March 8, 2023

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

RE: Notice of Exempt Modification
723 Farmington Ave., New Britain, CT 06380
Latitude: 41.698414
Longitude: --72.785944
T-Mobile Site #: CTHA105A_Anchor

Dear Ms. Bachman:

T-Mobile currently maintains nine (9) antennas at the 88-foot level of the existing 119-foot Monopole Tower at 723 Farmington Ave., New Britain, CT. The 119-foot tower is owned by SBA Towers II LLC. The property is owned by Falcons Academinc & Athletic Assoc Inc. T-Mobile now intends to replace three (3) 1900/2100 MHz antennas with three (3) new L2500/N2500 MHz antennas and three (3) 1900/2100 MHz antennas with three (3) new 1900/2100/L2100/U2100 MHz antennas. The new antennas support 5G services and would be installed at the 88-foot level of the tower.

Planned Modifications:

TOWER
Remove:

- N/A

Remove and Replace:

- (3) Ericsson AIR21 KRC118023-1 antenna (remove) – (3) Ericsson AIR6419 B41 antenna (replace) - *L2500/N2500 MHz*
- (3) Ericsson AIR32 KRD901146-1 antenna (remove) – (3) Commscope W65B-R1 (replace) - *1900/2100/L2100/U2100 MHz*
- (3) Ericsson KRY 112 144/2 – TMAs (remove) – (3) RRUs 4460 B25+B66

Existing Equipment to Remain:

- (3) RFS APXVAARR24_43-U-NA20 antenna
- (3) Ericsson Radio 4449 B71+B12 RRUs
- (3) Commscope SDX1926Q-43 –Diplexers
- (3) T-Arms
- (5) 1-5/8" coax
- (1) 1-5/8" Fiber

GROUND

- (1) RBS6131 Equipment cabinet

Install New:

GROUND

- (1) Ericsson B160 Battery Cabinet
- (1) Ericsson 6160 Equipment cabinet
- (1) Slackbox
- (1) 150 A-2P Breaker
- (1) 125 A-2P Breaker
- (1) 25 A-1P Breaker

Entitlements:

- (2) 1-5/8" fiber
- (5) 1-5/8" Coax
- (6) 7/8" coax
- (1) 1-5/8: coax for GPS antenna

This facility was approved by the Council under Docket No. 303 on June 28, 2005. Approval was given for a monopole not to exceed a height of 110 feet above ground level. Antennas mounts shall be designed to reduce the visual profile of the antenna configuration without compromising coverage objectives. Landscaping shall include the addition of deciduous tree plantings between the existing paved driveway and the compound site. There were no further post construction stipulations set. Please see attached.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16.50j-72(b)(2). In accordance with R.C.S.A. § 16.50j-73, a copy of this letter is being sent to the City of New Britain's Mayor, Erin E. Stewart, and City Planner II, Jeffrey Cormier, as well as to the property owner. (Separate notice is not being sent to tower owner, as it belongs to SBA.)

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 modification 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 modification 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, T-Mobile respectfully submits that the proposed modifications to the above-referenced telecommunication facility constitute an exempt modifications under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Elizabeth Jamieson
Site Development Specialist II
SBA Communications Corporation
134 Flanders Road,
Suite 125
Westborough, MA 01581
860.605.7808 + **T**
EJamieson@sbasite.com

Attachments
cc: The Honorable Erin E. Stewart, Mayor / with attachments
The City of New Britain 27 West Main St., New Britain, CT 06051
City Planner II, Jeffrey Cormier / with attachments
The City of New Britain 27 West Main St., New Britain, CT 06051
Falcons Academic + Athletic Association, Inc. / with attachmentsAtt; Andrew Mechlinski
201 Washington St., New Britain, CT 06051

EXHIBIT 1

SBA Network Services, LLC

To: CONNECTICUT SITING COUNCIL 129986

Check Number: 2174792
Date: 02/14/2023

Invoice Number	Invoice Date	Description	Gross Amount	Taxes Withheld	Net Amount
PRSF02142302	02/14/2023	723 Farmington Ave	$ 625.00	$ 0.00	$ 625.00
			$ 625.00	$ 0.00	$ 625.00

SBA Network Services, LLC
8051 Congress Avenue
NV15551-A Betty Lane
Boca Raton, FL 33487
(800) 487-7483

Wells Fargo Bank

2174792

061209756 129986

DATE	AMOUNT
02/14/2023	$ 625.00

Void After 120 Days

Six Hundred Twenty Five Dollars And 00 Cents

Pay to the Order of:

CONNECTICUT SITING COUNCIL
ACCOUNTS RECEIVABLE
TEN FRANKLIN SQUARE

NEW BRITAIN, CT 06051

⑈2174792⑈ ⑆061209756⑆ 2079900424566⑈

EXHIBIT 2

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
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Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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March 09, 2023

Dear Customer,

The following is the proof-of-delivery for tracking number: 771272260534

Delivery Information:			
Status:	Delivered	**Delivered To:**	Receptionist/Front Desk
Signed for by:	E.STEWART	**Delivery Location:**	
Service type:	FedEx 2Day		
Special Handling:	Deliver Weekday		
		Delivery date:	Mar 9, 2023 09:35

Shipping Information:			
Tracking number:	771272260534	**Ship Date:**	Mar 8, 2023
		Weight:	

Recipient:	**Shipper:**

Thank you for choosing FedEx

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
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(https://www.fedex.com/en-us/home.html) elizabeth

FedEx® Tracking

SCHEDULED DELIVERY DATE

Friday

3/10/2023 before 4:30 pm

ON TIME

DELIVERY STATUS

In Transit

TRACKING ID

771272326840

FROM

PACKAGE RECEIVED BY FEDEX
WATERTOWN, CT
3/8/2023 5:00 PM

IN TRANSIT
At FedEx destination facility
WINDSOR LOCKS, CT
3/9/2023 7:38 AM

OUT FOR DELIVERY

TO

Scheduled Delivery Date
3/10/2023 before 4:30 PM

View travel history

Want updates on this shipment? Enter your email and we will do the rest!

YOUR EMAIL

SUBMIT

MORE OPTIONS

Shipment facts

Shipment overview

TRACKING NUMBER 771272326840

SHIP DATE 3/8/23

STANDARD TRANSIT 3/10/23 before 4:30 pm

(https://www.fedex.com/en-us/home.html)

Services

SERVICE FedEx 2Day

SPECIAL HANDLING SECTION Deliver Weekday

Package details

PACKAGING FedEx Envelope

Back to to

Travel history

Ascending

TIME ZONE
Local Scan Time

Wednesday, 3/8/2023

- 3:04 PM
  Dropped off at FedEx OnSite-WALGREENS
  THOMASTON, CT
- 5:00 PM
  Picked up
  WATERTOWN, CT
- 5:03 PM
  Shipment arriving On-Time
  WATERTOWN, CT
- 7:12 PM
  Left FedEx origin facility
  WATERTOWN, CT
- 8:13 PM
  At destination sort facility
  EAST GRANBY, CT

Thursday, 3/9/2023

7:38 AM
At local FedEx facility
WINDSOR LOCKS, CT

Back to to

OUR COMPANY

About FedEx(https://www.fedex.com/en-us/about.html)

Our Portfolio(https://www.fedex.com/en-us/about/company-structure.html)

(https://www.fedex.com/en-us/home.html)

FedEx Blog(https://www.fedex.com/en-us/blog.html)

Corporate Responsibility(https://www.fedex.com/en-us/about/corporate-social-responsibility.html)

Newsroom(https://newsroom.fedex.com/)

Contact Us(https://www.fedex.com/en-us/customer-support/contact-us.html)

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FedEx Compatible(https://www.fedex.com/en-us/compatible.html)

FedEx Developer Portal(https://developer.fedex.com/api/en-us/home.html)

FedEx Logistics(https://www.fedex.com/en-us/logistics.html)

FedEx Cross Border(https://www.fedex.com/en-us/cross-border.html)

ShopRunner(https://www.fedex.com/en-us/shoprunner.html)

LANGUAGE

Change Country/Territory(https://www.fedex.com/?location=home)

FOLLOW FEDEX (https://www.fedex.com/en-us/email.html) (Https://www.facebook.com/FedEx/)

(Https://twitter.com/fedex) (https://www.instagram.com/fedex/) (https://www.linkedin.com/company/fedex)

(https://www.youtube.com/fedex) (https://www.pinterest.com/FedEx/)

Site Map (https://www.fedex.com/en-us/sitemap.html) | Terms of Use (https://www.fedex.com/en-us/terms-of-use.html) | Privacy & Security (https://www.fedex.com/en-us/trust-center.html)

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March 09, 2023

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Signed for by:	E.STEWART	**Delivery Location:**	
Service type:	FedEx 2Day		
Special Handling:	Deliver Weekday		
		Delivery date:	Mar 9, 2023 09:35

Shipping Information:			
Tracking number:	771272260534	**Ship Date:**	Mar 8, 2023
		Weight:	

Recipient:	**Shipper:**

Thank you for choosing FedEx

EXHIBIT 3

723 FARMINGTON AVE

Location	723 FARMINGTON AVE	**Mblu**	C3A/ 1/ / /
Acct#	37500723	**Owner**	FALCONS ACADEMIC + ATHLETIC ASSOC INC
Assessment	$341,180	**Appraisal**	$487,400
PID	597	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$208,000	$279,400	$487,400
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$145,600	$195,580	$341,180

Owner of Record

Owner	FALCONS ACADEMIC + ATHLETIC ASSOC INC	**Sale Price**	$0
Co-Owner		**Certificate**	
Address	201 WASHINGTON ST NEW BRITAIN , CT 06051	**Book & Page**	2025/628
		Sale Date	07/29/2019

Ownership History

Ownership History				
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Sale Date**
FALCONS ACADEMIC + ATHLETIC ASSOC INC	$0		2025/628	07/29/2019
NEST 88 POLISH FALCONS ALLIANCE	$0		1412/0329	05/30/2002
NEST 88 POLISH FALCONS ALLIANC	$0		0474/0342	12/22/1958
NEST 88 POLISH FALCONS	$0		0327/0077	06/14/1948
EDWARD SZCZEPANIK	$0		0324/0597	05/21/1948
SEBASTIANO & VINCENZA FORMICA	$0		0305/0273	10/09/1945
JOSEPHINE BURGIO	$0		0302/0276	10/11/1944
MARY FALLETTI &	$0		0295/0251	09/01/1943
JOHN & SOPHIE CHUDZIK	$0		0157/0194	01/01/1900

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

Building Attributes	
Field	**Description**
Style	Outbuildings
Model	
Grade	
Stories	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Central Heat Sys	
AC Type	
Total Bedrooms	
Total Full Baths	
Total Half Baths	
Total Xtra Fixtrs	
Total Rooms	
Bath Style	
Kitchen Style	
Whirlpool Tub	
Fireplaces	
Usrfld 104	
Rec Room Finish	
Usrfld 107	
Bsmt Garages	
Fireplaces	
Usrfld 108	
Usrfld 101	
Usrfld 102	

Building Photo

(http://images.vgsi.com/photos/NewBritainCTPhotos//\00\01\94\92.jpg)

Building Layout

Building Layout (ParcelSketch.ashx?pid=597&bid=858)

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

Usrfld 300	
Usrfld 301	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	3531
Description	Fratnl Org Lnd
Zone	T
Neighborhood	103
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	25.69
Depth	
Assessed Value	$195,580
Appraised Value	$279,400

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
FN3	Fence-6' Chain			300.00 L.F.	$3,000	1
CB3	PreCastConcCel			100.00 S.F.	$23,100	1
CB3	PreCastConcCel			360.00 S.F.	$181,900	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2019	$208,000	$279,400	$487,400
2018	$208,000	$563,800	$771,800
2017	$208,000	$563,800	$771,800

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2019	$145,600	$195,580	$341,180
2018	$145,600	$394,660	$540,260
2017	$145,600	$394,660	$540,260

EXHIBIT 4

City of New Britain

Geographic Information System (GIS)

Date Printed: 12/18/2020

MAP DISCLAIMER - NOTICE OF LIABILITY

This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The City of New Britain and its mapping contractors assume no legal responsibility for the information contained herein.

Approximate Scale: 1 inch = 150 feet

0 150 Feet

N W E S

EXHIBIT 5

8558

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@po.state.ct.us
Web Site: www.ct.gov/csc

July 5, 2005

Thomas J. Regan, Esq.
Brown Rudnick Berlack Israels LLP
CityPlace I, 38th Floor
185 Asylum Street
Hartford, CT 06103-3402

RE: **DOCKET NO. 303** – Sprint Spectrum, L.P. application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located at 723 Farmington Avenue, New Britain, Connecticut.

Dear Attorney Regan:

By its Decision and Order dated June 28, 2005, the Connecticut Siting Council (Council) granted a Certificate of Environmental Compatibility and Public Need (Certificate) to Sprint Spectrum, L.P. for the construction, maintenance and operation of a telecommunications facility located at 723 Farmington Avenue, New Britain, Connecticut.

Enclosed are the Council's Certificate, Findings of Fact, Opinion, and Decision and Order.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/cm

Enclosures (4)

G:\DOCKETS\303\CERTPKG303.DOC

CSC
CONNECTICUT SITING COUNCIL

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@po.state.ct.us
www.ct.gov/csc

CERTIFICATE

OF

ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

DOCKET NO. 303

Pursuant to General Statutes § 16-50k, as amended, the Connecticut Siting Council hereby issues a Certificate of Environmental Compatibility and Public Need to Sprint Spectrum, L.P. for the construction, maintenance and operation of a telecommunications facility located at 723 Farmington Avenue, New Britain, Connecticut. This Certificate is issued in accordance with and subject to the terms and conditions set forth in the Decision and Order of the Council on June 28, 2005.

By order of the Council,

Pamela B. Katz, P.E., Chairman

June 28, 2005

DOCKET NO. 303 – Sprint Spectrum, L.P. application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located at 723 Farmington Avenue, New Britain, Connecticut.	}	Connecticut Siting Council June 28, 2005

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Sprint Spectrum, L.P., hereinafter referred to as the Certificate Holder, for a telecommunications facility at 723 Farmington Avenue, New Britain, Connecticut.

The facility shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The tower shall be constructed as a monopole, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of Sprint Spectrum, L.P and other entities, both public and private, but such tower shall not exceed a height of 110 feet above ground level. The height at the top of the antennas shall not exceed a height of 110 feet above ground level, including antennas.

2. Panel antennas shall be installed on the monopole using a flush or T-arm mounting configuration. T-arm antenna mounts shall be designed to reduce the visual profile of the antenna configuration to the greatest extent possible without compromising coverage objectives.

3. Landscaping shall include the addition of deciduous tree plantings between the existing paved driveway and the compound site, preferably along the north edge of the existing driveway.

4. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the City of New Britain for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
   a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment building, access road, utility line, and landscaping; and
   b) construction plans for site clearing, water drainage, and erosion and sedimentation control consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

5. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of electromagnetic radio frequency power density is submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.

6. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.

7. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.

8. The Certificate Holder shall provide reasonable space on the tower for no compensation for any City of New Britain public safety services (police, fire and medical services), provided such use can be accommodated and is compatible with the structural integrity of the tower.

9. If the facility does not initially provide wireless services within one year of completion of construction or within two years from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), whichever is earlier, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating these deadlines.

10. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.

11. Any antenna that becomes obsolete and ceases to function shall be removed within 60 days after such antennas become obsolete and cease to function.

12. Any request for extension of the period referred to in Condition 9 shall be filed with the Council not later than sixty days prior to the expiration date of this Certificate and shall be served on all parties and intervenors and the City of New Britain, as listed in the service list. Any proposed modifications to this Decision and Order shall likewise be so served.

13. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of site construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction and the commencement of site operation.

Pursuant to General Statutes § 16-50p, the Council hereby directs that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in The Hartford Courant and The New Britain Herald.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with Section 16-50j-17 of the Regulations of Connecticut State Agencies.

The parties and intervenors to this proceeding are:

Applicant
Sprint Spectrum, L.P.
d/b/a Sprint PCS

Its Representative
Thomas J. Regan, Esq.
Brown Rudnick Berlack Israels LLP
CityPlace I, 38th Floor
185 Asylum Street
Hartford, CT 06103-3402

Intervenor
New Cingular Wireless, PCS, LLC

Its Representative
Wendell G. Davis
Blackwell, Davis & Spadaccini, LLC
158 East Center Street
Manchester, CT 06040

CERTIFICATION

The undersigned members of the Connecticut Siting Council (Council) hereby certify that they have heard this case, or read the record thereof, in **DOCKET NO. 303** – Sprint Spectrum, L.P. application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located at 723 Farmington Avenue, New Britain, Connecticut., and voted as follows to approve the proposed site located at 723 Farmington Avenue, New Britain, Connecticut:

Council Members	Vote Cast
Pamela B. Katz, P.E., Chairman	Yes
Commissioner Donald W. Downes Designee: Gerald J. Heffernan	Yes
Commissioner Gina McCarthy Designee: Brian J. Emerick	Yes
Philip T. Ashton	Yes
Daniel P. Lynch, Jr.	Absent
James J. Murphy, Jr.	Yes
Brian F. O'Neill	Yes
Colin C. Tait	Absent
Edward S. Wilensky	Yes

Dated at New Britain, Connecticut June 28, 2005.

STATE OF CONNECTICUT)

ss. New Britain, Connecticut :

COUNTY OF HARTFORD)

I hereby certify that the foregoing is a true and correct copy of the Findings of Fact, Opinion, and Decision and Order issued by the Connecticut Siting Council, State of Connecticut.

ATTEST:

S. Derek Phelps
Executive Director
Connecticut Siting Council

I certify that a copy of the Findings of Fact, Opinion, and Decision and Order in Docket No. 303 has been forwarded by Certified First Class Return Receipt Requested mail on July 5, 2005, to all parties and intervenors of record as listed on the attached service list, dated March 4, 2005.

ATTEST:

Carriann Mulcahy
Secretary
Connecticut Siting Council

Date: March 4, 2005

LIST OF PARTIES AND INTERVENORS
SERVICE LIST

Status Granted	Status Holder (name, address & phone number)	Representative (name, address & phone number)
Applicant	Sprint Spectrum, L.P. d/b/a Sprint PCS	Thomas J. Regan, Esq. Brown Rudnick Berlack Israels LLP CityPlace I, 38th Floor 185 Asylum Street Hartford, CT 06103-3402 (860) 509-6522 (860) 509-6501 tregan@brownrudknick.com
Intervenor (Approved 3/3/05)	New Cingular Wireless, PCS, LLC	Wendell G. Davis Blackwell, Davis & Spadaccini, LLC 158 East Center Street Manchester, CT 06040 (860) 432-0676 x13 (860) 432-2926 –f

EXHIBIT 6

HA105/SBA STANLEY_FT

723 FARMINGTON AVENUE
NEW BRITAIN, CT 06053
HARTFORD COUNTY

SITE NO.: CTHA105A

SITE TYPE: 119'± MONOPOLE

RF DESIGN GUIDELINE: 67D5D998E OUTDOOR

APPROVALS

PROJECT MANAGER:	DATE:	ZONING/SITE ACQ.:	DATE:
CONSTRUCTION:	DATE:	OPERATIONS:	DATE:
RF ENGINEERING:	DATE:	TOWER OWNER:	DATE:

T-MOBILE TECHNICIAN SITE SAFETY NOTES

LOCATION	SPECIAL RESTRICTIONS
SECTOR A:	ACCESS BY CERTIFIED CLIMBER
SECTOR B:	ACCESS BY CERTIFIED CLIMBER
SECTOR C:	ACCESS BY CERTIFIED CLIMBER
GPS/LMU:	UNRESTRICTED
RADIO CABINETS:	UNRESTRICTED
PPC DISCONNECT:	UNRESTRICTED
MAIN CIRCUIT D/C:	UNRESTRICTED
NIU/T DEMARC:	UNRESTRICTED
OTHER/SPECIAL:	NONE

SCOPE OF WORK

REMOVE:
- 6 ANTENNAS
- 3 TMAs
- 1 125A-2P BREAKER
- 1 50A-2P BREAKER
- ALL COAX CABLES
- 1 1-¼" (9x18) HCS FIBER CABLE

INSTALL:
- 6 ANTENNAS
- 3 RADIOS
- 2 HYBRID FIBER CABLES
- 1 6160 EQUIPMENT CABINET
- 1 B160 BATTERY CABINET
- 1 SLACKBOX
- 1 150A-2P BREAKER
- 1 125A-2P BREAKER
- 1 25A-1P BREAKER

SITE NOTES

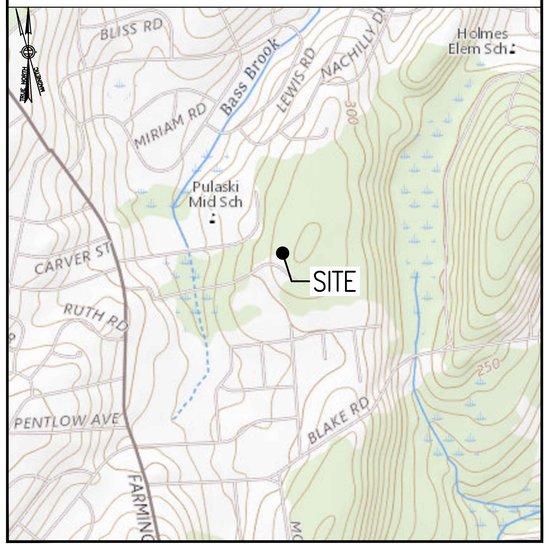
1. THIS IS AN UNMANNED AND RESTRICTED ACCESS TELECOMMUNICATION FACILITY, AND IS NOT FOR HUMAN HABITATION. IT WILL BE USED FOR THE TRANSMISSION OF RADIO SIGNAL FOR THE PURPOSE OF PROVIDING PUBLIC CELLULAR SERVICE.
   - ADA COMPLIANCE NOT REQUIRED.
   - POTABLE WATER OR SANITARY SERVICE IS NOT REQUIRED.
   - NO OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES REQUIRED.
2. CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON JOB SITE. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK. FAILURE TO NOTIFY THE ARCHITECT/ENGINEER PLACE THE RESPONSIBILITY ON THE CONTRACTOR TO CORRECT THE DISCREPANCIES AT THE CONTRACTOR'S EXPENSE.
3. NEW CONSTRUCTION WILL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES.
   - BUILDING CODE: 2022 CONNECTICUT STATE BUILDING CODE
   - ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE
   - STRUCTURAL CODE: TIA/EIA-222-G STRUCTURAL STANDARDS FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS.

GENERAL NOTES

1. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.
2. THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE OMNIPOINT REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.
4. THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.
5. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/CONTRACT DOCUMENTS.
7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S/VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
8. THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDENDUMS OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.
9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
10. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS, ESTABLISHING AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS AS SHOWN HEREIN.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.
12. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
13. THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
14. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
15. THE CONTRACTOR SHALL NOTIFY THE PROJECT OWNER'S REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE LESSEE/LICENSEE REPRESENTATIVE.
16. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.
17. ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK.

AT LEAST 72 HOURS PRIOR TO DIGGING, THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 811

VICINITY MAP: 1"=1000'



DIRECTIONS

FROM COMMERCE WAY TRAVELING NE TOWARDS N BOUNDARY RD/S WASHINGTON ST, CONTINUE ONTO S. WASHINGTON ST TO TAKE A RIGHT ONTO MA-123 E, TURN LEFT TO MERGE ONTO I-495 N TOWARD MANSFIELD, MARLBORO, FOLLOW I-495 N, I-90 W AND I-84, TAKE EXIT 9 FOR I-84 TOWARD HARTFORD CT/NEW YORK CITY, STAY LEFT ON I-84, FOLLOW SIGNS FOR I-91N/HARTFORD, TAKE EXIT 37 FOR FIENERMANN ROAD, KEPP RIGHT AT FORK, FOLLOW SOGNS FOR NEW BRITAIN, MERGE ONTO FIENERMANN ROAD, TURN LEFT ONTO FARMINGTON AVENUE, PASSING PULASKI MIDDLE SCHOOL'S, THEN PASS LIBERTY BANK, TAKE THE NEXT LEFT TO ENTRANCE GATE, DESTINATION IS ON THE LEFT AT THE END OF THE ROAD BEYOND THE GATE.

SHEET INDEX

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DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE PROJECT OWNER'S REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

PROJECT SUMMARY

SITE NUMBER:	CTHA105A
SITE NAME:	HA105/SBA STANLEY_FT
SBA SITE NUMBER:	CT0855-B
SBA SITE NAME:	NEW BRITAIN 3, CT
SITE ADDRESS:	723 FARMINGTON AVENUE NEW BRITAIN, CT 06053
PROPERTY OWNER:	FALCONS ACADEMIC + ATHLETIC ASSOCIATION 201 WASHINGTON STREET NEW BRITAIN, CT 06051
TOWER OWNER:	SBA TOWERS, LLC 8501 CONGRESS AVENUE BOCA RATON, FL 33487 PHONE: 561-226-9523
COUNTY:	HARTFORD
ZONING DISTRICT:	TWO FAMILY (T)
STRUCTURE TYPE:	MONOPOLE
STRUCTURE HEIGHT:	119'±
APPLICANT:	T-MOBILE NORTHEAST LLC 15 COMMERCE WAY, SUITE B NORTON, MA 02766
ARCHITECT:	CHAPPELL ENGINEERING ASSOCIATES, LLC 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
STRUCTURAL ENGINEER:	CHAPPELL ENGINEERING ASSOCIATES, LLC 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
SITE CONTROL POINT:	LATITUDE: 41.69849300° N41°41'54.58" LONGITUDE: -72.78582000° W72°47'08.95"

SPECIAL ZONING NOTE:
BASED ON INFORMATION PROVIDED BY T-MOBILE REGULATORY COMPLIANCE PROFESSIONALS AND LEGAL COUNSEL, THIS TELECOMMUNICATIONS EQUIPMENT DEPLOYMENT IS CONSIDERED AN ELIGIBLE FACILITY UNDER THE MIDDLE CLASS TAX RELIEF AND JOB CREATION ACT OF 2012, 47 USC 1455(A), SECTION 6409(A), AND IS SUBJECT TO AN ELIGIBLE FACILITY REQUEST, EXPEDITED REVIEW, AND LIMITED/PARTIAL ZONING PRE-EMPTION FOR LOCAL DISCRETIONARY PERMITS (VARIANCE, SPECIAL PERMIT, SITE PLAN REVIEW, OR ADMINISTRATIVE REVIEW).

T-MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
OFFICE: (508) 286-2700

SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
WESTBOROUGH, MA 01581
(508) 251-0720

CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil ·Structural ·Land Surveying
R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25997
LICENSED
PROFESSIONAL CIVIL ENGINEER

3/1/2023

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
3	02/02/23	CONSTRUCTION REVISED	BDJ
2	08/15/22	ISSUED FOR CONSTRUCTION	BDJ
1	12/11/20	ISSUED FOR CONSTRUCTION	BDJ
0	11/20/20	ISSUED FOR REVIEW	BDJ

SITE NUMBER:
CTHA105A
SITE ADDRESS:
723 FARMINGTON AVENUE
NEW BRITAIN, CT 06053

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

1815.167

GENERAL NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
   CONTRACTOR – T–MOBILE
   SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER – T–MOBILE
   OEM – ORIGINAL EQUIPMENT MANUFACTURER

2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.

3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.

4. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL, STATE AND FEDERAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

5. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.

6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.

9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER, T1 CABLES AND GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR AND/OR LANDLORD PRIOR TO CONSTRUCTION.

10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.

11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY.

12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION AND RETURN DISTURBED AREAS TO ORIGINAL CONDITIONS.

13. THE SUBCONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE SUBCONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.

14. SUBCONTRACTOR SHALL NOTIFY CHAPPELL ENGINEERING ASSOCIATES, LLC 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING TRENCHES, SEALING ROOF AND WALL PENETRATIONS AND POST DOWNS, FINISHING NEW WALLS OR FINAL ELECTRICAL CONNECTIONS FOR ENGINEERING REVIEW.

15. CONSTRUCTION SHALL COMPLY WITH ALL T–MOBILE STANDARDS AND SPECIFICATIONS.

16. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.

17. THE EXISTING CELL SITES ARE IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.

18. IF THE EXISTING CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

SITE WORK GENERAL NOTES:

1. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.

2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION.

3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.

4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.

5. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.

6. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

7. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.

8. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF ENGINEERING, OWNER AND/OR LOCAL UTILITIES.

9. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE AND STABILIZED TO PREVENT EROSION AS SPECIFIED IN THE PROJECT SPECIFICATIONS.

10. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

11. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE T–MOBILE SPECIFICATION FOR SITE SIGNAGE.

CONCRETE AND REINFORCING STEEL NOTES:

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. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. A HIGHER STRENGTH (400PSI) MAY BE USED. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 381 CODE REQUIREMENTS

3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.

4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
   CONCRETE CAST AGAINST EARTH.....3 IN.
   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 AND LARGER .....2 IN.
   #5 AND SMALLER & WWF .....1½ IN.
   CONCRETE NOT EXPOSED TO EARTH OR WEATHER
   OR NOT CAST AGAINST THE GROUND:
   SLAB AND WALL .....¾ IN.
   BEAMS AND COLUMNS .....1½ IN.

5. A CHAMFER ¾" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

6. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHORS SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO THE MANUFACTURERS RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY SIMPSON OR APPROVED EQUAL.

7. CONCRETE CYLINDER TIES ARE NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (IBC1905.6.2.3) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER;
   (A) RESULTS OF CONCRETE CYLINDER TEST PERFORMED AT THE SUPPLIERS PLANT.
   (B) CERTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED.
FOR GREATER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST.

8. AS AN ALTERNATIVE TO ITEM 7. TEST CYLINDERS SHALL BE TAKEN INITIALLY AND THEREAFTER FOR EVERY 50 YARDS OF CONCRETE FROM EACH DIFFERENT BATCH PLANT.

9. EQUIPMENT SHALL NOT BE PLACED ON NEW PADS FOR SEVEN DAYS AFTER PAD IS POURED, UNLESS IT IS VERIFIED BY CYLINDER TESTS THAT COMPRESSIVE STRENGTH HAS BEEN ATTAINED.

STRUCTURAL STEEL NOTES:

1. ALL STEEL WORK SHALL BE PAINTED OR GALVANIZED IN ACCORDANCE WITH THE DRAWINGS AND T–MOBILE SPECIFICATIONS UNLESS OTHERWISE NOTED. STRUCTURAL STEEL SHALL BE ASTM–A–36 UNLESS OTHERWISE NOTED ON THE SITE SPECIFIC DRAWINGS. STEEL DESIGN, INSTALLATION AND BOLTING SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION".

2. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 9TH EDITION. PAINTED SURFACES SHALL BE TOUCHED UP.

3. BOLTED CONNECTIONS SHALL USE BEARING TYPE ASTM A325 BOLTS (¾"ø) AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE. ALL BOLTS SHALL BE GALVANIZED OR STAINLESS STEEL.

4. NON–STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE ⅝" DIA. ASTM A 307 BOLTS (GALV) UNLESS NOTED OTHERWISE.

5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW & APPROVAL ON PROJECTS REQUIRING STRUCTURAL STEEL

6. ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.

SOIL COMPACTION NOTES FOR SLAB ON GRADE:

1. EXCAVATE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL TO EXPOSE NATURAL SUBGRADE AND PLACE CRUSHED STONE AS REQUIRED.

2. COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR ENGINEER IS ACCEPTABLE.

3. AS AN ALTERNATE TO INSPECTION AND WRITTEN CERTIFICATION, THE "UNDISTURBED SOIL" BASE SHALL BE COMPACTED WITH "COMPACTION EQUIPMENT", LISTED BELOW, TO AT LEAST 90% MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM D 1557 METHOD C.

4. COMPACTED SUBBASE SHALL BE UNIFORM AND LEVELED. PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED IN 3" LIFTS ABOVE COMPACTED SOIL. GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING #1 SIEVE.

5. AS AN ALTERNATE TO ITEMS 2 AND 3, THE SUBGRADE SOILS WITH 5 PASSES OR A MEDIUM SIZED VIBRATORY PLATE COMPACTOR (SUCH AS BOMAG BPR 30/38) OR HAND–OPERATED SINGLE DRUM VIBRATORY ROLLER (SUCH AS BOMAG BW 55E). AND SOFT AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL–GRADED GRANULAR FILL AND COMPACTED AS STATED ABOVE.

COMPACTION EQUIPMENT:

1. HAND OPERATED DOUBLE DRUN, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.

CONSTRUCTION NOTES:

1. FIELD VERIFICATION:
SUBCONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, T–MOBILE ANTENNA PLATFORM LOCATION AND UTILITY TRENCHWORK.

2. COORDINATION OF WORK:
SUBCONTRACTOR SHALL COORDINATE RF WORK AND PROCEDURES WITH CONTRACTOR.

3. CABLE LADDER RACK:
SUBCONTRACTOR SHALL FURNISH AND INSTALL CABLE LADDER RACK, CABLE TRAY AND/OR ICE BRIDGE, AND CONDUIT AS REQUIRED TO SUPPORT CABLES TO THE NEW BTS LOCATION.

ELECTRICAL INSTALLATION NOTES:

1. WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.

2. SUBCONTRACTOR SHALL MODIFY OR INSTALL CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLING TO THE NEW BTS EQUIPMENT. SUBCONTRACTOR SHALL SUBMIT MODIFICATIONS TO CONTRACTOR FOR APPROVAL.

3. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.

4. CABLES SHALL NOT BE ROUTED THROUGH LADDER–STYLE CABLE TRAY RUNGS.

5. EACH END OF EVERY POWER, GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA, AND MATCH INSTALLATION REQUIREMENTS.

6. POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, ½ INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC AND OSHA.

7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).

8. PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.

9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.

10. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.

11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.

12. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #2 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.

13. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI–CONDUCTOR, TYPE TC CABLE (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.

14. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP–STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY HARGER (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).

15. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.

16. NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.

17. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.

18. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.

19. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.

20. RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.

21. LIQUID–TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID–TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.

22. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION–TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.

23. CABINETS, BOXES AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.

24. CABINETS, BOXES AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.

25. WIREWAYS SHALL BE EPOXY–COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.

26. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY–COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.

27. METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY–COATED, OR NON–CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.

28. NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.

29. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.

30. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.

31. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.

32. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.

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3/1/2023

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SITE NUMBER:
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SITE ADDRESS:
723 FARMINGTON AVENUE
NEW BRITAIN, CT 06053

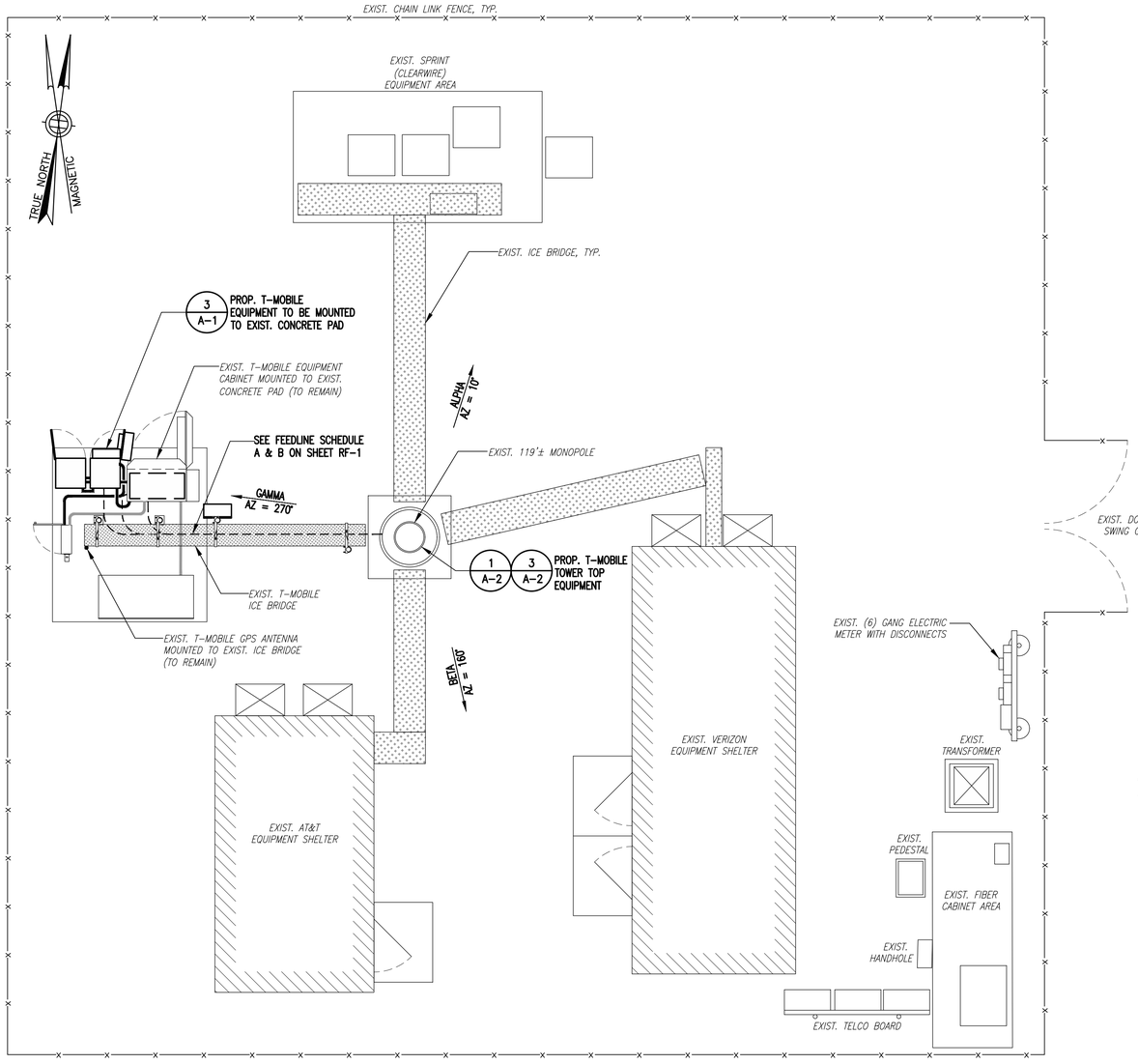
SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-1

1815.167

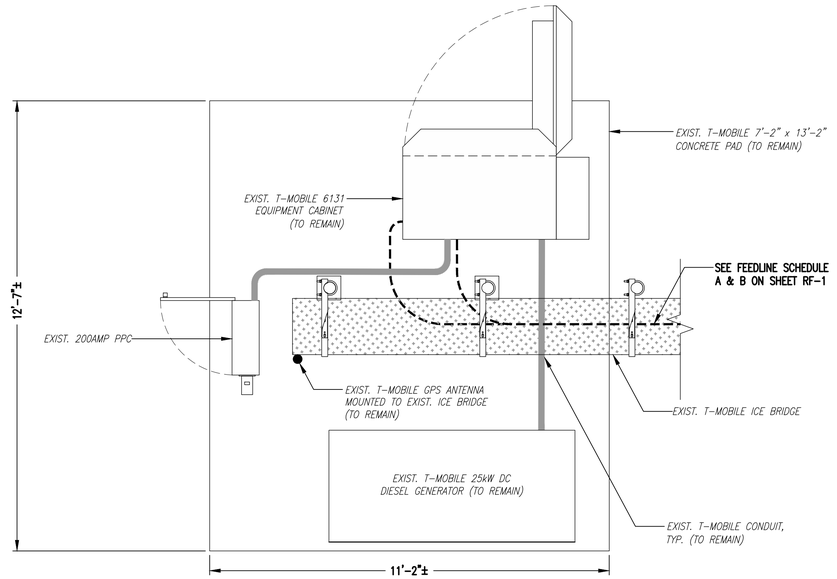
SPECIAL PRE-CONSTRUCTION WORK NOTE (SBA-PROVIDED TOWER STRUCTURAL ANALYSIS SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY SPECIAL SHIELDING OF TOWER TOP EQUIPMENT AND FOR ANY SPECIAL FEEDLINE BUNDLING OR RELOCATION.

SPECIAL CONSTRUCTION NOTE (SBA-PROVIDED ANTENNA MOUNT STRUCTURAL MOD SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANTENNA MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT THE T-MOBILE RAD/VERTICAL EQUIPMENT SPACE PER RECOMMENDATIONS FROM SBA-PROVIDED ANTENNA MOUNT STRUCTURAL ANALYSIS AND ANY SUPPLEMENTAL CONSTRUCTION DRAWINGS (PROVIDED BY OTHERS).



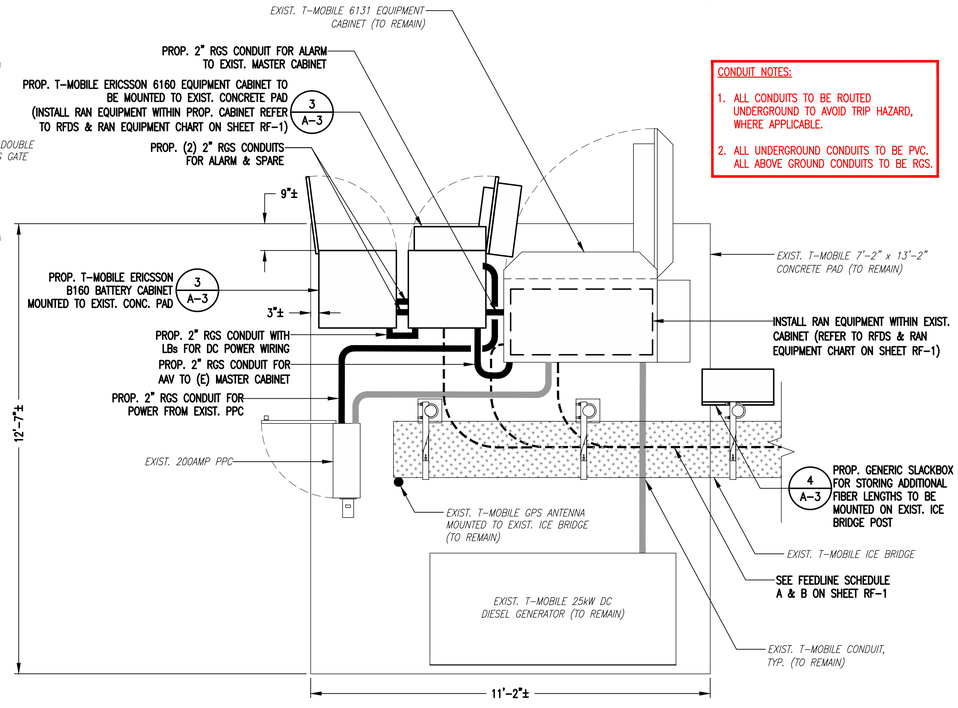
COMPOUND PLAN
SCALE: 1" = 4'-0" — 1 A-1

0 2.5' 5' 10' 15'



EXISTING EQUIPENT PLAN
SCALE: 1" = 2'-0" — 2 A-1

NORTH



CONDUIT NOTES:
1. ALL CONDUITS TO BE ROUTED UNDERGROUND TO AVOID TRIP HAZARD, WHERE APPLICABLE.
2. ALL UNDERGROUND CONDUITS TO BE PVC. ALL ABOVE GROUND CONDUITS TO BE RGS.

PROPOSED EQUIPENT PLAN
SCALE: 1" = 2'-0" — 3 A-1

NORTH

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STATE OF CONNECTICUT · JAMES M. FITZGERALD · No. 25997 · LICENSED PROFESSIONAL CIVIL ENGINEER

3/1/2023

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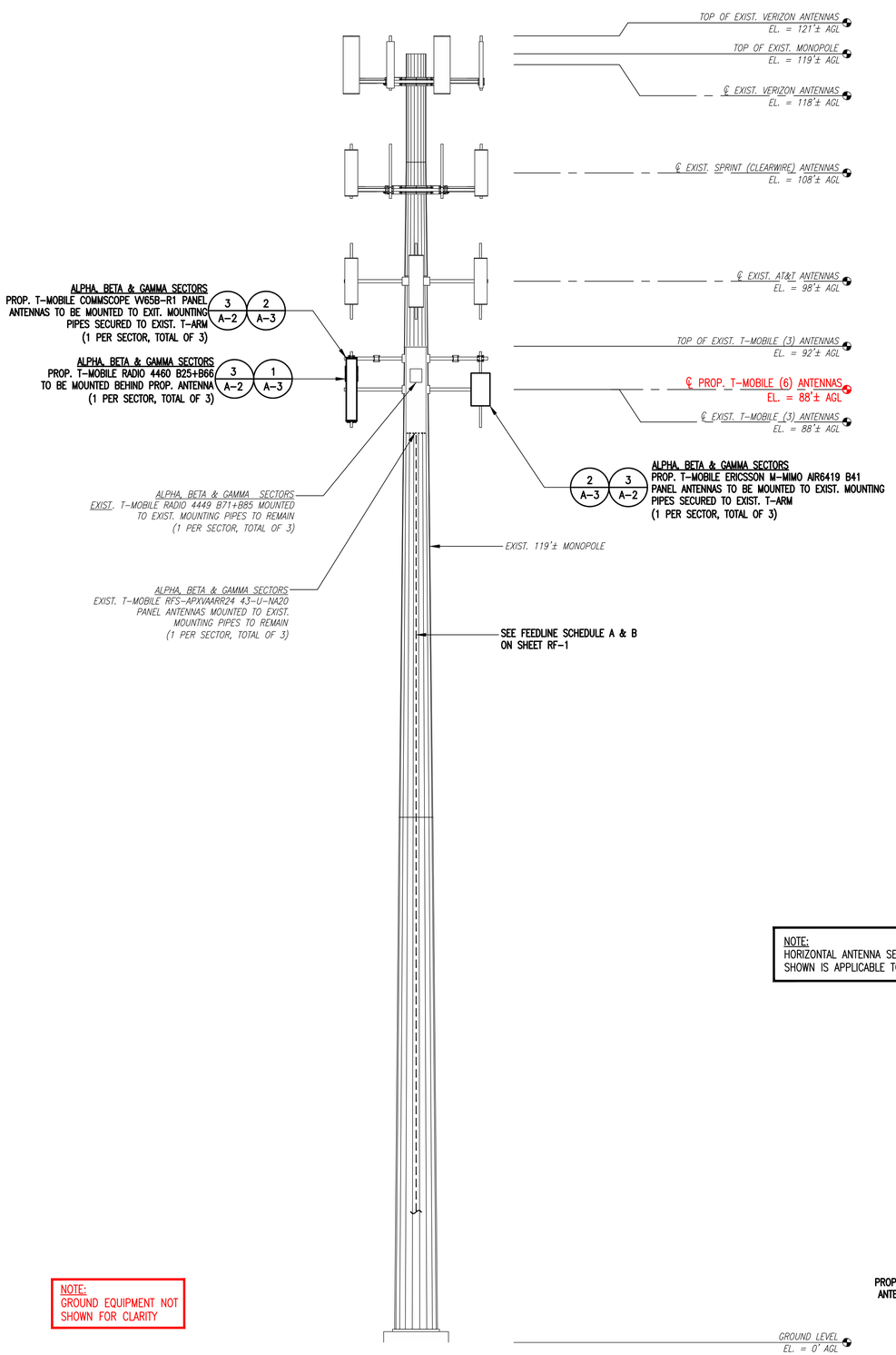
SHEET TITLE
COMPOUND PLAN & EQUIPMENT PLANS

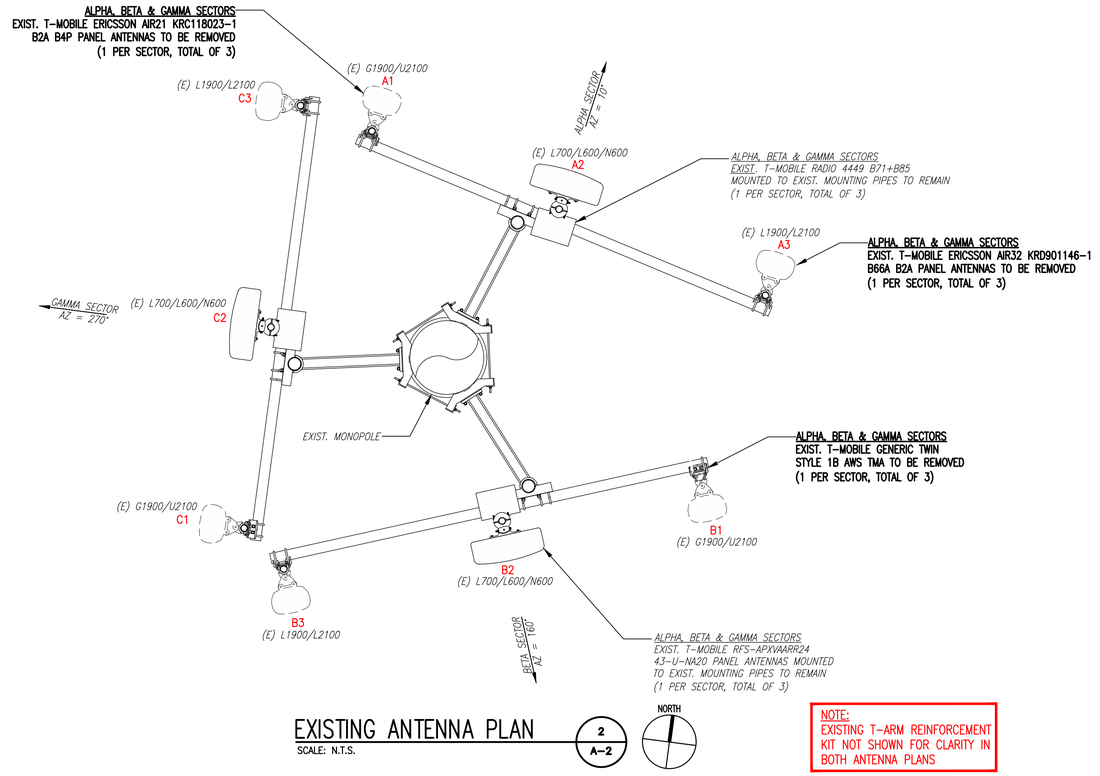
SHEET NUMBER
A-1

1815.167



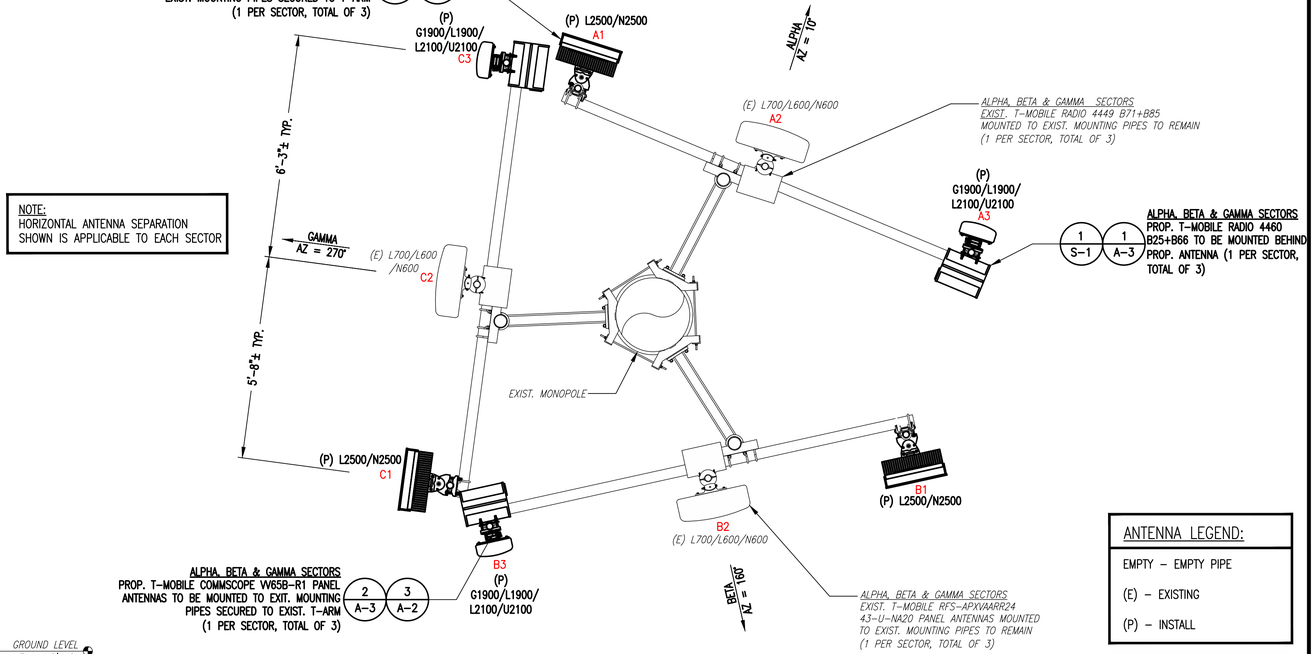
ELEVATION
SCALE: 1" = 6'-0"
1 A-2
0 3' 6' 12' 18'

NOTE:
GROUND EQUIPMENT NOT SHOWN FOR CLARITY



EXISTING ANTENNA PLAN
SCALE: N.T.S.
2 A-2

NOTE:
EXISTING T-ARM REINFORCEMENT KIT NOT SHOWN FOR CLARITY IN BOTH ANTENNA PLANS



NOTE:
HORIZONTAL ANTENNA SEPARATION SHOWN IS APPLICABLE TO EACH SECTOR

PROPOSED ANTENNA PLAN
SCALE: N.T.S.
3 A-2

ANTENNA LEGEND:

EMPTY – EMPTY PIPE

(E) – EXISTING

(P) – INSTALL

NOTE:
VERIFY PROPOSED AZIMUTHS WITH RF ENGINEER PRIOR TO INSTALLATION.

