602x0.463	23	-25.950	--	87.4	Pass
L24	48.96 - 42.03	Pole + Reinf.	TP43.17x40.814x0.463	24	-27.084	--	88.3	Pass
L25	42.03 - 37.03	Pole	TP42.791x41.108x0.375	25	-30.311	--	74.7	Pass
L26	37.03 - 32.03	Pole	TP44.005x42.791x0.375	26	-31.698	--	75.4	Pass
L27	32.03 - 27.03	Pole	TP45.22x44.005x0.375	27	-33.116	--	76.1	Pass
L28	27.03 - 22.03	Pole	TP46.434x45.22x0.375	28	-34.563	--	76.6	Pass
L29	22.03 - 17.03	Pole	TP47.649x46.434x0.375	29	-36.039	--	77.2	Pass
L30	17.03 - 12.03	Pole	TP48.863x47.649x0.375	30	-37.545	--	77.7	Pass
L31	12.03 - 7.03	Pole	TP50.078x48.863x0.375	31	-39.080	--	78.2	Pass
L32	7.03 - 2.03	Pole	TP51.292x50.078x0.375	32	-40.644	--	78.7	Pass
L33	2.03 - 0	Pole	TP52.507x51.292x0.375	33	-42.238	--	79.1	Pass
L34		Pole	TP53x52.507x0.375	34	-42.894	--	79.3	Pass
							Summary	
							Pole (L15)	99.8 Pass
							Reinforcement	88.3 Pass
							Rating =	99.8 Pass

**Table 5 - Tower Component Stresses vs. Capacity – LC7**

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1,2	Anchor Rod Bracket	Base	51.3	Pass
1,2	Anchor Rods	Base	79.0	Pass
1,2	Base Plate	Base	99.5	Pass
1,2	Base Foundation (Structure)	Base	90.6	Pass
1,2	Base Foundation (Soil Interaction)	Base	91.3	Pass

<b>Structure Rating (max from all components) =</b>	<b>99.8%</b>
---	--------------

Notes:

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

**4.1) Recommendations**

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

**APPENDIX A**

**TNXTOWER OUTPUT**

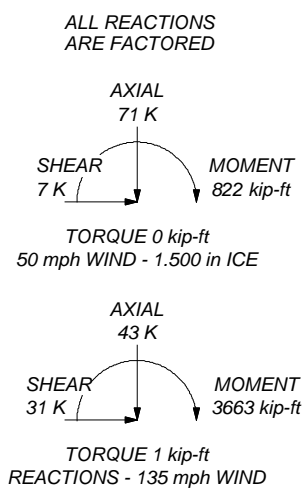
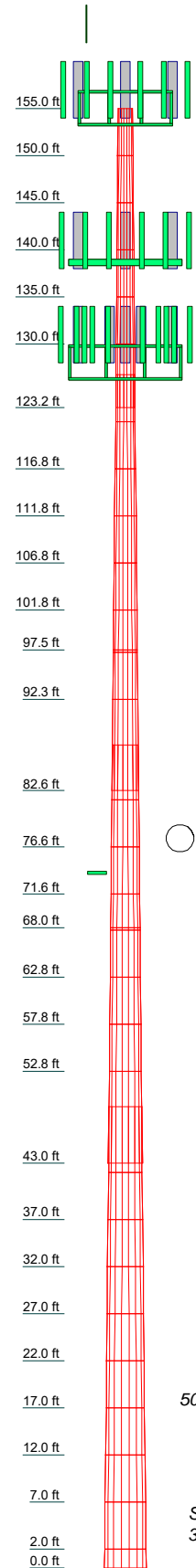
**MATERIAL STRENGTH**


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

**TOWER DESIGN NOTES**

1. Tower is located in New London County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 135 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. TIA-222-H Annex S
9. TOWER RATING: 99.8%

Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Weight (K)
1	5.000	18	0.188				0.2
2	5.000	18	0.188				0.2
3	5.000	18	0.188				0.2
4	5.000	18	0.188				0.2
5	5.000	18	0.188				0.2
6	5.000	18	0.188				0.2
7	5.000	18	0.188	3.580	22.146	22.146	0.2
8	5.000	18	0.250		24.672	24.672	0.3
9	5.000	18	0.250		25.870	25.870	0.4
10	5.000	18	0.250		27.068	27.068	0.4
11	5.000	18	0.250		28.267	28.267	0.4
12	5.000	18	0.250		29.465	29.465	0.4
13	5.000	18	0.250		30.663	30.663	0.3
14	5.000	18	0.250		31.861	31.861	0.3
15	5.830	18	0.250	4.830	33.059	33.059	0.9
16	5.830	18	0.313		34.257	34.257	0.6
17	5.830	18	0.313		35.455	35.455	0.6
18	5.830	18	0.313		36.653	36.653	0.6
19	5.830	18	0.313		37.851	37.851	0.4
20	5.830	18	0.313		39.049	39.049	0.4
21	5.830	18	0.313		40.247	40.247	0.4
22	5.830	18	0.475		41.445	41.445	1.0
23	5.830	18	0.463		42.643	42.643	1.0
24	5.830	18	0.463	5.930	43.841	43.841	2.0
25	5.830	18	0.375		45.039	45.039	1.2
26	5.830	18	0.375		46.237	46.237	0.9
27	5.830	18	0.375		47.435	47.435	0.9
28	5.830	18	0.375		48.633	48.633	0.9
29	5.830	18	0.375		49.831	49.831	1.0
30	5.830	18	0.375		51.029	51.029	1.0
31	5.830	18	0.375		52.227	52.227	1.0
32	5.830	18	0.375		53.425	53.425	1.0
33	5.830	18	0.375		54.623	54.623	1.0
34	5.830	18	0.375		55.821	55.821	1.0



 <p><b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265</p>	Job: <b>147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 87636)</b>		
	Project:	Client: Crown Castle	App'd:
	Code: TIA-222-H	Drawn by: Regan	Scale: NTS
	Path:	Date: 09/17/21	Dwg No: E-1

Vx

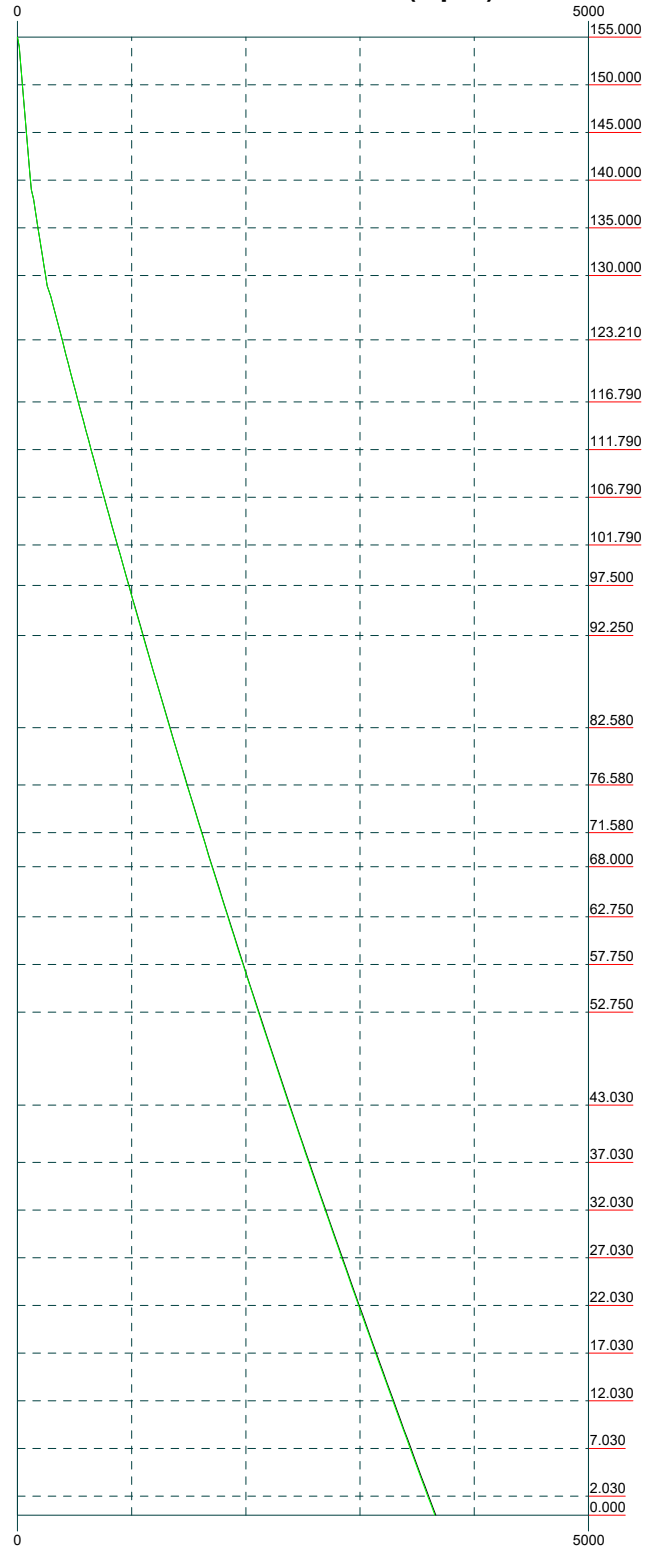
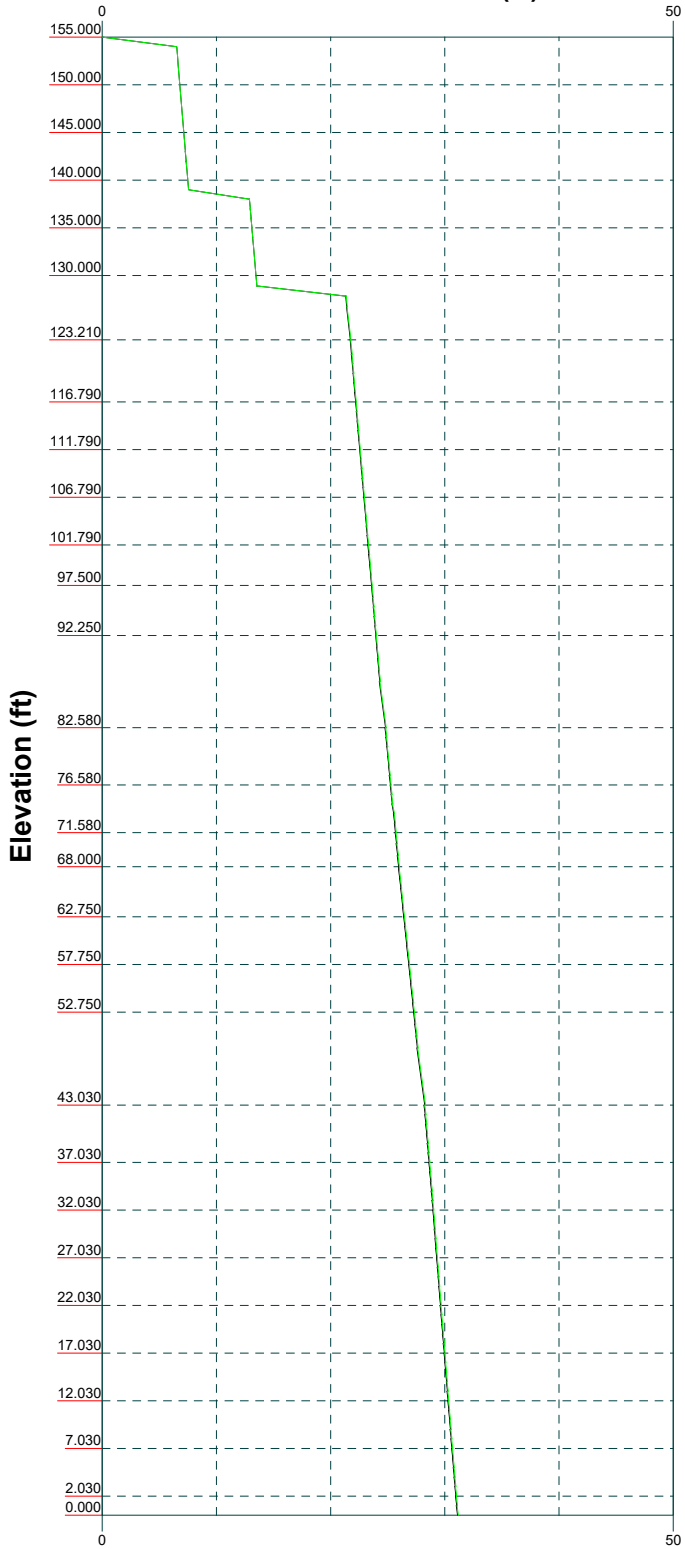
Vz

Mx

Mz

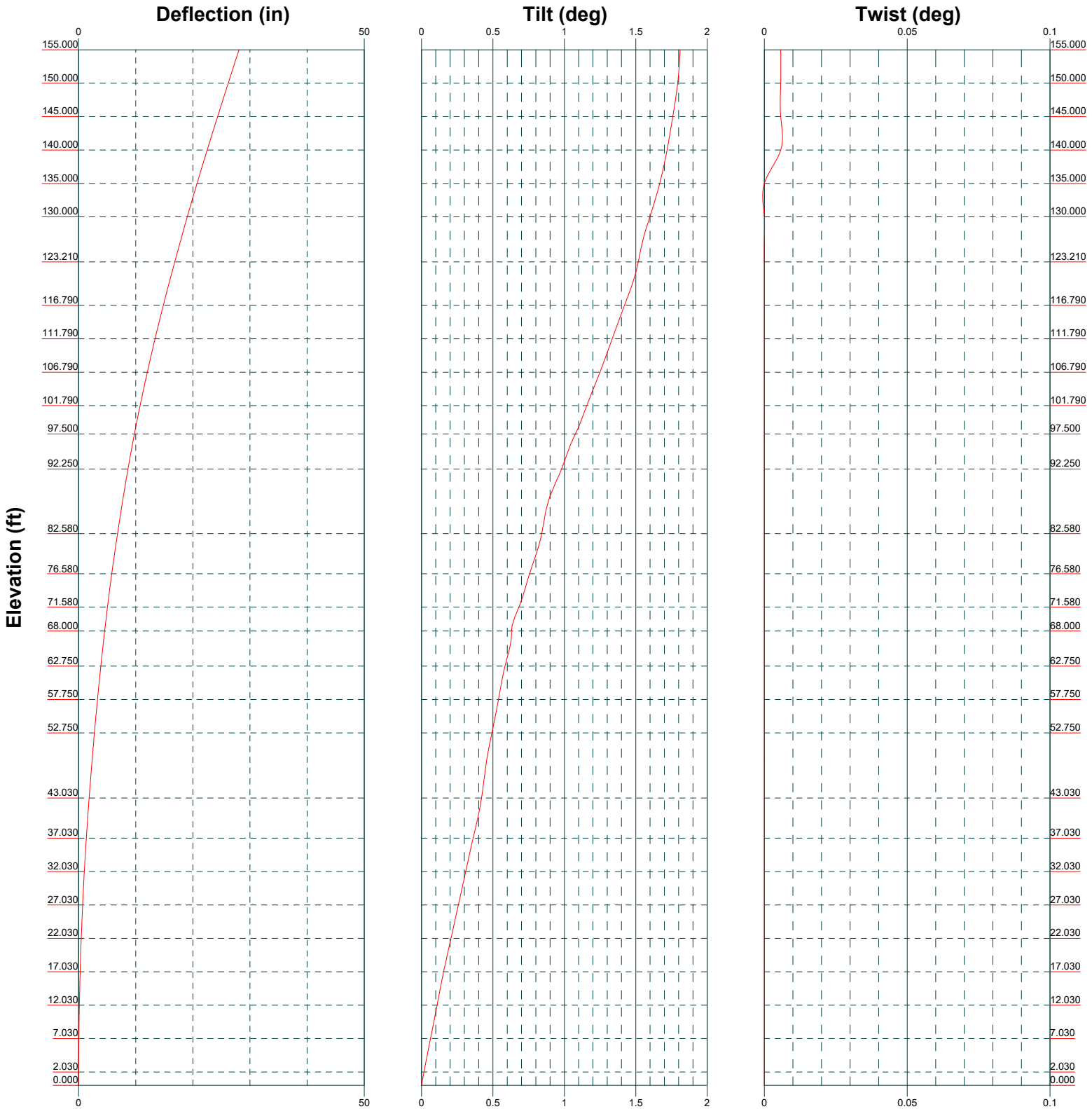
Global Mast Shear (K)

Global Mast Moment (kip-ft)



**B+T Group**  
 1717 S. Boulder, Suite 300  
 Tulsa, OK 74119  
 Phone: (918) 587-4630  
 FAX: (918) 295-0265

Job:	147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 87636)		
Project:			
Client:	Crown Castle	Drawn by:	Regan
Code:	TIA-222-H	Date:	09/17/21
Path:			App'd:
			Scale:
			Dwg No:
			E-4

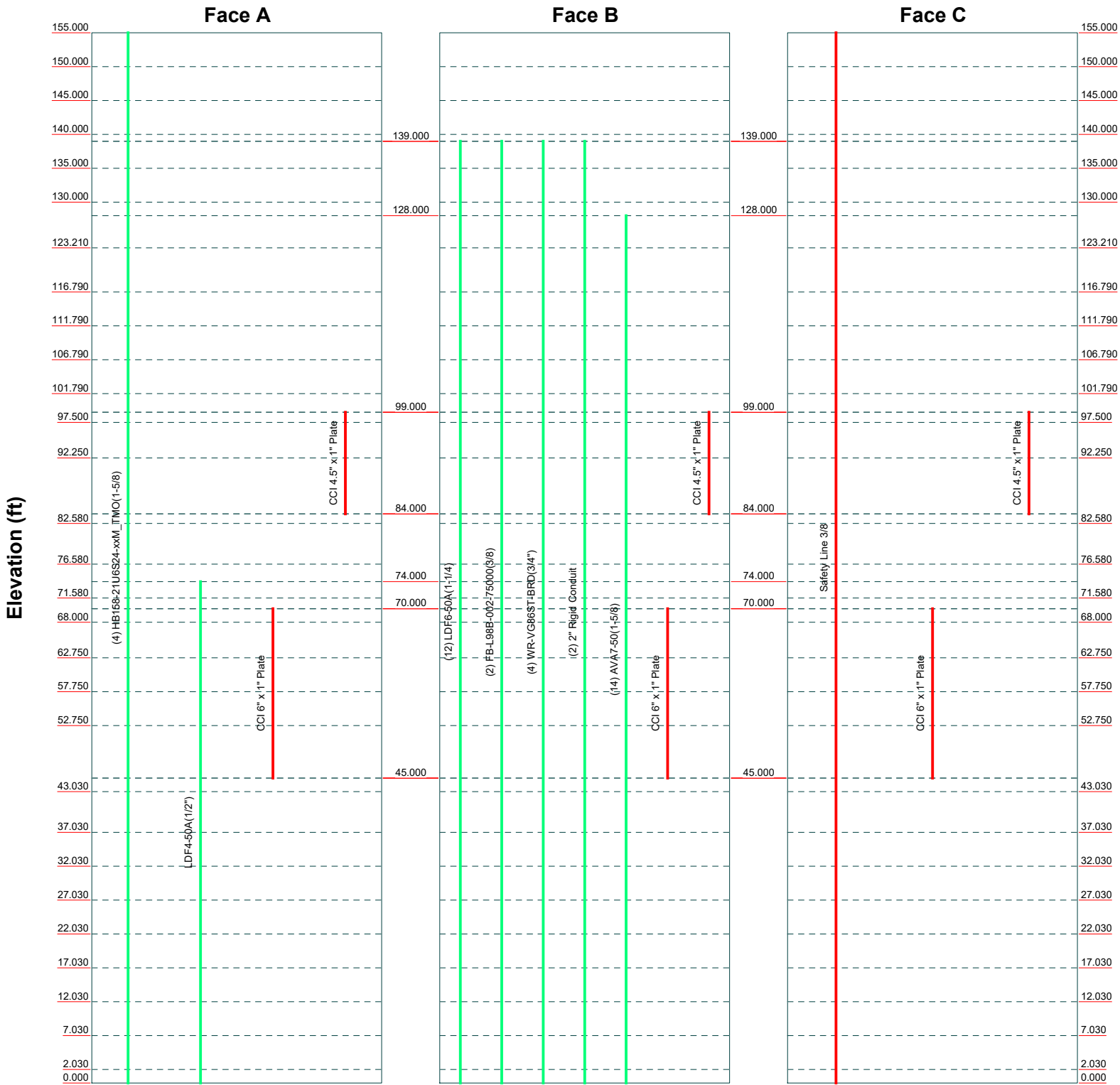




# Feed Line Distribution Chart

## 0' - 155'

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



<p><b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265</p>	<b>Job: 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 87636)</b>		
	Project:		
	Client: Crown Castle	Drawn by: Regan	App'd:
	Code: TIA-222-H	Date: 09/17/21	Scale: NTS
	Path:	Dwg No: E-7	

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)	<b>Page</b> 1 of 36
	<b>Project</b>	<b>Date</b> 16:20:43 09/17/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Regan

## 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 New London County, Connecticut.

Tower base elevation above sea level: 290.000 ft.

Basic wind speed of 135 mph.

Risk Category II.

Exposure Category B.

Simplified Topographic Factor Procedure for wind speed-up calculations is used.

Topographic Category: 1.

Crest Height: 0.000 ft.

Nominal ice thickness of 1.500 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.

TIA-222-H Annex S.

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

<ul style="list-style-type: none"> <li>Consider Moments - Legs</li> <li>Consider Moments - Horizontals</li> <li>Consider Moments - Diagonals</li> <li>Use Moment Magnification</li> <li>√ Use Code Stress Ratios</li> <li>√ Use Code Safety Factors - Guys</li> <li>Escalate Ice</li> <li>Always Use Max Kz</li> <li>Use Special Wind Profile</li> <li>Include Bolts In Member Capacity</li> <li>Leg Bolts Are At Top Of Section</li> <li>Secondary Horizontal Braces Leg</li> <li>Use Diamond Inner Bracing (4 Sided)</li> <li>SR Members Have Cut Ends</li> <li>SR Members Are Concentric</li> </ul>	<ul style="list-style-type: none"> <li>Distribute Leg Loads As Uniform</li> <li>Assume Legs Pinned</li> <li>√ Assume Rigid Index Plate</li> <li>√ Use Clear Spans For Wind Area</li> <li>Use Clear Spans For KL/r</li> <li>Retension Guys To Initial Tension</li> <li>√ Bypass Mast Stability Checks</li> <li>√ Use Azimuth Dish Coefficients</li> <li>√ Project Wind Area of Appurt.</li> <li>Autocalc Torque Arm Areas</li> <li>Add IBC .6D+W Combination</li> <li>Sort Capacity Reports By Component</li> <li>Triangulate Diamond Inner Bracing</li> <li>Treat Feed Line Bundles As Cylinder</li> <li>Ignore KL/ry For 60 Deg. Angle Legs</li> </ul>	<ul style="list-style-type: none"> <li>Use ASCE 10 X-Brace Ly Rules</li> <li>Calculate Redundant Bracing Forces</li> <li>Ignore Redundant Members in FEA</li> <li>SR Leg Bolts Resist Compression</li> <li>All Leg Panels Have Same Allowable</li> <li>Offset Girt At Foundation</li> <li>√ Consider Feed Line Torque</li> <li>Include Angle Block Shear Check</li> <li>Use TIA-222-H Bracing Resist. Exemption</li> <li>Use TIA-222-H Tension Splice Exemption</li> <li style="text-align: center;">Poles</li> <li>√ Include Shear-Torsion Interaction</li> <li>Always Use Sub-Critical Flow</li> <li>Use Top Mounted Sockets</li> <li>Pole Without Linear Attachments</li> <li>Pole With Shroud Or No Appurtenances</li> <li>Outside and Inside Corner Radii Are Known</li> </ul>
--	---	---

<p><b>tnxTower</b></p> <p><b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265</p>	<p><b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)</p>	<p><b>Page</b> 2 of 36</p>
	<p><b>Project</b></p>	<p><b>Date</b> 16:20:43 09/17/21</p>
	<p><b>Client</b> Crown Castle</p>	<p><b>Designed by</b> Regan</p>

## Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	155.000-150.000	5.000	0.000	18	18.000	19.036	0.188	0.750	A572-65 (65 ksi)
L2	150.000-145.000	5.000	0.000	18	19.036	20.073	0.188	0.750	A572-65 (65 ksi)
L3	145.000-140.000	5.000	0.000	18	20.073	21.109	0.188	0.750	A572-65 (65 ksi)
L4	140.000-135.000	5.000	0.000	18	21.109	22.146	0.188	0.750	A572-65 (65 ksi)
L5	135.000-130.000	5.000	0.000	18	22.146	23.182	0.188	0.750	A572-65 (65 ksi)
L6	130.000-123.210	6.790	3.580	18	23.182	24.590	0.188	0.750	A572-65 (65 ksi)
L7	123.210-121.790	5.000	0.000	18	23.473	24.671	0.250	1.000	A572-65 (65 ksi)
L8	121.790-116.790	5.000	0.000	18	24.671	25.870	0.250	1.000	A572-65 (65 ksi)
L9	116.790-111.790	5.000	0.000	18	25.870	27.068	0.250	1.000	A572-65 (65 ksi)
L10	111.790-106.790	5.000	0.000	18	27.068	28.267	0.250	1.000	A572-65 (65 ksi)
L11	106.790-101.790	5.000	0.000	18	28.267	29.465	0.250	1.000	A572-65 (65 ksi)
L12	101.790-97.500	4.290	0.000	18	29.465	30.494	0.250	1.000	A572-65 (65 ksi)
L13	97.500-97.250	0.250	0.000	18	30.494	30.554	0.250	1.000	A572-65 (65 ksi)
L14	97.250-92.250	5.000	0.000	18	30.554	31.752	0.250	1.000	A572-65 (65 ksi)
L15	92.250-82.580	9.670	4.830	18	31.752	34.070	0.250	1.000	A572-65 (65 ksi)
L16	82.580-81.580	5.830	0.000	18	32.412	33.825	0.313	1.250	A572-65 (65 ksi)
L17	81.580-76.580	5.000	0.000	18	33.825	35.037	0.313	1.250	A572-65 (65 ksi)
L18	76.580-71.580	5.000	0.000	18	35.037	36.249	0.313	1.250	A572-65 (65 ksi)
L19	71.580-68.000	3.580	0.000	18	36.249	37.117	0.313	1.250	A572-65 (65 ksi)
L20	68.000-67.750	0.250	0.000	18	37.117	37.178	0.487	1.950	A572-65 (65 ksi)
L21	67.750-62.750	5.000	0.000	18	37.178	38.390	0.475	1.900	A572-65 (65 ksi)
L22	62.750-57.750	5.000	0.000	18	38.390	39.602	0.475	1.900	A572-65 (65 ksi)
L23	57.750-52.750	5.000	0.000	18	39.602	40.814	0.463	1.850	A572-65 (65 ksi)
L24	52.750-43.030	9.720	5.930	18	40.814	43.170	0.463	1.850	A572-65 (65 ksi)
L25	43.030-42.030	6.930	0.000	18	41.108	42.791	0.375	1.500	A572-65 (65 ksi)
L26	42.030-37.030	5.000	0.000	18	42.791	44.005	0.375	1.500	A572-65 (65 ksi)
L27	37.030-32.030	5.000	0.000	18	44.005	45.220	0.375	1.500	A572-65 (65 ksi)
L28	32.030-27.030	5.000	0.000	18	45.220	46.434	0.375	1.500	A572-65 (65 ksi)
L29	27.030-22.030	5.000	0.000	18	46.434	47.649	0.375	1.500	A572-65 (65 ksi)

<p><b>tnxTower</b></p> <p><b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265</p>	<p><b>Job</b></p> <p>147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)</p>	<p><b>Page</b></p> <p>3 of 36</p>
	<p><b>Project</b></p>	<p><b>Date</b></p> <p>16:20:43 09/17/21</p>
	<p><b>Client</b></p> <p>Crown Castle</p>	<p><b>Designed by</b></p> <p>Regan</p>

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L30	22.030-17.030	5.000	0.000	18	47.649	48.863	0.375	1.500	A572-65 (65 ksi)
L31	17.030-12.030	5.000	0.000	18	48.863	50.078	0.375	1.500	A572-65 (65 ksi)
L32	12.030-7.030	5.000	0.000	18	50.078	51.292	0.375	1.500	A572-65 (65 ksi)
L33	7.030-2.030	5.000	0.000	18	51.292	52.507	0.375	1.500	A572-65 (65 ksi)
L34	2.030-0.000	2.030		18	52.507	53.000	0.375	1.500	A572-65 (65 ksi)

### Tapered Pole Properties

Section	Tip Dia. in	Area in <sup>2</sup>	I in <sup>4</sup>	r in	C in	I/C in <sup>3</sup>	J in <sup>4</sup>	It/Q in <sup>2</sup>	w in	w/t
L1	18.249	10.601	424.933	6.323	9.144	46.471	850.425	5.301	2.838	15.136
	19.301	11.218	503.512	6.691	9.671	52.067	1007.687	5.610	3.020	16.109
L2	19.301	11.218	503.512	6.691	9.671	52.067	1007.687	5.610	3.020	16.109
	20.354	11.834	591.226	7.059	10.197	57.980	1183.231	5.918	3.203	17.082
L3	20.354	11.834	591.226	7.059	10.197	57.980	1183.231	5.918	3.203	17.082
	21.406	12.451	688.578	7.427	10.724	64.211	1378.062	6.227	3.385	18.055
L4	21.406	12.451	688.578	7.427	10.724	64.211	1378.062	6.227	3.385	18.055
	22.459	13.068	796.070	7.795	11.250	70.761	1593.187	6.535	3.568	19.028
L5	22.459	13.068	796.070	7.795	11.250	70.761	1593.187	6.535	3.568	19.028
	23.511	13.685	914.204	8.163	11.777	77.628	1829.610	6.844	3.750	20.001
L6	23.511	13.685	914.204	8.163	11.777	77.628	1829.610	6.844	3.750	20.001
	24.940	14.523	1092.568	8.663	12.492	87.463	2186.574	7.263	3.998	21.322
L7	24.668	18.427	1255.545	8.244	11.924	105.294	2512.742	9.215	3.691	14.765
	25.013	19.378	1460.140	8.670	12.533	116.503	2922.202	9.691	3.902	15.609
L8	25.013	19.378	1460.140	8.670	12.533	116.503	2922.202	9.691	3.902	15.609
	26.230	20.329	1685.836	9.095	13.142	128.279	3373.889	10.167	4.113	16.452
L9	26.230	20.329	1685.836	9.095	13.142	128.279	3373.889	10.167	4.113	16.452
	27.447	21.280	1933.666	9.521	13.751	140.623	3869.877	10.642	4.324	17.296
L10	27.447	21.280	1933.666	9.521	13.751	140.623	3869.877	10.642	4.324	17.296
	28.664	22.231	2204.668	9.946	14.360	153.533	4412.237	11.118	4.535	18.14
L11	28.664	22.231	2204.668	9.946	14.360	153.533	4412.237	11.118	4.535	18.14
	29.881	23.182	2499.876	10.371	14.968	167.010	5003.041	11.593	4.746	18.984
L12	29.881	23.182	2499.876	10.371	14.968	167.010	5003.041	11.593	4.746	18.984
	30.926	23.998	2773.245	10.737	15.491	179.025	5550.139	12.001	4.927	19.708
L13	30.926	23.998	2773.245	10.737	15.491	179.025	5550.139	12.001	4.927	19.708
	30.986	24.046	2789.763	10.758	15.521	179.738	5583.196	12.025	4.937	19.75
L14	30.986	24.046	2789.763	10.758	15.521	179.738	5583.196	12.025	4.937	19.75
	32.203	24.997	3134.029	11.183	16.130	194.297	6272.182	12.501	5.148	20.593
L15	32.203	24.997	3134.029	11.183	16.130	194.297	6272.182	12.501	5.148	20.593
	34.557	26.836	3877.977	12.006	17.308	224.063	7761.056	13.421	5.556	22.225
L16	34.053	31.839	4144.760	11.395	16.465	251.725	8294.973	15.922	5.155	16.495
	34.299	33.241	4716.635	11.897	17.183	274.489	9439.476	16.623	5.403	17.29
L17	34.299	33.241	4716.635	11.897	17.183	274.489	9439.476	16.623	5.403	17.29
	35.530	34.443	5247.100	12.327	17.799	294.797	10501.104	17.225	5.617	17.973
L18	35.530	34.443	5247.100	12.327	17.799	294.797	10501.104	17.225	5.617	17.973
	36.760	35.645	5815.918	12.758	18.415	315.830	11639.488	17.826	5.830	18.656
L19	36.760	35.645	5815.918	12.758	18.415	315.830	11639.488	17.826	5.830	18.656
	37.642	36.506	6247.497	13.066	18.856	331.334	12503.214	18.256	5.983	19.144
L20	37.615	56.678	9607.732	13.004	18.856	509.544	19228.106	28.344	5.675	11.64
	37.676	56.772	9655.496	13.025	18.886	511.242	19323.697	28.391	5.685	11.662
L21	37.678	55.335	9417.538	13.030	18.886	498.643	18847.468	27.673	5.707	12.015

<p><b>tnxTower</b></p> <p><b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265</p>	<p><b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)</p>	<p><b>Page</b> 4 of 36</p>
	<p><b>Project</b></p>	<p><b>Date</b> 16:20:43 09/17/21</p>
	<p><b>Client</b> Crown Castle</p>	<p><b>Designed by</b> Regan</p>

Section	Tip Dia. in	Area in <sup>2</sup>	I in <sup>4</sup>	r in	C in	I/C in <sup>3</sup>	J in <sup>4</sup>	It/Q in <sup>2</sup>	w in	w/t
L22	38.909	57.162	10381.645	13.460	19.502	532.336	20776.951	28.587	5.921	12.464
	38.909	57.162	10381.645	13.460	19.502	532.336	20776.951	28.587	5.921	12.464
	40.140	58.990	11409.404	13.890	20.118	567.131	22833.820	29.500	6.134	12.914
L23	40.141	57.456	11119.807	13.894	20.118	552.736	22254.246	28.733	6.156	13.31
	41.372	59.235	12185.147	14.325	20.733	587.705	24386.327	29.623	6.369	13.771
L24	41.372	59.235	12185.147	14.325	20.733	587.705	24386.327	29.623	6.369	13.771
	43.765	62.694	14446.697	15.161	21.930	658.753	28912.403	31.353	6.784	14.668
L25	43.146	48.482	10162.507	14.460	20.883	486.649	20338.386	24.246	6.575	17.533
	43.393	50.485	11475.212	15.058	21.738	527.893	22965.522	25.248	6.871	18.323
L26	43.393	50.485	11475.212	15.058	21.738	527.893	22965.522	25.248	6.871	18.323
	44.626	51.931	12489.424	15.489	22.355	558.693	24995.282	25.970	7.085	18.893
L27	44.626	51.931	12489.424	15.489	22.355	558.693	24995.282	25.970	7.085	18.893
	45.860	53.377	13561.702	15.920	22.972	590.366	27141.248	26.693	7.299	19.463
L28	45.860	53.377	13561.702	15.920	22.972	590.366	27141.248	26.693	7.299	19.463
	47.093	54.822	14693.661	16.351	23.589	622.912	29406.656	27.416	7.512	20.033
L29	47.093	54.822	14693.661	16.351	23.589	622.912	29406.656	27.416	7.512	20.033
	48.326	56.268	15886.917	16.782	24.206	656.331	31794.739	28.139	7.726	20.603
L30	48.326	56.268	15886.917	16.782	24.206	656.331	31794.739	28.139	7.726	20.603
	49.559	57.713	17143.088	17.213	24.823	690.624	34308.733	28.862	7.940	21.173
L31	49.559	57.713	17143.088	17.213	24.823	690.624	34308.733	28.862	7.940	21.173
	50.793	59.159	18463.789	17.645	25.440	725.790	36951.873	29.585	8.154	21.743
L32	50.793	59.159	18463.789	17.645	25.440	725.790	36951.873	29.585	8.154	21.743
	52.026	60.604	19850.636	18.076	26.057	761.829	39727.393	30.308	8.367	22.313
L33	52.026	60.604	19850.636	18.076	26.057	761.829	39727.393	30.308	8.367	22.313
	53.259	62.050	21305.247	18.507	26.674	798.742	42638.528	31.031	8.581	22.883
L34	53.259	62.050	21305.247	18.507	26.674	798.742	42638.528	31.031	8.581	22.883
	53.760	62.637	21915.529	18.682	26.924	813.977	43859.896	31.324	8.668	23.115

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A <sub>f</sub>	Adjust. Factor A <sub>r</sub>	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals	Double Angle Stitch Bolt Spacing Horizontals	Double Angle Stitch Bolt Spacing Redundants
ft	ft <sup>2</sup>	in					in	in	in
L1				1	1	1			
155.000-150.000									
L2				1	1	1			
150.000-145.000									
L3				1	1	1			
145.000-140.000									
L4				1	1	1			
140.000-135.000									
L5				1	1	1			
135.000-130.000									
L6				1	1	1			
130.000-123.210									
L7				1	1	1			
123.210-121.790									
L8				1	1	1			
121.790-116.790									
L9				1	1	1			
116.790-111.790									
L10				1	1	1			

<p><b>tnxTower</b></p> <p><b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265</p>	<p><b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)</p>	<p><b>Page</b> 5 of 36</p>
	<p><b>Project</b></p>	<p><b>Date</b> 16:20:43 09/17/21</p>
	<p><b>Client</b> Crown Castle</p>	<p><b>Designed by</b> Regan</p>

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor $A_f$	Adjust. Factor $A_r$	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
ft	ft <sup>2</sup>	in							
111.790-106.790									
L11				1	1	1			
106.790-101.790									
L12				1	1	1			
101.790-97.500									
L13				1	1	1			
97.500-97.250									
L14				1	1	1			
97.250-92.250									
L15				1	1	1			
92.250-82.580									
L16				1	1	1			
82.580-81.580									
L17				1	1	1			
81.580-76.580									
L18				1	1	1			
76.580-71.580									
L19				1	1	1			
71.580-68.000									
L20				1	1	0.961153			
68.000-67.750									
L21				1	1	0.975618			
67.750-62.750									
L22				1	1	0.965777			
62.750-57.750									
L23				1	1	0.982074			
57.750-52.750									
L24				1	1	0.975253			
52.750-43.030									
L25				1	1	1			
43.030-42.030									
L26				1	1	1			
42.030-37.030									
L27				1	1	1			
37.030-32.030									
L28				1	1	1			
32.030-27.030									
L29				1	1	1			
27.030-22.030									
L30				1	1	1			
22.030-17.030									
L31				1	1	1			
17.030-12.030									
L32				1	1	1			
12.030-7.030									
L33				1	1	1			
7.030-2.030									
L34				1	1	1			
2.030-0.000									

**Feed Line/Linear Appurtenances - Entered As Round Or Flat**



<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)	<b>Page</b> 7 of 36
	<b>Project</b>	<b>Date</b> 16:20:43 09/17/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Regan

## Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>	Weight K
L1	155.000-150.000	A	0.000	0.000	0.000	0.000	0.050
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.188	0.000	0.001
L2	150.000-145.000	A	0.000	0.000	0.000	0.000	0.050
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.188	0.000	0.001
L3	145.000-140.000	A	0.000	0.000	0.000	0.000	0.050
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.188	0.000	0.001
L4	140.000-135.000	A	0.000	0.000	0.000	0.000	0.050
		B	0.000	0.000	0.000	0.000	0.061
		C	0.000	0.000	0.188	0.000	0.001
L5	135.000-130.000	A	0.000	0.000	0.000	0.000	0.050
		B	0.000	0.000	0.000	0.000	0.076
		C	0.000	0.000	0.188	0.000	0.001
L6	130.000-123.210	A	0.000	0.000	0.000	0.000	0.068
		B	0.000	0.000	0.000	0.000	0.151
		C	0.000	0.000	0.255	0.000	0.001
L7	123.210-121.790	A	0.000	0.000	0.000	0.000	0.014
		B	0.000	0.000	0.000	0.000	0.036
		C	0.000	0.000	0.053	0.000	0.000
L8	121.790-116.790	A	0.000	0.000	0.000	0.000	0.050
		B	0.000	0.000	0.000	0.000	0.125
		C	0.000	0.000	0.188	0.000	0.001
L9	116.790-111.790	A	0.000	0.000	0.000	0.000	0.050
		B	0.000	0.000	0.000	0.000	0.125
		C	0.000	0.000	0.188	0.000	0.001
L10	111.790-106.790	A	0.000	0.000	0.000	0.000	0.050
		B	0.000	0.000	0.000	0.000	0.125
		C	0.000	0.000	0.188	0.000	0.001
L11	106.790-101.790	A	0.000	0.000	0.000	0.000	0.050
		B	0.000	0.000	0.000	0.000	0.125
		C	0.000	0.000	0.188	0.000	0.001
L12	101.790-97.500	A	0.000	0.000	1.125	0.000	0.043
		B	0.000	0.000	1.125	0.000	0.107
		C	0.000	0.000	1.286	0.000	0.001
L13	97.500-97.250	A	0.000	0.000	0.188	0.000	0.003
		B	0.000	0.000	0.188	0.000	0.006
		C	0.000	0.000	0.197	0.000	0.000
L14	97.250-92.250	A	0.000	0.000	3.750	0.000	0.050
		B	0.000	0.000	3.750	0.000	0.125
		C	0.000	0.000	3.938	0.000	0.001
L15	92.250-82.580	A	0.000	0.000	6.188	0.000	0.097
		B	0.000	0.000	6.188	0.000	0.242
		C	0.000	0.000	6.550	0.000	0.002
L16	82.580-81.580	A	0.000	0.000	0.000	0.000	0.010
		B	0.000	0.000	0.000	0.000	0.025
		C	0.000	0.000	0.037	0.000	0.000
L17	81.580-76.580	A	0.000	0.000	0.000	0.000	0.050
		B	0.000	0.000	0.000	0.000	0.125
		C	0.000	0.000	0.188	0.000	0.001
L18	76.580-71.580	A	0.000	0.000	0.000	0.000	0.050



<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)	<b>Page</b> 8 of 36
	<b>Project</b>	<b>Date</b> 16:20:43 09/17/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Regan

Tower Section	Tower Elevation ft	Face	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>	Weight K
L19	71.580-68.000	B	0.000	0.000	0.000	0.000	0.125
		C	0.000	0.000	0.188	0.000	0.001
		A	0.000	0.000	2.000	0.000	0.036
L20	68.000-67.750	B	0.000	0.000	2.000	0.000	0.090
		C	0.000	0.000	2.134	0.000	0.001
		A	0.000	0.000	0.250	0.000	0.003
L21	67.750-62.750	B	0.000	0.000	0.250	0.000	0.006
		C	0.000	0.000	0.259	0.000	0.000
		A	0.000	0.000	5.000	0.000	0.051
L22	62.750-57.750	B	0.000	0.000	5.000	0.000	0.125
		C	0.000	0.000	5.188	0.000	0.001
		A	0.000	0.000	5.000	0.000	0.051
L23	57.750-52.750	B	0.000	0.000	5.000	0.000	0.125
		C	0.000	0.000	5.188	0.000	0.001
		A	0.000	0.000	5.000	0.000	0.051
L24	52.750-43.030	B	0.000	0.000	5.188	0.000	0.001
		C	0.000	0.000	7.750	0.000	0.099
		A	0.000	0.000	7.750	0.000	0.244
L25	43.030-42.030	C	0.000	0.000	8.114	0.000	0.002
		A	0.000	0.000	0.000	0.000	0.010
		B	0.000	0.000	0.000	0.000	0.025
L26	42.030-37.030	C	0.000	0.000	0.037	0.000	0.000
		A	0.000	0.000	0.000	0.000	0.051
		B	0.000	0.000	0.000	0.000	0.125
L27	37.030-32.030	C	0.000	0.000	0.188	0.000	0.001
		A	0.000	0.000	0.000	0.000	0.051
		B	0.000	0.000	0.000	0.000	0.125
L28	32.030-27.030	C	0.000	0.000	0.188	0.000	0.001
		A	0.000	0.000	0.000	0.000	0.051
		B	0.000	0.000	0.000	0.000	0.125
L29	27.030-22.030	C	0.000	0.000	0.188	0.000	0.001
		A	0.000	0.000	0.000	0.000	0.051
		B	0.000	0.000	0.000	0.000	0.125
L30	22.030-17.030	C	0.000	0.000	0.188	0.000	0.001
		A	0.000	0.000	0.000	0.000	0.051
		B	0.000	0.000	0.000	0.000	0.125
L31	17.030-12.030	C	0.000	0.000	0.188	0.000	0.001
		A	0.000	0.000	0.000	0.000	0.051
		B	0.000	0.000	0.000	0.000	0.125
L32	12.030-7.030	C	0.000	0.000	0.188	0.000	0.001
		A	0.000	0.000	0.000	0.000	0.051
		B	0.000	0.000	0.000	0.000	0.125
L33	7.030-2.030	C	0.000	0.000	0.188	0.000	0.001
		A	0.000	0.000	0.000	0.000	0.051
		B	0.000	0.000	0.000	0.000	0.125
L34	2.030-0.000	C	0.000	0.000	0.188	0.000	0.001
		A	0.000	0.000	0.000	0.000	0.021
		B	0.000	0.000	0.000	0.000	0.051
		C	0.000	0.000	0.076	0.000	0.000

**Feed Line/Linear Appurtenances Section Areas - With Ice**

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>	Weight K
L1	155.000-150.000	A	1.486	0.000	0.000	0.000	0.000	0.050
		B		0.000	0.000	0.000	0.000	0.000

<p><b>tnxTower</b></p> <p><b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265</p>	<p><b>Job</b></p> <p>147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)</p>	<p><b>Page</b></p> <p>9 of 36</p>
	<p><b>Project</b></p>	<p><b>Date</b></p> <p>16:20:43 09/17/21</p>
	<p><b>Client</b></p> <p>Crown Castle</p>	<p><b>Designed by</b></p> <p>Regan</p>

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>	Weight K
L2	150.000-145.000	C		0.000	0.000	1.673	0.000	0.018
		A	1.481	0.000	0.000	0.000	0.000	0.050
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	1.668	0.000	0.018
L3	145.000-140.000	A	1.476	0.000	0.000	0.000	0.000	0.050
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	1.663	0.000	0.018
L4	140.000-135.000	A	1.471	0.000	0.000	0.000	0.000	0.050
		B		0.000	0.000	0.000	0.000	0.061
		C		0.000	0.000	1.658	0.000	0.018
L5	135.000-130.000	A	1.465	0.000	0.000	0.000	0.000	0.050
		B		0.000	0.000	0.000	0.000	0.076
		C		0.000	0.000	1.653	0.000	0.018
L6	130.000-123.210	A	1.458	0.000	0.000	0.000	0.000	0.068
		B		0.000	0.000	0.000	0.000	0.151
		C		0.000	0.000	2.235	0.000	0.024
L7	123.210-121.790	A	1.454	0.000	0.000	0.000	0.000	0.014
		B		0.000	0.000	0.000	0.000	0.036
		C		0.000	0.000	0.467	0.000	0.005
L8	121.790-116.790	A	1.450	0.000	0.000	0.000	0.000	0.050
		B		0.000	0.000	0.000	0.000	0.125
		C		0.000	0.000	1.637	0.000	0.017
L9	116.790-111.790	A	1.444	0.000	0.000	0.000	0.000	0.050
		B		0.000	0.000	0.000	0.000	0.125
		C		0.000	0.000	1.631	0.000	0.017
L10	111.790-106.790	A	1.437	0.000	0.000	0.000	0.000	0.050
		B		0.000	0.000	0.000	0.000	0.125
		C		0.000	0.000	1.625	0.000	0.017
L11	106.790-101.790	A	1.430	0.000	0.000	0.000	0.000	0.050
		B		0.000	0.000	0.000	0.000	0.125
		C		0.000	0.000	1.618	0.000	0.017
L12	101.790-97.500	A	1.424	0.000	0.000	1.548	0.000	0.057
		B		0.000	0.000	1.548	0.000	0.121
		C		0.000	0.000	2.931	0.000	0.028
L13	97.500-97.250	A	1.421	0.000	0.000	0.258	0.000	0.005
		B		0.000	0.000	0.258	0.000	0.009
		C		0.000	0.000	0.338	0.000	0.003
L14	97.250-92.250	A	1.417	0.000	0.000	5.155	0.000	0.095
		B		0.000	0.000	5.155	0.000	0.170
		C		0.000	0.000	6.760	0.000	0.062
L15	92.250-82.580	A	1.405	0.000	0.000	8.491	0.000	0.170
		B		0.000	0.000	8.491	0.000	0.316
		C		0.000	0.000	11.571	0.000	0.105
L16	82.580-81.580	A	1.397	0.000	0.000	0.000	0.000	0.010
		B		0.000	0.000	0.000	0.000	0.025
		C		0.000	0.000	0.319	0.000	0.003
L17	81.580-76.580	A	1.391	0.000	0.000	0.000	0.000	0.050
		B		0.000	0.000	0.000	0.000	0.125
		C		0.000	0.000	1.579	0.000	0.016
L18	76.580-71.580	A	1.382	0.000	0.000	0.000	0.000	0.050
		B		0.000	0.000	0.000	0.000	0.125
		C		0.000	0.000	1.570	0.000	0.016
L19	71.580-68.000	A	1.374	0.000	0.000	2.550	0.000	0.057
		B		0.000	0.000	2.550	0.000	0.110
		C		0.000	0.000	3.668	0.000	0.032
L20	68.000-67.750	A	1.370	0.000	0.000	0.319	0.000	0.005
		B		0.000	0.000	0.319	0.000	0.009
		C		0.000	0.000	0.396	0.000	0.003
L21	67.750-62.750	A	1.365	0.000	0.000	6.365	0.000	0.102
		B		0.000	0.000	6.365	0.000	0.176
		C		0.000	0.000	7.917	0.000	0.066

<p><b>tnxTower</b></p> <p><b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265</p>	<p><b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)</p>	<p><b>Page</b> 10 of 36</p>
	<p><b>Project</b></p>	<p><b>Date</b> 16:20:43 09/17/21</p>
	<p><b>Client</b> Crown Castle</p>	<p><b>Designed by</b> Regan</p>

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>	Weight K
L22	62.750-57.750	A	1.354	0.000	0.000	6.354	0.000	0.101
		B		0.000	0.000	6.354	0.000	0.176
		C		0.000	0.000	7.896	0.000	0.066
L23	57.750-52.750	A	1.342	0.000	0.000	6.342	0.000	0.101
		B		0.000	0.000	6.342	0.000	0.175
		C		0.000	0.000	7.872	0.000	0.065
L24	52.750-43.030	A	1.323	0.000	0.000	9.801	0.000	0.174
		B		0.000	0.000	9.801	0.000	0.319
		C		0.000	0.000	12.738	0.000	0.105
L25	43.030-42.030	A	1.308	0.000	0.000	0.000	0.000	0.010
		B		0.000	0.000	0.000	0.000	0.025
		C		0.000	0.000	0.302	0.000	0.003
L26	42.030-37.030	A	1.298	0.000	0.000	0.000	0.000	0.051
		B		0.000	0.000	0.000	0.000	0.125
		C		0.000	0.000	1.486	0.000	0.014
L27	37.030-32.030	A	1.281	0.000	0.000	0.000	0.000	0.051
		B		0.000	0.000	0.000	0.000	0.125
		C		0.000	0.000	1.468	0.000	0.014
L28	32.030-27.030	A	1.261	0.000	0.000	0.000	0.000	0.051
		B		0.000	0.000	0.000	0.000	0.125
		C		0.000	0.000	1.448	0.000	0.014
L29	27.030-22.030	A	1.238	0.000	0.000	0.000	0.000	0.051
		B		0.000	0.000	0.000	0.000	0.125
		C		0.000	0.000	1.425	0.000	0.013
L30	22.030-17.030	A	1.210	0.000	0.000	0.000	0.000	0.051
		B		0.000	0.000	0.000	0.000	0.125
		C		0.000	0.000	1.397	0.000	0.013
L31	17.030-12.030	A	1.175	0.000	0.000	0.000	0.000	0.051
		B		0.000	0.000	0.000	0.000	0.125
		C		0.000	0.000	1.362	0.000	0.012
L32	12.030-7.030	A	1.126	0.000	0.000	0.000	0.000	0.051
		B		0.000	0.000	0.000	0.000	0.125
		C		0.000	0.000	1.313	0.000	0.011
L33	7.030-2.030	A	1.045	0.000	0.000	0.000	0.000	0.051
		B		0.000	0.000	0.000	0.000	0.125
		C		0.000	0.000	1.233	0.000	0.010
L34	2.030-0.000	A	0.900	0.000	0.000	0.000	0.000	0.021
		B		0.000	0.000	0.000	0.000	0.051
		C		0.000	0.000	0.442	0.000	0.003

### Feed Line Center of Pressure

Section	Elevation ft	CP <sub>X</sub> in	CP <sub>Z</sub> in	CP <sub>X</sub> Ice in	CP <sub>Z</sub> Ice in
L1	155.000-150.000	0.035	0.298	0.145	1.252
L2	150.000-145.000	0.035	0.298	0.146	1.264
L3	145.000-140.000	0.035	0.299	0.148	1.276
L4	140.000-135.000	0.035	0.299	0.149	1.286
L5	135.000-130.000	0.035	0.299	0.150	1.294
L6	130.000-123.210	0.035	0.299	0.151	1.303
L7	123.210-121.790	0.035	0.299	0.152	1.310
L8	121.790-116.790	0.035	0.299	0.152	1.312
L9	116.790-111.790	0.035	0.299	0.153	1.319
L10	111.790-106.790	0.035	0.299	0.153	1.324
L11	106.790-101.790	0.035	0.300	0.154	1.329
L12	101.790-97.500	0.024	0.211	0.119	1.027

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)	<b>Page</b> 11 of 36
	<b>Project</b>	<b>Date</b> 16:20:43 09/17/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Regan

Section	Elevation	CP <sub>x</sub>	CP <sub>z</sub>	CP <sub>x</sub>	CP <sub>z</sub>
	ft	in	in	Ice in	Ice in
L13	97.500-97.250	0.016	0.138	0.084	0.726
L14	97.250-92.250	0.016	0.140	0.085	0.733
L15	92.250-82.580	0.018	0.155	0.093	0.801
L16	82.580-81.580	0.035	0.300	0.155	1.343
L17	81.580-76.580	0.035	0.300	0.155	1.336
L18	76.580-71.580	0.035	0.300	0.155	1.336
L19	71.580-68.000	0.020	0.174	0.103	0.892
L20	68.000-67.750	0.015	0.131	0.082	0.711
L21	67.750-62.750	0.015	0.132	0.083	0.715
L22	62.750-57.750	0.016	0.135	0.084	0.723
L23	57.750-52.750	0.016	0.137	0.084	0.729
L24	52.750-43.030	0.018	0.157	0.094	0.810
L25	43.030-42.030	0.035	0.300	0.153	1.321
L26	42.030-37.030	0.035	0.300	0.151	1.303
L27	37.030-32.030	0.035	0.300	0.150	1.293
L28	32.030-27.030	0.035	0.300	0.148	1.281
L29	27.030-22.030	0.035	0.300	0.146	1.266
L30	22.030-17.030	0.035	0.300	0.144	1.246
L31	17.030-12.030	0.035	0.300	0.141	1.221
L32	12.030-7.030	0.035	0.300	0.137	1.184
L33	7.030-2.030	0.035	0.301	0.129	1.119
L34	2.030-0.000	0.035	0.301	0.116	0.998

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 <sub>a</sub> No Ice	K <sub>a</sub> Ice
L1	1	Safety Line 3/8	150.00 - 155.00	1.0000	1.0000
L2	1	Safety Line 3/8	145.00 - 150.00	1.0000	1.0000
L3	1	Safety Line 3/8	140.00 - 145.00	1.0000	1.0000
L4	1	Safety Line 3/8	135.00 - 140.00	1.0000	1.0000
L5	1	Safety Line 3/8	130.00 - 135.00	1.0000	1.0000
L6	1	Safety Line 3/8	123.21 - 130.00	1.0000	1.0000
L7	1	Safety Line 3/8	121.79 - 123.21	1.0000	1.0000
L8	1	Safety Line 3/8	116.79 - 121.79	1.0000	1.0000
L9	1	Safety Line 3/8	111.79 - 116.79	1.0000	1.0000
L10	1	Safety Line 3/8	106.79 - 111.79	1.0000	1.0000
L11	1	Safety Line 3/8	101.79 - 106.79	1.0000	1.0000
L12	1	Safety Line 3/8	97.50 - 101.79	1.0000	1.0000
L12	18	CCI 4.5" x 1" Plate	97.50 - 99.00	1.0000	1.0000
L12	19	CCI 4.5" x 1" Plate	97.50 - 99.00	1.0000	1.0000

<p><b>tnxTower</b></p> <p><b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265</p>	<p><b>Job</b></p> <p>147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)</p>	<p><b>Page</b></p> <p>12 of 36</p>
	<p><b>Project</b></p>	<p><b>Date</b></p> <p>16:20:43 09/17/21</p>
	<p><b>Client</b></p> <p>Crown Castle</p>	<p><b>Designed by</b></p> <p>Regan</p>

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	$K_a$ No Ice	$K_a$ Ice
L12	20	CCI 4.5" x 1" Plate	97.50 - 99.00	1.0000	1.0000
L13	1	Safety Line 3/8	97.25 - 97.50	1.0000	1.0000
L13	18	CCI 4.5" x 1" Plate	97.25 - 97.50	1.0000	1.0000
L13	19	CCI 4.5" x 1" Plate	97.25 - 97.50	1.0000	1.0000
L13	20	CCI 4.5" x 1" Plate	97.25 - 97.50	1.0000	1.0000
L14	1	Safety Line 3/8	92.25 - 97.25	1.0000	1.0000
L14	18	CCI 4.5" x 1" Plate	92.25 - 97.25	1.0000	1.0000
L14	19	CCI 4.5" x 1" Plate	92.25 - 97.25	1.0000	1.0000
L14	20	CCI 4.5" x 1" Plate	92.25 - 97.25	1.0000	1.0000
L15	1	Safety Line 3/8	82.58 - 92.25	1.0000	1.0000
L15	18	CCI 4.5" x 1" Plate	84.00 - 92.25	1.0000	1.0000
L15	19	CCI 4.5" x 1" Plate	84.00 - 92.25	1.0000	1.0000
L15	20	CCI 4.5" x 1" Plate	84.00 - 92.25	1.0000	1.0000
L16	1	Safety Line 3/8	81.58 - 82.58	1.0000	1.0000
L17	1	Safety Line 3/8	76.58 - 81.58	1.0000	1.0000
L18	1	Safety Line 3/8	71.58 - 76.58	1.0000	1.0000
L19	1	Safety Line 3/8	68.00 - 71.58	1.0000	1.0000
L19	15	CCI 6" x 1" Plate	68.00 - 70.00	1.0000	1.0000
L19	16	CCI 6" x 1" Plate	68.00 - 70.00	1.0000	1.0000
L19	17	CCI 6" x 1" Plate	68.00 - 70.00	1.0000	1.0000
L20	1	Safety Line 3/8	67.75 - 68.00	1.0000	1.0000
L20	15	CCI 6" x 1" Plate	67.75 - 68.00	1.0000	1.0000
L20	16	CCI 6" x 1" Plate	67.75 - 68.00	1.0000	1.0000
L20	17	CCI 6" x 1" Plate	67.75 - 68.00	1.0000	1.0000
L21	1	Safety Line 3/8	62.75 - 67.75	1.0000	1.0000
L21	15	CCI 6" x 1" Plate	62.75 - 67.75	1.0000	1.0000
L21	16	CCI 6" x 1" Plate	62.75 - 67.75	1.0000	1.0000
L21	17	CCI 6" x 1" Plate	62.75 - 67.75	1.0000	1.0000
L22	1	Safety Line 3/8	57.75 - 62.75	1.0000	1.0000
L22	15	CCI 6" x 1" Plate	57.75 - 62.75	1.0000	1.0000
L22	16	CCI 6" x 1" Plate	57.75 - 62.75	1.0000	1.0000
L22	17	CCI 6" x 1" Plate	57.75 - 62.75	1.0000	1.0000
L23	1	Safety Line 3/8	52.75 - 57.75	1.0000	1.0000
L23	15	CCI 6" x 1" Plate	52.75 - 57.75	1.0000	1.0000
L23	16	CCI 6" x 1" Plate	52.75 - 57.75	1.0000	1.0000
L23	17	CCI 6" x 1" Plate	52.75 - 57.75	1.0000	1.0000
L24	1	Safety Line 3/8	43.03 - 52.75	1.0000	1.0000
L24	15	CCI 6" x 1" Plate	45.00 - 52.75	1.0000	1.0000
L24	16	CCI 6" x 1" Plate	45.00 - 52.75	1.0000	1.0000
L24	17	CCI 6" x 1" Plate	45.00 - 52.75	1.0000	1.0000
L25	1	Safety Line 3/8	42.03 - 43.03	1.0000	1.0000
L26	1	Safety Line 3/8	37.03 - 42.03	1.0000	1.0000
L27	1	Safety Line 3/8	32.03 - 37.03	1.0000	1.0000
L28	1	Safety Line 3/8	27.03 - 32.03	1.0000	1.0000
L29	1	Safety Line 3/8	22.03 - 27.03	1.0000	1.0000
L30	1	Safety Line 3/8	17.03 - 22.03	1.0000	1.0000
L31	1	Safety Line 3/8	12.03 - 17.03	1.0000	1.0000
L32	1	Safety Line 3/8	7.03 - 12.03	1.0000	1.0000
L33	1	Safety Line 3/8	2.03 - 7.03	1.0000	1.0000
L34	1	Safety Line 3/8	0.00 - 2.03	1.0000	1.0000

**Effective Width of Flat Linear Attachments / Feed Lines**

<p><b>tnxTower</b></p> <p><b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265</p>	<p><b>Job</b></p> <p>147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)</p>	<p><b>Page</b></p> <p>13 of 36</p>
	<p><b>Project</b></p>	<p><b>Date</b></p> <p>16:20:43 09/17/21</p>
	<p><b>Client</b></p> <p>Crown Castle</p>	<p><b>Designed by</b></p> <p>Regan</p>

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L12	18	CCI 4.5" x 1" Plate	97.50 - 99.00	Auto	0.0000
L12	19	CCI 4.5" x 1" Plate	97.50 - 99.00	Auto	0.0000
L12	20	CCI 4.5" x 1" Plate	97.50 - 99.00	Auto	0.0000
L13	18	CCI 4.5" x 1" Plate	97.25 - 97.50	Auto	0.0000
L13	19	CCI 4.5" x 1" Plate	97.25 - 97.50	Auto	0.0000
L13	20	CCI 4.5" x 1" Plate	97.25 - 97.50	Auto	0.0000
L14	18	CCI 4.5" x 1" Plate	92.25 - 97.25	Auto	0.0000
L14	19	CCI 4.5" x 1" Plate	92.25 - 97.25	Auto	0.0000
L14	20	CCI 4.5" x 1" Plate	92.25 - 97.25	Auto	0.0000
L15	18	CCI 4.5" x 1" Plate	84.00 - 92.25	Auto	0.0000
L15	19	CCI 4.5" x 1" Plate	84.00 - 92.25	Auto	0.0000
L15	20	CCI 4.5" x 1" Plate	84.00 - 92.25	Auto	0.0000
L19	15	CCI 6" x 1" Plate	68.00 - 70.00	Auto	0.0100
L19	16	CCI 6" x 1" Plate	68.00 - 70.00	Auto	0.0100
L19	17	CCI 6" x 1" Plate	68.00 - 70.00	Auto	0.0100
L20	15	CCI 6" x 1" Plate	67.75 - 68.00	Auto	0.0533
L20	16	CCI 6" x 1" Plate	67.75 - 68.00	Auto	0.0533
L20	17	CCI 6" x 1" Plate	67.75 - 68.00	Auto	0.0533
L21	15	CCI 6" x 1" Plate	62.75 - 67.75	Auto	0.0310
L21	16	CCI 6" x 1" Plate	62.75 - 67.75	Auto	0.0310
L21	17	CCI 6" x 1" Plate	62.75 - 67.75	Auto	0.0310
L22	15	CCI 6" x 1" Plate	57.75 - 62.75	Auto	0.0025
L22	16	CCI 6" x 1" Plate	57.75 - 62.75	Auto	0.0025
L22	17	CCI 6" x 1" Plate	57.75 - 62.75	Auto	0.0025
L23	15	CCI 6" x 1" Plate	52.75 - 57.75	Auto	0.0000
L23	16	CCI 6" x 1" Plate	52.75 - 57.75	Auto	0.0000
L23	17	CCI 6" x 1" Plate	52.75 - 57.75	Auto	0.0000
L24	15	CCI 6" x 1" Plate	45.00 - 52.75	Auto	0.0000
L24	16	CCI 6" x 1" Plate	45.00 - 52.75	Auto	0.0000
L24	17	CCI 6" x 1" Plate	45.00 - 52.75	Auto	0.0000

### Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C <sub>A</sub> A <sub>Front</sub> ft <sup>2</sup>	C <sub>A</sub> A <sub>Side</sub> ft <sup>2</sup>	Weight K
Lighting Rod 1/2" x 2'	C	From Leg	4.000	0.000	164.000	No Ice	0.100	0.100	0.020
			0.000			1/2" Ice	0.264	0.264	0.021
			0.000			1" Ice	0.395	0.395	0.024
						2" Ice	0.685	0.685	0.034
* AIR6449 B41_T-MOBILE w/ Mount Pipe	A	From Leg	4.000	0.000	155.000	No Ice	5.190	2.710	0.128
			0.000			1/2" Ice	5.590	3.040	0.174
			2.000			1" Ice	6.020	3.380	0.227
						2" Ice	6.900	4.120	0.354
AIR6449 B41_T-MOBILE w/ Mount Pipe	B	From Leg	4.000	0.000	155.000	No Ice	5.190	2.710	0.128
			0.000			1/2" Ice	5.590	3.040	0.174
			2.000			1" Ice	6.020	3.380	0.227
						2" Ice	6.900	4.120	0.354
AIR6449 B41_T-MOBILE	C	From Leg	4.000	0.000	155.000	No Ice	5.190	2.710	0.128

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b>		147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)		<b>Page</b>		14 of 36	
	<b>Project</b>				<b>Date</b>		16:20:43 09/17/21	
	<b>Client</b>		Crown Castle		<b>Designed by</b>		Regan	

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment °	Placement ft	C <sub>AA</sub> Front ft <sup>2</sup>	C <sub>AA</sub> Side ft <sup>2</sup>	Weight K
			Horz Lateral ft	Vert ft					
w/ Mount Pipe			0.000			1/2" Ice	5.590	3.040	0.174
			2.000			1" Ice	6.020	3.380	0.227
						2" Ice	6.900	4.120	0.354
APX16DWV-16DWV-S-E-A 20 w/ Mount Pipe	A	From Leg	4.000	0.000	155.000	No Ice	6.290	2.760	0.061
			0.000			1/2" Ice	6.860	3.270	0.105
			2.000			1" Ice	7.450	3.790	0.157
						2" Ice	8.680	4.900	0.290
APX16DWV-16DWV-S-E-A 20 w/ Mount Pipe	B	From Leg	4.000	0.000	155.000	No Ice	6.290	2.760	0.061
			0.000			1/2" Ice	6.860	3.270	0.105
			2.000			1" Ice	7.450	3.790	0.157
						2" Ice	8.680	4.900	0.290
APX16DWV-16DWV-S-E-A 20 w/ Mount Pipe	C	From Leg	4.000	0.000	155.000	No Ice	6.290	2.760	0.061
			0.000			1/2" Ice	6.860	3.270	0.105
			2.000			1" Ice	7.450	3.790	0.157
						2" Ice	8.680	4.900	0.290
APXVAALL24_43-U-NA20 _TMO w/ Mount Pipe	A	From Leg	4.000	0.000	155.000	No Ice	14.690	6.870	0.183
			0.000			1/2" Ice	15.460	7.550	0.311
			2.000			1" Ice	16.230	8.250	0.453
						2" Ice	17.820	9.670	0.782
APXVAALL24_43-U-NA20 _TMO w/ Mount Pipe	B	From Leg	4.000	0.000	155.000	No Ice	14.690	6.870	0.183
			0.000			1/2" Ice	15.460	7.550	0.311
			2.000			1" Ice	16.230	8.250	0.453
						2" Ice	17.820	9.670	0.782
APXVAALL24_43-U-NA20 _TMO w/ Mount Pipe	C	From Leg	4.000	0.000	155.000	No Ice	14.690	6.870	0.183
			0.000			1/2" Ice	15.460	7.550	0.311
			2.000			1" Ice	16.230	8.250	0.453
						2" Ice	17.820	9.670	0.782
RADIO 4415 B66A	A	From Leg	4.000	0.000	155.000	No Ice	1.856	0.870	0.050
			0.000			1/2" Ice	2.027	0.997	0.064
			2.000			1" Ice	2.204	1.134	0.081
						2" Ice	2.582	1.432	0.124
RADIO 4415 B66A	B	From Leg	4.000	0.000	155.000	No Ice	1.856	0.870	0.050
			0.000			1/2" Ice	2.027	0.997	0.064
			2.000			1" Ice	2.204	1.134	0.081
						2" Ice	2.582	1.432	0.124
RADIO 4415 B66A	C	From Leg	4.000	0.000	155.000	No Ice	1.856	0.870	0.050
			0.000			1/2" Ice	2.027	0.997	0.064
			2.000			1" Ice	2.204	1.134	0.081
						2" Ice	2.582	1.432	0.124
RADIO 4424 B25_TMO	A	From Leg	4.000	0.000	155.000	No Ice	2.052	1.610	0.086
			0.000			1/2" Ice	2.231	1.772	0.107
			2.000			1" Ice	2.417	1.941	0.131
						2" Ice	2.811	2.301	0.188
RADIO 4424 B25_TMO	B	From Leg	4.000	0.000	155.000	No Ice	2.052	1.610	0.086
			0.000			1/2" Ice	2.231	1.772	0.107
			2.000			1" Ice	2.417	1.941	0.131
						2" Ice	2.811	2.301	0.188
RADIO 4424 B25_TMO	C	From Leg	4.000	0.000	155.000	No Ice	2.052	1.610	0.086
			0.000			1/2" Ice	2.231	1.772	0.107
			2.000			1" Ice	2.417	1.941	0.131
						2" Ice	2.811	2.301	0.188
RADIO 4449 B71 B85A_T-MOBILE	A	From Leg	4.000	0.000	155.000	No Ice	1.970	1.587	0.073
			0.000			1/2" Ice	2.147	1.749	0.093
			2.000			1" Ice	2.331	1.918	0.116
						2" Ice	2.721	2.280	0.170
RADIO 4449 B71 B85A_T-MOBILE	B	From Leg	4.000	0.000	155.000	No Ice	1.970	1.587	0.073
			0.000			1/2" Ice	2.147	1.749	0.093

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)	<b>Page</b> 15 of 36
	<b>Project</b>	<b>Date</b> 16:20:43 09/17/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Regan

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment °	Placement ft	C <sub>AA</sub> Front ft <sup>2</sup>	C <sub>AA</sub> Side ft <sup>2</sup>	Weight K
			Horz Lateral ft	Vert ft					
			2.000				1" Ice 2.331	1.918	0.116
							2" Ice 2.721	2.280	0.170
RADIO 4449 B71	C	From Leg	4.000	0.000	155.000		No Ice 1.970	1.587	0.073
B85A_T-MOBILE			0.000				1/2" Ice 2.147	1.749	0.093
			2.000				1" Ice 2.331	1.918	0.116
							2" Ice 2.721	2.280	0.170
9' x 2" Pipe Mount	C	From Leg	4.000	0.000	155.000		No Ice 2.138	2.138	0.065
			0.000				1/2" Ice 3.066	3.066	0.081
			4.000				1" Ice 4.010	4.010	0.103
							2" Ice 5.131	5.131	0.165
8' x 2.375" Mount Pipe	A	From Leg	4.000	0.000	155.000		No Ice 1.900	1.900	0.061
			0.000				1/2" Ice 2.728	2.728	0.075
			2.000				1" Ice 3.401	3.401	0.095
							2" Ice 4.396	4.396	0.150
8' x 2.375" Mount Pipe	B	From Leg	4.000	0.000	155.000		No Ice 1.900	1.900	0.061
			0.000				1/2" Ice 2.728	2.728	0.075
			2.000				1" Ice 3.401	3.401	0.095
							2" Ice 4.396	4.396	0.150
8' x 2.375" Mount Pipe	C	From Leg	4.000	0.000	155.000		No Ice 1.900	1.900	0.061
			0.000				1/2" Ice 2.728	2.728	0.075
			2.000				1" Ice 3.401	3.401	0.095
							2" Ice 4.396	4.396	0.150
4' x 2" Pipe Mount	A	From Leg	4.000	0.000	155.000		No Ice 0.785	0.785	0.029
			0.000				1/2" Ice 1.028	1.028	0.035
			2.000				1" Ice 1.281	1.281	0.044
							2" Ice 1.814	1.814	0.072
4' x 2" Pipe Mount	B	From Leg	4.000	0.000	155.000		No Ice 0.785	0.785	0.029
			0.000				1/2" Ice 1.028	1.028	0.035
			2.000				1" Ice 1.281	1.281	0.044
							2" Ice 1.814	1.814	0.072
4' x 2" Pipe Mount	C	From Leg	4.000	0.000	155.000		No Ice 0.785	0.785	0.029
			0.000				1/2" Ice 1.028	1.028	0.035
			2.000				1" Ice 1.281	1.281	0.044
							2" Ice 1.814	1.814	0.072
Miscellaneous [NA 507-1]	C	None		0.000	159.000		No Ice 4.560	4.560	0.245
							1/2" Ice 6.390	6.390	0.311
							1" Ice 8.180	8.180	0.402
							2" Ice 11.660	11.660	0.657
Platform Mount [LP 712-1]	C	None		0.000	155.000		No Ice 19.640	19.640	1.068
							1/2" Ice 22.330	22.330	1.532
							1" Ice 25.020	25.020	1.996
							2" Ice 30.400	30.400	2.923
Transition Ladder	C	From Leg	2.000	0.000	155.000		No Ice 6.000	6.000	0.160
			0.000				1/2" Ice 8.000	8.000	0.240
			-2.000				1" Ice 10.000	10.000	0.320
							2" Ice 14.000	14.000	0.480
*									
HPA-65R-BUU-H8 w/ Mount Pipe	A	From Leg	4.000	0.000	139.000		No Ice 12.250	8.330	0.105
			0.000				1/2" Ice 13.190	9.230	0.194
			2.000				1" Ice 14.160	10.150	0.297
							2" Ice 16.140	12.050	0.543
HPA-65R-BUU-H8 w/ Mount Pipe	B	From Leg	4.000	0.000	139.000		No Ice 12.250	8.330	0.105
			0.000				1/2" Ice 13.190	9.230	0.194
			2.000				1" Ice 14.160	10.150	0.297
							2" Ice 16.140	12.050	0.543
HPA-65R-BUU-H8 w/ Mount Pipe	C	From Leg	4.000	0.000	139.000		No Ice 12.250	8.330	0.105
			0.000				1/2" Ice 13.190	9.230	0.194



<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)	<b>Page</b> 16 of 36
	<b>Project</b>	<b>Date</b> 16:20:43 09/17/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Regan

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment °	Placement ft	C <sub>AA</sub> Front ft <sup>2</sup>	C <sub>AA</sub> Side ft <sup>2</sup>	Weight K
			Horz Lateral ft	Vert ft					
			2.000						
80010966 w/ Mount Pipe	A	From Leg	4.000	0.000	139.000	1" Ice	14.160	10.150	0.297
			0.000			2" Ice	16.140	12.050	0.543
			2.000			No Ice	14.610	6.840	0.159
						1/2" Ice	15.470	7.630	0.267
80010966 w/ Mount Pipe	B	From Leg	4.000	0.000	139.000	1" Ice	16.350	8.420	0.389
			0.000			2" Ice	18.140	10.060	0.677
			2.000			No Ice	14.610	6.840	0.159
						1/2" Ice	15.470	7.630	0.267
80010966 w/ Mount Pipe	C	From Leg	4.000	0.000	139.000	1" Ice	16.350	8.420	0.389
			0.000			2" Ice	18.140	10.060	0.677
			2.000			No Ice	14.610	6.840	0.159
						1/2" Ice	15.470	7.630	0.267
7770.00 w/ Mount Pipe	A	From Leg	4.000	0.000	139.000	1" Ice	16.350	8.420	0.389
			0.000			2" Ice	18.140	10.060	0.677
			1.000			No Ice	5.746	4.254	0.055
						1/2" Ice	6.179	5.014	0.103
7770.00 w/ Mount Pipe	B	From Leg	4.000	0.000	139.000	1" Ice	6.607	5.711	0.157
			0.000			2" Ice	7.488	7.155	0.287
			1.000			No Ice	5.746	4.254	0.055
						1/2" Ice	6.179	5.014	0.103
7770.00 w/ Mount Pipe	C	From Leg	4.000	0.000	139.000	1" Ice	6.607	5.711	0.157
			0.000			2" Ice	7.488	7.155	0.287
			1.000			No Ice	5.746	4.254	0.055
						1/2" Ice	6.179	5.014	0.103
RRUS 11	A	From Leg	4.000	0.000	139.000	1" Ice	6.607	5.711	0.157
			0.000			2" Ice	7.488	7.155	0.287
			1.000			No Ice	2.784	1.187	0.048
						1/2" Ice	2.992	1.334	0.068
RRUS 11	B	From Leg	4.000	0.000	139.000	1" Ice	3.207	1.490	0.092
			0.000			2" Ice	3.658	1.833	0.150
			1.000			No Ice	2.784	1.187	0.048
						1/2" Ice	2.992	1.334	0.068
RRUS 11	C	From Leg	4.000	0.000	139.000	1" Ice	3.207	1.490	0.092
			0.000			2" Ice	3.658	1.833	0.150
			1.000			No Ice	2.784	1.187	0.048
						1/2" Ice	2.992	1.334	0.068
RRUS 32 B2	A	From Leg	4.000	0.000	139.000	1" Ice	3.207	1.490	0.092
			0.000			2" Ice	3.658	1.833	0.150
			1.000			No Ice	2.731	1.668	0.053
						1/2" Ice	2.953	1.855	0.074
RRUS 32 B2	B	From Leg	4.000	0.000	139.000	1" Ice	3.182	2.049	0.098
			0.000			2" Ice	3.663	2.458	0.157
			1.000			No Ice	2.731	1.668	0.053
						1/2" Ice	2.953	1.855	0.074
RRUS 32 B2	C	From Leg	4.000	0.000	139.000	1" Ice	3.182	2.049	0.098
			0.000			2" Ice	3.663	2.458	0.157
			1.000			No Ice	2.731	1.668	0.053
						1/2" Ice	2.953	1.855	0.074
RRUS 4478 B14	A	From Leg	4.000	0.000	139.000	1" Ice	3.182	2.049	0.098
			0.000			2" Ice	3.663	2.458	0.157
			1.000			No Ice	1.843	1.059	0.060
						1/2" Ice	2.012	1.197	0.076
RRUS 4478 B14	B	From Leg	4.000	0.000	139.000	1" Ice	2.190	1.342	0.094
			0.000			2" Ice	2.566	1.656	0.140
			1.000			No Ice	1.843	1.059	0.060
						1/2" Ice	2.012	1.197	0.076
					1" Ice	2.190	1.342	0.094	

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)	<b>Page</b> 17 of 36
	<b>Project</b>	<b>Date</b> 16:20:43 09/17/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Regan

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment °	Placement ft	C <sub>AA</sub> Front ft <sup>2</sup>	C <sub>AA</sub> Side ft <sup>2</sup>	Weight K	
			Horz Lateral ft	Vert ft						
RRUS 4478 B14	C	From Leg	4.000	0.000	0.000	139.000	2" Ice	2.566	1.656	0.140
							No Ice	1.843	1.059	0.060
							1/2" Ice	2.012	1.197	0.076
							1" Ice	2.190	1.342	0.094
(2) LGP21401	A	From Leg	4.000	0.000	0.000	139.000	2" Ice	2.566	1.656	0.140
							No Ice	1.104	0.207	0.014
							1/2" Ice	1.239	0.274	0.021
							1" Ice	1.381	0.348	0.030
(2) LGP21401	B	From Leg	4.000	0.000	0.000	139.000	2" Ice	1.688	0.521	0.055
							No Ice	1.104	0.207	0.014
							1/2" Ice	1.239	0.274	0.021
							1" Ice	1.381	0.348	0.030
(2) LGP21401	C	From Leg	4.000	0.000	0.000	139.000	2" Ice	1.688	0.521	0.055
							No Ice	1.104	0.207	0.014
							1/2" Ice	1.239	0.274	0.021
							1" Ice	1.381	0.348	0.030
DC6-48-60-18-8F	A	From Leg	4.000	0.000	0.000	139.000	2" Ice	1.688	0.521	0.055
							No Ice	1.212	1.212	0.033
							1/2" Ice	1.892	1.892	0.055
							1" Ice	2.105	2.105	0.080
DC6-48-60-18-8F	B	From Leg	4.000	0.000	0.000	139.000	2" Ice	2.570	2.570	0.138
							No Ice	1.212	1.212	0.033
							1/2" Ice	1.892	1.892	0.055
							1" Ice	2.105	2.105	0.080
Platform Mount [LP 303-1]	C	None			0.000	139.000	2" Ice	2.570	2.570	0.138
							No Ice	14.690	14.690	1.250
							1/2" Ice	18.010	18.010	1.569
							1" Ice	21.340	21.340	1.942
* (2) LPA-80063/6CF w/ Mount Pipe	A	From Leg	4.000	0.000	0.000	128.000	2" Ice	28.080	28.080	2.852
							No Ice	9.831	10.215	0.052
							1/2" Ice	10.400	11.384	0.145
							1" Ice	10.933	12.269	0.246
(2) LPA-80063/6CF w/ Mount Pipe	B	From Leg	4.000	0.000	0.000	128.000	2" Ice	12.026	14.086	0.476
							No Ice	9.831	10.215	0.052
							1/2" Ice	10.400	11.384	0.145
							1" Ice	10.933	12.269	0.246
(2) LPA-80063/6CF w/ Mount Pipe	C	From Leg	4.000	0.000	0.000	128.000	2" Ice	12.026	14.086	0.476
							No Ice	9.831	10.215	0.052
							1/2" Ice	10.400	11.384	0.145
							1" Ice	10.933	12.269	0.246
(2) JAHH-65B-R3B w/ Mount Pipe	A	From Leg	4.000	0.000	0.000	128.000	2" Ice	12.026	14.086	0.476
							No Ice	5.500	4.380	0.096
							1/2" Ice	5.970	4.840	0.169
							1" Ice	6.450	5.300	0.254
(2) JAHH-65B-R3B w/ Mount Pipe	B	From Leg	4.000	0.000	0.000	128.000	2" Ice	7.440	6.260	0.457
							No Ice	5.500	4.380	0.096
							1/2" Ice	5.970	4.840	0.169
							1" Ice	6.450	5.300	0.254
(2) JAHH-65B-R3B w/ Mount Pipe	C	From Leg	4.000	0.000	0.000	128.000	2" Ice	7.440	6.260	0.457
							No Ice	5.500	4.380	0.096
							1/2" Ice	5.970	4.840	0.169
							1" Ice	6.450	5.300	0.254
RVZDC-6627-PF-48	A	From Leg	4.000	0.000	0.000	128.000	2" Ice	7.440	6.260	0.457
							No Ice	3.792	2.514	0.032
							1/2" Ice	4.044	2.727	0.063
							1" Ice	4.303	2.947	0.099

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)	<b>Page</b> 18 of 36
	<b>Project</b>	<b>Date</b> 16:20:43 09/17/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Regan

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment °	Placement ft	C <sub>AA</sub> Front ft <sup>2</sup>	C <sub>AA</sub> Side ft <sup>2</sup>	Weight K	
			Horz Lateral ft	Vert ft						
MT6407-77A w/ Mount Pipe	A	From Leg	4.000	0.000	0.000	128.000	2" Ice	4.844	3.417	0.181
			0.000				No Ice	4.907	2.682	0.096
			3.000				1/2" Ice	5.256	3.145	0.136
							1" Ice	5.615	3.624	0.180
MT6407-77A w/ Mount Pipe	B	From Leg	4.000	0.000	0.000	128.000	2" Ice	6.362	4.631	0.288
			0.000				No Ice	4.907	2.682	0.096
			3.000				1/2" Ice	5.256	3.145	0.136
							1" Ice	5.615	3.624	0.180
MT6407-77A w/ Mount Pipe	C	From Leg	4.000	0.000	0.000	128.000	2" Ice	6.362	4.631	0.288
			0.000				No Ice	4.907	2.682	0.096
			3.000				1/2" Ice	5.256	3.145	0.136
							1" Ice	5.615	3.624	0.180
RF4439D-25A	A	From Leg	4.000	0.000	0.000	128.000	2" Ice	6.362	4.631	0.288
			0.000				No Ice	1.865	1.252	0.075
			3.000				1/2" Ice	2.035	1.394	0.093
							1" Ice	2.212	1.544	0.114
RF4439D-25A	B	From Leg	4.000	0.000	0.000	128.000	2" Ice	2.589	1.866	0.165
			0.000				No Ice	1.865	1.252	0.075
			3.000				1/2" Ice	2.035	1.394	0.093
							1" Ice	2.212	1.544	0.114
RF4439D-25A	C	From Leg	4.000	0.000	0.000	128.000	2" Ice	2.589	1.866	0.165
			0.000				No Ice	1.865	1.252	0.075
			3.000				1/2" Ice	2.035	1.394	0.093
							1" Ice	2.212	1.544	0.114
RF4440D-13A	A	From Leg	4.000	0.000	0.000	128.000	2" Ice	2.589	1.866	0.165
			0.000				No Ice	1.865	1.129	0.073
			3.000				1/2" Ice	2.035	1.267	0.090
							1" Ice	2.212	1.411	0.110
RF4440D-13A	B	From Leg	4.000	0.000	0.000	128.000	2" Ice	2.589	1.723	0.159
			0.000				No Ice	1.865	1.129	0.073
			3.000				1/2" Ice	2.035	1.267	0.090
							1" Ice	2.212	1.411	0.110
RF4440D-13A	C	From Leg	4.000	0.000	0.000	128.000	2" Ice	2.589	1.723	0.159
			0.000				No Ice	1.865	1.129	0.073
			3.000				1/2" Ice	2.035	1.267	0.090
							1" Ice	2.212	1.411	0.110
CBC78T-DS-43-2X	A	From Leg	4.000	0.000	0.000	128.000	2" Ice	2.589	1.723	0.159
			0.000				No Ice	0.368	0.512	0.021
			3.000				1/2" Ice	0.446	0.605	0.027
							1" Ice	0.531	0.705	0.035
CBC78T-DS-43-2X	B	From Leg	4.000	0.000	0.000	128.000	2" Ice	0.723	0.927	0.057
			0.000				No Ice	0.368	0.512	0.021
			3.000				1/2" Ice	0.446	0.605	0.027
							1" Ice	0.531	0.705	0.035
CBC78T-DS-43-2X	C	From Leg	4.000	0.000	0.000	128.000	2" Ice	0.723	0.927	0.057
			0.000				No Ice	0.368	0.512	0.021
			3.000				1/2" Ice	0.446	0.605	0.027
							1" Ice	0.531	0.705	0.035
12' Horizontal Handrail	A	From Leg	4.000	0.000	0.000	128.000	2" Ice	0.723	0.927	0.057
			0.000				No Ice	2.280	0.010	0.033
			2.500				1/2" Ice	3.500	0.040	0.050
							1" Ice	4.750	0.090	0.076
12' Horizontal Handrail	B	From Leg	4.000	0.000	0.000	128.000	2" Ice	7.280	0.210	0.150
			0.000				No Ice	2.280	0.010	0.033
			2.500				1/2" Ice	3.500	0.040	0.050
							1" Ice	4.750	0.090	0.076
						2" Ice	7.280	0.210	0.150	