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SHEET TITLE
ELEVATION & ANTENNA PLANS

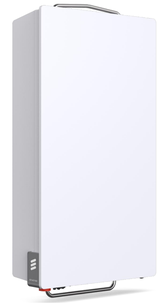
SHEET NUMBER
A-2

1815.167

ERICSSON RADIO 4460 B25+B66

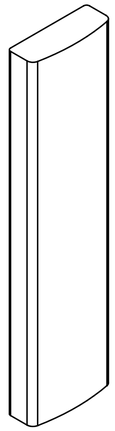
DIMENSIONS: 17.0"H x 15.1"W x 11.9"D
WEIGHT: 104.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

RADIO DETAIL
SCALE: N.T.S.
1 / A-3



ERICSSON M-MIMO AIR6419 B41 ANTENNA

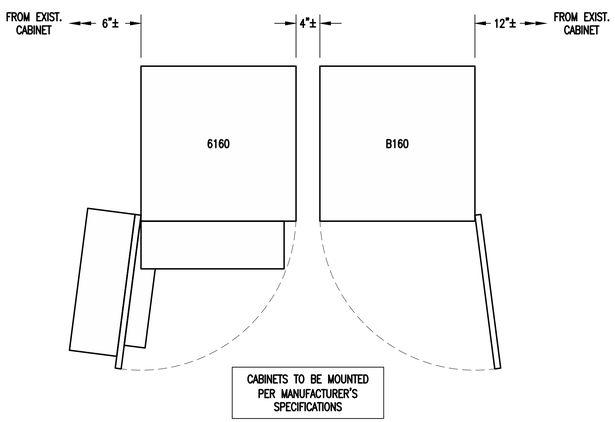
DIMENSIONS: 36.3"H x 20.9"W x 9.0"D
WEIGHT: 83.3 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3



COMMSCOPE VV-65B-R1 ANTENNA

DIMENSIONS: 70.4"H x 12.1"W x 4.7"D
WEIGHT: 28.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

ANTENNA DETAILS
SCALE: N.T.S.
2 / A-3



ERICSSON 6161 SITE SUPPORT CABINET

DIMENSIONS: 63.25"H x 26.0W x 34.0"D
QUANTITY: TOTAL OF 1

ERICSSON B160 BATTERY CABINET

DIMENSIONS: 63.25"H x 26.0W x 26.0"D
QUANTITY: TOTAL OF 1

EQUIPMENT DETAIL
SCALE: N.T.S.
3 / A-3

SLACKBOX – HOFFMAN 32FH91 NEMA 3R ENCLOSURE

DIMENSIONS: 24.0"H x 24.0"W x 12.0"D
QUANTITY: TOTAL OF 1

SSC DETAILS
SCALE: N.T.S.
4 / A-3

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SITE DETAILS

SHEET NUMBER
A-3

1815.167

FINAL ANTENNA CONFIGURATION

SECTOR	ANTENNA	RAD CENTER	AZIMUTH (TRUE NORTH)	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	BAND	TMA/RADIOS	SIGNAL CABLES
ALPHA	A1 ERICSSON M-MIMO AIR6419 B41	88'-0"± AGL	10°	0°	0°	L2500/N2500	–	(E) (2) 1-⅝" (6x12) HCS FIBER CABLES (P) (2) 1-¾" (6x24) HCS FIBER CABLES
	A2 *RFS APXVAARR24_43-U-NA20*	*88'-0"± AGL*	*10°*	*0°*	*0°*	*L700/L600/N600*	*ERICSSON RADIO 4449 B71+B85*	
	A3 COMMSCOPE VV-65B-R1	88'-0"± AGL	10°	0°	0°	L1900/G1900 L2100/U2100	ERICSSON RADIO 4460 B25+B66	
BETA	B1 ERICSSON M-MIMO AIR6419 B41	88'-0"± AGL	160°	0°	0°	L2500/N2500	–	
	B2 *RFS APXVAARR24_43-U-NA20*	*88'-0"± AGL*	*160°*	*0°*	*0°*	*L700/L600/N600*	*ERICSSON RADIO 4449 B71+B85*	
	B3 COMMSCOPE VV-65B-R1	88'-0"± AGL	160°	0°	0°	L1900/G1900 L2100/U2100	ERICSSON RADIO 4460 B25+B66	
GAMMA	C1 ERICSSON M-MIMO AIR6419 B41	88'-0"± AGL	270°	0°	0°	L2500/N2500	–	
	C2 *RFS APXVAARR24_43-U-NA20*	*88'-0"± AGL*	*270°*	*0°*	*0°*	*L700/L600/N600*	*ERICSSON RADIO 4449 B71+B85*	
	C3 COMMSCOPE VV-65B-R1	88'-0"± AGL	270°	0°	0°	L1900/G1900 L2100/U2100	ERICSSON RADIO 4460 B25+B66	

CABLE NOTE: EXISTING ALL COAX CABLES TO BE CAPPED, WRAPPED & REMOVED) & (1) 1-¼" (9x18) HCS FIBER CABLES TO BE REMOVED. SEE FEEDLINE SCHEDULE A & B BELOW.

NOTE: RFDS REV5 – 05/23/22

FEEDLINE SCHEDULE

SCHEDULE	FEEDLINES		LOCATION
A	*EXISTING TO REMAIN:*	*(2) 1-⅝" (6x12) HCS FIBER CABLES* *(1) ½" COAX CABLE FOR GPS ANTENNA*	ROUTED PER STRUCTURAL ANALYSIS
	EXISTING TO BE REMOVED:	*(5) 1-⅝" COAX CABLES* *(6) ⅞" COAX CABLES* *(1) 1-¼" (9x18) HCS FIBER CABLE*	
B	PROPOSED:	(2) 1-¾" (6x24) HCS FIBER CABLES	

NOTE:
EXISTING T-MOBILE EQUIPMENT FEEDLINE INVENTORY BASED ON OBSERVED FIELD CONDITIONS. RFDS AND FEEDLINE LEASING ENTITLEMENTS MAY DIFFER.

RAN EQUIPMENT

CABINET	EXISTING	PROPOSED
ERICSSON RBS6131	*(1) DUW30* *(1) DUG20* *(2) BB 6630* *(6) RU22*	*(1) DUW30* *(1) DUG20* *(2) BB 6630*
ERICSSON 6160	*N/A*	(1) BB 6648 (1) RP 6651 (1) PSU 4813 vR4A (1) CSR IXRe V2

NOTE:
RAN EQUIPMENT IS BASED ON RFDS REV5 DATED 05/23/2022

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SHEET TITLE
RF DATA

SHEET NUMBER
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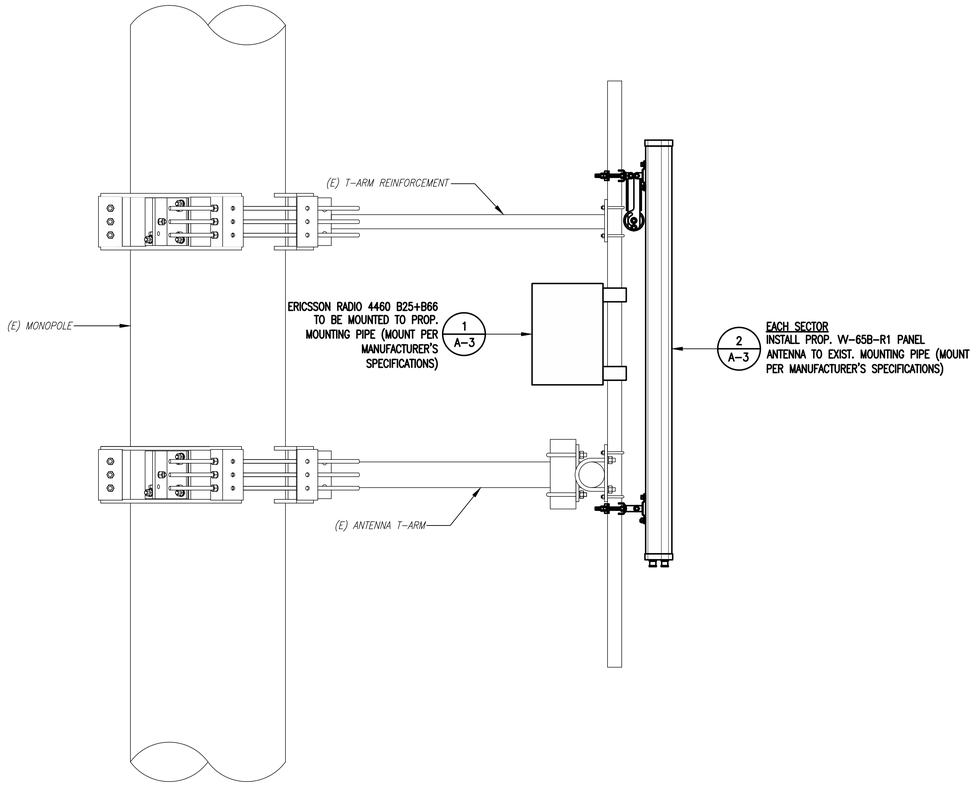
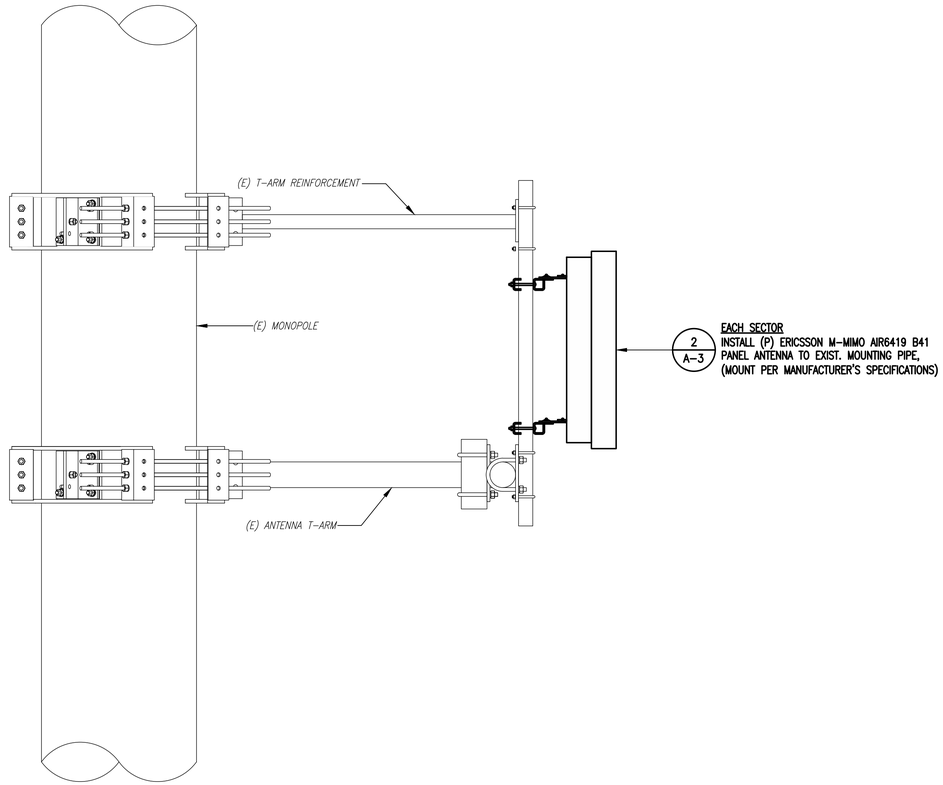
1815.167



ANTENNA & RADIO MOUNT DETAIL
SCALE: N.T.S.
1
S-1



ANTENNA MOUNT DETAIL
SCALE: N.T.S.
2
S-1

T-MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
OFFICE: (508) 286-2700

SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
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CHAPPELL ENGINEERING ASSOCIATES, LLC
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201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25997
LICENSED
PROFESSIONAL CIVIL ENGINEER
3/1/2023

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
3	02/02/23	CONSTRUCTION REVISED	BDJ
2	08/15/22	ISSUED FOR CONSTRUCTION	BDJ
1	12/11/20	ISSUED FOR CONSTRUCTION	BDJ
0	11/20/20	ISSUED FOR REVIEW	BDJ

SITE NUMBER:
CTHA105A

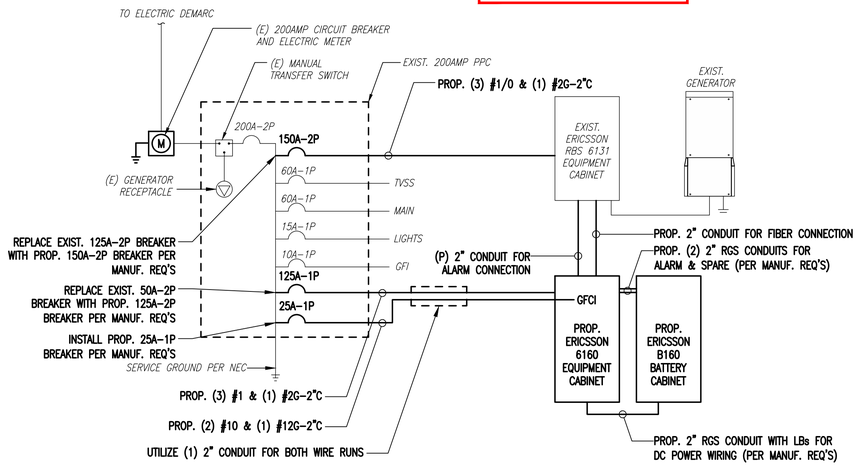
SITE ADDRESS:
723 FARMINGTON AVENUE
NEW BRITAIN, CT 06053

SHEET TITLE
ANTENNA MOUNTING DETAILS

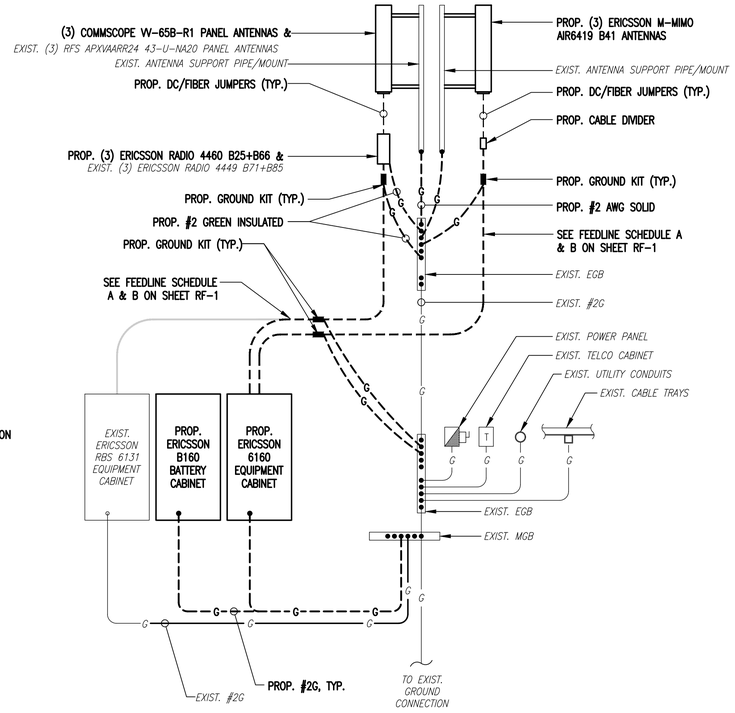
SHEET NUMBER
S-1

1815.167

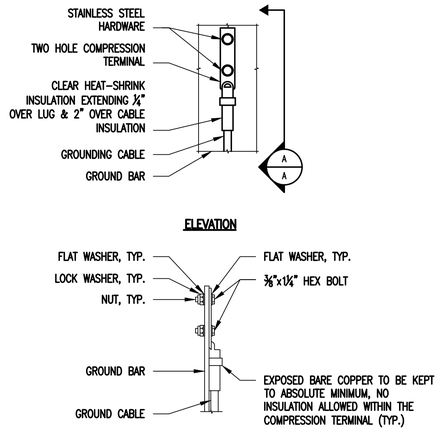
CONDUIT NOTE:
ALL UNDERGROUND CONDUITS TO BE PVC.
ALL ABOVE GROUND CONDUITS TO BE RGS.



ONE LINE DIAGRAM
SCALE: NOT TO SCALE — 1 / E-1

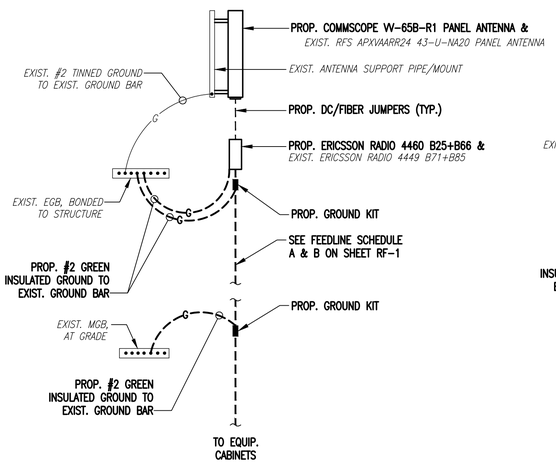


GROUNDING RISER DIAGRAM
SCALE: NOT TO SCALE — 2 / E-1

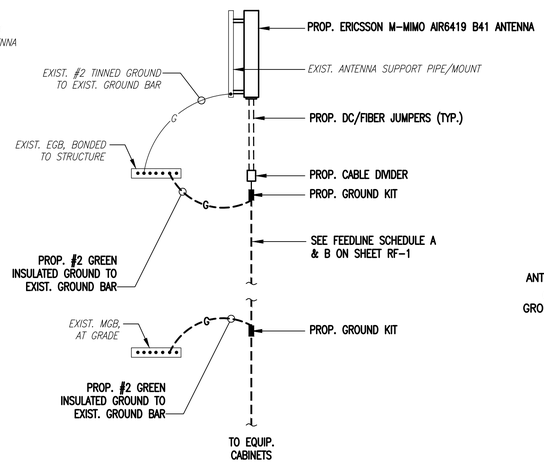


TYPICAL GROUND BAR CONNECTIONS DETAIL
SCALE: NOT TO SCALE — 3 / E-1

NOTES:
1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
3. CADWELL DOWNLEADS FROM UPPER EGB, LOWER EGB AND MGB.

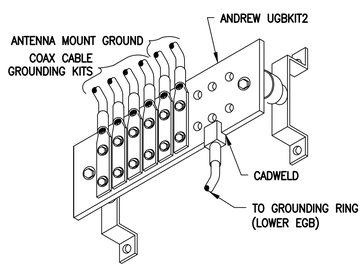


L700/L600/N600 ANTENNA & G1900/L1900/L2100/U2100 ANTENNA



L2500/N2500 ANTENNA

COAX CABLE CONNECTION AND GROUNDING DETAIL
SCALE: NOT TO SCALE — 4 / E-1



GROUND BAR (EGB)
SCALE: NOT TO SCALE — 5 / E-1

ELECTRICAL AND GROUNDING NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
5. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
6. BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THHNINSULATION.
8. RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
9. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
10. WHERE CONDUIT BETWEEN BTS AND PROJECT OWNER CELL SITE PPC AND BETWEEN BTS AND PROJECT OWNER CELL SITE TELCO SERVICE CABINET ARE UNDERGROUND USE PVC, SCHEDULE 40 CONDUIT. ABOVE THE GROUND PORTION OF THESE CONDUITS SHALL BE PVC CONDUIT.
11. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
12. PPC SUPPLIED BY PROJECT OWNER.
13. GROUNDING SHALL COMPLY WITH NEC ART. 250. ADDITIONALLY, GROUNDING, BONDING AND LIGHTNING PROTECTION SHALL BE DONE IN ACCORDANCE WITH "T-MOBILE BTS SITE GROUNDING STANDARDS".
14. GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
15. USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.
16. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
17. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF PROJECT OWNER EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.
18. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
19. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
20. CONTRACTOR SHALL PROVIDE AND INSTALL OMNI DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALLS OVER EACH GROUND ROD AND BONDING POINT BETWEEN (E) TOWER/ MONOPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING.
21. CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMNS MINIMUM RESISTANCE REQUIRED.
22. CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN-LOSS AND DISTANCE- TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE OUT.

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STATE OF CONNECTICUT · JAMES M. FITZGERALD · No. 25997 · LICENSED PROFESSIONAL CIVIL ENGINEER
3/1/2023

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

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SITE NUMBER:
CTHA105A

SITE ADDRESS:
723 FARMINGTON AVENUE
NEW BRITAIN, CT 06053

SHEET TITLE
ELECTRICAL & GROUNDING DETAILS

SHEET NUMBER
E-1

1815.167

EXHIBIT 7

Tower Engineering Solutions
Phone (972) 483-0607, Fax (972) 975-9615
1320 Greenway Drive, Suite 600, Irving, Texas 75038

Structural Analysis Report

Existing 119 ft SABRE Monopole
Customer Name: SBA Communications Corp
Customer Site Number: CT08558-B
Customer Site Name: New Britain 3, CT
Carrier Name: T-Mobile (App#: 221841, V1)
Carrier Site ID / Name: CTHA105A / New Britain
Site Location: 723 Farmington Ave.
New Britain, Connecticut
Hartford County
Latitude: 41.698414
Longitude: -72.785944

2/16/23

Analysis Result:

Max Structural Usage: 93.1% [Pass]
Max Foundation Usage: 96.0% [Pass]
Additional Usage Caused by New Mount/Mount Modification: N/A

Report Prepared By: Younus Alkarawi

Introduction

The purpose of this report is to summarize the analysis results on the 119 ft SABRE Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Original Tower drawings by Sabre, Job# 06-08008, dated 08/1/2005
Foundation Drawing	Original Foundation drawings by Sabre, Job# 06-08008, dated 08/1/2005
Geotechnical Report	Geotechnical Report prepared by DR. Clarence Welti, dated 07/7/2005
Modification Drawings	TES Job #128281 dated 06/17/2022. PCI by TES# 132936, Dated 10/17/2022
Mount Analysis	T-Mobile MA by TES# 138613, Dated 02/14/2023

Analysis Criteria

The comprehensive analysis was performed in accordance with the requirements and stipulations of the TIA-222-H**.** In accordance with this standard, the structure was analyzed using **TESPoles,** a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Wind Speed Used in the Analysis:	120.0 mph (3-Sec. Gust) (Ultimate wind speed)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 1”1/2 radial ice concurrent
Service Load Wind Speed:	60 mph + 0” Radial ice
Standard/Codes:	TIA-222-H / 2021 IBC / 2022 Connecticut State Building Code
Exposure Category:	C
Risk Category:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	S_S = 0.195, S_1 = 0.055

This structural analysis is based upon the tower being classified as a Risk Category II; however, if a different classification is required subsequent to the date hereof, the tower classification will be changed to meet such requirement and a new structural analysis will be run.

Existing Antennas, Mounts and Transmission Lines

The table below summarizes the antennas, mounts and transmission lines that were considered in the analysis as existing on the tower.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	118.0	6	Commscope NHH-65B-R2B – Panel	(3) Modified T-Arms W/ (3) Valmont Site Pro VZWSMART-SFK4 (T-Arm kit), (3) Commscope BASMNT-SBS-1-2 (side-by-side mounts), (1) Valmont Site Pro VZWSMART-PLK7 (Collar Mount), (12) Valmont Site Pro VZWSMART-MSK2 (Crossover Plates) (3) Site Pro P30150 (P3.0 STD pipe)	(11) 1 5/8" (2) 1 5/8" Hybrid	Verizon
2		3	Samsung MT6407-77A – Panel			
3		3	Amphenol BXA-70063-6BF- Panel			
4		3	Samsung B5/B13 RRH-BR04C (RFV01U-D2A)			
5		3	Samsung B2/B66A RRH-BR049 (RFV01U-D1A)			
6		1	Raycap RVZDC-6627-PF-48-OVP			
7	108.0	2	RFS APXVSPP18-C-A20 Panels	(3) T-Arm	(4) 1-1/4" Hybrid (3) 1/2" (6) 5/16"	Clearwire*
8		3	RFS APXVTM14-C-120 Panels			
9		1	Powerwave P40-16-XLPP-RR-A Panels			
10		3	Kathrein 840 10054 Panels			
11		4	RFS ACU-A20-N RET's			
12		3	ALU 1900MHz RRU's			
13		3	ALU 800 MHz Filters			
14		3	ALU 800 MHz RRU's			
15		2	DragonwaveHorizon ODU Radios			
16		3	ALU TD-RRH8x20-25 RRU's			
17		2	Andrew VHLP2.5 Dishes			
18	98.0	3	Cci TPA-65R-BU6DA - Panel	Platform Mount [(1) Site Pro 1 F3P-12-WLL]	(6) 1 5/8" (4) 3/4" DC Power (3) 3/8" Fiber (2) 1 1/4" 4AWG6 DC Power	AT&T
19		3	Cci DMP65R-BU6DA - Panel			
20		3	Ericsson Air6449 - Panel			
21		3	Ericsson Air6419 N77G - Panel			
22		3	Ericsson RRUS 4478 B14 RRU			
23		3	Ericcson RRUS 4449 B5/B12 RRU			
24		3	Ericsson RRUS 8843 B25/B66A RRU			
25		3	Ericsson RRUS 32 RRU			
26		3	Raycap DC6-48-60-18-8F COVP			
-	88.0	3	Ericsson AIR 21 B2A/B4P - Panel	(3) T-Arm w/ Mods	(11) 1 5/8" Coax (3) 1-1/4" Hybrid	T-Mobile
-		3	Ericsson AIR32 KRD901146-1_B66A-Panel			
-		3	RFS APXVAARR24_43-U-NA20 - Panel			
-		3	Ericsson KRY 112 144/2			
-		3	Ericsson Radio 4449 B71 + B12			

*Sprint-Clearwire is now terminated at the 108' rad but not yet Removed.

Existing Antennas, Mounts and Transmission Lines

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
33	78.0	3	JMA Wireless MX08FRO665-21 - Panel	Platform w/ Handrails [MC-PK8-DSH]	(1) 1.411" Hybrid	Dish Wireless
34		3	Fujitsu TA08025-B605 - RRU			
35		3	Fujitsu TA08025-B604 - RRU			
36		1	Raycap RDIDC-9181-PF-48 - COVP			

Proposed Carrier's Final Configuration of Antennas, Mounts and Transmission Lines

Information pertaining to the proposed carrier's final configuration of antennas and transmission lines was provided by SBA Communications Corp. The proposed antennas and lines are listed below.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
27	88.0	3	Commscope VV-65B-R1B - Panel	(3) T-Arm w/ Mod	(9) 1 5/8" Coax (3) 1-1/4" Hybrid (1) 1.99" Hybrid	T-Mobile
28		3	RFS APXVAARR24_43-U-NA20 - Panel			
29		3	Ericsson AIR6419 B41 - Panel			
30		3	Ericsson 4460 B25 + B66 RRU			
31		3	Ericsson 4449 B71 + B85 RRU			
32		3	Ericsson KRY 112 144/2 - TMA			

See the attached coax layout for the line placement considered in the analysis.

Analysis Results

The results of the structural analysis, performed for the wind and ice loading and antenna equipment as defined above, are summarized as the following:

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	**93.1%**	**87.2%**	**70.7%**
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	2909.1	32.4	37.8

The foundation has been investigated using the supplied documents and soils report and was found adequate. Therefore, no modification to the foundation will be required.

Service Load Condition (Rigidity):

The maximum twist and sway of the microwave dishes under the operational wind speed as specified in the Analysis Criteria are listed in the table below:

Elevation (ft)	Antenna / Dish	Carrier	Twist (deg)	Sway (deg)
108.0	VHLP2.5 - Dish	Clearwire	0.000	1.313

It is recommended that the carriers review the twist and sway values of the microwave dishes.

Conclusions

Based on the analysis results, the existing structure and its foundation were found to be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the TIA-222 Standard under the design basic wind speed as specified in the Analysis Criteria.

Standard Conditions

1. This analysis was performed based on the information supplied to **(TES) Tower Engineering Solutions, LLC.** Verification of the information provided was not included in the Scope of Work for **TES**. The accuracy of the analysis is dependent on the accuracy of the information provided.

2. The structural analysis was performance based upon the evidence available at the time of this report. All information provided by the client is considered to be accurate.

3. The analyses will be performed based on the codes as specified by the client or based on the best knowledge of the engineering staff of **TES**. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/TIA-222. If wind speed and/or ice loads are different from the minimum values recommended by the ANSI/TIA-222 standard or other codes, **TES** should be notified in writing and the applicable minimum values provided by the client.

4. The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. **TES** has not visited the tower site to verify the adequacy of the information provided. If there is any discrepancy found in the report regarding the existing conditions, **TES** should be notified immediately to evaluate the effect of the discrepancy on the analysis results.

5. The client will assume responsibility for rework associated with the differences in initially provided information, including tower and foundation information, existing and/or proposed equipment and transmission lines.

6. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

Usage Diagram - Max Ratio 93.14% at 53.3ft

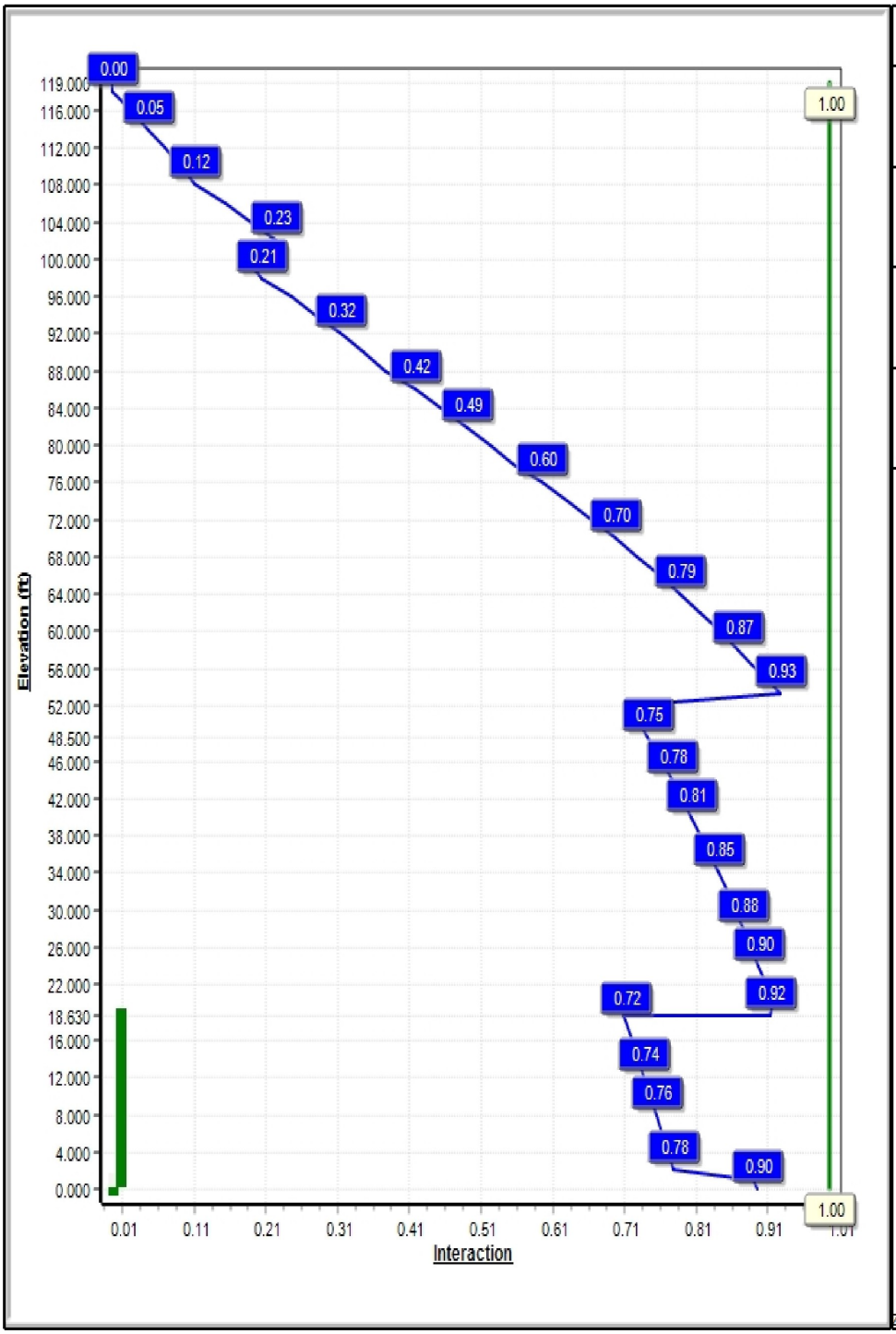
Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-H	2/16/2023
Site Name:	New Britain 3, CT	**Exposure:**	C	
Height:	119.00 (ft)	**Gh:**	1.1	
Base Elev:	0.000 (ft)			Page: 1

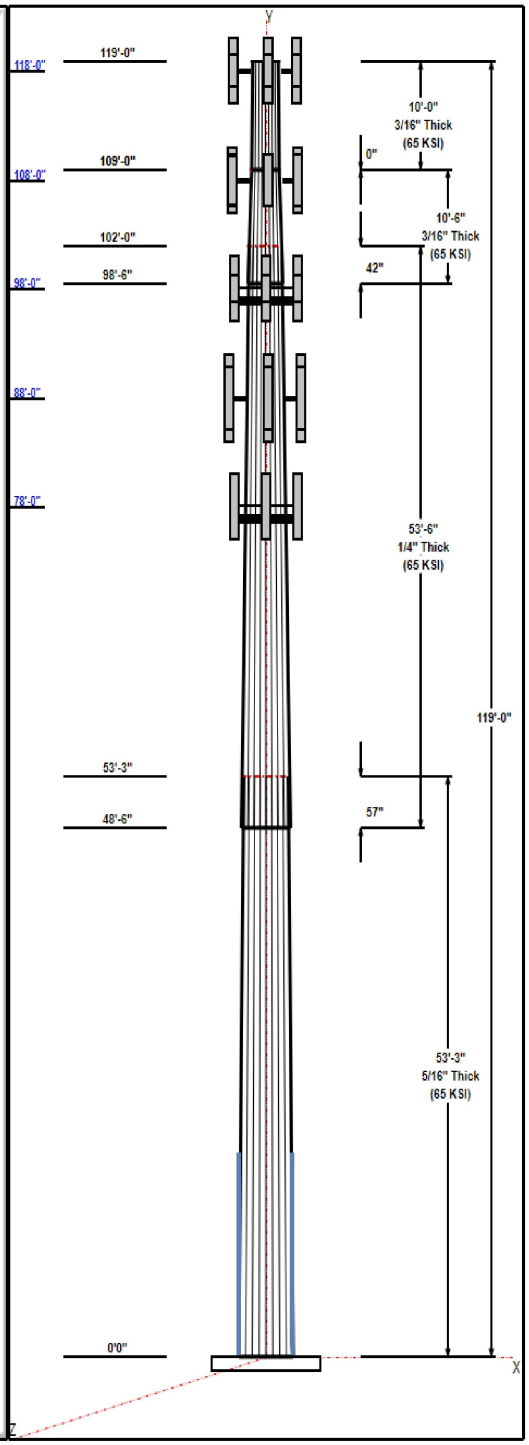
Tower Engineering Solutions

Dead Load Factor:	1.20
Wind Load Factor:	1.00

Load Case : 1.2D + 1.0W 120 mph Wind

Iterations: 25





Structure: CT08558-B-SBA

Type: Tapered
Site Name: New Britain 3, CT
Height: 119.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.22164

2/16/2023

Tower Engineering Solutions

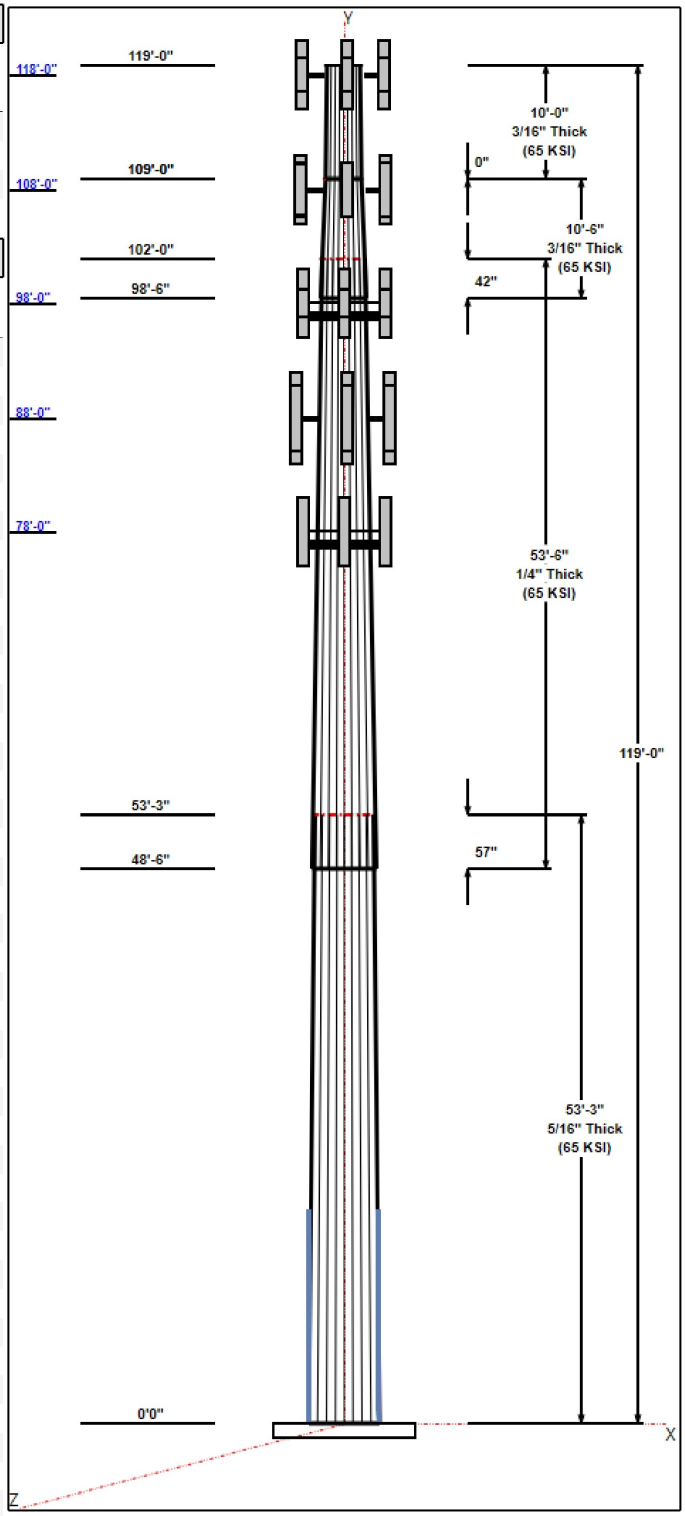
Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	53.25	35.70	47.50	0.313		0.22164	65
2	53.50	25.39	37.25	0.250	Slip	0.22164	65
3	10.50	24.22	26.54	0.188	Slip	0.22164	65
4	10.00	22.00	24.22	0.188	Butt	0.22164	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
118.00	118.00	3	BXA-70063-6BF	Verizon
118.00	118.00	3	T-Arm	Verizon
118.00	118.00	6	Commscope	Verizon
118.00	118.00	3	Samsung MT6407-77A	Verizon
118.00	118.00	1	(3) T-Arm Kit	Verizon
118.00	118.00	3	BSAMNT-SBS-1-2	Verizon
118.00	118.00	1	Collar	Verizon
118.00	118.00	3	Samsung B5/B13	Verizon
118.00	118.00	1	Raycap	Verizon
118.00	118.00	3	B2/B66A RRH-BR049	Verizon
108.00	108.00	3	1900MHz RRH	Clearwire
108.00	108.00	3	800 MHz Filters	Clearwire
108.00	108.00	3	800 MHz	Clearwire
108.00	108.00	3	840 10054	Clearwire
108.00	108.00	4	ACU-A20-N	Clearwire
108.00	108.00	2	APXVSPP18-C-A20	Clearwire
108.00	108.00	3	APXVTM14-C-120	Clearwire
108.00	108.00	2	Horizon	Clearwire
108.00	108.00	1	P40-16-XLPP-RR-A	Clearwire
108.00	108.00	3	TD-RRH8x20-25	Clearwire
108.00	108.00	2	VHLP2.5	Clearwire
108.00	108.00	3	T-Arm	Clearwire
98.00	98.00	1	F3P-12-WLL	AT&T
98.00	98.00	3	Cci TPA-65R-BU6DA	AT&T
98.00	98.00	3	Cci DMP65R-BU6DA	AT&T
98.00	98.00	3	Ericsson RRUS 8843	AT&T
98.00	98.00	3	Ericsson RRUS 32	AT&T
98.00	98.00	3	Raycap DC6-48-60-0-8F	AT&T
98.00	98.00	3	AIR 6449 N77D	AT&T
98.00	98.00	3	Ericsson Air6419 N77G	AT&T
98.00	98.00	3	Ericsson RRUS 4478 B14	AT&T
98.00	98.00	3	Ericcson RRUS 4449	AT&T
88.00	88.00	3	VV-65B-R1B	T-Mobile
88.00	88.00	3	AIR 6419 B77G	T-Mobile
88.00	88.00	3	4460 Radio	T-Mobile
88.00	88.00	3	APXVAARR24_43-U-NA20	T-Mobile
88.00	88.00	3	KRY 112 144/2	T-Mobile
88.00	88.00	3	4449 B71 + B85	T-Mobile
88.00	88.00	3	T-Arm w/ mod	T-Mobile
78.00	78.00	3	JMA Wireless	Dish Wireless
78.00	78.00	3	Fujitsu TA08025-B605	Dish Wireless
78.00	78.00	3	Fujitsu TA08025-B604	Dish Wireless
78.00	78.00	1	Raycap	Dish Wireless
78.00	78.00	1	MC-PK8-DSH	Dish Wireless

Linear Appurtenances



Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	118.00	Inside	1 5/8" Coax	Verizon
0.00	118.00	Outside	1 5/8" Hybrid	Verizon
0.00	108.00	Inside	1-1/4" Hybrid	Clearwire/Sprint
0.00	108.00	Inside	1/2" Coax	Clearwire/Sprint
0.00	108.00	Inside	5/16" Coax	Clearwire/Sprint
0.00	98.00	Inside	1 1/4" DC	AT&T
0.00	98.00	Inside	1 5/8" Coax	AT&T
0.00	98.00	Inside	3/4" DC Power	AT&T
0.00	98.00	Inside	3/8" Fiber	AT&T
0.00	88.00	Inside	1 5/8" Coax	T-Mobile
0.00	88.00	Inside	1-1/4" Hybrid	T-Mobile
0.00	88.00	Inside	1.99" Hybrid	T-Mobile
0.00	78.00	Outside	1.411" Hybrid	Dish Wireless
0.00	20.00	Outside	1" Reinforcing plate	

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
12	2.25" 18J	75.0	Cluster

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.7500	52.0	60.0	Clipped

Reactions

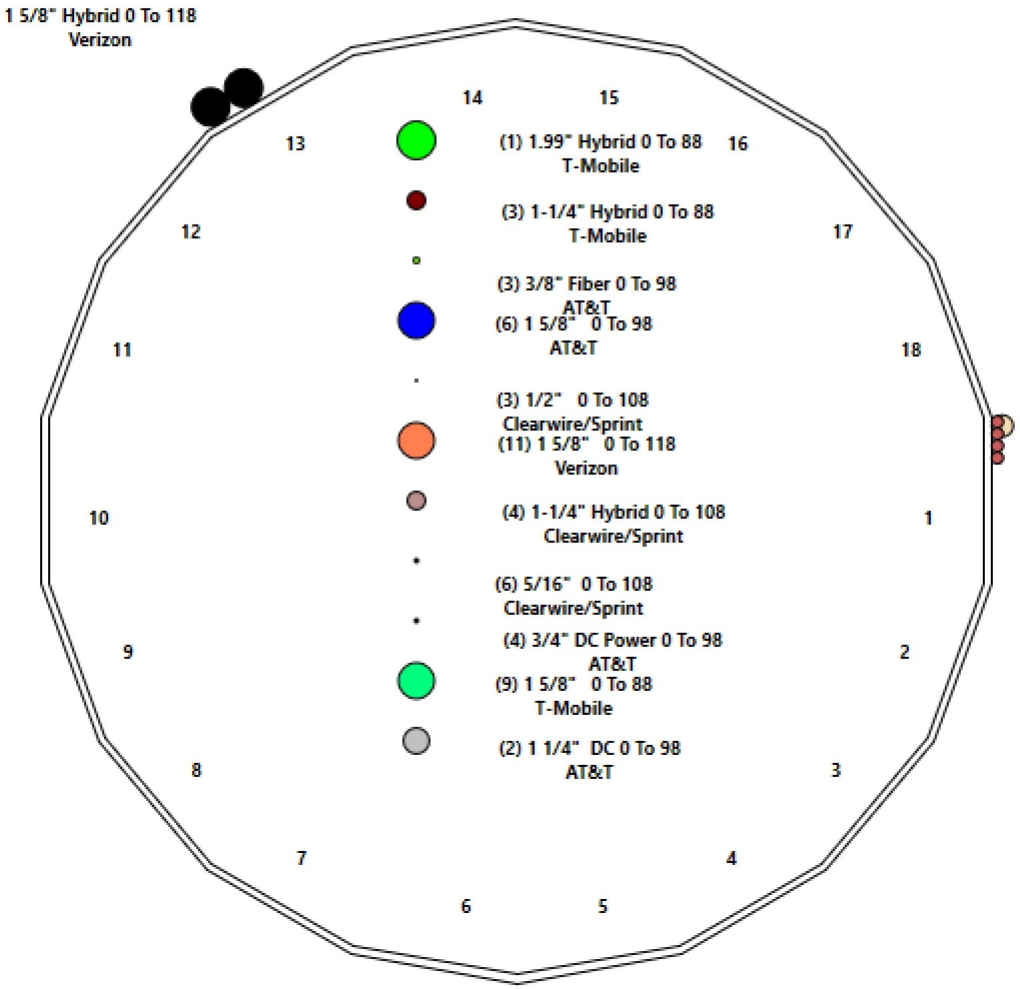
Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.0W 120 mph Wind	2909.1	32.4	37.8
0.9D + 1.0W 120 mph Wind	2876.8	32.4	28.4
1.2D + 1.0Di + 1.0Wi 50 mph Wind	827.3	9.1	62.4
1.2D + 1.0Ev + 1.0Eh	60.9	0.6	39.2
0.9D + 1.0Ev + 1.0Eh	60.3	0.6	29.7
1.0D + 1.0W 60 mph Wind	646.8	7.2	31.5

Structure: CT08558-B-SBA - Coax Line Placement

Type: Monopole
Site Name: New Britain 3, CT
Height: 119.00 (ft)

2/16/2023

Tower Engineering Solutions



Shaft Properties

Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 5	

Tower Engineering Solutions

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	53.250	0.3125	65		0.00	7,420
2	18	53.500	0.2500	65	Slip	57.00	4,488
3	18	10.500	0.1875	65	Slip	42.00	536
4	18	10.000	0.1875	65	Flange	0.00	464
					Total Shaft Weight:		**12,908**

	Bottom						Top						
Sec. No.	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper
1	47.50	0.00	46.80	13166.65	25.39	152.00	35.70	53.25	35.10	5552.15	18.73	114.2	0.221639
2	37.25	48.50	29.36	5078.18	24.86	149.00	25.39	102.00	19.95	1593.41	16.50	101.5	0.221639
3	26.54	98.50	15.68	1376.54	23.55	141.57	24.22	109.00	14.30	1043.15	21.36	129.1	0.221639
4	24.22	109.0	14.30	1043.15	21.36	129.15	22.00	119.00	12.98	780.30	19.28	117.3	0.221639

Additional Steel

							Intermediate Connectors		Termination Connectors			
Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Fu (ksi)	Offset (in)	Description	Spacing (in)	Description	Spacing (in)	Lower Qty	Upper Qty
0.00	1.00	4	SOL 1 3/4" William R71	128	150	0.00	5/8" Hollo Bolt	12.00	5/8" Hollo Bolt	3.00		
1.00	18.63	4	LNP LP6X100-B-20T	65	80	0.00	5/8" Hollo Bolt	24.00	5/8" Hollo Bolt	3.00		10

Load Summary

Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 6	

Tower Engineering Solutions

Discrete Appurtenances

				No Ice			Ice				
No.	Elev (ft)	Description	Qty	Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
1	118.00	BXA-70063-6BF	3	17.00	7.57	0.70	155.35	10.268	0.70	0.00	0.00
2	118.00	T-Arm	3	350.00	10.00	0.75	588.54	18.519	0.75	0.00	0.00
3	118.00	Commscope NHH-65B-R2B	6	43.70	8.08	0.83	239.63	9.339	0.83	0.00	0.00
4	118.00	Samsung MT6407-77A	3	79.40	4.69	0.70	195.53	5.614	0.70	0.00	0.00
5	118.00	(3) T-Arm Kit VZWSMART-SFK4	1	500.00	16.50	1.00	1079.30	32.243	1.00	0.00	0.00
6	118.00	BSAMNT-SBS-1-2	3	25.35	0.00	1.00	42.63	0.000	1.00	0.00	0.00
7	118.00	Collar Mount-VZWSMART-PLK7	1	150.60	2.50	1.00	355.88	5.056	1.00	0.00	0.00
8	118.00	Samsung B5/B13 RRH-BR04C	3	70.30	1.88	0.67	117.78	2.418	0.67	0.00	0.00
9	118.00	Raycap RVZDC-6627-PF-48-OVP	1	32.00	3.79	1.00	154.78	4.576	1.00	0.00	0.00
10	118.00	B2/B66A RRH-BR049	3	84.40	1.87	0.67	158.71	2.428	0.67	0.00	0.00
11	108.00	1900MHz RRH	3	44.00	3.80	0.50	149.64	5.145	0.50	0.00	0.00
12	108.00	800 MHz Filters	3	64.00	2.40	0.67	138.71	3.483	0.67	0.00	0.00
13	108.00	800 MHz	3	53.00	2.49	0.67	124.57	3.597	0.67	0.00	0.00
14	108.00	840 10054	3	35.00	4.59	0.61	116.55	6.208	0.61	0.00	0.00
15	108.00	ACU-A20-N	4	1.00	0.14	0.67	5.16	0.427	0.67	0.00	0.00
16	108.00	APXVSPP18-C-A20	2	57.00	8.02	0.83	224.27	10.723	0.83	0.00	0.00
17	108.00	APXVTM14-C-120	3	56.00	6.34	0.79	210.21	7.415	0.79	0.00	0.00
18	108.00	Horizon	2	10.60	0.43	1.00	32.40	0.925	1.00	0.00	0.00
19	108.00	P40-16-XLPP-RR-A	1	53.00	9.08	1.00	254.88	10.271	1.00	0.00	0.00
20	108.00	TD-RRH8x20-25	3	70.00	4.05	0.67	176.17	4.835	0.67	0.00	0.00
21	108.00	VHLP2.5	2	47.60	8.43	1.00	214.71	10.082	1.00	0.00	0.00
22	108.00	T-Arm	3	350.00	8.00	0.75	586.43	14.755	0.75	0.00	0.00
23	98.00	F3P-12-WLL	1	2786.00	56.18	1.00	5395.35	23.831	1.00	0.00	0.00
24	98.00	Cci TPA-65R-BU6DA	3	52.60	12.87	0.72	275.56	14.282	0.72	0.00	0.00
25	98.00	Cci DMP65R-BU6DA	3	79.40	12.71	0.72	361.67	14.113	0.72	0.00	0.00
26	98.00	Ericsson RRUS 8843 B25/B66A	3	75.00	1.65	0.50	145.86	2.163	0.50	0.00	0.00
27	98.00	Ericsson RRUS 32	3	53.00	2.74	0.50	136.50	3.436	0.50	0.00	0.00
28	98.00	Raycap DC6-48-60-0-8F	3	31.80	0.92	1.00	91.05	1.340	1.00	0.00	0.00
29	98.00	AIR 6449 N77D	3	88.00	4.13	0.85	218.80	4.949	0.85	0.00	0.00
30	98.00	Ericsson Air6419 N77G	3	55.40	3.80	0.76	132.67	4.563	0.76	0.00	0.00
31	98.00	Ericsson RRUS 4478 B14	3	59.40	1.65	0.50	99.14	2.147	0.50	0.00	0.00
32	98.00	Ericcson RRUS 4449 B5/B12	3	71.00	1.97	0.50	122.16	2.494	0.50	0.00	0.00
33	88.00	VV-65B-R1B	3	29.50	7.90	0.75	49.02	13.129	0.75	0.00	0.00
34	88.00	AIR 6419 B77G	3	66.10	3.80	0.75	157.31	4.554	0.75	0.00	0.00
35	88.00	4460 Radio	3	109.00	2.85	0.67	177.17	3.489	0.67	0.00	0.00
36	88.00	APXVAARR24_43-U-NA20	3	128.00	20.24	0.70	521.61	22.038	0.75	0.00	0.00
37	88.00	KRY 112 144/2	3	11.00	0.41	0.70	21.22	0.860	0.75	0.00	0.00
38	88.00	4449 B71 + B85	3	74.00	2.57	0.67	165.09	3.182	0.67	0.00	0.00
39	88.00	T-Arm w/ mod	3	350.00	14.00	0.75	581.64	25.582	0.75	0.00	0.00
40	78.00	JMA Wireless MX08FRO665-21	3	64.50	12.49	0.74	336.96	13.862	0.74	0.00	0.00
41	78.00	Fujitsu TA08025-B605	3	75.00	1.96	0.67	123.99	2.486	0.67	0.00	0.00
42	78.00	Fujitsu TA08025-B604	3	63.90	1.96	0.67	111.32	2.486	0.67	0.00	0.00
43	78.00	Raycap RDIDC-9181-PF-48	1	21.90	2.01	1.00	71.78	2.542	1.00	0.00	0.00
44	78.00	MC-PK8-DSH	1	1727.00	37.59	1.00	3307.99	81.834	1.00	0.00	0.00
		Totals:	**119**	**14,272.25**			**32,789.85**				

Linear Appurtenances

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
Bottom Elev. (ft)	**Top Elev. (ft)**	**Description**		**Exposed Width**		**Exposed**					
0.00	118.00	(11) 1 5/8" Coax		0.00		Inside					
0.00	118.00	(2) 1 5/8" Hybrid		1.63		Outside					
0.00	108.00	(4) 1-1/4" Hybrid		0.00		Inside					
0.00	108.00	(3) 1/2" Coax		0.00		Inside					
0.00	108.00	(6) 5/16" Coax		0.00		Inside					
0.00	98.00	(2) 1 1/4" DC		0.00		Inside					
0.00	98.00	(6) 1 5/8" Coax		0.00		Inside					
0.00	98.00	(4) 3/4" DC Power		0.00		Inside					
0.00	98.00	(3) 3/8" Fiber		0.00		Inside					
0.00	88.00	(9) 1 5/8" Coax		0.00		Inside					
0.00	88.00	(3) 1-1/4" Hybrid		0.00		Inside					
0.00	88.00	(1) 1.99" Hybrid		0.00		Inside					
0.00	78.00	(1) 1.411" Hybrid		1.41		Outside					
0.00	20.00	(4) 1" Reinforcing plate		0.00		Outside					

Shaft Section Properties

Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 8	

Tower Engineering Solutions

Increment Length: **2 (ft)**

											Additional Reinforcing			
Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)	Area (in^2)	Ixp (in^4)	Iyp (in^4)	Weight (lb)
0.00	RB1	0.3125	47.500	46.802	13166.7	25.39	152.00	65	72	0.0	10.40	4731.7	1578.5	
1.00	RT1 RB2	0.3125	47.278	46.583	12982.0	25.27	151.29	65	72	158.9	34.40	15197.3	5115.0	117.9
2.00		0.3125	47.057	46.363	12799.1	25.14	150.58	65	72	158.1	24.00	10412.0	3518.7	81.7
4.00		0.3125	46.613	45.923	12438.4	24.89	149.16	65	72	314.0	24.00	10221.2	3455.1	163.3
6.00		0.3125	46.170	45.483	12084.5	24.64	147.74	65	72	311.0	24.00	10032.1	3392.0	163.3
8.00		0.3125	45.727	45.044	11737.5	24.39	146.33	65	73	308.0	24.00	9844.8	3329.6	163.3
10.00		0.3125	45.284	44.604	11397.1	24.14	144.91	65	73	305.1	24.00	9659.3	3267.8	163.3
12.00		0.3125	44.840	44.164	11063.4	23.89	143.49	65	73	302.1	24.00	9475.5	3206.5	163.3
14.00		0.3125	44.397	43.725	10736.3	23.64	142.07	65	74	299.1	24.00	9293.5	3145.8	163.3
16.00		0.3125	43.954	43.285	10415.7	23.39	140.65	65	74	296.1	24.00	9113.3	3085.8	163.3
18.00		0.3125	43.511	42.845	10101.5	23.14	139.23	65	74	293.1	24.00	8934.8	3026.3	163.3
18.63	RT2	0.3125	43.371	42.707	10003.9	23.06	138.79	65	74	91.7	24.00	8879.0	3007.7	51.4
20.00		0.3125	43.067	42.406	9793.7	22.89	137.82	65	74	198.4				
22.00		0.3125	42.624	41.966	9492.2	22.64	136.40	65	75	287.1				
24.00		0.3125	42.181	41.526	9197.0	22.39	134.98	65	75	284.1				
26.00		0.3125	41.737	41.087	8908.0	22.14	133.56	65	75	281.1				
28.00		0.3125	41.294	40.647	8625.1	21.89	132.14	65	76	278.1				
30.00		0.3125	40.851	40.208	8348.2	21.64	130.72	65	76	275.1				
32.00		0.3125	40.408	39.768	8077.3	21.39	129.30	65	76	272.1				
34.00		0.3125	39.964	39.328	7812.4	21.14	127.89	65	77	269.1				
36.00		0.3125	39.521	38.889	7553.3	20.89	126.47	65	77	266.2				
38.00		0.3125	39.078	38.449	7300.0	20.64	125.05	65	77	263.2				
40.00		0.3125	38.634	38.009	7052.4	20.39	123.63	65	77	260.2				
42.00		0.3125	38.191	37.570	6810.5	20.14	122.21	65	78	257.2				
44.00		0.3125	37.748	37.130	6574.2	19.89	120.79	65	78	254.2				
46.00		0.3125	37.305	36.690	6343.4	19.64	119.37	65	78	251.2				
48.00		0.3125	36.861	36.251	6118.1	19.39	117.96	65	79	248.2				
48.50	Bot - Section 2	0.3125	36.751	36.141	6062.6	19.33	117.60	65	79	61.6				
50.00		0.3125	36.418	35.811	5898.2	19.14	116.54	65	79	332.8				
52.00		0.3125	35.975	35.371	5683.6	18.89	115.12	65	79	439.0				
53.25	Top - Section 1	0.2500	36.198	28.524	4656.9	24.12	144.79	65	73	271.7				
54.00		0.2500	36.032	28.392	4592.6	24.00	144.13	65	73	72.6				
56.00		0.2500	35.588	28.040	4424.0	23.69	142.35	65	74	192.0				
58.00		0.2500	35.145	27.688	4259.6	23.38	140.58	65	74	189.6				
60.00		0.2500	34.702	27.336	4099.4	23.06	138.81	65	74	187.2				
62.00		0.2500	34.258	26.985	3943.1	22.75	137.03	65	75	184.8				
64.00		0.2500	33.815	26.633	3791.0	22.44	135.26	65	75	182.4				
66.00		0.2500	33.372	26.281	3642.7	22.13	133.49	65	75	180.1				
68.00		0.2500	32.929	25.930	3498.4	21.81	131.71	65	76	177.7				
70.00		0.2500	32.485	25.578	3358.0	21.50	129.94	65	76	175.3				
72.00		0.2500	32.042	25.226	3221.4	21.19	128.17	65	76	172.9				
74.00		0.2500	31.599	24.874	3088.5	20.88	126.39	65	77	170.5				
76.00		0.2500	31.155	24.523	2959.3	20.56	124.62	65	77	168.1				
78.00		0.2500	30.712	24.171	2833.8	20.25	122.85	65	78	165.7				
80.00		0.2500	30.269	23.819	2711.9	19.94	121.08	65	78	163.3				
82.00		0.2500	29.826	23.467	2593.5	19.63	119.30	65	78	160.9				
84.00		0.2500	29.382	23.116	2478.6	19.31	117.53	65	79	158.5				
86.00		0.2500	28.939	22.764	2367.2	19.00	115.76	65	79	156.1				
88.00		0.2500	28.496	22.412	2259.2	18.69	113.98	65	79	153.7				
90.00		0.2500	28.053	22.061	2154.5	18.38	112.21	65	80	151.3				

Increment Length: **2 (ft)**

Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)	Additional Reinforcing Area (in^2)	Ixp (in^4)	Iyp (in^4)	Weight (lb)
92.00		0.2500	27.609	21.709	2053.0	18.06	110.44	65	80	148.9				
94.00		0.2500	27.166	21.357	1954.9	17.75	108.66	65	81	146.5				
96.00		0.2500	26.723	21.005	1859.9	17.44	106.89	65	81	144.1				
98.00		0.2500	26.279	20.654	1768.0	17.12	105.12	65	81	141.8				
98.50	Bot - Section 3	0.2500	26.169	20.566	1745.5	17.05	104.67	65	81	35.1				
100.00		0.2500	25.836	20.302	1679.2	16.81	103.34	65	82	183.8				
102.00	Top - Section 2	0.1875	25.768	15.223	1258.5	22.82	137.43	65	75	241.5				
104.00		0.1875	25.325	14.959	1194.2	22.40	135.06	65	75	102.7				
106.00		0.1875	24.881	14.695	1132.2	21.99	132.70	65	76	100.9				
108.00		0.1875	24.438	14.432	1072.3	21.57	130.34	65	76	99.1				
109.00	Top - Section 3	0.1875	24.216	14.300	1043.1	21.36	129.15	65	76	48.9				
109.00	Bot - Section 4	0.1875	24.216	14.300	1043.1	21.36	129.15	65	76					
110.00		0.1875	23.995	14.168	1014.5	21.15	127.97	65	77	48.4				
112.00		0.1875	23.551	13.904	958.9	20.74	125.61	65	77	95.5				
114.00		0.1875	23.108	13.640	905.4	20.32	123.24	65	78	93.7				
116.00		0.1875	22.665	13.376	853.9	19.90	120.88	65	78	91.9				
118.00		0.1875	22.222	13.113	804.3	19.49	118.52	65	78	90.1				
119.00		0.1875	22.000	12.981	780.3	19.28	117.33	65	79	44.4				
									Total Weight	**12908.1**				**1557.7**

Wind Loading - Shaft

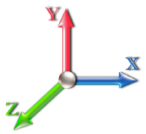
Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 10	

Tower Engineering Solutions

Load Case: 1.2D + 1.0W 120 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 25

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00	RB1	1.00	0.85	29.432	32.37	442.17	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
1.00	RT1 RB2	1.00	0.85	29.432	32.37	440.10	0.730	0.000	1.00	4.010	2.93	94.8	0.0	190.7
2.00		1.00	0.85	29.432	32.37	438.04	0.730	0.000	1.00	3.991	2.91	94.3	0.0	189.8
4.00		1.00	0.85	29.432	32.37	433.92	0.730	0.000	2.00	7.926	5.79	187.3	0.0	376.8
6.00		1.00	0.85	29.432	32.37	429.79	0.730	0.000	2.00	7.851	5.73	185.6	0.0	373.2
8.00		1.00	0.85	29.432	32.37	425.66	0.730	0.000	2.00	7.776	5.68	183.8	0.0	369.7
10.00		1.00	0.85	29.432	32.37	421.54	0.730	0.000	2.00	7.701	5.62	182.0	0.0	366.1
12.00		1.00	0.85	29.432	32.37	417.41	0.730	0.000	2.00	7.626	5.57	180.2	0.0	362.5
14.00		1.00	0.85	29.432	32.37	413.28	0.730	0.000	2.00	7.551	5.51	178.5	0.0	358.9
16.00		1.00	0.86	29.795	32.77	411.68	0.730	0.000	2.00	7.476	5.46	178.9	0.0	355.3
18.00		1.00	0.88	30.543	33.60	412.61	0.730	0.000	2.00	7.401	5.40	181.5	0.0	351.7
18.63	RT2	1.00	0.89	30.765	33.84	412.78	0.730	0.000	0.63	2.316	1.69	57.2	0.0	110.0
20.00		1.00	0.90	31.228	34.35	412.96	0.730	0.000	1.37	5.010	3.66	125.6	0.0	238.1
22.00		1.00	0.92	31.861	35.05	412.83	0.730	0.000	2.00	7.251	5.29	185.5	0.0	344.5
24.00		1.00	0.94	32.450	35.70	412.30	0.730	0.000	2.00	7.176	5.24	187.0	0.0	340.9
26.00		1.00	0.95	33.002	36.30	411.41	0.730	0.000	2.00	7.101	5.18	188.2	0.0	337.3
28.00		1.00	0.97	33.521	36.87	410.23	0.730	0.000	2.00	7.026	5.13	189.1	0.0	333.7
30.00		1.00	0.98	34.011	37.41	408.79	0.730	0.000	2.00	6.951	5.07	189.8	0.0	330.2
32.00		1.00	1.00	34.476	37.92	407.11	0.730	0.000	2.00	6.876	5.02	190.4	0.0	326.6
34.00		1.00	1.01	34.919	38.41	405.22	0.730	0.000	2.00	6.801	4.96	190.7	0.0	323.0
36.00		1.00	1.02	35.342	38.88	403.14	0.730	0.000	2.00	6.726	4.91	190.9	0.0	319.4
38.00		1.00	1.03	35.747	39.32	400.90	0.730	0.000	2.00	6.651	4.86	190.9	0.0	315.8
40.00		1.00	1.04	36.135	39.75	398.49	0.730	0.000	2.00	6.576	4.80	190.8	0.0	312.2
42.00		1.00	1.05	36.508	40.16	395.95	0.730	0.000	2.00	6.501	4.75	190.6	0.0	308.6
44.00		1.00	1.06	36.867	40.55	393.28	0.730	0.000	2.00	6.426	4.69	190.2	0.0	305.0
46.00		1.00	1.07	37.214	40.93	390.48	0.730	0.000	2.00	6.351	4.64	189.8	0.0	301.4
48.00		1.00	1.08	37.549	41.30	387.57	0.730	0.000	2.00	6.276	4.58	189.2	0.0	297.8
48.50	Bot - Section 2	1.00	1.09	37.631	41.39	386.83	0.730	0.000	0.50	1.557	1.14	47.1	0.0	73.9
50.00		1.00	1.09	37.873	41.66	384.56	0.730	0.000	1.50	4.707	3.44	143.1	0.0	399.4
52.00		1.00	1.10	38.187	42.01	381.45	0.730	0.000	2.00	6.210	4.53	190.4	0.0	526.8
53.25	Top - Section 1	1.00	1.11	38.378	42.22	379.46	0.730	0.000	1.25	3.843	2.81	118.4	0.0	326.0
54.00		1.00	1.11	38.491	42.34	383.57	0.730	0.000	0.75	2.292	1.67	70.8	0.0	87.2
56.00		1.00	1.12	38.787	42.67	380.31	0.730	0.000	2.00	6.060	4.42	188.8	0.0	230.4
58.00		1.00	1.13	39.075	42.98	376.96	0.730	0.000	2.00	5.985	4.37	187.8	0.0	227.6
60.00		1.00	1.14	39.355	43.29	373.54	0.730	0.000	2.00	5.910	4.31	186.8	0.0	224.7
62.00		1.00	1.14	39.627	43.59	370.04	0.730	0.000	2.00	5.835	4.26	185.7	0.0	221.8
64.00		1.00	1.15	39.893	43.88	366.48	0.730	0.000	2.00	5.760	4.21	184.5	0.0	218.9
66.00		1.00	1.16	40.152	44.17	362.84	0.730	0.000	2.00	5.685	4.15	183.3	0.0	216.1
68.00		1.00	1.17	40.405	44.45	359.15	0.730	0.000	2.00	5.610	4.10	182.0	0.0	213.2
70.00		1.00	1.17	40.653	44.72	355.40	0.730	0.000	2.00	5.535	4.04	180.7	0.0	210.3
72.00		1.00	1.18	40.894	44.98	351.59	0.730	0.000	2.00	5.460	3.99	179.3	0.0	207.4
74.00		1.00	1.19	41.131	45.24	347.73	0.730	0.000	2.00	5.385	3.93	177.9	0.0	204.6
76.00		1.00	1.19	41.363	45.50	343.81	0.730	0.000	2.00	5.310	3.88	176.4	0.0	201.7
78.00	Appurtenance(s)	1.00	1.20	41.589	45.75	339.85	0.730	0.000	2.00	5.235	3.82	174.8	0.0	198.8
80.00		1.00	1.21	41.812	45.99	335.84	0.730	0.000	2.00	5.160	3.77	173.3	0.0	196.0
82.00		1.00	1.21	42.030	46.23	331.78	0.730	0.000	2.00	5.085	3.71	171.6	0.0	193.1
84.00		1.00	1.22	42.243	46.47	327.68	0.730	0.000	2.00	5.010	3.66	170.0	0.0	190.2

Wind Loading - Shaft

Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 11	

Tower Engineering Solutions

86.00		1.00	1.23	42.453	46.70	323.54	0.730	0.000	2.00	4.935	3.60	168.2	0.0	187.3
88.00	Appurtenance(s)	1.00	1.23	42.659	46.93	319.35	0.730	0.000	2.00	4.860	3.55	166.5	0.0	184.5
90.00		1.00	1.24	42.861	47.15	315.13	0.730	0.000	2.00	4.785	3.49	164.7	0.0	181.6
92.00		1.00	1.24	43.060	47.37	310.87	0.730	0.000	2.00	4.710	3.44	162.9	0.0	178.7
94.00		1.00	1.25	43.256	47.58	306.57	0.730	0.000	2.00	4.635	3.38	161.0	0.0	175.9
96.00		1.00	1.25	43.448	47.79	302.24	0.730	0.000	2.00	4.560	3.33	159.1	0.0	173.0
98.00	Appurtenance(s)	1.00	1.26	43.637	48.00	297.87	0.730	0.000	2.00	4.485	3.27	157.2	0.0	170.1
98.50	Bot - Section 3	1.00	1.26	43.684	48.05	296.77	0.730	0.000	0.50	1.110	0.81	38.9	0.0	42.1
100.00		1.00	1.27	43.823	48.21	293.47	0.730	0.000	1.50	3.348	2.44	117.8	0.0	220.6
102.00	Top - Section 2	1.00	1.27	44.006	48.41	289.04	0.730	0.000	2.00	4.398	3.21	155.4	0.0	289.8
104.00		1.00	1.28	44.186	48.60	288.85	0.730	0.000	2.00	4.323	3.16	153.4	0.0	123.2
106.00		1.00	1.28	44.364	48.80	284.36	0.730	0.000	2.00	4.248	3.10	151.3	0.0	121.1
108.00	Appurtenance(s)	1.00	1.29	44.539	48.99	279.85	0.730	0.000	2.00	4.173	3.05	149.3	0.0	118.9
109.00	Top - Section 3	1.00	1.29	44.625	49.09	277.58	0.730	0.000	1.00	2.059	1.50	73.8	0.0	58.7
110.00		1.00	1.29	44.711	49.18	275.30	0.730	0.000	1.00	2.040	1.49	73.2	0.0	58.1
112.00		1.00	1.30	44.881	49.37	270.73	0.730	0.000	2.00	4.023	2.94	145.0	0.0	114.6
114.00		1.00	1.30	45.048	49.55	266.13	0.730	0.000	2.00	3.948	2.88	142.8	0.0	112.5
116.00		1.00	1.31	45.214	49.74	261.50	0.730	0.000	2.00	3.873	2.83	140.6	0.0	110.3
118.00	Appurtenance(s)	1.00	1.31	45.377	49.91	256.85	0.730	0.000	2.00	3.798	2.77	138.4	0.0	108.2
119.00		1.00	1.31	45.457	50.00	254.51	0.730	0.000	1.00	1.871	1.37	68.3	0.0	53.3
								Totals:	**119.00**			**10,443.4**		**15,489.7**

Discrete Appurtenance Forces

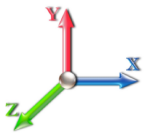
Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 12	

Tower Engineering Solutions

Load Case: 1.2D + 1.0W 120 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 25

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	118.00	(3) T-Arm Kit	1	45.377	49.914	0.75	0.75	12.38	600.00	0.000	0.000	617.69	0.00	0.00
2	118.00	BXA-70063-6BF	3	45.377	49.914	0.56	0.80	12.72	61.20	0.000	0.000	634.79	0.00	0.00
3	118.00	T-Arm	3	45.377	49.914	0.56	0.75	16.88	1260.00	0.000	0.000	842.31	0.00	0.00
4	118.00	Commscope	6	45.377	49.914	0.66	0.80	32.19	314.64	0.000	0.000	1606.78	0.00	0.00
5	118.00	Samsung MT6407-77A	3	45.377	49.914	0.56	0.80	7.88	285.84	0.000	0.000	393.29	0.00	0.00
6	118.00	B2/B66A RRH-BR049	3	45.377	49.914	0.54	0.80	3.01	303.84	0.000	0.000	150.09	0.00	0.00
7	118.00	BSAMNT-SBS-1-2	3	45.377	49.914	0.75	0.75	0.00	91.26	0.000	0.000	0.00	0.00	0.00
8	118.00	Collar	1	45.377	49.914	0.75	0.75	1.88	180.72	0.000	0.000	93.59	0.00	0.00
9	118.00	Samsung B5/B13	3	45.377	49.914	0.54	0.80	3.02	253.08	0.000	0.000	150.89	0.00	0.00
10	118.00	Raycap	1	45.377	49.914	0.80	0.80	3.03	38.40	0.000	0.000	151.34	0.00	0.00
11	108.00	840 10054	3	44.539	48.992	0.49	0.80	6.72	126.00	0.000	0.000	329.22	0.00	0.00
12	108.00	800 MHz	3	44.539	48.992	0.54	0.80	4.00	190.80	0.000	0.000	196.16	0.00	0.00
13	108.00	ACU-A20-N	4	44.539	48.992	0.54	0.80	0.30	4.80	0.000	0.000	14.71	0.00	0.00
14	108.00	APXVSPP18-C-A20	2	44.539	48.992	0.66	0.80	10.65	136.80	0.000	0.000	521.80	0.00	0.00
15	108.00	800 MHz Filters	3	44.539	48.992	0.54	0.80	3.86	230.40	0.000	0.000	189.07	0.00	0.00
16	108.00	1900MHz RRH	3	44.539	48.992	0.40	0.80	4.56	158.40	0.000	0.000	223.41	0.00	0.00
17	108.00	T-Arm	3	44.539	48.992	0.56	0.75	13.50	1260.00	0.000	0.000	661.40	0.00	0.00
18	108.00	APXVTM14-C-120	3	44.539	48.992	0.63	0.80	12.02	201.60	0.000	0.000	588.92	0.00	0.00
19	108.00	Horizon	2	44.539	48.992	0.80	0.80	0.69	25.44	0.000	0.000	33.71	0.00	0.00
20	108.00	P40-16-XLPP-RR-A	1	44.539	48.992	0.80	0.80	7.26	63.60	0.000	0.000	355.88	0.00	0.00
21	108.00	TD-RRH8x20-25	3	44.539	48.992	0.54	0.80	6.51	252.00	0.000	0.000	319.06	0.00	0.00
22	108.00	VHLP2.5	2	44.539	48.992	1.00	1.00	16.86	114.24	0.000	0.000	826.01	0.00	0.00
23	98.00	Ericcson RRUS 4449	3	43.637	48.000	0.38	0.75	2.22	255.60	0.000	0.000	106.38	0.00	0.00
24	98.00	Ericsson RRUS 4478 B14	3	43.637	48.000	0.38	0.75	1.86	213.84	0.000	0.000	89.10	0.00	0.00
25	98.00	Ericsson Air6419 N77G	3	43.637	48.000	0.57	0.75	6.50	199.44	0.000	0.000	311.91	0.00	0.00
26	98.00	AIR 6449 N77D	3	43.637	48.000	0.64	0.75	7.90	316.80	0.000	0.000	379.14	0.00	0.00
27	98.00	Raycap DC6-48-60-0-8F	3	43.637	48.000	0.75	0.75	2.07	114.48	0.000	0.000	99.36	0.00	0.00
28	98.00	Ericsson RRUS 32	3	43.637	48.000	0.38	0.75	3.08	190.80	0.000	0.000	147.96	0.00	0.00
29	98.00	Ericsson RRUS 8843	3	43.637	48.000	0.38	0.75	1.86	270.00	0.000	0.000	89.10	0.00	0.00
30	98.00	Cci DMP65R-BU6DA	3	43.637	48.000	0.54	0.75	20.59	285.84	0.000	0.000	988.34	0.00	0.00
31	98.00	Cci TPA-65R-BU6DA	3	43.637	48.000	0.54	0.75	20.85	189.36	0.000	0.000	1000.78	0.00	0.00
32	98.00	F3P-12-WLL	1	43.637	48.000	1.00	1.00	56.18	3343.20	0.000	0.000	2696.67	0.00	0.00
33	88.00	AIR 6419 B77G	3	42.659	46.925	0.60	0.80	6.84	237.96	0.000	0.000	320.97	0.00	0.00
34	88.00	4460 Radio	3	42.659	46.925	0.54	0.80	4.58	392.40	0.000	0.000	215.05	0.00	0.00
35	88.00	VV-65B-R1B	3	42.659	46.925	0.60	0.80	14.22	106.20	0.000	0.000	667.27	0.00	0.00
36	88.00	4449 B71 + B85	3	42.659	46.925	0.54	0.80	4.13	266.40	0.000	0.000	193.92	0.00	0.00
37	88.00	APXVAARR24_43-U-NA2	3	42.659	46.925	0.56	0.80	34.00	460.80	0.000	0.000	1595.60	0.00	0.00
38	88.00	KRY 112 144/2	3	42.659	46.925	0.56	0.80	0.69	39.60	0.000	0.000	32.32	0.00	0.00
39	88.00	T-Arm w/ mod	3	42.659	46.925	0.56	0.75	23.63	1260.00	0.000	0.000	1108.60	0.00	0.00
40	78.00	MC-PK8-DSH	1	41.589	45.748	1.00	1.00	37.59	2072.40	0.000	0.000	1719.68	0.00	0.00
41	78.00	Raycap	1	41.589	45.748	0.75	0.75	1.51	26.28	0.000	0.000	68.97	0.00	0.00
42	78.00	Fujitsu TA08025-B604	3	41.589	45.748	0.50	0.75	2.95	230.04	0.000	0.000	135.17	0.00	0.00
43	78.00	Fujitsu TA08025-B605	3	41.589	45.748	0.50	0.75	2.95	270.00	0.000	0.000	135.17	0.00	0.00
44	78.00	JMA Wireless	3	41.589	45.748	0.55	0.75	20.80	232.20	0.000	0.000	951.38	0.00	0.00
							Totals:		**17,126.70**			**21,952.96**		

Total Applied Force Summary

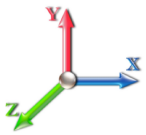
Structure:	CT08558-B-SBA		**Code:**	TIA-222-H	2/16/2023
Site Name:	New Britain 3, CT		**Exposure:**	C	
Height:	119.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 13

Tower Engineering Solutions

Load Case: 1.2D + 1.0W 120 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 25

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
1.00		94.77	241.95	0.00	0.00
2.00		94.33	241.05	0.00	0.00
4.00		187.33	479.41	0.00	0.00
6.00		185.55	475.81	0.00	0.00
8.00		183.78	472.22	0.00	0.00
10.00		182.01	468.63	0.00	0.00
12.00		180.24	465.04	0.00	0.00
14.00		178.46	461.45	0.00	0.00
16.00		178.87	457.86	0.00	0.00
18.00		181.52	454.27	0.00	0.00
18.63		57.21	142.35	0.00	0.00
20.00		125.64	308.33	0.00	0.00
22.00		185.52	447.09	0.00	0.00
24.00		186.99	443.50	0.00	0.00
26.00		188.18	439.91	0.00	0.00
28.00		189.12	436.32	0.00	0.00
30.00		189.84	432.73	0.00	0.00
32.00		190.36	429.14	0.00	0.00
34.00		190.70	425.55	0.00	0.00
36.00		190.88	421.96	0.00	0.00
38.00		190.91	418.37	0.00	0.00
40.00		190.81	414.78	0.00	0.00
42.00		190.58	411.18	0.00	0.00
44.00		190.23	407.59	0.00	0.00
46.00		189.78	404.00	0.00	0.00
48.00		189.23	400.41	0.00	0.00
48.50		47.06	99.54	0.00	0.00
50.00		143.15	476.30	0.00	0.00
52.00		190.44	629.41	0.00	0.00
53.25		118.44	390.10	0.00	0.00
54.00		70.84	125.62	0.00	0.00
56.00		188.76	333.00	0.00	0.00
58.00		187.80	330.13	0.00	0.00
60.00		186.78	327.25	0.00	0.00
62.00		185.68	324.38	0.00	0.00
64.00		184.53	321.51	0.00	0.00
66.00		183.31	318.64	0.00	0.00
68.00		182.03	315.77	0.00	0.00
70.00		180.69	312.89	0.00	0.00
72.00		179.30	310.02	0.00	0.00
74.00		177.86	307.15	0.00	0.00
76.00		176.37	304.28	0.00	0.00
78.00	(11) attachments	3185.21	3132.32	0.00	0.00
80.00		173.25	295.77	0.00	0.00
82.00		171.62	292.90	0.00	0.00
84.00		169.95	290.03	0.00	0.00

Total Applied Force Summary

Structure:	CT08558-B-SBA		**Code:**	TIA-222-H	2/16/2023
Site Name:	New Britain 3, CT		**Exposure:**	C	
Height:	119.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 14

Tower Engineering Solutions

86.00		168.24	287.15	0.00	0.00
88.00	(21) attachments	4300.22	3047.64	0.00	0.00
90.00		164.69	248.21	0.00	0.00
92.00		162.86	245.34	0.00	0.00
94.00		160.99	242.47	0.00	0.00
96.00		159.09	239.59	0.00	0.00
98.00	(28) attachments	6065.89	5616.08	0.00	0.00
98.50		38.92	53.13	0.00	0.00
100.00		117.82	253.77	0.00	0.00
102.00		155.43	333.96	0.00	0.00
104.00		153.40	167.44	0.00	0.00
106.00		151.34	165.29	0.00	0.00
108.00	(32) attachments	4408.60	2927.21	0.00	0.00
109.00		73.77	75.03	0.00	0.00
110.00		73.23	74.49	0.00	0.00
112.00		145.00	147.36	0.00	0.00
114.00		142.83	145.21	0.00	0.00
116.00		140.63	143.05	0.00	0.00
118.00	(27) attachments	4779.17	3529.88	0.00	0.00
119.00		68.30	53.27	0.00	0.00
	Totals:	**32,396.31**	**37,833.46**	**0.00**	**0.00**

Linear Appurtenance Segment Forces (Factored)

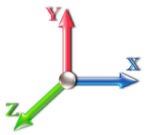
Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 15	

Tower Engineering Solutions

Load Case: 1.2D + 1.0W 120 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
1.00	1 5/8" Hybrid	Yes	1.00	0.000	1.63	0.14	0.00	0.063	0.000	29.432	0.00	2.64
1.00	1.411" Hybrid	Yes	1.00	0.000	1.41	0.12	0.00	0.063	0.000	29.432	0.00	1.38
1.00	1" Reinforcing plate	Yes	1.00	0.000	0.00	0.00	0.00	0.063	0.000	29.432	0.00	0.00
2.00	1 5/8" Hybrid	Yes	1.00	0.000	1.63	0.14	0.00	0.063	0.000	29.432	0.00	2.64
2.00	1.411" Hybrid	Yes	1.00	0.000	1.41	0.12	0.00	0.063	0.000	29.432	0.00	1.38
2.00	1" Reinforcing plate	Yes	1.00	0.000	0.00	0.00	0.00	0.063	0.000	29.432	0.00	0.00
4.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.064	0.000	29.432	0.00	5.28
4.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.064	0.000	29.432	0.00	2.76
4.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.064	0.000	29.432	0.00	0.00
6.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.065	0.000	29.432	0.00	5.28
6.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.065	0.000	29.432	0.00	2.76
6.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	29.432	0.00	0.00
8.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.065	0.000	29.432	0.00	5.28
8.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.065	0.000	29.432	0.00	2.76
8.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	29.432	0.00	0.00
10.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.066	0.000	29.432	0.00	5.28
10.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.066	0.000	29.432	0.00	2.76
10.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	29.432	0.00	0.00
12.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.066	0.000	29.432	0.00	5.28
12.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.066	0.000	29.432	0.00	2.76
12.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	29.432	0.00	0.00
14.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.067	0.000	29.432	0.00	5.28
14.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.067	0.000	29.432	0.00	2.76
14.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.067	0.000	29.432	0.00	0.00
16.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.068	0.000	29.795	0.00	5.28
16.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.068	0.000	29.795	0.00	2.76
16.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	29.795	0.00	0.00
18.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.068	0.000	30.543	0.00	5.28
18.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.068	0.000	30.543	0.00	2.76
18.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	30.543	0.00	0.00
18.63	1 5/8" Hybrid	Yes	0.63	0.000	1.63	0.09	0.00	0.069	0.000	30.765	0.00	1.66
18.63	1.411" Hybrid	Yes	0.63	0.000	1.41	0.07	0.00	0.069	0.000	30.765	0.00	0.87
18.63	1" Reinforcing plate	Yes	0.63	0.000	0.00	0.00	0.00	0.069	0.000	30.765	0.00	0.00
20.00	1 5/8" Hybrid	Yes	1.37	0.000	1.63	0.19	0.00	0.069	0.000	31.228	0.00	3.62
20.00	1.411" Hybrid	Yes	1.37	0.000	1.41	0.16	0.00	0.069	0.000	31.228	0.00	1.89
20.00	1" Reinforcing plate	Yes	1.37	0.000	0.00	0.00	0.00	0.069	0.000	31.228	0.00	0.00
22.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.070	0.000	31.861	0.00	5.28
22.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.070	0.000	31.861	0.00	2.76
24.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.071	0.000	32.450	0.00	5.28
24.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.071	0.000	32.450	0.00	2.76
26.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.071	0.000	33.002	0.00	5.28
26.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.071	0.000	33.002	0.00	2.76
28.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.072	0.000	33.521	0.00	5.28
28.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.072	0.000	33.521	0.00	2.76
30.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.073	0.000	34.011	0.00	5.28
30.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.073	0.000	34.011	0.00	2.76
32.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.074	0.000	34.476	0.00	5.28

Linear Appurtenance Segment Forces (Factored)

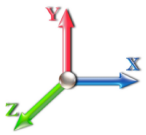
Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 16	

Tower Engineering Solutions

Load Case: 1.2D + 1.0W 120 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
32.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.074	0.000	34.476	0.00	2.76
34.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.074	0.000	34.919	0.00	5.28
34.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.074	0.000	34.919	0.00	2.76
36.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.075	0.000	35.342	0.00	5.28
36.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.075	0.000	35.342	0.00	2.76
38.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.076	0.000	35.747	0.00	5.28
38.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.076	0.000	35.747	0.00	2.76
40.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.077	0.000	36.135	0.00	5.28
40.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.077	0.000	36.135	0.00	2.76
42.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.078	0.000	36.508	0.00	5.28
42.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.078	0.000	36.508	0.00	2.76
44.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.079	0.000	36.867	0.00	5.28
44.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.079	0.000	36.867	0.00	2.76
46.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.080	0.000	37.214	0.00	5.28
46.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.080	0.000	37.214	0.00	2.76
48.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.081	0.000	37.549	0.00	5.28
48.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.081	0.000	37.549	0.00	2.76
48.50	1 5/8" Hybrid	Yes	0.50	0.000	1.63	0.07	0.00	0.081	0.000	37.631	0.00	1.32
48.50	1.411" Hybrid	Yes	0.50	0.000	1.41	0.06	0.00	0.081	0.000	37.631	0.00	0.69
50.00	1 5/8" Hybrid	Yes	1.50	0.000	1.63	0.20	0.00	0.082	0.000	37.873	0.00	3.96
50.00	1.411" Hybrid	Yes	1.50	0.000	1.41	0.18	0.00	0.082	0.000	37.873	0.00	2.07
52.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.083	0.000	38.187	0.00	5.28
52.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.083	0.000	38.187	0.00	2.76
53.25	1 5/8" Hybrid	Yes	1.25	0.000	1.63	0.17	0.00	0.084	0.000	38.378	0.00	3.30
53.25	1.411" Hybrid	Yes	1.25	0.000	1.41	0.15	0.00	0.084	0.000	38.378	0.00	1.72
54.00	1 5/8" Hybrid	Yes	0.75	0.000	1.63	0.10	0.00	0.083	0.000	38.491	0.00	1.98
54.00	1.411" Hybrid	Yes	0.75	0.000	1.41	0.09	0.00	0.083	0.000	38.491	0.00	1.03
56.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.084	0.000	38.787	0.00	5.28
56.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.084	0.000	38.787	0.00	2.76
58.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.085	0.000	39.075	0.00	5.28
58.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.085	0.000	39.075	0.00	2.76
60.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.086	0.000	39.355	0.00	5.28
60.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.086	0.000	39.355	0.00	2.76
62.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.087	0.000	39.627	0.00	5.28
62.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.087	0.000	39.627	0.00	2.76
64.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.088	0.000	39.893	0.00	5.28
64.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.088	0.000	39.893	0.00	2.76
66.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.089	0.000	40.152	0.00	5.28
66.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.089	0.000	40.152	0.00	2.76
68.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.090	0.000	40.405	0.00	5.28
68.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.090	0.000	40.405	0.00	2.76
70.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.092	0.000	40.653	0.00	5.28
70.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.092	0.000	40.653	0.00	2.76
72.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.093	0.000	40.894	0.00	5.28
72.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.093	0.000	40.894	0.00	2.76
74.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.094	0.000	41.131	0.00	5.28
74.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.094	0.000	41.131	0.00	2.76

Linear Appurtenance Segment Forces (Factored)

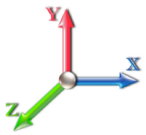
Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 17	

Tower Engineering Solutions

Load Case: 1.2D + 1.0W 120 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
76.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.095	0.000	41.363	0.00	5.28
76.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.095	0.000	41.363	0.00	2.76
78.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.097	0.000	41.589	0.00	5.28
78.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.097	0.000	41.589	0.00	2.76
80.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.053	0.000	41.812	0.00	5.28
82.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.053	0.000	42.030	0.00	5.28
84.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.054	0.000	42.243	0.00	5.28
86.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.055	0.000	42.453	0.00	5.28
88.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.056	0.000	42.659	0.00	5.28
90.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.057	0.000	42.861	0.00	5.28
92.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.058	0.000	43.060	0.00	5.28
94.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.059	0.000	43.256	0.00	5.28
96.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.060	0.000	43.448	0.00	5.28
98.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.061	0.000	43.637	0.00	5.28
98.50	1 5/8" Hybrid	Yes	0.50	0.000	1.63	0.07	0.00	0.061	0.000	43.684	0.00	1.32
100.00	1 5/8" Hybrid	Yes	1.50	0.000	1.63	0.20	0.00	0.062	0.000	43.823	0.00	3.96
102.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.063	0.000	44.006	0.00	5.28
104.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.063	0.000	44.186	0.00	5.28
106.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.064	0.000	44.364	0.00	5.28
108.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.065	0.000	44.539	0.00	5.28
109.00	1 5/8" Hybrid	Yes	1.00	0.000	1.63	0.14	0.00	0.066	0.000	44.625	0.00	2.64
110.00	1 5/8" Hybrid	Yes	1.00	0.000	1.63	0.14	0.00	0.067	0.000	44.711	0.00	2.64
112.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.068	0.000	44.881	0.00	5.28
114.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.069	0.000	45.048	0.00	5.28
116.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.070	0.000	45.214	0.00	5.28
118.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.072	0.000	45.377	0.00	5.28
									Totals:		**0.0**	**419.2**

Calculated Forces

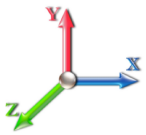
Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 18	

Tower Engineering Solutions

Load Case: 1.2D + 1.0W 120 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 25

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-37.82	-32.42	0.00	-2909.1	0.00	2909.13	3013.27	821.38	3215.78	2929.21	0.00	0.000	0.000	0.899
1.00	-37.55	-32.35	0.00	-2876.7	0.00	2876.71	3005.28	817.52	3185.65	2907.64	0.01	-0.056	0.000	0.895
2.00	-37.26	-32.31	0.00	-2844.3	0.00	2844.36	2997.23	813.67	3155.65	2886.08	0.02	-0.101	0.000	0.783
4.00	-36.73	-32.18	0.00	-2779.7	0.00	2779.75	2980.97	805.95	3096.08	2843.02	0.09	-0.199	0.000	0.775
6.00	-36.20	-32.05	0.00	-2715.4	0.00	2715.40	2964.47	798.23	3037.08	2800.03	0.19	-0.297	0.000	0.767
8.00	-35.67	-31.93	0.00	-2651.2	0.00	2651.29	2947.74	790.52	2978.65	2757.14	0.34	-0.396	0.000	0.759
10.00	-35.15	-31.80	0.00	-2587.4	0.00	2587.43	2930.78	782.80	2920.79	2714.33	0.52	-0.495	0.000	0.750
12.00	-34.63	-31.68	0.00	-2523.8	0.00	2523.82	2913.58	775.09	2863.49	2671.62	0.75	-0.594	0.000	0.742
14.00	-34.12	-31.56	0.00	-2460.4	0.00	2460.47	2896.16	767.37	2806.76	2629.02	1.02	-0.693	0.000	0.733
16.00	-33.61	-31.43	0.00	-2397.3	0.00	2397.36	2878.49	759.65	2750.60	2586.53	1.34	-0.793	0.000	0.724
18.00	-33.12	-31.28	0.00	-2334.5	0.00	2334.50	2860.60	751.94	2695.01	2544.16	1.69	-0.893	0.000	0.715
18.63	-32.95	-31.25	0.00	-2314.7	0.00	2314.79	2854.92	749.51	2677.62	2530.83	1.81	-0.924	0.000	0.712
18.63	-32.95	-31.25	0.00	-2314.7	0.00	2314.79	2854.92	749.51	2677.62	2530.83	1.81	-0.924	0.000	0.918
20.00	-32.59	-31.17	0.00	-2271.9	0.00	2271.99	2842.47	744.22	2639.98	2501.91	2.09	-0.993	0.000	0.921
22.00	-32.08	-31.05	0.00	-2209.6	0.00	2209.64	2824.11	736.51	2585.53	2459.79	2.53	-1.123	0.000	0.911
24.00	-31.57	-30.93	0.00	-2147.5	0.00	2147.53	2805.52	728.79	2531.63	2417.81	3.03	-1.254	0.000	0.901
26.00	-31.06	-30.80	0.00	-2085.6	0.00	2085.67	2786.70	721.07	2478.31	2375.97	3.58	-1.385	0.000	0.891
28.00	-30.56	-30.67	0.00	-2024.0	0.00	2024.07	2767.64	713.36	2425.56	2334.28	4.19	-1.516	0.000	0.880
30.00	-30.06	-30.54	0.00	-1962.7	0.00	1962.73	2748.35	705.64	2373.37	2292.75	4.86	-1.648	0.000	0.869
32.00	-29.57	-30.41	0.00	-1901.6	0.00	1901.65	2728.82	697.93	2321.75	2251.38	5.58	-1.779	0.000	0.857
34.00	-29.08	-30.27	0.00	-1840.8	0.00	1840.84	2709.07	690.21	2270.69	2210.17	6.35	-1.911	0.000	0.846
36.00	-28.60	-30.13	0.00	-1780.3	0.00	1780.30	2689.08	682.49	2220.21	2169.15	7.18	-2.043	0.000	0.833
38.00	-28.12	-29.99	0.00	-1720.0	0.00	1720.05	2668.86	674.78	2170.29	2128.30	8.06	-2.175	0.000	0.821
40.00	-27.64	-29.84	0.00	-1660.0	0.00	1660.07	2648.40	667.06	2120.94	2087.65	9.00	-2.306	0.000	0.808
42.00	-27.17	-29.70	0.00	-1600.3	0.00	1600.39	2627.71	659.35	2072.16	2047.19	10.00	-2.438	0.000	0.794
44.00	-26.71	-29.55	0.00	-1540.9	0.00	1540.99	2606.79	651.63	2023.94	2006.93	11.05	-2.569	0.000	0.780
46.00	-26.24	-29.40	0.00	-1481.8	0.00	1481.89	2585.64	643.91	1976.29	1966.88	12.15	-2.700	0.000	0.766
48.00	-25.81	-29.23	0.00	-1423.0	0.00	1423.08	2564.25	636.20	1929.21	1927.04	13.31	-2.830	0.000	0.751
48.50	-25.68	-29.21	0.00	-1408.4	0.00	1408.47	2558.87	634.27	1917.53	1917.11	13.61	-2.863	0.000	0.747
50.00	-25.15	-29.09	0.00	-1364.6	0.00	1364.65	2542.63	628.48	1882.70	1887.42	14.53	-2.961	0.000	0.735
52.00	-24.48	-28.91	0.00	-1306.4	0.00	1306.47	2520.78	620.77	1836.76	1848.03	15.79	-3.090	0.000	0.719
53.25	-24.07	-28.80	0.00	-1270.3	0.00	1270.33	1874.80	500.59	1493.02	1387.94	16.61	-3.170	0.000	0.931
54.00	-23.90	-28.77	0.00	-1248.7	0.00	1248.73	1869.65	498.27	1479.25	1377.68	17.12	-3.219	0.000	0.923
56.00	-23.50	-28.62	0.00	-1191.2	0.00	1191.20	1855.77	492.10	1442.82	1350.40	18.50	-3.370	0.000	0.898
58.00	-23.11	-28.47	0.00	-1133.9	0.00	1133.96	1841.66	485.93	1406.85	1323.20	19.94	-3.519	0.000	0.873
60.00	-22.72	-28.32	0.00	-1077.0	0.00	1077.02	1827.31	479.75	1371.34	1296.09	21.45	-3.667	0.000	0.847
62.00	-22.34	-28.17	0.00	-1020.3	0.00	1020.38	1812.73	473.58	1336.27	1269.09	23.01	-3.813	0.000	0.820
64.00	-21.96	-28.02	0.00	-964.03	0.00	964.03	1797.91	467.41	1301.67	1242.19	24.64	-3.956	0.000	0.792
66.00	-21.59	-27.87	0.00	-907.99	0.00	907.99	1782.87	461.24	1267.51	1215.41	26.33	-4.096	0.000	0.763
68.00	-21.22	-27.72	0.00	-852.25	0.00	852.25	1767.59	455.06	1233.81	1188.74	28.07	-4.234	0.000	0.733
70.00	-20.86	-27.56	0.00	-796.82	0.00	796.82	1752.08	448.89	1200.57	1162.21	29.88	-4.368	0.000	0.701
72.00	-20.50	-27.40	0.00	-741.70	0.00	741.70	1736.33	442.72	1167.77	1135.80	31.73	-4.498	0.000	0.669
74.00	-20.15	-27.25	0.00	-686.90	0.00	686.90	1720.35	436.54	1135.44	1109.54	33.64	-4.624	0.000	0.635
76.00	-19.81	-27.09	0.00	-632.41	0.00	632.41	1704.14	430.37	1103.55	1083.42	35.61	-4.746	0.000	0.599
78.00	-16.90	-23.68	0.00	-578.24	0.00	578.24	1687.70	424.20	1072.12	1057.45	37.62	-4.862	0.000	0.560
80.00	-16.58	-23.52	0.00	-530.88	0.00	530.88	1671.02	418.03	1041.15	1031.64	39.68	-4.974	0.000	0.528
82.00	-16.26	-23.35	0.00	-483.85	0.00	483.85	1654.12	411.85	1010.63	1006.00	41.78	-5.080	0.000	0.494
84.00	-15.95	-23.18	0.00	-437.15	0.00	437.15	1636.97	405.68	980.56	980.53	43.93	-5.181	0.000	0.459

Calculated Forces

Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 19

Tower Engineering Solutions

86.00	-15.64	-23.01	0.00	-390.79	0.00	390.79	1619.60	399.51	950.95	955.23	46.12	-5.276	0.000	0.422
88.00	-12.98	-18.47	0.00	-344.77	0.00	344.77	1601.99	393.33	921.79	930.12	48.35	-5.365	0.000	0.381
90.00	-12.72	-18.30	0.00	-307.83	0.00	307.83	1584.15	387.16	893.08	905.20	50.61	-5.447	0.000	0.350
92.00	-12.47	-18.13	0.00	-271.24	0.00	271.24	1566.08	380.99	864.83	880.48	52.91	-5.523	0.000	0.318
94.00	-12.22	-17.96	0.00	-234.98	0.00	234.98	1547.77	374.82	837.03	855.96	55.23	-5.593	0.000	0.285
96.00	-11.98	-17.79	0.00	-199.07	0.00	199.07	1529.23	368.64	809.69	831.66	57.59	-5.657	0.000	0.250
98.00	-6.99	-11.20	0.00	-163.49	0.00	163.49	1510.46	362.47	782.80	807.56	59.96	-5.712	0.000	0.208
98.50	-6.93	-11.16	0.00	-157.89	0.00	157.89	1505.73	360.93	776.15	801.57	60.56	-5.725	0.000	0.203
100.00	-6.69	-11.02	0.00	-141.15	0.00	141.15	1491.46	356.30	756.37	783.69	62.36	-5.762	0.000	0.186
102.00	-6.36	-10.84	0.00	-119.11	0.00	119.11	1021.50	267.16	567.02	537.93	64.78	-5.806	0.000	0.229
104.00	-6.20	-10.67	0.00	-97.43	0.00	97.43	1010.40	262.53	547.54	522.80	67.22	-5.844	0.000	0.194
106.00	-6.05	-10.51	0.00	-76.09	0.00	76.09	999.06	257.90	528.40	507.75	69.68	-5.886	0.000	0.158
108.00	-3.59	-5.82	0.00	-55.07	0.00	55.07	987.50	253.27	509.60	492.79	72.14	-5.919	0.000	0.116
109.00	-3.52	-5.74	0.00	-49.25	0.00	49.25	981.63	250.96	500.32	485.35	73.38	-5.932	0.000	0.106
109.00	-3.52	-5.74	0.00	-49.25	0.00	49.25	981.63	250.96	500.32	485.35	73.38	-5.932	0.000	0.106
110.00	-3.45	-5.66	0.00	-43.50	0.00	43.50	975.70	248.64	491.14	477.94	74.63	-5.945	0.000	0.095
112.00	-3.32	-5.51	0.00	-32.17	0.00	32.17	963.67	244.01	473.02	463.19	77.12	-5.966	0.000	0.073
114.00	-3.19	-5.35	0.00	-21.16	0.00	21.16	951.40	239.39	455.24	448.55	79.62	-5.982	0.000	0.051
116.00	-3.06	-5.20	0.00	-10.46	0.00	10.46	938.91	234.76	437.80	434.02	82.12	-5.992	0.000	0.028
118.00	-0.05	-0.07	0.00	-0.07	0.00	0.07	926.18	230.13	420.70	419.63	84.63	-5.996	0.000	0.000
119.00	0.00	-0.07	0.00	0.00	0.00	0.00	919.72	227.81	412.28	412.48	85.88	-5.996	0.000	0.000