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)	<b>Page</b> 19 of 36
	<b>Project</b>	<b>Date</b> 16:20:43 09/17/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Regan

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment °	Placement ft	C <sub>AA</sub>		Weight K
			Horz Lateral ft	Vert ft			Front ft <sup>2</sup>	Side ft <sup>2</sup>	
12' Horizontal Handrail	C	From Leg	4.000	0.000	128.000	No Ice	2.280	0.010	0.033
			0.000			1/2" Ice	3.500	0.040	0.050
			2.500			1" Ice	4.750	0.090	0.076
						2" Ice	7.280	0.210	0.150
(2) 6' x 2.5" Schedule 40 Pipe	A	From Leg	2.000	0.000	128.000	No Ice	1.728	1.728	0.035
			0.000			1/2" Ice	2.090	2.090	0.048
			2.500			1" Ice	2.461	2.461	0.065
						2" Ice	3.231	3.231	0.112
(2) 6' x 2.5" Schedule 40 Pipe	B	From Leg	2.000	0.000	128.000	No Ice	1.728	1.728	0.035
			0.000			1/2" Ice	2.090	2.090	0.048
			2.500			1" Ice	2.461	2.461	0.065
						2" Ice	3.231	3.231	0.112
(2) 6' x 2.5" Schedule 40 Pipe	C	From Leg	2.000	0.000	128.000	No Ice	1.728	1.728	0.035
			0.000			1/2" Ice	2.090	2.090	0.048
			2.500			1" Ice	2.461	2.461	0.065
						2" Ice	3.231	3.231	0.112
T-Arm Mount [TA 602-3]	C	None		0.000	128.000	No Ice	13.400	13.400	0.774
						1/2" Ice	16.440	16.440	1.004
						1" Ice	19.700	19.700	1.292
						2" Ice	25.860	25.860	2.053
Side Arm Mount [SO 102-3]	C	None		0.000	128.000	No Ice	3.600	3.600	0.075
						1/2" Ice	4.180	4.180	0.105
						1" Ice	4.750	4.750	0.135
						2" Ice	5.900	5.900	0.195
[NA 510-2]+[PRK-1245L]	C	None		0.000	128.000	No Ice	28.630	28.630	0.280
						1/2" Ice	37.310	37.310	0.670
						1" Ice	45.800	45.800	0.940
						2" Ice	62.380	62.380	1.630
* KS24019-L112A	C	From Leg	3.000	0.000	74.000	No Ice	0.141	0.141	0.005
			0.000			1/2" Ice	0.198	0.198	0.007
			0.000			1" Ice	0.262	0.262	0.009
						2" Ice	0.415	0.415	0.018
Side Arm Mount [SO 701-1]	C	From Leg	2.000	0.000	74.000	No Ice	0.850	1.670	0.065
			0.000			1/2" Ice	1.140	2.340	0.079
			0.000			1" Ice	1.430	3.010	0.093
						2" Ice	2.010	4.350	0.121
*									

## 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

<p><b>tnxTower</b></p> <p><b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265</p>	<p><b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)</p>	<p><b>Page</b> 20 of 36</p>
	<p><b>Project</b></p>	<p><b>Date</b> 16:20:43 09/17/21</p>
	<p><b>Client</b> Crown Castle</p>	<p><b>Designed by</b> Regan</p>

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

### Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	155 - 150	Pole	Max Tension	48	0.000	-0.000	0.000
			Max. Compression	26	-9.861	1.788	-1.044
			Max. Mx	20	-3.481	43.170	-0.392
			Max. My	14	-3.480	0.684	-42.803
			Max. Vy	20	-6.798	43.170	-0.392
			Max. Vx	14	6.799	0.684	-42.803
			Max. Torque	24			1.544
L2	150 - 145	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-10.367	1.810	-1.068
			Max. Mx	20	-3.741	78.002	-0.399
			Max. My	14	-3.740	0.700	-77.640

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)	<b>Page</b> 21 of 36
	<b>Project</b>	<b>Date</b> 16:20:43 09/17/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Regan

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L3	145 - 140	Pole	Max. Vy	20	-7.139	78.002	-0.399
			Max. Vx	14	7.140	0.700	-77.640
			Max. Torque	24			1.544
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-10.894	1.829	-1.091
			Max. Mx	20	-4.021	114.560	-0.404
			Max. My	14	-4.019	0.712	-114.203
			Max. Vy	20	-7.489	114.560	-0.404
L4	140 - 135	Pole	Max. Vx	14	7.490	0.712	-114.203
			Max. Torque	24			1.543
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-19.477	1.372	-0.837
			Max. Mx	20	-7.010	180.342	-0.334
			Max. My	14	-7.007	0.599	-180.064
			Max. Vy	20	-13.111	180.342	-0.334
			Max. Vx	14	13.113	0.599	-180.064
L5	135 - 130	Pole	Max. Torque	24			1.542
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-20.137	1.397	-0.861
			Max. Mx	20	-7.459	246.775	-0.338
			Max. My	14	-7.456	0.615	-246.506
			Max. Vy	20	-13.472	246.775	-0.338
			Max. Vx	14	13.474	0.615	-246.506
			Max. Torque	24			1.277
L6	130 - 123.21	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-31.119	1.414	-0.161
			Max. Mx	20	-10.474	314.647	-0.223
			Max. My	14	-10.462	0.629	-314.556
			Max. Vy	20	-21.409	314.647	-0.223
			Max. Vx	14	21.461	0.629	-314.556
			Max. Torque	24			1.276
			Max Tension	1	0.000	0.000	0.000
L7	123.21 - 121.79	Pole	Max. Compression	26	-32.326	1.445	-0.187
			Max. Mx	20	-11.305	422.742	-0.228
			Max. My	14	-11.292	0.650	-422.914
			Max. Vy	20	-21.833	422.742	-0.228
			Max. Vx	14	21.886	0.650	-422.914
			Max. Torque	14			-1.102
			Max Tension	1	0.000	0.000	0.000
			L8	121.79 - 116.79	Pole	Max. Compression	26
Max. Mx	20	-12.036				532.760	-0.232
Max. My	14	-12.024				0.668	-533.197
Max. Vy	20	-22.196				532.760	-0.232
Max. Vx	14	22.248				0.668	-533.197
Max. Torque	14						-1.102
Max Tension	1	0.000				0.000	0.000
L9	116.79 - 111.79	Pole				Max. Compression	26
			Max. Mx	20	-12.796	644.595	-0.237
			Max. My	14	-12.785	0.684	-645.297
			Max. Vy	20	-22.560	644.595	-0.237
			Max. Vx	14	22.612	0.684	-645.297
			Max. Torque	14			-1.100
			Max Tension	1	0.000	0.000	0.000
			L10	111.79 - 106.79	Pole	Max. Compression	26
Max. Mx	20	-13.590				758.242	-0.241
Max. My	14	-13.579				0.698	-759.210
Max. Vy	20	-22.922				758.242	-0.241
Max. Vx	14	22.922				0.698	-759.210

<b>Job</b>	147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)
<b>Project</b>	
<b>Client</b>	Crown Castle

<b>Page</b>	22 of 36
<b>Date</b>	16:20:43 09/17/21
<b>Designed by</b>	Regan

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L11	106.79 - 101.79	Pole	Max. Vx	14	22.975	0.698	-759.210
			Max. Torque	14			-1.098
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-35.988	1.545	-0.294
			Max. Mx	20	-14.413	873.695	-0.244
			Max. My	14	-14.403	0.709	-874.929
			Max. Vy	20	-23.284	873.695	-0.244
L12	101.79 - 97.5	Pole	Max. Vx	14	23.337	0.709	-874.929
			Max. Torque	14			-1.097
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-36.874	1.562	-0.318
			Max. Mx	20	-15.140	974.191	-0.247
			Max. My	14	-15.130	0.718	-975.654
			Max. Vy	20	-23.595	974.191	-0.247
L13	97.5 - 97.25	Pole	Max. Vx	14	23.648	0.718	-975.654
			Max. Torque	14			-1.095
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-36.930	1.565	-0.320
			Max. Mx	20	-15.200	980.089	-0.248
			Max. My	14	-15.190	0.720	-981.565
			Max. Vy	20	-23.606	980.089	-0.248
L14	97.25 - 92.25	Pole	Max. Vx	14	23.659	0.720	-981.565
			Max. Torque	14			-1.094
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-38.078	1.566	-0.343
			Max. Mx	20	-16.059	1098.975	-0.251
			Max. My	14	-16.050	0.727	-1100.718
			Max. Vy	20	-23.971	1098.975	-0.251
L15	92.25 - 82.58	Pole	Max. Vx	14	24.024	0.727	-1100.718
			Max. Torque	14			-1.093
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-39.199	1.566	-0.365
			Max. Mx	20	-16.926	1215.755	-0.254
			Max. My	14	-16.917	0.734	-1217.756
			Max. Vy	20	-24.318	1215.755	-0.254
L16	82.58 - 81.58	Pole	Max. Vx	14	24.371	0.734	-1217.756
			Max. Torque	14			-1.092
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-41.509	1.566	-0.392
			Max. Mx	20	-18.556	1359.094	-0.258
			Max. My	14	-18.548	0.743	-1361.406
			Max. Vy	20	-24.868	1359.094	-0.258
L17	81.58 - 76.58	Pole	Max. Vx	14	24.921	0.743	-1361.406
			Max. Torque	14			-1.090
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-42.735	1.566	-0.416
			Max. Mx	20	-19.600	1484.313	-0.260
			Max. My	14	-19.593	0.750	-1486.892
			Max. Vy	20	-25.249	1484.313	-0.260
L18	76.58 - 71.58	Pole	Max. Vx	14	25.302	0.750	-1486.892
			Max. Torque	14			-1.089
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-44.123	1.971	-0.674
			Max. Mx	20	-20.752	1611.822	-0.368
			Max. My	14	-20.744	0.962	-1614.600
			Max. Vy	20	-25.683	1611.822	-0.368
L19	71.58 - 68	Pole	Max. Vx	14	25.753	0.962	-1614.600
			Max. Torque	14			-1.311
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-45.106	1.971	-0.691

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)	<b>Page</b> 23 of 36
	<b>Project</b>	<b>Date</b> 16:20:43 09/17/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Regan

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L20	68 - 67.75	Pole	Max. Mx	20	-21.532	1704.196	-0.317
			Max. My	14	-21.525	0.912	-1707.226
			Max. Vy	20	-25.955	1704.196	-0.317
			Max. Vx	14	26.025	0.912	-1707.226
			Max. Torque	14			-1.311
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-45.197	1.974	-0.694
			Max. Mx	20	-21.621	1710.683	-0.313
			Max. My	14	-21.614	0.910	-1713.731
			Max. Vy	20	-25.967	1710.683	-0.313
L21	67.75 - 62.75	Pole	Max. Vx	14	26.037	0.910	-1713.731
			Max. Torque	14			-1.310
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-47.027	1.971	-0.718
			Max. Mx	20	-23.033	1841.587	-0.242
			Max. My	14	-23.026	0.839	-1844.986
			Max. Vy	20	-26.413	1841.587	-0.242
			Max. Vx	14	26.483	0.839	-1844.986
			Max. Torque	14			-1.310
			Max Tension	1	0.000	0.000	0.000
L22	62.75 - 57.75	Pole	Max. Compression	26	-48.887	1.971	-0.743
			Max. Mx	20	-24.480	1974.694	-0.170
			Max. My	14	-24.474	0.769	-1978.444
			Max. Vy	20	-26.852	1974.694	-0.170
			Max. Vx	14	26.922	0.769	-1978.444
			Max. Torque	14			-1.309
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-50.777	1.971	-0.769
			Max. Mx	20	-25.955	2109.973	-0.099
			Max. My	14	-25.950	0.698	-2114.075
L23	57.75 - 52.75	Pole	Max. Vy	20	-27.283	2109.973	-0.099
			Max. Vx	14	27.353	0.698	-2114.075
			Max. Torque	14			-1.309
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-52.210	1.971	-0.790
			Max. Mx	20	-27.089	2213.929	-0.044
			Max. My	14	-27.084	0.644	-2218.297
			Max. Vy	20	-27.602	2213.929	-0.044
			Max. Vx	14	27.671	0.644	-2218.297
			Max. Torque	14			-1.308
L24	52.75 - 43.03	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-56.429	1.971	-0.826
			Max. Mx	20	-30.316	2407.566	0.055
			Max. My	14	-30.311	0.545	-2412.422
			Max. Vy	20	-28.285	2407.566	0.055
			Max. Vx	14	28.355	0.545	-2412.422
			Max. Torque	14			-1.307
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-58.059	1.971	-0.853
			Max. Mx	20	-31.703	2549.788	0.127
L25	43.03 - 42.03	Pole	Max. My	14	-31.699	0.472	-2554.995
			Max. Vy	20	-28.637	2549.788	0.127
			Max. Vx	14	28.707	0.472	-2554.995
			Max. Torque	14			-1.307
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-59.722	1.971	-0.880
			Max. Mx	20	-33.120	2693.734	0.199
			Max. My	14	-33.116	0.399	-2699.291
			Max. Vy	20	-28.975	2693.734	0.199
			Max. Vx	14	29.045	0.399	-2699.291
L26	42.03 - 37.03	Pole	Max. Torque	14			-1.307
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-59.722	1.971	-0.880
			Max. Mx	20	-33.120	2693.734	0.199
			Max. My	14	-33.116	0.399	-2699.291
L27	37.03 - 32.03	Pole	Max. Vy	20	-28.975	2693.734	0.199
			Max. Vx	14	29.045	0.399	-2699.291
			Max. Torque	14			-1.307
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-59.722	1.971	-0.880



<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)	<b>Page</b> 24 of 36
	<b>Project</b>	<b>Date</b> 16:20:43 09/17/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Regan

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L28	32.03 - 27.03	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-61.418	1.971	-0.907
			Max. Mx	20	-34.566	2839.334	0.271
			Max. My	14	-34.563	0.326	-2845.240
			Max. Vy	20	-29.299	2839.334	0.271
			Max. Vx	14	29.368	0.326	-2845.240
			Max. Torque	14			-1.306
L29	27.03 - 22.03	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-63.146	1.971	-0.933
			Max. Mx	20	-36.042	2986.563	0.342
			Max. My	14	-36.039	0.252	-2992.816
			Max. Vy	20	-29.627	2986.563	0.342
			Max. Vx	14	29.696	0.252	-2992.816
			Max. Torque	14			-1.306
L30	22.03 - 17.03	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-64.903	1.971	-0.960
			Max. Mx	20	-37.547	3135.440	0.414
			Max. My	14	-37.545	0.178	-3142.039
			Max. Vy	20	-29.959	3135.440	0.414
			Max. Vx	14	30.027	0.178	-3142.039
			Max. Torque	14			-1.305
L31	17.03 - 12.03	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-66.687	1.971	-0.985
			Max. Mx	20	-39.081	3285.985	0.486
			Max. My	14	-39.080	0.103	-3292.929
			Max. Vy	20	-30.294	3285.985	0.486
			Max. Vx	14	30.363	0.103	-3292.929
			Max. Torque	14			-1.305
L32	12.03 - 7.03	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-68.492	1.971	-1.010
			Max. Mx	20	-40.645	3438.217	0.557
			Max. My	14	-40.644	0.028	-3445.504
			Max. Vy	20	-30.634	3438.217	0.557
			Max. Vx	14	30.702	0.028	-3445.504
			Max. Torque	14			-1.305
L33	7.03 - 2.03	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-70.307	1.971	-1.033
			Max. Mx	20	-42.239	3592.157	0.629
			Max. My	14	-42.238	-0.047	-3599.786
			Max. Vy	20	-30.978	3592.157	0.629
			Max. Vx	14	31.045	-0.047	-3599.786
			Max. Torque	14			-1.305
L34	2.03 - 0	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-71.034	1.971	-1.040
			Max. Mx	20	-42.894	3655.148	0.657
			Max. My	14	-42.894	-0.077	-3662.915
			Max. Vy	20	-31.119	3655.148	0.657
			Max. Vx	14	31.186	-0.077	-3662.915
			Max. Torque	14			-1.305

### Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	26	71.034	0.000	-0.000
	Max. H <sub>x</sub>	20	42.907	31.100	0.015

<p><b>tnxTower</b></p> <p><b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265</p>	<p><b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)</p>	<p><b>Page</b> 25 of 36</p>
	<p><b>Project</b></p>	<p><b>Date</b> 16:20:43 09/17/21</p>
	<p><b>Client</b> Crown Castle</p>	<p><b>Designed by</b> Regan</p>

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
	Max. H <sub>z</sub>	2	42.907	0.015	31.168
	Max. M <sub>x</sub>	2	3661.983	0.015	31.168
	Max. M <sub>z</sub>	8	3653.029	-31.100	-0.015
	Max. Torsion	2	1.304	0.015	31.168
	Min. Vert	19	32.180	26.926	-15.571
	Min. H <sub>x</sub>	8	42.907	-31.100	-0.015
	Min. H <sub>z</sub>	14	42.907	-0.015	-31.168
	Min. M <sub>x</sub>	14	-3662.915	-0.015	-31.168
	Min. M <sub>z</sub>	20	-3655.148	31.100	0.015
	Min. Torsion	14	-1.305	-0.015	-31.168

### Tower Mast Reaction Summary

Load Combination	Vertical K	Shear <sub>x</sub> K	Shear <sub>z</sub> K	Overturning Moment, M <sub>x</sub> kip-ft	Overturning Moment, M <sub>z</sub> kip-ft	Torque kip-ft
Dead Only	35.756	0.000	0.000	0.365	0.825	0.000
1.2 Dead+1.0 Wind 0 deg - No Ice	42.907	-0.015	-31.168	-3661.983	2.171	-1.304
0.9 Dead+1.0 Wind 0 deg - No Ice	32.180	-0.015	-31.168	-3611.153	1.880	-1.277
1.2 Dead+1.0 Wind 30 deg - No Ice	42.907	15.537	-26.985	-3170.756	-1825.004	-1.000
0.9 Dead+1.0 Wind 30 deg - No Ice	32.180	15.537	-26.985	-3126.756	-1799.871	-0.984
1.2 Dead+1.0 Wind 60 deg - No Ice	42.907	26.926	-15.571	-1829.802	-3162.908	-0.426
0.9 Dead+1.0 Wind 60 deg - No Ice	32.180	26.926	-15.571	-1804.456	-3119.162	-0.424
1.2 Dead+1.0 Wind 90 deg - No Ice	42.907	31.100	0.015	1.591	-3653.029	0.265
0.9 Dead+1.0 Wind 90 deg - No Ice	32.180	31.100	0.015	1.457	-3602.468	0.251
1.2 Dead+1.0 Wind 120 deg - No Ice	42.907	26.941	15.597	1832.679	-3164.027	0.885
0.9 Dead+1.0 Wind 120 deg - No Ice	32.180	26.941	15.597	1807.068	-3120.272	0.860
1.2 Dead+1.0 Wind 150 deg - No Ice	42.907	15.563	27.000	3172.808	-1826.948	1.266
0.9 Dead+1.0 Wind 150 deg - No Ice	32.180	15.563	27.000	3128.550	-1801.800	1.236
1.2 Dead+1.0 Wind 180 deg - No Ice	42.907	0.015	31.168	3662.915	-0.078	1.305
0.9 Dead+1.0 Wind 180 deg - No Ice	32.180	0.015	31.168	3611.835	-0.351	1.278
1.2 Dead+1.0 Wind 210 deg - No Ice	42.907	-15.537	26.985	3171.700	1827.103	0.994
0.9 Dead+1.0 Wind 210 deg - No Ice	32.180	-15.537	26.985	3127.447	1801.404	0.978
1.2 Dead+1.0 Wind 240 deg - No Ice	42.907	-26.926	15.571	1830.746	3165.021	0.419
0.9 Dead+1.0 Wind 240 deg - No Ice	32.180	-26.926	15.571	1805.147	3120.704	0.417
1.2 Dead+1.0 Wind 270 deg - No Ice	42.907	-31.100	-0.015	-0.657	3655.148	-0.266
0.9 Dead+1.0 Wind 270 deg - No Ice	32.180	-31.100	-0.015	-0.774	3604.015	-0.252

<p><b>tnxTower</b></p> <p><b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265</p>	<p><b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)</p>	<p><b>Page</b> 26 of 36</p>
	<p><b>Project</b></p>	<p><b>Date</b> 16:20:43 09/17/21</p>
	<p><b>Client</b> Crown Castle</p>	<p><b>Designed by</b> Regan</p>

Load Combination	Vertical K	Shear <sub>x</sub> K	Shear <sub>z</sub> K	Overturning Moment, M <sub>x</sub> kip-ft	Overturning Moment, M <sub>z</sub> kip-ft	Torque kip-ft
1.2 Dead+1.0 Wind 300 deg - No Ice	42.907	-26.941	-15.597	-1831.757	3166.140	-0.879
0.9 Dead+1.0 Wind 300 deg - No Ice	32.180	-26.941	-15.597	-1806.394	3121.815	-0.854
1.2 Dead+1.0 Wind 330 deg - No Ice	42.907	-15.563	-27.000	-3171.887	1829.048	-1.259
0.9 Dead+1.0 Wind 330 deg - No Ice	32.180	-15.563	-27.000	-3127.876	1803.334	-1.229
1.2 Dead+1.0 Ice+1.0 Temp	71.034	-0.000	0.000	1.040	1.971	-0.000
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	71.034	-0.005	-6.743	-819.445	2.501	-0.408
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	71.034	3.361	-5.837	-709.328	-407.047	-0.282
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	71.034	5.826	-3.367	-408.851	-706.954	-0.080
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	71.034	6.730	0.005	1.475	-816.861	0.143
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	71.034	5.830	3.375	411.704	-707.319	0.328
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	71.034	3.369	5.842	711.916	-407.678	0.425
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	71.034	0.005	6.743	821.670	1.774	0.408
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	71.034	-3.361	5.837	711.555	411.325	0.282
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	71.034	-5.826	3.367	411.077	711.235	0.080
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	71.034	-6.730	-0.005	0.748	821.143	-0.143
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	71.034	-5.830	-3.375	-409.484	711.598	-0.328
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	71.034	-3.369	-5.842	-709.695	411.953	-0.425
Dead+Wind 0 deg - Service	35.756	-0.003	-5.801	-677.262	1.090	-0.240
Dead+Wind 30 deg - Service	35.756	2.892	-5.023	-586.370	-336.985	-0.185
Dead+Wind 60 deg - Service	35.756	5.012	-2.898	-338.257	-584.529	-0.081
Dead+Wind 90 deg - Service	35.756	5.789	0.003	0.595	-675.206	0.046
Dead+Wind 120 deg - Service	35.756	5.015	2.903	339.392	-584.737	0.160
Dead+Wind 150 deg - Service	35.756	2.897	5.026	587.353	-337.346	0.231
Dead+Wind 180 deg - Service	35.756	0.003	5.801	678.036	0.673	0.240
Dead+Wind 210 deg - Service	35.756	-2.892	5.023	587.145	338.748	0.185
Dead+Wind 240 deg - Service	35.756	-5.012	2.898	339.032	586.292	0.080
Dead+Wind 270 deg - Service	35.756	-5.789	-0.003	0.179	676.969	-0.046
Dead+Wind 300 deg - Service	35.756	-5.015	-2.903	-338.618	586.500	-0.159
Dead+Wind 330 deg - Service	35.756	-2.897	-5.026	-586.579	339.109	-0.231

## 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	-35.756	0.000	0.000	35.756	0.000	0.000%
2	-0.015	-42.907	-31.168	0.015	42.907	31.168	0.000%
3	-0.015	-32.180	-31.168	0.015	32.180	31.168	0.000%
4	15.537	-42.907	-26.985	-15.537	42.907	26.985	0.000%
5	15.537	-32.180	-26.985	-15.537	32.180	26.985	0.000%
6	26.926	-42.907	-15.571	-26.926	42.907	15.571	0.000%
7	26.926	-32.180	-15.571	-26.926	32.180	15.571	0.000%

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)	<b>Page</b> 27 of 36
	<b>Project</b>	<b>Date</b> 16:20:43 09/17/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Regan

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
8	31.100	-42.907	0.015	-31.100	42.907	-0.015	0.000%
9	31.100	-32.180	0.015	-31.100	32.180	-0.015	0.000%
10	26.941	-42.907	15.597	-26.941	42.907	-15.597	0.000%
11	26.941	-32.180	15.597	-26.941	32.180	-15.597	0.000%
12	15.563	-42.907	27.000	-15.563	42.907	-27.000	0.000%
13	15.563	-32.180	27.000	-15.563	32.180	-27.000	0.000%
14	0.015	-42.907	31.168	-0.015	42.907	-31.168	0.000%
15	0.015	-32.180	31.168	-0.015	32.180	-31.168	0.000%
16	-15.537	-42.907	26.985	15.537	42.907	-26.985	0.000%
17	-15.537	-32.180	26.985	15.537	32.180	-26.985	0.000%
18	-26.926	-42.907	15.571	26.926	42.907	-15.571	0.000%
19	-26.926	-32.180	15.571	26.926	32.180	-15.571	0.000%
20	-31.100	-42.907	-0.015	31.100	42.907	0.015	0.000%
21	-31.100	-32.180	-0.015	31.100	32.180	0.015	0.000%
22	-26.941	-42.907	-15.597	26.941	42.907	15.597	0.000%
23	-26.941	-32.180	-15.597	26.941	32.180	15.597	0.000%
24	-15.563	-42.907	-27.000	15.563	42.907	27.000	0.000%
25	-15.563	-32.180	-27.000	15.563	32.180	27.000	0.000%
26	0.000	-71.034	0.000	0.000	71.034	-0.000	0.000%
27	-0.005	-71.034	-6.743	0.005	71.034	6.743	0.000%
28	3.361	-71.034	-5.837	-3.361	71.034	5.837	0.000%
29	5.826	-71.034	-3.367	-5.826	71.034	3.367	0.000%
30	6.730	-71.034	0.005	-6.730	71.034	-0.005	0.000%
31	5.830	-71.034	3.375	-5.830	71.034	-3.375	0.000%
32	3.369	-71.034	5.842	-3.369	71.034	-5.842	0.000%
33	0.005	-71.034	6.743	-0.005	71.034	-6.743	0.000%
34	-3.361	-71.034	5.837	3.361	71.034	-5.837	0.000%
35	-5.826	-71.034	3.367	5.826	71.034	-3.367	0.000%
36	-6.730	-71.034	-0.005	6.730	71.034	0.005	0.000%
37	-5.830	-71.034	-3.375	5.830	71.034	3.375	0.000%
38	-3.369	-71.034	-5.842	3.369	71.034	5.842	0.000%
39	-0.003	-35.756	-5.801	0.003	35.756	5.801	0.000%
40	2.892	-35.756	-5.023	-2.892	35.756	5.023	0.000%
41	5.012	-35.756	-2.898	-5.012	35.756	2.898	0.000%
42	5.789	-35.756	0.003	-5.789	35.756	-0.003	0.000%
43	5.015	-35.756	2.903	-5.015	35.756	-2.903	0.000%
44	2.897	-35.756	5.026	-2.897	35.756	-5.026	0.000%
45	0.003	-35.756	5.801	-0.003	35.756	-5.801	0.000%
46	-2.892	-35.756	5.023	2.892	35.756	-5.023	0.000%
47	-5.012	-35.756	2.898	5.012	35.756	-2.898	0.000%
48	-5.789	-35.756	-0.003	5.789	35.756	0.003	0.000%
49	-5.015	-35.756	-2.903	5.015	35.756	2.903	0.000%
50	-2.897	-35.756	-5.026	2.897	35.756	5.026	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	0.00093984
3	Yes	5	0.00000001	0.00038994
4	Yes	7	0.00000001	0.00011543
5	Yes	6	0.00000001	0.00054114
6	Yes	7	0.00000001	0.00011808
7	Yes	6	0.00000001	0.00055434
8	Yes	5	0.00000001	0.00031019

<p><b>tnxTower</b></p> <p><b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265</p>	<p><b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)</p>	<p><b>Page</b> 28 of 36</p>
	<p><b>Project</b></p>	<p><b>Date</b> 16:20:43 09/17/21</p>
	<p><b>Client</b> Crown Castle</p>	<p><b>Designed by</b> Regan</p>

9	Yes	5	0.00000001	0.00011141
10	Yes	7	0.00000001	0.00011901
11	Yes	6	0.00000001	0.00055861
12	Yes	7	0.00000001	0.00011510
13	Yes	6	0.00000001	0.00053943
14	Yes	5	0.00000001	0.00090482
15	Yes	5	0.00000001	0.00037490
16	Yes	7	0.00000001	0.00011934
17	Yes	6	0.00000001	0.00056012
18	Yes	7	0.00000001	0.00011668
19	Yes	6	0.00000001	0.00054704
20	Yes	5	0.00000001	0.00028881
21	Yes	5	0.00000001	0.00010117
22	Yes	7	0.00000001	0.00011587
23	Yes	6	0.00000001	0.00054325
24	Yes	7	0.00000001	0.00011980
25	Yes	6	0.00000001	0.00056229
26	Yes	4	0.00000001	0.00031675
27	Yes	7	0.00000001	0.00025123
28	Yes	7	0.00000001	0.00032514
29	Yes	7	0.00000001	0.00032657
30	Yes	7	0.00000001	0.00024947
31	Yes	7	0.00000001	0.00032944
32	Yes	7	0.00000001	0.00032618
33	Yes	7	0.00000001	0.00025225
34	Yes	7	0.00000001	0.00033316
35	Yes	7	0.00000001	0.00033116
36	Yes	7	0.00000001	0.00025250
37	Yes	7	0.00000001	0.00032895
38	Yes	7	0.00000001	0.00033279
39	Yes	5	0.00000001	0.00006548
40	Yes	5	0.00000001	0.00035479
41	Yes	5	0.00000001	0.00037299
42	Yes	4	0.00000001	0.00083631
43	Yes	5	0.00000001	0.00038056
44	Yes	5	0.00000001	0.00035404
45	Yes	5	0.00000001	0.00006545
46	Yes	5	0.00000001	0.00038692
47	Yes	5	0.00000001	0.00036666
48	Yes	4	0.00000001	0.00084068
49	Yes	5	0.00000001	0.00036059
50	Yes	5	0.00000001	0.00038912

### Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	155 - 150	28.076	46	1.809	0.006
L2	150 - 145	26.190	46	1.792	0.005
L3	145 - 140	24.330	46	1.761	0.004
L4	140 - 135	22.507	46	1.720	0.003
L5	135 - 130	20.732	46	1.667	0.003
L6	130 - 123.21	19.020	46	1.601	0.002
L7	126.79 - 121.79	17.960	46	1.552	0.002
L8	121.79 - 116.79	16.357	46	1.502	0.002
L9	116.79 - 111.79	14.826	46	1.422	0.002
L10	111.79 - 106.79	13.382	46	1.336	0.001
L11	106.79 - 101.79	12.030	46	1.246	0.001
L12	101.79 - 97.5	10.773	46	1.155	0.001

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)	<b>Page</b> 29 of 36
	<b>Project</b>	<b>Date</b> 16:20:43 09/17/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Regan

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L13	97.5 - 97.25	9.771	46	1.075	0.001
L14	97.25 - 92.25	9.715	46	1.071	0.001
L15	92.25 - 82.58	8.642	46	0.978	0.001
L16	87.41 - 81.58	7.696	46	0.889	0.001
L17	81.58 - 76.58	6.642	45	0.833	0.001
L18	76.58 - 71.58	5.809	45	0.758	0.001
L19	71.58 - 68	5.054	45	0.684	0.000
L20	68 - 67.75	4.561	45	0.632	0.000
L21	67.75 - 62.75	4.528	45	0.630	0.000
L22	62.75 - 57.75	3.893	45	0.582	0.000
L23	57.75 - 52.75	3.307	45	0.536	0.000
L24	52.75 - 43.03	2.770	45	0.490	0.000
L25	48.96 - 42.03	2.395	45	0.456	0.000
L26	42.03 - 37.03	1.759	45	0.415	0.000
L27	37.03 - 32.03	1.352	45	0.361	0.000
L28	32.03 - 27.03	1.002	45	0.308	0.000
L29	27.03 - 22.03	0.707	45	0.256	0.000
L30	22.03 - 17.03	0.465	45	0.206	0.000
L31	17.03 - 12.03	0.276	45	0.157	0.000
L32	12.03 - 7.03	0.136	45	0.109	0.000
L33	7.03 - 2.03	0.046	45	0.063	0.000
L34	2.03 - 0	0.004	45	0.018	0.000

### Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
164.000	Lighting Rod 1/2" x 2'	46	28.076	1.809	0.006	11881
159.000	Miscellaneous [NA 507-1]	46	28.076	1.809	0.006	11881
155.000	AIR6449 B41_T-MOBILE w/ Mount Pipe	46	28.076	1.809	0.006	11881
139.000	HPA-65R-BUU-H8 w/ Mount Pipe	46	22.147	1.711	0.003	5877
128.000	(2) LPA-80063/6CF w/ Mount Pipe	46	18.356	1.569	0.002	4618
74.000	KS24019-L112A	45	5.410	0.720	0.001	3827

### Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	155 - 150	151.221	14	9.726	0.032
L2	150 - 145	141.119	14	9.646	0.026
L3	145 - 140	131.141	14	9.490	0.021
L4	140 - 135	121.354	14	9.277	0.017
L5	135 - 130	111.818	14	8.997	0.014
L6	130 - 123.21	102.614	14	8.643	0.012
L7	126.79 - 121.79	96.910	14	8.379	0.011
L8	121.79 - 116.79	88.282	14	8.112	0.010
L9	116.79 - 111.79	80.036	14	7.680	0.008
L10	111.79 - 106.79	72.256	14	7.217	0.007
L11	106.79 - 101.79	64.968	14	6.734	0.006

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)	<b>Page</b> 30 of 36
	<b>Project</b>	<b>Date</b> 16:20:43 09/17/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Regan

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L12	101.79 - 97.5	58.189	14	6.240	0.006
L13	97.5 - 97.25	52.785	14	5.811	0.005
L14	97.25 - 92.25	52.482	14	5.786	0.005
L15	92.25 - 82.58	46.693	14	5.286	0.004
L16	87.41 - 81.58	41.586	14	4.804	0.004
L17	81.58 - 76.58	35.890	14	4.504	0.003
L18	76.58 - 71.58	31.391	14	4.097	0.003
L19	71.58 - 68	27.313	14	3.698	0.003
L20	68 - 67.75	24.648	14	3.418	0.002
L21	67.75 - 62.75	24.469	14	3.405	0.002
L22	62.75 - 57.75	21.040	14	3.149	0.002
L23	57.75 - 52.75	17.875	14	2.899	0.002
L24	52.75 - 43.03	14.971	14	2.649	0.002
L25	48.96 - 42.03	12.942	14	2.464	0.001
L26	42.03 - 37.03	9.504	14	2.245	0.001
L27	37.03 - 32.03	7.308	14	1.950	0.001
L28	32.03 - 27.03	5.417	14	1.663	0.001
L29	27.03 - 22.03	3.822	14	1.384	0.001
L30	22.03 - 17.03	2.515	14	1.112	0.001
L31	17.03 - 12.03	1.489	14	0.848	0.000
L32	12.03 - 7.03	0.737	14	0.591	0.000
L33	7.03 - 2.03	0.249	14	0.341	0.000
L34	2.03 - 0	0.021	14	0.097	0.000

### Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
164.000	Lighting Rod 1/2" x 2'	14	151.221	9.726	0.032	2522
159.000	Miscellaneous [NA 507-1]	14	151.221	9.726	0.032	2522
155.000	AIR6449 B41_T-MOBILE w/ Mount Pipe	14	151.221	9.726	0.032	2522
139.000	HPA-65R-BUU-H8 w/ Mount Pipe	14	119.425	9.227	0.016	1172
128.000	(2) LPA-80063/6CF w/ Mount Pipe	14	99.043	8.472	0.011	900
74.000	KS24019-L112A	14	29.234	3.892	0.003	715

### Compression Checks

### Pole Design Data

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
L1	155 - 150 (1)	TP19.036x18x0.188	5.000	0.000	0.0	11.217	-3.481	656.224	0.005
L2	150 - 145 (2)	TP20.073x19.036x0.188	5.000	0.000	0.0	11.834	-3.741	692.309	0.005
L3	145 - 140 (3)	TP21.109x20.073x0.188	5.000	0.000	0.0	12.451	-4.020	728.394	0.006
L4	140 - 135 (4)	TP22.146x21.109x0.188	5.000	0.000	0.0	13.068	-7.009	764.480	0.009
L5	135 - 130 (5)	TP23.182x22.146x0.188	5.000	0.000	0.0	13.685	-7.458	800.565	0.009
L6	130 - 123.21	TP24.59x23.182x0.188	6.790	0.000	0.0	14.081	-10.464	823.732	0.013

<p><b>tnxTower</b></p> <p><b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265</p>	<p><b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)</p>	<p><b>Page</b> 31 of 36</p>
	<p><b>Project</b></p>	<p><b>Date</b> 16:20:43 09/17/21</p>
	<p><b>Client</b> Crown Castle</p>	<p><b>Designed by</b> Regan</p>

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
L7	(6) 123.21 - 121.79 (7)	TP24.671x23.473x0.25	5.000	0.000	0.0	19.378	-11.295	1133.630	0.010
L8	121.79 - 116.79 (8)	TP25.87x24.671x0.25	5.000	0.000	0.0	20.329	-12.026	1189.270	0.010
L9	116.79 - 111.79 (9)	TP27.068x25.87x0.25	5.000	0.000	0.0	21.280	-12.788	1244.900	0.010
L10	111.79 - 106.79 (10)	TP28.267x27.068x0.25	5.000	0.000	0.0	22.231	-13.579	1300.540	0.010
L11	106.79 - 101.79 (11)	TP29.465x28.267x0.25	5.000	0.000	0.0	23.182	-14.403	1356.170	0.011
L12	101.79 - 97.5 (12)	TP30.494x29.465x0.25	4.290	0.000	0.0	23.998	-15.130	1403.900	0.011
L13	97.5 - 97.25 (13)	TP30.554x30.494x0.25	0.250	0.000	0.0	24.046	-15.191	1406.690	0.011
L14	97.25 - 92.25 (14)	TP31.752x30.554x0.25	5.000	0.000	0.0	24.997	-16.050	1462.320	0.011
L15	92.25 - 82.58 (15)	TP34.07x31.752x0.25	9.670	0.000	0.0	25.917	-16.917	1516.170	0.011
L16	82.58 - 81.58 (16)	TP33.825x32.412x0.313	5.830	0.000	0.0	33.241	-18.548	1944.580	0.010
L17	81.58 - 76.58 (17)	TP35.037x33.825x0.313	5.000	0.000	0.0	34.443	-19.593	2014.900	0.010
L18	76.58 - 71.58 (18)	TP36.249x35.037x0.313	5.000	0.000	0.0	35.645	-20.744	2085.230	0.010
L19	71.58 - 68 (19)	TP37.117x36.249x0.313	3.580	0.000	0.0	36.506	-21.525	2135.580	0.010
L20	68 - 67.75 (20)	TP37.178x37.117x0.488	0.250	0.000	0.0	56.772	-21.614	3321.160	0.007
L21	67.75 - 62.75 (21)	TP38.39x37.178x0.475	5.000	0.000	0.0	57.162	-23.026	3344.000	0.007
L22	62.75 - 57.75 (22)	TP39.602x38.39x0.475	5.000	0.000	0.0	58.990	-24.474	3450.890	0.007
L23	57.75 - 52.75 (23)	TP40.814x39.602x0.463	5.000	0.000	0.0	59.235	-25.950	3465.240	0.007
L24	52.75 - 43.03 (24)	TP43.17x40.814x0.463	9.720	0.000	0.0	60.583	-27.084	3544.130	0.008
L25	43.03 - 42.03 (25)	TP42.791x41.108x0.375	6.930	0.000	0.0	50.486	-30.311	2953.400	0.010
L26	42.03 - 37.03 (26)	TP44.005x42.791x0.375	5.000	0.000	0.0	51.931	-31.698	3037.970	0.010
L27	37.03 - 32.03 (27)	TP45.22x44.005x0.375	5.000	0.000	0.0	53.377	-33.116	3122.530	0.011
L28	32.03 - 27.03 (28)	TP46.434x45.22x0.375	5.000	0.000	0.0	54.822	-34.563	3207.100	0.011
L29	27.03 - 22.03 (29)	TP47.649x46.434x0.375	5.000	0.000	0.0	56.268	-36.039	3291.660	0.011
L30	22.03 - 17.03 (30)	TP48.863x47.649x0.375	5.000	0.000	0.0	57.713	-37.545	3376.230	0.011
L31	17.03 - 12.03 (31)	TP50.078x48.863x0.375	5.000	0.000	0.0	59.159	-39.080	3460.790	0.011
L32	12.03 - 7.03 (32)	TP51.292x50.078x0.375	5.000	0.000	0.0	60.604	-40.644	3545.360	0.011
L33	7.03 - 2.03 (33)	TP52.507x51.292x0.375	5.000	0.000	0.0	62.050	-42.238	3629.930	0.012
L34	2.03 - 0 (34)	TP53x52.507x0.375	2.030	0.000	0.0	62.637	-42.894	3664.260	0.012

**Pole Bending Design Data**



**tnxTower**

**B+T Group**  
 1717 S. Boulder, Suite 300  
 Tulsa, OK 74119  
 Phone: (918) 587-4630  
 FAX: (918) 295-0265

**Job**  
 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT,  
 CT(BU# 876366)

**Page**  
 32 of 36

**Project**  
 Date  
 16:20:43 09/17/21

**Client**  
 Crown Castle  
 Designed by  
 Regan

Section No.	Elevation ft	Size	$M_{ux}$ kip-ft	$\phi M_{rx}$ kip-ft	Ratio $\frac{M_{ux}}{\phi M_{rx}}$	$M_{uy}$ kip-ft	$\phi M_{ry}$ kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ry}}$
L1	155 - 150 (1)	TP19.036x18x0.188	43.308	317.939	0.136	0.000	317.939	0.000
L2	150 - 145 (2)	TP20.073x19.036x0.188	78.142	349.072	0.224	0.000	349.072	0.000
L3	145 - 140 (3)	TP21.109x20.073x0.188	114.703	381.078	0.301	0.000	381.078	0.000
L4	140 - 135 (4)	TP22.146x21.109x0.188	180.461	413.875	0.436	0.000	413.875	0.000
L5	135 - 130 (5)	TP23.182x22.146x0.188	246.898	447.380	0.552	0.000	447.380	0.000
L6	130 - 123.21 (6)	TP24.59x23.182x0.188	314.788	469.225	0.671	0.000	469.225	0.000
L7	123.21 - 121.79 (7)	TP24.671x23.473x0.25	423.082	716.555	0.590	0.000	716.555	0.000
L8	121.79 - 116.79 (8)	TP25.87x24.671x0.25	533.299	779.438	0.684	0.000	779.438	0.000
L9	116.79 - 111.79 (9)	TP27.068x25.87x0.25	645.334	843.967	0.765	0.000	843.967	0.000
L10	111.79 - 106.79 (10)	TP28.267x27.068x0.25	759.210	910.025	0.834	0.000	910.025	0.000
L11	106.79 - 101.79 (11)	TP29.465x28.267x0.25	874.933	977.475	0.895	0.000	977.475	0.000
L12	101.79 - 97.5 (12)	TP30.494x29.465x0.25	975.650	1036.367	0.941	0.000	1036.367	0.000
L13	97.5 - 97.25 (13)	TP30.554x30.494x0.25	981.567	1039.825	0.944	0.000	1039.825	0.000
L14	97.25 - 92.25 (14)	TP31.752x30.554x0.25	1100.717	1109.592	0.992	0.000	1109.592	0.000
L15	92.25 - 82.58 (15)	TP34.07x31.752x0.25	1217.758	1178.108	1.034	0.000	1178.108	0.000
L16	82.58 - 81.58 (16)	TP33.825x32.412x0.313	1361.408	1647.525	0.826	0.000	1647.525	0.000
L17	81.58 - 76.58 (17)	TP35.037x33.825x0.313	1486.892	1751.667	0.849	0.000	1751.667	0.000
L18	76.58 - 71.58 (18)	TP36.249x35.037x0.313	1614.600	1857.625	0.869	0.000	1857.625	0.000
L19	71.58 - 68 (19)	TP37.117x36.249x0.313	1707.225	1934.533	0.882	0.000	1934.533	0.000
L20	68 - 67.75 (20)	TP37.178x37.117x0.488	1713.733	3165.225	0.541	0.000	3165.225	0.000
L21	67.75 - 62.75 (21)	TP38.39x37.178x0.475	1844.983	3295.825	0.560	0.000	3295.825	0.000
L22	62.75 - 57.75 (22)	TP39.602x38.39x0.475	1978.442	3511.250	0.563	0.000	3511.250	0.000
L23	57.75 - 52.75 (23)	TP40.814x39.602x0.463	2114.075	3638.625	0.581	0.000	3638.625	0.000
L24	52.75 - 43.03 (24)	TP43.17x40.814x0.463	2218.300	3807.158	0.583	0.000	3807.158	0.000
L25	43.03 - 42.03 (25)	TP42.791x41.108x0.375	2412.425	3120.408	0.773	0.000	3120.408	0.000
L26	42.03 - 37.03 (26)	TP44.005x42.791x0.375	2554.992	3274.375	0.780	0.000	3274.375	0.000
L27	37.03 - 32.03 (27)	TP45.22x44.005x0.375	2699.292	3430.325	0.787	0.000	3430.325	0.000
L28	32.03 - 27.03 (28)	TP46.434x45.22x0.375	2845.242	3588.108	0.793	0.000	3588.108	0.000
L29	27.03 - 22.03 (29)	TP47.649x46.434x0.375	2992.817	3747.617	0.799	0.000	3747.617	0.000
L30	22.03 - 17.03 (30)	TP48.863x47.649x0.375	3142.042	3908.700	0.804	0.000	3908.700	0.000
L31	17.03 - 12.03 (31)	TP50.078x48.863x0.375	3292.925	4071.233	0.809	0.000	4071.233	0.000
L32	12.03 - 7.03 (32)	TP51.292x50.078x0.375	3445.508	4235.083	0.814	0.000	4235.083	0.000
L33	7.03 - 2.03 (33)	TP52.507x51.292x0.375	3599.783	4400.125	0.818	0.000	4400.125	0.000
L34	2.03 - 0 (34)	TP53x52.507x0.375	3662.917	4467.442	0.820	0.000	4467.442	0.000

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)	<b>Page</b> 33 of 36
	<b>Project</b>	<b>Date</b> 16:20:43 09/17/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Regan

### Pole Shear Design Data

Section No.	Elevation ft	Size	Actual $V_u$ K	$\phi V_n$ K	Ratio $\frac{V_u}{\phi V_n}$	Actual $T_u$ kip-ft	$\phi T_n$ kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	155 - 150 (1)	TP19.036x18x0.188	6.798	196.867	0.035	0.001	324.968	0.000
L2	150 - 145 (2)	TP20.073x19.036x0.188	7.139	207.693	0.034	0.001	361.691	0.000
L3	145 - 140 (3)	TP21.109x20.073x0.188	7.490	218.518	0.034	0.001	400.378	0.000
L4	140 - 135 (4)	TP22.146x21.109x0.188	13.112	229.344	0.057	0.002	441.031	0.000
L5	135 - 130 (5)	TP23.182x22.146x0.188	13.472	240.169	0.056	0.002	483.649	0.000
L6	130 - 123.21 (6)	TP24.59x23.182x0.188	21.449	247.119	0.087	0.881	512.046	0.002
L7	123.21 - 121.79 (7)	TP24.671x23.473x0.25	21.873	340.090	0.064	0.881	727.352	0.001
L8	121.79 - 116.79 (8)	TP25.87x24.671x0.25	22.235	356.780	0.062	0.880	800.494	0.001
L9	116.79 - 111.79 (9)	TP27.068x25.87x0.25	22.599	373.471	0.061	0.878	877.142	0.001
L10	111.79 - 106.79 (10)	TP28.267x27.068x0.25	22.975	390.161	0.059	1.097	957.292	0.001
L11	106.79 - 101.79 (11)	TP29.465x28.267x0.25	23.337	406.851	0.057	1.095	1040.942	0.001
L12	101.79 - 97.5 (12)	TP30.494x29.465x0.25	23.648	421.171	0.056	1.094	1115.508	0.001
L13	97.5 - 97.25 (13)	TP30.554x30.494x0.25	23.659	422.006	0.056	1.094	1119.933	0.001
L14	97.25 - 92.25 (14)	TP31.752x30.554x0.25	24.024	438.696	0.055	1.092	1210.275	0.001
L15	92.25 - 82.58 (15)	TP34.07x31.752x0.25	24.371	454.852	0.054	1.091	1301.058	0.001
L16	82.58 - 81.58 (16)	TP33.825x32.412x0.313	24.921	583.374	0.043	1.090	1712.142	0.001
L17	81.58 - 76.58 (17)	TP35.037x33.825x0.313	25.302	604.471	0.042	1.088	1838.217	0.001
L18	76.58 - 71.58 (18)	TP36.249x35.037x0.313	25.753	621.350	0.041	1.311	1968.775	0.001
L19	71.58 - 68 (19)	TP37.117x36.249x0.313	26.025	635.640	0.041	1.310	2065.008	0.001
L20	68 - 67.75 (20)	TP37.178x37.117x0.488	26.037	994.701	0.026	1.310	3201.417	0.000
L21	67.75 - 62.75 (21)	TP38.39x37.178x0.475	26.483	996.785	0.027	1.309	3331.017	0.000
L22	62.75 - 57.75 (22)	TP39.602x38.39x0.475	26.922	1028.850	0.026	1.309	3547.383	0.000
L23	57.75 - 52.75 (23)	TP40.814x39.602x0.463	27.353	1033.330	0.026	1.308	3673.600	0.000
L24	52.75 - 43.03 (24)	TP43.17x40.814x0.463	27.671	1055.350	0.026	1.308	3842.783	0.000
L25	43.03 - 42.03 (25)	TP42.791x41.108x0.375	28.355	880.946	0.032	1.307	3291.183	0.000
L26	42.03 - 37.03 (26)	TP44.005x42.791x0.375	28.706	906.316	0.032	1.307	3482.358	0.000
L27	37.03 - 32.03 (27)	TP45.22x44.005x0.375	29.045	931.686	0.031	1.306	3678.925	0.000
L28	32.03 - 27.03 (28)	TP46.434x45.22x0.375	29.368	957.055	0.031	1.306	3880.892	0.000
L29	27.03 - 22.03 (29)	TP47.649x46.434x0.375	29.696	982.425	0.030	1.306	4088.258	0.000
L30	22.03 - 17.03 (30)	TP48.863x47.649x0.375	30.027	1007.790	0.030	1.305	4301.017	0.000
L31	17.03 - 12.03 (31)	TP50.078x48.863x0.375	30.363	1033.160	0.029	1.305	4519.175	0.000

<p><b>tnxTower</b></p> <p><b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265</p>	<p><b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)</p>	<p><b>Page</b> 34 of 36</p>
	<p><b>Project</b></p>	<p><b>Date</b> 16:20:43 09/17/21</p>
	<p><b>Client</b> Crown Castle</p>	<p><b>Designed by</b> Regan</p>

Section No.	Elevation ft	Size	Actual $V_u$ K	$\phi V_n$ K	Ratio $\frac{V_u}{\phi V_n}$	Actual $T_u$ kip-ft	$\phi T_n$ kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L32	12.03 - 7.03 (32)	TP51.292x50.078x0.375	30.702	1058.530	0.029	1.305	4742.725	0.000
L33	7.03 - 2.03 (33)	TP52.507x51.292x0.375	31.045	1083.900	0.029	1.305	4971.675	0.000
L34	2.03 - 0 (34)	TP53x52.507x0.375	31.186	1094.130	0.029	1.305	5066.167	0.000

### Pole Interaction Design Data

Section No.	Elevation ft	Ratio $P_u$ $\phi P_n$	Ratio $M_{ux}$ $\phi M_{nx}$	Ratio $M_{uy}$ $\phi M_{ny}$	Ratio $V_u$ $\phi V_n$	Ratio $T_u$ $\phi T_n$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	155 - 150 (1)	0.005	0.136	0.000	0.035	0.000	0.143	1.050	4.8.2 ✓
L2	150 - 145 (2)	0.005	0.224	0.000	0.034	0.000	0.230	1.050	4.8.2 ✓
L3	145 - 140 (3)	0.006	0.301	0.000	0.034	0.000	0.308	1.050	4.8.2 ✓
L4	140 - 135 (4)	0.009	0.436	0.000	0.057	0.000	0.448	1.050	4.8.2 ✓
L5	135 - 130 (5)	0.009	0.552	0.000	0.056	0.000	0.564	1.050	4.8.2 ✓
L6	130 - 123.21 (6)	0.013	0.671	0.000	0.087	0.002	0.691	1.050	4.8.2 ✓
L7	123.21 - 121.79 (7)	0.010	0.590	0.000	0.064	0.001	0.605	1.050	4.8.2 ✓
L8	121.79 - 116.79 (8)	0.010	0.684	0.000	0.062	0.001	0.698	1.050	4.8.2 ✓
L9	116.79 - 111.79 (9)	0.010	0.765	0.000	0.061	0.001	0.779	1.050	4.8.2 ✓
L10	111.79 - 106.79 (10)	0.010	0.834	0.000	0.059	0.001	0.848	1.050	4.8.2 ✓
L11	106.79 - 101.79 (11)	0.011	0.895	0.000	0.057	0.001	0.909	1.050	4.8.2 ✓
L12	101.79 - 97.5 (12)	0.011	0.941	0.000	0.056	0.001	0.955	1.050	4.8.2 ✓
L13	97.5 - 97.25 (13)	0.011	0.944	0.000	0.056	0.001	0.958	1.050	4.8.2 ✓
L14	97.25 - 92.25 (14)	0.011	0.992	0.000	0.055	0.001	1.006	1.050	4.8.2 ✓
L15	92.25 - 82.58 (15)	0.011	1.034	0.000	0.054	0.001	1.048	1.050	4.8.2 ✓
L16	82.58 - 81.58 (16)	0.010	0.826	0.000	0.043	0.001	0.838	1.050	4.8.2 ✓
L17	81.58 - 76.58 (17)	0.010	0.849	0.000	0.042	0.001	0.860	1.050	4.8.2 ✓
L18	76.58 - 71.58 (18)	0.010	0.869	0.000	0.041	0.001	0.881	1.050	4.8.2 ✓
L19	71.58 - 68 (19)	0.010	0.882	0.000	0.041	0.001	0.894	1.050	4.8.2 ✓
L20	68 - 67.75 (20)	0.007	0.541	0.000	0.026	0.000	0.549	1.050	4.8.2 ✓

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)	<b>Page</b> 35 of 36
	<b>Project</b>	<b>Date</b> 16:20:43 09/17/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Regan

Section No.	Elevation ft	Ratio	Ratio	Ratio	Ratio	Ratio	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
		$P_u$ $\phi P_n$	$M_{ux}$ $\phi M_{nx}$	$M_{uy}$ $\phi M_{ny}$	$V_u$ $\phi V_n$	$T_u$ $\phi T_n$			
L21	67.75 - 62.75 (21)	0.007	0.560	0.000	0.027	0.000	0.567	1.050	4.8.2 ✓
L22	62.75 - 57.75 (22)	0.007	0.563	0.000	0.026	0.000	0.571	1.050	4.8.2 ✓
L23	57.75 - 52.75 (23)	0.007	0.581	0.000	0.026	0.000	0.589	1.050	4.8.2 ✓
L24	52.75 - 43.03 (24)	0.008	0.583	0.000	0.026	0.000	0.591	1.050	4.8.2 ✓
L25	43.03 - 42.03 (25)	0.010	0.773	0.000	0.032	0.000	0.784	1.050	4.8.2 ✓
L26	42.03 - 37.03 (26)	0.010	0.780	0.000	0.032	0.000	0.792	1.050	4.8.2 ✓
L27	37.03 - 32.03 (27)	0.011	0.787	0.000	0.031	0.000	0.798	1.050	4.8.2 ✓
L28	32.03 - 27.03 (28)	0.011	0.793	0.000	0.031	0.000	0.805	1.050	4.8.2 ✓
L29	27.03 - 22.03 (29)	0.011	0.799	0.000	0.030	0.000	0.810	1.050	4.8.2 ✓
L30	22.03 - 17.03 (30)	0.011	0.804	0.000	0.030	0.000	0.816	1.050	4.8.2 ✓
L31	17.03 - 12.03 (31)	0.011	0.809	0.000	0.029	0.000	0.821	1.050	4.8.2 ✓
L32	12.03 - 7.03 (32)	0.011	0.814	0.000	0.029	0.000	0.826	1.050	4.8.2 ✓
L33	7.03 - 2.03 (33)	0.012	0.818	0.000	0.029	0.000	0.831	1.050	4.8.2 ✓
L34	2.03 - 0 (34)	0.012	0.820	0.000	0.029	0.000	0.832	1.050	4.8.2 ✓

### Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$\phi P_{allow}$ K	% Capacity	Pass Fail
L1	155 - 150	Pole	TP19.036x18x0.188	1	-3.481	--	**	**
L2	150 - 145	Pole	TP20.073x19.036x0.188	2	-3.741	--	**	**
L3	145 - 140	Pole	TP21.109x20.073x0.188	3	-4.020	--	**	**
L4	140 - 135	Pole	TP22.146x21.109x0.188	4	-7.009	--	**	**
L5	135 - 130	Pole	TP23.182x22.146x0.188	5	-7.458	--	**	**
L6	130 - 123.21	Pole	TP24.59x23.182x0.188	6	-10.464	--	**	**
L7	123.21 - 121.79	Pole	TP24.671x23.473x0.25	7	-11.295	--	**	**
L8	121.79 - 116.79	Pole	TP25.87x24.671x0.25	8	-12.026	--	**	**
L9	116.79 - 111.79	Pole	TP27.068x25.87x0.25	9	-12.788	--	**	**
L10	111.79 - 106.79	Pole	TP28.267x27.068x0.25	10	-13.579	--	**	**
L11	106.79 - 101.79	Pole	TP29.465x28.267x0.25	11	-14.403	--	**	**
L12	101.79 - 97.5	Pole	TP30.494x29.465x0.25	12	-15.130	--	**	**
L13	97.5 - 97.25	Pole	TP30.554x30.494x0.25	13	-15.191	--	**	**
L14	97.25 - 92.25	Pole	TP31.752x30.554x0.25	14	-16.050	--	**	**
L15	92.25 - 82.58	Pole	TP34.07x31.752x0.25	15	-16.917	--	**	**

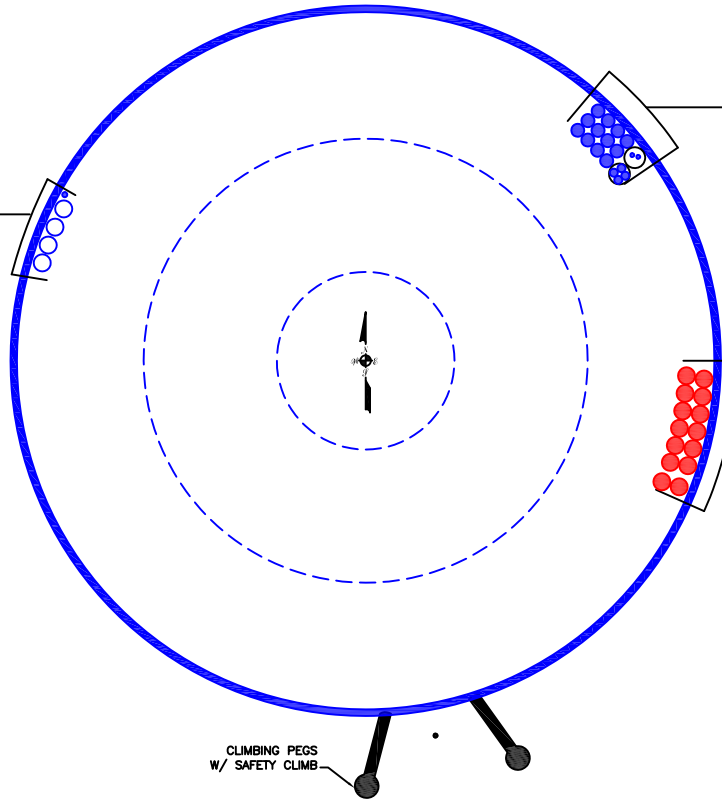
<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT(BU# 876366)	<b>Page</b> 36 of 36
	<b>Project</b>	<b>Date</b> 16:20:43 09/17/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Regan

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$\phi P_{allow}$ K	% Capacity	Pass Fail	
L16	82.58 - 81.58	Pole	TP33.825x32.412x0.313	16	-18.548	--	**	**	
L17	81.58 - 76.58	Pole	TP35.037x33.825x0.313	17	-19.593	--	**	**	
L18	76.58 - 71.58	Pole	TP36.249x35.037x0.313	18	-20.744	--	**	**	
L19	71.58 - 68	Pole	TP37.117x36.249x0.313	19	-21.525	--	**	**	
L20	68 - 67.75	Pole	TP37.178x37.117x0.488	20	-21.614	--	**	**	
L21	67.75 - 62.75	Pole	TP38.39x37.178x0.475	21	-23.026	--	**	**	
L22	62.75 - 57.75	Pole	TP39.602x38.39x0.475	22	-24.474	--	**	**	
L23	57.75 - 52.75	Pole	TP40.814x39.602x0.463	23	-25.950	--	**	**	
L24	52.75 - 43.03	Pole	TP43.17x40.814x0.463	24	-27.084	--	**	**	
L25	43.03 - 42.03	Pole	TP42.791x41.108x0.375	25	-30.311	--	**	**	
L26	42.03 - 37.03	Pole	TP44.005x42.791x0.375	26	-31.698	--	**	**	
L27	37.03 - 32.03	Pole	TP45.22x44.005x0.375	27	-33.116	--	**	**	
L28	32.03 - 27.03	Pole	TP46.434x45.22x0.375	28	-34.563	--	**	**	
L29	27.03 - 22.03	Pole	TP47.649x46.434x0.375	29	-36.039	--	**	**	
L30	22.03 - 17.03	Pole	TP48.863x47.649x0.375	30	-37.545	--	**	**	
L31	17.03 - 12.03	Pole	TP50.078x48.863x0.375	31	-39.080	--	**	**	
L32	12.03 - 7.03	Pole	TP51.292x50.078x0.375	32	-40.644	--	**	**	
L33	7.03 - 2.03	Pole	TP52.507x51.292x0.375	33	-42.238	--	**	**	
L34	2.03 - 0	Pole	TP53x52.507x0.375	34	-42.894	--	**	**	
							Summary		
							Pole (L15)	**	**
							<b>RATING =</b>	**	**

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

**APPENDIX B**  
**BASE LEVEL DRAWING**

(OTHER CONSIDERED EQUIPMENT)  
(1) 1/2" TO 74 FT LEVEL  
(4) 1-5/8" TO 155 FT LEVEL



(OTHER CONSIDERED EQUIPMENT)  
(2) 3/8" TO 139 FT LEVEL - IN CONDUIT  
(4) 3/4" TO 139 FT LEVEL - IN CONDUIT  
(12) 1-1/4" TO 139 FT LEVEL

(PROPOSED EQUIPMENT CONFIGURATION)  
(14) 1-5/8" TO 128 FT LEVEL

CLIMBING PEGS  
W/ SAFETY CLIMB

BUSINESS UNIT: 876366

**APPENDIX C**  
**ADDITIONAL CALCULATIONS**



**Pole Geometry**

	Pole Height Above Base (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	Wall Thickness (in)	Bend Radius (in)	Pole Material
1	155	31.79	3.58	18	18	24.59	0.1875	Auto	A572-65
2	126.79	44.21	4.83	18	23.47	34.07	0.25	Auto	A572-65
3	87.41	44.38	5.93	18	32.41	43.17	0.3125	Auto	A572-65
4	48.96	48.96	0	18	41.11	53	0.375	Auto	A572-65

**Reinforcement Configuration**

	Bottom Effective Elevation (ft)	Top Effective Elevation (ft)	Type	Model	Number																						
						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18				
1	47	68	plate	CCI-SFP-060100	3	E							E						E								
2	85.5	97.5	plate	CCI-SFP-045100	3	E							E						E								
3																											
4																											
5																											
6																											
7																											
8																											
9																											
10																											

**Reinforcement Details**

	B (in)	H (in)	Gross Area (in <sup>2</sup> )	Pole Face to Centroid (in)	Bottom Termination Type	Bottom Termination Length (in)	Top Termination Type	Top Termination Length (in)	Lu (in)	Net Area (in <sup>2</sup> )	Bolt Hole Size (in)	Reinforcement Material
1	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
2	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	20.000	3.250	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	155 - 150	5		18	18.000	19.036	0.1875	A572-65	1.000
2	150 - 145	5		18	19.036	20.073	0.1875	A572-65	1.000
3	145 - 140	5		18	20.073	21.109	0.1875	A572-65	1.000
4	140 - 135	5		18	21.109	22.146	0.1875	A572-65	1.000
5	135 - 130	5		18	22.146	23.182	0.1875	A572-65	1.000
6	130 - 126.79	6.79	3.58	18	23.182	24.590	0.1875	A572-65	1.000
7	126.79 - 121.79	5		18	23.473	24.671	0.25	A572-65	1.000
8	121.79 - 116.79	5		18	24.671	25.870	0.25	A572-65	1.000
9	116.79 - 111.79	5		18	25.870	27.068	0.25	A572-65	1.000
10	111.79 - 106.79	5		18	27.068	28.267	0.25	A572-65	1.000
11	106.79 - 101.79	5		18	28.267	29.465	0.25	A572-65	1.000
12	101.79 - 97.5	4.29		18	29.465	30.494	0.25	A572-65	1.000
13	97.5 - 97.25	0.25		18	30.494	30.554	0.25	A572-65	1.000
14	97.25 - 92.25	5		18	30.554	31.752	0.25	A572-65	1.000
15	92.25 - 87.41	9.67	4.83	18	31.752	34.070	0.25	A572-65	1.000
16	87.41 - 81.58	5.83		18	32.412	33.825	0.3125	A572-65	1.000
17	81.58 - 76.58	5		18	33.825	35.037	0.3125	A572-65	1.000
18	76.58 - 71.58	5		18	35.037	36.249	0.3125	A572-65	1.000
19	71.58 - 68	3.58		18	36.249	37.117	0.3125	A572-65	1.000
20	68 - 67.75	0.25		18	37.117	37.178	0.4875	A572-65	0.961
21	67.75 - 62.75	5		18	37.178	38.390	0.475	A572-65	0.976
22	62.75 - 57.75	5		18	38.390	39.602	0.475	A572-65	0.966
23	57.75 - 52.75	5		18	39.602	40.814	0.4625	A572-65	0.982
24	52.75 - 48.96	9.72	5.93	18	40.814	43.170	0.4625	A572-65	0.975
25	48.96 - 42.03	6.93		18	41.108	42.791	0.375	A572-65	1.000
26	42.03 - 37.03	5		18	42.791	44.005	0.375	A572-65	1.000
27	37.03 - 32.03	5		18	44.005	45.220	0.375	A572-65	1.000
28	32.03 - 27.03	5		18	45.220	46.434	0.375	A572-65	1.000
29	27.03 - 22.03	5		18	46.434	47.649	0.375	A572-65	1.000
30	22.03 - 17.03	5		18	47.649	48.863	0.375	A572-65	1.000
31	17.03 - 12.03	5		18	48.863	50.078	0.375	A572-65	1.000
32	12.03 - 7.03	5		18	50.078	51.292	0.375	A572-65	1.000
33	7.03 - 2.03	5		18	51.292	52.507	0.375	A572-65	1.000
34	2.03 - 0	2.03		18	52.507	53.000	0.375	A572-65	1.000

## TNX Section Forces

Increment (ft):		TNX Output			
	5	Section Height (ft)	P <sub>u</sub> (K)	M <sub>ux</sub> (kip-ft)	V <sub>u</sub> (K)
1	155 - 150	3.48	43.31	6.80	
2	150 - 145	3.74	78.14	7.14	
3	145 - 140	4.02	114.70	7.49	
4	140 - 135	7.01	180.46	13.11	
5	135 - 130	7.46	246.90	13.47	
6	130 - 126.79	10.46	314.79	21.45	
7	126.79 - 121.79	11.30	423.08	21.87	
8	121.79 - 116.79	12.03	533.30	22.24	
9	116.79 - 111.79	12.79	645.33	22.60	
10	111.79 - 106.79	13.58	759.21	22.98	
11	106.79 - 101.79	14.40	874.93	23.34	
12	101.79 - 97.5	15.13	975.65	23.65	
13	97.5 - 97.25	15.19	981.57	23.66	
14	97.25 - 92.25	16.05	1100.72	24.02	
15	92.25 - 87.41	16.92	1217.76	24.37	
16	87.41 - 81.58	18.55	1361.41	24.92	
17	81.58 - 76.58	19.59	1486.89	25.30	
18	76.58 - 71.58	20.74	1614.60	25.75	
19	71.58 - 68	21.52	1707.23	26.03	
20	68 - 67.75	21.61	1713.73	26.04	
21	67.75 - 62.75	23.03	1844.99	26.48	
22	62.75 - 57.75	24.47	1978.44	26.92	
23	57.75 - 52.75	25.95	2114.08	27.35	
24	52.75 - 48.96	27.08	2218.30	27.67	
25	48.96 - 42.03	30.31	2412.42	28.36	
26	42.03 - 37.03	31.70	2554.99	28.71	
27	37.03 - 32.03	33.12	2699.29	29.04	
28	32.03 - 27.03	34.56	2845.24	29.37	
29	27.03 - 22.03	36.04	2992.82	29.70	
30	22.03 - 17.03	37.54	3142.04	30.03	
31	17.03 - 12.03	39.08	3292.93	30.36	
32	12.03 - 7.03	40.64	3445.50	30.70	
33	7.03 - 2.03	42.24	3599.79	31.05	
34	2.03 - 0	42.89	3662.92	31.19	

# Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
155 - 150	Pole	TP19.036x18x0.1875	Pole	13.6%	Pass
150 - 145	Pole	TP20.073x19.036x0.1875	Pole	21.9%	Pass
145 - 140	Pole	TP21.109x20.073x0.1875	Pole	29.3%	Pass
140 - 135	Pole	TP22.146x21.109x0.1875	Pole	42.7%	Pass
135 - 130	Pole	TP23.182x22.146x0.1875	Pole	53.8%	Pass
130 - 126.79	Pole	TP24.59x23.182x0.1875	Pole	65.8%	Pass
126.79 - 121.79	Pole	TP24.671x23.473x0.25	Pole	57.6%	Pass
121.79 - 116.79	Pole	TP25.87x24.671x0.25	Pole	66.5%	Pass
116.79 - 111.79	Pole	TP27.068x25.87x0.25	Pole	74.2%	Pass
111.79 - 106.79	Pole	TP28.267x27.068x0.25	Pole	80.8%	Pass
106.79 - 101.79	Pole	TP29.465x28.267x0.25	Pole	86.6%	Pass
101.79 - 97.5	Pole	TP30.494x29.465x0.25	Pole	91.0%	Pass
97.5 - 97.25	Pole	TP30.554x30.494x0.25	Pole	91.2%	Pass
97.25 - 92.25	Pole	TP31.752x30.554x0.25	Pole	95.8%	Pass
92.25 - 87.41	Pole	TP34.07x31.752x0.25	Pole	99.8%	Pass
87.41 - 81.58	Pole	TP33.825x32.412x0.3125	Pole	79.8%	Pass
81.58 - 76.58	Pole	TP35.037x33.825x0.3125	Pole	81.9%	Pass
76.58 - 71.58	Pole	TP36.249x35.037x0.3125	Pole	83.9%	Pass
71.58 - 68	Pole	TP37.117x36.249x0.3125	Pole	85.2%	Pass
68 - 67.75	Pole + Reinf.	TP37.178x37.117x0.4875	Reinf. 1 Tension Rupture	82.9%	Pass
67.75 - 62.75	Pole + Reinf.	TP38.39x37.178x0.475	Reinf. 1 Tension Rupture	84.5%	Pass
62.75 - 57.75	Pole + Reinf.	TP39.602x38.39x0.475	Reinf. 1 Tension Rupture	86.0%	Pass
57.75 - 52.75	Pole + Reinf.	TP40.814x39.602x0.4625	Reinf. 1 Tension Rupture	87.4%	Pass
52.75 - 48.96	Pole + Reinf.	TP43.17x40.814x0.4625	Reinf. 1 Tension Rupture	88.3%	Pass
48.96 - 42.03	Pole	TP42.791x41.108x0.375	Pole	74.7%	Pass
42.03 - 37.03	Pole	TP44.005x42.791x0.375	Pole	75.4%	Pass
37.03 - 32.03	Pole	TP45.22x44.005x0.375	Pole	76.1%	Pass
32.03 - 27.03	Pole	TP46.434x45.22x0.375	Pole	76.6%	Pass
27.03 - 22.03	Pole	TP47.649x46.434x0.375	Pole	77.2%	Pass
22.03 - 17.03	Pole	TP48.863x47.649x0.375	Pole	77.7%	Pass
17.03 - 12.03	Pole	TP50.078x48.863x0.375	Pole	78.2%	Pass
12.03 - 7.03	Pole	TP51.292x50.078x0.375	Pole	78.7%	Pass
7.03 - 2.03	Pole	TP52.507x51.292x0.375	Pole	79.1%	Pass
2.03 - 0	Pole	TP53x52.507x0.375	Pole	79.3%	Pass
				Summary	
			Pole	99.8%	Pass
			Reinforcement	88.3%	Pass
			Overall	99.8%	Pass

## Additional Calculations

Section Elevation (ft)	Moment of Inertia (in <sup>4</sup> )			Area (in <sup>2</sup> )			% Capacity*		
	Pole	Reinf.	Total	Pole	Reinf.	Total	Pole	R1	R2
155 - 150	503	n/a	503	11.22	n/a	11.22	13.6%		
150 - 145	591	n/a	591	11.83	n/a	11.83	21.9%		
145 - 140	688	n/a	688	12.45	n/a	12.45	29.3%		
140 - 135	796	n/a	796	13.07	n/a	13.07	42.7%		
135 - 130	914	n/a	914	13.68	n/a	13.68	53.8%		
130 - 126.79	996	n/a	996	14.08	n/a	14.08	65.8%		
126.79 - 121.79	1460	n/a	1460	19.38	n/a	19.38	57.6%		
121.79 - 116.79	1685	n/a	1685	20.33	n/a	20.33	66.5%		
116.79 - 111.79	1933	n/a	1933	21.28	n/a	21.28	74.2%		
111.79 - 106.79	2204	n/a	2204	22.23	n/a	22.23	80.8%		
106.79 - 101.79	2499	n/a	2499	23.18	n/a	23.18	86.6%		
101.79 - 97.5	2772	n/a	2772	24.00	n/a	24.00	91.0%		
97.5 - 97.25	2789	n/a	2789	24.05	n/a	24.05	91.2%		
97.25 - 92.25	3133	n/a	3133	25.00	n/a	25.00	95.8%		
92.25 - 87.41	3492	n/a	3492	25.92	n/a	25.92	99.8%		
87.41 - 81.58	4715	n/a	4715	33.24	n/a	33.24	79.8%		
81.58 - 76.58	5245	n/a	5245	34.44	n/a	34.44	81.9%		
76.58 - 71.58	5814	n/a	5814	35.64	n/a	35.64	83.9%		
71.58 - 68	6245	n/a	6245	36.50	n/a	36.50	85.2%		
68 - 67.75	6276	3307	9583	36.56	18.00	54.56	55.0%	82.9%	
67.75 - 62.75	6916	3519	10435	37.77	18.00	55.77	56.8%	84.5%	
62.75 - 57.75	7597	3737	11334	38.97	18.00	56.97	58.4%	86.0%	
57.75 - 52.75	8322	3962	12284	40.17	18.00	58.17	60.0%	87.4%	
52.75 - 48.96	8902	4136	13038	41.08	18.00	59.08	61.2%	88.3%	
48.96 - 42.03	11471	n/a	11471	50.48	n/a	50.48	74.7%		
42.03 - 37.03	12485	n/a	12485	51.93	n/a	51.93	75.4%		
37.03 - 32.03	13557	n/a	13557	53.37	n/a	53.37	76.1%		
32.03 - 27.03	14688	n/a	14688	54.82	n/a	54.82	76.6%		
27.03 - 22.03	15881	n/a	15881	56.27	n/a	56.27	77.2%		
22.03 - 17.03	17137	n/a	17137	57.71	n/a	57.71	77.7%		
17.03 - 12.03	18457	n/a	18457	59.16	n/a	59.16	78.2%		
12.03 - 7.03	19843	n/a	19843	60.60	n/a	60.60	78.7%		
7.03 - 2.03	21298	n/a	21298	62.05	n/a	62.05	79.1%		
2.03 - 0	21908	n/a	21908	62.63	n/a	62.63	79.3%		

Note: Section capacity checked using 5 degree increments.

Rating per TIA-222-H Section 15.5.

PROJECT **147460.004.01 - WAPPINGERS FALLS/ PRESTON CIT, CT**

SUBJECT **Anchor Rod Bracket Analysis**

DATE **09-17-21**

TIA-222 Rev.

**H**

v4.6.1

Apply TIA-222-H Section 15.5?

Yes



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

Analysis Criteria	
Design/Analysis	Analysis
Load Type	Current Load
Current load	134.12 kips
AR Capacity	227.3 kips

Tower Type	Monopole
------------	----------

Manufacturers Tower Prop.	
Pole Thickness	0.375 in
Pole Grade	A572-65
Fy	65 ksi
Fu	80 ksi
Base Plate Gr.	A572-60
Fy	60 ksi
Fu	75 ksi

Post-Installed Adhesive AR Mod.	
ARB Type	Welded
Size	1.75 in
Grade	A193 Gr B7
Fy	105 ksi
Fu	125 ksi

Anchor Rod Bracket Analysis Checks		
Tube Bearing	34.2%	-
Tube Compression	51.3%	-
Gusset Shear	18.2%	-
Gusset Flexure	N/A	-
Welds	Gusset to Tower and BP	34.4%
	Gusset to Tube	38.3%
	Geometry	N/A
Tower Punching	26.8%	-
Tube Punching	10.2%	-
<b>Utilization</b>		<b>51.3%</b>

Bracket Properties		
Gusset	Pipe/Tube	Weld - Gusset to Pipe/Tube
Thickness	1 in	FEXX
Width at Tube	6.5 in	70 ksi
Height at Pole	30 in	Weld Type
Height at Tube	24 in	Double Fillet
Grade	A572-50	Fillet Size
Fy	50 ksi	5/16 in
Fu	65 ksi	
Weld - Gusset to Tower	Weld - Gusset to Base Plate	
FEXX	70 ksi	
Weld Type	CJP - Double Bevel	
Fillet Size	1/4 in	
	Bevel Depth	1/4 in
	Gap	0 in
	Notch (horiz)	0.75 in
	Notch (vert)	0.75 in
	Pipe/Tube Welded to Base/Footpad?	Yes
	Fillet Size	1/4 in

# Monopole Base Plate Connection

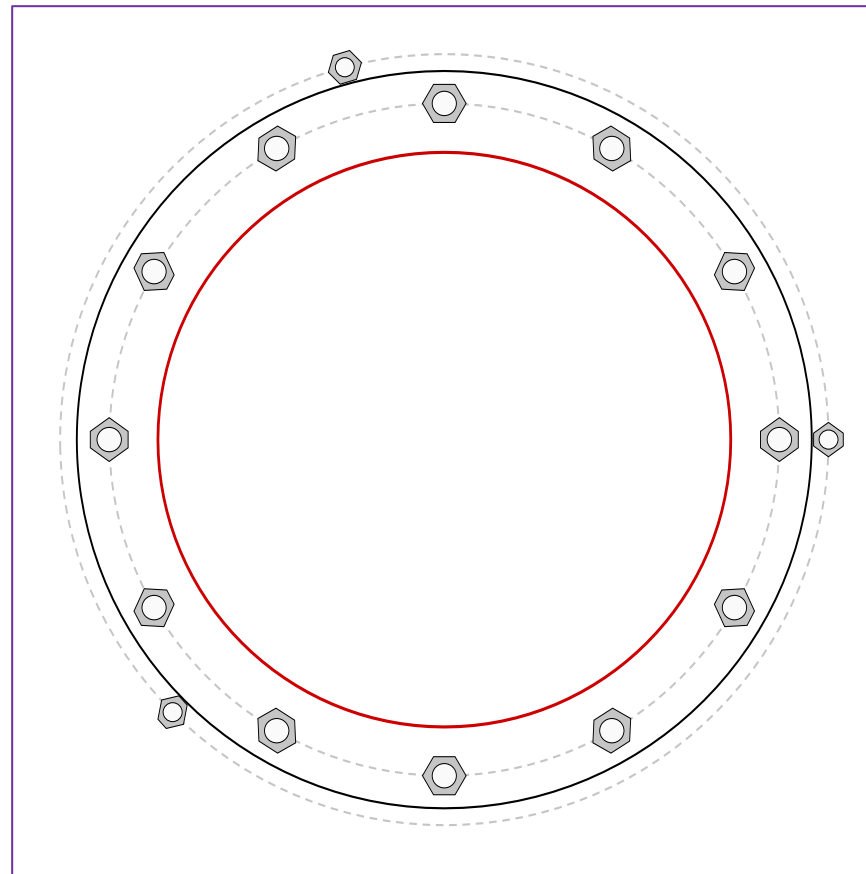


Site Info	
BU #	876366
Site Name	PINGERS FALLS /FALLS
Order #	583851, Rev.0

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

Applied Loads	
Moment (kip-ft)	3662.92
Axial Force (kips)	42.89
Shear Force (kips)	31.19

\*TIA-222-H Section 15.5 Applied



Connection Properties	Analysis Results
-----------------------	------------------

Anchor Rod Data
GROUP 1: (12) 2-1/4" $\phi$ bolts (A615-75 N; $F_y=75$ ksi, $F_u=100$ ksi) on 62" BC
GROUP 2: (3) 1-3/4" $\phi$ bolts (A193 Gr. B7 N; $F_y=105$ ksi, $F_u=125$ ksi) on 71.09" BC <i>pos. (deg): 0, 105, 225</i>
Base Plate Data
68" OD x 1.75" Plate (A871-60; $F_y=60$ ksi, $F_u=75$ ksi)
Stiffener Data
N/A
Pole Data
53" x 0.375" 18-sided pole (A572-65; $F_y=65$ ksi, $F_u=80$ ksi)

Anchor Rod Summary	<i>(units of kips, kip-in)</i>	
GROUP 1:		
$P_{u,t} = 202.12$	$\phi P_{n,t} = 243.75$	<b>Stress Rating</b>
$V_u = 2.6$	$\phi V_n = 149.1$	<b>79.0%</b>
$M_u = n/a$	$\phi M_n = n/a$	<b>Pass</b>
GROUP 2:		
$P_{u,t} = 134.12$	$\phi P_{n,t} = 178.13$	<b>Stress Rating</b>
$V_u = 0$	$\phi V_n = 112.75$	<b>71.7%</b>
$M_u = n/a$	$\phi M_n = n/a$	<b>Pass</b>
Base Plate Summary		
Max Stress (ksi):	56.44	(Flexural)
Allowable Stress (ksi):	54	
Stress Rating:	<b>99.5%</b>	<b>Pass</b>

# CCIplate

Elevation (ft) 0 (Base)

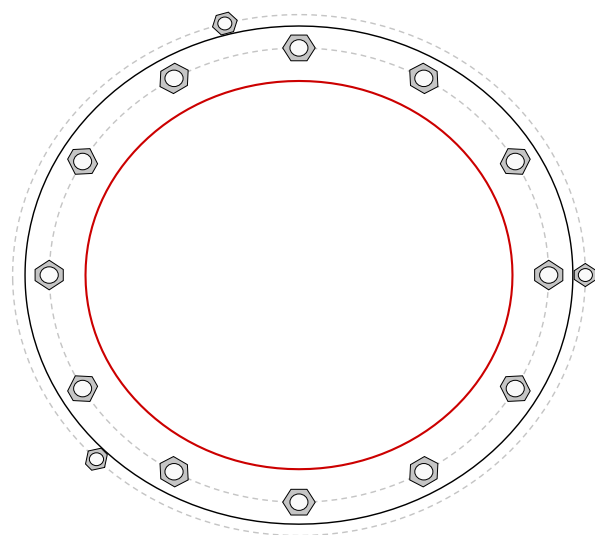
note: Bending interaction not considered when Grout Considered = "Yes"

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

## Custom Bolt Connection

Bolt	Bolt Group ID	Location (deg.)	Diameter (in)	Material	Bolt Circle (in)	Eta Factor, $\eta$ :	$I_{ar}$ (in):	Thread Type	Area Override, in <sup>2</sup>	Tension Only
1	1	0	2.25	A615-75	62	0.5	1	N-Included		No
2	1	30	2.25	A615-75	62	0.5	1	N-Included		No
3	1	60	2.25	A615-75	62	0.5	1	N-Included		No
4	1	90	2.25	A615-75	62	0.5	1	N-Included		No
5	1	120	2.25	A615-75	62	0.5	1	N-Included		No
6	1	150	2.25	A615-75	62	0.5	1	N-Included		No
7	1	180	2.25	A615-75	62	0.5	1	N-Included		No
8	1	210	2.25	A615-75	62	0.5	1	N-Included		No
9	1	240	2.25	A615-75	62	0.5	1	N-Included		No
10	1	270	2.25	A615-75	62	0.5	1	N-Included		No
11	1	300	2.25	A615-75	62	0.5	1	N-Included		No
12	1	330	2.25	A615-75	62	0.5	1	N-Included		No
13	2	0	1.75	A193 Gr. B7	71.09	0.5	1	N-Included		No
14	2	105	1.75	A193 Gr. B7	71.09	0.5	1	N-Included		No
15	2	225	1.75	A193 Gr. B7	71.09	0.5	1	N-Included		No