Wind Loading - Shaft

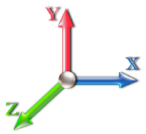
Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 20	

Tower Engineering Solutions

Load Case: 0.9D + 1.0W 120 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.00



Iterations 25

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00	RB1	1.00	0.85	29.432	32.37	442.17	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
1.00	RT1 RB2	1.00	0.85	29.432	32.37	440.10	0.730	0.000	1.00	4.010	2.93	94.8	0.0	143.0
2.00		1.00	0.85	29.432	32.37	438.04	0.730	0.000	1.00	3.991	2.91	94.3	0.0	142.3
4.00		1.00	0.85	29.432	32.37	433.92	0.730	0.000	2.00	7.926	5.79	187.3	0.0	282.6
6.00		1.00	0.85	29.432	32.37	429.79	0.730	0.000	2.00	7.851	5.73	185.6	0.0	279.9
8.00		1.00	0.85	29.432	32.37	425.66	0.730	0.000	2.00	7.776	5.68	183.8	0.0	277.2
10.00		1.00	0.85	29.432	32.37	421.54	0.730	0.000	2.00	7.701	5.62	182.0	0.0	274.5
12.00		1.00	0.85	29.432	32.37	417.41	0.730	0.000	2.00	7.626	5.57	180.2	0.0	271.9
14.00		1.00	0.85	29.432	32.37	413.28	0.730	0.000	2.00	7.551	5.51	178.5	0.0	269.2
16.00		1.00	0.86	29.795	32.77	411.68	0.730	0.000	2.00	7.476	5.46	178.9	0.0	266.5
18.00		1.00	0.88	30.543	33.60	412.61	0.730	0.000	2.00	7.401	5.40	181.5	0.0	263.8
18.63	RT2	1.00	0.89	30.765	33.84	412.78	0.730	0.000	0.63	2.316	1.69	57.2	0.0	82.5
20.00		1.00	0.90	31.228	34.35	412.96	0.730	0.000	1.37	5.010	3.66	125.6	0.0	178.6
22.00		1.00	0.92	31.861	35.05	412.83	0.730	0.000	2.00	7.251	5.29	185.5	0.0	258.4
24.00		1.00	0.94	32.450	35.70	412.30	0.730	0.000	2.00	7.176	5.24	187.0	0.0	255.7
26.00		1.00	0.95	33.002	36.30	411.41	0.730	0.000	2.00	7.101	5.18	188.2	0.0	253.0
28.00		1.00	0.97	33.521	36.87	410.23	0.730	0.000	2.00	7.026	5.13	189.1	0.0	250.3
30.00		1.00	0.98	34.011	37.41	408.79	0.730	0.000	2.00	6.951	5.07	189.8	0.0	247.6
32.00		1.00	1.00	34.476	37.92	407.11	0.730	0.000	2.00	6.876	5.02	190.4	0.0	244.9
34.00		1.00	1.01	34.919	38.41	405.22	0.730	0.000	2.00	6.801	4.96	190.7	0.0	242.2
36.00		1.00	1.02	35.342	38.88	403.14	0.730	0.000	2.00	6.726	4.91	190.9	0.0	239.5
38.00		1.00	1.03	35.747	39.32	400.90	0.730	0.000	2.00	6.651	4.86	190.9	0.0	236.8
40.00		1.00	1.04	36.135	39.75	398.49	0.730	0.000	2.00	6.576	4.80	190.8	0.0	234.2
42.00		1.00	1.05	36.508	40.16	395.95	0.730	0.000	2.00	6.501	4.75	190.6	0.0	231.5
44.00		1.00	1.06	36.867	40.55	393.28	0.730	0.000	2.00	6.426	4.69	190.2	0.0	228.8
46.00		1.00	1.07	37.214	40.93	390.48	0.730	0.000	2.00	6.351	4.64	189.8	0.0	226.1
48.00		1.00	1.08	37.549	41.30	387.57	0.730	0.000	2.00	6.276	4.58	189.2	0.0	223.4
48.50	Bot - Section 2	1.00	1.09	37.631	41.39	386.83	0.730	0.000	0.50	1.557	1.14	47.1	0.0	55.4
50.00		1.00	1.09	37.873	41.66	384.56	0.730	0.000	1.50	4.707	3.44	143.1	0.0	299.5
52.00		1.00	1.10	38.187	42.01	381.45	0.730	0.000	2.00	6.210	4.53	190.4	0.0	395.1
53.25	Top - Section 1	1.00	1.11	38.378	42.22	379.46	0.730	0.000	1.25	3.843	2.81	118.4	0.0	244.5
54.00		1.00	1.11	38.491	42.34	383.57	0.730	0.000	0.75	2.292	1.67	70.8	0.0	65.4
56.00		1.00	1.12	38.787	42.67	380.31	0.730	0.000	2.00	6.060	4.42	188.8	0.0	172.8
58.00		1.00	1.13	39.075	42.98	376.96	0.730	0.000	2.00	5.985	4.37	187.8	0.0	170.7
60.00		1.00	1.14	39.355	43.29	373.54	0.730	0.000	2.00	5.910	4.31	186.8	0.0	168.5
62.00		1.00	1.14	39.627	43.59	370.04	0.730	0.000	2.00	5.835	4.26	185.7	0.0	166.4
64.00		1.00	1.15	39.893	43.88	366.48	0.730	0.000	2.00	5.760	4.21	184.5	0.0	164.2
66.00		1.00	1.16	40.152	44.17	362.84	0.730	0.000	2.00	5.685	4.15	183.3	0.0	162.0
68.00		1.00	1.17	40.405	44.45	359.15	0.730	0.000	2.00	5.610	4.10	182.0	0.0	159.9
70.00		1.00	1.17	40.653	44.72	355.40	0.730	0.000	2.00	5.535	4.04	180.7	0.0	157.7
72.00		1.00	1.18	40.894	44.98	351.59	0.730	0.000	2.00	5.460	3.99	179.3	0.0	155.6
74.00		1.00	1.19	41.131	45.24	347.73	0.730	0.000	2.00	5.385	3.93	177.9	0.0	153.4
76.00		1.00	1.19	41.363	45.50	343.81	0.730	0.000	2.00	5.310	3.88	176.4	0.0	151.3
78.00	Appurtenance(s)	1.00	1.20	41.589	45.75	339.85	0.730	0.000	2.00	5.235	3.82	174.8	0.0	149.1
80.00		1.00	1.21	41.812	45.99	335.84	0.730	0.000	2.00	5.160	3.77	173.3	0.0	147.0
82.00		1.00	1.21	42.030	46.23	331.78	0.730	0.000	2.00	5.085	3.71	171.6	0.0	144.8
84.00		1.00	1.22	42.243	46.47	327.68	0.730	0.000	2.00	5.010	3.66	170.0	0.0	142.7

Wind Loading - Shaft

Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 21	

Tower Engineering Solutions

86.00		1.00	1.23	42.453	46.70	323.54	0.730	0.000	2.00	4.935	3.60	168.2	0.0	140.5
88.00	Appurtenance(s)	1.00	1.23	42.659	46.93	319.35	0.730	0.000	2.00	4.860	3.55	166.5	0.0	138.4
90.00		1.00	1.24	42.861	47.15	315.13	0.730	0.000	2.00	4.785	3.49	164.7	0.0	136.2
92.00		1.00	1.24	43.060	47.37	310.87	0.730	0.000	2.00	4.710	3.44	162.9	0.0	134.0
94.00		1.00	1.25	43.256	47.58	306.57	0.730	0.000	2.00	4.635	3.38	161.0	0.0	131.9
96.00		1.00	1.25	43.448	47.79	302.24	0.730	0.000	2.00	4.560	3.33	159.1	0.0	129.7
98.00	Appurtenance(s)	1.00	1.26	43.637	48.00	297.87	0.730	0.000	2.00	4.485	3.27	157.2	0.0	127.6
98.50	Bot - Section 3	1.00	1.26	43.684	48.05	296.77	0.730	0.000	0.50	1.110	0.81	38.9	0.0	31.6
100.00		1.00	1.27	43.823	48.21	293.47	0.730	0.000	1.50	3.348	2.44	117.8	0.0	165.5
102.00	Top - Section 2	1.00	1.27	44.006	48.41	289.04	0.730	0.000	2.00	4.398	3.21	155.4	0.0	217.3
104.00		1.00	1.28	44.186	48.60	288.85	0.730	0.000	2.00	4.323	3.16	153.4	0.0	92.4
106.00		1.00	1.28	44.364	48.80	284.36	0.730	0.000	2.00	4.248	3.10	151.3	0.0	90.8
108.00	Appurtenance(s)	1.00	1.29	44.539	48.99	279.85	0.730	0.000	2.00	4.173	3.05	149.3	0.0	89.2
109.00	Top - Section 3	1.00	1.29	44.625	49.09	277.58	0.730	0.000	1.00	2.059	1.50	73.8	0.0	44.0
110.00		1.00	1.29	44.711	49.18	275.30	0.730	0.000	1.00	2.040	1.49	73.2	0.0	43.6
112.00		1.00	1.30	44.881	49.37	270.73	0.730	0.000	2.00	4.023	2.94	145.0	0.0	86.0
114.00		1.00	1.30	45.048	49.55	266.13	0.730	0.000	2.00	3.948	2.88	142.8	0.0	84.4
116.00		1.00	1.31	45.214	49.74	261.50	0.730	0.000	2.00	3.873	2.83	140.6	0.0	82.7
118.00	Appurtenance(s)	1.00	1.31	45.377	49.91	256.85	0.730	0.000	2.00	3.798	2.77	138.4	0.0	81.1
119.00		1.00	1.31	45.457	50.00	254.51	0.730	0.000	1.00	1.871	1.37	68.3	0.0	40.0
								Totals:	**119.00**			**10,443.4**		**11,617.3**

Discrete Appurtenance Forces

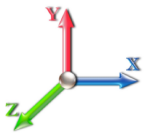
Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 22	

Tower Engineering Solutions

Load Case: 0.9D + 1.0W 120 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.00



Iterations 25

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	118.00	(3) T-Arm Kit	1	45.377	49.914	0.75	0.75	12.38	450.00	0.000	0.000	617.69	0.00	0.00
2	118.00	BXA-70063-6BF	3	45.377	49.914	0.56	0.80	12.72	45.90	0.000	0.000	634.79	0.00	0.00
3	118.00	T-Arm	3	45.377	49.914	0.56	0.75	16.88	945.00	0.000	0.000	842.31	0.00	0.00
4	118.00	Commscope	6	45.377	49.914	0.66	0.80	32.19	235.98	0.000	0.000	1606.78	0.00	0.00
5	118.00	Samsung MT6407-77A	3	45.377	49.914	0.56	0.80	7.88	214.38	0.000	0.000	393.29	0.00	0.00
6	118.00	B2/B66A RRH-BR049	3	45.377	49.914	0.54	0.80	3.01	227.88	0.000	0.000	150.09	0.00	0.00
7	118.00	BSAMNT-SBS-1-2	3	45.377	49.914	0.75	0.75	0.00	68.45	0.000	0.000	0.00	0.00	0.00
8	118.00	Collar	1	45.377	49.914	0.75	0.75	1.88	135.54	0.000	0.000	93.59	0.00	0.00
9	118.00	Samsung B5/B13	3	45.377	49.914	0.54	0.80	3.02	189.81	0.000	0.000	150.89	0.00	0.00
10	118.00	Raycap	1	45.377	49.914	0.80	0.80	3.03	28.80	0.000	0.000	151.34	0.00	0.00
11	108.00	840 10054	3	44.539	48.992	0.49	0.80	6.72	94.50	0.000	0.000	329.22	0.00	0.00
12	108.00	800 MHz	3	44.539	48.992	0.54	0.80	4.00	143.10	0.000	0.000	196.16	0.00	0.00
13	108.00	ACU-A20-N	4	44.539	48.992	0.54	0.80	0.30	3.60	0.000	0.000	14.71	0.00	0.00
14	108.00	APXVSPP18-C-A20	2	44.539	48.992	0.66	0.80	10.65	102.60	0.000	0.000	521.80	0.00	0.00
15	108.00	800 MHz Filters	3	44.539	48.992	0.54	0.80	3.86	172.80	0.000	0.000	189.07	0.00	0.00
16	108.00	1900MHz RRH	3	44.539	48.992	0.40	0.80	4.56	118.80	0.000	0.000	223.41	0.00	0.00
17	108.00	T-Arm	3	44.539	48.992	0.56	0.75	13.50	945.00	0.000	0.000	661.40	0.00	0.00
18	108.00	APXVTM14-C-120	3	44.539	48.992	0.63	0.80	12.02	151.20	0.000	0.000	588.92	0.00	0.00
19	108.00	Horizon	2	44.539	48.992	0.80	0.80	0.69	19.08	0.000	0.000	33.71	0.00	0.00
20	108.00	P40-16-XLPP-RR-A	1	44.539	48.992	0.80	0.80	7.26	47.70	0.000	0.000	355.88	0.00	0.00
21	108.00	TD-RRH8x20-25	3	44.539	48.992	0.54	0.80	6.51	189.00	0.000	0.000	319.06	0.00	0.00
22	108.00	VHLP2.5	2	44.539	48.992	1.00	1.00	16.86	85.68	0.000	0.000	826.01	0.00	0.00
23	98.00	Ericcson RRUS 4449	3	43.637	48.000	0.38	0.75	2.22	191.70	0.000	0.000	106.38	0.00	0.00
24	98.00	Ericsson RRUS 4478 B14	3	43.637	48.000	0.38	0.75	1.86	160.38	0.000	0.000	89.10	0.00	0.00
25	98.00	Ericsson Air6419 N77G	3	43.637	48.000	0.57	0.75	6.50	149.58	0.000	0.000	311.91	0.00	0.00
26	98.00	AIR 6449 N77D	3	43.637	48.000	0.64	0.75	7.90	237.60	0.000	0.000	379.14	0.00	0.00
27	98.00	Raycap DC6-48-60-0-8F	3	43.637	48.000	0.75	0.75	2.07	85.86	0.000	0.000	99.36	0.00	0.00
28	98.00	Ericsson RRUS 32	3	43.637	48.000	0.38	0.75	3.08	143.10	0.000	0.000	147.96	0.00	0.00
29	98.00	Ericsson RRUS 8843	3	43.637	48.000	0.38	0.75	1.86	202.50	0.000	0.000	89.10	0.00	0.00
30	98.00	Cci DMP65R-BU6DA	3	43.637	48.000	0.54	0.75	20.59	214.38	0.000	0.000	988.34	0.00	0.00
31	98.00	Cci TPA-65R-BU6DA	3	43.637	48.000	0.54	0.75	20.85	142.02	0.000	0.000	1000.78	0.00	0.00
32	98.00	F3P-12-WLL	1	43.637	48.000	1.00	1.00	56.18	2507.40	0.000	0.000	2696.67	0.00	0.00
33	88.00	AIR 6419 B77G	3	42.659	46.925	0.60	0.80	6.84	178.47	0.000	0.000	320.97	0.00	0.00
34	88.00	4460 Radio	3	42.659	46.925	0.54	0.80	4.58	294.30	0.000	0.000	215.05	0.00	0.00
35	88.00	VV-65B-R1B	3	42.659	46.925	0.60	0.80	14.22	79.65	0.000	0.000	667.27	0.00	0.00
36	88.00	4449 B71 + B85	3	42.659	46.925	0.54	0.80	4.13	199.80	0.000	0.000	193.92	0.00	0.00
37	88.00	APXVAARR24_43-U-NA2	3	42.659	46.925	0.56	0.80	34.00	345.60	0.000	0.000	1595.60	0.00	0.00
38	88.00	KRY 112 144/2	3	42.659	46.925	0.56	0.80	0.69	29.70	0.000	0.000	32.32	0.00	0.00
39	88.00	T-Arm w/ mod	3	42.659	46.925	0.56	0.75	23.63	945.00	0.000	0.000	1108.60	0.00	0.00
40	78.00	MC-PK8-DSH	1	41.589	45.748	1.00	1.00	37.59	1554.30	0.000	0.000	1719.68	0.00	0.00
41	78.00	Raycap	1	41.589	45.748	0.75	0.75	1.51	19.71	0.000	0.000	68.97	0.00	0.00
42	78.00	Fujitsu TA08025-B604	3	41.589	45.748	0.50	0.75	2.95	172.53	0.000	0.000	135.17	0.00	0.00
43	78.00	Fujitsu TA08025-B605	3	41.589	45.748	0.50	0.75	2.95	202.50	0.000	0.000	135.17	0.00	0.00
44	78.00	JMA Wireless	3	41.589	45.748	0.55	0.75	20.80	174.15	0.000	0.000	951.38	0.00	0.00
							Totals:		**12,845.02**			**21,952.96**		

Total Applied Force Summary

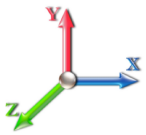
Structure:	CT08558-B-SBA		**Code:**	TIA-222-H	2/16/2023
Site Name:	New Britain 3, CT		**Exposure:**	C	
Height:	119.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 23

Tower Engineering Solutions

Load Case: 0.9D + 1.0W 120 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.00



Iterations 25

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
1.00		94.77	181.46	0.00	0.00
2.00		94.33	180.79	0.00	0.00
4.00		187.33	359.55	0.00	0.00
6.00		185.55	356.86	0.00	0.00
8.00		183.78	354.17	0.00	0.00
10.00		182.01	351.48	0.00	0.00
12.00		180.24	348.78	0.00	0.00
14.00		178.46	346.09	0.00	0.00
16.00		178.87	343.40	0.00	0.00
18.00		181.52	340.70	0.00	0.00
18.63		57.21	106.76	0.00	0.00
20.00		125.64	231.25	0.00	0.00
22.00		185.52	335.32	0.00	0.00
24.00		186.99	332.62	0.00	0.00
26.00		188.18	329.93	0.00	0.00
28.00		189.12	327.24	0.00	0.00
30.00		189.84	324.55	0.00	0.00
32.00		190.36	321.85	0.00	0.00
34.00		190.70	319.16	0.00	0.00
36.00		190.88	316.47	0.00	0.00
38.00		190.91	313.77	0.00	0.00
40.00		190.81	311.08	0.00	0.00
42.00		190.58	308.39	0.00	0.00
44.00		190.23	305.70	0.00	0.00
46.00		189.78	303.00	0.00	0.00
48.00		189.23	300.31	0.00	0.00
48.50		47.06	74.66	0.00	0.00
50.00		143.15	357.22	0.00	0.00
52.00		190.44	472.05	0.00	0.00
53.25		118.44	292.57	0.00	0.00
54.00		70.84	94.21	0.00	0.00
56.00		188.76	249.75	0.00	0.00
58.00		187.80	247.60	0.00	0.00
60.00		186.78	245.44	0.00	0.00
62.00		185.68	243.29	0.00	0.00
64.00		184.53	241.13	0.00	0.00
66.00		183.31	238.98	0.00	0.00
68.00		182.03	236.82	0.00	0.00
70.00		180.69	234.67	0.00	0.00
72.00		179.30	232.52	0.00	0.00
74.00		177.86	230.36	0.00	0.00
76.00		176.37	228.21	0.00	0.00
78.00	(11) attachments	3185.21	2349.24	0.00	0.00
80.00		173.25	221.83	0.00	0.00
82.00		171.62	219.67	0.00	0.00
84.00		169.95	217.52	0.00	0.00

Total Applied Force Summary

Structure:	CT08558-B-SBA		**Code:**	TIA-222-H	2/16/2023
Site Name:	New Britain 3, CT		**Exposure:**	C	
Height:	119.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 24

86.00		168.24	215.36	0.00	0.00
88.00	(21) attachments	4300.22	2285.73	0.00	0.00
90.00		164.69	186.16	0.00	0.00
92.00		162.86	184.00	0.00	0.00
94.00		160.99	181.85	0.00	0.00
96.00		159.09	179.70	0.00	0.00
98.00	(28) attachments	6065.89	4212.06	0.00	0.00
98.50		38.92	39.85	0.00	0.00
100.00		117.82	190.33	0.00	0.00
102.00		155.43	250.47	0.00	0.00
104.00		153.40	125.58	0.00	0.00
106.00		151.34	123.97	0.00	0.00
108.00	(32) attachments	4408.60	2195.41	0.00	0.00
109.00		73.77	56.27	0.00	0.00
110.00		73.23	55.87	0.00	0.00
112.00		145.00	110.52	0.00	0.00
114.00		142.83	108.91	0.00	0.00
116.00		140.63	107.29	0.00	0.00
118.00	(27) attachments	4779.17	2647.41	0.00	0.00
119.00		68.30	39.96	0.00	0.00
	Totals:	**32,396.31**	**28,375.10**	**0.00**	**0.00**

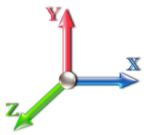
Linear Appurtenance Segment Forces (Factored)

Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 25	

Load Case: 0.9D + 1.0W 120 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.00



Iterations 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
1.00	1 5/8" Hybrid	Yes	1.00	0.000	1.63	0.14	0.00	0.063	0.000	29.432	0.00	1.98
1.00	1.411" Hybrid	Yes	1.00	0.000	1.41	0.12	0.00	0.063	0.000	29.432	0.00	1.03
1.00	1" Reinforcing plate	Yes	1.00	0.000	0.00	0.00	0.00	0.063	0.000	29.432	0.00	0.00
2.00	1 5/8" Hybrid	Yes	1.00	0.000	1.63	0.14	0.00	0.063	0.000	29.432	0.00	1.98
2.00	1.411" Hybrid	Yes	1.00	0.000	1.41	0.12	0.00	0.063	0.000	29.432	0.00	1.03
2.00	1" Reinforcing plate	Yes	1.00	0.000	0.00	0.00	0.00	0.063	0.000	29.432	0.00	0.00
4.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.064	0.000	29.432	0.00	3.96
4.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.064	0.000	29.432	0.00	2.07
4.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.064	0.000	29.432	0.00	0.00
6.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.065	0.000	29.432	0.00	3.96
6.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.065	0.000	29.432	0.00	2.07
6.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	29.432	0.00	0.00
8.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.065	0.000	29.432	0.00	3.96
8.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.065	0.000	29.432	0.00	2.07
8.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	29.432	0.00	0.00
10.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.066	0.000	29.432	0.00	3.96
10.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.066	0.000	29.432	0.00	2.07
10.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	29.432	0.00	0.00
12.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.066	0.000	29.432	0.00	3.96
12.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.066	0.000	29.432	0.00	2.07
12.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	29.432	0.00	0.00
14.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.067	0.000	29.432	0.00	3.96
14.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.067	0.000	29.432	0.00	2.07
14.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.067	0.000	29.432	0.00	0.00
16.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.068	0.000	29.795	0.00	3.96
16.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.068	0.000	29.795	0.00	2.07
16.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	29.795	0.00	0.00
18.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.068	0.000	30.543	0.00	3.96
18.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.068	0.000	30.543	0.00	2.07
18.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	30.543	0.00	0.00
18.63	1 5/8" Hybrid	Yes	0.63	0.000	1.63	0.09	0.00	0.069	0.000	30.765	0.00	1.25
18.63	1.411" Hybrid	Yes	0.63	0.000	1.41	0.07	0.00	0.069	0.000	30.765	0.00	0.65
18.63	1" Reinforcing plate	Yes	0.63	0.000	0.00	0.00	0.00	0.069	0.000	30.765	0.00	0.00
20.00	1 5/8" Hybrid	Yes	1.37	0.000	1.63	0.19	0.00	0.069	0.000	31.228	0.00	2.71
20.00	1.411" Hybrid	Yes	1.37	0.000	1.41	0.16	0.00	0.069	0.000	31.228	0.00	1.42
20.00	1" Reinforcing plate	Yes	1.37	0.000	0.00	0.00	0.00	0.069	0.000	31.228	0.00	0.00
22.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.070	0.000	31.861	0.00	3.96
22.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.070	0.000	31.861	0.00	2.07
24.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.071	0.000	32.450	0.00	3.96
24.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.071	0.000	32.450	0.00	2.07
26.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.071	0.000	33.002	0.00	3.96
26.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.071	0.000	33.002	0.00	2.07
28.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.072	0.000	33.521	0.00	3.96
28.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.072	0.000	33.521	0.00	2.07
30.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.073	0.000	34.011	0.00	3.96
30.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.073	0.000	34.011	0.00	2.07
32.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.074	0.000	34.476	0.00	3.96

Linear Appurtenance Segment Forces (Factored)

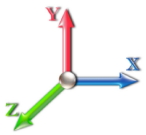
Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 26	

Tower Engineering Solutions

Load Case: 0.9D + 1.0W 120 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.00



Iterations 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
32.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.074	0.000	34.476	0.00	2.07
34.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.074	0.000	34.919	0.00	3.96
34.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.074	0.000	34.919	0.00	2.07
36.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.075	0.000	35.342	0.00	3.96
36.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.075	0.000	35.342	0.00	2.07
38.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.076	0.000	35.747	0.00	3.96
38.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.076	0.000	35.747	0.00	2.07
40.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.077	0.000	36.135	0.00	3.96
40.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.077	0.000	36.135	0.00	2.07
42.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.078	0.000	36.508	0.00	3.96
42.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.078	0.000	36.508	0.00	2.07
44.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.079	0.000	36.867	0.00	3.96
44.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.079	0.000	36.867	0.00	2.07
46.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.080	0.000	37.214	0.00	3.96
46.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.080	0.000	37.214	0.00	2.07
48.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.081	0.000	37.549	0.00	3.96
48.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.081	0.000	37.549	0.00	2.07
48.50	1 5/8" Hybrid	Yes	0.50	0.000	1.63	0.07	0.00	0.081	0.000	37.631	0.00	0.99
48.50	1.411" Hybrid	Yes	0.50	0.000	1.41	0.06	0.00	0.081	0.000	37.631	0.00	0.52
50.00	1 5/8" Hybrid	Yes	1.50	0.000	1.63	0.20	0.00	0.082	0.000	37.873	0.00	2.97
50.00	1.411" Hybrid	Yes	1.50	0.000	1.41	0.18	0.00	0.082	0.000	37.873	0.00	1.55
52.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.083	0.000	38.187	0.00	3.96
52.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.083	0.000	38.187	0.00	2.07
53.25	1 5/8" Hybrid	Yes	1.25	0.000	1.63	0.17	0.00	0.084	0.000	38.378	0.00	2.48
53.25	1.411" Hybrid	Yes	1.25	0.000	1.41	0.15	0.00	0.084	0.000	38.378	0.00	1.29
54.00	1 5/8" Hybrid	Yes	0.75	0.000	1.63	0.10	0.00	0.083	0.000	38.491	0.00	1.49
54.00	1.411" Hybrid	Yes	0.75	0.000	1.41	0.09	0.00	0.083	0.000	38.491	0.00	0.78
56.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.084	0.000	38.787	0.00	3.96
56.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.084	0.000	38.787	0.00	2.07
58.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.085	0.000	39.075	0.00	3.96
58.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.085	0.000	39.075	0.00	2.07
60.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.086	0.000	39.355	0.00	3.96
60.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.086	0.000	39.355	0.00	2.07
62.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.087	0.000	39.627	0.00	3.96
62.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.087	0.000	39.627	0.00	2.07
64.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.088	0.000	39.893	0.00	3.96
64.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.088	0.000	39.893	0.00	2.07
66.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.089	0.000	40.152	0.00	3.96
66.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.089	0.000	40.152	0.00	2.07
68.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.090	0.000	40.405	0.00	3.96
68.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.090	0.000	40.405	0.00	2.07
70.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.092	0.000	40.653	0.00	3.96
70.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.092	0.000	40.653	0.00	2.07
72.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.093	0.000	40.894	0.00	3.96
72.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.093	0.000	40.894	0.00	2.07
74.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.094	0.000	41.131	0.00	3.96
74.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.094	0.000	41.131	0.00	2.07

Linear Appurtenance Segment Forces (Factored)

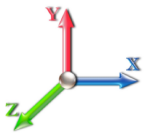
Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 27	

Tower Engineering Solutions

Load Case: 0.9D + 1.0W 120 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.00



Iterations 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
76.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.095	0.000	41.363	0.00	3.96
76.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.095	0.000	41.363	0.00	2.07
78.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.097	0.000	41.589	0.00	3.96
78.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.097	0.000	41.589	0.00	2.07
80.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.053	0.000	41.812	0.00	3.96
82.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.053	0.000	42.030	0.00	3.96
84.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.054	0.000	42.243	0.00	3.96
86.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.055	0.000	42.453	0.00	3.96
88.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.056	0.000	42.659	0.00	3.96
90.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.057	0.000	42.861	0.00	3.96
92.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.058	0.000	43.060	0.00	3.96
94.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.059	0.000	43.256	0.00	3.96
96.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.060	0.000	43.448	0.00	3.96
98.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.061	0.000	43.637	0.00	3.96
98.50	1 5/8" Hybrid	Yes	0.50	0.000	1.63	0.07	0.00	0.061	0.000	43.684	0.00	0.99
100.00	1 5/8" Hybrid	Yes	1.50	0.000	1.63	0.20	0.00	0.062	0.000	43.823	0.00	2.97
102.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.063	0.000	44.006	0.00	3.96
104.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.063	0.000	44.186	0.00	3.96
106.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.064	0.000	44.364	0.00	3.96
108.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.065	0.000	44.539	0.00	3.96
109.00	1 5/8" Hybrid	Yes	1.00	0.000	1.63	0.14	0.00	0.066	0.000	44.625	0.00	1.98
110.00	1 5/8" Hybrid	Yes	1.00	0.000	1.63	0.14	0.00	0.067	0.000	44.711	0.00	1.98
112.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.068	0.000	44.881	0.00	3.96
114.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.069	0.000	45.048	0.00	3.96
116.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.070	0.000	45.214	0.00	3.96
118.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.072	0.000	45.377	0.00	3.96
									Totals:		**0.0**	**314.4**

Calculated Forces

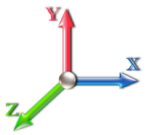
Structure:	CT08558-B-SBA	**Code:**	TIA-222-H		2/16/2023
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 28

Tower Engineering Solutions

Load Case: 0.9D + 1.0W 120 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.00



Iterations 25

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-28.36	-32.41	0.00	-2876.8	0.00	2876.81	3013.27	821.38	3215.78	2929.21	0.00	0.000	0.000	0.886
1.00	-28.15	-32.34	0.00	-2844.4	0.00	2844.40	3005.28	817.52	3185.65	2907.64	0.01	-0.055	0.000	0.882
2.00	-27.93	-32.28	0.00	-2812.0	0.00	2812.06	2997.23	813.67	3155.65	2886.08	0.02	-0.100	0.000	0.772
4.00	-27.51	-32.14	0.00	-2747.5	0.00	2747.50	2980.97	805.95	3096.08	2843.02	0.09	-0.197	0.000	0.764
6.00	-27.10	-32.00	0.00	-2683.2	0.00	2683.22	2964.47	798.23	3037.08	2800.03	0.19	-0.294	0.000	0.756
8.00	-26.70	-31.86	0.00	-2619.2	0.00	2619.23	2947.74	790.52	2978.65	2757.14	0.33	-0.391	0.000	0.748
10.00	-26.29	-31.72	0.00	-2555.5	0.00	2555.52	2930.78	782.80	2920.79	2714.33	0.52	-0.489	0.000	0.739
12.00	-25.89	-31.58	0.00	-2492.0	0.00	2492.09	2913.58	775.09	2863.49	2671.62	0.74	-0.587	0.000	0.731
14.00	-25.49	-31.44	0.00	-2428.9	0.00	2428.93	2896.16	767.37	2806.76	2629.02	1.01	-0.685	0.000	0.722
16.00	-25.10	-31.30	0.00	-2366.0	0.00	2366.05	2878.49	759.65	2750.60	2586.53	1.32	-0.783	0.000	0.713
18.00	-24.73	-31.14	0.00	-2303.4	0.00	2303.46	2860.60	751.94	2695.01	2544.16	1.67	-0.882	0.000	0.704
18.63	-24.59	-31.10	0.00	-2283.8	0.00	2283.84	2854.92	749.51	2677.62	2530.83	1.79	-0.913	0.000	0.701
18.63	-24.59	-31.10	0.00	-2283.8	0.00	2283.84	2854.92	749.51	2677.62	2530.83	1.79	-0.913	0.000	0.904
20.00	-24.31	-31.02	0.00	-2241.2	0.00	2241.23	2842.47	744.22	2639.98	2501.91	2.06	-0.981	0.000	0.906
22.00	-23.91	-30.88	0.00	-2179.2	0.00	2179.20	2824.11	736.51	2585.53	2459.79	2.50	-1.109	0.000	0.896
24.00	-23.51	-30.74	0.00	-2117.4	0.00	2117.44	2805.52	728.79	2531.63	2417.81	2.99	-1.238	0.000	0.886
26.00	-23.12	-30.59	0.00	-2055.9	0.00	2055.97	2786.70	721.07	2478.31	2375.97	3.54	-1.367	0.000	0.875
28.00	-22.73	-30.45	0.00	-1994.7	0.00	1994.79	2767.64	713.36	2425.56	2334.28	4.14	-1.496	0.000	0.865
30.00	-22.34	-30.30	0.00	-1933.8	0.00	1933.89	2748.35	705.64	2373.37	2292.75	4.80	-1.626	0.000	0.853
32.00	-21.95	-30.15	0.00	-1873.2	0.00	1873.29	2728.82	697.93	2321.75	2251.38	5.51	-1.756	0.000	0.842
34.00	-21.57	-30.00	0.00	-1813.0	0.00	1813.00	2709.07	690.21	2270.69	2210.17	6.27	-1.886	0.000	0.830
36.00	-21.20	-29.84	0.00	-1753.0	0.00	1753.00	2689.08	682.49	2220.21	2169.15	7.09	-2.015	0.000	0.818
38.00	-20.82	-29.69	0.00	-1693.3	0.00	1693.31	2668.86	674.78	2170.29	2128.30	7.96	-2.145	0.000	0.805
40.00	-20.45	-29.53	0.00	-1633.9	0.00	1633.93	2648.40	667.06	2120.94	2087.65	8.89	-2.275	0.000	0.792
42.00	-20.08	-29.38	0.00	-1574.8	0.00	1574.87	2627.71	659.35	2072.16	2047.19	9.87	-2.404	0.000	0.779
44.00	-19.72	-29.22	0.00	-1516.1	0.00	1516.12	2606.79	651.63	2023.94	2006.93	10.90	-2.534	0.000	0.765
46.00	-19.36	-29.06	0.00	-1457.6	0.00	1457.69	2585.64	643.91	1976.29	1966.88	11.99	-2.662	0.000	0.751
48.00	-19.03	-28.88	0.00	-1399.5	0.00	1399.57	2564.25	636.20	1929.21	1927.04	13.14	-2.790	0.000	0.736
48.50	-18.93	-28.85	0.00	-1385.1	0.00	1385.13	2558.87	634.27	1917.53	1917.11	13.43	-2.823	0.000	0.732
50.00	-18.52	-28.73	0.00	-1341.8	0.00	1341.86	2542.63	628.48	1882.70	1887.42	14.33	-2.919	0.000	0.720
52.00	-18.01	-28.54	0.00	-1284.4	0.00	1284.41	2520.78	620.77	1836.76	1848.03	15.58	-3.045	0.000	0.704
53.25	-17.69	-28.43	0.00	-1248.7	0.00	1248.73	1874.80	500.59	1493.02	1387.94	16.39	-3.125	0.000	0.912
54.00	-17.55	-28.38	0.00	-1227.4	0.00	1227.41	1869.65	498.27	1479.25	1377.68	16.89	-3.172	0.000	0.904
56.00	-17.24	-28.23	0.00	-1170.6	0.00	1170.64	1855.77	492.10	1442.82	1350.40	18.25	-3.321	0.000	0.879
58.00	-16.93	-28.07	0.00	-1114.1	0.00	1114.19	1841.66	485.93	1406.85	1323.20	19.67	-3.468	0.000	0.855
60.00	-16.63	-27.91	0.00	-1058.0	0.00	1058.06	1827.31	479.75	1371.34	1296.09	21.15	-3.613	0.000	0.829
62.00	-16.33	-27.75	0.00	-1002.2	0.00	1002.24	1812.73	473.58	1336.27	1269.09	22.70	-3.756	0.000	0.802
64.00	-16.04	-27.59	0.00	-946.75	0.00	946.75	1797.91	467.41	1301.67	1242.19	24.30	-3.896	0.000	0.775
66.00	-15.74	-27.42	0.00	-891.58	0.00	891.58	1782.87	461.24	1267.51	1215.41	25.96	-4.034	0.000	0.746
68.00	-15.46	-27.26	0.00	-836.73	0.00	836.73	1767.59	455.06	1233.81	1188.74	27.68	-4.169	0.000	0.716
70.00	-15.18	-27.10	0.00	-782.21	0.00	782.21	1752.08	448.89	1200.57	1162.21	29.46	-4.301	0.000	0.685
72.00	-14.90	-26.93	0.00	-728.02	0.00	728.02	1736.33	442.72	1167.77	1135.80	31.28	-4.429	0.000	0.653
74.00	-14.63	-26.77	0.00	-674.15	0.00	674.15	1720.35	436.54	1135.44	1109.54	33.17	-4.553	0.000	0.620
76.00	-14.36	-26.61	0.00	-620.61	0.00	620.61	1704.14	430.37	1103.55	1083.42	35.10	-4.672	0.000	0.585
78.00	-12.23	-23.26	0.00	-567.40	0.00	567.40	1687.70	424.20	1072.12	1057.45	37.08	-4.786	0.000	0.547
80.00	-11.99	-23.09	0.00	-520.88	0.00	520.88	1671.02	418.03	1041.15	1031.64	39.11	-4.896	0.000	0.515
82.00	-11.74	-22.92	0.00	-474.69	0.00	474.69	1654.12	411.85	1010.63	1006.00	41.18	-5.000	0.000	0.482
84.00	-11.50	-22.75	0.00	-428.85	0.00	428.85	1636.97	405.68	980.56	980.53	43.29	-5.099	0.000	0.448

Calculated Forces

Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 29

Tower Engineering Solutions

86.00	-11.27	-22.58	0.00	-383.34	0.00	383.34	1619.60	399.51	950.95	955.23	45.45	-5.192	0.000	0.411
88.00	-9.36	-18.11	0.00	-338.17	0.00	338.17	1601.99	393.33	921.79	930.12	47.64	-5.279	0.000	0.372
90.00	-9.16	-17.94	0.00	-301.96	0.00	301.96	1584.15	387.16	893.08	905.20	49.87	-5.360	0.000	0.342
92.00	-8.97	-17.77	0.00	-266.08	0.00	266.08	1566.08	380.99	864.83	880.48	52.12	-5.435	0.000	0.310
94.00	-8.79	-17.60	0.00	-230.54	0.00	230.54	1547.77	374.82	837.03	855.96	54.41	-5.504	0.000	0.277
96.00	-8.60	-17.44	0.00	-195.33	0.00	195.33	1529.23	368.64	809.69	831.66	56.73	-5.566	0.000	0.243
98.00	-5.00	-10.99	0.00	-160.46	0.00	160.46	1510.46	362.47	782.80	807.56	59.07	-5.620	0.000	0.203
98.50	-4.96	-10.95	0.00	-154.97	0.00	154.97	1505.73	360.93	776.15	801.57	59.66	-5.633	0.000	0.198
100.00	-4.77	-10.82	0.00	-138.54	0.00	138.54	1491.46	356.30	756.37	783.69	61.43	-5.669	0.000	0.181
102.00	-4.53	-10.64	0.00	-116.91	0.00	116.91	1021.50	267.16	567.02	537.93	63.81	-5.712	0.000	0.223
104.00	-4.41	-10.48	0.00	-95.62	0.00	95.62	1010.40	262.53	547.54	522.80	66.21	-5.750	0.000	0.189
106.00	-4.30	-10.32	0.00	-74.66	0.00	74.66	999.06	257.90	528.40	507.75	68.62	-5.790	0.000	0.153
108.00	-2.56	-5.71	0.00	-54.02	0.00	54.02	987.50	253.27	509.60	492.79	71.05	-5.823	0.000	0.113
109.00	-2.51	-5.63	0.00	-48.31	0.00	48.31	981.63	250.96	500.32	485.35	72.27	-5.836	0.000	0.103
109.00	-2.51	-5.63	0.00	-48.31	0.00	48.31	981.63	250.96	500.32	485.35	72.27	-5.836	0.000	0.103
110.00	-2.46	-5.56	0.00	-42.68	0.00	42.68	975.70	248.64	491.14	477.94	73.50	-5.849	0.000	0.092
112.00	-2.36	-5.40	0.00	-31.57	0.00	31.57	963.67	244.01	473.02	463.19	75.95	-5.869	0.000	0.071
114.00	-2.27	-5.25	0.00	-20.76	0.00	20.76	951.40	239.39	455.24	448.55	78.40	-5.885	0.000	0.049
116.00	-2.18	-5.10	0.00	-10.27	0.00	10.27	938.91	234.76	437.80	434.02	80.87	-5.895	0.000	0.026
118.00	-0.03	-0.07	0.00	-0.07	0.00	0.07	926.18	230.13	420.70	419.63	83.33	-5.898	0.000	0.000
119.00	0.00	-0.07	0.00	0.00	0.00	0.00	919.72	227.81	412.28	412.48	84.57	-5.898	0.000	0.000

Wind Loading - Shaft

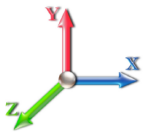
Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 30	

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00	RB1	1.00	0.85	5.110	5.62	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
1.00	RT1 RB2	1.00	0.85	5.110	5.62	0.00	1.200	1.057	1.00	4.186	5.02	28.2	64.0	254.7
2.00		1.00	0.85	5.110	5.62	0.00	1.200	1.133	1.00	4.180	5.02	28.2	68.4	258.2
4.00		1.00	0.85	5.110	5.62	0.00	1.200	1.215	2.00	8.331	10.00	56.2	145.6	522.4
6.00		1.00	0.85	5.110	5.62	0.00	1.200	1.265	2.00	8.273	9.93	55.8	150.3	523.6
8.00		1.00	0.85	5.110	5.62	0.00	1.200	1.302	2.00	8.210	9.85	55.4	153.4	523.1
10.00		1.00	0.85	5.110	5.62	0.00	1.200	1.331	2.00	8.145	9.77	54.9	155.5	521.5
12.00		1.00	0.85	5.110	5.62	0.00	1.200	1.356	2.00	8.078	9.69	54.5	156.9	519.4
14.00		1.00	0.85	5.110	5.62	0.00	1.200	1.377	2.00	8.010	9.61	54.0	157.9	516.8
16.00		1.00	0.86	5.173	5.69	0.00	1.200	1.395	2.00	7.941	9.53	54.2	158.5	513.8
18.00		1.00	0.88	5.303	5.83	0.00	1.200	1.412	2.00	7.872	9.45	55.1	158.9	510.6
18.63	RT2	1.00	0.89	5.341	5.88	0.00	1.200	1.417	0.63	2.465	2.96	17.4	50.1	160.1
20.00		1.00	0.90	5.422	5.96	0.00	1.200	1.427	1.37	5.336	6.40	38.2	108.9	347.0
22.00		1.00	0.92	5.531	6.08	0.00	1.200	1.440	2.00	7.731	9.28	56.4	159.0	503.5
24.00		1.00	0.94	5.634	6.20	0.00	1.200	1.453	2.00	7.660	9.19	57.0	158.8	499.8
26.00		1.00	0.95	5.729	6.30	0.00	1.200	1.465	2.00	7.589	9.11	57.4	158.5	495.9
28.00		1.00	0.97	5.820	6.40	0.00	1.200	1.476	2.00	7.518	9.02	57.8	158.1	491.9
30.00		1.00	0.98	5.905	6.50	0.00	1.200	1.486	2.00	7.446	8.94	58.0	157.6	487.7
32.00		1.00	1.00	5.985	6.58	0.00	1.200	1.495	2.00	7.374	8.85	58.3	157.0	483.6
34.00		1.00	1.01	6.062	6.67	0.00	1.200	1.504	2.00	7.302	8.76	58.4	156.3	479.3
36.00		1.00	1.02	6.136	6.75	0.00	1.200	1.513	2.00	7.230	8.68	58.6	155.5	474.9
38.00		1.00	1.03	6.206	6.83	0.00	1.200	1.521	2.00	7.158	8.59	58.6	154.7	470.5
40.00		1.00	1.04	6.273	6.90	0.00	1.200	1.529	2.00	7.086	8.50	58.7	153.9	466.1
42.00		1.00	1.05	6.338	6.97	0.00	1.200	1.537	2.00	7.013	8.42	58.7	152.9	461.5
44.00		1.00	1.06	6.401	7.04	0.00	1.200	1.544	2.00	6.940	8.33	58.6	152.0	457.0
46.00		1.00	1.07	6.461	7.11	0.00	1.200	1.551	2.00	6.868	8.24	58.6	150.9	452.4
48.00		1.00	1.08	6.519	7.17	0.00	1.200	1.557	2.00	6.795	8.15	58.5	149.9	447.7
48.50	Bot - Section 2	1.00	1.09	6.533	7.19	0.00	1.200	1.559	0.50	1.687	2.02	14.5	37.4	111.3
50.00		1.00	1.09	6.575	7.23	0.00	1.200	1.564	1.50	5.098	6.12	44.2	113.1	512.4
52.00		1.00	1.10	6.630	7.29	0.00	1.200	1.570	2.00	6.734	8.08	58.9	149.6	676.4
53.25	Top - Section 1	1.00	1.11	6.663	7.33	0.00	1.200	1.574	1.25	4.171	5.01	36.7	93.1	419.0
54.00		1.00	1.11	6.683	7.35	0.00	1.200	1.576	0.75	2.489	2.99	22.0	55.7	142.8
56.00		1.00	1.12	6.734	7.41	0.00	1.200	1.581	2.00	6.588	7.91	58.6	147.3	377.7
58.00		1.00	1.13	6.784	7.46	0.00	1.200	1.587	2.00	6.514	7.82	58.3	146.0	373.6
60.00		1.00	1.14	6.832	7.52	0.00	1.200	1.592	2.00	6.441	7.73	58.1	144.8	369.5
62.00		1.00	1.14	6.880	7.57	0.00	1.200	1.598	2.00	6.368	7.64	57.8	143.5	365.3
64.00		1.00	1.15	6.926	7.62	0.00	1.200	1.603	2.00	6.295	7.55	57.5	142.2	361.1
66.00		1.00	1.16	6.971	7.67	0.00	1.200	1.608	2.00	6.221	7.47	57.2	140.9	356.9
68.00		1.00	1.17	7.015	7.72	0.00	1.200	1.612	2.00	6.148	7.38	56.9	139.5	352.7
70.00		1.00	1.17	7.058	7.76	0.00	1.200	1.617	2.00	6.074	7.29	56.6	138.1	348.5
72.00		1.00	1.18	7.100	7.81	0.00	1.200	1.622	2.00	6.001	7.20	56.2	136.7	344.2
74.00		1.00	1.19	7.141	7.85	0.00	1.200	1.626	2.00	5.927	7.11	55.9	135.3	339.9
76.00		1.00	1.19	7.181	7.90	0.00	1.200	1.631	2.00	5.854	7.02	55.5	133.9	335.6
78.00	Appurtenance(s)	1.00	1.20	7.220	7.94	0.00	1.200	1.635	2.00	5.780	6.94	55.1	132.4	331.3
80.00		1.00	1.21	7.259	7.98	0.00	1.200	1.639	2.00	5.706	6.85	54.7	131.0	326.9
82.00		1.00	1.21	7.297	8.03	0.00	1.200	1.643	2.00	5.633	6.76	54.3	129.5	322.6
84.00		1.00	1.22	7.334	8.07	0.00	1.200	1.647	2.00	5.559	6.67	53.8	128.0	318.2

Wind Loading - Shaft

Structure: CT08558-B-SBA
Site Name: New Britain 3, CT
Height: 119.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1
Topography: 1
Code: TIA-222-H
Exposure: C
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II
2/16/2023

IES Tower Engineering Solutions

86.00	1.00	1.23	7.370	8.11	0.00	1.200	1.651	2.00	5.485	6.58	53.4	126.5	313.8
88.00 Appurtenance(s)	1.00	1.23	7.406	8.15	0.00	1.200	1.655	2.00	5.412	6.49	52.9	124.9	309.4
90.00	1.00	1.24	7.441	8.19	0.00	1.200	1.658	2.00	5.338	6.41	52.4	123.4	305.0
92.00	1.00	1.24	7.476	8.22	0.00	1.200	1.662	2.00	5.264	6.32	51.9	121.8	300.6
94.00	1.00	1.25	7.510	8.26	0.00	1.200	1.666	2.00	5.190	6.23	51.4	120.3	296.1
96.00	1.00	1.25	7.543	8.30	0.00	1.200	1.669	2.00	5.116	6.14	50.9	118.7	291.7
98.00 Appurtenance(s)	1.00	1.26	7.576	8.33	0.00	1.200	1.672	2.00	5.042	6.05	50.4	117.1	287.2
98.50 Bot - Section 3	1.00	1.26	7.584	8.34	0.00	1.200	1.673	0.50	1.249	1.50	12.5	29.2	71.2
100.00	1.00	1.27	7.608	8.37	0.00	1.200	1.676	1.50	3.767	4.52	37.8	87.8	308.4
102.00 Top - Section 2	1.00	1.27	7.640	8.40	0.00	1.200	1.679	2.00	4.958	5.95	50.0	115.4	405.2
104.00	1.00	1.28	7.671	8.44	0.00	1.200	1.682	2.00	4.884	5.86	49.5	113.8	237.0
106.00	1.00	1.28	7.702	8.47	0.00	1.200	1.686	2.00	4.810	5.77	48.9	112.1	233.2
108.00 Appurtenance(s)	1.00	1.29	7.732	8.51	0.00	1.200	1.689	2.00	4.736	5.68	48.3	110.5	229.4
109.00 Top - Section 3	1.00	1.29	7.747	8.52	0.00	1.200	1.690	1.00	2.340	2.81	23.9	54.8	113.5
110.00	1.00	1.29	7.762	8.54	0.00	1.200	1.692	1.00	2.322	2.79	23.8	54.4	112.5
112.00	1.00	1.30	7.792	8.57	0.00	1.200	1.695	2.00	4.588	5.51	47.2	107.2	221.8
114.00	1.00	1.30	7.821	8.60	0.00	1.200	1.698	2.00	4.514	5.42	46.6	105.5	217.9
116.00	1.00	1.31	7.850	8.63	0.00	1.200	1.701	2.00	4.440	5.33	46.0	103.8	214.1
118.00 Appurtenance(s)	1.00	1.31	7.878	8.67	0.00	1.200	1.704	2.00	4.366	5.24	45.4	102.1	210.2
119.00	1.00	1.31	7.892	8.68	0.00	1.200	1.705	1.00	2.155	2.59	22.5	50.6	103.9
							Totals:	**119.00**			**3,254.4**		**23,711.2**

Discrete Appurtenance Forces

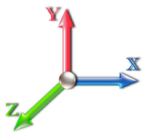
Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 32	