## Plot Graphic





# Pier and Pad Foundation



BU #: 876366  
 Site Name: WAPPINGERS  
 App. Number: 583851, Rev.0

TIA-222 Revision: H  
 Tower Type: Monopole

Top & Bot. Pad Rein. Different?:   
 Block Foundation?:   
 Rectangular Pad?:

Superstructure Analysis Reactions		
Compression, $P_{comp}$ :	42.91	kips
Base Shear, $Vu_{comp}$ :	31.17	kips
Moment, $M_u$ :	3662.92	ft-kips
Tower Height, $H$ :	155	ft
BP Dist. Above Fdn, $bp_{dist}$ :	3.25	in

Foundation Analysis Checks				
	Capacity	Demand	Rating*	Check
<i>Lateral (Sliding) (kips)</i>	283.84	31.17	10.5%	Pass
<i>Bearing Pressure (ksf)</i>	4.31	3.43	79.4%	Pass
<i>Overturning (kip*ft)</i>	4261.05	3889.55	91.3%	Pass
<i>Pier Flexure (Comp.) (kip*ft)</i>	3997.25	3803.19	90.6%	Pass
<i>Pier Compression (kip)</i>	31187.52	82.60	0.3%	Pass
<i>Pad Flexure (kip*ft)</i>	3732.05	1848.15	47.2%	Pass
<i>Pad Shear - 1-way (kips)</i>	667.68	313.73	44.8%	Pass
<i>Pad Shear - 2-way (Comp) (ksi)</i>	0.190	0.000	0.0%	Pass
<i>Flexural 2-way (Comp) (kip*ft)</i>	3450.28	2281.91	63.0%	Pass

Pier Properties		
Pier Shape:	Square	
Pier Diameter, $dpier$ :	7	ft
Ext. Above Grade, $E$ :	1	ft
Pier Rebar Size, $Sc$ :	8	
Pier Rebar Quantity, $mc$ :	30	
Pier Tie/Spiral Size, $St$ :	4	
Pier Tie/Spiral Quantity, $mt$ :	5	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, $cc_{pier}$ :	3	in

\*Rating per TIA-222-H Section 15.5

Structural Rating*:	90.6%
Soil Rating*:	91.3%

Pad Properties		
Depth, $D$ :	6	ft
Pad Width, $W_1$ :	23	ft
Pad Thickness, $T$ :	2.5	ft
Pad Rebar Size (Top dir.2), $Sp_{top2}$ :	8	
Pad Rebar Quantity (Top dir. 2), $mp_{top2}$ :	20	
Pad Rebar Size (Bottom dir. 2), $Sp_2$ :	8	
Pad Rebar Quantity (Bottom dir. 2), $mp_2$ :	43	
Pad Clear Cover, $cc_{pad}$ :	3	in

Material Properties		
Rebar Grade, $F_y$ :	60	ksi
Concrete Compressive Strength, $F'_c$ :	4	ksi
Dry Concrete Density, $\delta_c$ :	150	pcf

Soil Properties		
Total Soil Unit Weight, $\gamma$ :	125	pcf
Ultimate Net Bearing, $Q_{net}$ :	5.000	ksf
Cohesion, $C_u$ :	0.000	ksf
Friction Angle, $\phi$ :	34	degrees
SPT Blow Count, $N_{blows}$ :		
Base Friction, $\mu$ :	0.6	
Neglected Depth, $N$ :	3.50	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, $gw$ :	6	ft

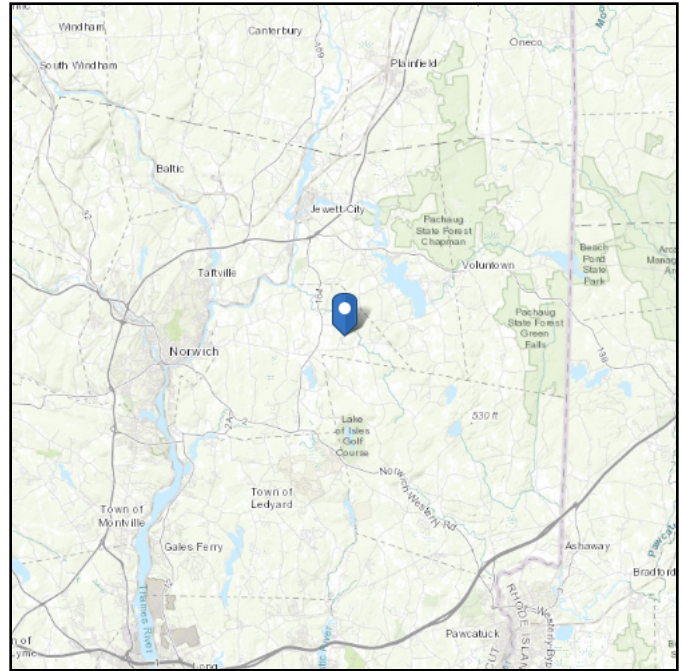
<--Toggle between Gross and Net

# ASCE 7 Hazards Report

**Address:**  
No Address at This  
Location

**Standard:** ASCE/SEI 7-10  
**Risk Category:** II  
**Soil Class:** D - Stiff Soil

**Elevation:** 290.25 ft (NAVD 88)  
**Latitude:** 41.538183  
**Longitude:** -71.951667

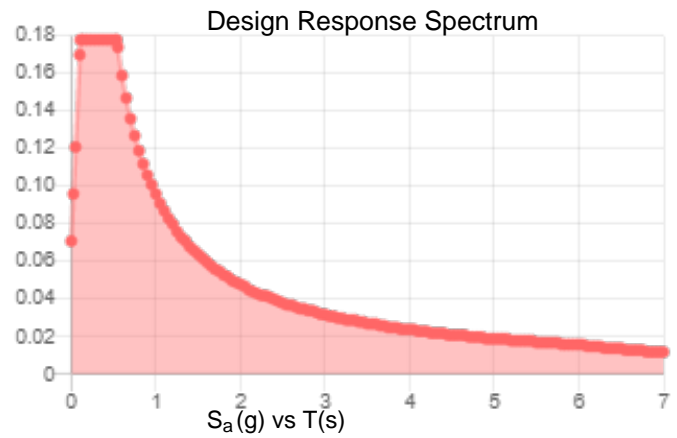
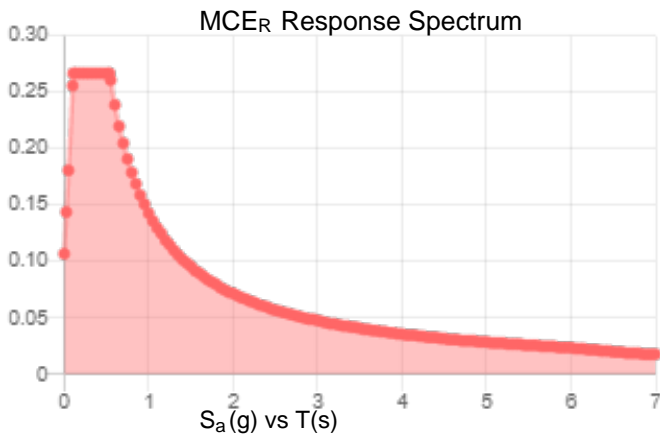


**Site Soil Class:** D - Stiff Soil

**Results:**

$S_S$ :	0.167	$S_{DS}$ :	0.178
$S_1$ :	0.06	$S_{D1}$ :	0.096
$F_a$ :	1.6	$T_L$ :	6
$F_v$ :	2.4	PGA :	0.084
$S_{MS}$ :	0.267	PGA <sub>M</sub> :	0.134
$S_{M1}$ :	0.143	F <sub>PGA</sub> :	1.6
		$I_e$ :	1

**Seismic Design Category** B



**Data Accessed:**

Thu Aug 19 2021

**Date Source:**

USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

## Ice

---

**Results:**

Ice Thickness: 0.75 in.  
Concurrent Temperature: 15 F  
Gust Speed: 50 mph

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

**Date Accessed:** Thu Aug 19 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 50-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.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE 7 Hazard Tool.

# Exhibit E

## **Mount Analysis**



Maser Consulting Connecticut  
2000 Midlantic Drive, Suite 100  
Mt. Laurel, NJ 08054  
(856) 797-0412  
peter.albano@colliersengineering.com

---

## Post-Mod Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10097861  
Maser Consulting Connecticut Project #: 21777344A

August 26, 2021

### Site Information

Site ID: 467767-VZW / PRESTON CITY CT  
Site Name: PRESTON CITY CT  
Carrier Name: Verizon Wireless  
Address: 101 Pierce Road  
Preston City, Connecticut 06365  
New London County  
Latitude: 41.538183°  
Longitude: -71.951667°

### Structure Information

Tower Type: 155-Ft Monopole  
Mount Type: 13.33-Ft T-Arm

FUZE ID # 16272096

### Analysis Results

T-Arm: 62.8% Pass

### \*\*\*Contractor PMI Requirements:

*Included at the end of this MA report*

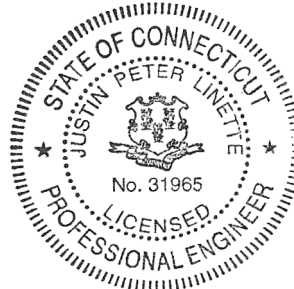
*Available & Submitted via portal at <https://pmi.vzwsmart.com>*

*Contractor - Please Review Specific Site PMI Requirements Upon Award*

*Requirements also Noted on Mount Modification Drawings*

*Requirements may also be Noted on A & E drawings*

Report Prepared By: Zachary Bandilla



**Executive Summary:**

The objective of this report is to summarize the analysis results of the antenna support mount including the proposed modifications at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards.

This analysis is inclusive of the mount structure only and does not address the structural capacity of the supporting structure. This mounting frame was not analyzed as an anchor attachment point for fall protection. All climbing activities are required to have a fall protection plan completed by a competent person.

**Sources of Information:**

Document Type	Remarks
<i>Radio Frequency Data Sheet (RFDS)</i>	<i>Verizon RFDS Site ID: 617628, dated August 12, 2021</i>
<i>Desktop Mount Mapping</i>	<i>Colliers Engineering &amp; Design, Project #: 21777344, dated April 7, 2021</i>
<i>Previous Mount Analysis</i>	<i>Maser Consulting Connecticut, Project #: 21777344A, Dated August 20, 2021</i>
<i>Mount Modification Drawings</i>	<i>Maser Consulting Connecticut, Project #: 21777344A, Dated August 26, 2021</i>

**Analysis Criteria:**

Codes and Standards:	ANSI/TIA-222-H
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), $V_{ULT}$ : 125 mph
	Ice Wind Speed (3-sec. Gust): 50 mph
	Design Ice Thickness: 1.00 in
	Risk Category: II
	Exposure Category: C
	Topographic Category: 1
	Topographic Feature Considered: N/A
	Topographic Method: N/A
	Ground Elevation Factor, $K_e$ : 0.990
Seismic Parameters:	$S_s$ : 0.189
	$S_1$ : 0.053
Maintenance Parameters:	Wind Speed (3-sec. Gust): 30 mph
	Maintenance Live Load, $L_v$ : 250 lbs.
	Maintenance Live Load, $L_m$ : 500 lbs.
Analysis Software:	RISA-3D (V17)

**Final Loading Configuration:**

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
132.00	134.00	3	Samsung	MT6407-77A	Added
		3	Commscope	CBC78T-DS-43	
		3	Samsung	RF4439d-25A	
		3	Samsung	RF4440d-13A	
		6	Andrew	JAHH-65B-R3B	Retained
		6	Antel	LPA-80063/6CF	
		1	-	OVP-12	

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

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

**Standard Conditions:**

1. All engineering services are performed on the basis that the information provided to Maser Consulting Connecticut and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to Maser Consulting Connecticut to verify deviation will not adversely impact the analysis.
2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer’s specifications.

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

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

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped by Maser Consulting Connecticut, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer’s specifications.
4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.



6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Maser Consulting Connecticut is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.
7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
  - o Channel, Solid Round, Angle, Plate      ASTM A36 (Gr. 36)
  - o HSS (Rectangular)                              ASTM 500 (Gr. B-46)
  - o Pipe    ASTM A53 (Gr. B-35)
  - o Threaded Rod                                        F1554 (Gr. 36)
  - o Bolts    ASTM A325
8. Any mount modifications listed under Sources of Information are assumed to have been installed per the design specifications.

**Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Maser Consulting Connecticut.**

**Analysis Results:**

Component	Utilization %	Pass/Fail
<i>Antenna Pipe</i>	46.9 %	<i>Pass</i>
<i>Face Horizontal</i>	49.6 %	<i>Pass</i>
<i>Vertical Pipe</i>	11.9 %	<i>Pass</i>
<i>Standoff</i>	60.7 %	<i>Pass</i>
<i>Mod Horizontal</i>	57.4 %	<i>Pass</i>
<i>Mod Standoff</i>	58.2 %	<i>Pass</i>
<i>Connection Check</i>	62.8 %	<i>Pass</i>

<b>Structure Rating – (Controlling Utilization of all Components)</b>	<b>62.8%</b>
---	--------------

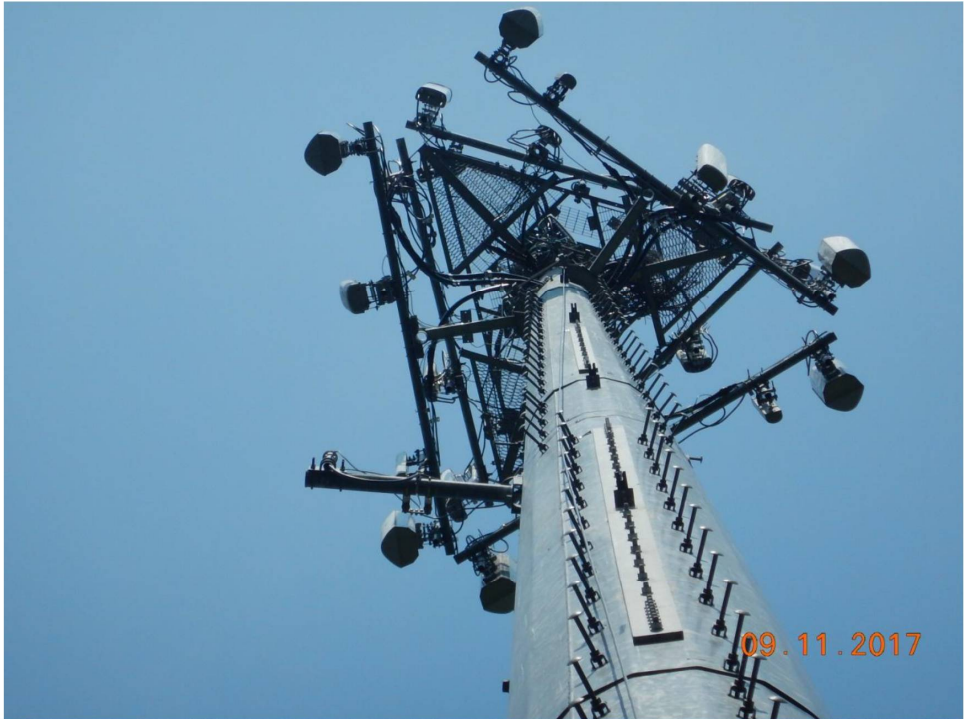
**Recommendation:**


The existing mounts will be **SUFFICIENT** for the final loading after the proposed modifications are successfully completed.

ANSI/ASSP rigging plan review services compliant with the requirements of ANSI/TIA 322 are available for a Construction Class IV site or other, if required. Separate review fees will apply.

**Attachments:**

1. Mount Photos
2. Mount Mapping Report (for reference only)
3. Analysis Calculations
- 4. Contractor Required PMI Report Deliverables**
5. Antenna Placement Diagrams





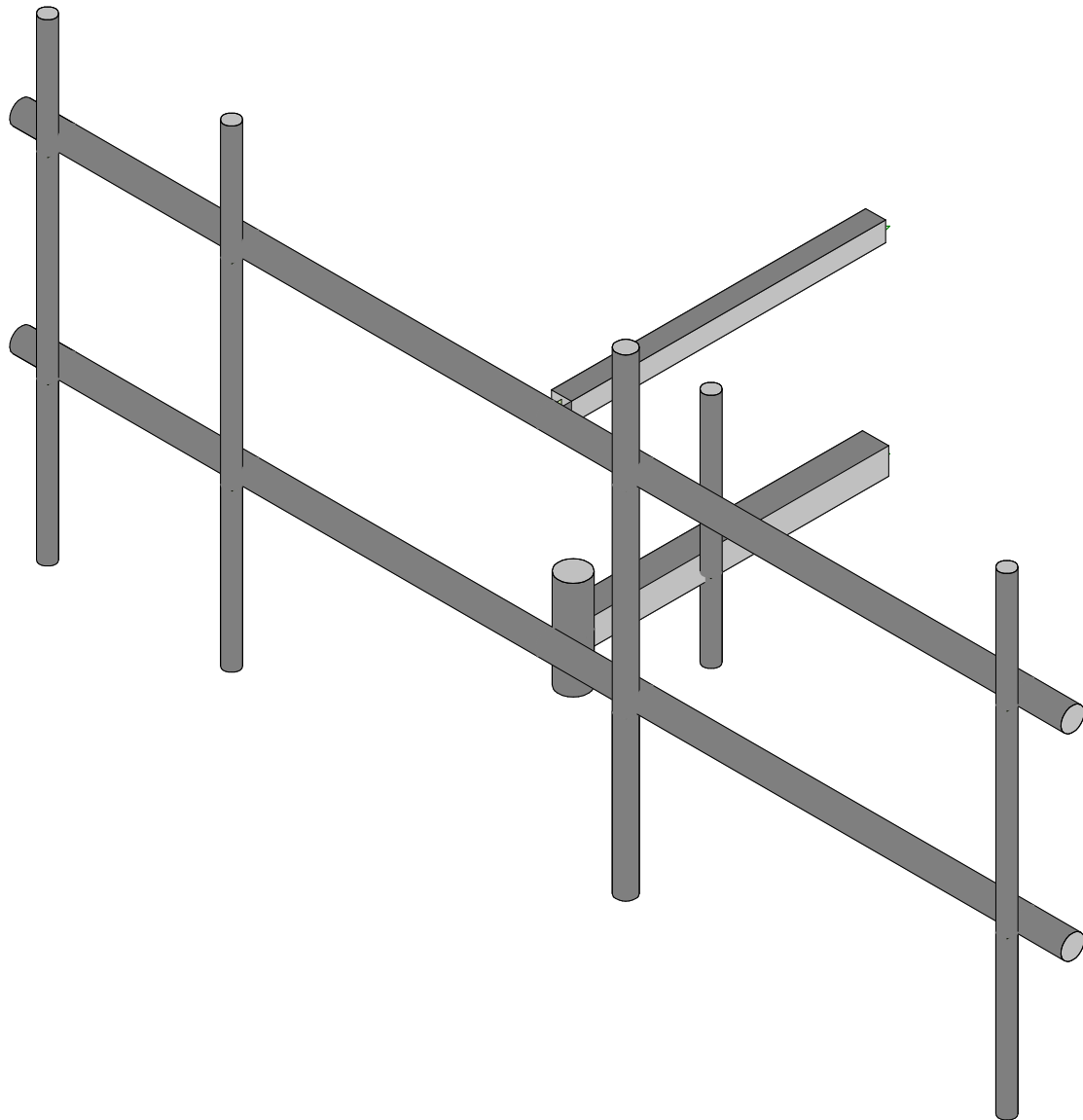
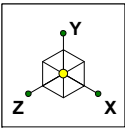
	<b>Desktop Mount Mapping Form</b>			
	Site Name:	PRESTON CITY CT	Tower Type:	Monopole
	Site ID:	467767	Tower Owner:	Crown
	FUZE Project ID:		Tower Height (Ft.):	155
	Customer:	Verizon Wireless	Mount Elevation (Ft.):	129.3
TES Project No.	21777344	Date:	4/7/2021	

The information contained herein is considered confidential in nature and is to be used only for the specific customer it was intended for. Reproduction, transmission, publication, modification or disclosure by any method is prohibited except by express written permission of TES.

Document Type	Provided? (Yes/No)	Engineering Firm	Project No.	Dated	Comments/Remarks
Previous Mount Mapping	No				
Previous Mapping Photos	No				
Previous Mount Analysis	Yes	Dewberry	50002925/50095231	9/14/2017	Add a vsk-w monopole stabilizer kit by connecting wireless. This will include an upper rail face plate (2.78" diameter) and have two stabilizer arms at 2.
Previous Mount Modifications	No				
Previous Structural Analysis	No				
Construction Drawings	No				
Closeout Package	No				
Closeout Photos	No				
Handover Package	No				
New Build 445 Documentation	No				
Other	No				
Previous PMI	No				

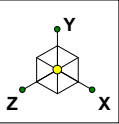
The **desktop mount mapping** is based on the engineering review of the available site documents in FUZE, as listed above, in place of a full mount mapping. It is assumed that the information provided in the documents listed above, provide an accurate representation of the existing mount. EOR reserves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

	
Photo taken from: Mount Analysis	Photo taken from: Mount Analysis

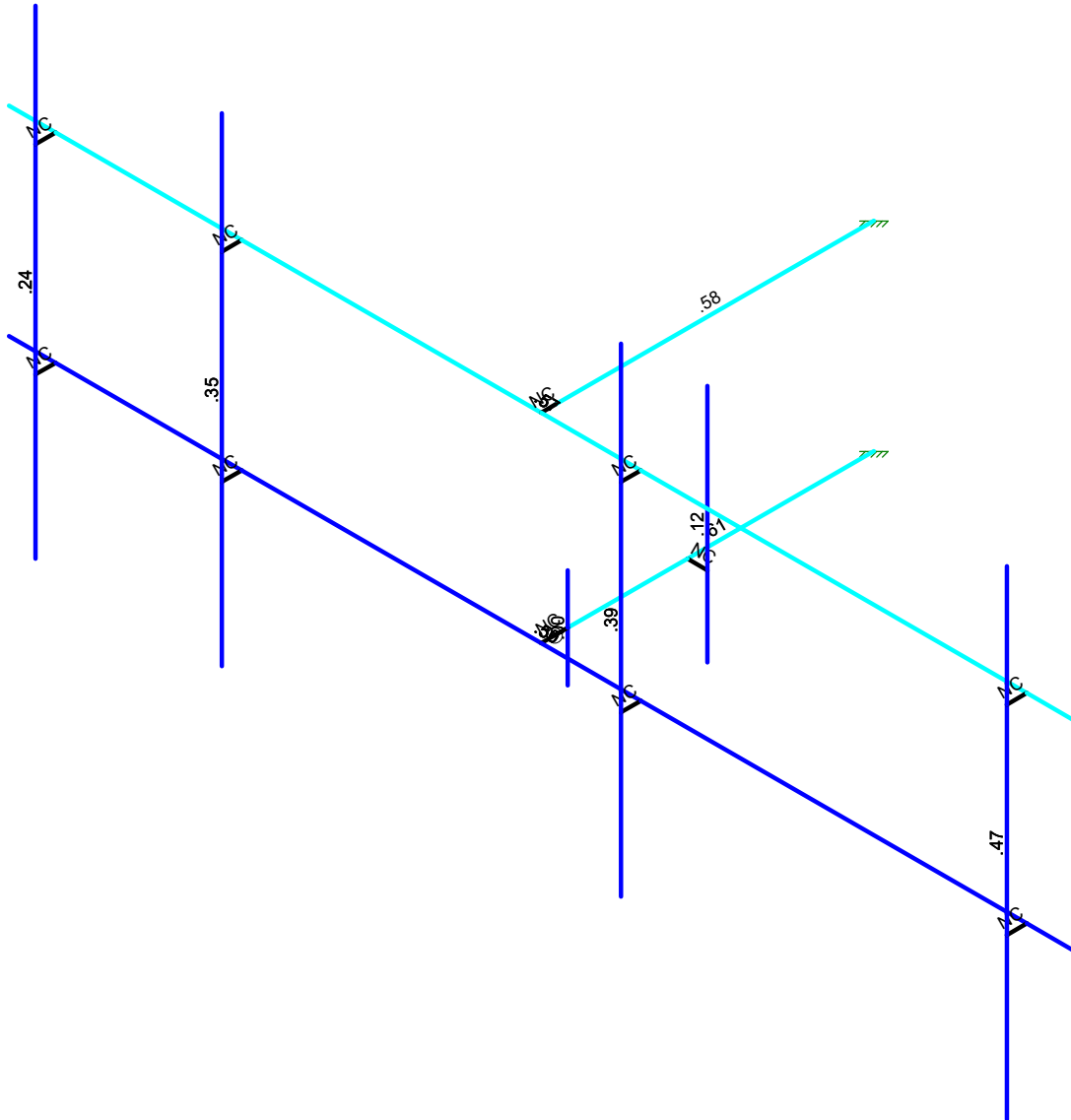


Envelope Only Solution

Maser Consulting	467767-VZW_MT_LOT_SectorA_H	SK - 1
DAB		Aug 25, 2021 at 6:58 AM
Project No. 10052223		LOADED_467767-VZW_MT_LOT_...

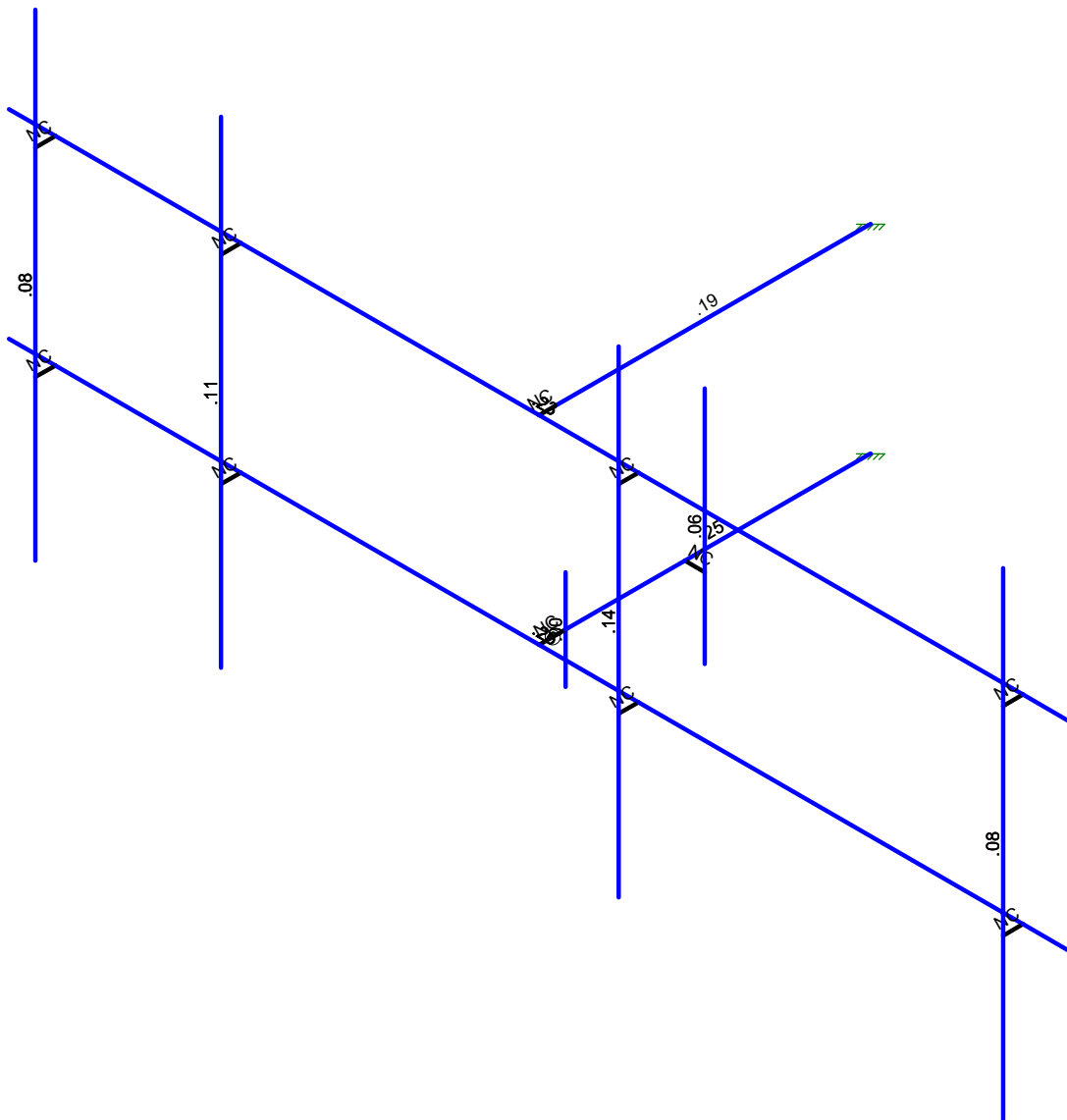
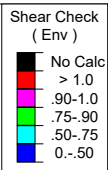
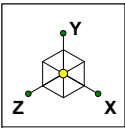


Code Check ( Env )	
Black	No Calc
Red	> 1.0
Pink	.90-1.0
Green	.75-.90
Cyan	.50-.75
Blue	0-.50



Member Code Checks Displayed (Enveloped)  
Envelope Only Solution

Maser Consulting	467767-VZW_MT_LOT_SectorA_H	SK - 2
DAB		Aug 25, 2021 at 6:58 AM
Project No. 10052223		LOADED_467767-VZW_MT_LOT_...



Member Shear Checks Displayed (Enveloped)  
Envelope Only Solution

Maser Consulting	467767-VZW_MT_LOT_SectorA_H	SK - 3
DAB		Aug 25, 2021 at 6:58 AM
Project No. 10052223		LOADED_467767-VZW_MT_LOT_...



**Basic Load Cases**

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



**Basic Load Cases (Continued)**

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surface(P...
57	Structure Wi (120 De..	None						20	
58	Structure Wi (150 De..	None						20	
59	Structure Wi (180 De..	None						20	
60	Structure Wi (210 De..	None						20	
61	Structure Wi (240 De..	None						20	
62	Structure Wi (270 De..	None						20	
63	Structure Wi (300 De..	None						20	
64	Structure Wi (330 De..	None						20	
65	Structure Wm (0 Deg)	None						20	
66	Structure Wm (30 De..	None						20	
67	Structure Wm (60 De..	None						20	
68	Structure Wm (90 De..	None						20	
69	Structure Wm (120 D..	None						20	
70	Structure Wm (150 D..	None						20	
71	Structure Wm (180 D..	None						20	
72	Structure Wm (210 D..	None						20	
73	Structure Wm (240 D..	None						20	
74	Structure Wm (270 D..	None						20	
75	Structure Wm (300 D..	None						20	
76	Structure Wm (330 D..	None						20	
77	Lm1	None					1		
78	Lm2	None					1		
79	Lv1	None					1		
80	Lv2	None					1		

**Load Combinations**

	Description	Solve	P...	SR...	BLC Fact...	BLC Fact...	BLC Fact...	BLC Fact...	BLC Fact...	BLC Fact...	BLC Fact...	BLC Fact...	BLC Fact...	BLC Fact...	BLC Fact...	BLC Fact...	BLC Fact...	BLC Fact...	BLC Fact...
1	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	3	1	41	1							
2	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	4	1	42	1							
3	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	5	1	43	1							
4	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	6	1	44	1							
5	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	7	1	45	1							
6	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	8	1	46	1							
7	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	9	1	47	1							
8	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	10	1	48	1							
9	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	11	1	49	1							
10	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	12	1	50	1							
11	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	13	1	51	1							
12	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	14	1	52	1							
13	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1			
14	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1			
15	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1			
16	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1			
17	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1			
18	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1			
19	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1			
20	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1			
21	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1			
22	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1			
23	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1			
24	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1			
25	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1					
26	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1					
27	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1					
28	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1					





**Load Combinations (Continued)**

Description	Solve	P...	SR...	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..
29	1.2D + 1.5...	Yes	Y	1	1.2	39	1.2	77	1.5	31	1	69	1		
30	1.2D + 1.5...	Yes	Y	1	1.2	39	1.2	77	1.5	32	1	70	1		
31	1.2D + 1.5...	Yes	Y	1	1.2	39	1.2	77	1.5	33	1	71	1		
32	1.2D + 1.5...	Yes	Y	1	1.2	39	1.2	77	1.5	34	1	72	1		
33	1.2D + 1.5...	Yes	Y	1	1.2	39	1.2	77	1.5	35	1	73	1		
34	1.2D + 1.5...	Yes	Y	1	1.2	39	1.2	77	1.5	36	1	74	1		
35	1.2D + 1.5...	Yes	Y	1	1.2	39	1.2	77	1.5	37	1	75	1		
36	1.2D + 1.5...	Yes	Y	1	1.2	39	1.2	77	1.5	38	1	76	1		
37	1.2D + 1.5...	Yes	Y	1	1.2	39	1.2	78	1.5	27	1	65	1		
38	1.2D + 1.5...	Yes	Y	1	1.2	39	1.2	78	1.5	28	1	66	1		
39	1.2D + 1.5...	Yes	Y	1	1.2	39	1.2	78	1.5	29	1	67	1		
40	1.2D + 1.5...	Yes	Y	1	1.2	39	1.2	78	1.5	30	1	68	1		
41	1.2D + 1.5...	Yes	Y	1	1.2	39	1.2	78	1.5	31	1	69	1		
42	1.2D + 1.5...	Yes	Y	1	1.2	39	1.2	78	1.5	32	1	70	1		
43	1.2D + 1.5...	Yes	Y	1	1.2	39	1.2	78	1.5	33	1	71	1		
44	1.2D + 1.5...	Yes	Y	1	1.2	39	1.2	78	1.5	34	1	72	1		
45	1.2D + 1.5...	Yes	Y	1	1.2	39	1.2	78	1.5	35	1	73	1		
46	1.2D + 1.5...	Yes	Y	1	1.2	39	1.2	78	1.5	36	1	74	1		
47	1.2D + 1.5...	Yes	Y	1	1.2	39	1.2	78	1.5	37	1	75	1		
48	1.2D + 1.5...	Yes	Y	1	1.2	39	1.2	78	1.5	38	1	76	1		
49	1.2D + 1.5...	Yes	Y	1	1.2	39	1.2	79	1.5						
50	1.2D + 1.5...	Yes	Y	1	1.2	39	1.2	80	1.5						
51	1.4D	Yes	Y	1	1.4	39	1.4								
52	Seismic M...		Y	1	1	39	1								
53	1.2D + 1.0...		Y	1	1.2	39	1.2	SX		SY	1	SZ	-1		
54	1.2D + 1.0...		Y	1	1.2	39	1.2	SX	.5	SY	1	SZ	-.866		
55	1.2D + 1.0...		Y	1	1.2	39	1.2	SX	.866	SY	1	SZ	-.5		
56	1.2D + 1.0...		Y	1	1.2	39	1.2	SX	1	SY	1	SZ			
57	1.2D + 1.0...		Y	1	1.2	39	1.2	SX	.866	SY	1	SZ	.5		
58	1.2D + 1.0...		Y	1	1.2	39	1.2	SX	.5	SY	1	SZ	.866		
59	1.2D + 1.0...		Y	1	1.2	39	1.2	SX		SY	1	SZ	1		
60	1.2D + 1.0...		Y	1	1.2	39	1.2	SX	-.5	SY	1	SZ	.866		
61	1.2D + 1.0...		Y	1	1.2	39	1.2	SX	-.866	SY	1	SZ	.5		
62	1.2D + 1.0...		Y	1	1.2	39	1.2	SX	-1	SY	1	SZ			
63	1.2D + 1.0...		Y	1	1.2	39	1.2	SX	-.866	SY	1	SZ	-.5		
64	1.2D + 1.0...		Y	1	1.2	39	1.2	SX	-.5	SY	1	SZ	-.866		

**Joint Coordinates and Temperatures**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	0	0	-1.208333	0	
2	N2	0	0	2.625	0	
3	N3	0	0	2.958333	0	
4	N4	0	-.625	2.625	0	
5	N5	0	.625	2.625	0	
6	N6	6.666667	0	2.958333	0	
7	N7	-6.666667	0	2.958333	0	
8	N8	-6.083333	0	2.958333	0	
9	N9	6.083333	0	2.958333	0	
10	N10	-6.083333	0	3.208333	0	
11	N11	6.083333	0	3.208333	0	
12	N12	-6.083333	4	3.208333	0	
13	N13	6.083333	4	3.208333	0	
14	N14	-6.083333	-2	3.208333	0	
15	N15	6.083333	-2	3.208333	0	
16	N16	-3.75	0	2.958333	0	

### Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
17	N17	-3.75	0	3.208333	0	
18	N18	-3.75	4	3.208333	0	
19	N19	-3.75	-2	3.208333	0	
20	N20	1.25	0	2.958333	0	
21	N21	1.25	0	3.208333	0	
22	N22	1.25	4	3.208333	0	
23	N23	1.25	-2	3.208333	0	
24	N24	.25	2	1.124667	0	
25	N25	.25	-1	1.124667	0	
26	N26	.25	0	1.124667	0	
27	N27	0	0	1.124667	0	
28	N28	6.666667	2.5	2.958333	0	
29	N29	-6.666667	2.5	2.958333	0	
30	N30	-6.083333	2.5	2.958333	0	
31	N31	6.083333	2.5	2.958333	0	
32	N32	-6.083333	2.5	3.208333	0	
33	N33	6.083333	2.5	3.208333	0	
34	N34	-3.75	2.5	2.958333	0	
35	N35	-3.75	2.5	3.208333	0	
36	N36	1.25	2.5	2.958333	0	
37	N37	1.25	2.5	3.208333	0	
38	N38	0	2.5	-1.208333	0	
39	N39	0	2.5	2.775	0	
40	N40	0	2.5	2.958333	0	

### Hot Rolled Steel Section Sets

	Label	Shape	Type	Design L...	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Antenna Pipe 2	PIPE_2.5	Column	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89
2	Antenna Pipe	PIPE_2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
3	Face Horizontal	PIPE_3.0	Beam	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
4	Vertical Pipe	PIPE_4.0	Column	Pipe	A53 Gr. B	Typical	2.96	6.82	6.82	13.6
5	Standoff	HSS4X4X3	Beam	SquareT...	A500 Gr. B 46	Typical	2.58	6.21	6.21	10
6	Mod Horizontal	PIPE_3.0	Beam	Single A...	A36 Gr.36	Typical	2.07	2.85	2.85	5.69
7	Mod Standoff	HSS3X3X4	Beam	Tube	A500 Gr. B 46	Typical	2.44	3.02	3.02	5.08

### Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
1	M3	Standoff	3.833			Lbyy						Lateral
2	M4	Vertical Pipe	1.25			Lbyy						Lateral
3	M5	Face Horizo...	13.333			Lbyy						Lateral
4	MP1A	Antenna Pipe	6			Lbyy						Lateral
5	MP4A	Antenna Pipe	6			Lbyy						Lateral
6	MP3A	Antenna Pipe	6			Lbyy						Lateral
7	MP2A	Antenna Pip...	6			Lbyy						Lateral
8	M13	Antenna Pipe	3			Lbyy						Lateral
9	M15	Mod Horizo...	13.333			Lbyy						Lateral
10	M21	Mod Standoff	3.983			Lbyy						Lateral

### Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N2	N3			RIGID	None	None	RIGID	Typical
2	M3	N1	N2			Standoff	Beam	SquareTube	A500 Gr. ...	Typical



**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
3	M4	N5	N4			Vertical Pipe	Column	Pipe	A53 Gr. B	Typical
4	M5	N7	N6			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
5	MP1A	N13	N15			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
6	MP4A	N12	N14			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
7	M9	N8	N10			RIGID	None	None	RIGID	Typical
8	M11	N9	N11			RIGID	None	None	RIGID	Typical
9	MP3A	N18	N19			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
10	M12A	N16	N17			RIGID	None	None	RIGID	Typical
11	MP2A	N22	N23			Antenna Pipe 2	Column	Pipe	A53 Gr. B	Typical
12	M12	N20	N21			RIGID	None	None	RIGID	Typical
13	M13	N24	N25			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
14	M14	N27	N26			RIGID	None	None	RIGID	Typical
15	M15	N29	N28			Mod Horizontal	Beam	Single Angle	A36 Gr.36	Typical
16	M16	N30	N32			RIGID	None	None	RIGID	Typical
17	M17	N31	N33			RIGID	None	None	RIGID	Typical
18	M18	N34	N35			RIGID	None	None	RIGID	Typical
19	M19	N36	N37			RIGID	None	None	RIGID	Typical
20	M20	N39	N40			RIGID	None	None	RIGID	Typical
21	M21	N38	N39			Mod Standoff	Beam	Tube	A500 Gr. ...	Typical

**Member Advanced Data**

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1	OOOXXO					Yes	** NA **			None
2	M3						Yes	Default			None
3	M4						Yes	** NA **			None
4	M5						Yes	Default			None
5	MP1A						Yes	** NA **			None
6	MP4A						Yes	** NA **			None
7	M9						Yes	** NA **			None
8	M11						Yes	** NA **			None
9	MP3A						Yes	** NA **			None
10	M12A						Yes	** NA **			None
11	MP2A						Yes	** NA **			None
12	M12						Yes	** NA **			None
13	M13						Yes	** NA **			None
14	M14						Yes	** NA **			None
15	M15						Yes				None
16	M16						Yes	** NA **			None
17	M17						Yes	** NA **			None
18	M18						Yes	** NA **			None
19	M19						Yes	** NA **			None
20	M20						Yes	** NA **			None
21	M21						Yes	Default			None

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	Y	-43.55	1
2	MP3A	My	-.022	1
3	MP3A	Mz	0	1
4	MP3A	Y	-43.55	4
5	MP3A	My	-.022	4
6	MP3A	Mz	0	4
7	MP2A	Y	-10.4	.75
8	MP2A	My	-.003	.75



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.-%]
9	MP2A	Mz	.004	.75
10	MP2A	Y	-74.7	2.75
11	MP2A	My	.037	2.75
12	MP2A	Mz	0	2.75
13	MP1A	Y	-70.3	2.75
14	MP1A	My	.035	2.75
15	MP1A	Mz	0	2.75
16	MP2A	Y	-31.65	.5
17	MP2A	My	-.016	.5
18	MP2A	Mz	.024	.5
19	MP2A	Y	-31.65	4.5
20	MP2A	My	-.016	4.5
21	MP2A	Mz	.024	4.5
22	MP2A	Y	-31.65	.5
23	MP2A	My	-.016	.5
24	MP2A	Mz	-.024	.5
25	MP2A	Y	-31.65	4.5
26	MP2A	My	-.016	4.5
27	MP2A	Mz	-.024	4.5
28	MP1A	Y	-13.5	.5
29	MP1A	My	-.007	.5
30	MP1A	Mz	0	.5
31	MP1A	Y	-13.5	4.5
32	MP1A	My	-.007	4.5
33	MP1A	Mz	0	4.5
34	MP4A	Y	-13.5	.5
35	MP4A	My	-.007	.5
36	MP4A	Mz	0	.5
37	MP4A	Y	-13.5	4.5
38	MP4A	My	-.007	4.5
39	MP4A	Mz	0	4.5
40	M13	Y	-32	1
41	M13	My	-.016	1
42	M13	Mz	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.-%]
1	MP3A	Y	-35.431	1
2	MP3A	My	-.018	1
3	MP3A	Mz	0	1
4	MP3A	Y	-35.431	4
5	MP3A	My	-.018	4
6	MP3A	Mz	0	4
7	MP2A	Y	-10.678	.75
8	MP2A	My	-.003	.75
9	MP2A	Mz	.004	.75
10	MP2A	Y	-44.667	2.75
11	MP2A	My	.022	2.75
12	MP2A	Mz	0	2.75
13	MP1A	Y	-42.536	2.75
14	MP1A	My	.021	2.75
15	MP1A	Mz	0	2.75
16	MP2A	Y	-69.596	.5
17	MP2A	My	-.035	.5
18	MP2A	Mz	.052	.5
19	MP2A	Y	-69.596	4.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
20	MP2A	My	-.035	4.5
21	MP2A	Mz	.052	4.5
22	MP2A	Y	-69.596	.5
23	MP2A	My	-.035	.5
24	MP2A	Mz	-.052	.5
25	MP2A	Y	-69.596	4.5
26	MP2A	My	-.035	4.5
27	MP2A	Mz	-.052	4.5
28	MP1A	Y	-88.233	.5
29	MP1A	My	-.044	.5
30	MP1A	Mz	0	.5
31	MP1A	Y	-88.233	4.5
32	MP1A	My	-.044	4.5
33	MP1A	Mz	0	4.5
34	MP4A	Y	-88.233	.5
35	MP4A	My	-.044	.5
36	MP4A	Mz	0	.5
37	MP4A	Y	-88.233	4.5
38	MP4A	My	-.044	4.5
39	MP4A	Mz	0	4.5
40	M13	Y	-87.471	1
41	M13	My	-.044	1
42	M13	Mz	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP3A	X	0	1
2	MP3A	Z	-106.713	1
3	MP3A	Mx	0	1
4	MP3A	X	0	4
5	MP3A	Z	-106.713	4
6	MP3A	Mx	0	4
7	MP2A	X	0	.75
8	MP2A	Z	-13.764	.75
9	MP2A	Mx	-.005	.75
10	MP2A	X	0	2.75
11	MP2A	Z	-84.916	2.75
12	MP2A	Mx	0	2.75
13	MP1A	X	0	2.75
14	MP1A	Z	-84.916	2.75
15	MP1A	Mx	0	2.75
16	MP2A	X	0	.5
17	MP2A	Z	-206.842	.5
18	MP2A	Mx	-.155	.5
19	MP2A	X	0	4.5
20	MP2A	Z	-206.842	4.5
21	MP2A	Mx	-.155	4.5
22	MP2A	X	0	.5
23	MP2A	Z	-206.842	.5
24	MP2A	Mx	.155	.5
25	MP2A	X	0	4.5
26	MP2A	Z	-206.842	4.5
27	MP2A	Mx	.155	4.5
28	MP1A	X	0	.5
29	MP1A	Z	-217.967	.5
30	MP1A	Mx	0	.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
31	MP1A	X	0	4.5
32	MP1A	Z	-217.967	4.5
33	MP1A	Mx	0	4.5
34	MP4A	X	0	.5
35	MP4A	Z	-217.967	.5
36	MP4A	Mx	0	.5
37	MP4A	X	0	4.5
38	MP4A	Z	-217.967	4.5
39	MP4A	Mx	0	4.5
40	M13	X	0	1
41	M13	Z	-184.364	1
42	M13	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	45.24	1
2	MP3A	Z	-78.357	1
3	MP3A	Mx	-.023	1
4	MP3A	X	45.24	4
5	MP3A	Z	-78.357	4
6	MP3A	Mx	-.023	4
7	MP2A	X	5.891	.75
8	MP2A	Z	-10.203	.75
9	MP2A	Mx	-.006	.75
10	MP2A	X	38.939	2.75
11	MP2A	Z	-67.444	2.75
12	MP2A	Mx	.019	2.75
13	MP1A	X	38.3	2.75
14	MP1A	Z	-66.338	2.75
15	MP1A	Mx	.019	2.75
16	MP2A	X	94.547	.5
17	MP2A	Z	-163.76	.5
18	MP2A	Mx	-.17	.5
19	MP2A	X	94.547	4.5
20	MP2A	Z	-163.76	4.5
21	MP2A	Mx	-.17	4.5
22	MP2A	X	94.547	.5
23	MP2A	Z	-163.76	.5
24	MP2A	Mx	.076	.5
25	MP2A	X	94.547	4.5
26	MP2A	Z	-163.76	4.5
27	MP2A	Mx	.076	4.5
28	MP1A	X	106.074	.5
29	MP1A	Z	-183.725	.5
30	MP1A	Mx	-.053	.5
31	MP1A	X	106.074	4.5
32	MP1A	Z	-183.725	4.5
33	MP1A	Mx	-.053	4.5
34	MP4A	X	106.074	.5
35	MP4A	Z	-183.725	.5
36	MP4A	Mx	-.053	.5
37	MP4A	X	106.074	4.5
38	MP4A	Z	-183.725	4.5
39	MP4A	Mx	-.053	4.5
40	M13	X	86.719	1
41	M13	Z	-150.201	1



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
42	M13	Mx	-0.43	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	50.24	1
2	MP3A	Z	-29.006	1
3	MP3A	Mx	-.025	1
4	MP3A	X	50.24	4
5	MP3A	Z	-29.006	4
6	MP3A	Mx	-.025	4
7	MP2A	X	10.592	.75
8	MP2A	Z	-6.115	.75
9	MP2A	Mx	-.006	.75
10	MP2A	X	55.253	2.75
11	MP2A	Z	-31.9	2.75
12	MP2A	Mx	.028	2.75
13	MP1A	X	51.935	2.75
14	MP1A	Z	-29.985	2.75
15	MP1A	Mx	.026	2.75
16	MP2A	X	133.02	.5
17	MP2A	Z	-76.799	.5
18	MP2A	Mx	-.124	.5
19	MP2A	X	133.02	4.5
20	MP2A	Z	-76.799	4.5
21	MP2A	Mx	-.124	4.5
22	MP2A	X	133.02	.5
23	MP2A	Z	-76.799	.5
24	MP2A	Mx	-.009	.5
25	MP2A	X	133.02	4.5
26	MP2A	Z	-76.799	4.5
27	MP2A	Mx	-.009	4.5
28	MP1A	X	173.645	.5
29	MP1A	Z	-100.254	.5
30	MP1A	Mx	-.087	.5
31	MP1A	X	173.645	4.5
32	MP1A	Z	-100.254	4.5
33	MP1A	Mx	-.087	4.5
34	MP4A	X	173.645	.5
35	MP4A	Z	-100.254	.5
36	MP4A	Mx	-.087	.5
37	MP4A	X	173.645	4.5
38	MP4A	Z	-100.254	4.5
39	MP4A	Mx	-.087	4.5
40	M13	X	131.275	1
41	M13	Z	-75.792	1
42	M13	Mx	-.066	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	41.778	1
2	MP3A	Z	0	1
3	MP3A	Mx	-.021	1
4	MP3A	X	41.778	4
5	MP3A	Z	0	4
6	MP3A	Mx	-.021	4
7	MP2A	X	14.663	.75



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
8	MP2A	Z	0	.75
9	MP2A	Mx	-.005	.75
10	MP2A	X	56.762	2.75
11	MP2A	Z	0	2.75
12	MP2A	Mx	.028	2.75
13	MP1A	X	51.654	2.75
14	MP1A	Z	0	2.75
15	MP1A	Mx	.026	2.75
16	MP2A	X	135.851	.5
17	MP2A	Z	0	.5
18	MP2A	Mx	-.068	.5
19	MP2A	X	135.851	4.5
20	MP2A	Z	0	4.5
21	MP2A	Mx	-.068	4.5
22	MP2A	X	135.851	.5
23	MP2A	Z	0	.5
24	MP2A	Mx	-.068	.5
25	MP2A	X	135.851	4.5
26	MP2A	Z	0	4.5
27	MP2A	Mx	-.068	4.5
28	MP1A	X	194.689	.5
29	MP1A	Z	0	.5
30	MP1A	Mx	-.097	.5
31	MP1A	X	194.689	4.5
32	MP1A	Z	0	4.5
33	MP1A	Mx	-.097	4.5
34	MP4A	X	194.689	.5
35	MP4A	Z	0	.5
36	MP4A	Mx	-.097	.5
37	MP4A	X	194.689	4.5
38	MP4A	Z	0	4.5
39	MP4A	Mx	-.097	4.5
40	M13	X	140.657	1
41	M13	Z	0	1
42	M13	Mx	-.07	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP3A	X	50.24	1
2	MP3A	Z	29.006	1
3	MP3A	Mx	-.025	1
4	MP3A	X	50.24	4
5	MP3A	Z	29.006	4
6	MP3A	Mx	-.025	4
7	MP2A	X	14.415	.75
8	MP2A	Z	8.323	.75
9	MP2A	Mx	-.001	.75
10	MP2A	X	55.253	2.75
11	MP2A	Z	31.9	2.75
12	MP2A	Mx	.028	2.75
13	MP1A	X	51.935	2.75
14	MP1A	Z	29.985	2.75
15	MP1A	Mx	.026	2.75
16	MP2A	X	133.02	.5
17	MP2A	Z	76.799	.5
18	MP2A	Mx	-.009	.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
19	MP2A	X	133.02	4.5
20	MP2A	Z	76.799	4.5
21	MP2A	Mx	-.009	4.5
22	MP2A	X	133.02	.5
23	MP2A	Z	76.799	.5
24	MP2A	Mx	-.124	.5
25	MP2A	X	133.02	4.5
26	MP2A	Z	76.799	4.5
27	MP2A	Mx	-.124	4.5
28	MP1A	X	173.645	.5
29	MP1A	Z	100.254	.5
30	MP1A	Mx	-.087	.5
31	MP1A	X	173.645	4.5
32	MP1A	Z	100.254	4.5
33	MP1A	Mx	-.087	4.5
34	MP4A	X	173.645	.5
35	MP4A	Z	100.254	.5
36	MP4A	Mx	-.087	.5
37	MP4A	X	173.645	4.5
38	MP4A	Z	100.254	4.5
39	MP4A	Mx	-.087	4.5
40	M13	X	131.275	1
41	M13	Z	75.792	1
42	M13	Mx	-.066	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP3A	X	45.24	1
2	MP3A	Z	78.357	1
3	MP3A	Mx	-.023	1
4	MP3A	X	45.24	4
5	MP3A	Z	78.357	4
6	MP3A	Mx	-.023	4
7	MP2A	X	8.098	.75
8	MP2A	Z	14.026	.75
9	MP2A	Mx	.003	.75
10	MP2A	X	38.939	2.75
11	MP2A	Z	67.444	2.75
12	MP2A	Mx	.019	2.75
13	MP1A	X	38.3	2.75
14	MP1A	Z	66.338	2.75
15	MP1A	Mx	.019	2.75
16	MP2A	X	94.547	.5
17	MP2A	Z	163.76	.5
18	MP2A	Mx	.076	.5
19	MP2A	X	94.547	4.5
20	MP2A	Z	163.76	4.5
21	MP2A	Mx	.076	4.5
22	MP2A	X	94.547	.5
23	MP2A	Z	163.76	.5
24	MP2A	Mx	-.17	.5
25	MP2A	X	94.547	4.5
26	MP2A	Z	163.76	4.5
27	MP2A	Mx	-.17	4.5
28	MP1A	X	106.074	.5
29	MP1A	Z	183.725	.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
30	MP1A	Mx	-.053	.5
31	MP1A	X	106.074	4.5
32	MP1A	Z	183.725	4.5
33	MP1A	Mx	-.053	4.5
34	MP4A	X	106.074	.5
35	MP4A	Z	183.725	.5
36	MP4A	Mx	-.053	.5
37	MP4A	X	106.074	4.5
38	MP4A	Z	183.725	4.5
39	MP4A	Mx	-.053	4.5
40	M13	X	86.719	1
41	M13	Z	150.201	1
42	M13	Mx	-.043	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	0	1
2	MP3A	Z	106.713	1
3	MP3A	Mx	0	1
4	MP3A	X	0	4
5	MP3A	Z	106.713	4
6	MP3A	Mx	0	4
7	MP2A	X	0	.75
8	MP2A	Z	13.764	.75
9	MP2A	Mx	.005	.75
10	MP2A	X	0	2.75
11	MP2A	Z	84.916	2.75
12	MP2A	Mx	0	2.75
13	MP1A	X	0	2.75
14	MP1A	Z	84.916	2.75
15	MP1A	Mx	0	2.75
16	MP2A	X	0	.5
17	MP2A	Z	206.842	.5
18	MP2A	Mx	.155	.5
19	MP2A	X	0	4.5
20	MP2A	Z	206.842	4.5
21	MP2A	Mx	.155	4.5
22	MP2A	X	0	.5
23	MP2A	Z	206.842	.5
24	MP2A	Mx	-.155	.5
25	MP2A	X	0	4.5
26	MP2A	Z	206.842	4.5
27	MP2A	Mx	-.155	4.5
28	MP1A	X	0	.5
29	MP1A	Z	217.967	.5
30	MP1A	Mx	0	.5
31	MP1A	X	0	4.5
32	MP1A	Z	217.967	4.5
33	MP1A	Mx	0	4.5
34	MP4A	X	0	.5
35	MP4A	Z	217.967	.5
36	MP4A	Mx	0	.5
37	MP4A	X	0	4.5
38	MP4A	Z	217.967	4.5
39	MP4A	Mx	0	4.5
40	M13	X	0	1



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
41	M13	Z	184.364	1
42	M13	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-45.24	1
2	MP3A	Z	78.357	1
3	MP3A	Mx	.023	1
4	MP3A	X	-45.24	4
5	MP3A	Z	78.357	4
6	MP3A	Mx	.023	4
7	MP2A	X	-5.891	.75
8	MP2A	Z	10.203	.75
9	MP2A	Mx	.006	.75
10	MP2A	X	-38.939	2.75
11	MP2A	Z	67.444	2.75
12	MP2A	Mx	-.019	2.75
13	MP1A	X	-38.3	2.75
14	MP1A	Z	66.338	2.75
15	MP1A	Mx	-.019	2.75
16	MP2A	X	-94.547	.5
17	MP2A	Z	163.76	.5
18	MP2A	Mx	.17	.5
19	MP2A	X	-94.547	4.5
20	MP2A	Z	163.76	4.5
21	MP2A	Mx	.17	4.5
22	MP2A	X	-94.547	.5
23	MP2A	Z	163.76	.5
24	MP2A	Mx	-.076	.5
25	MP2A	X	-94.547	4.5
26	MP2A	Z	163.76	4.5
27	MP2A	Mx	-.076	4.5
28	MP1A	X	-106.074	.5
29	MP1A	Z	183.725	.5
30	MP1A	Mx	.053	.5
31	MP1A	X	-106.074	4.5
32	MP1A	Z	183.725	4.5
33	MP1A	Mx	.053	4.5
34	MP4A	X	-106.074	.5
35	MP4A	Z	183.725	.5
36	MP4A	Mx	.053	.5
37	MP4A	X	-106.074	4.5
38	MP4A	Z	183.725	4.5
39	MP4A	Mx	.053	4.5
40	M13	X	-86.719	1
41	M13	Z	150.201	1
42	M13	Mx	.043	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-50.24	1
2	MP3A	Z	29.006	1
3	MP3A	Mx	.025	1
4	MP3A	X	-50.24	4
5	MP3A	Z	29.006	4
6	MP3A	Mx	.025	4



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
7	MP2A	X	-10.592	.75
8	MP2A	Z	6.115	.75
9	MP2A	Mx	.006	.75
10	MP2A	X	-55.253	2.75
11	MP2A	Z	31.9	2.75
12	MP2A	Mx	-.028	2.75
13	MP1A	X	-51.935	2.75
14	MP1A	Z	29.985	2.75
15	MP1A	Mx	-.026	2.75
16	MP2A	X	-133.02	.5
17	MP2A	Z	76.799	.5
18	MP2A	Mx	.124	.5
19	MP2A	X	-133.02	4.5
20	MP2A	Z	76.799	4.5
21	MP2A	Mx	.124	4.5
22	MP2A	X	-133.02	.5
23	MP2A	Z	76.799	.5
24	MP2A	Mx	.009	.5
25	MP2A	X	-133.02	4.5
26	MP2A	Z	76.799	4.5
27	MP2A	Mx	.009	4.5
28	MP1A	X	-173.645	.5
29	MP1A	Z	100.254	.5
30	MP1A	Mx	.087	.5
31	MP1A	X	-173.645	4.5
32	MP1A	Z	100.254	4.5
33	MP1A	Mx	.087	4.5
34	MP4A	X	-173.645	.5
35	MP4A	Z	100.254	.5
36	MP4A	Mx	.087	.5
37	MP4A	X	-173.645	4.5
38	MP4A	Z	100.254	4.5
39	MP4A	Mx	.087	4.5
40	M13	X	-131.275	1
41	M13	Z	75.792	1
42	M13	Mx	.066	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	-41.778	1
2	MP3A	Z	0	1
3	MP3A	Mx	.021	1
4	MP3A	X	-41.778	4
5	MP3A	Z	0	4
6	MP3A	Mx	.021	4
7	MP2A	X	-14.663	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	.005	.75
10	MP2A	X	-56.762	2.75
11	MP2A	Z	0	2.75
12	MP2A	Mx	-.028	2.75
13	MP1A	X	-51.654	2.75
14	MP1A	Z	0	2.75
15	MP1A	Mx	-.026	2.75
16	MP2A	X	-135.851	.5
17	MP2A	Z	0	.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
18	MP2A	Mx	.068	.5
19	MP2A	X	-135.851	4.5
20	MP2A	Z	0	4.5
21	MP2A	Mx	.068	4.5
22	MP2A	X	-135.851	.5
23	MP2A	Z	0	.5
24	MP2A	Mx	.068	.5
25	MP2A	X	-135.851	4.5
26	MP2A	Z	0	4.5
27	MP2A	Mx	.068	4.5
28	MP1A	X	-194.689	.5
29	MP1A	Z	0	.5
30	MP1A	Mx	.097	.5
31	MP1A	X	-194.689	4.5
32	MP1A	Z	0	4.5
33	MP1A	Mx	.097	4.5
34	MP4A	X	-194.689	.5
35	MP4A	Z	0	.5
36	MP4A	Mx	.097	.5
37	MP4A	X	-194.689	4.5
38	MP4A	Z	0	4.5
39	MP4A	Mx	.097	4.5
40	M13	X	-140.657	1
41	M13	Z	0	1
42	M13	Mx	.07	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP3A	X	-50.24	1
2	MP3A	Z	-29.006	1
3	MP3A	Mx	.025	1
4	MP3A	X	-50.24	4
5	MP3A	Z	-29.006	4
6	MP3A	Mx	.025	4
7	MP2A	X	-14.415	.75
8	MP2A	Z	-8.323	.75
9	MP2A	Mx	.001	.75
10	MP2A	X	-55.253	2.75
11	MP2A	Z	-31.9	2.75
12	MP2A	Mx	-.028	2.75
13	MP1A	X	-51.935	2.75
14	MP1A	Z	-29.985	2.75
15	MP1A	Mx	-.026	2.75
16	MP2A	X	-133.02	.5
17	MP2A	Z	-76.799	.5
18	MP2A	Mx	.009	.5
19	MP2A	X	-133.02	4.5
20	MP2A	Z	-76.799	4.5
21	MP2A	Mx	.009	4.5
22	MP2A	X	-133.02	.5
23	MP2A	Z	-76.799	.5
24	MP2A	Mx	.124	.5
25	MP2A	X	-133.02	4.5
26	MP2A	Z	-76.799	4.5
27	MP2A	Mx	.124	4.5
28	MP1A	X	-173.645	.5



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
29	MP1A	Z	-100.254	.5
30	MP1A	Mx	.087	.5
31	MP1A	X	-173.645	4.5
32	MP1A	Z	-100.254	4.5
33	MP1A	Mx	.087	4.5
34	MP4A	X	-173.645	.5
35	MP4A	Z	-100.254	.5
36	MP4A	Mx	.087	.5
37	MP4A	X	-173.645	4.5
38	MP4A	Z	-100.254	4.5
39	MP4A	Mx	.087	4.5
40	M13	X	-131.275	1
41	M13	Z	-75.792	1
42	M13	Mx	.066	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
1	MP3A	X	-45.24	1
2	MP3A	Z	-78.357	1
3	MP3A	Mx	.023	1
4	MP3A	X	-45.24	4
5	MP3A	Z	-78.357	4
6	MP3A	Mx	.023	4
7	MP2A	X	-8.098	.75
8	MP2A	Z	-14.026	.75
9	MP2A	Mx	-.003	.75
10	MP2A	X	-38.939	2.75
11	MP2A	Z	-67.444	2.75
12	MP2A	Mx	-.019	2.75
13	MP1A	X	-38.3	2.75
14	MP1A	Z	-66.338	2.75
15	MP1A	Mx	-.019	2.75
16	MP2A	X	-94.547	.5
17	MP2A	Z	-163.76	.5
18	MP2A	Mx	-.076	.5
19	MP2A	X	-94.547	4.5
20	MP2A	Z	-163.76	4.5
21	MP2A	Mx	-.076	4.5
22	MP2A	X	-94.547	.5
23	MP2A	Z	-163.76	.5
24	MP2A	Mx	.17	.5
25	MP2A	X	-94.547	4.5
26	MP2A	Z	-163.76	4.5
27	MP2A	Mx	.17	4.5
28	MP1A	X	-106.074	.5
29	MP1A	Z	-183.725	.5
30	MP1A	Mx	.053	.5
31	MP1A	X	-106.074	4.5
32	MP1A	Z	-183.725	4.5
33	MP1A	Mx	.053	4.5
34	MP4A	X	-106.074	.5
35	MP4A	Z	-183.725	.5
36	MP4A	Mx	.053	.5
37	MP4A	X	-106.074	4.5
38	MP4A	Z	-183.725	4.5
39	MP4A	Mx	.053	4.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.-%]
40	M13	X	-86.719	1
41	M13	Z	-150.201	1
42	M13	Mx	.043	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.-%]
1	MP3A	X	0	1
2	MP3A	Z	-19.278	1
3	MP3A	Mx	0	1
4	MP3A	X	0	4
5	MP3A	Z	-19.278	4
6	MP3A	Mx	0	4
7	MP2A	X	0	.75
8	MP2A	Z	-3.362	.75
9	MP2A	Mx	-.001	.75
10	MP2A	X	0	2.75
11	MP2A	Z	-16.244	2.75
12	MP2A	Mx	0	2.75
13	MP1A	X	0	2.75
14	MP1A	Z	-16.244	2.75
15	MP1A	Mx	0	2.75
16	MP2A	X	0	.5
17	MP2A	Z	-36.25	.5
18	MP2A	Mx	-.027	.5
19	MP2A	X	0	4.5
20	MP2A	Z	-36.25	4.5
21	MP2A	Mx	-.027	4.5
22	MP2A	X	0	.5
23	MP2A	Z	-36.25	.5
24	MP2A	Mx	.027	.5
25	MP2A	X	0	4.5
26	MP2A	Z	-36.25	4.5
27	MP2A	Mx	.027	4.5
28	MP1A	X	0	.5
29	MP1A	Z	-38.035	.5
30	MP1A	Mx	0	.5
31	MP1A	X	0	4.5
32	MP1A	Z	-38.035	4.5
33	MP1A	Mx	0	4.5
34	MP4A	X	0	.5
35	MP4A	Z	-38.035	.5
36	MP4A	Mx	0	.5
37	MP4A	X	0	4.5
38	MP4A	Z	-38.035	4.5
39	MP4A	Mx	0	4.5
40	M13	X	0	1
41	M13	Z	-33.39	1
42	M13	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.-%]
1	MP3A	X	8.255	1
2	MP3A	Z	-14.299	1
3	MP3A	Mx	-.004	1
4	MP3A	X	8.255	4
5	MP3A	Z	-14.299	4



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
6	MP3A	Mx	-0.04	4
7	MP2A	X	1.492	.75
8	MP2A	Z	-2.585	.75
9	MP2A	Mx	-.001	.75
10	MP2A	X	7.503	2.75
11	MP2A	Z	-12.996	2.75
12	MP2A	Mx	.004	2.75
13	MP1A	X	7.392	2.75
14	MP1A	Z	-12.804	2.75
15	MP1A	Mx	.004	2.75
16	MP2A	X	16.684	.5
17	MP2A	Z	-28.898	.5
18	MP2A	Mx	-.03	.5
19	MP2A	X	16.684	4.5
20	MP2A	Z	-28.898	4.5
21	MP2A	Mx	-.03	4.5
22	MP2A	X	16.684	.5
23	MP2A	Z	-28.898	.5
24	MP2A	Mx	.013	.5
25	MP2A	X	16.684	4.5
26	MP2A	Z	-28.898	4.5
27	MP2A	Mx	.013	4.5
28	MP1A	X	18.54	.5
29	MP1A	Z	-32.113	.5
30	MP1A	Mx	-.009	.5
31	MP1A	X	18.54	4.5
32	MP1A	Z	-32.113	4.5
33	MP1A	Mx	-.009	4.5
34	MP4A	X	18.54	.5
35	MP4A	Z	-32.113	.5
36	MP4A	Mx	-.009	.5
37	MP4A	X	18.54	4.5
38	MP4A	Z	-32.113	4.5
39	MP4A	Mx	-.009	4.5
40	M13	X	15.785	1
41	M13	Z	-27.34	1
42	M13	Mx	-.008	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP3A	X	9.505	1
2	MP3A	Z	-5.488	1
3	MP3A	Mx	-.005	1
4	MP3A	X	9.505	4
5	MP3A	Z	-5.488	4
6	MP3A	Mx	-.005	4
7	MP2A	X	2.659	.75
8	MP2A	Z	-1.535	.75
9	MP2A	Mx	-.001	.75
10	MP2A	X	10.854	2.75
11	MP2A	Z	-6.267	2.75
12	MP2A	Mx	.005	2.75
13	MP1A	X	10.276	2.75
14	MP1A	Z	-5.933	2.75
15	MP1A	Mx	.005	2.75
16	MP2A	X	23.907	.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
17	MP2A	Z	-13.803	.5
18	MP2A	Mx	-.022	.5
19	MP2A	X	23.907	4.5
20	MP2A	Z	-13.803	4.5
21	MP2A	Mx	-.022	4.5
22	MP2A	X	23.907	.5
23	MP2A	Z	-13.803	.5
24	MP2A	Mx	-.002	.5
25	MP2A	X	23.907	4.5
26	MP2A	Z	-13.803	4.5
27	MP2A	Mx	-.002	4.5
28	MP1A	X	30.459	.5
29	MP1A	Z	-17.586	.5
30	MP1A	Mx	-.015	.5
31	MP1A	X	30.459	4.5
32	MP1A	Z	-17.586	4.5
33	MP1A	Mx	-.015	4.5
34	MP4A	X	30.459	.5
35	MP4A	Z	-17.586	.5
36	MP4A	Mx	-.015	.5
37	MP4A	X	30.459	4.5
38	MP4A	Z	-17.586	4.5
39	MP4A	Mx	-.015	4.5
40	M13	X	24.186	1
41	M13	Z	-13.964	1
42	M13	Mx	-.012	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	8.208	1
2	MP3A	Z	0	1
3	MP3A	Mx	-.004	1
4	MP3A	X	8.208	4
5	MP3A	Z	0	4
6	MP3A	Mx	-.004	4
7	MP2A	X	3.533	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	-.001	.75
10	MP2A	X	11.297	2.75
11	MP2A	Z	0	2.75
12	MP2A	Mx	.006	2.75
13	MP1A	X	10.407	2.75
14	MP1A	Z	0	2.75
15	MP1A	Mx	.005	2.75
16	MP2A	X	24.724	.5
17	MP2A	Z	0	.5
18	MP2A	Mx	-.012	.5
19	MP2A	X	24.724	4.5
20	MP2A	Z	0	4.5
21	MP2A	Mx	-.012	4.5
22	MP2A	X	24.724	.5
23	MP2A	Z	0	.5
24	MP2A	Mx	-.012	.5
25	MP2A	X	24.724	4.5
26	MP2A	Z	0	4.5
27	MP2A	Mx	-.012	4.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
28	MP1A	X	34.216	.5
29	MP1A	Z	0	.5
30	MP1A	Mx	-.017	.5
31	MP1A	X	34.216	4.5
32	MP1A	Z	0	4.5
33	MP1A	Mx	-.017	4.5
34	MP4A	X	34.216	.5
35	MP4A	Z	0	.5
36	MP4A	Mx	-.017	.5
37	MP4A	X	34.216	4.5
38	MP4A	Z	0	4.5
39	MP4A	Mx	-.017	4.5
40	M13	X	26.108	1
41	M13	Z	0	1
42	M13	Mx	-.013	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP3A	X	9.505	1
2	MP3A	Z	5.488	1
3	MP3A	Mx	-.005	1
4	MP3A	X	9.505	4
5	MP3A	Z	5.488	4
6	MP3A	Mx	-.005	4
7	MP2A	X	3.386	.75
8	MP2A	Z	1.955	.75
9	MP2A	Mx	-.000339	.75
10	MP2A	X	10.854	2.75
11	MP2A	Z	6.267	2.75
12	MP2A	Mx	.005	2.75
13	MP1A	X	10.276	2.75
14	MP1A	Z	5.933	2.75
15	MP1A	Mx	.005	2.75
16	MP2A	X	23.907	.5
17	MP2A	Z	13.803	.5
18	MP2A	Mx	-.002	.5
19	MP2A	X	23.907	4.5
20	MP2A	Z	13.803	4.5
21	MP2A	Mx	-.002	4.5
22	MP2A	X	23.907	.5
23	MP2A	Z	13.803	.5
24	MP2A	Mx	-.022	.5
25	MP2A	X	23.907	4.5
26	MP2A	Z	13.803	4.5
27	MP2A	Mx	-.022	4.5
28	MP1A	X	30.459	.5
29	MP1A	Z	17.586	.5
30	MP1A	Mx	-.015	.5
31	MP1A	X	30.459	4.5
32	MP1A	Z	17.586	4.5
33	MP1A	Mx	-.015	4.5
34	MP4A	X	30.459	.5
35	MP4A	Z	17.586	.5
36	MP4A	Mx	-.015	.5
37	MP4A	X	30.459	4.5
38	MP4A	Z	17.586	4.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
39	MP4A	Mx	-.015	4.5
40	M13	X	24.186	1
41	M13	Z	13.964	1
42	M13	Mx	-.012	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP3A	X	8.255	1
2	MP3A	Z	14.299	1
3	MP3A	Mx	-.004	1
4	MP3A	X	8.255	4
5	MP3A	Z	14.299	4
6	MP3A	Mx	-.004	4
7	MP2A	X	1.912	.75
8	MP2A	Z	3.312	.75
9	MP2A	Mx	.000654	.75
10	MP2A	X	7.503	2.75
11	MP2A	Z	12.996	2.75
12	MP2A	Mx	.004	2.75
13	MP1A	X	7.392	2.75
14	MP1A	Z	12.804	2.75
15	MP1A	Mx	.004	2.75
16	MP2A	X	16.684	.5
17	MP2A	Z	28.898	.5
18	MP2A	Mx	.013	.5
19	MP2A	X	16.684	4.5
20	MP2A	Z	28.898	4.5
21	MP2A	Mx	.013	4.5
22	MP2A	X	16.684	.5
23	MP2A	Z	28.898	.5
24	MP2A	Mx	-.03	.5
25	MP2A	X	16.684	4.5
26	MP2A	Z	28.898	4.5
27	MP2A	Mx	-.03	4.5
28	MP1A	X	18.54	.5
29	MP1A	Z	32.113	.5
30	MP1A	Mx	-.009	.5
31	MP1A	X	18.54	4.5
32	MP1A	Z	32.113	4.5
33	MP1A	Mx	-.009	4.5
34	MP4A	X	18.54	.5
35	MP4A	Z	32.113	.5
36	MP4A	Mx	-.009	.5
37	MP4A	X	18.54	4.5
38	MP4A	Z	32.113	4.5
39	MP4A	Mx	-.009	4.5
40	M13	X	15.785	1
41	M13	Z	27.34	1
42	M13	Mx	-.008	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP3A	X	0	1
2	MP3A	Z	19.278	1
3	MP3A	Mx	0	1
4	MP3A	X	0	4



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
5	MP3A	Z	19.278	4
6	MP3A	Mx	0	4
7	MP2A	X	0	.75
8	MP2A	Z	3.362	.75
9	MP2A	Mx	.001	.75
10	MP2A	X	0	2.75
11	MP2A	Z	16.244	2.75
12	MP2A	Mx	0	2.75
13	MP1A	X	0	2.75
14	MP1A	Z	16.244	2.75
15	MP1A	Mx	0	2.75
16	MP2A	X	0	.5
17	MP2A	Z	36.25	.5
18	MP2A	Mx	.027	.5
19	MP2A	X	0	4.5
20	MP2A	Z	36.25	4.5
21	MP2A	Mx	.027	4.5
22	MP2A	X	0	.5
23	MP2A	Z	36.25	.5
24	MP2A	Mx	-.027	.5
25	MP2A	X	0	4.5
26	MP2A	Z	36.25	4.5
27	MP2A	Mx	-.027	4.5
28	MP1A	X	0	.5
29	MP1A	Z	38.035	.5
30	MP1A	Mx	0	.5
31	MP1A	X	0	4.5
32	MP1A	Z	38.035	4.5
33	MP1A	Mx	0	4.5
34	MP4A	X	0	.5
35	MP4A	Z	38.035	.5
36	MP4A	Mx	0	.5
37	MP4A	X	0	4.5
38	MP4A	Z	38.035	4.5
39	MP4A	Mx	0	4.5
40	M13	X	0	1
41	M13	Z	33.39	1
42	M13	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	-8.255	1
2	MP3A	Z	14.299	1
3	MP3A	Mx	.004	1
4	MP3A	X	-8.255	4
5	MP3A	Z	14.299	4
6	MP3A	Mx	.004	4
7	MP2A	X	-1.492	.75
8	MP2A	Z	2.585	.75
9	MP2A	Mx	.001	.75
10	MP2A	X	-7.503	2.75
11	MP2A	Z	12.996	2.75
12	MP2A	Mx	-.004	2.75
13	MP1A	X	-7.392	2.75
14	MP1A	Z	12.804	2.75
15	MP1A	Mx	-.004	2.75



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
16	MP2A	X	-16.684	.5
17	MP2A	Z	28.898	.5
18	MP2A	Mx	.03	.5
19	MP2A	X	-16.684	4.5
20	MP2A	Z	28.898	4.5
21	MP2A	Mx	.03	4.5
22	MP2A	X	-16.684	.5
23	MP2A	Z	28.898	.5
24	MP2A	Mx	-.013	.5
25	MP2A	X	-16.684	4.5
26	MP2A	Z	28.898	4.5
27	MP2A	Mx	-.013	4.5
28	MP1A	X	-18.54	.5
29	MP1A	Z	32.113	.5
30	MP1A	Mx	.009	.5
31	MP1A	X	-18.54	4.5
32	MP1A	Z	32.113	4.5
33	MP1A	Mx	.009	4.5
34	MP4A	X	-18.54	.5
35	MP4A	Z	32.113	.5
36	MP4A	Mx	.009	.5
37	MP4A	X	-18.54	4.5
38	MP4A	Z	32.113	4.5
39	MP4A	Mx	.009	4.5
40	M13	X	-15.785	1
41	M13	Z	27.34	1
42	M13	Mx	.008	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP3A	X	-9.505	1
2	MP3A	Z	5.488	1
3	MP3A	Mx	.005	1
4	MP3A	X	-9.505	4
5	MP3A	Z	5.488	4
6	MP3A	Mx	.005	4
7	MP2A	X	-2.659	.75
8	MP2A	Z	1.535	.75
9	MP2A	Mx	.001	.75
10	MP2A	X	-10.854	2.75
11	MP2A	Z	6.267	2.75
12	MP2A	Mx	-.005	2.75
13	MP1A	X	-10.276	2.75
14	MP1A	Z	5.933	2.75
15	MP1A	Mx	-.005	2.75
16	MP2A	X	-23.907	.5
17	MP2A	Z	13.803	.5
18	MP2A	Mx	.022	.5
19	MP2A	X	-23.907	4.5
20	MP2A	Z	13.803	4.5
21	MP2A	Mx	.022	4.5
22	MP2A	X	-23.907	.5
23	MP2A	Z	13.803	.5
24	MP2A	Mx	.002	.5
25	MP2A	X	-23.907	4.5
26	MP2A	Z	13.803	4.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
27	MP2A	Mx	.002	4.5
28	MP1A	X	-30.459	.5
29	MP1A	Z	17.586	.5
30	MP1A	Mx	.015	.5
31	MP1A	X	-30.459	4.5
32	MP1A	Z	17.586	4.5
33	MP1A	Mx	.015	4.5
34	MP4A	X	-30.459	.5
35	MP4A	Z	17.586	.5
36	MP4A	Mx	.015	.5
37	MP4A	X	-30.459	4.5
38	MP4A	Z	17.586	4.5
39	MP4A	Mx	.015	4.5
40	M13	X	-24.186	1
41	M13	Z	13.964	1
42	M13	Mx	.012	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP3A	X	-8.208	1
2	MP3A	Z	0	1
3	MP3A	Mx	.004	1
4	MP3A	X	-8.208	4
5	MP3A	Z	0	4
6	MP3A	Mx	.004	4
7	MP2A	X	-3.533	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	.001	.75
10	MP2A	X	-11.297	2.75
11	MP2A	Z	0	2.75
12	MP2A	Mx	-.006	2.75
13	MP1A	X	-10.407	2.75
14	MP1A	Z	0	2.75
15	MP1A	Mx	-.005	2.75
16	MP2A	X	-24.724	.5
17	MP2A	Z	0	.5
18	MP2A	Mx	.012	.5
19	MP2A	X	-24.724	4.5
20	MP2A	Z	0	4.5
21	MP2A	Mx	.012	4.5
22	MP2A	X	-24.724	.5
23	MP2A	Z	0	.5
24	MP2A	Mx	.012	.5
25	MP2A	X	-24.724	4.5
26	MP2A	Z	0	4.5
27	MP2A	Mx	.012	4.5
28	MP1A	X	-34.216	.5
29	MP1A	Z	0	.5
30	MP1A	Mx	.017	.5
31	MP1A	X	-34.216	4.5
32	MP1A	Z	0	4.5
33	MP1A	Mx	.017	4.5
34	MP4A	X	-34.216	.5
35	MP4A	Z	0	.5
36	MP4A	Mx	.017	.5
37	MP4A	X	-34.216	4.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
38	MP4A	Z	0	4.5
39	MP4A	Mx	.017	4.5
40	M13	X	-26.108	1
41	M13	Z	0	1
42	M13	Mx	.013	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP3A	X	-9.505	1
2	MP3A	Z	-5.488	1
3	MP3A	Mx	.005	1
4	MP3A	X	-9.505	4
5	MP3A	Z	-5.488	4
6	MP3A	Mx	.005	4
7	MP2A	X	-3.386	.75
8	MP2A	Z	-1.955	.75
9	MP2A	Mx	.000339	.75
10	MP2A	X	-10.854	2.75
11	MP2A	Z	-6.267	2.75
12	MP2A	Mx	-.005	2.75
13	MP1A	X	-10.276	2.75
14	MP1A	Z	-5.933	2.75
15	MP1A	Mx	-.005	2.75
16	MP2A	X	-23.907	.5
17	MP2A	Z	-13.803	.5
18	MP2A	Mx	.002	.5
19	MP2A	X	-23.907	4.5
20	MP2A	Z	-13.803	4.5
21	MP2A	Mx	.002	4.5
22	MP2A	X	-23.907	.5
23	MP2A	Z	-13.803	.5
24	MP2A	Mx	.022	.5
25	MP2A	X	-23.907	4.5
26	MP2A	Z	-13.803	4.5
27	MP2A	Mx	.022	4.5
28	MP1A	X	-30.459	.5
29	MP1A	Z	-17.586	.5
30	MP1A	Mx	.015	.5
31	MP1A	X	-30.459	4.5
32	MP1A	Z	-17.586	4.5
33	MP1A	Mx	.015	4.5
34	MP4A	X	-30.459	.5
35	MP4A	Z	-17.586	.5
36	MP4A	Mx	.015	.5
37	MP4A	X	-30.459	4.5
38	MP4A	Z	-17.586	4.5
39	MP4A	Mx	.015	4.5
40	M13	X	-24.186	1
41	M13	Z	-13.964	1
42	M13	Mx	.012	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP3A	X	-8.255	1
2	MP3A	Z	-14.299	1
3	MP3A	Mx	.004	1



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
4	MP3A	X	-8.255	4
5	MP3A	Z	-14.299	4
6	MP3A	Mx	.004	4
7	MP2A	X	-1.912	.75
8	MP2A	Z	-3.312	.75
9	MP2A	Mx	-.000654	.75
10	MP2A	X	-7.503	2.75
11	MP2A	Z	-12.996	2.75
12	MP2A	Mx	-.004	2.75
13	MP1A	X	-7.392	2.75
14	MP1A	Z	-12.804	2.75
15	MP1A	Mx	-.004	2.75
16	MP2A	X	-16.684	.5
17	MP2A	Z	-28.898	.5
18	MP2A	Mx	-.013	.5
19	MP2A	X	-16.684	4.5
20	MP2A	Z	-28.898	4.5
21	MP2A	Mx	-.013	4.5
22	MP2A	X	-16.684	.5
23	MP2A	Z	-28.898	.5
24	MP2A	Mx	.03	.5
25	MP2A	X	-16.684	4.5
26	MP2A	Z	-28.898	4.5
27	MP2A	Mx	.03	4.5
28	MP1A	X	-18.54	.5
29	MP1A	Z	-32.113	.5
30	MP1A	Mx	.009	.5
31	MP1A	X	-18.54	4.5
32	MP1A	Z	-32.113	4.5
33	MP1A	Mx	.009	4.5
34	MP4A	X	-18.54	.5
35	MP4A	Z	-32.113	.5
36	MP4A	Mx	.009	.5
37	MP4A	X	-18.54	4.5
38	MP4A	Z	-32.113	4.5
39	MP4A	Mx	.009	4.5
40	M13	X	-15.785	1
41	M13	Z	-27.34	1
42	M13	Mx	.008	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP3A	X	0	1
2	MP3A	Z	-6.147	1
3	MP3A	Mx	0	1
4	MP3A	X	0	4
5	MP3A	Z	-6.147	4
6	MP3A	Mx	0	4
7	MP2A	X	0	.75
8	MP2A	Z	-.793	.75
9	MP2A	Mx	-.000304	.75
10	MP2A	X	0	2.75
11	MP2A	Z	-4.891	2.75
12	MP2A	Mx	0	2.75
13	MP1A	X	0	2.75
14	MP1A	Z	-4.891	2.75