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	118.00	(3) T-Arm Kit	1	7.878	8.666	0.75	0.75	24.18	1029.30	0.000	0.000	209.56	0.00	0.00
2	118.00	BXA-70063-6BF	3	7.878	8.666	0.56	0.80	17.25	354.45	0.000	0.000	149.49	0.00	0.00
3	118.00	T-Arm	3	7.878	8.666	0.56	0.75	31.25	1585.61	0.000	0.000	270.81	0.00	0.00
4	118.00	Commscope	6	7.878	8.666	0.66	0.80	37.21	1490.23	0.000	0.000	322.43	0.00	0.00
5	118.00	Samsung MT6407-77A	3	7.878	8.666	0.56	0.80	9.43	634.22	0.000	0.000	81.73	0.00	0.00
6	118.00	B2/B66A RRH-BR049	3	7.878	8.666	0.54	0.80	3.90	526.78	0.000	0.000	33.84	0.00	0.00
7	118.00	BSAMNT-SBS-1-2	3	7.878	8.666	0.75	0.75	0.00	139.64	0.000	0.000	0.00	0.00	0.00
8	118.00	Collar	1	7.878	8.666	0.75	0.75	3.79	319.70	0.000	0.000	32.86	0.00	0.00
9	118.00	Samsung B5/B13	3	7.878	8.666	0.54	0.80	3.89	360.72	0.000	0.000	33.70	0.00	0.00
10	118.00	Raycap	1	7.878	8.666	0.80	0.80	3.66	161.18	0.000	0.000	31.73	0.00	0.00
11	108.00	840 10054	3	7.732	8.506	0.49	0.80	9.09	298.34	0.000	0.000	77.31	0.00	0.00
12	108.00	800 MHz	3	7.732	8.506	0.54	0.80	5.78	342.21	0.000	0.000	49.19	0.00	0.00
13	108.00	ACU-A20-N	4	7.732	8.506	0.54	0.80	0.92	16.23	0.000	0.000	7.79	0.00	0.00
14	108.00	APXVSPP18-C-A20	2	7.732	8.506	0.66	0.80	14.24	372.33	0.000	0.000	121.13	0.00	0.00
15	108.00	800 MHz Filters	3	7.732	8.506	0.54	0.80	5.60	388.22	0.000	0.000	47.64	0.00	0.00
16	108.00	1900MHz RRH	3	7.732	8.506	0.40	0.80	6.17	381.71	0.000	0.000	52.51	0.00	0.00
17	108.00	T-Arm	3	7.732	8.506	0.56	0.75	24.90	1759.30	0.000	0.000	211.79	0.00	0.00
18	108.00	APXVTM14-C-120	3	7.732	8.506	0.63	0.80	14.06	664.24	0.000	0.000	119.58	0.00	0.00
19	108.00	Horizon	2	7.732	8.506	0.80	0.80	1.48	56.25	0.000	0.000	12.58	0.00	0.00
20	108.00	P40-16-XLPP-RR-A	1	7.732	8.506	0.80	0.80	8.22	265.48	0.000	0.000	69.89	0.00	0.00
21	108.00	TD-RRH8x20-25	3	7.732	8.506	0.54	0.80	7.77	570.52	0.000	0.000	66.13	0.00	0.00
22	108.00	VHLP2.5	2	7.732	8.506	1.00	1.00	20.16	349.66	0.000	0.000	171.50	0.00	0.00
23	98.00	Ericcson RRUS 4449	3	7.576	8.333	0.38	0.75	2.81	368.27	0.000	0.000	23.39	0.00	0.00
24	98.00	Ericsson RRUS 4478 B14	3	7.576	8.333	0.38	0.75	2.42	304.85	0.000	0.000	20.13	0.00	0.00
25	98.00	Ericsson Air6419 N77G	3	7.576	8.333	0.57	0.75	7.80	331.06	0.000	0.000	65.02	0.00	0.00
26	98.00	AIR 6449 N77D	3	7.576	8.333	0.64	0.75	9.47	709.19	0.000	0.000	78.88	0.00	0.00
27	98.00	Raycap DC6-48-60-0-8F	3	7.576	8.333	0.75	0.75	3.01	239.12	0.000	0.000	25.12	0.00	0.00
28	98.00	Ericsson RRUS 32	3	7.576	8.333	0.38	0.75	3.87	441.30	0.000	0.000	32.21	0.00	0.00
29	98.00	Ericsson RRUS 8843	3	7.576	8.333	0.38	0.75	2.43	482.58	0.000	0.000	20.28	0.00	0.00
30	98.00	Cci DMP65R-BU6DA	3	7.576	8.333	0.54	0.75	22.86	930.75	0.000	0.000	190.53	0.00	0.00
31	98.00	Cci TPA-65R-BU6DA	3	7.576	8.333	0.54	0.75	23.14	608.63	0.000	0.000	192.81	0.00	0.00
32	98.00	F3P-12-WLL	1	7.576	8.333	1.00	1.00	123.83	5523.55	0.000	0.000	1031.94	0.00	0.00
33	88.00	AIR 6419 B77G	3	7.406	8.147	0.60	0.80	8.20	443.50	0.000	0.000	66.79	0.00	0.00
34	88.00	4460 Radio	3	7.406	8.147	0.54	0.80	5.61	545.92	0.000	0.000	45.71	0.00	0.00
35	88.00	VV-65B-R1B	3	7.406	8.147	0.60	0.80	23.63	45.97	0.000	0.000	192.52	0.00	0.00
36	88.00	4449 B71 + B85	3	7.406	8.147	0.54	0.80	5.12	568.18	0.000	0.000	41.69	0.00	0.00
37	88.00	APXVAARR24_43-U-NA2	3	7.406	8.147	0.60	0.80	39.67	1641.64	0.000	0.000	323.17	0.00	0.00
38	88.00	KRY 112 144/2	3	7.406	8.147	0.60	0.80	1.55	60.96	0.000	0.000	12.62	0.00	0.00
39	88.00	T-Arm w/ mod	3	7.406	8.147	0.56	0.75	43.17	1744.92	0.000	0.000	351.69	0.00	0.00
40	78.00	MC-PK8-DSH	1	7.220	7.942	1.00	1.00	81.83	3280.39	0.000	0.000	649.96	0.00	0.00
41	78.00	Raycap	1	7.220	7.942	0.75	0.75	1.91	63.46	0.000	0.000	15.14	0.00	0.00
42	78.00	Fujitsu TA08025-B604	3	7.220	7.942	0.50	0.75	3.75	336.01	0.000	0.000	29.76	0.00	0.00
43	78.00	Fujitsu TA08025-B605	3	7.220	7.942	0.50	0.75	3.75	379.18	0.000	0.000	29.76	0.00	0.00
44	78.00	JMA Wireless	3	7.220	7.942	0.55	0.75	23.08	847.98	0.000	0.000	183.31	0.00	0.00
							Totals:		**31,963.75**			**5,795.59**		

Total Applied Force Summary

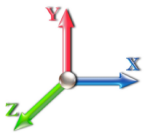
Structure:	CT08558-B-SBA		**Code:**	TIA-222-H	2/16/2023
Site Name:	New Britain 3, CT		**Exposure:**	C	
Height:	119.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 33

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
1.00		28.24	318.99	0.00	0.00
2.00		28.19	323.64	0.00	0.00
4.00		56.19	655.90	0.00	0.00
6.00		55.80	658.73	0.00	0.00
8.00		55.38	659.44	0.00	0.00
10.00		54.94	658.92	0.00	0.00
12.00		54.48	657.61	0.00	0.00
14.00		54.03	655.73	0.00	0.00
16.00		54.22	653.42	0.00	0.00
18.00		55.10	650.78	0.00	0.00
18.63		17.38	204.33	0.00	0.00
20.00		38.19	443.40	0.00	0.00
22.00		56.45	630.04	0.00	0.00
24.00		56.97	626.55	0.00	0.00
26.00		57.40	622.92	0.00	0.00
28.00		57.75	619.15	0.00	0.00
30.00		58.04	615.28	0.00	0.00
32.00		58.26	611.30	0.00	0.00
34.00		58.44	607.24	0.00	0.00
36.00		58.56	603.09	0.00	0.00
38.00		58.64	598.88	0.00	0.00
40.00		58.68	594.60	0.00	0.00
42.00		58.67	590.25	0.00	0.00
44.00		58.64	585.86	0.00	0.00
46.00		58.57	581.41	0.00	0.00
48.00		58.47	576.91	0.00	0.00
48.50		14.55	143.61	0.00	0.00
50.00		44.25	609.43	0.00	0.00
52.00		58.93	805.93	0.00	0.00
53.25		36.69	500.03	0.00	0.00
54.00		21.95	191.43	0.00	0.00
56.00		58.55	507.45	0.00	0.00
58.00		58.33	503.49	0.00	0.00
60.00		58.09	499.49	0.00	0.00
62.00		57.83	495.47	0.00	0.00
64.00		57.55	491.41	0.00	0.00
66.00		57.24	487.33	0.00	0.00
68.00		56.93	483.22	0.00	0.00
70.00		56.59	479.09	0.00	0.00
72.00		56.24	474.93	0.00	0.00
74.00		55.87	470.75	0.00	0.00
76.00		55.49	466.55	0.00	0.00
78.00	(11) attachments	963.03	5369.36	0.00	0.00
80.00		54.68	444.85	0.00	0.00
82.00		54.25	440.55	0.00	0.00
84.00		53.82	436.23	0.00	0.00

Total Applied Force Summary

Structure:	CT08558-B-SBA		**Code:**	TIA-222-H	2/16/2023
Site Name:	New Britain 3, CT		**Exposure:**	C	
Height:	119.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 34

Tower Engineering Solutions

86.00		53.37	431.89	0.00	0.00
88.00	(21) attachments	1087.08	5478.64	0.00	0.00
90.00		52.43	389.98	0.00	0.00
92.00		51.95	385.60	0.00	0.00
94.00		51.45	381.21	0.00	0.00
96.00		50.94	376.80	0.00	0.00
98.00	(28) attachments	1730.72	10311.68	0.00	0.00
98.50		12.50	86.94	0.00	0.00
100.00		37.83	355.52	0.00	0.00
102.00		50.00	468.05	0.00	0.00
104.00		49.46	299.95	0.00	0.00
106.00		48.90	296.20	0.00	0.00
108.00	(32) attachments	1055.38	5756.93	0.00	0.00
109.00		23.93	139.28	0.00	0.00
110.00		23.79	138.33	0.00	0.00
112.00		47.19	273.42	0.00	0.00
114.00		46.60	269.62	0.00	0.00
116.00		46.01	265.82	0.00	0.00
118.00	(27) attachments	1211.54	6863.84	0.00	0.00
119.00		22.45	103.88	0.00	0.00
	Totals:	**9,050.03**	**62,378.56**	**0.00**	**0.00**

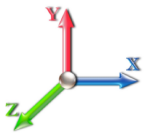
Linear Appurtenance Segment Forces (Factored)

Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 35	

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
1.00	1 5/8" Hybrid	Yes	1.00	0.000	1.63	0.31	0.00	0.063	0.000	5.110	0.00	7.96
1.00	1.411" Hybrid	Yes	1.00	0.000	1.41	0.29	0.00	0.063	0.000	5.110	0.00	4.07
1.00	1" Reinforcing plate	Yes	1.00	0.000	0.00	0.00	0.00	0.063	0.000	5.110	0.00	4.99
2.00	1 5/8" Hybrid	Yes	1.00	0.000	1.63	0.32	0.00	0.063	0.000	5.110	0.00	8.40
2.00	1.411" Hybrid	Yes	1.00	0.000	1.41	0.31	0.00	0.063	0.000	5.110	0.00	4.36
2.00	1" Reinforcing plate	Yes	1.00	0.000	0.00	0.00	0.00	0.063	0.000	5.110	0.00	5.43
4.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.68	0.00	0.064	0.000	5.110	0.00	17.78
4.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.64	0.00	0.064	0.000	5.110	0.00	9.36
4.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.064	0.000	5.110	0.00	11.83
6.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.69	0.00	0.065	0.000	5.110	0.00	18.40
6.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.66	0.00	0.065	0.000	5.110	0.00	9.78
6.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	5.110	0.00	12.45
8.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.71	0.00	0.065	0.000	5.110	0.00	18.86
8.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.67	0.00	0.065	0.000	5.110	0.00	10.09
8.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	5.110	0.00	12.91
10.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.72	0.00	0.066	0.000	5.110	0.00	19.23
10.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.68	0.00	0.066	0.000	5.110	0.00	10.34
10.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	5.110	0.00	13.28
12.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.72	0.00	0.066	0.000	5.110	0.00	19.54
12.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.69	0.00	0.066	0.000	5.110	0.00	10.56
12.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	5.110	0.00	13.59
14.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.73	0.00	0.067	0.000	5.110	0.00	19.81
14.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.69	0.00	0.067	0.000	5.110	0.00	10.74
14.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.067	0.000	5.110	0.00	13.87
16.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.74	0.00	0.068	0.000	5.173	0.00	20.05
16.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.70	0.00	0.068	0.000	5.173	0.00	10.91
16.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	5.173	0.00	14.11
18.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.74	0.00	0.068	0.000	5.303	0.00	20.27
18.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.71	0.00	0.068	0.000	5.303	0.00	11.06
18.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	5.303	0.00	14.32
18.63	1 5/8" Hybrid	Yes	0.63	0.000	1.63	0.23	0.00	0.069	0.000	5.341	0.00	6.41
18.63	1.411" Hybrid	Yes	0.63	0.000	1.41	0.22	0.00	0.069	0.000	5.341	0.00	3.50
18.63	1" Reinforcing plate	Yes	0.63	0.000	0.00	0.00	0.00	0.069	0.000	5.341	0.00	4.53
20.00	1 5/8" Hybrid	Yes	1.37	0.000	1.63	0.51	0.00	0.069	0.000	5.422	0.00	14.02
20.00	1.411" Hybrid	Yes	1.37	0.000	1.41	0.49	0.00	0.069	0.000	5.422	0.00	7.67
20.00	1" Reinforcing plate	Yes	1.37	0.000	0.00	0.00	0.00	0.069	0.000	5.422	0.00	9.95
22.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.75	0.00	0.070	0.000	5.531	0.00	20.65
22.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.72	0.00	0.070	0.000	5.531	0.00	11.32
24.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.76	0.00	0.071	0.000	5.634	0.00	20.81
24.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.72	0.00	0.071	0.000	5.634	0.00	11.44
26.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.76	0.00	0.071	0.000	5.729	0.00	20.97
26.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.72	0.00	0.071	0.000	5.729	0.00	11.55
28.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.76	0.00	0.072	0.000	5.820	0.00	21.12
28.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.73	0.00	0.072	0.000	5.820	0.00	11.65
30.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.77	0.00	0.073	0.000	5.905	0.00	21.25
30.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.73	0.00	0.073	0.000	5.905	0.00	11.74
32.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.77	0.00	0.074	0.000	5.985	0.00	21.38

Linear Appurtenance Segment Forces (Factored)

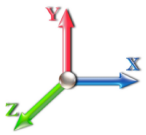
Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 36	

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
32.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.73	0.00	0.074	0.000	5.985	0.00	11.84
34.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.77	0.00	0.074	0.000	6.062	0.00	21.51
34.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.74	0.00	0.074	0.000	6.062	0.00	11.92
36.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.78	0.00	0.075	0.000	6.136	0.00	21.62
36.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.74	0.00	0.075	0.000	6.136	0.00	12.00
38.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.78	0.00	0.076	0.000	6.206	0.00	21.74
38.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.74	0.00	0.076	0.000	6.206	0.00	12.08
40.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.78	0.00	0.077	0.000	6.273	0.00	21.84
40.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.74	0.00	0.077	0.000	6.273	0.00	12.16
42.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.78	0.00	0.078	0.000	6.338	0.00	21.95
42.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.75	0.00	0.078	0.000	6.338	0.00	12.23
44.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.79	0.00	0.079	0.000	6.401	0.00	22.04
44.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.75	0.00	0.079	0.000	6.401	0.00	12.30
46.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.79	0.00	0.080	0.000	6.461	0.00	22.14
46.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.75	0.00	0.080	0.000	6.461	0.00	12.37
48.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.79	0.00	0.081	0.000	6.519	0.00	22.23
48.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.75	0.00	0.081	0.000	6.519	0.00	12.43
48.50	1 5/8" Hybrid	Yes	0.50	0.000	1.63	0.20	0.00	0.081	0.000	6.533	0.00	5.56
48.50	1.411" Hybrid	Yes	0.50	0.000	1.41	0.19	0.00	0.081	0.000	6.533	0.00	3.11
50.00	1 5/8" Hybrid	Yes	1.50	0.000	1.63	0.59	0.00	0.082	0.000	6.575	0.00	16.74
50.00	1.411" Hybrid	Yes	1.50	0.000	1.41	0.57	0.00	0.082	0.000	6.575	0.00	9.37
52.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.79	0.00	0.083	0.000	6.630	0.00	22.40
52.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.76	0.00	0.083	0.000	6.630	0.00	12.56
53.25	1 5/8" Hybrid	Yes	1.25	0.000	1.63	0.50	0.00	0.084	0.000	6.663	0.00	14.03
53.25	1.411" Hybrid	Yes	1.25	0.000	1.41	0.47	0.00	0.084	0.000	6.663	0.00	7.87
54.00	1 5/8" Hybrid	Yes	0.75	0.000	1.63	0.30	0.00	0.083	0.000	6.683	0.00	8.43
54.00	1.411" Hybrid	Yes	0.75	0.000	1.41	0.29	0.00	0.083	0.000	6.683	0.00	4.73
56.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.80	0.00	0.084	0.000	6.734	0.00	22.57
56.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.76	0.00	0.084	0.000	6.734	0.00	12.67
58.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.80	0.00	0.085	0.000	6.784	0.00	22.64
58.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.76	0.00	0.085	0.000	6.784	0.00	12.73
60.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.80	0.00	0.086	0.000	6.832	0.00	22.72
60.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.77	0.00	0.086	0.000	6.832	0.00	12.78
62.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.80	0.00	0.087	0.000	6.880	0.00	22.79
62.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.77	0.00	0.087	0.000	6.880	0.00	12.83
64.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.81	0.00	0.088	0.000	6.926	0.00	22.86
64.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.77	0.00	0.088	0.000	6.926	0.00	12.88
66.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.81	0.00	0.089	0.000	6.971	0.00	22.93
66.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.77	0.00	0.089	0.000	6.971	0.00	12.93
68.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.81	0.00	0.090	0.000	7.015	0.00	23.00
68.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.77	0.00	0.090	0.000	7.015	0.00	12.98
70.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.81	0.00	0.092	0.000	7.058	0.00	23.07
70.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.77	0.00	0.092	0.000	7.058	0.00	13.03
72.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.81	0.00	0.093	0.000	7.100	0.00	23.13
72.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.78	0.00	0.093	0.000	7.100	0.00	13.07
74.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.81	0.00	0.094	0.000	7.141	0.00	23.20
74.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.78	0.00	0.094	0.000	7.141	0.00	13.12

Linear Appurtenance Segment Forces (Factored)

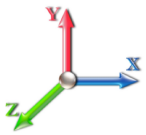
Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 37	

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
76.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.82	0.00	0.095	0.000	7.181	0.00	23.26
76.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.78	0.00	0.095	0.000	7.181	0.00	13.16
78.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.82	0.00	0.097	0.000	7.220	0.00	23.32
78.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.78	0.00	0.097	0.000	7.220	0.00	13.21
80.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.82	0.00	0.053	0.000	7.259	0.00	23.38
82.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.82	0.00	0.053	0.000	7.297	0.00	23.43
84.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.82	0.00	0.054	0.000	7.334	0.00	23.49
86.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.82	0.00	0.055	0.000	7.370	0.00	23.55
88.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.82	0.00	0.056	0.000	7.406	0.00	23.60
90.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.82	0.00	0.057	0.000	7.441	0.00	23.65
92.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.83	0.00	0.058	0.000	7.476	0.00	23.71
94.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.83	0.00	0.059	0.000	7.510	0.00	23.76
96.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.83	0.00	0.060	0.000	7.543	0.00	23.81
98.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.83	0.00	0.061	0.000	7.576	0.00	23.86
98.50	1 5/8" Hybrid	Yes	0.50	0.000	1.63	0.21	0.00	0.061	0.000	7.584	0.00	5.97
100.00	1 5/8" Hybrid	Yes	1.50	0.000	1.63	0.62	0.00	0.062	0.000	7.608	0.00	17.93
102.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.83	0.00	0.063	0.000	7.640	0.00	23.95
104.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.83	0.00	0.063	0.000	7.671	0.00	24.00
106.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.83	0.00	0.064	0.000	7.702	0.00	24.05
108.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.83	0.00	0.065	0.000	7.732	0.00	24.09
109.00	1 5/8" Hybrid	Yes	1.00	0.000	1.63	0.42	0.00	0.066	0.000	7.747	0.00	12.06
110.00	1 5/8" Hybrid	Yes	1.00	0.000	1.63	0.42	0.00	0.067	0.000	7.762	0.00	12.07
112.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.84	0.00	0.068	0.000	7.792	0.00	24.18
114.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.84	0.00	0.069	0.000	7.821	0.00	24.23
116.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.84	0.00	0.070	0.000	7.850	0.00	24.27
118.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.84	0.00	0.072	0.000	7.878	0.00	24.31
									Totals:		**0.0**	**1,905.7**

Calculated Forces

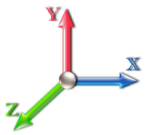
Structure:	CT08558-B-SBA	**Code:**	TIA-222-H		2/16/2023
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 38

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-62.38	-9.06	0.00	-827.26	0.00	827.26	3013.27	821.38	3215.78	2929.21	0.00	0.000	0.000	0.269
1.00	-62.06	-9.05	0.00	-818.20	0.00	818.20	3005.28	817.52	3185.65	2907.64	0.00	-0.016	0.000	0.268
2.00	-61.73	-9.04	0.00	-809.16	0.00	809.16	2997.23	813.67	3155.65	2886.08	0.01	-0.029	0.000	0.234
4.00	-61.07	-9.01	0.00	-791.08	0.00	791.08	2980.97	805.95	3096.08	2843.02	0.02	-0.057	0.000	0.231
6.00	-60.41	-8.98	0.00	-773.06	0.00	773.06	2964.47	798.23	3037.08	2800.03	0.05	-0.085	0.000	0.229
8.00	-59.74	-8.96	0.00	-755.09	0.00	755.09	2947.74	790.52	2978.65	2757.14	0.10	-0.113	0.000	0.227
10.00	-59.08	-8.93	0.00	-737.17	0.00	737.17	2930.78	782.80	2920.79	2714.33	0.15	-0.141	0.000	0.224
12.00	-58.42	-8.90	0.00	-719.31	0.00	719.31	2913.58	775.09	2863.49	2671.62	0.21	-0.169	0.000	0.222
14.00	-57.76	-8.88	0.00	-701.51	0.00	701.51	2896.16	767.37	2806.76	2629.02	0.29	-0.197	0.000	0.219
16.00	-57.10	-8.85	0.00	-683.76	0.00	683.76	2878.49	759.65	2750.60	2586.53	0.38	-0.226	0.000	0.217
18.00	-56.45	-8.81	0.00	-666.06	0.00	666.06	2860.60	751.94	2695.01	2544.16	0.48	-0.254	0.000	0.214
18.63	-56.24	-8.80	0.00	-660.51	0.00	660.51	2854.92	749.51	2677.62	2530.83	0.52	-0.263	0.000	0.213
18.63	-56.24	-8.80	0.00	-660.51	0.00	660.51	2854.92	749.51	2677.62	2530.83	0.52	-0.263	0.000	0.272
20.00	-55.79	-8.79	0.00	-648.45	0.00	648.45	2842.47	744.22	2639.98	2501.91	0.59	-0.283	0.000	0.279
22.00	-55.16	-8.77	0.00	-630.87	0.00	630.87	2824.11	736.51	2585.53	2459.79	0.72	-0.320	0.000	0.276
24.00	-54.52	-8.74	0.00	-613.34	0.00	613.34	2805.52	728.79	2531.63	2417.81	0.86	-0.357	0.000	0.273
26.00	-53.90	-8.72	0.00	-595.85	0.00	595.85	2786.70	721.07	2478.31	2375.97	1.02	-0.395	0.000	0.270
28.00	-53.27	-8.69	0.00	-578.42	0.00	578.42	2767.64	713.36	2425.56	2334.28	1.19	-0.432	0.000	0.267
30.00	-52.65	-8.66	0.00	-561.05	0.00	561.05	2748.35	705.64	2373.37	2292.75	1.38	-0.470	0.000	0.264
32.00	-52.04	-8.63	0.00	-543.73	0.00	543.73	2728.82	697.93	2321.75	2251.38	1.59	-0.508	0.000	0.261
34.00	-51.42	-8.60	0.00	-526.47	0.00	526.47	2709.07	690.21	2270.69	2210.17	1.81	-0.545	0.000	0.257
36.00	-50.81	-8.57	0.00	-509.27	0.00	509.27	2689.08	682.49	2220.21	2169.15	2.05	-0.583	0.000	0.254
38.00	-50.21	-8.54	0.00	-492.13	0.00	492.13	2668.86	674.78	2170.29	2128.30	2.30	-0.621	0.000	0.250
40.00	-49.61	-8.51	0.00	-475.05	0.00	475.05	2648.40	667.06	2120.94	2087.65	2.57	-0.658	0.000	0.246
42.00	-49.02	-8.47	0.00	-458.04	0.00	458.04	2627.71	659.35	2072.16	2047.19	2.85	-0.696	0.000	0.243
44.00	-48.43	-8.44	0.00	-441.10	0.00	441.10	2606.79	651.63	2023.94	2006.93	3.15	-0.734	0.000	0.239
46.00	-47.84	-8.40	0.00	-424.22	0.00	424.22	2585.64	643.91	1976.29	1966.88	3.47	-0.771	0.000	0.234
48.00	-47.26	-8.36	0.00	-407.42	0.00	407.42	2564.25	636.20	1929.21	1927.04	3.80	-0.808	0.000	0.230
48.50	-47.11	-8.35	0.00	-403.24	0.00	403.24	2558.87	634.27	1917.53	1917.11	3.88	-0.818	0.000	0.229
50.00	-46.50	-8.33	0.00	-390.71	0.00	390.71	2542.63	628.48	1882.70	1887.42	4.14	-0.846	0.000	0.225
52.00	-45.69	-8.28	0.00	-374.06	0.00	374.06	2520.78	620.77	1836.76	1848.03	4.51	-0.883	0.000	0.221
53.25	-45.19	-8.25	0.00	-363.71	0.00	363.71	1874.80	500.59	1493.02	1387.94	4.74	-0.906	0.000	0.286
54.00	-44.99	-8.25	0.00	-357.52	0.00	357.52	1869.65	498.27	1479.25	1377.68	4.88	-0.919	0.000	0.284
56.00	-44.48	-8.21	0.00	-341.03	0.00	341.03	1855.77	492.10	1442.82	1350.40	5.28	-0.963	0.000	0.277
58.00	-43.97	-8.18	0.00	-324.60	0.00	324.60	1841.66	485.93	1406.85	1323.20	5.69	-1.006	0.000	0.269
60.00	-43.47	-8.15	0.00	-308.24	0.00	308.24	1827.31	479.75	1371.34	1296.09	6.12	-1.048	0.000	0.262
62.00	-42.97	-8.11	0.00	-291.95	0.00	291.95	1812.73	473.58	1336.27	1269.09	6.57	-1.089	0.000	0.254
64.00	-42.47	-8.07	0.00	-275.73	0.00	275.73	1797.91	467.41	1301.67	1242.19	7.04	-1.130	0.000	0.246
66.00	-41.98	-8.03	0.00	-259.59	0.00	259.59	1782.87	461.24	1267.51	1215.41	7.52	-1.171	0.000	0.237
68.00	-41.49	-8.00	0.00	-243.52	0.00	243.52	1767.59	455.06	1233.81	1188.74	8.02	-1.210	0.000	0.229
70.00	-41.01	-7.96	0.00	-227.53	0.00	227.53	1752.08	448.89	1200.57	1162.21	8.53	-1.248	0.000	0.219
72.00	-40.53	-7.91	0.00	-211.62	0.00	211.62	1736.33	442.72	1167.77	1135.80	9.06	-1.285	0.000	0.210
74.00	-40.06	-7.87	0.00	-195.79	0.00	195.79	1720.35	436.54	1135.44	1109.54	9.61	-1.321	0.000	0.200
76.00	-39.59	-7.83	0.00	-180.05	0.00	180.05	1704.14	430.37	1103.55	1083.42	10.17	-1.356	0.000	0.190
78.00	-34.24	-6.76	0.00	-164.39	0.00	164.39	1687.70	424.20	1072.12	1057.45	10.75	-1.389	0.000	0.176
80.00	-33.79	-6.71	0.00	-150.87	0.00	150.87	1671.02	418.03	1041.15	1031.64	11.34	-1.421	0.000	0.167
82.00	-33.35	-6.66	0.00	-137.45	0.00	137.45	1654.12	411.85	1010.63	1006.00	11.94	-1.451	0.000	0.157
84.00	-32.91	-6.61	0.00	-124.13	0.00	124.13	1636.97	405.68	980.56	980.53	12.55	-1.480	0.000	0.147

Calculated Forces

Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 39

86.00	-32.48	-6.56	0.00	-110.90	0.00	110.90	1619.60	399.51	950.95	955.23	13.18	-1.507	0.000	0.136
88.00	-27.03	-5.34	0.00	-97.78	0.00	97.78	1601.99	393.33	921.79	930.12	13.82	-1.532	0.000	0.122
90.00	-26.64	-5.29	0.00	-87.09	0.00	87.09	1584.15	387.16	893.08	905.20	14.46	-1.555	0.000	0.113
92.00	-26.25	-5.24	0.00	-76.51	0.00	76.51	1566.08	380.99	864.83	880.48	15.12	-1.577	0.000	0.104
94.00	-25.87	-5.18	0.00	-66.04	0.00	66.04	1547.77	374.82	837.03	855.96	15.78	-1.596	0.000	0.094
96.00	-25.49	-5.13	0.00	-55.67	0.00	55.67	1529.23	368.64	809.69	831.66	16.46	-1.614	0.000	0.084
98.00	-15.24	-3.11	0.00	-45.41	0.00	45.41	1510.46	362.47	782.80	807.56	17.14	-1.630	0.000	0.066
98.50	-15.15	-3.10	0.00	-43.86	0.00	43.86	1505.73	360.93	776.15	801.57	17.31	-1.633	0.000	0.065
100.00	-14.79	-3.05	0.00	-39.21	0.00	39.21	1491.46	356.30	756.37	783.69	17.82	-1.643	0.000	0.060
102.00	-14.33	-2.99	0.00	-33.11	0.00	33.11	1021.50	267.16	567.02	537.93	18.51	-1.656	0.000	0.076
104.00	-14.03	-2.94	0.00	-27.12	0.00	27.12	1010.40	262.53	547.54	522.80	19.21	-1.666	0.000	0.066
106.00	-13.73	-2.88	0.00	-21.25	0.00	21.25	999.06	257.90	528.40	507.75	19.91	-1.678	0.000	0.056
108.00	-8.01	-1.66	0.00	-15.49	0.00	15.49	987.50	253.27	509.60	492.79	20.61	-1.687	0.000	0.040
109.00	-7.87	-1.63	0.00	-13.83	0.00	13.83	981.63	250.96	500.32	485.35	20.97	-1.691	0.000	0.037
109.00	-7.87	-1.63	0.00	-13.83	0.00	13.83	981.63	250.96	500.32	485.35	20.97	-1.691	0.000	0.037
110.00	-7.73	-1.60	0.00	-12.20	0.00	12.20	975.70	248.64	491.14	477.94	21.32	-1.695	0.000	0.033
112.00	-7.46	-1.55	0.00	-8.99	0.00	8.99	963.67	244.01	473.02	463.19	22.03	-1.701	0.000	0.027
114.00	-7.19	-1.49	0.00	-5.90	0.00	5.90	951.40	239.39	455.24	448.55	22.75	-1.705	0.000	0.021
116.00	-6.93	-1.44	0.00	-2.91	0.00	2.91	938.91	234.76	437.80	434.02	23.46	-1.708	0.000	0.014
118.00	-0.10	-0.03	0.00	-0.03	0.00	0.03	926.18	230.13	420.70	419.63	24.18	-1.709	0.000	0.000
119.00	0.00	-0.02	0.00	0.00	0.00	0.00	919.72	227.81	412.28	412.48	24.54	-1.709	0.000	0.000

Seismic Segment Forces (Factored)

Structure:	CT08558-B-SBA		**Code:**	TIA-222-H	2/16/2023
Site Name:	New Britain 3, CT		**Exposure:**	C	
Height:	119.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 40

Tower Engineering Solutions

Load Case:	1.2D + 1.0Ev + 1.0Eh							**Iterations**	21
Gust Response Factor	1.10				**Sds**	0.21		**Ss**	0.20
Dead Load Factor	1.20	**Seismic Load Factor**	1.00		**Sd1**	0.09		**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.36		**SA**	0.03	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	Hz (lb)	Vertical Ev (lb)	Lateral Fs (lb)	R: 1.50
0.00	RB1	0.00	0.00	0.00	0.00	
1.00	RT1 RB2	210.17	0.50	8.74	0.00	
2.00		209.42	1.50	8.71	0.00	
4.00		416.60	3.00	17.33	0.00	
6.00		413.61	5.00	17.21	0.00	
8.00		410.62	7.00	17.08	0.01	
10.00		407.62	9.00	16.96	0.02	
12.00		404.63	11.00	16.83	0.02	
14.00		401.64	13.00	16.71	0.03	
16.00		398.65	15.00	16.58	0.04	
18.00		395.65	17.00	16.46	0.05	
18.63	RT2	124.01	18.31	5.16	0.01	
20.00		268.65	19.31	11.18	0.03	
22.00		389.67	21.00	16.21	0.08	
24.00		386.68	23.00	16.09	0.09	
26.00		383.69	25.00	15.96	0.11	
28.00		380.69	27.00	15.84	0.12	
30.00		377.70	29.00	15.71	0.14	
32.00		374.71	31.00	15.59	0.16	
34.00		371.72	33.00	15.46	0.17	
36.00		368.73	35.00	15.34	0.19	
38.00		365.73	37.00	15.21	0.21	
40.00		362.74	39.00	15.09	0.23	
42.00		359.75	41.00	14.97	0.25	
44.00		356.76	43.00	14.84	0.27	
46.00		353.76	45.00	14.72	0.29	
48.00		350.77	47.00	14.59	0.32	
48.50	Bot - Section 2	87.23	48.25	3.63	0.02	
50.00		409.73	49.25	17.04	0.47	
52.00		541.60	51.00	22.53	0.88	
53.25	Top - Section 1	335.76	52.63	13.97	0.36	
54.00		111.09	53.63	4.62	0.04	
56.00		294.60	55.00	12.26	0.30	
58.00		292.20	57.00	12.16	0.32	
60.00		289.81	59.00	12.06	0.34	
62.00		287.41	61.00	11.96	0.36	
64.00		285.02	63.00	11.86	0.37	
66.00		282.63	65.00	11.76	0.39	
68.00		280.23	67.00	11.66	0.41	
70.00		277.84	69.00	11.56	0.43	
72.00		275.45	71.00	11.46	0.44	
74.00		273.05	73.00	11.36	0.46	
76.00		270.66	75.00	11.26	0.48	
78.00	Appurtenance(s)	2627.3	77.00	109.30	47.44	
80.00		263.11	79.00	10.95	0.50	
82.00		260.72	81.00	10.85	0.52	

Seismic Segment Forces (Factored)

Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 41	

84.00			258.32	83.00	10.75	0.53		
86.00			255.93	85.00	10.65	0.55		
88.00	Appurtenance(s)		2556.3	87.00	106.34	57.34		
90.00			217.95	89.00	9.07	0.44		
92.00			215.55	91.00	8.97	0.45		
94.00			213.16	93.00	8.87	0.46		
96.00			210.76	95.00	8.77	0.46		
98.00	Appurtenance(s)		4691.1	97.00	195.15	240.03		
98.50	Bot - Section 3		46.11	98.25	1.92	0.02		
100.00			217.00	99.25	9.03	0.54		
102.00	Top - Section 2		285.67	101.00	11.88	0.96		
104.00			146.90	103.00	6.11	0.27		
106.00			145.11	105.00	6.04	0.27		
108.00	Appurtenance(s)		2446.7	107.00	101.78	79.45		
109.00	Top - Section 3		65.25	108.50	2.71	0.06		
110.00			64.80	109.50	2.70	0.06		
112.00			128.26	111.00	5.34	0.23		
114.00			126.46	113.00	5.26	0.24		
116.00			124.67	115.00	5.19	0.24		
118.00	Appurtenance(s)		2947.0	117.00	122.60	137.82		
119.00			44.39	118.50	1.85	0.03		
		Totals:	**32,397.4**		**1,347.7**	**577.8**	**Total Wind:**	**32,396.3**

Calculated Forces

Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 42	

Tower Engineering Solutions

Load Case:	1.2D + 1.0Ev + 1.0Eh							**Iterations**	21
Gust Response Factor	1.10			**Sds**	0.21			**Ss**	0.20
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.09			**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.36	**SA**	0.03	**Seismic Importance Factor**			1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-39.18	-0.58	0.00	-60.95	0.00	60.95	3013.27	821.38	3215.78	2929.21		0.00	0.00	0.029
1.00	-38.93	-0.58	0.00	-60.37	0.00	60.37	3005.28	817.52	3185.65	2907.64		0.00	0.00	0.029
2.00	-38.68	-0.58	0.00	-59.79	0.00	59.79	2997.23	813.67	3155.65	2886.08		0.00	0.00	0.025
4.00	-38.18	-0.58	0.00	-58.64	0.00	58.64	2980.97	805.95	3096.08	2843.02		0.00	0.00	0.025
6.00	-37.69	-0.58	0.00	-57.48	0.00	57.48	2964.47	798.23	3037.08	2800.03		0.00	-0.01	0.024
8.00	-37.20	-0.58	0.00	-56.32	0.00	56.32	2947.74	790.52	2978.65	2757.14		0.01	-0.01	0.024
10.00	-36.72	-0.58	0.00	-55.15	0.00	55.15	2930.78	782.80	2920.79	2714.33		0.01	-0.01	0.024
12.00	-36.23	-0.58	0.00	-53.99	0.00	53.99	2913.58	775.09	2863.49	2671.62		0.02	-0.01	0.024
14.00	-35.76	-0.59	0.00	-52.82	0.00	52.82	2896.16	767.37	2806.76	2629.02		0.02	-0.01	0.024
16.00	-35.28	-0.59	0.00	-51.65	0.00	51.65	2878.49	759.65	2750.60	2586.53		0.03	-0.02	0.023
18.00	-34.81	-0.59	0.00	-50.47	0.00	50.47	2860.60	751.94	2695.01	2544.16		0.04	-0.02	0.023
18.63	-34.66	-0.59	0.00	-50.10	0.00	50.10	2854.92	749.51	2677.62	2530.83		0.04	-0.02	0.023
18.63	-34.66	-0.59	0.00	-50.10	0.00	50.10	2854.92	749.51	2677.62	2530.83		0.04	-0.02	0.027
20.00	-34.34	-0.59	0.00	-49.30	0.00	49.30	2842.47	744.22	2639.98	2501.91		0.04	-0.02	0.032
22.00	-33.88	-0.59	0.00	-48.12	0.00	48.12	2824.11	736.51	2585.53	2459.79		0.05	-0.02	0.032
24.00	-33.42	-0.59	0.00	-46.94	0.00	46.94	2805.52	728.79	2531.63	2417.81		0.06	-0.03	0.031
26.00	-32.96	-0.59	0.00	-45.75	0.00	45.75	2786.70	721.07	2478.31	2375.97		0.08	-0.03	0.031
28.00	-32.51	-0.59	0.00	-44.57	0.00	44.57	2767.64	713.36	2425.56	2334.28		0.09	-0.03	0.031
30.00	-32.06	-0.60	0.00	-43.38	0.00	43.38	2748.35	705.64	2373.37	2292.75		0.10	-0.04	0.031
32.00	-31.62	-0.60	0.00	-42.19	0.00	42.19	2728.82	697.93	2321.75	2251.38		0.12	-0.04	0.030
34.00	-31.18	-0.60	0.00	-40.99	0.00	40.99	2709.07	690.21	2270.69	2210.17		0.14	-0.04	0.030
36.00	-30.74	-0.60	0.00	-39.80	0.00	39.80	2689.08	682.49	2220.21	2169.15		0.15	-0.04	0.030
38.00	-30.31	-0.60	0.00	-38.60	0.00	38.60	2668.86	674.78	2170.29	2128.30		0.17	-0.05	0.029
40.00	-29.88	-0.60	0.00	-37.40	0.00	37.40	2648.40	667.06	2120.94	2087.65		0.19	-0.05	0.029
42.00	-29.45	-0.60	0.00	-36.19	0.00	36.19	2627.71	659.35	2072.16	2047.19		0.22	-0.05	0.029
44.00	-29.03	-0.60	0.00	-34.99	0.00	34.99	2606.79	651.63	2023.94	2006.93		0.24	-0.06	0.029
46.00	-28.61	-0.60	0.00	-33.78	0.00	33.78	2585.64	643.91	1976.29	1966.88		0.26	-0.06	0.028
48.00	-28.20	-0.60	0.00	-32.58	0.00	32.58	2564.25	636.20	1929.21	1927.04		0.29	-0.06	0.028
48.50	-28.09	-0.60	0.00	-32.27	0.00	32.27	2558.87	634.27	1917.53	1917.11		0.29	-0.06	0.028
50.00	-27.60	-0.60	0.00	-31.37	0.00	31.37	2542.63	628.48	1882.70	1887.42		0.31	-0.07	0.027
52.00	-26.95	-0.60	0.00	-30.16	0.00	30.16	2520.78	620.77	1836.76	1848.03		0.34	-0.07	0.027
53.25	-26.54	-0.60	0.00	-29.40	0.00	29.40	1874.80	500.59	1493.02	1387.94		0.36	-0.07	0.035
54.00	-26.41	-0.61	0.00	-28.95	0.00	28.95	1869.65	498.27	1479.25	1377.68		0.37	-0.07	0.035
56.00	-26.07	-0.61	0.00	-27.74	0.00	27.74	1855.77	492.10	1442.82	1350.40		0.40	-0.07	0.035
58.00	-25.72	-0.61	0.00	-26.53	0.00	26.53	1841.66	485.93	1406.85	1323.20		0.43	-0.08	0.034
60.00	-25.39	-0.61	0.00	-25.31	0.00	25.31	1827.31	479.75	1371.34	1296.09		0.47	-0.08	0.033
62.00	-25.05	-0.61	0.00	-24.10	0.00	24.10	1812.73	473.58	1336.27	1269.09		0.50	-0.08	0.033
64.00	-24.72	-0.61	0.00	-22.88	0.00	22.88	1797.91	467.41	1301.67	1242.19		0.54	-0.09	0.032
66.00	-24.39	-0.61	0.00	-21.67	0.00	21.67	1782.87	461.24	1267.51	1215.41		0.58	-0.09	0.032
68.00	-24.06	-0.61	0.00	-20.45	0.00	20.45	1767.59	455.06	1233.81	1188.74		0.62	-0.09	0.031
70.00	-23.73	-0.61	0.00	-19.23	0.00	19.23	1752.08	448.89	1200.57	1162.21		0.66	-0.10	0.030
72.00	-23.41	-0.61	0.00	-18.01	0.00	18.01	1736.33	442.72	1167.77	1135.80		0.70	-0.10	0.029
74.00	-23.09	-0.61	0.00	-16.79	0.00	16.79	1720.35	436.54	1135.44	1109.54		0.74	-0.10	0.029
76.00	-22.78	-0.61	0.00	-15.57	0.00	15.57	1704.14	430.37	1103.55	1083.42		0.79	-0.11	0.028
78.00	-19.54	-0.56	0.00	-14.34	0.00	14.34	1687.70	424.20	1072.12	1057.45		0.83	-0.11	0.025
80.00	-19.23	-0.56	0.00	-13.23	0.00	13.23	1671.02	418.03	1041.15	1031.64		0.88	-0.11	0.024
82.00	-18.93	-0.56	0.00	-12.11	0.00	12.11	1654.12	411.85	1010.63	1006.00		0.93	-0.12	0.023

Calculated Forces

Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 43

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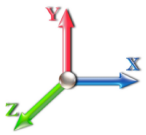
84.00	-18.62	-0.56	0.00	-11.00	0.00	11.00	1636.97	405.68	980.56	980.53	0.97	-0.12	0.023
86.00	-18.33	-0.56	0.00	-9.88	0.00	9.88	1619.60	399.51	950.95	955.23	1.02	-0.12	0.022
88.00	-15.17	-0.49	0.00	-8.77	0.00	8.77	1601.99	393.33	921.79	930.12	1.08	-0.12	0.019
90.00	-14.92	-0.49	0.00	-7.78	0.00	7.78	1584.15	387.16	893.08	905.20	1.13	-0.12	0.018
92.00	-14.66	-0.49	0.00	-6.79	0.00	6.79	1566.08	380.99	864.83	880.48	1.18	-0.13	0.017
94.00	-14.41	-0.49	0.00	-5.81	0.00	5.81	1547.77	374.82	837.03	855.96	1.23	-0.13	0.016
96.00	-14.16	-0.49	0.00	-4.82	0.00	4.82	1529.23	368.64	809.69	831.66	1.29	-0.13	0.015
98.00	-8.35	-0.24	0.00	-3.84	0.00	3.84	1510.46	362.47	782.80	807.56	1.34	-0.13	0.010
98.50	-8.30	-0.24	0.00	-3.72	0.00	3.72	1505.73	360.93	776.15	801.57	1.36	-0.13	0.010
100.00	-8.03	-0.24	0.00	-3.36	0.00	3.36	1491.46	356.30	756.37	783.69	1.40	-0.13	0.010
102.00	-7.69	-0.24	0.00	-2.89	0.00	2.89	1021.50	267.16	567.02	537.93	1.45	-0.13	0.013
104.00	-7.51	-0.24	0.00	-2.42	0.00	2.42	1010.40	262.53	547.54	522.80	1.51	-0.13	0.012
106.00	-7.34	-0.23	0.00	-1.95	0.00	1.95	999.06	257.90	528.40	507.75	1.57	-0.14	0.011
108.00	-4.31	-0.15	0.00	-1.48	0.00	1.48	987.50	253.27	509.60	492.79	1.62	-0.14	0.007
109.00	-4.24	-0.15	0.00	-1.33	0.00	1.33	981.63	250.96	500.32	485.35	1.65	-0.14	0.007
109.00	-4.24	-0.15	0.00	-1.33	0.00	1.33	981.63	250.96	500.32	485.35	1.65	-0.14	0.007
110.00	-4.16	-0.15	0.00	-1.18	0.00	1.18	975.70	248.64	491.14	477.94	1.68	-0.14	0.007
112.00	-4.01	-0.15	0.00	-0.88	0.00	0.88	963.67	244.01	473.02	463.19	1.74	-0.14	0.006
114.00	-3.86	-0.15	0.00	-0.59	0.00	0.59	951.40	239.39	455.24	448.55	1.80	-0.14	0.005
116.00	-3.71	-0.15	0.00	-0.29	0.00	0.29	938.91	234.76	437.80	434.02	1.86	-0.14	0.005
118.00	-0.06	0.00	0.00	0.00	0.00	0.00	926.18	230.13	420.70	419.63	1.91	-0.14	0.000
119.00	0.00	0.00	0.00	0.00	0.00	0.00	919.72	227.81	412.28	412.48	1.94	-0.14	0.000

Seismic Segment Forces (Factored)

Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 44	

Tower Engineering Solutions

Load Case: 0.9D + 1.0Ev + 1.0Eh



Gust Response Factor	1.10			**Sds**	0.21	**Iterations**	21
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.09	**Ss**	0.20
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.36	**SA**	0.03	**S1**	0.06
						Seismic Importance Factor	1.00

Top Elev (ft)	Description	Wz (lb)	Hz (lb)	Vertical Ev (lb)	Lateral Fs (lb)	R: 1.50
0.00	RB1	0.00	0.00	0.00	0.00	
1.00	RT1 RB2	197.35	0.50	8.21	0.00	
2.00		196.60	1.50	8.18	0.00	
4.00		390.96	3.00	16.26	0.00	
6.00		387.96	5.00	16.14	0.00	
8.00		384.97	7.00	16.01	0.01	
10.00		381.98	9.00	15.89	0.01	
12.00		378.99	11.00	15.77	0.02	
14.00		376.00	13.00	15.64	0.03	
16.00		373.00	15.00	15.52	0.04	
18.00		370.01	17.00	15.39	0.05	
18.63	RT2	115.93	18.31	4.82	0.01	
20.00		251.09	19.31	10.45	0.03	
22.00		364.03	21.00	15.14	0.07	
24.00		361.04	23.00	15.02	0.08	
26.00		358.04	25.00	14.89	0.09	
28.00		355.05	27.00	14.77	0.11	
30.00		352.06	29.00	14.65	0.12	
32.00		349.07	31.00	14.52	0.14	
34.00		346.07	33.00	14.40	0.15	
36.00		343.08	35.00	14.27	0.17	
38.00		340.09	37.00	14.15	0.19	
40.00		337.10	39.00	14.02	0.20	
42.00		334.11	41.00	13.90	0.22	
44.00		331.11	43.00	13.77	0.24	
46.00		328.12	45.00	13.65	0.26	
48.00		325.13	47.00	13.53	0.27	
48.50	Bot - Section 2	80.81	48.25	3.36	0.02	
50.00		390.50	49.25	16.24	0.43	
52.00		515.96	51.00	21.46	0.81	
53.25	Top - Section 1	319.74	52.63	13.30	0.33	
54.00		101.47	53.63	4.22	0.03	
56.00		268.95	55.00	11.19	0.26	
58.00		266.56	57.00	11.09	0.27	
60.00		264.16	59.00	10.99	0.29	
62.00		261.77	61.00	10.89	0.30	
64.00		259.38	63.00	10.79	0.31	
66.00		256.98	65.00	10.69	0.33	
68.00		254.59	67.00	10.59	0.34	
70.00		252.20	69.00	10.49	0.36	
72.00		249.80	71.00	10.39	0.37	
74.00		247.41	73.00	10.29	0.38	
76.00		245.02	75.00	10.19	0.40	
78.00	Appurtenance(s)	2601.7	77.00	108.23	47.13	
80.00		238.16	79.00	9.91	0.42	
82.00		235.76	81.00	9.81	0.43	

Seismic Segment Forces (Factored)

Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 45	

84.00			233.37	83.00	9.71	0.44		
86.00			230.98	85.00	9.61	0.45		
88.00	Appurtenance(s)		2531.3	87.00	105.31	56.96		
90.00			201.29	89.00	8.37	0.38		
92.00			198.90	91.00	8.27	0.38		
94.00			196.50	93.00	8.17	0.39		
96.00			194.11	95.00	8.07	0.40		
98.00	Appurtenance(s)		4674.5	97.00	194.46	241.45		
98.50	Bot - Section 3		43.35	98.25	1.80	0.02		
100.00			208.71	99.25	8.68	0.50		
102.00	Top - Section 2		274.62	101.00	11.42	0.90		
104.00			135.85	103.00	5.65	0.23		
106.00			134.06	105.00	5.58	0.23		
108.00	Appurtenance(s)		2435.6	107.00	101.32	79.77		
109.00	Top - Section 3		61.16	108.50	2.54	0.05		
110.00			60.71	109.50	2.53	0.05		
112.00			120.07	111.00	5.00	0.21		
114.00			118.28	113.00	4.92	0.21		
116.00			116.48	115.00	4.85	0.21		
118.00	Appurtenance(s)		2938.8	117.00	122.26	138.85		
119.00			44.39	118.50	1.85	0.03		
		Totals:	**31,093.1**		**1,293.5**	**577.8**	**Total Wind:**	**32,396.3**

Calculated Forces

Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 46	

Tower Engineering Solutions

Load Case: 0.9D + 1.0Ev + 1.0Eh

Gust Response Factor	1.10			**Sds**	0.21			**Iterations**	21
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.09			**Ss**	0.20
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.36	**SA**	0.03			**S1**	0.06
								Seismic Importance Factor	1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-29.67	-0.58	0.00	-60.32	0.00	60.32	3013.27	821.38	3215.78	2929.21		0.00	0.00	0.026
1.00	-29.48	-0.58	0.00	-59.74	0.00	59.74	3005.28	817.52	3185.65	2907.64		0.00	0.00	0.026
2.00	-29.29	-0.58	0.00	-59.17	0.00	59.17	2997.23	813.67	3155.65	2886.08		0.00	0.00	0.023
4.00	-28.91	-0.58	0.00	-58.01	0.00	58.01	2980.97	805.95	3096.08	2843.02		0.00	0.00	0.022
6.00	-28.54	-0.58	0.00	-56.86	0.00	56.86	2964.47	798.23	3037.08	2800.03		0.00	-0.01	0.022
8.00	-28.17	-0.58	0.00	-55.70	0.00	55.70	2947.74	790.52	2978.65	2757.14		0.01	-0.01	0.022
10.00	-27.80	-0.58	0.00	-54.53	0.00	54.53	2930.78	782.80	2920.79	2714.33		0.01	-0.01	0.022
12.00	-27.44	-0.58	0.00	-53.37	0.00	53.37	2913.58	775.09	2863.49	2671.62		0.02	-0.01	0.022
14.00	-27.08	-0.58	0.00	-52.21	0.00	52.21	2896.16	767.37	2806.76	2629.02		0.02	-0.01	0.021
16.00	-26.72	-0.58	0.00	-51.04	0.00	51.04	2878.49	759.65	2750.60	2586.53		0.03	-0.02	0.021
18.00	-26.36	-0.58	0.00	-49.87	0.00	49.87	2860.60	751.94	2695.01	2544.16		0.04	-0.02	0.021
18.63	-26.25	-0.59	0.00	-49.50	0.00	49.50	2854.92	749.51	2677.62	2530.83		0.04	-0.02	0.021
18.63	-26.25	-0.59	0.00	-49.50	0.00	49.50	2854.92	749.51	2677.62	2530.83		0.04	-0.02	0.025
20.00	-26.01	-0.59	0.00	-48.70	0.00	48.70	2842.47	744.22	2639.98	2501.91		0.04	-0.02	0.029
22.00	-25.66	-0.59	0.00	-47.53	0.00	47.53	2824.11	736.51	2585.53	2459.79		0.05	-0.02	0.028
24.00	-25.31	-0.59	0.00	-46.36	0.00	46.36	2805.52	728.79	2531.63	2417.81		0.06	-0.03	0.028
26.00	-24.97	-0.59	0.00	-45.18	0.00	45.18	2786.70	721.07	2478.31	2375.97		0.08	-0.03	0.028
28.00	-24.62	-0.59	0.00	-44.00	0.00	44.00	2767.64	713.36	2425.56	2334.28		0.09	-0.03	0.028
30.00	-24.28	-0.59	0.00	-42.82	0.00	42.82	2748.35	705.64	2373.37	2292.75		0.10	-0.04	0.028
32.00	-23.95	-0.59	0.00	-41.64	0.00	41.64	2728.82	697.93	2321.75	2251.38		0.12	-0.04	0.027
34.00	-23.61	-0.59	0.00	-40.46	0.00	40.46	2709.07	690.21	2270.69	2210.17		0.13	-0.04	0.027
36.00	-23.28	-0.59	0.00	-39.27	0.00	39.27	2689.08	682.49	2220.21	2169.15		0.15	-0.04	0.027
38.00	-22.96	-0.59	0.00	-38.08	0.00	38.08	2668.86	674.78	2170.29	2128.30		0.17	-0.05	0.026
40.00	-22.63	-0.59	0.00	-36.90	0.00	36.90	2648.40	667.06	2120.94	2087.65		0.19	-0.05	0.026
42.00	-22.31	-0.60	0.00	-35.71	0.00	35.71	2627.71	659.35	2072.16	2047.19		0.21	-0.05	0.026
44.00	-21.99	-0.60	0.00	-34.52	0.00	34.52	2606.79	651.63	2023.94	2006.93		0.24	-0.06	0.026
46.00	-21.67	-0.60	0.00	-33.32	0.00	33.32	2585.64	643.91	1976.29	1966.88		0.26	-0.06	0.025
48.00	-21.36	-0.60	0.00	-32.13	0.00	32.13	2564.25	636.20	1929.21	1927.04		0.28	-0.06	0.025
48.50	-21.28	-0.60	0.00	-31.83	0.00	31.83	2558.87	634.27	1917.53	1917.11		0.29	-0.06	0.025
50.00	-20.91	-0.60	0.00	-30.94	0.00	30.94	2542.63	628.48	1882.70	1887.42		0.31	-0.06	0.025
52.00	-20.41	-0.60	0.00	-29.74	0.00	29.74	2520.78	620.77	1836.76	1848.03		0.34	-0.07	0.024
53.25	-20.11	-0.60	0.00	-29.00	0.00	29.00	1874.80	500.59	1493.02	1387.94		0.36	-0.07	0.032
54.00	-20.01	-0.60	0.00	-28.55	0.00	28.55	1869.65	498.27	1479.25	1377.68		0.37	-0.07	0.031
56.00	-19.75	-0.60	0.00	-27.36	0.00	27.36	1855.77	492.10	1442.82	1350.40		0.40	-0.07	0.031
58.00	-19.49	-0.60	0.00	-26.16	0.00	26.16	1841.66	485.93	1406.85	1323.20		0.43	-0.08	0.030
60.00	-19.23	-0.60	0.00	-24.96	0.00	24.96	1827.31	479.75	1371.34	1296.09		0.46	-0.08	0.030
62.00	-18.98	-0.60	0.00	-23.77	0.00	23.77	1812.73	473.58	1336.27	1269.09		0.50	-0.08	0.029
64.00	-18.73	-0.60	0.00	-22.57	0.00	22.57	1797.91	467.41	1301.67	1242.19		0.53	-0.09	0.029
66.00	-18.48	-0.60	0.00	-21.37	0.00	21.37	1782.87	461.24	1267.51	1215.41		0.57	-0.09	0.028
68.00	-18.23	-0.60	0.00	-20.17	0.00	20.17	1767.59	455.06	1233.81	1188.74		0.61	-0.09	0.027
70.00	-17.98	-0.60	0.00	-18.97	0.00	18.97	1752.08	448.89	1200.57	1162.21		0.65	-0.10	0.027
72.00	-17.74	-0.60	0.00	-17.76	0.00	17.76	1736.33	442.72	1167.77	1135.80		0.69	-0.10	0.026
74.00	-17.50	-0.60	0.00	-16.56	0.00	16.56	1720.35	436.54	1135.44	1109.54		0.73	-0.10	0.025
76.00	-17.26	-0.60	0.00	-15.36	0.00	15.36	1704.14	430.37	1103.55	1083.42		0.78	-0.11	0.024
78.00	-14.80	-0.55	0.00	-14.16	0.00	14.16	1687.70	424.20	1072.12	1057.45		0.82	-0.11	0.022
80.00	-14.57	-0.55	0.00	-13.06	0.00	13.06	1671.02	418.03	1041.15	1031.64		0.87	-0.11	0.021
82.00	-14.34	-0.55	0.00	-11.96	0.00	11.96	1654.12	411.85	1010.63	1006.00		0.91	-0.11	0.021

Calculated Forces

Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 47

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84.00	-14.12	-0.55	0.00	-10.86	0.00	10.86	1636.97	405.68	980.56	980.53	0.96	-0.12	0.020
86.00	-13.89	-0.55	0.00	-9.76	0.00	9.76	1619.60	399.51	950.95	955.23	1.01	-0.12	0.019
88.00	-11.50	-0.49	0.00	-8.66	0.00	8.66	1601.99	393.33	921.79	930.12	1.06	-0.12	0.016
90.00	-11.31	-0.49	0.00	-7.69	0.00	7.69	1584.15	387.16	893.08	905.20	1.11	-0.12	0.016
92.00	-11.11	-0.49	0.00	-6.71	0.00	6.71	1566.08	380.99	864.83	880.48	1.17	-0.13	0.015
94.00	-10.92	-0.49	0.00	-5.74	0.00	5.74	1547.77	374.82	837.03	855.96	1.22	-0.13	0.014
96.00	-10.74	-0.49	0.00	-4.76	0.00	4.76	1529.23	368.64	809.69	831.66	1.27	-0.13	0.013
98.00	-6.33	-0.23	0.00	-3.79	0.00	3.79	1510.46	362.47	782.80	807.56	1.33	-0.13	0.009
98.50	-6.29	-0.23	0.00	-3.68	0.00	3.68	1505.73	360.93	776.15	801.57	1.34	-0.13	0.009
100.00	-6.09	-0.23	0.00	-3.32	0.00	3.32	1491.46	356.30	756.37	783.69	1.38	-0.13	0.008
102.00	-5.83	-0.23	0.00	-2.86	0.00	2.86	1021.50	267.16	567.02	537.93	1.44	-0.13	0.011
104.00	-5.70	-0.23	0.00	-2.39	0.00	2.39	1010.40	262.53	547.54	522.80	1.49	-0.13	0.010
106.00	-5.57	-0.23	0.00	-1.93	0.00	1.93	999.06	257.90	528.40	507.75	1.55	-0.13	0.009
108.00	-3.27	-0.15	0.00	-1.46	0.00	1.46	987.50	253.27	509.60	492.79	1.60	-0.13	0.006
109.00	-3.21	-0.15	0.00	-1.31	0.00	1.31	981.63	250.96	500.32	485.35	1.63	-0.14	0.006
109.00	-3.21	-0.15	0.00	-1.31	0.00	1.31	981.63	250.96	500.32	485.35	1.63	-0.14	0.006
110.00	-3.15	-0.15	0.00	-1.17	0.00	1.17	975.70	248.64	491.14	477.94	1.66	-0.14	0.006
112.00	-3.04	-0.15	0.00	-0.87	0.00	0.87	963.67	244.01	473.02	463.19	1.72	-0.14	0.005
114.00	-2.92	-0.15	0.00	-0.58	0.00	0.58	951.40	239.39	455.24	448.55	1.77	-0.14	0.004
116.00	-2.81	-0.15	0.00	-0.29	0.00	0.29	938.91	234.76	437.80	434.02	1.83	-0.14	0.004
118.00	-0.04	0.00	0.00	0.00	0.00	0.00	926.18	230.13	420.70	419.63	1.89	-0.14	0.000
119.00	0.00	0.00	0.00	0.00	0.00	0.00	919.72	227.81	412.28	412.48	1.92	-0.14	0.000

Wind Loading - Shaft

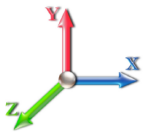
Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 48	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00	RB1	1.00	0.85	6.583	7.24	221.08	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
1.00	RT1 RB2	1.00	0.85	6.583	7.24	220.05	0.730	0.000	1.00	4.010	2.93	21.2	0.0	158.9
2.00		1.00	0.85	6.583	7.24	219.02	0.730	0.000	1.00	3.991	2.91	21.1	0.0	158.1
4.00		1.00	0.85	6.583	7.24	216.96	0.730	0.000	2.00	7.926	5.79	41.9	0.0	314.0
6.00		1.00	0.85	6.583	7.24	214.89	0.730	0.000	2.00	7.851	5.73	41.5	0.0	311.0
8.00		1.00	0.85	6.583	7.24	212.83	0.730	0.000	2.00	7.776	5.68	41.1	0.0	308.0
10.00		1.00	0.85	6.583	7.24	210.77	0.730	0.000	2.00	7.701	5.62	40.7	0.0	305.1
12.00		1.00	0.85	6.583	7.24	208.70	0.730	0.000	2.00	7.626	5.57	40.3	0.0	302.1
14.00		1.00	0.85	6.583	7.24	206.64	0.730	0.000	2.00	7.551	5.51	39.9	0.0	299.1
16.00		1.00	0.86	6.665	7.33	205.84	0.730	0.000	2.00	7.476	5.46	40.0	0.0	296.1
18.00		1.00	0.88	6.832	7.52	206.30	0.730	0.000	2.00	7.401	5.40	40.6	0.0	293.1
18.63	RT2	1.00	0.89	6.882	7.57	206.39	0.730	0.000	0.63	2.316	1.69	12.8	0.0	91.7
20.00		1.00	0.90	6.985	7.68	206.48	0.730	0.000	1.37	5.010	3.66	28.1	0.0	198.4
22.00		1.00	0.92	7.127	7.84	206.41	0.730	0.000	2.00	7.251	5.29	41.5	0.0	287.1
24.00		1.00	0.94	7.259	7.98	206.15	0.730	0.000	2.00	7.176	5.24	41.8	0.0	284.1
26.00		1.00	0.95	7.382	8.12	205.71	0.730	0.000	2.00	7.101	5.18	42.1	0.0	281.1
28.00		1.00	0.97	7.498	8.25	205.12	0.730	0.000	2.00	7.026	5.13	42.3	0.0	278.1
30.00		1.00	0.98	7.608	8.37	204.39	0.730	0.000	2.00	6.951	5.07	42.5	0.0	275.1
32.00		1.00	1.00	7.712	8.48	203.55	0.730	0.000	2.00	6.876	5.02	42.6	0.0	272.1
34.00		1.00	1.01	7.811	8.59	202.61	0.730	0.000	2.00	6.801	4.96	42.7	0.0	269.1
36.00		1.00	1.02	7.905	8.70	201.57	0.730	0.000	2.00	6.726	4.91	42.7	0.0	266.2
38.00		1.00	1.03	7.996	8.80	200.45	0.730	0.000	2.00	6.651	4.86	42.7	0.0	263.2
40.00		1.00	1.04	8.083	8.89	199.25	0.730	0.000	2.00	6.576	4.80	42.7	0.0	260.2
42.00		1.00	1.05	8.166	8.98	197.98	0.730	0.000	2.00	6.501	4.75	42.6	0.0	257.2
44.00		1.00	1.06	8.247	9.07	196.64	0.730	0.000	2.00	6.426	4.69	42.6	0.0	254.2
46.00		1.00	1.07	8.324	9.16	195.24	0.730	0.000	2.00	6.351	4.64	42.5	0.0	251.2
48.00		1.00	1.08	8.399	9.24	193.79	0.730	0.000	2.00	6.276	4.58	42.3	0.0	248.2
48.50	Bot - Section 2	1.00	1.09	8.417	9.26	193.41	0.730	0.000	0.50	1.557	1.14	10.5	0.0	61.6
50.00		1.00	1.09	8.472	9.32	192.28	0.730	0.000	1.50	4.707	3.44	32.0	0.0	332.8
52.00		1.00	1.10	8.542	9.40	190.73	0.730	0.000	2.00	6.210	4.53	42.6	0.0	439.0
53.25	Top - Section 1	1.00	1.11	8.585	9.44	189.73	0.730	0.000	1.25	3.843	2.81	26.5	0.0	271.7
54.00		1.00	1.11	8.610	9.47	191.79	0.730	0.000	0.75	2.292	1.67	15.8	0.0	72.6
56.00		1.00	1.12	8.676	9.54	190.15	0.730	0.000	2.00	6.060	4.42	42.2	0.0	192.0
58.00		1.00	1.13	8.740	9.61	188.48	0.730	0.000	2.00	5.985	4.37	42.0	0.0	189.6
60.00		1.00	1.14	8.803	9.68	186.77	0.730	0.000	2.00	5.910	4.31	41.8	0.0	187.2
62.00		1.00	1.14	8.864	9.75	185.02	0.730	0.000	2.00	5.835	4.26	41.5	0.0	184.8
64.00		1.00	1.15	8.923	9.82	183.24	0.730	0.000	2.00	5.760	4.21	41.3	0.0	182.4
66.00		1.00	1.16	8.981	9.88	181.42	0.730	0.000	2.00	5.685	4.15	41.0	0.0	180.1
68.00		1.00	1.17	9.038	9.94	179.58	0.730	0.000	2.00	5.610	4.10	40.7	0.0	177.7
70.00		1.00	1.17	9.093	10.00	177.70	0.730	0.000	2.00	5.535	4.04	40.4	0.0	175.3
72.00		1.00	1.18	9.147	10.06	175.80	0.730	0.000	2.00	5.460	3.99	40.1	0.0	172.9
74.00		1.00	1.19	9.200	10.12	173.86	0.730	0.000	2.00	5.385	3.93	39.8	0.0	170.5
76.00		1.00	1.19	9.252	10.18	171.91	0.730	0.000	2.00	5.310	3.88	39.5	0.0	168.1
78.00	Appurtenance(s)	1.00	1.20	9.303	10.23	169.93	0.730	0.000	2.00	5.235	3.82	39.1	0.0	165.7
80.00		1.00	1.21	9.353	10.29	167.92	0.730	0.000	2.00	5.160	3.77	38.8	0.0	163.3
82.00		1.00	1.21	9.401	10.34	165.89	0.730	0.000	2.00	5.085	3.71	38.4	0.0	160.9
84.00		1.00	1.22	9.449	10.39	163.84	0.730	0.000	2.00	5.010	3.66	38.0	0.0	158.5

Wind Loading - Shaft

Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 49	

86.00		1.00	1.23	9.496	10.45	161.77	0.730	0.000	2.00	4.935	3.60	37.6	0.0	156.1
88.00	Appurtenance(s)	1.00	1.23	9.542	10.50	159.68	0.730	0.000	2.00	4.860	3.55	37.2	0.0	153.7
90.00		1.00	1.24	9.587	10.55	157.57	0.730	0.000	2.00	4.785	3.49	36.8	0.0	151.3
92.00		1.00	1.24	9.632	10.60	155.43	0.730	0.000	2.00	4.710	3.44	36.4	0.0	148.9
94.00		1.00	1.25	9.676	10.64	153.29	0.730	0.000	2.00	4.635	3.38	36.0	0.0	146.5
96.00		1.00	1.25	9.719	10.69	151.12	0.730	0.000	2.00	4.560	3.33	35.6	0.0	144.1
98.00	Appurtenance(s)	1.00	1.26	9.761	10.74	148.94	0.730	0.000	2.00	4.485	3.27	35.2	0.0	141.8
98.50	Bot - Section 3	1.00	1.26	9.771	10.75	148.39	0.730	0.000	0.50	1.110	0.81	8.7	0.0	35.1
100.00		1.00	1.27	9.802	10.78	146.73	0.730	0.000	1.50	3.348	2.44	26.4	0.0	183.8
102.00	Top - Section 2	1.00	1.27	9.843	10.83	144.52	0.730	0.000	2.00	4.398	3.21	34.8	0.0	241.5
104.00		1.00	1.28	9.884	10.87	144.42	0.730	0.000	2.00	4.323	3.16	34.3	0.0	102.7
106.00		1.00	1.28	9.923	10.92	142.18	0.730	0.000	2.00	4.248	3.10	33.9	0.0	100.9
108.00	Appurtenance(s)	1.00	1.29	9.963	10.96	139.92	0.730	0.000	2.00	4.173	3.05	33.4	0.0	99.1
109.00	Top - Section 3	1.00	1.29	9.982	10.98	138.79	0.730	0.000	1.00	2.059	1.50	16.5	0.0	48.9
110.00		1.00	1.29	10.001	11.00	137.65	0.730	0.000	1.00	2.040	1.49	16.4	0.0	48.4
112.00		1.00	1.30	10.039	11.04	135.36	0.730	0.000	2.00	4.023	2.94	32.4	0.0	95.5
114.00		1.00	1.30	10.077	11.08	133.06	0.730	0.000	2.00	3.948	2.88	31.9	0.0	93.7
116.00		1.00	1.31	10.114	11.12	130.75	0.730	0.000	2.00	3.873	2.83	31.5	0.0	91.9
118.00	Appurtenance(s)	1.00	1.31	10.150	11.17	128.42	0.730	0.000	2.00	3.798	2.77	31.0	0.0	90.1
119.00		1.00	1.31	10.168	11.18	127.26	0.730	0.000	1.00	1.871	1.37	15.3	0.0	44.4
								Totals:	**119.00**			**2,336.0**		**12,908.1**

Discrete Appurtenance Forces

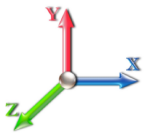
Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 50	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	118.00	(3) T-Arm Kit	1	10.150	11.165	0.75	0.75	12.38	500.00	0.000	0.000	138.17	0.00	0.00
2	118.00	BXA-70063-6BF	3	10.150	11.165	0.56	0.80	12.72	51.00	0.000	0.000	141.99	0.00	0.00
3	118.00	T-Arm	3	10.150	11.165	0.56	0.75	16.88	1050.00	0.000	0.000	188.41	0.00	0.00
4	118.00	Commscope	6	10.150	11.165	0.66	0.80	32.19	262.20	0.000	0.000	359.41	0.00	0.00
5	118.00	Samsung MT6407-77A	3	10.150	11.165	0.56	0.80	7.88	238.20	0.000	0.000	87.97	0.00	0.00
6	118.00	B2/B66A RRH-BR049	3	10.150	11.165	0.54	0.80	3.01	253.20	0.000	0.000	33.57	0.00	0.00
7	118.00	BSAMNT-SBS-1-2	3	10.150	11.165	0.75	0.75	0.00	76.05	0.000	0.000	0.00	0.00	0.00
8	118.00	Collar	1	10.150	11.165	0.75	0.75	1.88	150.60	0.000	0.000	20.93	0.00	0.00
9	118.00	Samsung B5/B13	3	10.150	11.165	0.54	0.80	3.02	210.90	0.000	0.000	33.75	0.00	0.00
10	118.00	Raycap	1	10.150	11.165	0.80	0.80	3.03	32.00	0.000	0.000	33.85	0.00	0.00
11	108.00	840 10054	3	9.963	10.959	0.49	0.80	6.72	105.00	0.000	0.000	73.64	0.00	0.00
12	108.00	800 MHz	3	9.963	10.959	0.54	0.80	4.00	159.00	0.000	0.000	43.88	0.00	0.00
13	108.00	ACU-A20-N	4	9.963	10.959	0.54	0.80	0.30	4.00	0.000	0.000	3.29	0.00	0.00
14	108.00	APXVSPP18-C-A20	2	9.963	10.959	0.66	0.80	10.65	114.00	0.000	0.000	116.72	0.00	0.00
15	108.00	800 MHz Filters	3	9.963	10.959	0.54	0.80	3.86	192.00	0.000	0.000	42.29	0.00	0.00
16	108.00	1900MHz RRH	3	9.963	10.959	0.40	0.80	4.56	132.00	0.000	0.000	49.97	0.00	0.00
17	108.00	T-Arm	3	9.963	10.959	0.56	0.75	13.50	1050.00	0.000	0.000	147.94	0.00	0.00
18	108.00	APXVTM14-C-120	3	9.963	10.959	0.63	0.80	12.02	168.00	0.000	0.000	131.73	0.00	0.00
19	108.00	Horizon	2	9.963	10.959	0.80	0.80	0.69	21.20	0.000	0.000	7.54	0.00	0.00
20	108.00	P40-16-XLPP-RR-A	1	9.963	10.959	0.80	0.80	7.26	53.00	0.000	0.000	79.61	0.00	0.00
21	108.00	TD-RRH8x20-25	3	9.963	10.959	0.54	0.80	6.51	210.00	0.000	0.000	71.37	0.00	0.00
22	108.00	VHLP2.5	2	9.963	10.959	1.00	1.00	16.86	95.20	0.000	0.000	184.77	0.00	0.00
23	98.00	Ericcson RRUS 4449	3	9.761	10.737	0.38	0.75	2.22	213.00	0.000	0.000	23.80	0.00	0.00
24	98.00	Ericsson RRUS 4478 B14	3	9.761	10.737	0.38	0.75	1.86	178.20	0.000	0.000	19.93	0.00	0.00
25	98.00	Ericsson Air6419 N77G	3	9.761	10.737	0.57	0.75	6.50	166.20	0.000	0.000	69.77	0.00	0.00
26	98.00	AIR 6449 N77D	3	9.761	10.737	0.64	0.75	7.90	264.00	0.000	0.000	84.81	0.00	0.00
27	98.00	Raycap DC6-48-60-0-8F	3	9.761	10.737	0.75	0.75	2.07	95.40	0.000	0.000	22.23	0.00	0.00
28	98.00	Ericsson RRUS 32	3	9.761	10.737	0.38	0.75	3.08	159.00	0.000	0.000	33.10	0.00	0.00
29	98.00	Ericsson RRUS 8843	3	9.761	10.737	0.38	0.75	1.86	225.00	0.000	0.000	19.93	0.00	0.00
30	98.00	Cci DMP65R-BU6DA	3	9.761	10.737	0.54	0.75	20.59	238.20	0.000	0.000	221.08	0.00	0.00
31	98.00	Cci TPA-65R-BU6DA	3	9.761	10.737	0.54	0.75	20.85	157.80	0.000	0.000	223.86	0.00	0.00
32	98.00	F3P-12-WLL	1	9.761	10.737	1.00	1.00	56.18	2786.00	0.000	0.000	603.20	0.00	0.00
33	88.00	AIR 6419 B77G	3	9.542	10.496	0.60	0.80	6.84	198.30	0.000	0.000	71.80	0.00	0.00
34	88.00	4460 Radio	3	9.542	10.496	0.54	0.80	4.58	327.00	0.000	0.000	48.10	0.00	0.00
35	88.00	VV-65B-R1B	3	9.542	10.496	0.60	0.80	14.22	88.50	0.000	0.000	149.26	0.00	0.00
36	88.00	4449 B71 + B85	3	9.542	10.496	0.54	0.80	4.13	222.00	0.000	0.000	43.38	0.00	0.00
37	88.00	APXVAARR24_43-U-NA2	3	9.542	10.496	0.56	0.80	34.00	384.00	0.000	0.000	356.91	0.00	0.00
38	88.00	KRY 112 144/2	3	9.542	10.496	0.56	0.80	0.69	33.00	0.000	0.000	7.23	0.00	0.00
39	88.00	T-Arm w/ mod	3	9.542	10.496	0.56	0.75	23.63	1050.00	0.000	0.000	247.98	0.00	0.00
40	78.00	MC-PK8-DSH	1	9.303	10.233	1.00	1.00	37.59	1727.00	0.000	0.000	384.67	0.00	0.00
41	78.00	Raycap	1	9.303	10.233	0.75	0.75	1.51	21.90	0.000	0.000	15.43	0.00	0.00
42	78.00	Fujitsu TA08025-B604	3	9.303	10.233	0.50	0.75	2.95	191.70	0.000	0.000	30.24	0.00	0.00
43	78.00	Fujitsu TA08025-B605	3	9.303	10.233	0.50	0.75	2.95	225.00	0.000	0.000	30.24	0.00	0.00
44	78.00	JMA Wireless	3	9.303	10.233	0.55	0.75	20.80	193.50	0.000	0.000	212.81	0.00	0.00
							Totals:		**14,272.25**			**4,910.53**		

Total Applied Force Summary

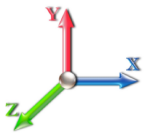
Structure:	CT08558-B-SBA		**Code:**	TIA-222-H	2/16/2023
Site Name:	New Britain 3, CT		**Exposure:**	C	
Height:	119.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 51

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
1.00		21.20	201.62	0.00	0.00
2.00		21.10	200.87	0.00	0.00
4.00		41.90	399.50	0.00	0.00
6.00		41.51	396.51	0.00	0.00
8.00		41.11	393.52	0.00	0.00
10.00		40.71	390.53	0.00	0.00
12.00		40.32	387.54	0.00	0.00
14.00		39.92	384.54	0.00	0.00
16.00		40.01	381.55	0.00	0.00
18.00		40.60	378.56	0.00	0.00
18.63		12.80	118.63	0.00	0.00
20.00		28.10	256.94	0.00	0.00
22.00		41.50	372.58	0.00	0.00
24.00		41.83	369.58	0.00	0.00
26.00		42.09	366.59	0.00	0.00
28.00		42.30	363.60	0.00	0.00
30.00		42.46	360.61	0.00	0.00
32.00		42.58	357.61	0.00	0.00
34.00		42.66	354.62	0.00	0.00
36.00		42.70	351.63	0.00	0.00
38.00		42.70	348.64	0.00	0.00
40.00		42.68	345.65	0.00	0.00
42.00		42.63	342.65	0.00	0.00
44.00		42.55	339.66	0.00	0.00
46.00		42.45	336.67	0.00	0.00
48.00		42.33	333.68	0.00	0.00
48.50		10.53	82.95	0.00	0.00
50.00		32.02	396.91	0.00	0.00
52.00		42.60	524.50	0.00	0.00
53.25		26.49	325.08	0.00	0.00
54.00		15.85	104.68	0.00	0.00
56.00		42.22	277.50	0.00	0.00
58.00		42.01	275.11	0.00	0.00
60.00		41.78	272.71	0.00	0.00
62.00		41.53	270.32	0.00	0.00
64.00		41.28	267.92	0.00	0.00
66.00		41.00	265.53	0.00	0.00
68.00		40.72	263.14	0.00	0.00
70.00		40.42	260.74	0.00	0.00
72.00		40.11	258.35	0.00	0.00
74.00		39.79	255.96	0.00	0.00
76.00		39.45	253.56	0.00	0.00
78.00	(11) attachments	712.48	2610.27	0.00	0.00
80.00		38.75	246.48	0.00	0.00
82.00		38.39	244.08	0.00	0.00
84.00		38.02	241.69	0.00	0.00

Total Applied Force Summary

Structure:	CT08558-B-SBA		**Code:**	TIA-222-H	2/16/2023
Site Name:	New Britain 3, CT		**Exposure:**	C	
Height:	119.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 52

86.00		37.63	239.29	0.00	0.00
88.00	(21) attachments	961.89	2539.70	0.00	0.00
90.00		36.84	206.84	0.00	0.00
92.00		36.43	204.45	0.00	0.00
94.00		36.01	202.06	0.00	0.00
96.00		35.59	199.66	0.00	0.00
98.00	(28) attachments	1356.84	4680.07	0.00	0.00
98.50		8.71	44.27	0.00	0.00
100.00		26.35	211.47	0.00	0.00
102.00		34.77	278.30	0.00	0.00
104.00		34.31	139.54	0.00	0.00
106.00		33.85	137.74	0.00	0.00
108.00	(32) attachments	986.13	2439.34	0.00	0.00
109.00		16.50	62.52	0.00	0.00
110.00		16.38	62.07	0.00	0.00
112.00		32.43	122.80	0.00	0.00
114.00		31.95	121.01	0.00	0.00
116.00		31.46	119.21	0.00	0.00
118.00	(27) attachments	1069.02	2941.57	0.00	0.00
119.00		15.28	44.39	0.00	0.00
	Totals:	**7,246.54**	**31,527.89**	**0.00**	**0.00**

Linear Appurtenance Segment Forces (Factored)

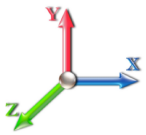
Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 53	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
1.00	1 5/8" Hybrid	Yes	1.00	0.000	1.63	0.14	0.00	0.063	0.000	6.583	0.00	2.20
1.00	1.411" Hybrid	Yes	1.00	0.000	1.41	0.12	0.00	0.063	0.000	6.583	0.00	1.15
1.00	1" Reinforcing plate	Yes	1.00	0.000	0.00	0.00	0.00	0.063	0.000	6.583	0.00	0.00
2.00	1 5/8" Hybrid	Yes	1.00	0.000	1.63	0.14	0.00	0.063	0.000	6.583	0.00	2.20
2.00	1.411" Hybrid	Yes	1.00	0.000	1.41	0.12	0.00	0.063	0.000	6.583	0.00	1.15
2.00	1" Reinforcing plate	Yes	1.00	0.000	0.00	0.00	0.00	0.063	0.000	6.583	0.00	0.00
4.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.064	0.000	6.583	0.00	4.40
4.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.064	0.000	6.583	0.00	2.30
4.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.064	0.000	6.583	0.00	0.00
6.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.065	0.000	6.583	0.00	4.40
6.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.065	0.000	6.583	0.00	2.30
6.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	6.583	0.00	0.00
8.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.065	0.000	6.583	0.00	4.40
8.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.065	0.000	6.583	0.00	2.30
8.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	6.583	0.00	0.00
10.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.066	0.000	6.583	0.00	4.40
10.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.066	0.000	6.583	0.00	2.30
10.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	6.583	0.00	0.00
12.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.066	0.000	6.583	0.00	4.40
12.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.066	0.000	6.583	0.00	2.30
12.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	6.583	0.00	0.00
14.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.067	0.000	6.583	0.00	4.40
14.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.067	0.000	6.583	0.00	2.30
14.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.067	0.000	6.583	0.00	0.00
16.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.068	0.000	6.665	0.00	4.40
16.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.068	0.000	6.665	0.00	2.30
16.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	6.665	0.00	0.00
18.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.068	0.000	6.832	0.00	4.40
18.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.068	0.000	6.832	0.00	2.30
18.00	1" Reinforcing plate	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	6.832	0.00	0.00
18.63	1 5/8" Hybrid	Yes	0.63	0.000	1.63	0.09	0.00	0.069	0.000	6.882	0.00	1.39
18.63	1.411" Hybrid	Yes	0.63	0.000	1.41	0.07	0.00	0.069	0.000	6.882	0.00	0.72
18.63	1" Reinforcing plate	Yes	0.63	0.000	0.00	0.00	0.00	0.069	0.000	6.882	0.00	0.00
20.00	1 5/8" Hybrid	Yes	1.37	0.000	1.63	0.19	0.00	0.069	0.000	6.985	0.00	3.01
20.00	1.411" Hybrid	Yes	1.37	0.000	1.41	0.16	0.00	0.069	0.000	6.985	0.00	1.58
20.00	1" Reinforcing plate	Yes	1.37	0.000	0.00	0.00	0.00	0.069	0.000	6.985	0.00	0.00
22.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.070	0.000	7.127	0.00	4.40
22.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.070	0.000	7.127	0.00	2.30
24.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.071	0.000	7.259	0.00	4.40
24.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.071	0.000	7.259	0.00	2.30
26.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.071	0.000	7.382	0.00	4.40
26.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.071	0.000	7.382	0.00	2.30
28.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.072	0.000	7.498	0.00	4.40
28.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.072	0.000	7.498	0.00	2.30
30.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.073	0.000	7.608	0.00	4.40
30.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.073	0.000	7.608	0.00	2.30
32.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.074	0.000	7.712	0.00	4.40

Linear Appurtenance Segment Forces (Factored)

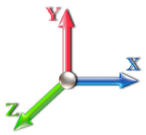
Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 54	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
32.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.074	0.000	7.712	0.00	2.30
34.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.074	0.000	7.811	0.00	4.40
34.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.074	0.000	7.811	0.00	2.30
36.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.075	0.000	7.905	0.00	4.40
36.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.075	0.000	7.905	0.00	2.30
38.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.076	0.000	7.996	0.00	4.40
38.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.076	0.000	7.996	0.00	2.30
40.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.077	0.000	8.083	0.00	4.40
40.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.077	0.000	8.083	0.00	2.30
42.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.078	0.000	8.166	0.00	4.40
42.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.078	0.000	8.166	0.00	2.30
44.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.079	0.000	8.247	0.00	4.40
44.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.079	0.000	8.247	0.00	2.30
46.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.080	0.000	8.324	0.00	4.40
46.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.080	0.000	8.324	0.00	2.30
48.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.081	0.000	8.399	0.00	4.40
48.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.081	0.000	8.399	0.00	2.30
48.50	1 5/8" Hybrid	Yes	0.50	0.000	1.63	0.07	0.00	0.081	0.000	8.417	0.00	1.10
48.50	1.411" Hybrid	Yes	0.50	0.000	1.41	0.06	0.00	0.081	0.000	8.417	0.00	0.57
50.00	1 5/8" Hybrid	Yes	1.50	0.000	1.63	0.20	0.00	0.082	0.000	8.472	0.00	3.30
50.00	1.411" Hybrid	Yes	1.50	0.000	1.41	0.18	0.00	0.082	0.000	8.472	0.00	1.72
52.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.083	0.000	8.542	0.00	4.40
52.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.083	0.000	8.542	0.00	2.30
53.25	1 5/8" Hybrid	Yes	1.25	0.000	1.63	0.17	0.00	0.084	0.000	8.585	0.00	2.75
53.25	1.411" Hybrid	Yes	1.25	0.000	1.41	0.15	0.00	0.084	0.000	8.585	0.00	1.44
54.00	1 5/8" Hybrid	Yes	0.75	0.000	1.63	0.10	0.00	0.083	0.000	8.610	0.00	1.65
54.00	1.411" Hybrid	Yes	0.75	0.000	1.41	0.09	0.00	0.083	0.000	8.610	0.00	0.86
56.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.084	0.000	8.676	0.00	4.40
56.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.084	0.000	8.676	0.00	2.30
58.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.085	0.000	8.740	0.00	4.40
58.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.085	0.000	8.740	0.00	2.30
60.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.086	0.000	8.803	0.00	4.40
60.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.086	0.000	8.803	0.00	2.30
62.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.087	0.000	8.864	0.00	4.40
62.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.087	0.000	8.864	0.00	2.30
64.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.088	0.000	8.923	0.00	4.40
64.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.088	0.000	8.923	0.00	2.30
66.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.089	0.000	8.981	0.00	4.40
66.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.089	0.000	8.981	0.00	2.30
68.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.090	0.000	9.038	0.00	4.40
68.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.090	0.000	9.038	0.00	2.30
70.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.092	0.000	9.093	0.00	4.40
70.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.092	0.000	9.093	0.00	2.30
72.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.093	0.000	9.147	0.00	4.40
72.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.093	0.000	9.147	0.00	2.30
74.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.094	0.000	9.200	0.00	4.40
74.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.094	0.000	9.200	0.00	2.30

Linear Appurtenance Segment Forces (Factored)

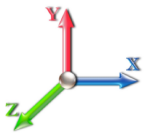
Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 55	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
76.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.095	0.000	9.252	0.00	4.40
76.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.095	0.000	9.252	0.00	2.30
78.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.097	0.000	9.303	0.00	4.40
78.00	1.411" Hybrid	Yes	2.00	0.000	1.41	0.23	0.00	0.097	0.000	9.303	0.00	2.30
80.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.053	0.000	9.353	0.00	4.40
82.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.053	0.000	9.401	0.00	4.40
84.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.054	0.000	9.449	0.00	4.40
86.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.055	0.000	9.496	0.00	4.40
88.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.056	0.000	9.542	0.00	4.40
90.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.057	0.000	9.587	0.00	4.40
92.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.058	0.000	9.632	0.00	4.40
94.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.059	0.000	9.676	0.00	4.40
96.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.060	0.000	9.719	0.00	4.40
98.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.061	0.000	9.761	0.00	4.40
98.50	1 5/8" Hybrid	Yes	0.50	0.000	1.63	0.07	0.00	0.061	0.000	9.771	0.00	1.10
100.00	1 5/8" Hybrid	Yes	1.50	0.000	1.63	0.20	0.00	0.062	0.000	9.802	0.00	3.30
102.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.063	0.000	9.843	0.00	4.40
104.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.063	0.000	9.884	0.00	4.40
106.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.064	0.000	9.923	0.00	4.40
108.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.065	0.000	9.963	0.00	4.40
109.00	1 5/8" Hybrid	Yes	1.00	0.000	1.63	0.14	0.00	0.066	0.000	9.982	0.00	2.20
110.00	1 5/8" Hybrid	Yes	1.00	0.000	1.63	0.14	0.00	0.067	0.000	10.001	0.00	2.20
112.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.068	0.000	10.039	0.00	4.40
114.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.069	0.000	10.077	0.00	4.40
116.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.070	0.000	10.114	0.00	4.40
118.00	1 5/8" Hybrid	Yes	2.00	0.000	1.63	0.27	0.00	0.072	0.000	10.150	0.00	4.40
									Totals:		**0.0**	**349.3**

Calculated Forces

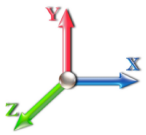
Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 56	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-31.53	-7.25	0.00	-646.77	0.00	646.77	3013.27	821.38	3215.78	2929.21	0.00	0.000	0.000	0.206
1.00	-31.32	-7.23	0.00	-639.52	0.00	639.52	3005.28	817.52	3185.65	2907.64	0.00	-0.012	0.000	0.205
2.00	-31.12	-7.22	0.00	-632.29	0.00	632.29	2997.23	813.67	3155.65	2886.08	0.01	-0.022	0.000	0.179
4.00	-30.72	-7.19	0.00	-617.85	0.00	617.85	2980.97	805.95	3096.08	2843.02	0.02	-0.044	0.000	0.177
6.00	-30.32	-7.16	0.00	-603.47	0.00	603.47	2964.47	798.23	3037.08	2800.03	0.04	-0.066	0.000	0.175
8.00	-29.92	-7.13	0.00	-589.15	0.00	589.15	2947.74	790.52	2978.65	2757.14	0.08	-0.088	0.000	0.173
10.00	-29.53	-7.10	0.00	-574.89	0.00	574.89	2930.78	782.80	2920.79	2714.33	0.12	-0.110	0.000	0.171
12.00	-29.14	-7.07	0.00	-560.69	0.00	560.69	2913.58	775.09	2863.49	2671.62	0.17	-0.132	0.000	0.169
14.00	-28.75	-7.04	0.00	-546.55	0.00	546.55	2896.16	767.37	2806.76	2629.02	0.23	-0.154	0.000	0.167
16.00	-28.37	-7.01	0.00	-532.47	0.00	532.47	2878.49	759.65	2750.60	2586.53	0.30	-0.176	0.000	0.165
18.00	-27.99	-6.97	0.00	-518.45	0.00	518.45	2860.60	751.94	2695.01	2544.16	0.38	-0.198	0.000	0.163
18.63	-27.87	-6.97	0.00	-514.06	0.00	514.06	2854.92	749.51	2677.62	2530.83	0.40	-0.205	0.000	0.163
18.63	-27.87	-6.97	0.00	-514.06	0.00	514.06	2854.92	749.51	2677.62	2530.83	0.40	-0.205	0.000	0.208
20.00	-27.61	-6.95	0.00	-504.52	0.00	504.52	2842.47	744.22	2639.98	2501.91	0.46	-0.221	0.000	0.211
22.00	-27.23	-6.92	0.00	-490.62	0.00	490.62	2824.11	736.51	2585.53	2459.79	0.56	-0.250	0.000	0.209
24.00	-26.86	-6.89	0.00	-476.78	0.00	476.78	2805.52	728.79	2531.63	2417.81	0.67	-0.279	0.000	0.207
26.00	-26.49	-6.86	0.00	-463.00	0.00	463.00	2786.70	721.07	2478.31	2375.97	0.80	-0.308	0.000	0.204
28.00	-26.12	-6.83	0.00	-449.28	0.00	449.28	2767.64	713.36	2425.56	2334.28	0.93	-0.337	0.000	0.202
30.00	-25.76	-6.80	0.00	-435.63	0.00	435.63	2748.35	705.64	2373.37	2292.75	1.08	-0.366	0.000	0.199
32.00	-25.40	-6.76	0.00	-422.04	0.00	422.04	2728.82	697.93	2321.75	2251.38	1.24	-0.395	0.000	0.197
34.00	-25.04	-6.73	0.00	-408.51	0.00	408.51	2709.07	690.21	2270.69	2210.17	1.41	-0.424	0.000	0.194
36.00	-24.69	-6.70	0.00	-395.04	0.00	395.04	2689.08	682.49	2220.21	2169.15	1.59	-0.454	0.000	0.191
38.00	-24.34	-6.67	0.00	-381.65	0.00	381.65	2668.86	674.78	2170.29	2128.30	1.79	-0.483	0.000	0.189
40.00	-23.99	-6.63	0.00	-368.31	0.00	368.31	2648.40	667.06	2120.94	2087.65	2.00	-0.512	0.000	0.186
42.00	-23.64	-6.60	0.00	-355.05	0.00	355.05	2627.71	659.35	2072.16	2047.19	2.22	-0.541	0.000	0.183
44.00	-23.30	-6.56	0.00	-341.85	0.00	341.85	2606.79	651.63	2023.94	2006.93	2.45	-0.570	0.000	0.179
46.00	-22.96	-6.53	0.00	-328.72	0.00	328.72	2585.64	643.91	1976.29	1966.88	2.70	-0.599	0.000	0.176
48.00	-22.62	-6.49	0.00	-315.66	0.00	315.66	2564.25	636.20	1929.21	1927.04	2.96	-0.628	0.000	0.173
48.50	-22.54	-6.49	0.00	-312.41	0.00	312.41	2558.87	634.27	1917.53	1917.11	3.02	-0.636	0.000	0.172
50.00	-22.14	-6.46	0.00	-302.69	0.00	302.69	2542.63	628.48	1882.70	1887.42	3.23	-0.657	0.000	0.169
52.00	-21.61	-6.42	0.00	-289.77	0.00	289.77	2520.78	620.77	1836.76	1848.03	3.51	-0.686	0.000	0.165
53.25	-21.29	-6.39	0.00	-281.74	0.00	281.74	1874.80	500.59	1493.02	1387.94	3.69	-0.704	0.000	0.215
54.00	-21.18	-6.39	0.00	-276.95	0.00	276.95	1869.65	498.27	1479.25	1377.68	3.80	-0.715	0.000	0.213
56.00	-20.90	-6.35	0.00	-264.18	0.00	264.18	1855.77	492.10	1442.82	1350.40	4.11	-0.748	0.000	0.207
58.00	-20.62	-6.32	0.00	-251.47	0.00	251.47	1841.66	485.93	1406.85	1323.20	4.43	-0.781	0.000	0.201
60.00	-20.35	-6.28	0.00	-238.84	0.00	238.84	1827.31	479.75	1371.34	1296.09	4.76	-0.814	0.000	0.196
62.00	-20.07	-6.25	0.00	-226.27	0.00	226.27	1812.73	473.58	1336.27	1269.09	5.11	-0.846	0.000	0.190
64.00	-19.80	-6.22	0.00	-213.77	0.00	213.77	1797.91	467.41	1301.67	1242.19	5.47	-0.878	0.000	0.183
66.00	-19.53	-6.18	0.00	-201.34	0.00	201.34	1782.87	461.24	1267.51	1215.41	5.85	-0.909	0.000	0.177
68.00	-19.27	-6.15	0.00	-188.98	0.00	188.98	1767.59	455.06	1233.81	1188.74	6.24	-0.940	0.000	0.170
70.00	-19.00	-6.11	0.00	-176.69	0.00	176.69	1752.08	448.89	1200.57	1162.21	6.64	-0.969	0.000	0.163
72.00	-18.74	-6.08	0.00	-164.46	0.00	164.46	1736.33	442.72	1167.77	1135.80	7.05	-0.998	0.000	0.156
74.00	-18.49	-6.04	0.00	-152.31	0.00	152.31	1720.35	436.54	1135.44	1109.54	7.47	-1.026	0.000	0.148
76.00	-18.23	-6.00	0.00	-140.23	0.00	140.23	1704.14	430.37	1103.55	1083.42	7.91	-1.053	0.000	0.140
78.00	-15.63	-5.25	0.00	-128.22	0.00	128.22	1687.70	424.20	1072.12	1057.45	8.36	-1.079	0.000	0.131
80.00	-15.38	-5.21	0.00	-117.72	0.00	117.72	1671.02	418.03	1041.15	1031.64	8.81	-1.104	0.000	0.123
82.00	-15.14	-5.18	0.00	-107.29	0.00	107.29	1654.12	411.85	1010.63	1006.00	9.28	-1.127	0.000	0.116
84.00	-14.90	-5.14	0.00	-96.94	0.00	96.94	1636.97	405.68	980.56	980.53	9.76	-1.150	0.000	0.108

Calculated Forces

Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 57

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86.00	-14.65	-5.10	0.00	-86.66	0.00	86.66	1619.60	399.51	950.95	955.23	10.25	-1.171	0.000	0.100
88.00	-12.13	-4.09	0.00	-76.46	0.00	76.46	1601.99	393.33	921.79	930.12	10.74	-1.190	0.000	0.090
90.00	-11.93	-4.06	0.00	-68.27	0.00	68.27	1584.15	387.16	893.08	905.20	11.24	-1.209	0.000	0.083
92.00	-11.72	-4.02	0.00	-60.16	0.00	60.16	1566.08	380.99	864.83	880.48	11.75	-1.226	0.000	0.076
94.00	-11.52	-3.98	0.00	-52.13	0.00	52.13	1547.77	374.82	837.03	855.96	12.27	-1.241	0.000	0.068
96.00	-11.32	-3.94	0.00	-44.17	0.00	44.17	1529.23	368.64	809.69	831.66	12.79	-1.255	0.000	0.061
98.00	-6.67	-2.48	0.00	-36.28	0.00	36.28	1510.46	362.47	782.80	807.56	13.32	-1.267	0.000	0.049
98.50	-6.63	-2.48	0.00	-35.04	0.00	35.04	1505.73	360.93	776.15	801.57	13.45	-1.270	0.000	0.048
100.00	-6.42	-2.45	0.00	-31.33	0.00	31.33	1491.46	356.30	756.37	783.69	13.86	-1.278	0.000	0.044
102.00	-6.14	-2.41	0.00	-26.43	0.00	26.43	1021.50	267.16	567.02	537.93	14.39	-1.288	0.000	0.055
104.00	-6.00	-2.37	0.00	-21.62	0.00	21.62	1010.40	262.53	547.54	522.80	14.93	-1.297	0.000	0.047
106.00	-5.86	-2.33	0.00	-16.89	0.00	16.89	999.06	257.90	528.40	507.75	15.48	-1.306	0.000	0.039
108.00	-3.44	-1.29	0.00	-12.22	0.00	12.22	987.50	253.27	509.60	492.79	16.03	-1.313	0.000	0.028
109.00	-3.38	-1.27	0.00	-10.93	0.00	10.93	981.63	250.96	500.32	485.35	16.30	-1.316	0.000	0.026
109.00	-3.38	-1.27	0.00	-10.93	0.00	10.93	981.63	250.96	500.32	485.35	16.30	-1.316	0.000	0.026
110.00	-3.32	-1.26	0.00	-9.65	0.00	9.65	975.70	248.64	491.14	477.94	16.58	-1.319	0.000	0.024
112.00	-3.20	-1.22	0.00	-7.14	0.00	7.14	963.67	244.01	473.02	463.19	17.13	-1.324	0.000	0.019
114.00	-3.08	-1.19	0.00	-4.70	0.00	4.70	951.40	239.39	455.24	448.55	17.69	-1.327	0.000	0.014
116.00	-2.96	-1.15	0.00	-2.32	0.00	2.32	938.91	234.76	437.80	434.02	18.25	-1.330	0.000	0.009
118.00	-0.04	-0.02	0.00	-0.02	0.00	0.02	926.18	230.13	420.70	419.63	18.80	-1.330	0.000	0.000
119.00	0.00	-0.02	0.00	0.00	0.00	0.00	919.72	227.81	412.28	412.48	19.08	-1.330	0.000	0.000

Final Analysis Summary

Structure:	CT08558-B-SBA	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 58	

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Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.0W 120 mph Wind	32.4	0.00	37.82	0.00	0.00	2909.13
0.9D + 1.0W 120 mph Wind	32.4	0.00	28.36	0.00	0.00	2876.81
1.2D + 1.0Di + 1.0Wi 50 mph Wind	9.1	0.00	62.38	0.00	0.00	827.26
1.2D + 1.0Ev + 1.0Eh	0.6	0.00	39.18	0.00	0.00	60.95
0.9D + 1.0Ev + 1.0Eh	0.6	0.00	29.67	0.00	0.00	60.32
1.0D + 1.0W 60 mph Wind	7.2	0.00	31.53	0.00	0.00	646.77

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.0W 120 mph Wind	-24.07	-28.80	0.00	-1270.3	0.00	-1270.3	1874.80	500.59	1493.02	1387.94	53.25	0.931
0.9D + 1.0W 120 mph Wind	-17.69	-28.43	0.00	-1248.7	0.00	-1248.7	1874.80	500.59	1493.02	1387.94	53.25	0.912
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-45.19	-8.25	0.00	-363.71	0.00	-363.71	1874.80	500.59	1493.02	1387.94	53.25	0.286
1.2D + 1.0Ev + 1.0Eh	-26.54	-0.60	0.00	-29.40	0.00	-29.40	1874.80	500.59	1493.02	1387.94	53.25	0.035
0.9D + 1.0Ev + 1.0Eh	-20.11	-0.60	0.00	-29.00	0.00	-29.00	1874.80	500.59	1493.02	1387.94	53.25	0.032
1.0D + 1.0W 60 mph Wind	-21.29	-6.39	0.00	-281.74	0.00	-281.74	1874.80	500.59	1493.02	1387.94	53.25	0.215

Additional Steel Summary

			Intermediate Connectors			Lower Termination				Upper Termination				Max Member			
Elev From (ft)	Elev To (ft)	Member	VQ/I (lb/in)	Vu (kips)	phi Vn (kips)	MQ/I (kips)	phi Vn (kips)	Num Reqd	Num Actual	MQ/I (kips)	phi Vn (kips)	Num Reqd	Num Actual	Pu (kips)	phi Pn (kips)	phi Tn (kips)	Ratio
0.0	1.0	(4) SOL-1 3/4" William R71	193.6	2.32	25.3	132.1	25.3	6	0	206.6	25.3			132.06	288.5	298.82	0.458
1.0	18.6	(4) LNP-LP6X100-B-20T	248.9	5.97	25.3	206.6	25.3			221.2	22.7	10	10	237.58	297.8	288.75	0.823

Base Plate Summary

Structure:	CT08558-B-SB	**Code:**	TIA-222-H	2/16/2023	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 59	

Tower Engineering Solutions

Reactions

Original Design

Moment (kip-ft):	2356.00
Axial (kip):	27.50
Shear (kip):	24.70

Analysis (1.2D + 1.0W)

Moment (kip-ft):	2909.13
Axial (kip):	37.82
Shear (kip):	32.42

Base Plate

Yield (ksi):	60.00
Width (in):	52.00
Style:	Clipped
Polygon Sides:	4.00
Clip Length (in):	9.00
Effective Len (in):	9.84
Moment (kip-in):	710.59
Allow Stress (ksi):	81.00
Applied Stress (ksi):	57.51
Stress Ratio:	0.71

Anchor Bolts

Bolt Circle:	54.00
Number Bolts:	12.00
Bolt Type:	2.25" 18J
Bolt Diameter (in):	2.25
Yield (ksi):	75.00
Ultimate (ksi):	100.00
Arrangement:	Clustered
Cluster Dist (in):	6.00
Start Angle (deg):	45.00

Compression

Force (kip):	218.64
Allowable (kip):	268.39
Ratio:	0.82

Tension

Force (kip):	212.34
Allowable (kip):	243.75
Ratio:	0.87

Pier Foundation Design For Monopole

				Date
				2/15/2023
	Customer Name:	**T-Mobile**	**EIA/TIA Standard:**	TIA-222-H
	Site Name:		**Structure Height (Ft.):**	119
	Site Number:	CT08558-B-SBA	**Engineer Name:**	H. You
	Engr. Number:	138478	**Engineer Login ID:**	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

Analysis or Design? Analysis

Acceptable overstress (5.0%

Base Reactions (Factored):

Axial Load (Kips):	37.8	Shear Force (Kips):	32.4
Uplift Force (Kips):	0.0	Moment (Kips-ft):	2909.1

Foundation Geometries:

Diameter of Pier (ft.):	6.0	Depth of Base B. G. S. :	24.0	ft.
Pier Height A. G. (ft.):	1.00			

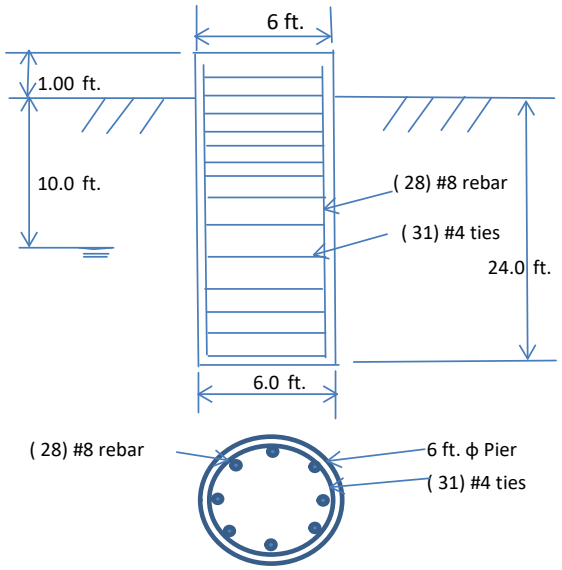
Material Properties and Reabr Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield strength:	60	ksi
Vertical Rebar Size #:	8	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	28	Tie Spacing:	12.0	in.
Concrete Cover (in.):	3	Concrete unit weight:	150.0	pcf

Soil Design Parameters:

Water Table B.G.S. (ft):	10.0	Unit weight of water:	62.4	psf
Ratio of Uplift/Axial Skin Friction:	1.0	Pullout failure Angle:	30	(°)

Skin Frictions are to be obtained from: Soil Report



Monopole Pier Foundation

Depth of Layers (ft) Top	Depth of Layers (ft) Bottom	γ_{soil} (pcf)	ϕ (°)	Cohesion (psf)	Ultimate Skin Friction (psf)	Ultimate Bearing (psf)	Soil Types
0.0	2.0	135	0	0	0	0	Sand
2.0	10.0	135	34	0	0	0	Sand
10.0	25.0	137	34	0	0	0	Sand
25.0	30.0	137	34	0	0	0	Sand

Soil weight Increase Factor for bouyant soils (1.0 to 1.15): 1.1

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Soil Bearing Strength Reduction Factor:	0.75	
Total Dry Soil Volume from Conical Failure (cu. Ft.):	5907	Dry Soil Weight from Conical Failure:	797	Kips
Total Buoyant Soil Volume from Conical Failure (cu. Ft.):	2024	Buoyant Soil Weight from Conical Failure (Ki	193	Kips
Total Dry Concrete Volume (cu. Ft.):	311	Total Dry Concrete Weight:	46.7	Kips
Total Buoyant Concrete Volume (cu. Ft.):	395.8	Total Buoyant Concrete Weight:	34.68	Kips
Total Effective Concrete Weight (Kips):	81.3	Total Effective Soil Weight:	990.1	Kips
Total Effective Vertical Load on Base (Kips):	43.3			

Check Soil Capacities:

					Usage	
Allowable Foundation Overturning Resistance (kips-ft.):	6317.7	>	Design Factored Moment (kips-ft):	3445	0.55	OK!
Factor of Safety of Passive Soil Resistance against Moment:	1.83	OK!				