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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
15	MP1A	Mx	0	2.75
16	MP2A	X	0	.5
17	MP2A	Z	-11.914	.5
18	MP2A	Mx	-.009	.5
19	MP2A	X	0	4.5
20	MP2A	Z	-11.914	4.5
21	MP2A	Mx	-.009	4.5
22	MP2A	X	0	.5
23	MP2A	Z	-11.914	.5
24	MP2A	Mx	.009	.5
25	MP2A	X	0	4.5
26	MP2A	Z	-11.914	4.5
27	MP2A	Mx	.009	4.5
28	MP1A	X	0	.5
29	MP1A	Z	-12.555	.5
30	MP1A	Mx	0	.5
31	MP1A	X	0	4.5
32	MP1A	Z	-12.555	4.5
33	MP1A	Mx	0	4.5
34	MP4A	X	0	.5
35	MP4A	Z	-12.555	.5
36	MP4A	Mx	0	.5
37	MP4A	X	0	4.5
38	MP4A	Z	-12.555	4.5
39	MP4A	Mx	0	4.5
40	M13	X	0	1
41	M13	Z	-10.619	1
42	M13	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
1	MP3A	X	2.606	1
2	MP3A	Z	-4.513	1
3	MP3A	Mx	-.001	1
4	MP3A	X	2.606	4
5	MP3A	Z	-4.513	4
6	MP3A	Mx	-.001	4
7	MP2A	X	.339	.75
8	MP2A	Z	-.588	.75
9	MP2A	Mx	-.000334	.75
10	MP2A	X	2.243	2.75
11	MP2A	Z	-3.885	2.75
12	MP2A	Mx	.001	2.75
13	MP1A	X	2.206	2.75
14	MP1A	Z	-3.821	2.75
15	MP1A	Mx	.001	2.75
16	MP2A	X	5.446	.5
17	MP2A	Z	-9.433	.5
18	MP2A	Mx	-.01	.5
19	MP2A	X	5.446	4.5
20	MP2A	Z	-9.433	4.5
21	MP2A	Mx	-.01	4.5
22	MP2A	X	5.446	.5
23	MP2A	Z	-9.433	.5
24	MP2A	Mx	.004	.5
25	MP2A	X	5.446	4.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
26	MP2A	Z	-9.433	4.5
27	MP2A	Mx	.004	4.5
28	MP1A	X	6.11	.5
29	MP1A	Z	-10.583	.5
30	MP1A	Mx	-.003	.5
31	MP1A	X	6.11	4.5
32	MP1A	Z	-10.583	4.5
33	MP1A	Mx	-.003	4.5
34	MP4A	X	6.11	.5
35	MP4A	Z	-10.583	.5
36	MP4A	Mx	-.003	.5
37	MP4A	X	6.11	4.5
38	MP4A	Z	-10.583	4.5
39	MP4A	Mx	-.003	4.5
40	M13	X	4.995	1
41	M13	Z	-8.652	1
42	M13	Mx	-.002	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	2.894	1
2	MP3A	Z	-1.671	1
3	MP3A	Mx	-.001	1
4	MP3A	X	2.894	4
5	MP3A	Z	-1.671	4
6	MP3A	Mx	-.001	4
7	MP2A	X	.61	.75
8	MP2A	Z	-.352	.75
9	MP2A	Mx	-.000331	.75
10	MP2A	X	3.183	2.75
11	MP2A	Z	-1.837	2.75
12	MP2A	Mx	.002	2.75
13	MP1A	X	2.991	2.75
14	MP1A	Z	-1.727	2.75
15	MP1A	Mx	.001	2.75
16	MP2A	X	7.662	.5
17	MP2A	Z	-4.424	.5
18	MP2A	Mx	-.007	.5
19	MP2A	X	7.662	4.5
20	MP2A	Z	-4.424	4.5
21	MP2A	Mx	-.007	4.5
22	MP2A	X	7.662	.5
23	MP2A	Z	-4.424	.5
24	MP2A	Mx	-.000513	.5
25	MP2A	X	7.662	4.5
26	MP2A	Z	-4.424	4.5
27	MP2A	Mx	-.000513	4.5
28	MP1A	X	10.002	.5
29	MP1A	Z	-5.775	.5
30	MP1A	Mx	-.005	.5
31	MP1A	X	10.002	4.5
32	MP1A	Z	-5.775	4.5
33	MP1A	Mx	-.005	4.5
34	MP4A	X	10.002	.5
35	MP4A	Z	-5.775	.5
36	MP4A	Mx	-.005	.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
37	MP4A	X	10.002	4.5
38	MP4A	Z	-5.775	4.5
39	MP4A	Mx	-.005	4.5
40	M13	X	7.561	1
41	M13	Z	-4.366	1
42	M13	Mx	-.004	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	2.406	1
2	MP3A	Z	0	1
3	MP3A	Mx	-.001	1
4	MP3A	X	2.406	4
5	MP3A	Z	0	4
6	MP3A	Mx	-.001	4
7	MP2A	X	.845	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	-.000272	.75
10	MP2A	X	3.27	2.75
11	MP2A	Z	0	2.75
12	MP2A	Mx	.002	2.75
13	MP1A	X	2.975	2.75
14	MP1A	Z	0	2.75
15	MP1A	Mx	.001	2.75
16	MP2A	X	7.825	.5
17	MP2A	Z	0	.5
18	MP2A	Mx	-.004	.5
19	MP2A	X	7.825	4.5
20	MP2A	Z	0	4.5
21	MP2A	Mx	-.004	4.5
22	MP2A	X	7.825	.5
23	MP2A	Z	0	.5
24	MP2A	Mx	-.004	.5
25	MP2A	X	7.825	4.5
26	MP2A	Z	0	4.5
27	MP2A	Mx	-.004	4.5
28	MP1A	X	11.214	.5
29	MP1A	Z	0	.5
30	MP1A	Mx	-.006	.5
31	MP1A	X	11.214	4.5
32	MP1A	Z	0	4.5
33	MP1A	Mx	-.006	4.5
34	MP4A	X	11.214	.5
35	MP4A	Z	0	.5
36	MP4A	Mx	-.006	.5
37	MP4A	X	11.214	4.5
38	MP4A	Z	0	4.5
39	MP4A	Mx	-.006	4.5
40	M13	X	8.102	1
41	M13	Z	0	1
42	M13	Mx	-.004	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP3A	X	2.894	1
2	MP3A	Z	1.671	1



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
3	MP3A	Mx	-.001	1
4	MP3A	X	2.894	4
5	MP3A	Z	1.671	4
6	MP3A	Mx	-.001	4
7	MP2A	X	.83	.75
8	MP2A	Z	.479	.75
9	MP2A	Mx	-8.3e-5	.75
10	MP2A	X	3.183	2.75
11	MP2A	Z	1.837	2.75
12	MP2A	Mx	.002	2.75
13	MP1A	X	2.991	2.75
14	MP1A	Z	1.727	2.75
15	MP1A	Mx	.001	2.75
16	MP2A	X	7.662	.5
17	MP2A	Z	4.424	.5
18	MP2A	Mx	-.000513	.5
19	MP2A	X	7.662	4.5
20	MP2A	Z	4.424	4.5
21	MP2A	Mx	-.000513	4.5
22	MP2A	X	7.662	.5
23	MP2A	Z	4.424	.5
24	MP2A	Mx	-.007	.5
25	MP2A	X	7.662	4.5
26	MP2A	Z	4.424	4.5
27	MP2A	Mx	-.007	4.5
28	MP1A	X	10.002	.5
29	MP1A	Z	5.775	.5
30	MP1A	Mx	-.005	.5
31	MP1A	X	10.002	4.5
32	MP1A	Z	5.775	4.5
33	MP1A	Mx	-.005	4.5
34	MP4A	X	10.002	.5
35	MP4A	Z	5.775	.5
36	MP4A	Mx	-.005	.5
37	MP4A	X	10.002	4.5
38	MP4A	Z	5.775	4.5
39	MP4A	Mx	-.005	4.5
40	M13	X	7.561	1
41	M13	Z	4.366	1
42	M13	Mx	-.004	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP3A	X	2.606	1
2	MP3A	Z	4.513	1
3	MP3A	Mx	-.001	1
4	MP3A	X	2.606	4
5	MP3A	Z	4.513	4
6	MP3A	Mx	-.001	4
7	MP2A	X	.466	.75
8	MP2A	Z	.808	.75
9	MP2A	Mx	.00016	.75
10	MP2A	X	2.243	2.75
11	MP2A	Z	3.885	2.75
12	MP2A	Mx	.001	2.75
13	MP1A	X	2.206	2.75



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
14	MP1A	Z	3.821	2.75
15	MP1A	Mx	.001	2.75
16	MP2A	X	5.446	.5
17	MP2A	Z	9.433	.5
18	MP2A	Mx	.004	.5
19	MP2A	X	5.446	4.5
20	MP2A	Z	9.433	4.5
21	MP2A	Mx	.004	4.5
22	MP2A	X	5.446	.5
23	MP2A	Z	9.433	.5
24	MP2A	Mx	-.01	.5
25	MP2A	X	5.446	4.5
26	MP2A	Z	9.433	4.5
27	MP2A	Mx	-.01	4.5
28	MP1A	X	6.11	.5
29	MP1A	Z	10.583	.5
30	MP1A	Mx	-.003	.5
31	MP1A	X	6.11	4.5
32	MP1A	Z	10.583	4.5
33	MP1A	Mx	-.003	4.5
34	MP4A	X	6.11	.5
35	MP4A	Z	10.583	.5
36	MP4A	Mx	-.003	.5
37	MP4A	X	6.11	4.5
38	MP4A	Z	10.583	4.5
39	MP4A	Mx	-.003	4.5
40	M13	X	4.995	1
41	M13	Z	8.652	1
42	M13	Mx	-.002	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP3A	X	0	1
2	MP3A	Z	6.147	1
3	MP3A	Mx	0	1
4	MP3A	X	0	4
5	MP3A	Z	6.147	4
6	MP3A	Mx	0	4
7	MP2A	X	0	.75
8	MP2A	Z	.793	.75
9	MP2A	Mx	.000304	.75
10	MP2A	X	0	2.75
11	MP2A	Z	4.891	2.75
12	MP2A	Mx	0	2.75
13	MP1A	X	0	2.75
14	MP1A	Z	4.891	2.75
15	MP1A	Mx	0	2.75
16	MP2A	X	0	.5
17	MP2A	Z	11.914	.5
18	MP2A	Mx	.009	.5
19	MP2A	X	0	4.5
20	MP2A	Z	11.914	4.5
21	MP2A	Mx	.009	4.5
22	MP2A	X	0	.5
23	MP2A	Z	11.914	.5
24	MP2A	Mx	-.009	.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
25	MP2A	X	0	4.5
26	MP2A	Z	11.914	4.5
27	MP2A	Mx	-.009	4.5
28	MP1A	X	0	.5
29	MP1A	Z	12.555	.5
30	MP1A	Mx	0	.5
31	MP1A	X	0	4.5
32	MP1A	Z	12.555	4.5
33	MP1A	Mx	0	4.5
34	MP4A	X	0	.5
35	MP4A	Z	12.555	.5
36	MP4A	Mx	0	.5
37	MP4A	X	0	4.5
38	MP4A	Z	12.555	4.5
39	MP4A	Mx	0	4.5
40	M13	X	0	1
41	M13	Z	10.619	1
42	M13	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP3A	X	-2.606	1
2	MP3A	Z	4.513	1
3	MP3A	Mx	.001	1
4	MP3A	X	-2.606	4
5	MP3A	Z	4.513	4
6	MP3A	Mx	.001	4
7	MP2A	X	-.339	.75
8	MP2A	Z	.588	.75
9	MP2A	Mx	.000334	.75
10	MP2A	X	-2.243	2.75
11	MP2A	Z	3.885	2.75
12	MP2A	Mx	-.001	2.75
13	MP1A	X	-2.206	2.75
14	MP1A	Z	3.821	2.75
15	MP1A	Mx	-.001	2.75
16	MP2A	X	-5.446	.5
17	MP2A	Z	9.433	.5
18	MP2A	Mx	.01	.5
19	MP2A	X	-5.446	4.5
20	MP2A	Z	9.433	4.5
21	MP2A	Mx	.01	4.5
22	MP2A	X	-5.446	.5
23	MP2A	Z	9.433	.5
24	MP2A	Mx	-.004	.5
25	MP2A	X	-5.446	4.5
26	MP2A	Z	9.433	4.5
27	MP2A	Mx	-.004	4.5
28	MP1A	X	-6.11	.5
29	MP1A	Z	10.583	.5
30	MP1A	Mx	.003	.5
31	MP1A	X	-6.11	4.5
32	MP1A	Z	10.583	4.5
33	MP1A	Mx	.003	4.5
34	MP4A	X	-6.11	.5
35	MP4A	Z	10.583	.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
36	MP4A	Mx	.003	.5
37	MP4A	X	-6.11	4.5
38	MP4A	Z	10.583	4.5
39	MP4A	Mx	.003	4.5
40	M13	X	-4.995	1
41	M13	Z	8.652	1
42	M13	Mx	.002	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP3A	X	-2.894	1
2	MP3A	Z	1.671	1
3	MP3A	Mx	.001	1
4	MP3A	X	-2.894	4
5	MP3A	Z	1.671	4
6	MP3A	Mx	.001	4
7	MP2A	X	-.61	.75
8	MP2A	Z	.352	.75
9	MP2A	Mx	.000331	.75
10	MP2A	X	-3.183	2.75
11	MP2A	Z	1.837	2.75
12	MP2A	Mx	-.002	2.75
13	MP1A	X	-2.991	2.75
14	MP1A	Z	1.727	2.75
15	MP1A	Mx	-.001	2.75
16	MP2A	X	-7.662	.5
17	MP2A	Z	4.424	.5
18	MP2A	Mx	.007	.5
19	MP2A	X	-7.662	4.5
20	MP2A	Z	4.424	4.5
21	MP2A	Mx	.007	4.5
22	MP2A	X	-7.662	.5
23	MP2A	Z	4.424	.5
24	MP2A	Mx	.000513	.5
25	MP2A	X	-7.662	4.5
26	MP2A	Z	4.424	4.5
27	MP2A	Mx	.000513	4.5
28	MP1A	X	-10.002	.5
29	MP1A	Z	5.775	.5
30	MP1A	Mx	.005	.5
31	MP1A	X	-10.002	4.5
32	MP1A	Z	5.775	4.5
33	MP1A	Mx	.005	4.5
34	MP4A	X	-10.002	.5
35	MP4A	Z	5.775	.5
36	MP4A	Mx	.005	.5
37	MP4A	X	-10.002	4.5
38	MP4A	Z	5.775	4.5
39	MP4A	Mx	.005	4.5
40	M13	X	-7.561	1
41	M13	Z	4.366	1
42	M13	Mx	.004	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP3A	X	-2.406	1



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
2	MP3A	Z	0	1
3	MP3A	Mx	.001	1
4	MP3A	X	-2.406	4
5	MP3A	Z	0	4
6	MP3A	Mx	.001	4
7	MP2A	X	-.845	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	.000272	.75
10	MP2A	X	-3.27	2.75
11	MP2A	Z	0	2.75
12	MP2A	Mx	-.002	2.75
13	MP1A	X	-2.975	2.75
14	MP1A	Z	0	2.75
15	MP1A	Mx	-.001	2.75
16	MP2A	X	-7.825	.5
17	MP2A	Z	0	.5
18	MP2A	Mx	.004	.5
19	MP2A	X	-7.825	4.5
20	MP2A	Z	0	4.5
21	MP2A	Mx	.004	4.5
22	MP2A	X	-7.825	.5
23	MP2A	Z	0	.5
24	MP2A	Mx	.004	.5
25	MP2A	X	-7.825	4.5
26	MP2A	Z	0	4.5
27	MP2A	Mx	.004	4.5
28	MP1A	X	-11.214	.5
29	MP1A	Z	0	.5
30	MP1A	Mx	.006	.5
31	MP1A	X	-11.214	4.5
32	MP1A	Z	0	4.5
33	MP1A	Mx	.006	4.5
34	MP4A	X	-11.214	.5
35	MP4A	Z	0	.5
36	MP4A	Mx	.006	.5
37	MP4A	X	-11.214	4.5
38	MP4A	Z	0	4.5
39	MP4A	Mx	.006	4.5
40	M13	X	-8.102	1
41	M13	Z	0	1
42	M13	Mx	.004	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP3A	X	-2.894	1
2	MP3A	Z	-1.671	1
3	MP3A	Mx	.001	1
4	MP3A	X	-2.894	4
5	MP3A	Z	-1.671	4
6	MP3A	Mx	.001	4
7	MP2A	X	-.83	.75
8	MP2A	Z	-.479	.75
9	MP2A	Mx	8.3e-5	.75
10	MP2A	X	-3.183	2.75
11	MP2A	Z	-1.837	2.75
12	MP2A	Mx	-.002	2.75





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
13	MP1A	X	-2.991	2.75
14	MP1A	Z	-1.727	2.75
15	MP1A	Mx	-.001	2.75
16	MP2A	X	-7.662	.5
17	MP2A	Z	-4.424	.5
18	MP2A	Mx	.000513	.5
19	MP2A	X	-7.662	4.5
20	MP2A	Z	-4.424	4.5
21	MP2A	Mx	.000513	4.5
22	MP2A	X	-7.662	.5
23	MP2A	Z	-4.424	.5
24	MP2A	Mx	.007	.5
25	MP2A	X	-7.662	4.5
26	MP2A	Z	-4.424	4.5
27	MP2A	Mx	.007	4.5
28	MP1A	X	-10.002	.5
29	MP1A	Z	-5.775	.5
30	MP1A	Mx	.005	.5
31	MP1A	X	-10.002	4.5
32	MP1A	Z	-5.775	4.5
33	MP1A	Mx	.005	4.5
34	MP4A	X	-10.002	.5
35	MP4A	Z	-5.775	.5
36	MP4A	Mx	.005	.5
37	MP4A	X	-10.002	4.5
38	MP4A	Z	-5.775	4.5
39	MP4A	Mx	.005	4.5
40	M13	X	-7.561	1
41	M13	Z	-4.366	1
42	M13	Mx	.004	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP3A	X	-2.606	1
2	MP3A	Z	-4.513	1
3	MP3A	Mx	.001	1
4	MP3A	X	-2.606	4
5	MP3A	Z	-4.513	4
6	MP3A	Mx	.001	4
7	MP2A	X	-.466	.75
8	MP2A	Z	-.808	.75
9	MP2A	Mx	-.00016	.75
10	MP2A	X	-2.243	2.75
11	MP2A	Z	-3.885	2.75
12	MP2A	Mx	-.001	2.75
13	MP1A	X	-2.206	2.75
14	MP1A	Z	-3.821	2.75
15	MP1A	Mx	-.001	2.75
16	MP2A	X	-5.446	.5
17	MP2A	Z	-9.433	.5
18	MP2A	Mx	-.004	.5
19	MP2A	X	-5.446	4.5
20	MP2A	Z	-9.433	4.5
21	MP2A	Mx	-.004	4.5
22	MP2A	X	-5.446	.5
23	MP2A	Z	-9.433	.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
24	MP2A	Mx	.01	.5
25	MP2A	X	-5.446	4.5
26	MP2A	Z	-9.433	4.5
27	MP2A	Mx	.01	4.5
28	MP1A	X	-6.11	.5
29	MP1A	Z	-10.583	.5
30	MP1A	Mx	.003	.5
31	MP1A	X	-6.11	4.5
32	MP1A	Z	-10.583	4.5
33	MP1A	Mx	.003	4.5
34	MP4A	X	-6.11	.5
35	MP4A	Z	-10.583	.5
36	MP4A	Mx	.003	.5
37	MP4A	X	-6.11	4.5
38	MP4A	Z	-10.583	4.5
39	MP4A	Mx	.003	4.5
40	M13	X	-4.995	1
41	M13	Z	-8.652	1
42	M13	Mx	.002	1

**Member Point Loads (BLC 77 : Lm1)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M5	Y	-500	%96

**Member Point Loads (BLC 78 : Lm2)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M5	Y	-500	%59.5

**Member Point Loads (BLC 79 : Lv1)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M5	Y	-250	%50

**Member Point Loads (BLC 80 : Lv2)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M5	Y	-250	0

**Member Distributed Loads (BLC 40 : Structure Di)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft.%]	End Location[ft.%]
1	M3	Y	-9.551	-9.551	0	%100
2	M4	Y	-7.927	-7.927	0	%100
3	M5	Y	-6.524	-6.524	0	%100
4	MP1A	Y	-4.945	-4.945	0	%100
5	MP4A	Y	-4.945	-4.945	0	%100
6	MP3A	Y	-4.945	-4.945	0	%100
7	MP2A	Y	-5.647	-5.647	0	%100
8	M13	Y	-4.945	-4.945	0	%100
9	M15	Y	-6.524	-6.524	0	%100
10	M21	Y	-7.566	-7.566	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft.%]	End Location[ft.%]
1	M3	X	0	0	0	%100
2	M3	Z	0	0	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
3	M4	X	0	0	0	%100
4	M4	Z	-10.502	-10.502	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	-14.754	-14.754	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-10.785	-10.785	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	-10.785	-10.785	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	-10.785	-10.785	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	-13.055	-13.055	0	%100
15	M13	X	0	0	0	%100
16	M13	Z	-8.819	-8.819	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	-14.754	-14.754	0	%100
19	M21	X	0	0	0	%100
20	M21	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M3	X	2.035	2.035	0	%100
2	M3	Z	-3.524	-3.524	0	%100
3	M4	X	5.251	5.251	0	%100
4	M4	Z	-9.095	-9.095	0	%100
5	M5	X	5.533	5.533	0	%100
6	M5	Z	-9.583	-9.583	0	%100
7	MP1A	X	5.392	5.392	0	%100
8	MP1A	Z	-9.34	-9.34	0	%100
9	MP4A	X	5.392	5.392	0	%100
10	MP4A	Z	-9.34	-9.34	0	%100
11	MP3A	X	5.392	5.392	0	%100
12	MP3A	Z	-9.34	-9.34	0	%100
13	MP2A	X	6.528	6.528	0	%100
14	MP2A	Z	-11.306	-11.306	0	%100
15	M13	X	4.41	4.41	0	%100
16	M13	Z	-7.638	-7.638	0	%100
17	M15	X	5.533	5.533	0	%100
18	M15	Z	-9.583	-9.583	0	%100
19	M21	X	1.524	1.524	0	%100
20	M21	Z	-2.639	-2.639	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M3	X	10.573	10.573	0	%100
2	M3	Z	-6.104	-6.104	0	%100
3	M4	X	9.095	9.095	0	%100
4	M4	Z	-5.251	-5.251	0	%100
5	M5	X	3.194	3.194	0	%100
6	M5	Z	-1.844	-1.844	0	%100
7	MP1A	X	9.34	9.34	0	%100
8	MP1A	Z	-5.392	-5.392	0	%100
9	MP4A	X	9.34	9.34	0	%100
10	MP4A	Z	-5.392	-5.392	0	%100
11	MP3A	X	9.34	9.34	0	%100
12	MP3A	Z	-5.392	-5.392	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft,F...	Start Location[ft.%,]	End Location[ft.%,]
13	MP2A	X	11.306	11.306	0	%100
14	MP2A	Z	-6.528	-6.528	0	%100
15	M13	X	7.638	7.638	0	%100
16	M13	Z	-4.41	-4.41	0	%100
17	M15	X	3.194	3.194	0	%100
18	M15	Z	-1.844	-1.844	0	%100
19	M21	X	7.917	7.917	0	%100
20	M21	Z	-4.571	-4.571	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft,F...	Start Location[ft.%,]	End Location[ft.%,]
1	M3	X	16.278	16.278	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	10.502	10.502	0	%100
4	M4	Z	0	0	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	0	0	0	%100
7	MP1A	X	10.785	10.785	0	%100
8	MP1A	Z	0	0	0	%100
9	MP4A	X	10.785	10.785	0	%100
10	MP4A	Z	0	0	0	%100
11	MP3A	X	10.785	10.785	0	%100
12	MP3A	Z	0	0	0	%100
13	MP2A	X	13.055	13.055	0	%100
14	MP2A	Z	0	0	0	%100
15	M13	X	8.819	8.819	0	%100
16	M13	Z	0	0	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	0	0	0	%100
19	M21	X	12.189	12.189	0	%100
20	M21	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft,F...	Start Location[ft.%,]	End Location[ft.%,]
1	M3	X	10.573	10.573	0	%100
2	M3	Z	6.104	6.104	0	%100
3	M4	X	9.095	9.095	0	%100
4	M4	Z	5.251	5.251	0	%100
5	M5	X	3.194	3.194	0	%100
6	M5	Z	1.844	1.844	0	%100
7	MP1A	X	9.34	9.34	0	%100
8	MP1A	Z	5.392	5.392	0	%100
9	MP4A	X	9.34	9.34	0	%100
10	MP4A	Z	5.392	5.392	0	%100
11	MP3A	X	9.34	9.34	0	%100
12	MP3A	Z	5.392	5.392	0	%100
13	MP2A	X	11.306	11.306	0	%100
14	MP2A	Z	6.528	6.528	0	%100
15	M13	X	7.638	7.638	0	%100
16	M13	Z	4.41	4.41	0	%100
17	M15	X	3.194	3.194	0	%100
18	M15	Z	1.844	1.844	0	%100
19	M21	X	7.917	7.917	0	%100
20	M21	Z	4.571	4.571	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M3	X	2.035	2.035	0	%100
2	M3	Z	3.524	3.524	0	%100
3	M4	X	5.251	5.251	0	%100
4	M4	Z	9.095	9.095	0	%100
5	M5	X	5.533	5.533	0	%100
6	M5	Z	9.583	9.583	0	%100
7	MP1A	X	5.392	5.392	0	%100
8	MP1A	Z	9.34	9.34	0	%100
9	MP4A	X	5.392	5.392	0	%100
10	MP4A	Z	9.34	9.34	0	%100
11	MP3A	X	5.392	5.392	0	%100
12	MP3A	Z	9.34	9.34	0	%100
13	MP2A	X	6.528	6.528	0	%100
14	MP2A	Z	11.306	11.306	0	%100
15	M13	X	4.41	4.41	0	%100
16	M13	Z	7.638	7.638	0	%100
17	M15	X	5.533	5.533	0	%100
18	M15	Z	9.583	9.583	0	%100
19	M21	X	1.524	1.524	0	%100
20	M21	Z	2.639	2.639	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M3	X	0	0	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	10.502	10.502	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	14.754	14.754	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	10.785	10.785	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	10.785	10.785	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	10.785	10.785	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	13.055	13.055	0	%100
15	M13	X	0	0	0	%100
16	M13	Z	8.819	8.819	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	14.754	14.754	0	%100
19	M21	X	0	0	0	%100
20	M21	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M3	X	-2.035	-2.035	0	%100
2	M3	Z	3.524	3.524	0	%100
3	M4	X	-5.251	-5.251	0	%100
4	M4	Z	9.095	9.095	0	%100
5	M5	X	-5.533	-5.533	0	%100
6	M5	Z	9.583	9.583	0	%100
7	MP1A	X	-5.392	-5.392	0	%100
8	MP1A	Z	9.34	9.34	0	%100
9	MP4A	X	-5.392	-5.392	0	%100
10	MP4A	Z	9.34	9.34	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
11	MP3A	X	-5.392	-5.392	0	%100
12	MP3A	Z	9.34	9.34	0	%100
13	MP2A	X	-6.528	-6.528	0	%100
14	MP2A	Z	11.306	11.306	0	%100
15	M13	X	-4.41	-4.41	0	%100
16	M13	Z	7.638	7.638	0	%100
17	M15	X	-5.533	-5.533	0	%100
18	M15	Z	9.583	9.583	0	%100
19	M21	X	-1.524	-1.524	0	%100
20	M21	Z	2.639	2.639	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M3	X	-10.573	-10.573	0	%100
2	M3	Z	6.104	6.104	0	%100
3	M4	X	-9.095	-9.095	0	%100
4	M4	Z	5.251	5.251	0	%100
5	M5	X	-3.194	-3.194	0	%100
6	M5	Z	1.844	1.844	0	%100
7	MP1A	X	-9.34	-9.34	0	%100
8	MP1A	Z	5.392	5.392	0	%100
9	MP4A	X	-9.34	-9.34	0	%100
10	MP4A	Z	5.392	5.392	0	%100
11	MP3A	X	-9.34	-9.34	0	%100
12	MP3A	Z	5.392	5.392	0	%100
13	MP2A	X	-11.306	-11.306	0	%100
14	MP2A	Z	6.528	6.528	0	%100
15	M13	X	-7.638	-7.638	0	%100
16	M13	Z	4.41	4.41	0	%100
17	M15	X	-3.194	-3.194	0	%100
18	M15	Z	1.844	1.844	0	%100
19	M21	X	-7.917	-7.917	0	%100
20	M21	Z	4.571	4.571	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M3	X	-16.278	-16.278	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	-10.502	-10.502	0	%100
4	M4	Z	0	0	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	0	0	0	%100
7	MP1A	X	-10.785	-10.785	0	%100
8	MP1A	Z	0	0	0	%100
9	MP4A	X	-10.785	-10.785	0	%100
10	MP4A	Z	0	0	0	%100
11	MP3A	X	-10.785	-10.785	0	%100
12	MP3A	Z	0	0	0	%100
13	MP2A	X	-13.055	-13.055	0	%100
14	MP2A	Z	0	0	0	%100
15	M13	X	-8.819	-8.819	0	%100
16	M13	Z	0	0	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	0	0	0	%100
19	M21	X	-12.189	-12.189	0	%100
20	M21	Z	0	0	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M3	X	-10.573	-10.573	0	%100
2	M3	Z	-6.104	-6.104	0	%100
3	M4	X	-9.095	-9.095	0	%100
4	M4	Z	-5.251	-5.251	0	%100
5	M5	X	-3.194	-3.194	0	%100
6	M5	Z	-1.844	-1.844	0	%100
7	MP1A	X	-9.34	-9.34	0	%100
8	MP1A	Z	-5.392	-5.392	0	%100
9	MP4A	X	-9.34	-9.34	0	%100
10	MP4A	Z	-5.392	-5.392	0	%100
11	MP3A	X	-9.34	-9.34	0	%100
12	MP3A	Z	-5.392	-5.392	0	%100
13	MP2A	X	-11.306	-11.306	0	%100
14	MP2A	Z	-6.528	-6.528	0	%100
15	M13	X	-7.638	-7.638	0	%100
16	M13	Z	-4.41	-4.41	0	%100
17	M15	X	-3.194	-3.194	0	%100
18	M15	Z	-1.844	-1.844	0	%100
19	M21	X	-7.917	-7.917	0	%100
20	M21	Z	-4.571	-4.571	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M3	X	-2.035	-2.035	0	%100
2	M3	Z	-3.524	-3.524	0	%100
3	M4	X	-5.251	-5.251	0	%100
4	M4	Z	-9.095	-9.095	0	%100
5	M5	X	-5.533	-5.533	0	%100
6	M5	Z	-9.583	-9.583	0	%100
7	MP1A	X	-5.392	-5.392	0	%100
8	MP1A	Z	-9.34	-9.34	0	%100
9	MP4A	X	-5.392	-5.392	0	%100
10	MP4A	Z	-9.34	-9.34	0	%100
11	MP3A	X	-5.392	-5.392	0	%100
12	MP3A	Z	-9.34	-9.34	0	%100
13	MP2A	X	-6.528	-6.528	0	%100
14	MP2A	Z	-11.306	-11.306	0	%100
15	M13	X	-4.41	-4.41	0	%100
16	M13	Z	-7.638	-7.638	0	%100
17	M15	X	-5.533	-5.533	0	%100
18	M15	Z	-9.583	-9.583	0	%100
19	M21	X	-1.524	-1.524	0	%100
20	M21	Z	-2.639	-2.639	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M3	X	0	0	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	-3.056	-3.056	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	-4.212	-4.212	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-3.395	-3.395	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	-3.395	-3.395	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
11	MP3A	X	0	0	0	%100
12	MP3A	Z	-3.395	-3.395	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	-3.758	-3.758	0	%100
15	M13	X	0	0	0	%100
16	M13	Z	-2.792	-2.792	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	-4.212	-4.212	0	%100
19	M21	X	0	0	0	%100
20	M21	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M3	X	.515	.515	0	%100
2	M3	Z	-.892	-.892	0	%100
3	M4	X	1.528	1.528	0	%100
4	M4	Z	-2.646	-2.646	0	%100
5	M5	X	1.58	1.58	0	%100
6	M5	Z	-2.736	-2.736	0	%100
7	MP1A	X	1.697	1.697	0	%100
8	MP1A	Z	-2.94	-2.94	0	%100
9	MP4A	X	1.697	1.697	0	%100
10	MP4A	Z	-2.94	-2.94	0	%100
11	MP3A	X	1.697	1.697	0	%100
12	MP3A	Z	-2.94	-2.94	0	%100
13	MP2A	X	1.879	1.879	0	%100
14	MP2A	Z	-3.255	-3.255	0	%100
15	M13	X	1.396	1.396	0	%100
16	M13	Z	-2.418	-2.418	0	%100
17	M15	X	1.58	1.58	0	%100
18	M15	Z	-2.736	-2.736	0	%100
19	M21	X	.436	.436	0	%100
20	M21	Z	-.756	-.756	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M3	X	2.676	2.676	0	%100
2	M3	Z	-1.545	-1.545	0	%100
3	M4	X	2.646	2.646	0	%100
4	M4	Z	-1.528	-1.528	0	%100
5	M5	X	.912	.912	0	%100
6	M5	Z	-.527	-.527	0	%100
7	MP1A	X	2.94	2.94	0	%100
8	MP1A	Z	-1.697	-1.697	0	%100
9	MP4A	X	2.94	2.94	0	%100
10	MP4A	Z	-1.697	-1.697	0	%100
11	MP3A	X	2.94	2.94	0	%100
12	MP3A	Z	-1.697	-1.697	0	%100
13	MP2A	X	3.255	3.255	0	%100
14	MP2A	Z	-1.879	-1.879	0	%100
15	M13	X	2.418	2.418	0	%100
16	M13	Z	-1.396	-1.396	0	%100
17	M15	X	.912	.912	0	%100
18	M15	Z	-.527	-.527	0	%100
19	M21	X	2.267	2.267	0	%100
20	M21	Z	-1.309	-1.309	0	%100





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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M3	X	4.12	4.12	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	3.056	3.056	0	%100
4	M4	Z	0	0	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	0	0	0	%100
7	MP1A	X	3.395	3.395	0	%100
8	MP1A	Z	0	0	0	%100
9	MP4A	X	3.395	3.395	0	%100
10	MP4A	Z	0	0	0	%100
11	MP3A	X	3.395	3.395	0	%100
12	MP3A	Z	0	0	0	%100
13	MP2A	X	3.758	3.758	0	%100
14	MP2A	Z	0	0	0	%100
15	M13	X	2.792	2.792	0	%100
16	M13	Z	0	0	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	0	0	0	%100
19	M21	X	3.49	3.49	0	%100
20	M21	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M3	X	2.676	2.676	0	%100
2	M3	Z	1.545	1.545	0	%100
3	M4	X	2.646	2.646	0	%100
4	M4	Z	1.528	1.528	0	%100
5	M5	X	.912	.912	0	%100
6	M5	Z	.527	.527	0	%100
7	MP1A	X	2.94	2.94	0	%100
8	MP1A	Z	1.697	1.697	0	%100
9	MP4A	X	2.94	2.94	0	%100
10	MP4A	Z	1.697	1.697	0	%100
11	MP3A	X	2.94	2.94	0	%100
12	MP3A	Z	1.697	1.697	0	%100
13	MP2A	X	3.255	3.255	0	%100
14	MP2A	Z	1.879	1.879	0	%100
15	M13	X	2.418	2.418	0	%100
16	M13	Z	1.396	1.396	0	%100
17	M15	X	.912	.912	0	%100
18	M15	Z	.527	.527	0	%100
19	M21	X	2.267	2.267	0	%100
20	M21	Z	1.309	1.309	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M3	X	.515	.515	0	%100
2	M3	Z	.892	.892	0	%100
3	M4	X	1.528	1.528	0	%100
4	M4	Z	2.646	2.646	0	%100
5	M5	X	1.58	1.58	0	%100
6	M5	Z	2.736	2.736	0	%100
7	MP1A	X	1.697	1.697	0	%100
8	MP1A	Z	2.94	2.94	0	%100
9	MP4A	X	1.697	1.697	0	%100
10	MP4A	Z	2.94	2.94	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
11	MP3A	X	1.697	1.697	0	%100
12	MP3A	Z	2.94	2.94	0	%100
13	MP2A	X	1.879	1.879	0	%100
14	MP2A	Z	3.255	3.255	0	%100
15	M13	X	1.396	1.396	0	%100
16	M13	Z	2.418	2.418	0	%100
17	M15	X	1.58	1.58	0	%100
18	M15	Z	2.736	2.736	0	%100
19	M21	X	.436	.436	0	%100
20	M21	Z	.756	.756	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M3	X	0	0	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	3.056	3.056	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	4.212	4.212	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	3.395	3.395	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	3.395	3.395	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	3.395	3.395	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	3.758	3.758	0	%100
15	M13	X	0	0	0	%100
16	M13	Z	2.792	2.792	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	4.212	4.212	0	%100
19	M21	X	0	0	0	%100
20	M21	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M3	X	-.515	-.515	0	%100
2	M3	Z	.892	.892	0	%100
3	M4	X	-1.528	-1.528	0	%100
4	M4	Z	2.646	2.646	0	%100
5	M5	X	-1.58	-1.58	0	%100
6	M5	Z	2.736	2.736	0	%100
7	MP1A	X	-1.697	-1.697	0	%100
8	MP1A	Z	2.94	2.94	0	%100
9	MP4A	X	-1.697	-1.697	0	%100
10	MP4A	Z	2.94	2.94	0	%100
11	MP3A	X	-1.697	-1.697	0	%100
12	MP3A	Z	2.94	2.94	0	%100
13	MP2A	X	-1.879	-1.879	0	%100
14	MP2A	Z	3.255	3.255	0	%100
15	M13	X	-1.396	-1.396	0	%100
16	M13	Z	2.418	2.418	0	%100
17	M15	X	-1.58	-1.58	0	%100
18	M15	Z	2.736	2.736	0	%100
19	M21	X	-.436	-.436	0	%100
20	M21	Z	.756	.756	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M3	X	-2.676	-2.676	0	%100
2	M3	Z	1.545	1.545	0	%100
3	M4	X	-2.646	-2.646	0	%100
4	M4	Z	1.528	1.528	0	%100
5	M5	X	-.912	-.912	0	%100
6	M5	Z	.527	.527	0	%100
7	MP1A	X	-2.94	-2.94	0	%100
8	MP1A	Z	1.697	1.697	0	%100
9	MP4A	X	-2.94	-2.94	0	%100
10	MP4A	Z	1.697	1.697	0	%100
11	MP3A	X	-2.94	-2.94	0	%100
12	MP3A	Z	1.697	1.697	0	%100
13	MP2A	X	-3.255	-3.255	0	%100
14	MP2A	Z	1.879	1.879	0	%100
15	M13	X	-2.418	-2.418	0	%100
16	M13	Z	1.396	1.396	0	%100
17	M15	X	-.912	-.912	0	%100
18	M15	Z	.527	.527	0	%100
19	M21	X	-2.267	-2.267	0	%100
20	M21	Z	1.309	1.309	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M3	X	-4.12	-4.12	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	-3.056	-3.056	0	%100
4	M4	Z	0	0	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	0	0	0	%100
7	MP1A	X	-3.395	-3.395	0	%100
8	MP1A	Z	0	0	0	%100
9	MP4A	X	-3.395	-3.395	0	%100
10	MP4A	Z	0	0	0	%100
11	MP3A	X	-3.395	-3.395	0	%100
12	MP3A	Z	0	0	0	%100
13	MP2A	X	-3.758	-3.758	0	%100
14	MP2A	Z	0	0	0	%100
15	M13	X	-2.792	-2.792	0	%100
16	M13	Z	0	0	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	0	0	0	%100
19	M21	X	-3.49	-3.49	0	%100
20	M21	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M3	X	-2.676	-2.676	0	%100
2	M3	Z	-1.545	-1.545	0	%100
3	M4	X	-2.646	-2.646	0	%100
4	M4	Z	-1.528	-1.528	0	%100
5	M5	X	-.912	-.912	0	%100
6	M5	Z	-.527	-.527	0	%100
7	MP1A	X	-2.94	-2.94	0	%100
8	MP1A	Z	-1.697	-1.697	0	%100
9	MP4A	X	-2.94	-2.94	0	%100
10	MP4A	Z	-1.697	-1.697	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
11	MP3A	X	-2.94	-2.94	0	%100
12	MP3A	Z	-1.697	-1.697	0	%100
13	MP2A	X	-3.255	-3.255	0	%100
14	MP2A	Z	-1.879	-1.879	0	%100
15	M13	X	-2.418	-2.418	0	%100
16	M13	Z	-1.396	-1.396	0	%100
17	M15	X	-0.912	-0.912	0	%100
18	M15	Z	-0.527	-0.527	0	%100
19	M21	X	-2.267	-2.267	0	%100
20	M21	Z	-1.309	-1.309	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M3	X	-0.515	-0.515	0	%100
2	M3	Z	-0.892	-0.892	0	%100
3	M4	X	-1.528	-1.528	0	%100
4	M4	Z	-2.646	-2.646	0	%100
5	M5	X	-1.58	-1.58	0	%100
6	M5	Z	-2.736	-2.736	0	%100
7	MP1A	X	-1.697	-1.697	0	%100
8	MP1A	Z	-2.94	-2.94	0	%100
9	MP4A	X	-1.697	-1.697	0	%100
10	MP4A	Z	-2.94	-2.94	0	%100
11	MP3A	X	-1.697	-1.697	0	%100
12	MP3A	Z	-2.94	-2.94	0	%100
13	MP2A	X	-1.879	-1.879	0	%100
14	MP2A	Z	-3.255	-3.255	0	%100
15	M13	X	-1.396	-1.396	0	%100
16	M13	Z	-2.418	-2.418	0	%100
17	M15	X	-1.58	-1.58	0	%100
18	M15	Z	-2.736	-2.736	0	%100
19	M21	X	-0.436	-0.436	0	%100
20	M21	Z	-0.756	-0.756	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M3	X	0	0	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	-0.605	-0.605	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	-0.85	-0.85	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-0.621	-0.621	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	-0.621	-0.621	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	-0.621	-0.621	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	-0.752	-0.752	0	%100
15	M13	X	0	0	0	%100
16	M13	Z	-0.508	-0.508	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	-0.85	-0.85	0	%100
19	M21	X	0	0	0	%100
20	M21	Z	0	0	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M3	X	.117	.117	0	%100
2	M3	Z	-.203	-.203	0	%100
3	M4	X	.302	.302	0	%100
4	M4	Z	-.524	-.524	0	%100
5	M5	X	.319	.319	0	%100
6	M5	Z	-.552	-.552	0	%100
7	MP1A	X	.311	.311	0	%100
8	MP1A	Z	-.538	-.538	0	%100
9	MP4A	X	.311	.311	0	%100
10	MP4A	Z	-.538	-.538	0	%100
11	MP3A	X	.311	.311	0	%100
12	MP3A	Z	-.538	-.538	0	%100
13	MP2A	X	.376	.376	0	%100
14	MP2A	Z	-.651	-.651	0	%100
15	M13	X	.254	.254	0	%100
16	M13	Z	-.44	-.44	0	%100
17	M15	X	.319	.319	0	%100
18	M15	Z	-.552	-.552	0	%100
19	M21	X	.088	.088	0	%100
20	M21	Z	-.152	-.152	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M3	X	.609	.609	0	%100
2	M3	Z	-.352	-.352	0	%100
3	M4	X	.524	.524	0	%100
4	M4	Z	-.302	-.302	0	%100
5	M5	X	.184	.184	0	%100
6	M5	Z	-.106	-.106	0	%100
7	MP1A	X	.538	.538	0	%100
8	MP1A	Z	-.311	-.311	0	%100
9	MP4A	X	.538	.538	0	%100
10	MP4A	Z	-.311	-.311	0	%100
11	MP3A	X	.538	.538	0	%100
12	MP3A	Z	-.311	-.311	0	%100
13	MP2A	X	.651	.651	0	%100
14	MP2A	Z	-.376	-.376	0	%100
15	M13	X	.44	.44	0	%100
16	M13	Z	-.254	-.254	0	%100
17	M15	X	.184	.184	0	%100
18	M15	Z	-.106	-.106	0	%100
19	M21	X	.456	.456	0	%100
20	M21	Z	-.263	-.263	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M3	X	.938	.938	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	.605	.605	0	%100
4	M4	Z	0	0	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	0	0	0	%100
7	MP1A	X	.621	.621	0	%100
8	MP1A	Z	0	0	0	%100
9	MP4A	X	.621	.621	0	%100
10	MP4A	Z	0	0	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
11	MP3A	X	.621	.621	0	%100
12	MP3A	Z	0	0	0	%100
13	MP2A	X	.752	.752	0	%100
14	MP2A	Z	0	0	0	%100
15	M13	X	.508	.508	0	%100
16	M13	Z	0	0	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	0	0	0	%100
19	M21	X	.702	.702	0	%100
20	M21	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M3	X	.609	.609	0	%100
2	M3	Z	.352	.352	0	%100
3	M4	X	.524	.524	0	%100
4	M4	Z	.302	.302	0	%100
5	M5	X	.184	.184	0	%100
6	M5	Z	.106	.106	0	%100
7	MP1A	X	.538	.538	0	%100
8	MP1A	Z	.311	.311	0	%100
9	MP4A	X	.538	.538	0	%100
10	MP4A	Z	.311	.311	0	%100
11	MP3A	X	.538	.538	0	%100
12	MP3A	Z	.311	.311	0	%100
13	MP2A	X	.651	.651	0	%100
14	MP2A	Z	.376	.376	0	%100
15	M13	X	.44	.44	0	%100
16	M13	Z	.254	.254	0	%100
17	M15	X	.184	.184	0	%100
18	M15	Z	.106	.106	0	%100
19	M21	X	.456	.456	0	%100
20	M21	Z	.263	.263	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M3	X	.117	.117	0	%100
2	M3	Z	.203	.203	0	%100
3	M4	X	.302	.302	0	%100
4	M4	Z	.524	.524	0	%100
5	M5	X	.319	.319	0	%100
6	M5	Z	.552	.552	0	%100
7	MP1A	X	.311	.311	0	%100
8	MP1A	Z	.538	.538	0	%100
9	MP4A	X	.311	.311	0	%100
10	MP4A	Z	.538	.538	0	%100
11	MP3A	X	.311	.311	0	%100
12	MP3A	Z	.538	.538	0	%100
13	MP2A	X	.376	.376	0	%100
14	MP2A	Z	.651	.651	0	%100
15	M13	X	.254	.254	0	%100
16	M13	Z	.44	.44	0	%100
17	M15	X	.319	.319	0	%100
18	M15	Z	.552	.552	0	%100
19	M21	X	.088	.088	0	%100
20	M21	Z	.152	.152	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M3	X	0	0	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	0	0	0	%100
4	M4	Z	.605	.605	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	.85	.85	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	.621	.621	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	.621	.621	0	%100
11	MP3A	X	0	0	0	%100
12	MP3A	Z	.621	.621	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	.752	.752	0	%100
15	M13	X	0	0	0	%100
16	M13	Z	.508	.508	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	.85	.85	0	%100
19	M21	X	0	0	0	%100
20	M21	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M3	X	-.117	-.117	0	%100
2	M3	Z	.203	.203	0	%100
3	M4	X	-.302	-.302	0	%100
4	M4	Z	.524	.524	0	%100
5	M5	X	-.319	-.319	0	%100
6	M5	Z	.552	.552	0	%100
7	MP1A	X	-.311	-.311	0	%100
8	MP1A	Z	.538	.538	0	%100
9	MP4A	X	-.311	-.311	0	%100
10	MP4A	Z	.538	.538	0	%100
11	MP3A	X	-.311	-.311	0	%100
12	MP3A	Z	.538	.538	0	%100
13	MP2A	X	-.376	-.376	0	%100
14	MP2A	Z	.651	.651	0	%100
15	M13	X	-.254	-.254	0	%100
16	M13	Z	.44	.44	0	%100
17	M15	X	-.319	-.319	0	%100
18	M15	Z	.552	.552	0	%100
19	M21	X	-.088	-.088	0	%100
20	M21	Z	.152	.152	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M3	X	-.609	-.609	0	%100
2	M3	Z	.352	.352	0	%100
3	M4	X	-.524	-.524	0	%100
4	M4	Z	.302	.302	0	%100
5	M5	X	-.184	-.184	0	%100
6	M5	Z	.106	.106	0	%100
7	MP1A	X	-.538	-.538	0	%100
8	MP1A	Z	.311	.311	0	%100
9	MP4A	X	-.538	-.538	0	%100
10	MP4A	Z	.311	.311	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
11	MP3A	X	-.538	-.538	0	%100
12	MP3A	Z	.311	.311	0	%100
13	MP2A	X	-.651	-.651	0	%100
14	MP2A	Z	.376	.376	0	%100
15	M13	X	-.44	-.44	0	%100
16	M13	Z	.254	.254	0	%100
17	M15	X	-.184	-.184	0	%100
18	M15	Z	.106	.106	0	%100
19	M21	X	-.456	-.456	0	%100
20	M21	Z	.263	.263	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M3	X	-.938	-.938	0	%100
2	M3	Z	0	0	0	%100
3	M4	X	-.605	-.605	0	%100
4	M4	Z	0	0	0	%100
5	M5	X	0	0	0	%100
6	M5	Z	0	0	0	%100
7	MP1A	X	-.621	-.621	0	%100
8	MP1A	Z	0	0	0	%100
9	MP4A	X	-.621	-.621	0	%100
10	MP4A	Z	0	0	0	%100
11	MP3A	X	-.621	-.621	0	%100
12	MP3A	Z	0	0	0	%100
13	MP2A	X	-.752	-.752	0	%100
14	MP2A	Z	0	0	0	%100
15	M13	X	-.508	-.508	0	%100
16	M13	Z	0	0	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	0	0	0	%100
19	M21	X	-.702	-.702	0	%100
20	M21	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M3	X	-.609	-.609	0	%100
2	M3	Z	-.352	-.352	0	%100
3	M4	X	-.524	-.524	0	%100
4	M4	Z	-.302	-.302	0	%100
5	M5	X	-.184	-.184	0	%100
6	M5	Z	-.106	-.106	0	%100
7	MP1A	X	-.538	-.538	0	%100
8	MP1A	Z	-.311	-.311	0	%100
9	MP4A	X	-.538	-.538	0	%100
10	MP4A	Z	-.311	-.311	0	%100
11	MP3A	X	-.538	-.538	0	%100
12	MP3A	Z	-.311	-.311	0	%100
13	MP2A	X	-.651	-.651	0	%100
14	MP2A	Z	-.376	-.376	0	%100
15	M13	X	-.44	-.44	0	%100
16	M13	Z	-.254	-.254	0	%100
17	M15	X	-.184	-.184	0	%100
18	M15	Z	-.106	-.106	0	%100
19	M21	X	-.456	-.456	0	%100
20	M21	Z	-.263	-.263	0	%100