Check the capacities of Reinforceing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90	Strength reduction factor (Shear):	0.75	
Strength reduction factor (Axial compresion):	0.65	Wind Load Factor on Concrete Design:	1.00	

Reinforcing Concrete Pier:

					Usage	
Vertical Steel Rebar Area (sq. in./each):	0.79		Tie / Stirrup Area (sq. in./each):	0.20		
Calculated Moment Capacity (Mn,Kips-Ft):	3222.1	>	Design Factored Moment (Mu, K-Ft):	3052.3	0.95	OK!
Calculated Shear Capacity (Kips):	740.2	>	Design Factored Shear (Kips):	279.4	0.38	OK!
Calculated Tension Capacity (Tn, Kips):	1194.5	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	7159	>	Design Factored Axial Load (Pu Kips):	37.8	0.01	OK!
Moment & Axial Strength Combination:	0.95	OK!	Max. Allowable Tie/Stirrup Spacing:	12.00	in.	
Pier Reinforcement Ratio:	0.005	Reinforcement Ratio is satisfied per ACI				

Monopole Mat Foundation Design

			Date: 2/15/2023
Customer Name:	T-Mobile	**TIA Standard:**	TIA-222-H
Site Name:		**Structure Height (Ft.):**	119
Site Number:	CT08558-B-SBA	**Engineer Name:**	H. You
Engr. Number:	138478	**Engineer Login ID:**	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

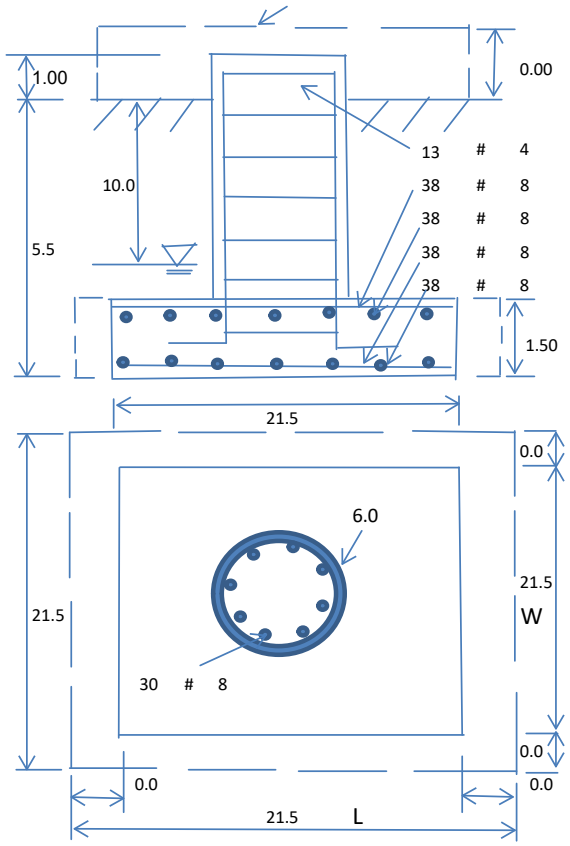
Analysis or Design? Analysis

Base Reactions (Factored):

Axial Load (Kips):	37.8	Shear Force (Kips):	32.4
Uplift Force (Kips):	0.0	Moment (Kips-ft):	2909.1
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	6.0	Depth of Base BG (ft.):	5.5
Pier Height A. G. (ft.):	1.00	Thickness of Pad (ft):	1.50
Length of Pad (ft.):	21.5	Width of Pad (ft.):	21.5
Final Length of pad (ft)	21.5	Final width of pad (ft):	21.5



Material Properties and Reabr Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	40	
Vertical Rebar Size #:	8	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	30	Tie Spacing (in):	6.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	8	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf

Rebar at the bottom of the concrete pad:

Qty. of Rebar in Pad (L):	38	Qty. of Rebar in Pad (W):	38

Rebar at the top of the concrete pad:

Qty. of Rebar in Pad (L):	38	Qty. of Rebar in Pad (W):	38
Apply 1.35 factor for e/w Per G:	1.35		

Soil Design Parameters:

Soil Unit Weight (pcf):	128.0	Soil Buoyant Weight:	50.0	Pcf		
Water Table B.G.S. (ft):	10.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	12000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		Angle from Bottm of Pad:	25
Consider soil hor. resist. for OTM.:	No	Reduction factor on the maximum soil bearing pressure:	1.00			

Foundation Analysis and Design: Uplift Strength Reduction Factor: 0.75 — Compression Strength Reduction Factor: 0.75

Total Dry Soil Volume (cu. Ft.):	1735.90	Total Dry Soil Weight (Kips):	222.20
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	222.20	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	834.75	Total Dry Concrete Weight (Kips):	125.21
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	125.21	Total Vertical Load on Base (Kips):	385.21

Check Soil Capacities:

					Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	3790	<	Allowable Factored Soil Bearing (psf):	9000	0.42	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	3767.5	>	Design Factored Momont (kips-ft):	3120	0.83	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.21	OK!				

Check the capacities of Reinforceing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90		Strength reduction factor (Shear):	0.75		
Strength reduction factor (Axial compresion):	0.65		Wind Load Factor on Concrete Design:	1.00		
					Load/ Capacity Ratio	
(1) Concrete Pier:						
Vertical Steel Rebar Area (sq. in./each):	0.79		Tie / Stirrup Area (sq. in./each):	0.20		
Calculated Moment Capacity (Mn,Kips-Ft):	3443.6	>	Design Factored Moment (Mu, Kips-F	3071.1	0.89	OK!
Calculated Shear Capacity (Kips):	539.9	>	Design Factored Shear (Kips):	32.4	0.06	OK!
Calculated Tension Capacity (Tn, Kips):	1279.8	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	7156.5	>	Design Factored Axial Load (Pu Kips):	37.8	0.01	OK!
Moment & Axial Strength Combination:	0.89	OK!	Check Tie Spacing (Design/Required):		0.5	OK!
Pier Reinforcement Ratio:	0.006		Reinforcement Ratio is satisfied per ACI			
(2).Concrete Pad:						
One-Way Design Shear Capacity (L-Direction, Kips):	354.9	>	One-Way Factored Shear (L-D. Kips):	227.1	0.64	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	354.9	>	One-Way Factored Shear (W-D., Kips)	227.1	0.64	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	363.0	>	One-Way Factored Shear (C-C, Kips):	245.6	0.68	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0080	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0080		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	1820.1	>	Moment at Bottom (L-Dir. K-Ft):	921.7	0.51	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	1820.1	>	Moment at Bottom (W-Dir. K-Ft):	921.7	0.51	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	2525.8	>	Moment at Bottom (C-C Dir. K-Ft):	1303.5	0.52	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0080	OK!	Upper Steel Reinf. Ratio (W-Dir.):	0.0080		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	1820.1	>	Moment at the top (L-Dir K-Ft):	472.8	0.26	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	1820.1	>	Moment at the top (W-Dir K-Ft):	472.8	0.26	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	2525.8	>	Moment at the top (C-C Dir. K-Ft):	443.6	0.18	OK!
(3).Check Punching Shear Capacity due to Moment in the Pier:						
Moment transferred by punching shear:	1163.6	k-ft.	Max. factored shear stress v_{u_CD}:		6.0	Psi
Max. factored shear stress v_{u_AB}:	22.4	Psi	Factored shear Strength ϕv_n:		189.7	Psi
Max. factored shear stress v_u:	22.4	Psi	Check Usage of Punching Shear Capacity:		0.12	OK!
(4).Check Bending Capacity of the Pad Within the Effective Slab Width:						
Overturning moment to be transferred by flexure:	872.7	k-ft.	Effective Width for resisting OT moment:		10.5	ft.
Calculated number of Rebar in Effective width:	19		Actual number of Rebar in Effective width:		19	
Steel Pad Moment Capacity (L-Direc. Kips-ft):	908.4	k-ft.	Check Usage of the Flexure Capacity:		0.96	OK!

EXHIBIT 8

Tower Engineering Solutions
Phone (972) 483-0607, Fax (972) 975-9615
1320 Greenway Drive, Suite 600, Irving, Texas 75038

Antenna Mount Analysis Report

Existing 119-Ft Monopole Tower

Customer Name: SBA Communications Corp

Customer Site Number: CT08558-B-SBA

Customer Site Name: New Britain 3, CT

Carrier Name: T-Mobile (App#: 221841-1)

Carrier Site ID / Name: CTHA105A / New Britain

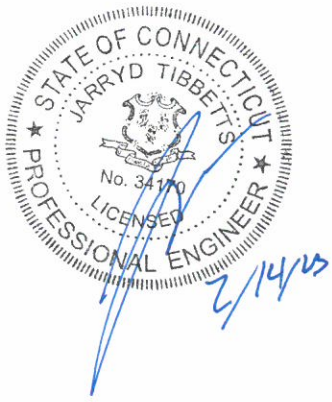
Site Location: 723 Farmington Ave.

New Britain, Connecticut

Hartford County

Latitude: 41.698414

Longitude: -72.785944



Analysis Result:

Max Structural Usage: 72.6% [Pass]

Report Prepared By: Sandesh Khawas Bhujel

Introduction

The purpose of this report is to summarize the analysis results on the (3) T-arms at 88.00' elevation to support the proposed antenna configuration. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Mount Drawings	Mount Mapping by SGS Towers, dated 06/26/2018
Antenna Loading	SBA Application #: 221841, v1, dated 2/13/2023
Modification Drawings	N/A

Analysis Criteria

Wind Speed Used in the Analysis: 120 mph (3-Sec. Gust) (Ultimate Wind Speed)
Wind Speed with Ice: 50 mph (3-Sec. Gust) with 1.5" radial ice concurrent
Service Load Wind Speed: 30 mph +0" Radial ice
Standard/Codes: ANSI/TIA/EIA 222-H / 2021 IBC / 2022 Connecticut State Building Code
Exposure Category: C
Risk Category: II
Topographic Category: 1
Crest Height (Ft): 0
Ground Elevation Factor: 0.989

The site is a Risk Category II structure per IBC Table 1604.5. This site does not support emergency communication equipment for first responders such as fire departments, police, hospitals, ambulance services or any of the facilities listed for Risk Categories III and IV. The scope of work detailed in this structural analysis does not include items that are a part of emergency service as the 911 or essential facility service of an emergency response system.

Mount Information

(3) T-arms at 88.00' elevation

Final Antenna Configuration

3	Commscope VV-65B-R1
3	Ericsson AIR6419 B41
3	RFS APXVAARR24_43-U-NA20 (Octa)
3	Ericsson KRY 112 144/2*
3	Ericsson 4460 B25 + B66
3	Ericsson 4449 B71 + B85

* Existing equipment are flush mounted directly to the front face horizontal member and are not shown in the placement diagram.

In addition to the proposed equipment loading, a 500 lb serviceability load was also considered in this analysis in accordance with TIA requirements.

Analysis Results

Our calculations have determined that under design wind load the existing mounts will be structurally adequate to support the proposed antenna configuration. The maximum structural usage is 72.6%, which occurs in the flange connection. The proposed equipment must be installed as stipulated in the Final Antenna Configuration section of this report. The analysis results are void if the proposed equipment is not installed in accordance with this report.

Attachments

1. Mount Photos
2. Antenna Placement Diagram
3. Mount Mapping Information
4. Analysis Calculations

Standard Conditions

1. The loading configuration as analyzed in this report is as provided from the customer. Any deviation from this design shall be communicated to TES to verify deviation will not adversely impact the analysis.

2. The analysis is based on the presumption that the antenna mount members and components along with any existing reinforcement items have been correctly and properly designed, manufactured, installed and maintained.

3. All the existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion. The mount analysis is not a condition assessment of the mount.

4. The mount analysis was performed in accordance with the loading provided, and if applicable the modification required to support the additional loading.

5. If the mount is modified, installation must adhere to the configuration communicated in the modification drawings.

6. The modification drawings are not intended to convey means or methods. These are the responsibility of the installing contractor.

7. Rigging plan review is available if the contractor requires for a construction class IV or other if required. Review fee would apply.

8. The mount modification package was created based upon information provided for the mount loading. The underlying tower is assumed to provide support and sufficient rigidity to support the mount loads as a tower analysis was not part of the mount analysis.

9. TES is not responsible for modifications to climbing facilities unless communicated to TES in writing.

Structure: CT08558-B-SBA - New Britain 3, CT

Sector: **A**

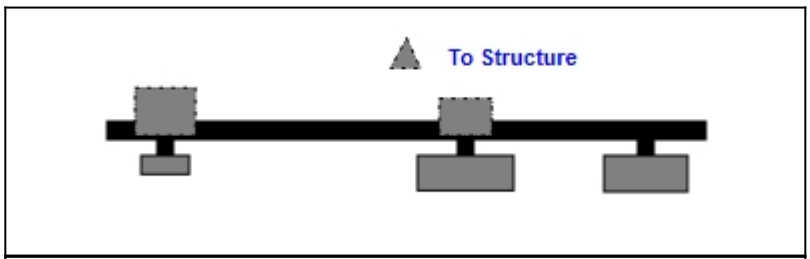
Structure Type: Monopole

Mount Elev: 88.00

2/14/2023

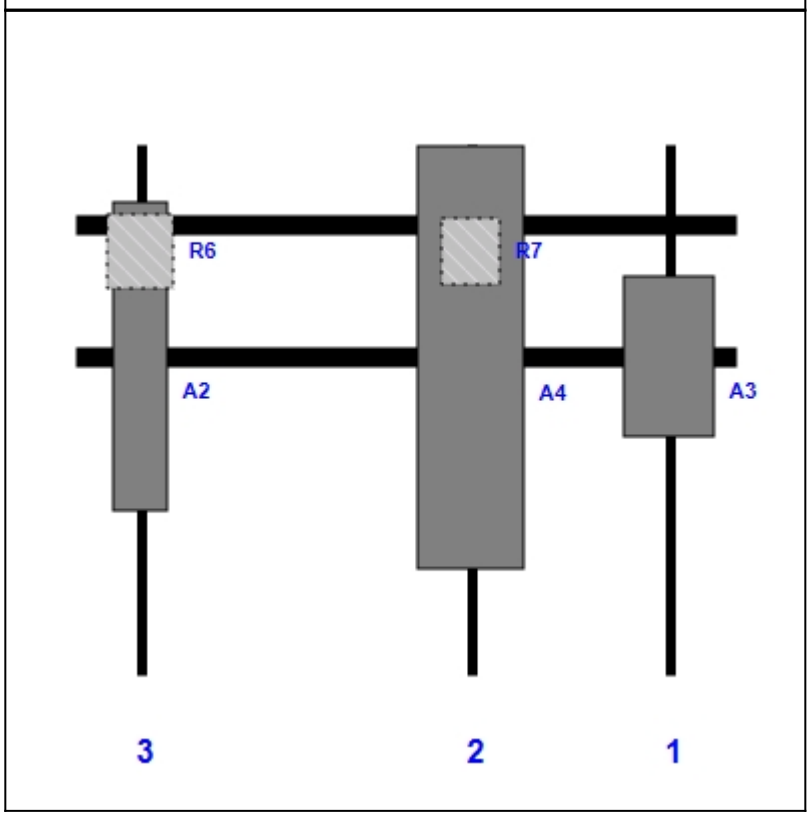
Tower Engineering Solutions

Plan View



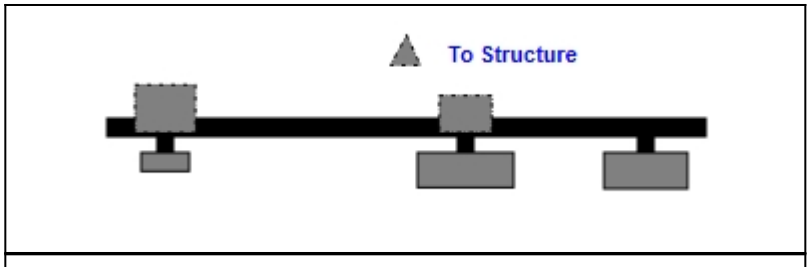
Front View

Looking Toward Structure



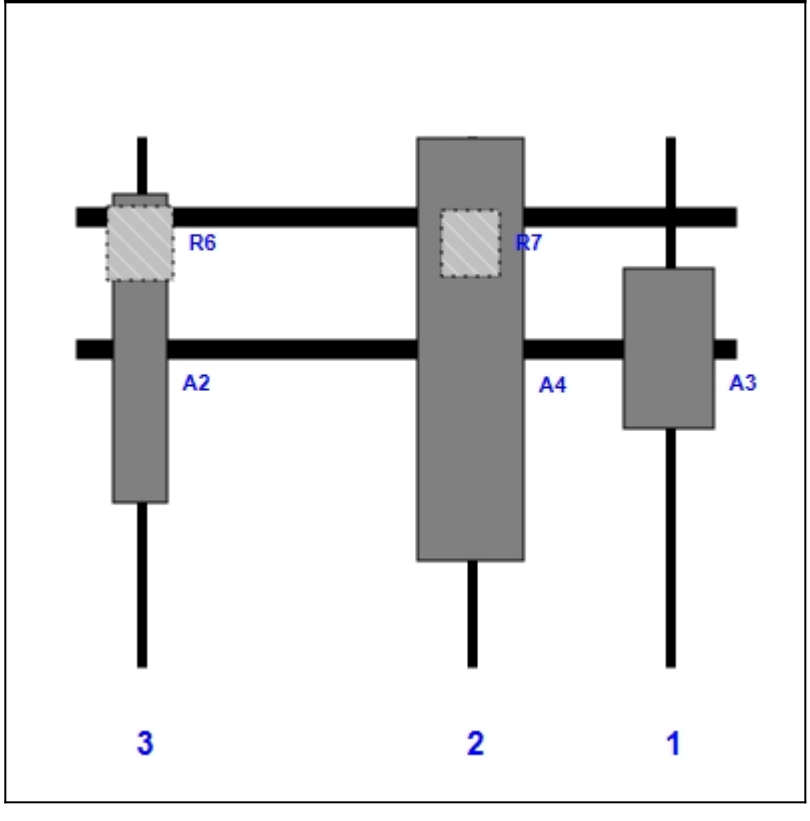
Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A3	AIR6419 B41	36.30	20.90	135.00	1	a	Front	48.00		Retained	
A4	APXVAARR24_43-U-NA20 (Octa)	95.90	24.00	90.00	2	a	Front	48.00		Retained	
R7	4449 B71 + B85	14.90	13.10	90.00	2	a	Behind	24.00		Retained	
A2	VV-65B-R1	70.35	12.01	15.00	3	a	Front	48.00		Retained	
R6	4460 B25 + B66	17.00	15.10	15.00	3	a	Behind	24.00		Retained	

Plan View



Front View

Looking Toward Structure



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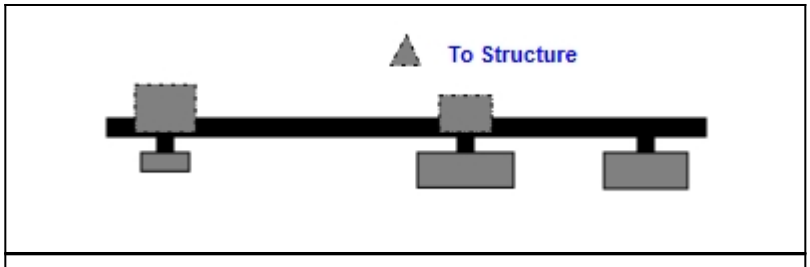
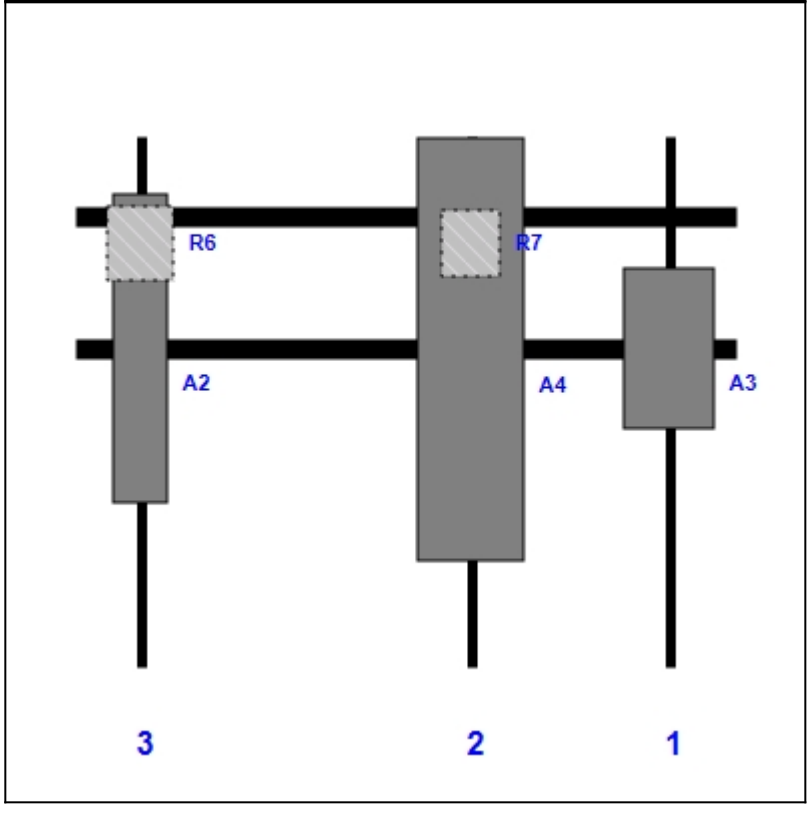
A2	VV-65B-R1	70.35	12.01	15.00	3	a	Front	48.00		Retained	
R6	4460 B25 + B66	17.00	15.10	15.00	3	a	Behind	24.00		Retained	

Plan View



Front View

Looking Toward Structure



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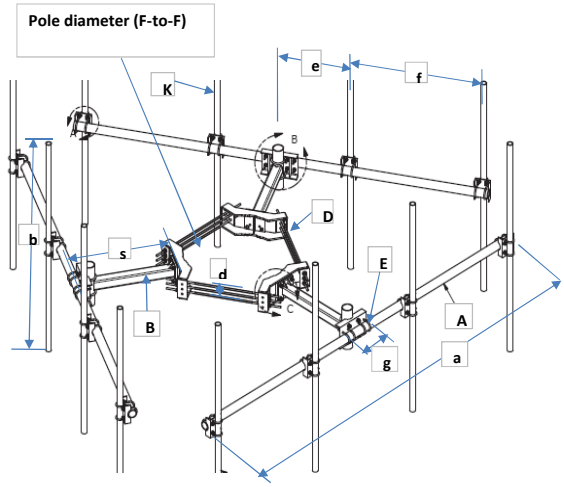
A2	VV-65B-R1	70.35	12.01	15.00	3	a	Front	48.00		Retained	
R6	4460 B25 + B66	17.00	15.10	15.00	3	a	Behind	24.00		Retained	

Antenna Mount Type "MT-Z" Mapping Form (PATENT PENDING)

FCC # 1251709

Tower Owner:	SBA	**Mapping Date:**	6/26/18
Site Name:	New Britain 3, CT	**Structure Type:**	Monopole
Site Number or ID:	CT08558-B	**Structure Height (Ft.):**	120
Mapping Contractor:	SGS Towers	**Mount Height (Ft.):**	85



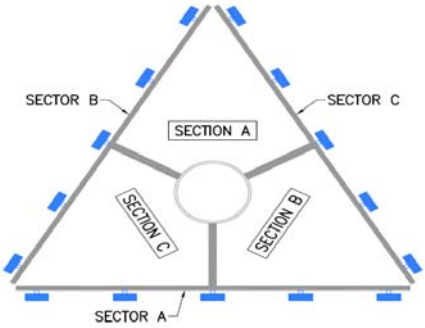
Geometries (Unit: inches)									
a	150	**e**		**j**		**o**		**s**	38
b	120	**f**	75	**k**		**p**		**t**	5.25
c		**g**	13	**m**		**q**		**u ***	48
d	6	**h**		**n**		**r**		**v ***	120

Members/Bolts (Unit: inches) — * - See Ant. Layout for "u", "v" and member "K" (pipe)

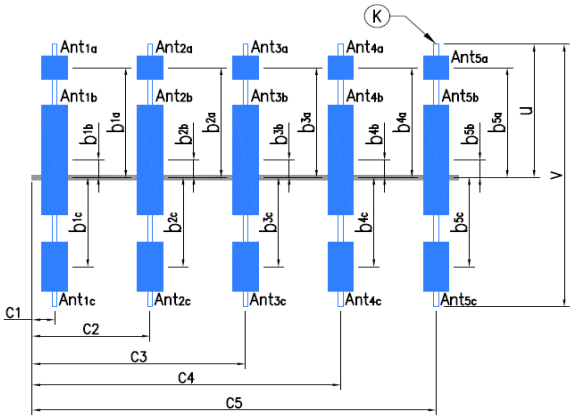
Items	Member	Lx (O.D.)	Ly (I.D.)	T	Items	Member	Lx (O.D.)	Ly (I.D.)	T
A	3.5 OD x 0.216 Pipe	3.5	3.068	0.216	**F**				
B	Tubing 4x4x1/4	4	4	0.25	**G**				
C					**H**				
D	3/4" Bolt				**J**				
E	1/2" Bolt				**K* (pipe)**	2.875 OD x 0.276 Pipe	2.875	2.323	0.276

Please enter the infomation below if members can't be found from the drop down lists

There is an additional collar mount 32" above the bottom collar mount.
Additional collar mount has (2) channel arms (3.75"x5.5"x3/16"x46") that extend out to an additional top rail in the face of the
The additional top rail on the mount face is 2.38"x3/16"x150". It is 30" above the bottom rail on the mount face.
The channel arm spacing is 42" from the edge of the top mount rail, and 82" from channel arm to channel arm out on the face.
There are only 3 antenna pipes on the mount face (member "K"). The two pipes on the ends are 2.38"x1/8"x48".



Climbing ladder is , at 30 Degree Azimuth



Antenna Layout

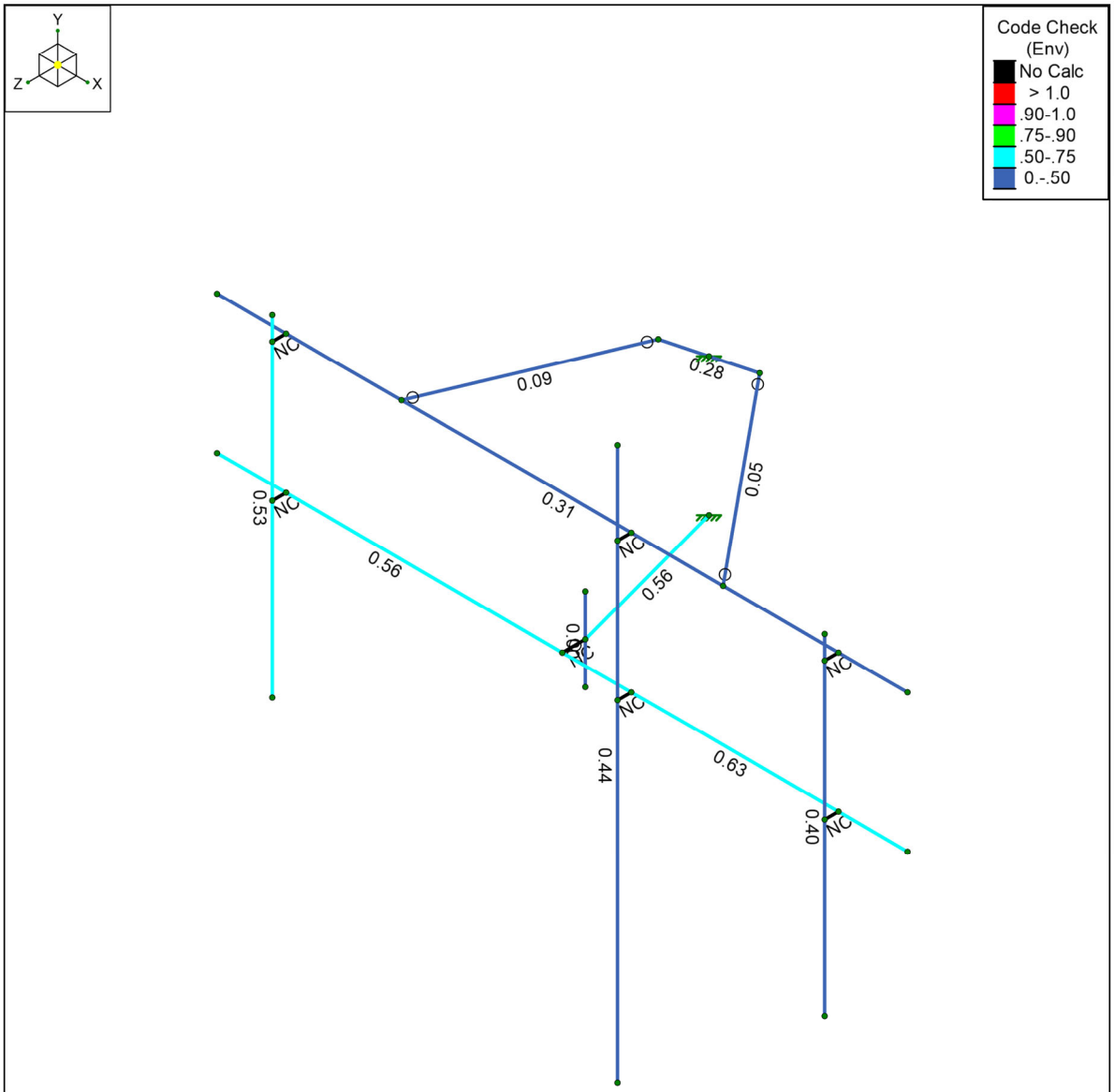
Ants. Items	Enter antenna model. If not labled, enter "Unknown". If no antenna at specified location, enter "N/A". If antennas and the locations are the same on all three sectors, only enter one sector.					Mounting Locations (Unit: inches)			Photos of antennas
	Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (In.)	Horiz. offset (Use "-" if Ant. is inside)	Horiz. offset "C_1, C_2, C_3, C_4, C_5" (in.)	Photo Numbers
Sector A									
Ant_{1a}		9	3.5	10	(1) 1 5/8	3	0	15	
Ant_{1b}	AS1180231				(1) 1 5/8	6	13	14	
Ant_{1c}									
Ant_{2a}	RRUS 11 B12				(1) 7/8	18	-3	90	
Ant_{2b}	LNX-6515DS-A1M				(1) 7/8	2	10		
Ant_{2c}									
Ant_{3a}								135	
Ant_{3b}	(22P)AIR32 B2A B66aA					0	13	0	
Ant_{3c}								0	
Ant_{4a}									
Ant_{4b}									
Ant_{4c}									
Ant_{5a}									
Ant_{5b}									
Ant_{5c}									
Are Ant same as sector A?	Yes	**Antennas on Sector B are the same as Sector A**							

Azimuth (Degree) of Each Sector and Climbing Information

Sector A:	30	Deg	
Sector B:	150	Deg	
Sector C:	270	Deg	
Climbing	30	Deg	
Climbing Facility	Corrosion Type:	Good condition	
	Access:	Climbing path was unobstructed.	
	Condition:	N/A	

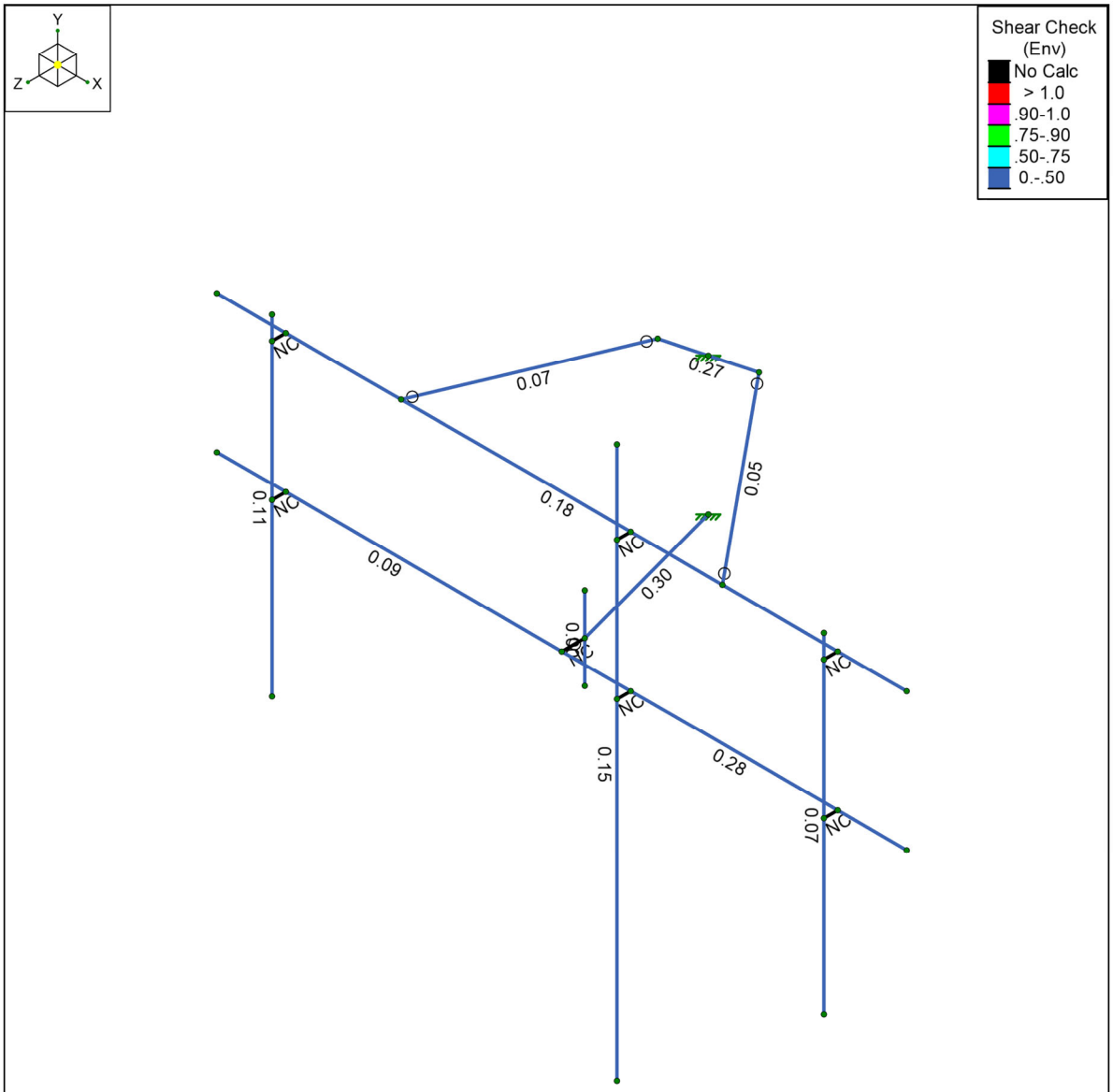
Are Ant same as sector A/B?	Same As A	**Antennas on Sector C are the same as Sector A**

Tower Engineering Solutions, LLC	CT08558-B-SBA_MT_LOT_Loads Only_Sector A_H	SK-1
		Feb 14, 2023
TES Project No. 138613		CT08558-B-SBA_138613_H_RIS…



Member Code Checks Displayed (Enveloped)

Tower Engineering Solutions, LLC	CT08558-B-SBA_MT_LOT_Loads Only_Sector A_H	SK-2
		Feb 14, 2023
TES Project No. 138613		CT08558-B-SBA_138613_H_RIS…



Member Shear Checks Displayed (Enveloped)

Tower Engineering Solutions, LLC	CT08558-B-SBA_MT_LOT_Loads Only_Sector A_H	SK-3
		Feb 14, 2023
TES Project No. 138613		CT08558-B-SBA_138613_H_RIS…

Basic Load Cases

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

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Point	Distributed
56	Structure Wi (90 Deg)	None					22
57	Structure Wi (120 Deg)	None					22
58	Structure Wi (150 Deg)	None					22
59	Structure Wi (180 Deg)	None					22
60	Structure Wi (210 Deg)	None					22
61	Structure Wi (240 Deg)	None					22
62	Structure Wi (270 Deg)	None					22
63	Structure Wi (300 Deg)	None					22
64	Structure Wi (330 Deg)	None					22
65	Structure Wm (0 Deg)	None					22
66	Structure Wm (30 Deg)	None					22
67	Structure Wm (60 Deg)	None					22
68	Structure Wm (90 Deg)	None					22
69	Structure Wm (120 Deg)	None					22
70	Structure Wm (150 Deg)	None					22
71	Structure Wm (180 Deg)	None					22
72	Structure Wm (210 Deg)	None					22
73	Structure Wm (240 Deg)	None					22
74	Structure Wm (270 Deg)	None					22
75	Structure Wm (300 Deg)	None					22
76	Structure Wm (330 Deg)	None					22
77	Lm1	None				1	
78	Lm2	None				1	
79	Lv1	None				1	
80	Lv2	None				1	
81	Antenna Ev	None				27	
82	Antenna Eh (0 Deg)	None				18	
83	Antenna Eh (90 Deg)	None				18	
84	Structure Ev	ELY		-0.042			
85	Structure Eh (0 Deg)	ELZ			-0.104		
86	Structure Eh (90 Deg)	ELX	0.104				

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	1.2D+1.0Wo (0 Deg)	Yes	Y	1	1.2	39	1.2	3	1	41	1								
2	1.2D+1.0Wo (30 Deg)	Yes	Y	1	1.2	39	1.2	4	1	42	1								
3	1.2D+1.0Wo (60 Deg)	Yes	Y	1	1.2	39	1.2	5	1	43	1								
4	1.2D+1.0Wo (90 Deg)	Yes	Y	1	1.2	39	1.2	6	1	44	1								
5	1.2D+1.0Wo (120 Deg)	Yes	Y	1	1.2	39	1.2	7	1	45	1								
6	1.2D+1.0Wo (150 Deg)	Yes	Y	1	1.2	39	1.2	8	1	46	1								
7	1.2D+1.0Wo (180 Deg)	Yes	Y	1	1.2	39	1.2	9	1	47	1								
8	1.2D+1.0Wo (210 Deg)	Yes	Y	1	1.2	39	1.2	10	1	48	1								
9	1.2D+1.0Wo (240 Deg)	Yes	Y	1	1.2	39	1.2	11	1	49	1								
10	1.2D+1.0Wo (270 Deg)	Yes	Y	1	1.2	39	1.2	12	1	50	1								
11	1.2D+1.0Wo (300 Deg)	Yes	Y	1	1.2	39	1.2	13	1	51	1								
12	1.2D+1.0Wo (330 Deg)	Yes	Y	1	1.2	39	1.2	14	1	52	1								
13	1.2D + 1.0Di + 1.0Wi (0 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	15	1	53	1				
14	1.2D + 1.0Di + 1.0Wi (30 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	16	1	54	1				
15	1.2D + 1.0Di + 1.0Wi (60 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	17	1	55	1				
16	1.2D + 1.0Di + 1.0Wi (90 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	18	1	56	1				
17	1.2D + 1.0Di + 1.0Wi (120 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	19	1	57	1				
18	1.2D + 1.0Di + 1.0Wi (150 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	20	1	58	1				
19	1.2D + 1.0Di + 1.0Wi (180 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	21	1	59	1				
20	1.2D + 1.0Di + 1.0Wi (210 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	22	1	60	1				
21	1.2D + 1.0Di + 1.0Wi (240 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	23	1	61	1				

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
22	1.2D + 1.0Di + 1.0Wi (270 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	24	1	62	1				
23	1.2D + 1.0Di + 1.0Wi (300 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	25	1	63	1				
24	1.2D + 1.0Di + 1.0Wi (330 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	26	1	64	1				
25	1.2D + 1.5Lm1 + 1.0Wm (0 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	27	1	65	1						
26	1.2D + 1.5Lm1 + 1.0Wm (30 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	28	1	66	1						
27	1.2D + 1.5Lm1 + 1.0Wm (60 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	29	1	67	1						
28	1.2D + 1.5Lm1 + 1.0Wm (90 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	30	1	68	1						
29	1.2D + 1.5Lm1 + 1.0Wm (120 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	31	1	69	1						
30	1.2D + 1.5Lm1 + 1.0Wm (150 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	32	1	70	1						
31	1.2D + 1.5Lm1 + 1.0Wm (180 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	33	1	71	1						
32	1.2D + 1.5Lm1 + 1.0Wm (210 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	34	1	72	1						
33	1.2D + 1.5Lm1 + 1.0Wm (240 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	35	1	73	1						
34	1.2D + 1.5Lm1 + 1.0Wm (270 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	36	1	74	1						
35	1.2D + 1.5Lm1 + 1.0Wm (300 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	37	1	75	1						
36	1.2D + 1.5Lm1 + 1.0Wm (330 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	38	1	76	1						
37	1.2D + 1.5Lm2 + 1.0Wm (0 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	27	1	65	1						
38	1.2D + 1.5Lm2 + 1.0Wm (30 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	28	1	66	1						
39	1.2D + 1.5Lm2 + 1.0Wm (60 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	29	1	67	1						
40	1.2D + 1.5Lm2 + 1.0Wm (90 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	30	1	68	1						
41	1.2D + 1.5Lm2 + 1.0Wm (120 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	31	1	69	1						
42	1.2D + 1.5Lm2 + 1.0Wm (150 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	32	1	70	1						
43	1.2D + 1.5Lm2 + 1.0Wm (180 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	33	1	71	1						
44	1.2D + 1.5Lm2 + 1.0Wm (210 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	34	1	72	1						
45	1.2D + 1.5Lm2 + 1.0Wm (240 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	35	1	73	1						
46	1.2D + 1.5Lm2 + 1.0Wm (270 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	36	1	74	1						
47	1.2D + 1.5Lm2 + 1.0Wm (300 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	37	1	75	1						
48	1.2D + 1.5Lm2 + 1.0Wm (330 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	38	1	76	1						
49	1.2D + 1.5Lv1	Yes	Y	1	1.2	39	1.2	79	1.5										
50	1.2D + 1.5Lv2	Yes	Y	1	1.2	39	1.2	80	1.5										
51	1.4D	Yes	Y	1	1.4	39	1.4												
52	1.2D + 1.0Ev + 1.0Eh (0 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	1	83		ELZ	1	ELX	
53	1.2D + 1.0Ev + 1.0Eh (30 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.866	83	0.5	ELZ	0.866	ELX	0.5
54	1.2D + 1.0Ev + 1.0Eh (60 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.5	83	0.866	ELZ	0.5	ELX	0.866
55	1.2D + 1.0Ev + 1.0Eh (90 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82		83	1	ELZ		ELX	1
56	1.2D + 1.0Ev + 1.0Eh (120 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.5	83	0.866	ELZ	-0.5	ELX	0.866
57	1.2D + 1.0Ev + 1.0Eh (150 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.866	83	0.5	ELZ	-0.866	ELX	0.5
58	1.2D + 1.0Ev + 1.0Eh (180 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-1	83		ELZ	-1	ELX	
59	1.2D + 1.0Ev + 1.0Eh (210 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.866	83	-0.5	ELZ	-0.866	ELX	-0.5
60	1.2D + 1.0Ev + 1.0Eh (240 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.5	83	-0.866	ELZ	-0.5	ELX	-0.866
61	1.2D + 1.0Ev + 1.0Eh (270 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82		83	-1	ELZ		ELX	-1
62	1.2D + 1.0Ev + 1.0Eh (300 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.5	83	-0.866	ELZ	0.5	ELX	-0.866
63	1.2D + 1.0Ev + 1.0Eh (330 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.866	83	-0.5	ELZ	0.866	ELX	-0.5
64	0.9D - 1.0Ev + 1.0Eh (0 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	1	83		ELZ	1	ELX	
65	0.9D - 1.0Ev + 1.0Eh (30 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.866	83	0.5	ELZ	0.866	ELX	0.5
66	0.9D - 1.0Ev + 1.0Eh (60 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.5	83	0.866	ELZ	0.5	ELX	0.866
67	0.9D - 1.0Ev + 1.0Eh (90 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82		83	1	ELZ		ELX	1
68	0.9D - 1.0Ev + 1.0Eh (120 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.5	83	0.866	ELZ	-0.5	ELX	0.866
69	0.9D - 1.0Ev + 1.0Eh (150 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.866	83	0.5	ELZ	-0.866	ELX	0.5
70	0.9D - 1.0Ev + 1.0Eh (180 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-1	83		ELZ	-1	ELX	
71	0.9D - 1.0Ev + 1.0Eh (210 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.866	83	-0.5	ELZ	-0.866	ELX	-0.5
72	0.9D - 1.0Ev + 1.0Eh (240 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.5	83	-0.866	ELZ	-0.5	ELX	-0.866
73	0.9D - 1.0Ev + 1.0Eh (270 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82		83	-1	ELZ		ELX	-1
74	0.9D - 1.0Ev + 1.0Eh (300 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.5	83	-0.866	ELZ	0.5	ELX	-0.866
75	0.9D - 1.0Ev + 1.0Eh (330 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.866	83	-0.5	ELZ	0.866	ELX	-0.5

Node Coordinates

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1	N1	0.431365	0	-0.473457	
2	N2	1.250959	0	2.585308	
3	N3	-4.999041	0	3.001975	
4	N4	7.500959	0	3.001975	
5	NP1	-3.749041	2.916667	3.251975	
6	NP2	-3.749041	-3.083333	3.251975	
7	NP3	2.500959	4	3.251975	
8	NP4	2.500959	-6	3.251975	
9	NP5	6.250959	2.916667	3.251975	
10	NP6	6.250959	-3.083333	3.251975	
11	N11	1.250959	0.75	2.585308	
12	N12	1.250959	-0.75	2.585308	
13	N13	-4.999041	2.5	3.001975	
14	N14	7.500959	2.5	3.001975	
15	N15	-3.749041	0	3.001975	
16	N16	2.500959	0	3.001975	
17	N17	6.250959	0	3.001975	
18	N21	0.431365	2.5	-0.473457	
19	N19	1.155809	2.5	-0.667571	
20	N21A	-0.293079	2.5	-0.279343	
21	N21B	-3.749041	2.5	3.001975	
22	N22	2.500959	2.5	3.001975	
23	N23	6.250959	2.5	3.001975	
24	N24	-1.659874	2.5	3.001975	
25	N25	4.161792	2.5	3.001975	
26	N26	-3.749041	0	3.251975	
27	N27	2.500959	0	3.251975	
28	N28	6.250959	0	3.251975	
29	N29	-3.749041	2.5	3.251975	
30	N30	2.500959	2.5	3.251975	
31	N31	6.250959	2.5	3.251975	
32	N32	1.250959	0	3.001975	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	Front Face	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
2	Support Rail	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
3	Mount Pipe 1	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
4	Mount Pipe 2	PIPE_2.5	Beam	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
5	Mast Pipe	PIPE_4.0	Beam	Pipe	A53 Gr.B	Typical	2.96	6.82	6.82	13.6
6	Standoff	HSS4X4X4	Beam	Tube	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8

Cold Formed Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	V-Brace 1	6CU4x1875	Beam	CU	A570 Gr.33	Typical	2.483	4.143	14.81	0.029
2	V-Brace 2	5.5CU3.75x1875	Beam	CU	A570 Gr.33	Typical	2.296	3.362	11.487	0.027

Aluminum Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	AL1A	AACS14X13.9	Beam	AA Channel	3003-H14	Typical	11.8	44.7	401	1.19

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e⁵°F⁻¹]	Density [k/ft³]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
7	A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3

Cold Formed Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e⁵°F⁻¹]	Density [k/ft³]	Yield [ksi]	Fu [ksi]
1	A570 Gr.33	29500	11346	0.3	0.65	0.49	33	52
2	A607 C1 Gr.55	29500	11346	0.3	0.65	0.49	55	70

Aluminum Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e⁵°F⁻¹]	Density [k/ft³]	Table B.4	kt	Ftu [ksi]	Fty [ksi]	Fcy [ksi]	Fsu [ksi]	Ct
1	3003-H14	10100	3787.5	0.33	1.3	0.173	Table B.4-1	1	19	16	13	12	141
2	6061-T6	10100	3787.5	0.33	1.3	0.173	Table B.4-2	1	38	35	35	24	141
3	6063-T5	10100	3787.5	0.33	1.3	0.173	Table B.4-2	1	22	16	16	13	141
4	6063-T6	10100	3787.5	0.33	1.3	0.173	Table B.4-2	1	30	25	25	19	141
5	5052-H34	10200	3787.5	0.33	1.3	0.173	Table B.4-1	1	34	26	24	20	141
6	6061-T6 W	10100	3787.5	0.33	1.3	0.173	Table B.4-1	1	24	15	15	15	141

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	M1	N3	N32		Front Face	Beam	Pipe	A53 Gr.B	Typical
2	M2	N1	N2		Standoff	Beam	Tube	A500 Gr.B Rect	Typical
3	MP3A	NP1	NP2		Mount Pipe 1	Beam	Pipe	A53 Gr.B	Typical
4	MP2A	NP3	NP4		Mount Pipe 2	Beam	Pipe	A53 Gr.B	Typical
5	MP1A	NP5	NP6		Mount Pipe 1	Beam	Pipe	A53 Gr.B	Typical
6	M6	N11	N12		Mast Pipe	Beam	Pipe	A53 Gr.B	Typical
7	M7	N13	N14		Support Rail	Beam	Pipe	A53 Gr.B	Typical
8	M8	N19	N21A	180	V-Brace 1	Beam	CU	A570 Gr.33	Typical
9	M9	N21A	N24	180	V-Brace 2	Beam	CU	A570 Gr.33	Typical
10	M10	N19	N25		V-Brace 2	Beam	CU	A570 Gr.33	Typical
11	M11	N21B	N29		RIGID	Beam	None	RIGID	DR1
12	M12	N15	N26		RIGID	Beam	None	RIGID	DR1
13	M13	N22	N30		RIGID	Beam	None	RIGID	DR1
14	M14	N16	N27		RIGID	Beam	None	RIGID	DR1
15	M15	N23	N31		RIGID	Beam	None	RIGID	DR1
16	M16	N17	N28		RIGID	Beam	None	RIGID	DR1
17	M17	N32	N2		RIGID	Beam	None	RIGID	DR1
18	MP4A	N32	N4		Front Face	Beam	Pipe	A53 Gr.B	Typical

Member Advanced Data

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
1	M1			Yes	N/A	None
2	M2			Yes	N/A	None
3	MP3A			Yes	N/A	None
4	MP2A			Yes	N/A	None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Seismic DR
5	MP1A			Yes	N/A	None
6	M6			Yes	N/A	None
7	M7			Yes	N/A	None
8	M8			Yes	N/A	None
9	M9	OOOOXO	OOOOXO	Yes	N/A	None
10	M10	OOOOXO	OOOOXO	Yes	N/A	None
11	M11			Yes	N/A	None
12	M12			Yes	N/A	None
13	M13			Yes	N/A	None
14	M14			Yes	N/A	None
15	M15			Yes	N/A	None
16	M16			Yes	N/A	None
17	M17		OOOOXO	Yes	N/A	None
18	MP4A			Yes	N/A	None

Hot Rolled Steel Design Parameters

	Label	Shape	Length [ft]	Lcomp top [ft]	K y-y	K z-z	Channel Conn.	a [ft]	Function
1	M1	Front Face	6.25	Lbyy	2.1	2.1	N/A	N/A	Lateral
2	M2	Standoff	3.167	Lbyy			N/A	N/A	Gravity
3	MP3A	Mount Pipe 1	6	Lbyy			N/A	N/A	Lateral
4	MP2A	Mount Pipe 2	10	Lbyy			N/A	N/A	Lateral
5	MP1A	Mount Pipe 1	6	Lbyy			N/A	N/A	Lateral
6	M6	Mast Pipe	1.5	Lbyy			N/A	N/A	Lateral
7	M7	Support Rail	12.5	Lbyy			N/A	N/A	Lateral
8	MP4A	Front Face	6.25	Lbyy	2.1	2.1	N/A	N/A	Lateral

Cold Formed Steel Design Parameters

	Label	Shape	Length [ft]	Lcomp top [ft]	y sway	z sway
1	M8	V-Brace 1	1.5	Lbyy		
2	M9	V-Brace 2	3.555	Lbyy		
3	M10	V-Brace 2	4.744	Lbyy		

Aluminum Design Parameters

No Data to Print...