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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M3	X	-117	-117	0 %100
2	M3	Z	-203	-203	0 %100
3	M4	X	-302	-302	0 %100
4	M4	Z	-524	-524	0 %100
5	M5	X	-319	-319	0 %100
6	M5	Z	-552	-552	0 %100
7	MP1A	X	-311	-311	0 %100
8	MP1A	Z	-538	-538	0 %100
9	MP4A	X	-311	-311	0 %100
10	MP4A	Z	-538	-538	0 %100
11	MP3A	X	-311	-311	0 %100
12	MP3A	Z	-538	-538	0 %100
13	MP2A	X	-376	-376	0 %100
14	MP2A	Z	-651	-651	0 %100
15	M13	X	-254	-254	0 %100
16	M13	Z	-44	-44	0 %100
17	M15	X	-319	-319	0 %100
18	M15	Z	-552	-552	0 %100
19	M21	X	-088	-088	0 %100
20	M21	Z	-152	-152	0 %100

**Member Area Loads**

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

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

Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc.....	LC	phi*Pn...	phi*Pn...	phi*Mn...	phi*Mn.....	Eqn	
1	M3	HSS4X4X3	.607	0	9	.255	0 y	27	10067...	106812	12.662	12.662	2...H1-1b
2	M4	PIPE 4.0	.000	.625	5	.000	.625	5	92775...	93240	10.631	10.631	1...H1-1b
3	M5	PIPE 3.0	.496	6.667	1	.259	6.667	21	25150...	65205	5.749	5.749	1...H1-1b
4	MP1A	PIPE 2.0	.469	4	33	.085	1.5	27	20866...	32130	1.872	1.872	1...H1-1b
5	MP4A	PIPE 2.0	.235	4	50	.081	4	4	20866...	32130	1.872	1.872	2...H1-1b
6	MP3A	PIPE 2.0	.349	4	15	.110	4	16	20866...	32130	1.872	1.872	1...H1-1b
7	MP2A	PIPE 2.5	.394	4	21	.138	2.75	16	37773...	50715	3.596	3.596	2...H1-1b
8	M13	PIPE 2.0	.119	2	7	.059	2	4	28843...	32130	1.872	1.872	1 H1-1b
9	M15	PIPE 3.0	.574	6.667	7	.234	6.667	21	25150...	67068	5.913	5.913	1...H1-1b
10	M21	HSS3X3X4	.582	0	3	.189	0 y	27	89219...	101016	8.556	8.556	2...H1-1b

**Envelope Joint Reactions**

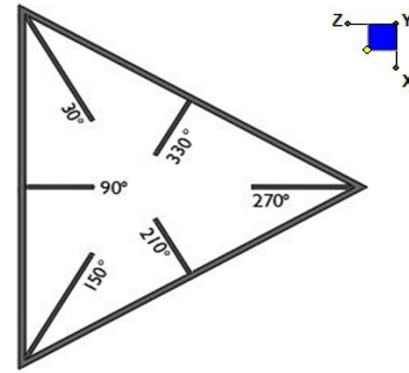
Joint	X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC		
1	N1	max	1603.554	10	1414.084	18	1913.231	1	-1.603	12	5.863	10	2.305	27
2		min	-1484.407	4	545.92	1	-936.07	7	-4.362	18	-5.436	3	-956	50
3	N38	max	521.41	11	878.28	24	1072.795	1	-.977	7	3.481	10	1.212	27
4		min	-663.286	29	318.851	7	-2049.926	7	-2.385	13	-3.921	3	-531	50
5	Totals:	max	2092.348	10	2269.481	15	2986.026	1						
6		min	-2092.342	4	993.596	9	-2985.996	7						



## I. Mount-to-Tower Connection Check - Proposed

### RISA Model Data

Nodes (labeled per RISA)	Orientation (per graphic of typical platform)
N38	90



TYPICAL PLATFORM

### Tower Connection Bolt Checks

Any moment resistance?:

Bolt Quantity per Reaction:

$d_x$  (in) (Delta X of typ. bolt config. sketch) :

$d_y$  (in) (Delta Y of typ. bolt config. sketch) :

Bolt Type:

Bolt Diameter (in):

Required Tensile Strength (kips):

Required Shear Strength (kips):

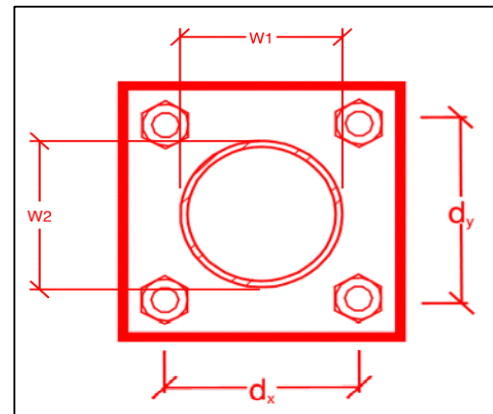
Tensile Strength / bolt (kips):

Shear Strength / bolt (kips):

Tensile Capacity Overall:

Shear Capacity Overall:

yes
4
6
6
A325N
0.625
16.6
5.8
20.7
12.4
<b>20.0%*</b>
<b>11.6%</b>



\*Note: Tension reduction not required if tension or shear capacity < 30%

### Tower Connection Plate and Weld Check

Connecting Standoff Member Shape:

Plate Width (in):

Plate Height (in):

W1 (in):

W2 (in):

Fy (ksi, plate):

$t_{plate}$  (in):

Weld Size (1/16 in):

$\Phi \cdot R_n$  (kip/in):

Required Weld Strength (kip/in):

Plate Bending Capacity:

Weld Capacity:

Rect
8.25
8.25
3
3
36
0.75
5
6.96
4.10
<b>40.3%</b>
<b>59.0%</b>

### Max Plate Bending Strengths

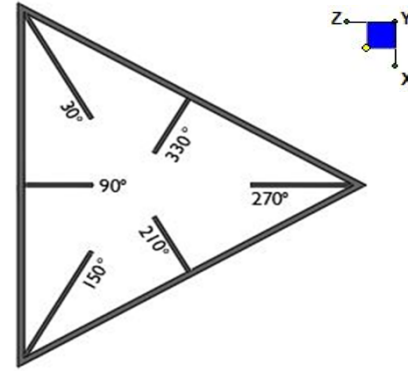
$M_{u_{xx}}$ (kip-in) :	3.2
$\Phi \cdot M_{n_{xx}}$ (kip-in) :	37.6
$M_{u_{yy}}$ (kip-in) :	12.0
$\Phi \cdot M_{n_{yy}}$ (kip-in) :	37.6



### I. Mount-to-Tower Connection Check - Existing

RISA Model Data

Nodes (labeled per RISA)	Orientation (per graphic of typical platform)
N1	90

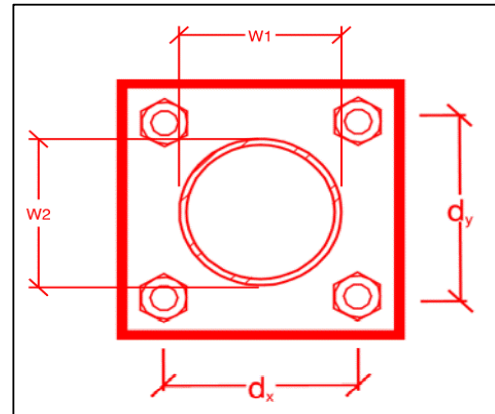


TYPICAL PLATFORM

Tower Connection Bolt Checks

Any moment resistance?:  
 Bolt Quantity per Reaction:  
 $d_x$  (in) (Delta X of typ. bolt config. sketch) :  
 $d_y$  (in) (Delta Y of typ. bolt config. sketch) :  
 Bolt Type:  
 Bolt Diameter (in):  
 Required Tensile Strength (kips):  
 Required Shear Strength (kips):  
 Tensile Strength / bolt (kips):  
 Shear Strength / bolt (kips):  
 Tensile Capacity Overall:  
 Shear Capacity Overall:

yes
4
6
6
A325N
0.5
25.0
10.4
13.3
8.0
47.1%*
32.8%



\*Note: Tension reduction not required if tension or shear capacity < 30%

Tower Connection Plate and Weld Check

Connecting Standoff Member Shape:  
 Plate Width (in):  
 Plate Height (in):  
 $W_1$  (in):  
 $W_2$  (in):  
 $F_y$  (ksi, plate):  
 $t_{plate}$  (in):  
 Weld Size (1/16 in):  
 $\Phi * R_n$  (kip/in):  
 Required Weld Strength (kip/in):  
 Plate Bending Capacity:  
 Weld Capacity:

Rect
8
8
4
4
36
0.625
4
5.57
3.50
61.1%
62.8%

Max Plate Bending Strengths

$M_{u_{xx}}$ (kip-in) :	3.5
$\Phi * M_{n_{xx}}$ (kip-in) :	25.3
$M_{u_{yy}}$ (kip-in) :	11.9
$\Phi * M_{n_{yy}}$ (kip-in) :	25.3

# Mount Desktop – Post Modification Inspection (PMI) Report Requirements

## Documents & Photos Required from Contractor – Mount Modification

---

**Purpose** – to provide Maser Consulting Connecticut the proper documentation in order to complete the required Mount Desktop review of the Post Modification Inspection Report.

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

### **Base Requirements:**

- Any special photos outside of the standard requirements will be indicated on the drawings
- Provide “as built drawings” showing contractor’s name, preparer’s signature, and date. Any deviations from the drawings (proposed modification) must be shown.
- Notation that all hardware was properly installed, and the existing hardware was inspected for any issues.
- Verification that loading is as communicated in the modification drawings. NOTE If loading is different than what is conveyed in the modification drawing contact Maser Consulting Connecticut immediately.
- Each photo should be time and date stamped
- Photos should be high resolution and submitted in a Zip File and should be organized in the file structure as depicted in Schedule A attached.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope.
- The photos in the file structure should be uploaded to <https://pmi.vzwsmart.com> as depicted on the drawings

### **Photo Requirements:**

- Base and “During Installation Photos”
  - Base pictures include
    - Photo of Gate Signs showing the tower owner, site name, and number
    - Photo of carrier shelter showing the carrier site name and number if available
    - Photos of the galvanizing compound and/or paint used (if applicable), clearly showing the label and name
  - “During Installation Photos if provided - must be placed only in this folder
- Photos taken at ground level
  - Overall tower structure before and after installation of the modifications
  - Photos of the appropriate mount before and after installation of the modifications; if the mounts are at different rad elevations, pictures must be provided for all elevations that the modifications were installed

- Photos taken at Mount Elevation
  - Photos showing each individual sector before and also after installation of modifications. Each entire sector must be in one photo to show in the inter-connection of members.
    - These photos should also certify that the placement and geometry of the equipment on the mount is as depicted on the sketch and table in the mount analysis
  - Close-up photos of each installed modification per the modification drawings; pictures should also include connection hardware (U-bolts, bolts, nuts, all-threaded rods, etc.)
  - Photos showing the measurements of the installed modification member sizes (i.e. lengths, widths, depths, diameters, thicknesses)
  - Photos showing the elevation or distances of the installed modifications from the appropriate reference locations shown in the modification drawings
  - Photos showing the installed modifications onto the tower with tape drop measurements (if applicable) (i.e. ring/collar mounts, tie-backs, V-bracing kits, etc.); if the existing mount elevation needs to be changed according to the modification drawings, a tape drop measurement shall be provided before the elevation change
  - Photos showing the safety climb wire rope above and below the mount prior to modification.
  - Photos showing the climbing facility and safety climb if present.

**Material Certification:**

- Materials utilized must be as per specification on the drawings or the equivalent as validated by Maser Consulting Connecticut.
  - If the drawings are as specified on the drawings
    - The contractor should provide the packing list or the materials utilized to perform the mount modification
  - If an equivalent is utilized
    - It is required that the Maser Consulting Connecticut certification of such is included in the contractor submission package. There may be an additional charge for this certification if the equivalent submission doesn't meet specifications as prescribed in the drawings.
- The contractor must certify that the materials meet these specifications by one of these methods.


















The Material utilized was as specified on the Maser Consulting Connecticut Mount Modification Drawings and included in the Material certification folder is a packing list or invoice for these materials

The material utilized was an "equivalent" and included as part of the contractor submission is the Maser Consulting Connecticut certification, invoices, or specifications validating accepted status

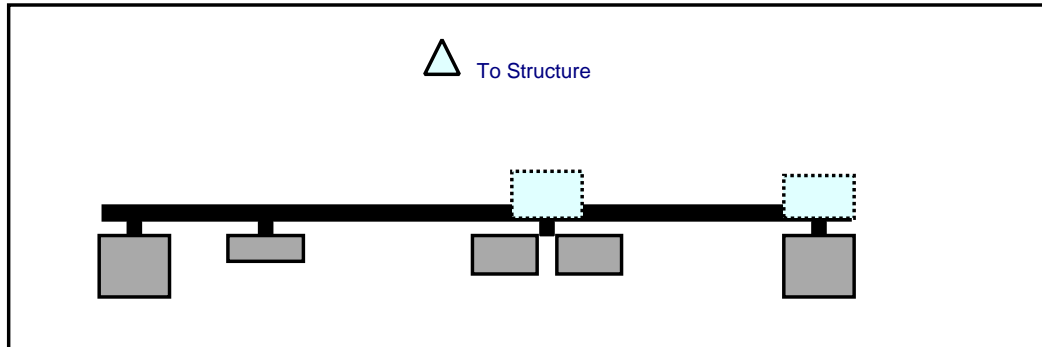
Certifying Individual: Company \_\_\_\_\_  
Name \_\_\_\_\_  
Signature \_\_\_\_\_



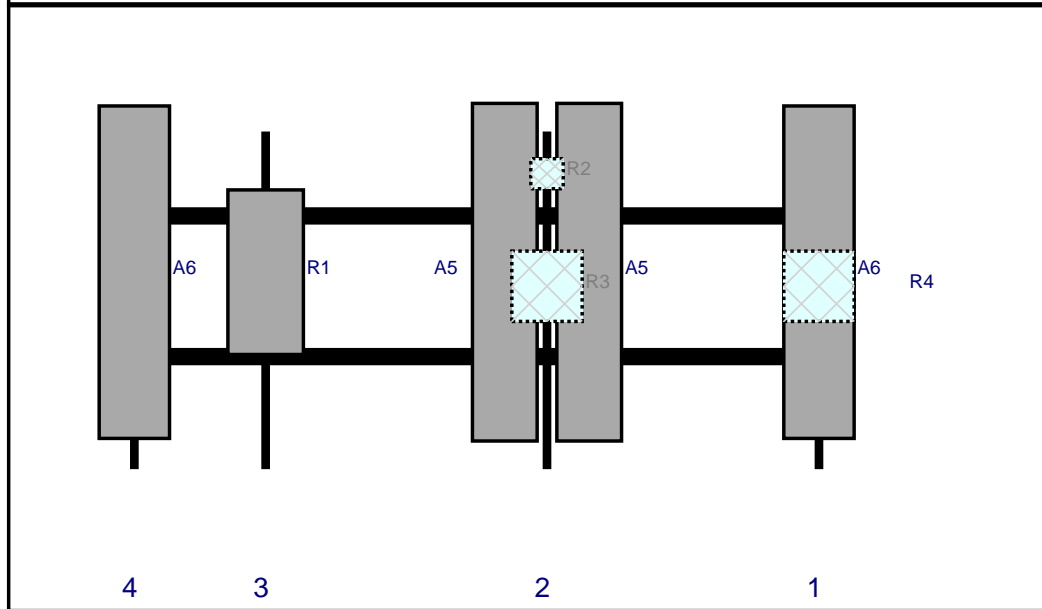
## **Schedule A – Photo & Document File Structure**

-  VzW Site Number / Name
  -  Base & “During Installation” Photos
  -  Pre-Installation Photos
    -  Alpha
    -  Beta
    -  Gamma
    -  Ground Level
    -  Tape Drop
  -  Post-Installation Photos
    -  Alpha
    -  Beta
    -  Gamma
    -  Ground Level
    -  Tape Drop
    -  Photos of climbing facility and safety climb – If Present
-  Certifications – Submission of this document including certifications
-  Specific Required Additional Photos

Plan View



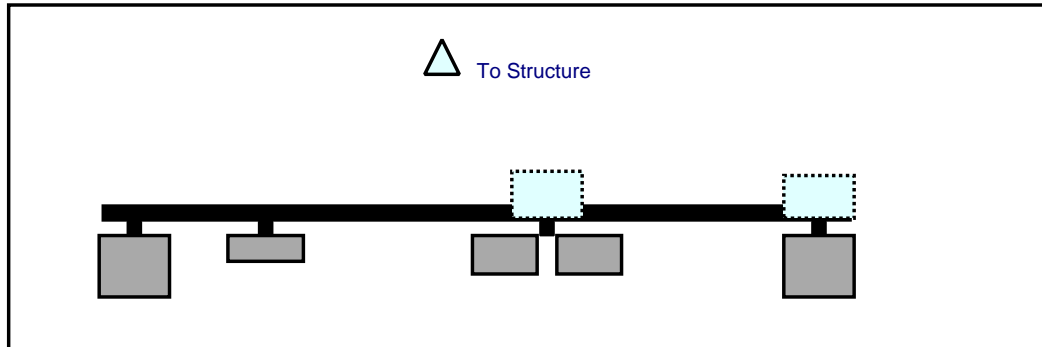
Front View  
Looking at Structure



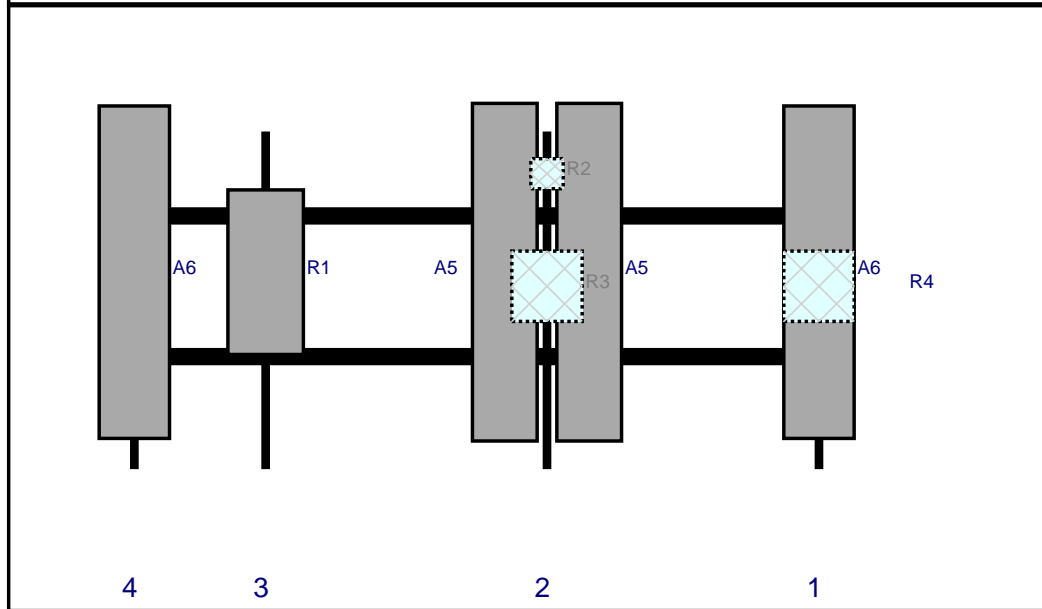
Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A6	LPA-80063/6CF	70.9	15	153	1	a	Front	30	0	Retained	
R4	RF4440d-13A	15	15	153	1	a	Behind	33	0	Added	
A5	JAHH-65B-R3B	72	13.8	95	2	a	Front	30	9	Retained	
A5	JAHH-65B-R3B	72	13.8	95	2	b	Front	30	-9	Retained	
R2	CBC78T-DS-43	6.4	6.9	95	2	a	Behind	9	0	Added	
R3	RF4439d-25A	15	15	95	2	a	Behind	33	0	Added	
R1	MT6407-77A	35.1	16.1	35	3	a	Front	30	0	Added	
A6	LPA-80063/6CF	70.9	15	7	4	a	Front	30	0	Retained	



Plan View

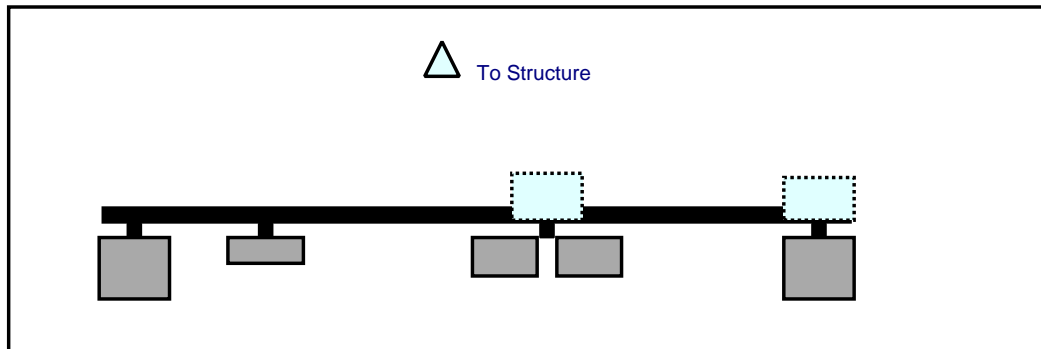


Front View  
Looking at Structure

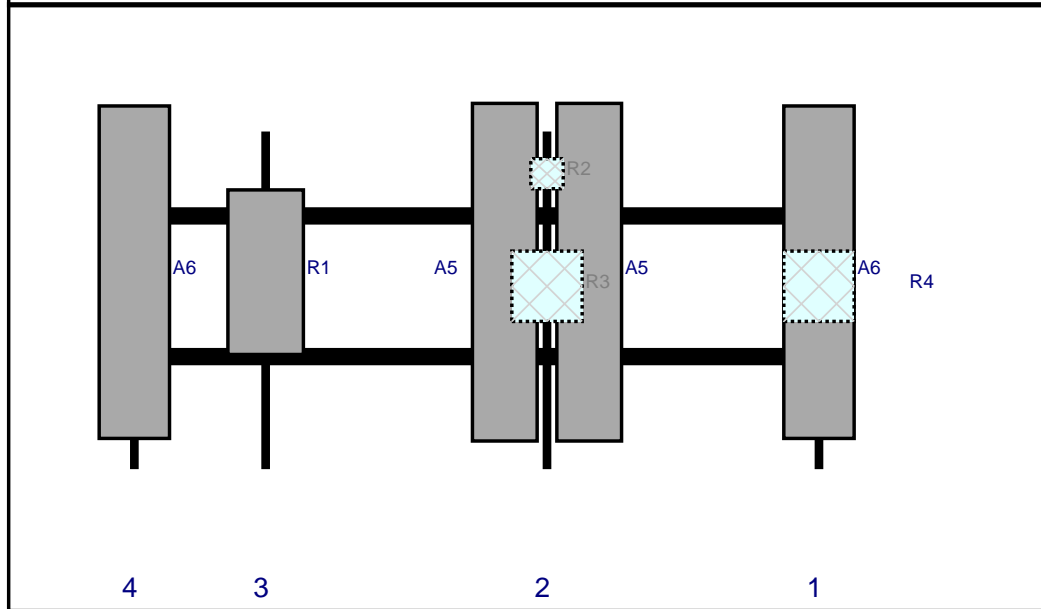


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A6	LPA-80063/6CF	70.9	15	153	1	a	Front	30	0	Retained	
R4	RF4440d-13A	15	15	153	1	a	Behind	33	0	Added	
A5	JAHH-65B-R3B	72	13.8	95	2	a	Front	30	9	Retained	
A5	JAHH-65B-R3B	72	13.8	95	2	b	Front	30	-9	Retained	
R2	CBC78T-DS-43	6.4	6.9	95	2	a	Behind	9	0	Added	
R3	RF4439d-25A	15	15	95	2	a	Behind	33	0	Added	
A6	LPA-80063/6CF	70.9	15	7	4	a	Front	30	0	Retained	
R1	MT6407-77A	35.1	16.1	35	3	a	Front	30	0	Added	

Plan View



Front View  
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A5	JAHH-65B-R3B	72	13.8	95	2	a	Front	30	9	Retained	
A5	JAHH-65B-R3B	72	13.8	95	2	b	Front	30	-9	Retained	
R2	CBC78T-DS-43	6.4	6.9	95	2	a	Behind	9	0	Added	
R3	RF4439d-25A	15	15	95	2	a	Behind	33	0	Added	
R1	MT6407-77A	35.1	16.1	35	3	a	Front	30	0	Added	
A6	LPA-80063/6CF	70.9	15	7	4	a	Front	30	0	Retained	
A6	LPA-80063/6CF	70.9	15	153	1	a	Front	30	0	Retained	
R4	RF4440d-13A	15	15	153	1	a	Behind	33	0	Added	

## **Site Information**

Site ID: 467767-VZW / PRESTON CITY CT  
Site Name: PRESTON CITY CT  
Carrier Name: Verizon Wireless  
Address: 101 Pierce Road  
Preston City, Connecticut 06365  
New London County  
Latitude: 41.538183°  
Longitude: -71.951667°

## **Structure Information**

Tower Type: 155-Ft Monopole  
Mount Type: 13.33-Ft T-Arm

To Whom It May Concern,

We respectfully submit the above referenced Antenna Mount Structural Analysis report in conformance with ANSI/TIA-222-H, Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures.

The 2015 International Building Code states that, in Section 3108, telecommunication towers shall be designed and constructed in accordance with the provisions of TIA-222. The TIA-222-H is the latest revision of the TIA-222 Standard, effective as of January 01, 2018.

As with all ANSI standards and engineering best practice is to apply the most current revision of the standard. This ensures the engineer is applying all updates. As an example, the TIA-222-H standard includes updates to bring it in line with the latest AISC and ACI standards and it also incorporates the latest wind speed map by ASCE 7 based on updated studies of the wind data.

The TIA-222-H standard clarifies these specific requirements for the antenna mount analysis such as modeling method, seismic analysis, 30-degree increment wind direction and maintenance loading. Therefore, it is our opinion that TIA-222-H is the most appropriate standard for antenna mount structural analysis and is acceptable for use at this site to ensure the engineer is taking into account the most current engineering standard available.

Sincerely,

Justin Linette, PE  
Technical Specialist

# Exhibit F

## **Power Density/RF Emissions Report**

**Site Name: PRESTON CITY CT**  
**Cumulative Power Density**

Operator	Operating Frequency	Number of Trans.	ERP Per Trans.	Total ERP	Distance to Target	Calculated Power Density
	(MHz)		(watts)	(watts)	(feet)	(mW/cm <sup>2</sup> )
VZW 700	751	4	609	2437	140	0.0045
VZW CDMA	877.26	2	258	515	140	0.0009
VZW Cellular	874	4	609	2437	140	0.0045
VZW PCS	1977.5	4	1428	5713	140	0.0105
VZW AWS	2120	4	1530	6122	140	0.0112
VZW CBAND	3730.08	4	6531	26125	140	0.0479

**Total Percentage of Maximum Permissible Exposure**

\*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Part 1 based on NCRP Report 86, 1986 and generally on ANSI  
 \*\*Calculation includes a -10 dB Off Beam Antenna Pattern Adjustment pursuant to Attachments B and C of the Siting Council

MHz = Megahertz  
 mW/cm<sup>2</sup> = milliwatts per square centimeter  
 ERP = Effective Radiated Power

Absolute worst case maximum values used.

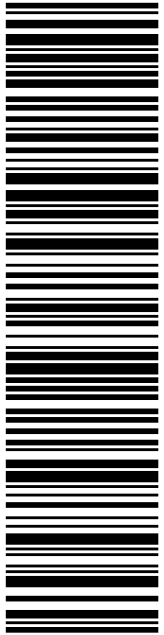
Maximum Permissible Exposure*	Fraction of MPE
(mW/cm <sup>2</sup> )	(%)
0.5007	0.89%
0.5848	0.16%
0.5827	0.77%
1.0000	1.05%
1.0000	1.12%
1.0000	4.79%
	8.79%

/IEEE C95.1-1992

il's November 10, 2015 Memorandum for Exempt Modification filing:

# Exhibit F

## **Recipient Mailings**



**USPS TRACKING #**

**9405 5036 9930 0049 8611 97**

Electronic Rate Approved #038555749

**SHIP TO:**

SARAH SNELL  
1800 W PARK DR  
WESTBOROUGH MA 01581-3926

**P**

11/01/2021

USPS.com  
**US POSTAGE**  
Flat Rate Env  
\$8.70

9405 5036 9930 0049 8611 97 0087 0000 0010 1581

Mailed from 01566


**U.S. POSTAGE PAID**  
click-n-ship®

**PRIORITY MAIL 1-DAY™**

DEBORAH CHASE  
NORTHEAST SITE SOLUTIONS  
420 MAIN ST  
STE 1  
STURBRIDGE MA 01566-1359

Expected Delivery Date: 11/03/21  
Ref#: CR-876366  
**0006**

**C006**



**Click-N-Ship®**



Cut on dotted line.

### Instructions

1. Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.
2. Place your label so it does not wrap around the edge of the package.
3. Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.
4. To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.
5. Mail your package on the "Ship Date" you selected when creating this label.

### Click-N-Ship® Label Record

**USPS TRACKING # :**  
**9405 5036 9930 0049 8611 97**

Trans. #: 547355310	Priority Mail® Postage: <b>\$8.70</b>
Print Date: 11/01/2021	Total: <b>\$8.70</b>
Ship Date: 11/01/2021	
Expected Delivery Date: 11/03/2021	

**From:** DEBORAH CHASE  
NORTHEAST SITE SOLUTIONS  
420 MAIN ST  
STE 1  
STURBRIDGE MA 01566-1359

Ref#: CR-876366


**To:** SARAH SNELL  
1800 W PARK DR  
WESTBOROUGH MA 01581-3926

\* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.



Thank you for shipping with the United States Postal Service!  
Check the status of your shipment on the USPS Tracking® page at [usps.com](https://usps.com)





**UNITED STATES  
POSTAL SERVICE®**

**Click-N-Ship®**

**P**

usps.com 9405 5036 9930 0049 8612 03 0087 0000 0010 6365  
**US POSTAGE**  
 Flat Rate Env  
**U.S. POSTAGE PAID**  
click-n-ship®


11/01/2021 Mailed from 01566

**PRIORITY MAIL 3-DAY™**

Expected Delivery Date: 11/06/21  
 Ref#: CR-876366  
**0006**

SHIP TO: SANDRA L ALLYN-GAUTHIER  
 FIRST SELECTWOMAN  
 389 ROUTE 2  
 PRESTON TOWN HALL  
 PRESTON CT 06365-8830

**USPS TRACKING #**



**9405 5036 9930 0049 8612 03**

Electronic Rate Approved #038555749



Cut on dotted line.

### Instructions

1. Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.
2. Place your label so it does not wrap around the edge of the package.
3. Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.
4. To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.
5. Mail your package on the "Ship Date" you selected when creating this label.

### Click-N-Ship® Label Record

**USPS TRACKING # :**  
**9405 5036 9930 0049 8612 03**

Trans. #: 547355310	Priority Mail® Postage: <b>\$8.70</b>
Print Date: 11/01/2021	Total: <b>\$8.70</b>
Ship Date: 11/01/2021	
Expected Delivery Date: 11/06/2021	

**From:** DEBORAH CHASE  
 NORTHEAST SITE SOLUTIONS  
 420 MAIN ST  
 STE 1  
 STURBRIDGE MA 01566-1359


Ref#: CR-876366

**To:** SANDRA L ALLYN-GAUTHIER  
 FIRST SELECTWOMAN  
 389 ROUTE 2  
 PRESTON TOWN HALL  
 PRESTON CT 06365-8830

\* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.



Thank you for shipping with the United States Postal Service!  
 Check the status of your shipment on the USPS Tracking® page at usps.com



**UNITED STATES  
POSTAL SERVICE®**

**Click-N-Ship®**

**P**

usps.com 9405 5036 9930 0049 8612 27 0087 0000 0010 6365  
**US POSTAGE**  
 Flat Rate Env  
**U.S. POSTAGE PAID**  
click-n-ship®

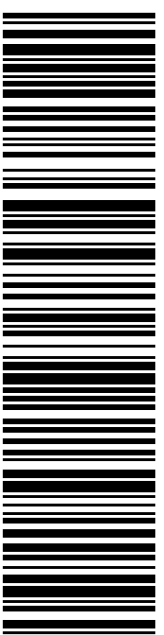
11/01/2021 Mailed from 01566

**PRIORITY MAIL 3-DAY™**

Expected Delivery Date: 11/06/21  
 Ref#: CR-876366  
**0006**

SHIP TO: JIM WEBER  
 BUILDING OFFICIAL  
 389 ROUTE 2  
 PRESTON TOWN HALL  
 PRESTON CT 06365-8830

**USPS TRACKING #**



**9405 5036 9930 0049 8612 27**

Electronic Rate Approved #038555749



Cut on dotted line.

### Instructions

1. Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.
2. Place your label so it does not wrap around the edge of the package.
3. Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.
4. To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.
5. Mail your package on the "Ship Date" you selected when creating this label.

### Click-N-Ship® Label Record

**USPS TRACKING # :**  
**9405 5036 9930 0049 8612 27**

Trans. #: 547355310	Priority Mail® Postage: <b>\$8.70</b>
Print Date: 11/01/2021	Total: <b>\$8.70</b>
Ship Date: 11/01/2021	
Expected Delivery Date: 11/06/2021	

**From:** DEBORAH CHASE  
 NORTHEAST SITE SOLUTIONS  
 420 MAIN ST  
 STE 1  
 STURBRIDGE MA 01566-1359

Ref#: CR-876366

**To:** JIM WEBER  
 BUILDING OFFICIAL  
 389 ROUTE 2  
 PRESTON TOWN HALL  
 PRESTON CT 06365-8830

\* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.



Thank you for shipping with the United States Postal Service!  
 Check the status of your shipment on the USPS Tracking® page at usps.com

874366




UNIONVILLE  
24 MILL ST  
UNIONVILLE, CT 06085-9998  
(800)275-8777

11/03/2021 12:49 PM

Product	Qty	Unit Price	Price
Prepaid Mail Westborough, MA 01581 Weight: 0 lb 2.00 oz Acceptance Date: Wed 11/03/2021 Tracking #: 9405 5036 9930 0049 8611 97	1		\$0.00
Prepaid Mail Preston, CT 06365 Weight: 0 lb 14.80 oz Acceptance Date: Wed 11/03/2021 Tracking #: 9405 5036 9930 0049 8612 03	1		\$0.00
Prepaid Mail Preston, CT 06365 Weight: 0 lb 14.70 oz Acceptance Date: Wed 11/03/2021 Tracking #: 9405 5036 9930 0049 8612 27	1		\$0.00
Prepaid Mail Preston, CT 06365 Weight: 0 lb 14.70 oz Acceptance Date: Wed 11/03/2021 Tracking #: 9405 5036 9930.0049 8612 41	1		\$0.00

Grand Total: \$0.00



**UNITED STATES  
POSTAL SERVICE®**

**Click-N-Ship®**

**P**

usps.com 9405 5036 9930 0049 8612 41 0087 0000 0010 6365  
**\$8.70**  
**US POSTAGE**  
 Flat Rate Env  
**U.S. POSTAGE PAID**  
Click-N-Ship®

11/01/2021 Mailed from 01566

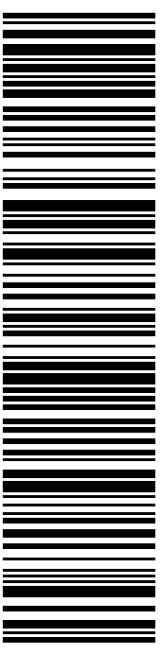
**PRIORITY MAIL 3-DAY™**

Expected Delivery Date: 11/06/21  
 Ref#: CR-876366  
**0006**

**R008**

SHIP TO:  
 PANUS FARM LLC  
 60 PIERCE RD  
 PRESTON CT 06365-8122

**USPS TRACKING #**



**9405 5036 9930 0049 8612 41**

Electronic Rate Approved #038555749



Cut on dotted line.

### Instructions

1. Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.
2. Place your label so it does not wrap around the edge of the package.
3. Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.
4. To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.
5. Mail your package on the "Ship Date" you selected when creating this label.

### Click-N-Ship® Label Record

**USPS TRACKING # :**  
**9405 5036 9930 0049 8612 41**

Trans. #: 547355310	Priority Mail® Postage: <b>\$8.70</b>
Print Date: 11/01/2021	Total: <b>\$8.70</b>
Ship Date: 11/01/2021	
Expected Delivery Date: 11/06/2021	

**From:** DEBORAH CHASE  
 NORTHEAST SITE SOLUTIONS  
 420 MAIN ST  
 STE 1  
 STURBRIDGE MA 01566-1359  
 Ref#: CR-876366

**To:** PANUS FARM LLC  
 60 PIERCE RD  
 PRESTON CT 06365-8122

\* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.



Thank you for shipping with the United States Postal Service!  
 Check the status of your shipment on the USPS Tracking® page at usps.com