Node Boundary Conditions

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
1	N1	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N21	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N19						
4	N21A						

Envelope Node Reactions

	Node Label		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N1	max	1559.624	9	2176.578	14	1570.396	1	-1.235	7	4.949	8	4.922	38
2		min	-1451.826	3	591.534	71	-1074.173	7	-7.031	13	-5.072	2	-2.317	32
3	N21	max	382.672	2	306.944	20	538.083	1	-0.001	42	0.577	8	0.096	42
4		min	-482.017	8	73.863	2	-1034.3	7	-0.119	36	-0.498	2	-0.213	32
5	Totals:	max	1216.553	9	2460.276	20	2108.479	1						
6		min	-1216.557	3	676.288	66	-2108.473	7						

Envelope Member Section Forces

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
1	M1	1	max	0	75	0.024	8	0.031	6	0	75	0	75	0	75
2			min	0	1	-0.004	30	-0.002	44	0	1	0	1	0	1
3		2	max	588.96	27	-75.323	38	285.324	8	0.177	12	0.236	6	-0.081	8
4			min	-186.867	9	-806.664	33	-414.93	2	-0.393	6	-0.16	12	-0.751	26
5		3	max	589.225	27	-88.53	38	298.06	8	0.177	12	0.598	7	0.54	32
6			min	-191.112	9	-819.871	33	-427.666	2	-0.393	6	-0.731	1	-0.444	38
7		4	max	589.491	27	-101.737	38	311.961	7	0.177	12	1.07	7	1.832	32
8			min	-195.357	9	-833.078	33	-446.125	1	-0.393	6	-1.413	1	-0.295	38
9		5	max	589.756	27	-114.944	38	331.568	7	0.177	12	1.573	7	3.144	32
10			min	-199.603	9	-846.285	33	-465.733	1	-0.393	6	-2.125	1	-0.126	38
11	M2	1	max	1474.531	12	2181.298	14	1608.399	2	3.593	38	4.949	8	7.363	13
12			min	-968.066	6	591.735	71	-1569.606	8	-3.458	32	-5.072	2	1.194	7
13		2	max	1473.909	12	2157.881	14	1605.001	2	3.593	38	3.708	8	5.646	13
14			min	-967.444	6	583.354	71	-1566.208	8	-3.458	32	-3.8	2	0.562	7
15		3	max	1473.287	12	2134.464	14	1601.603	2	3.593	38	2.469	8	3.948	13
16			min	-966.823	6	574.972	71	-1562.81	8	-3.458	32	-2.53	2	-0.06	7
17		4	max	1472.665	12	2111.046	14	1598.205	2	3.593	38	1.233	8	2.268	13
18			min	-966.201	6	566.591	71	-1559.412	8	-3.458	32	-1.264	2	-0.674	7
19		5	max	1472.043	12	2087.629	14	1594.807	2	3.593	38	0	75	1.446	1
20			min	-965.579	6	558.21	71	-1556.014	8	-3.458	32	0	1	-1.278	7
21	MP3A	1	max	0	75	0.012	32	0.004	41	0	75	0	75	0	75
22			min	0	1	-0.017	38	-0.008	23	0	1	0	1	0	1
23		2	max	261.445	21	67.773	9	256.16	2	0.023	12	0.16	2	0.194	33
24			min	-12.433	27	-582.608	27	-122.048	8	-0.076	18	-0.076	32	0.018	39
25		3	max	-20.956	75	103.914	3	178.911	7	0.06	5	0.432	1	0.236	3
26			min	-132.005	14	-103.929	9	-178.867	1	-0.06	9	-0.407	7	-0.236	9
27		4	max	-16.487	75	92.068	3	165.234	7	0.06	5	0.174	1	0.089	3
28			min	-113.539	14	-92.084	9	-165.189	1	-0.06	9	-0.149	7	-0.089	9
29		5	max	0	75	0.248	38	0.489	24	0	75	0	75	0	75
30			min	0	1	-0.315	32	-0.1	6	0	1	0	1	0	1
31	MP2A	1	max	0	75	0.672	32	0.099	48	0	75	0	75	0	75
32			min	0	1	-0.876	38	-0.457	15	0	1	0	1	0	1
33		2	max	806.439	13	618.444	8	445.447	24	0.39	2	0.541	1	0.126	3
34			min	213.146	70	-390.733	2	-41.462	6	-0.343	8	-0.32	7	-0.225	33
35		3	max	-78.451	69	242.858	3	443.025	7	0.146	5	1.162	1	0.607	3
36			min	-353.028	18	-242.631	9	-442.71	1	-0.146	11	-1.048	7	-0.606	9
37		4	max	-11.757	69	27.639	4	26.89	7	0	75	0.032	1	0.035	4
38			min	-39.326	18	-27.413	10	-26.575	1	0	1	-0.033	7	-0.034	10
39		5	max	0	75	1.146	37	2.047	13	0	75	0	75	0	75
40			min	0	1	-0.674	31	-0.705	7	0	1	0	1	0	1
41	MP1A	1	max	0	75	0.012	32	0.004	8	0	75	0	75	0	75
42			min	0	1	-0.018	38	-0.012	14	0	1	0	1	0	1
43		2	max	49.736	3	489.84	44	200.904	8	0.053	2	0.111	13	0.038	9
44			min	-246.989	45	-16.01	2	-109.155	2	-0.026	8	-0.009	7	-0.055	38
45		3	max	-44.69	75	86.99	3	152.535	7	0.047	5	0.203	1	0.099	3
46			min	-164.729	14	-86.854	9	-152.385	1	-0.047	9	-0.128	7	-0.099	9
47		4	max	-4.469	75	13.9	4	13.503	7	0	75	0.01	1	0.011	4
48			min	-18.466	14	-13.765	10	-13.354	1	0	1	-0.01	7	-0.01	10
49		5	max	0	75	0.763	38	0.674	13	0	75	0	75	0	75
50			min	0	1	-0.43	32	-0.174	7	0	1	0	1	0	1
51	M6	1	max	0	75	0.045	32	-0.001	7	0	75	0	75	0	75
52			min	0	1	-0.058	38	-0.069	13	0	1	0	1	0	1
53		2	max	9.198	20	3.552	10	3.522	1	0	75	0.001	1	0.001	4
54			min	3.242	64	-3.561	4	-3.545	7	0	1	-0.001	7	-0.001	10
55		3	max	18.396	20	7.097	10	7.067	1	0	75	0.003	1	0.003	4

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
56			min	6.484	64	-7.105	4	-7.09	7	0	1	-0.003	7	-0.003	10
57		4	max	-3.242	75	3.561	4	3.545	7	0	75	0.001	1	0.001	4
58			min	-9.198	19	-3.552	10	-3.522	1	0	1	-0.001	7	-0.001	10
59		5	max	0	75	0.058	38	0.069	13	0	75	0	75	0	75
60			min	0	1	-0.045	32	0.001	7	0	1	0	1	0	1
61	M7	1	max	0	75	0.021	2	0.026	6	0	75	0	75	0	75
62			min	0	1	-0.002	24	-0.001	44	0	1	0	1	0	1
63		2	max	-64.27	8	30.708	9	270.467	6	-0.035	11	0.413	6	0.03	8
64			min	-573.243	26	-163.783	27	-136.318	12	-0.263	29	-0.28	12	-0.196	14
65		3	max	41.488	7	61.517	8	55.406	12	0.211	35	0.086	8	0.29	38
66			min	-504.432	25	-140.675	38	-179.257	17	-0.021	5	-0.252	14	-0.108	9
67		4	max	-2.264	2	254.959	45	138.972	2	0.187	8	0.388	8	0.047	36
68			min	-484.537	44	-30.5	3	-228.802	8	-0.189	2	-0.306	2	-0.025	6
69		5	max	0	75	0.003	24	0.006	12	0	75	0	75	0	75
70			min	0	1	-0.021	2	-0.039	2	0	1	0	1	0	1
71	M8	1	max	205.97	2	94.412	20	873.164	8	0.017	32	0	75	0.015	32
72			min	-328.516	8	-1.33	2	-564.57	2	-0.053	38	0	1	-0.037	38
73		2	max	202.859	2	104.935	20	876.275	8	0.017	32	0.328	8	0.013	32
74			min	-325.405	8	2.473	2	-567.681	2	-0.053	38	-0.212	2	-0.064	43
75		3	max	199.748	2	115.458	20	879.386	8	0.077	33	0.657	8	-0.043	2
76			min	-322.294	8	-198.795	31	-570.791	2	-0.053	38	-0.426	2	-0.226	32
77		4	max	146.94	12	-42.103	38	236.988	12	0.077	33	0.166	6	0.017	38
78			min	-303.896	6	-194.993	31	-445.811	6	-0.026	39	-0.087	12	-0.153	32
79		5	max	149.064	12	-38.3	38	229.058	12	0.077	33	0	75	0.032	38
80			min	-306.021	6	-191.19	31	-437.881	6	-0.026	39	0	1	-0.08	33
81	M9	1	max	272.418	12	-40.239	38	43.472	11	0.01	38	0	75	0.041	39
82			min	-533.672	6	-187.425	32	-43.472	5	-0.017	32	0	1	-0.11	33
83		2	max	263.875	12	-31.908	38	21.736	11	0.01	38	0.029	11	0.1	17
84			min	-525.129	6	-179.094	32	-21.736	5	-0.017	32	-0.029	5	0.025	11
85		3	max	255.332	12	-23.578	38	0	75	0.01	38	0.039	11	0.216	18
86			min	-516.586	6	-170.764	32	0	1	-0.017	32	-0.039	5	0.065	75
87		4	max	246.789	12	-15.247	38	21.736	5	0.01	38	0.029	11	0.358	30
88			min	-508.043	6	-162.433	32	-21.736	11	-0.017	32	-0.029	5	0.095	65
89		5	max	238.246	12	-6.916	38	43.472	5	0.01	38	0	75	0.498	30
90			min	-499.5	6	-154.103	32	-43.472	11	-0.017	32	0	1	0.119	65
91	M10	1	max	599.26	2	90.472	20	60.623	3	0.012	38	0	75	0.064	38
92			min	-931.048	8	-0.145	26	-60.623	9	-0.006	32	0	1	-0.022	32
93		2	max	589.511	2	59.43	20	30.312	3	0.012	38	0.054	3	0.034	2
94			min	-921.298	8	-11.262	26	-30.312	9	-0.006	32	-0.054	9	-0.075	8
95		3	max	579.761	2	44.609	44	0	75	0.012	38	0.072	3	0.05	2
96			min	-911.548	8	-22.379	26	0	1	-0.006	32	-0.072	9	-0.127	8
97		4	max	570.011	2	33.492	44	30.312	9	0.012	38	0.054	3	0.079	2
98			min	-901.799	8	-33.496	26	-30.312	3	-0.006	32	-0.054	9	-0.167	8
99		5	max	560.261	2	22.375	44	60.623	9	0.012	38	0	75	0.121	2
100			min	-892.049	8	-49.2	14	-60.623	3	-0.006	32	0	1	-0.192	8
101	M11	1	max	119.461	12	159.508	27	-53.324	8	0.436	26	0.19	17	-0.035	11
102			min	-253.983	6	-43.246	9	-572.917	26	-0.091	8	0.021	11	-0.263	29
103		2	max	119.461	12	159.508	27	-53.324	8	0.436	26	0.161	17	-0.034	11
104			min	-253.983	6	-43.246	9	-572.917	26	-0.091	8	0.013	11	-0.273	29
105		3	max	119.461	12	159.508	27	-53.324	8	0.436	26	0.132	18	-0.032	11
106			min	-253.983	6	-43.246	9	-572.917	26	-0.091	8	0.004	11	-0.283	29
107		4	max	119.461	12	159.508	27	-53.324	8	0.436	26	0.103	18	-0.03	11
108			min	-253.983	6	-43.246	9	-572.917	26	-0.091	8	-0.004	11	-0.293	29
109		5	max	119.461	12	159.508	27	-53.324	8	0.436	26	0.075	18	-0.028	11
110			min	-253.983	6	-43.246	9	-572.917	26	-0.091	8	-0.012	12	-0.302	29

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
111	M12	1	max	406.052	2	412.608	21	587.564	27	1.006	26	0.107	11	0.177	12
112			min	-271.652	8	23.736	27	-181.588	9	0.162	8	-0.223	5	-0.393	6
113		2	max	406.052	2	412.608	21	587.564	27	1.006	26	0.098	11	0.165	12
114			min	-271.652	8	23.736	27	-181.588	9	0.162	8	-0.192	5	-0.4	6
115		3	max	406.052	2	412.608	21	587.564	27	1.006	26	0.09	11	0.153	12
116			min	-271.652	8	23.736	27	-181.588	9	0.162	8	-0.161	5	-0.407	6
117		4	max	406.052	2	412.608	21	587.564	27	1.006	26	0.081	11	0.142	12
118			min	-271.652	8	23.736	27	-181.588	9	0.162	8	-0.13	5	-0.414	6
119		5	max	406.052	2	412.608	21	587.564	27	1.006	26	0.072	11	0.13	12
120			min	-271.652	8	23.736	27	-181.588	9	0.162	8	-0.099	6	-0.421	6
121	M13	1	max	183.285	1	-82.982	70	461.873	32	0.438	3	0.339	8	0.063	6
122			min	-479.715	19	-379.296	37	-171.322	2	-0.573	9	-0.444	2	-0.208	12
123		2	max	183.285	1	-82.982	70	461.873	32	0.438	3	0.364	8	0.07	6
124			min	-479.715	19	-379.296	37	-171.322	2	-0.573	9	-0.455	2	-0.199	12
125		3	max	183.285	1	-82.982	70	461.873	32	0.438	3	0.39	8	0.076	6
126			min	-479.715	19	-379.296	37	-171.322	2	-0.573	9	-0.466	2	-0.191	12
127		4	max	183.285	1	-82.982	70	461.873	32	0.438	3	0.415	8	0.083	6
128			min	-479.715	19	-379.296	37	-171.322	2	-0.573	9	-0.477	2	-0.182	12
129		5	max	183.285	1	-82.982	70	461.873	32	0.438	3	0.44	8	0.089	6
130			min	-479.715	19	-379.296	37	-171.322	2	-0.573	9	-0.487	2	-0.174	12
131	M14	1	max	779.808	1	1202.628	13	653.592	3	0.078	1	0.332	12	0.711	1
132			min	-506.226	7	303.466	70	-883.118	9	-0.9	31	-0.224	6	-1.012	7
133		2	max	779.808	1	1202.628	13	653.592	3	0.078	1	0.298	12	0.682	1
134			min	-506.226	7	303.466	70	-883.118	9	-0.9	31	-0.204	6	-1.037	7
135		3	max	779.808	1	1202.628	13	653.592	3	0.078	1	0.294	1	0.653	1
136			min	-506.226	7	303.466	70	-883.118	9	-0.9	31	-0.215	7	-1.062	7
137		4	max	779.808	1	1202.628	13	653.592	3	0.078	1	0.298	1	0.624	1
138			min	-506.226	7	303.466	70	-883.118	9	-0.9	31	-0.233	7	-1.087	7
139		5	max	779.808	1	1202.628	13	653.592	3	0.078	1	0.303	1	0.595	1
140			min	-506.226	7	303.466	70	-883.118	9	-0.9	31	-0.252	7	-1.112	7
141	M15	1	max	120.483	2	253.274	45	483.793	44	0.059	2	-0.021	6	0.189	2
142			min	-213.409	8	-43.155	3	-6.207	2	-0.48	44	-0.122	48	-0.187	8
143		2	max	120.483	2	253.274	45	483.793	44	0.059	2	-0.015	7	0.192	2
144			min	-213.409	8	-43.155	3	-6.207	2	-0.48	44	-0.095	24	-0.196	8
145		3	max	120.483	2	253.274	45	483.793	44	0.059	2	-0.004	7	0.194	2
146			min	-213.409	8	-43.155	3	-6.207	2	-0.48	44	-0.077	14	-0.205	8
147		4	max	120.483	2	253.274	45	483.793	44	0.059	2	0.01	8	0.196	2
148			min	-213.409	8	-43.155	3	-6.207	2	-0.48	44	-0.06	14	-0.214	8
149		5	max	120.483	2	253.274	45	483.793	44	0.059	2	0.026	8	0.199	2
150			min	-213.409	8	-43.155	3	-6.207	2	-0.48	44	-0.053	2	-0.223	8
151	M16	1	max	241.852	12	212.157	15	176.982	3	-0.048	2	0.197	11	0.239	2
152			min	-153.923	6	-128.287	45	-494.382	45	-0.745	44	-0.111	5	-0.258	8
153		2	max	241.852	12	212.157	15	176.982	3	-0.048	2	0.173	11	0.228	2
154			min	-153.923	6	-128.287	45	-494.382	45	-0.745	44	-0.102	5	-0.256	8
155		3	max	241.852	12	212.157	15	176.982	3	-0.048	2	0.149	11	0.218	2
156			min	-153.923	6	-128.287	45	-494.382	45	-0.745	44	-0.092	5	-0.255	8
157		4	max	241.852	12	212.157	15	176.982	3	-0.048	2	0.125	11	0.208	2
158			min	-153.923	6	-128.287	45	-494.382	45	-0.745	44	-0.083	5	-0.254	8
159		5	max	241.852	12	212.157	15	176.982	3	-0.048	2	0.104	12	0.197	2
160			min	-153.923	6	-128.287	45	-494.382	45	-0.745	44	-0.076	6	-0.253	8
161	M17	1	max	1553.642	1	-545.295	71	1416.624	3	3.649	38	0.631	9	0.929	1
162			min	-1057.419	7	-2053.189	14	-1515.021	9	-3.517	32	-0.59	3	-1.462	7
163		2	max	1553.642	1	-545.295	71	1416.624	3	3.649	38	0.473	9	1.013	1
164			min	-1057.419	7	-2053.189	14	-1515.021	9	-3.517	32	-0.443	3	-1.385	7
165		3	max	1553.642	1	-545.295	71	1416.624	3	3.649	38	0.316	9	1.096	1

Envelope Member Section Forces (Continued)

	Member	Sec		Axial[lb]	LC	y Shear[lb]	LC	z Shear[lb]	LC	Torque[k-ft]	LC	y-y Moment[k-ft]	LC	z-z Moment[k-ft]	LC
166			min	-1057.419	7	-2053.189	14	-1515.021	9	-3.517	32	-0.295	3	-1.308	7
167		4	max	1553.642	1	-545.295	71	1416.624	3	3.649	38	0.158	9	1.18	1
168			min	-1057.419	7	-2053.189	14	-1515.021	9	-3.517	32	-0.148	3	-1.231	7
169		5	max	1553.642	1	-545.295	71	1416.624	3	3.649	38	0	3	1.263	1
170			min	-1057.419	7	-2053.189	14	-1515.021	9	-3.517	32	0	4	-1.154	7
171	MP4A	1	max	1316.678	9	1553.124	14	1087.909	1	1.205	7	1.424	7	3.524	38
172			min	-849.368	3	398.52	72	-728.73	7	-0.89	1	-2.012	1	-0.373	32
173		2	max	496.882	45	697.717	39	293.689	12	0.258	8	0.638	7	1.612	38
174			min	-195.653	3	27.608	9	-204.931	6	-0.239	2	-0.855	1	-0.234	9
175		3	max	496.616	45	684.51	39	280.954	12	0.258	8	0.338	7	0.532	38
176			min	-191.408	3	14.401	9	-192.196	6	-0.239	2	-0.418	1	-0.27	8
177		4	max	495.955	45	658.079	39	255.551	12	0.258	8	0.167	8	0.013	2
178			min	-180.821	3	-12.03	9	-166.793	6	-0.239	2	-0.109	2	-0.537	44
179		5	max	0	75	0.005	24	0.011	12	0	75	0	75	0	75
180			min	0	1	-0.032	2	-0.057	2	0	1	0	1	0	1

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
1	M2	HSS4X4X4	0.565	0	2	0.304	0	y	38	133783.978	139518	16.181	16.181	1.373	H1-1b
2	MP4A	PIPE_3.0	0.635	0	38	0.281	0		7	25929.458	65205	5.749	5.749	1	H1-1b
3	M7	PIPE_2.0	0.313	7.552	20	0.182	3.255		18	6295.422	32130	1.872	1.872	1	H1-1b
4	MP2A	PIPE_2.5	0.441	4.062	1	0.154	3.958		2	22373.407	50715	3.596	3.596	1	H1-1b
5	MP3A	PIPE_2.0	0.533	2.875	27	0.108	0.938		17	20866.733	32130	1.872	1.872	1	H1-1b
6	M1	PIPE_3.0	0.56	6.25	35	0.088	6.25		6	25929.458	65205	5.749	5.749	1	H1-1b
7	MP1A	PIPE_2.0	0.398	2.875	45	0.066	2.875		11	20866.733	32130	1.872	1.872	1	H1-1b
8	M6	PIPE_4.0	0	0.75	20	0	0.75		5	92571.332	93240	10.631	10.631	1	H1-1b*

Envelope AISI S100-10: LRFD Member Cold Formed Steel Code Checks

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pn[lb]	phi*Tn[lb]	phi*Mnyy[k-ft]	phi*Mnzz[k-ft]	Cb	C_{myy}	C_{mzz}	Eqn
1	M8	6CU4x1875	0.278	0.75	32	0.274	0.766	y	33	60613.627	73752.97	3.726	10.577	1.438	0.85	0.85	C3.3.2-1
2	M9	5.5CU3.75x1875	0.09	3.555	32	0.074	0	y	32	51846.326	68184.22	3.248	9.224	1.88	1	0.85	C3.3.2-1
3	M10	5.5CU3.75x1875	0.049	0	38	0.049	0	y	38	47821.766	68184.22	3.248	9.224	1.843	1	0.85	C3.3.2-1

Envelope AA ADM1-10: ASD - BUILDING Member Aluminum Code Checks

No Data to Print...

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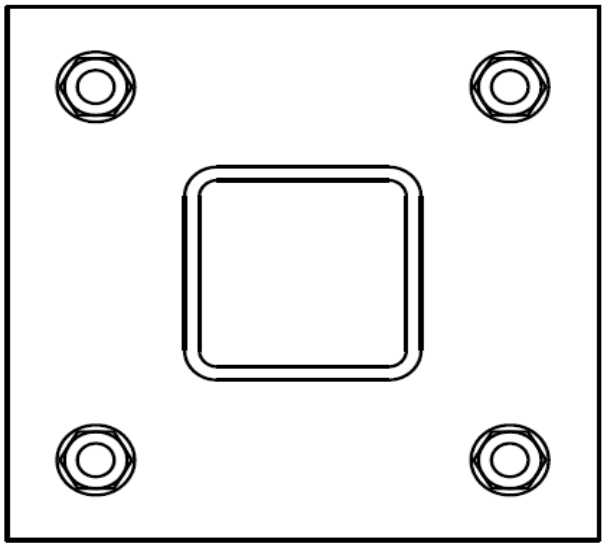
Standoff Arm Flange Connection Check

			Date: 2/14/2023
Customer:	SBA	TIA Standard:	ANSI/TIA-222-H
Carrier:	T-Mobile	Mount Elev. [ft]:	
Site Name:		Engineer Name:	S. Bhujel
Site Number:		Project #:	

NOTE: The calculations shown below are for a single representative load combination for example purposes. The results for all load combinations are presented in the Results Summary Table.

RISA Member Label =	M2	
I or J End?	I	
Load Combination # =	2	
Plate Width, Wp =	10	[In]
Plate Height, Hp =	10	[In]
Plate Thickness, tp =	0.625	[In]
Plate Fy =	36	[KSI]
Bolt Diameter, db =	0.5	[In]
Bolt Fu =	120	[KSI]
Bolt Horizontal Spacing, Sbh =	7	[In]
Bolt Vertical Spacing, Sbv =	7	[In]
Standoff Member Shape =	Rect Tube	
Member Width, Wm =	4	[In]
Member Depth, Dm =	4	[In]
Member Thickness, tm =	0.25	[In]
Standoff Weld Size =	0.1875	[In]
# Standoff Welds =	2	
Length of Stiffener, Ls =		[In]
Width of Stiffener, Ws =		[In]
Width of Notch, Wn =		[In]
Stiffener Dim 1, ds1 =		[In]
Stiffener Dim 2, ds2 =		[In]
Stiffener Fy =		[KSI]
Stiffener Weld Size =		[In]
# Stiffener Welds =		



Typical Connection Detail

NOTES

Capacity Checks:

Max Bolt Shear =	1.168	[Kips]
Bolt Shear Capacity =	8.84	[Kips]
Max Bolt Shear Usage =	13.2%	PASS
Max Bolt Tension =	7.56	[Kips]
Bolt Tension Capacity =	12.77	[Kips]
Max Bolt Tension Usage =	59.2%	PASS
Max Bolt Interaction =	60.2%	PASS
Max Plate Bending Moment =	17.81	[Kip-In]
Length of Yield Line =	7.75	[In]
Plate Moment Capacity =	24.52	[Kip-In]
Max Plate Usage =	72.6%	PASS
Max Weld Usage =	11.8%	PASS

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Standoff Arm Flange Connection Check			Date
			2/14/2023
Customer:	SBA	TIA Standard:	ANSI/TIA-222-H
Carrier:	T-Mobile	Mount Elev. [ft]:	
Site Name:		Engineer Name:	S. Bhujel
Site Number:		Project #:	

Results Summary Table

Member Label	Member End	Load Combo #	Max Bolt Shear [K]	Max Bolt Tension [K]	Bolt Shear Check	Bolt Tension Check	Bolt Interaction Check	Plate Bending Check	Weld Check
M2	I	1	0.5835	4.9434	6.6%	38.7%	39.0%	47.5%	16.3%
M2	I	2	1.1677	7.5639	13.2%	59.2%	60.2%	72.6%	11.8%
M2	I	3	1.1172	7.0671	12.6%	55.3%	56.3%	67.9%	13.3%
M2	I	4	0.9104	5.8698	10.3%	46.0%	46.7%	56.4%	9.5%
M2	I	5	0.8830	5.3673	10.0%	42.0%	42.7%	51.5%	10.5%
M2	I	6	0.5924	3.4556	6.7%	27.1%	27.4%	33.2%	4.9%
M2	I	7	0.4431	2.9498	5.0%	23.1%	23.3%	28.3%	23.0%
M2	I	8	1.0239	5.4139	11.6%	42.4%	43.5%	52.0%	43.0%
M2	I	9	0.9941	5.6763	11.3%	44.4%	45.4%	54.5%	46.1%
M2	I	10	0.7963	5.1631	9.0%	40.4%	41.0%	49.6%	43.1%
M2	I	11	0.7762	5.1914	8.8%	40.7%	41.2%	49.8%	44.7%
M2	I	12	0.4896	4.2378	5.5%	33.2%	33.4%	40.7%	38.6%
M2	I	13	0.7018	6.5353	7.9%	51.2%	51.4%	63.3%	47.5%
M2	I	14	0.8071	7.1682	9.1%	56.1%	56.4%	68.8%	42.4%
M2	I	15	0.7962	7.0954	9.0%	55.6%	55.8%	68.1%	41.2%
M2	I	16	0.7552	6.8194	8.5%	53.4%	53.6%	65.5%	41.6%
M2	I	17	0.7525	6.6647	8.5%	52.2%	52.4%	64.0%	41.4%
M2	I	18	0.7069	6.1898	8.0%	48.5%	48.7%	59.8%	43.0%
M2	I	19	0.5995	5.9052	6.8%	46.2%	46.7%	58.5%	48.3%
M2	I	20	0.5622	6.5032	6.4%	50.9%	51.3%	62.4%	53.4%
M2	I	21	0.5547	6.5990	6.3%	51.7%	52.0%	63.4%	54.6%
M2	I	22	0.5681	6.4951	6.4%	50.9%	51.3%	62.4%	54.2%
M2	I	23	0.5663	6.4803	6.4%	50.7%	51.1%	62.2%	54.4%
M2	I	24	0.5940	6.2310	6.7%	48.8%	49.2%	62.0%	52.8%
M2	I	25	2.3267	3.5869	26.3%	28.1%	38.4%	35.9%	32.5%
M2	I	26	2.3102	3.7520	26.1%	29.4%	39.1%	36.0%	31.3%
M2	I	27	2.3117	3.7230	26.2%	29.2%	38.9%	35.7%	31.1%
M2	I	28	2.3169	3.6489	26.2%	28.6%	38.5%	35.5%	31.2%
M2	I	29	2.3153	3.6194	26.2%	28.3%	38.4%	35.3%	31.1%
M2	I	30	2.3213	3.4998	26.3%	27.4%	37.8%	35.0%	31.5%
M2	I	31	2.3481	3.3624	26.6%	26.3%	36.8%	34.7%	32.8%
M2	I	32	2.3832	3.5174	27.0%	27.5%	36.2%	34.6%	34.0%
M2	I	33	2.3813	3.5345	27.0%	27.7%	36.4%	34.8%	34.3%
M2	I	34	2.3699	3.5024	26.8%	27.4%	36.7%	35.1%	34.1%
M2	I	35	2.3691	3.5045	26.8%	27.4%	36.8%	35.2%	34.2%
M2	I	36	2.3533	3.4461	26.6%	27.0%	37.3%	35.5%	33.8%
M2	I	37	2.4540	4.8012	27.8%	37.6%	44.8%	48.6%	41.9%
M2	I	38	2.4875	4.9645	28.2%	38.9%	44.6%	48.7%	40.8%
M2	I	39	2.4845	4.9328	28.1%	38.6%	44.4%	48.4%	40.6%
M2	I	40	2.4716	4.8570	28.0%	38.0%	44.1%	48.2%	40.7%
M2	I	41	2.4699	4.8249	28.0%	37.8%	44.1%	48.0%	40.6%
M2	I	42	2.4516	4.7027	27.7%	36.8%	44.3%	47.7%	40.9%

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Standoff Arm Flange Connection Check			Date
			2/14/2023
Customer:	SBA	TIA Standard:	ANSI/TIA-222-H
Carrier:	T-Mobile	Mount Elev. [ft]:	
Site Name:		Engineer Name:	S. Bhujel
Site Number:		Project #:	

Results Summary Table (Continued)

Member Label	Member End	Load Combo #	Max Bolt Shear [K]	Max Bolt Tension [K]	Bolt Shear Check	Bolt Tension Check	Bolt Interaction Check	Plate Bending Check	Weld Check
M2	I	43	2.4137	4.5920	27.3%	36.0%	45.1%	47.4%	42.0%
M2	I	44	2.3981	4.7454	27.1%	37.2%	45.8%	47.3%	43.2%
M2	I	45	2.4009	4.7617	27.2%	37.3%	46.0%	47.6%	43.4%
M2	I	46	2.4070	4.7279	27.2%	37.0%	45.8%	47.8%	43.3%
M2	I	47	2.4073	4.7292	27.2%	37.0%	45.9%	48.0%	43.4%
M2	I	48	2.4149	4.6699	27.3%	36.6%	45.6%	48.3%	43.1%
M2	I	49	0.2491	2.2245	2.8%	17.4%	17.5%	23.0%	18.0%
M2	I	50	0.3417	2.6879	3.9%	21.0%	21.3%	27.8%	21.7%
M2	I	51	0.2902	2.5949	3.3%	20.3%	20.4%	26.8%	21.0%
M2	I	52	0.2677	2.3827	3.0%	18.7%	18.8%	24.0%	18.5%
M2	I	53	0.2873	2.4956	3.3%	19.5%	19.6%	24.1%	17.7%
M2	I	54	0.2990	2.5553	3.4%	20.0%	20.1%	24.5%	17.1%
M2	I	55	0.2994	2.5482	3.4%	20.0%	20.0%	24.5%	17.0%
M2	I	56	0.2878	2.4736	3.3%	19.4%	19.5%	23.8%	17.2%
M2	I	57	0.2685	2.3536	3.0%	18.4%	18.5%	23.7%	17.9%
M2	I	58	0.2483	2.2716	2.8%	17.8%	18.0%	23.5%	18.7%
M2	I	59	0.2342	2.3676	2.7%	18.5%	18.7%	23.4%	19.5%
M2	I	60	0.2254	2.4294	2.6%	19.0%	19.2%	23.4%	20.1%
M2	I	61	0.2256	2.4400	2.6%	19.1%	19.3%	23.5%	20.2%
M2	I	62	0.2339	2.3973	2.6%	18.8%	19.0%	23.7%	20.0%
M2	I	63	0.2483	2.3110	2.8%	18.1%	18.3%	23.9%	19.3%
M2	I	64	0.1885	1.6734	2.1%	13.1%	13.2%	16.7%	12.7%
M2	I	65	0.2081	1.7855	2.4%	14.0%	14.0%	17.1%	11.9%
M2	I	66	0.2209	1.8460	2.5%	14.5%	14.5%	17.7%	11.4%
M2	I	67	0.2208	1.8380	2.5%	14.4%	14.5%	17.6%	11.2%
M2	I	68	0.2087	1.7635	2.4%	13.8%	13.9%	16.9%	11.5%
M2	I	69	0.1888	1.6435	2.1%	12.9%	12.9%	16.3%	12.1%
M2	I	70	0.1693	1.5811	1.9%	12.4%	12.5%	16.2%	13.0%
M2	I	71	0.1546	1.6771	1.8%	13.1%	13.2%	16.1%	13.8%
M2	I	72	0.1521	1.7390	1.7%	13.6%	13.7%	16.7%	14.3%
M2	I	73	0.1528	1.7487	1.7%	13.7%	13.8%	16.8%	14.5%
M2	I	74	0.1543	1.7060	1.7%	13.4%	13.5%	16.4%	14.2%
M2	I	75	0.1687	1.6205	1.9%	12.7%	12.8%	16.5%	13.6%

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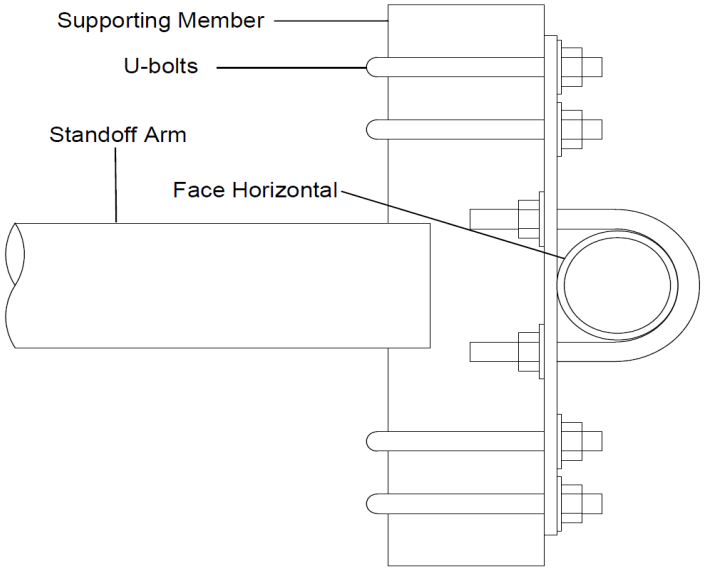
U-bolt Connection Rotation and Sliding Check

			Date: 2/14/2023
Customer:	SBA	TIA Standard:	ANSI/TIA-222-H
Carrier:	T-Mobile	Mount Elev. [ft]:	
Site Name:		Engineer Name:	S. Bhujel
Site Number:		TES Project #:	

NOTE: The calculations shown below are for a single representative load combination for example purposes. The results for all load combinations are presented in the Results Summary Table starting on the next page.

RISA Member Label =	M17	
I or J End?	J	
Load Combination # =	13	
ϕ_U =	1.00	
Applied Shear (Sliding), V_{US} =	2.052	[Kips]
Total Shear , V_{UB} =	2.054	[Kips]
Applied Torsional Moment, T_{UR} =	0.000	[Kip-Ft]
Applied Tension, T_{UT} =	0.000	[Kips]
# of U-bolts =	2	
Diameter of U-bolts =	0.625	[Inches]
U-bolt Fy =	36	[KSI]
U-bolt Fu =	58	[KSI]
Diameter of Vertical Pipe =	4.5	[Inches]



Typical Connection Detail

Check Bolt Tension:

Total U-bolt Tension, T_{UT} =	0.000	[Kips]
U-bolt Tension Capacity, ϕR_{NT} =	37.552	[Kips]
Max Usage =	0%	PASS

Check Bolt Shear:

Total U-bolt Shear, V_{UB} =	2.054	[Kips]
U-bolt Shear Capacity, ϕR_{NV} =	26.691	[Kips]
Max Usage =	7.7%	PASS

Check Combined Bolt Shear & Tension:

$$\left(\frac{V_{ub}}{\phi R_{nv}}\right)^2 + \left(\frac{T_{ub}}{\phi R_{nt}}\right)^2 \le 1$$

Interaction Ratio =	0.006	
Max Usage =	7.7%	PASS

Check Sliding:

Applied Shear (Sliding), V_{US} =	2.052	[Kips]
Assumed Pretension Stress =	20	[KSI]
U-bolt Pretension Per Leg, T_P =	6.14	[Kips]
Nominal Sliding Strength, R_{NS} =	7.363	[Kips]
ϕ_U =	1.00	
Max Usage =	27.9%	PASS

Check Rotation:

Applied Torsional Moment, T_{UR} =	0.0000	[Kip-Ft]
Nominal Torsional Strength, R_{NR} =	1.3806	[Kip-Ft]
ϕ_U =	1.00	
Max Usage =	0%	PASS

Check Sliding/Rotation Interaction:

$$\left(\frac{V_{us}}{\phi_u R_{ns}}\right)^2 + \left(\frac{T_{ur}}{\phi_u R_{nr}}\right)^2 \le 1.0$$

ϕ_U =	1.00	
Interaction Ratio =	0.078	
Max Usage =	27.9%	PASS

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U-bolt Connection Rotation and Sliding Check			Date
			2/14/2023
Customer:	SBA	TIA Standard:	ANSI/TIA-222-H
Carrier:	T-Mobile	Mount Elev. [ft]:	
Site Name:		Engineer Name:	S. Bhujel
Site Number:		TES Project #:	

Results Summary Table

Member Label	Member End	Load Combo #	Tension T_{UT} [K]	Sliding Shear V_{US} [K]	Total Shear V_{UB} [K]	Torsion T_{UR} [Kip-Ft]	Bolt Tension Check	Bolt Shear Check	Combined Shear & Tension	Sliding Check	Rotation Check	Sliding/ Rotation Interaction
M17	J	1	0.0000	0.8019	0.8468	0.0000	0.0%	3.2%	3.2%	10.9%	0.0%	10.9%
M17	J	2	0.0000	0.8116	1.5568	0.0000	0.0%	5.8%	5.8%	11.0%	0.0%	11.0%
M17	J	3	0.0000	0.7985	1.6262	0.0000	0.0%	6.1%	6.1%	10.8%	0.0%	10.8%
M17	J	4	0.0000	0.7850	1.4259	0.0000	0.0%	5.3%	5.3%	10.7%	0.0%	10.7%
M17	J	5	0.1797	0.7776	1.4450	0.0000	0.5%	5.4%	5.4%	10.6%	0.0%	10.6%
M17	J	6	0.7604	0.7622	1.1312	0.0000	2.0%	4.2%	4.7%	10.7%	0.0%	10.7%
M17	J	7	1.0574	0.7394	0.8203	0.0000	2.8%	3.1%	4.2%	10.5%	0.0%	10.5%
M17	J	8	0.7127	0.7284	1.5808	0.0000	1.9%	5.9%	6.2%	10.2%	0.0%	10.2%
M17	J	9	0.1262	0.7361	1.6844	0.0000	0.3%	6.3%	6.3%	10.0%	0.0%	10.0%
M17	J	10	0.0000	0.7474	1.5003	0.0000	0.0%	5.6%	5.6%	10.2%	0.0%	10.2%
M17	J	11	0.0000	0.7556	1.5360	0.0000	0.0%	5.8%	5.8%	10.3%	0.0%	10.3%
M17	J	12	0.0000	0.7744	1.2286	0.0000	0.0%	4.6%	4.6%	10.5%	0.0%	10.5%
M17	J	13	0.0000	2.0523	2.0542	0.0000	0.0%	7.7%	7.7%	27.9%	0.0%	27.9%
M17	J	14	0.0000	2.0532	2.0596	0.0000	0.0%	7.7%	7.7%	27.9%	0.0%	27.9%
M17	J	15	0.0000	2.0484	2.0580	0.0000	0.0%	7.7%	7.7%	27.8%	0.0%	27.8%
M17	J	16	0.0000	2.0437	2.0492	0.0000	0.0%	7.7%	7.7%	27.8%	0.0%	27.8%
M17	J	17	0.0000	2.0398	2.0453	0.0000	0.0%	7.7%	7.7%	27.7%	0.0%	27.7%
M17	J	18	0.0000	2.0336	2.0343	0.0000	0.0%	7.6%	7.6%	27.6%	0.0%	27.6%
M17	J	19	0.0000	2.0272	2.0407	0.0000	0.0%	7.6%	7.6%	27.5%	0.0%	27.5%
M17	J	20	0.0000	2.0262	2.0835	0.0000	0.0%	7.8%	7.8%	27.5%	0.0%	27.5%
M17	J	21	0.0000	2.0306	2.0966	0.0000	0.0%	7.9%	7.9%	27.6%	0.0%	27.6%
M17	J	22	0.0000	2.0353	2.0902	0.0000	0.0%	7.8%	7.8%	27.6%	0.0%	27.6%
M17	J	23	0.0000	2.0392	2.0937	0.0000	0.0%	7.8%	7.8%	27.7%	0.0%	27.7%
M17	J	24	0.0000	2.0456	2.0797	0.0000	0.0%	7.8%	7.8%	27.8%	0.0%	27.8%
M17	J	25	0.0000	1.4285	1.4296	0.0000	0.0%	5.4%	5.4%	19.4%	0.0%	19.4%
M17	J	26	0.0000	1.4288	1.4288	0.0000	0.0%	5.4%	5.4%	19.4%	0.0%	19.4%
M17	J	27	0.0000	1.4280	1.4281	0.0000	0.0%	5.4%	5.4%	19.4%	0.0%	19.4%
M17	J	28	0.0000	1.4271	1.4271	0.0000	0.0%	5.3%	5.3%	19.4%	0.0%	19.4%
M17	J	29	0.0000	1.4265	1.4265	0.0000	0.0%	5.3%	5.3%	19.4%	0.0%	19.4%
M17	J	30	0.0000	1.4254	1.4255	0.0000	0.0%	5.3%	5.3%	19.4%	0.0%	19.4%
M17	J	31	0.0000	1.4241	1.4272	0.0000	0.0%	5.3%	5.3%	19.3%	0.0%	19.3%
M17	J	32	0.0000	1.4237	1.4327	0.0000	0.0%	5.4%	5.4%	19.3%	0.0%	19.3%
M17	J	33	0.0000	1.4245	1.4343	0.0000	0.0%	5.4%	5.4%	19.3%	0.0%	19.3%
M17	J	34	0.0000	1.4253	1.4336	0.0000	0.0%	5.4%	5.4%	19.4%	0.0%	19.4%
M17	J	35	0.0000	1.4260	1.4345	0.0000	0.0%	5.4%	5.4%	19.4%	0.0%	19.4%
M17	J	36	0.0000	1.4271	1.4333	0.0000	0.0%	5.4%	5.4%	19.4%	0.0%	19.4%
M17	J	37	0.0000	1.5097	1.5129	0.0000	0.0%	5.7%	5.7%	20.5%	0.0%	20.5%
M17	J	38	0.0000	1.5105	1.5109	0.0000	0.0%	5.7%	5.7%	20.5%	0.0%	20.5%
M17	J	39	0.0000	1.5097	1.5099	0.0000	0.0%	5.7%	5.7%	20.5%	0.0%	20.5%
M17	J	40	0.0000	1.5087	1.5093	0.0000	0.0%	5.7%	5.7%	20.5%	0.0%	20.5%
M17	J	41	0.0000	1.5082	1.5087	0.0000	0.0%	5.7%	5.7%	20.5%	0.0%	20.5%
M17	J	42	0.0000	1.5069	1.5083	0.0000	0.0%	5.7%	5.7%	20.5%	0.0%	20.5%
M17	J	43	0.0000	1.5050	1.5117	0.0000	0.0%	5.7%	5.7%	20.4%	0.0%	20.4%
M17	J	44	0.0000	1.5042	1.5184	0.0000	0.0%	5.7%	5.7%	20.4%	0.0%	20.4%
M17	J	45	0.0000	1.5050	1.5199	0.0000	0.0%	5.7%	5.7%	20.4%	0.0%	20.4%
M17	J	46	0.0000	1.5059	1.5189	0.0000	0.0%	5.7%	5.7%	20.5%	0.0%	20.5%
M17	J	47	0.0000	1.5065	1.5197	0.0000	0.0%	5.7%	5.7%	20.5%	0.0%	20.5%
M17	J	48	0.0000	1.5078	1.5179	0.0000	0.0%	5.7%	5.7%	20.5%	0.0%	20.5%
M17	J	49	0.0000	0.7656	0.7676	0.0000	0.0%	2.9%	2.9%	10.4%	0.0%	10.4%
M17	J	50	0.0000	0.7608	0.7630	0.0000	0.0%	2.9%	2.9%	10.3%	0.0%	10.3%
M17	J	51	0.0000	0.8932	0.8955	0.0000	0.0%	3.4%	3.4%	12.1%	0.0%	12.1%

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U-bolt Connection Rotation and Sliding Check			Date
			2/14/2023
Customer:	SBA	TIA Standard:	ANSI/TIA-222-H
Carrier:	T-Mobile	Mount Elev. [ft]:	
Site Name:		Engineer Name:	S. Bhujel
Site Number:		TES Project #:	

M17	J	52	0.0000	0.7943	0.7956	0.0000	0.0%	3.0%	3.0%	10.8%	0.0%	10.8%

Results Summary Table (Continued)

Member Label	Member End	Load Combo #	Tension T_{UT} [K]	Shear V_{US} [K]	Total Shear V [K]	Torsion T_{UR} [Kip-Ft]	Bolt Tension Check	Bolt Shear Check	Combined Shear & Tension	Sliding Check	Rotation Check	Sliding/ Rotation Interaction
M17	J	53	0.0000	0.7947	0.7947	0.0000	0.0%	3.0%	3.0%	10.8%	0.0%	10.8%
M17	J	54	0.0000	0.7943	0.7946	0.0000	0.0%	3.0%	3.0%	10.8%	0.0%	10.8%
M17	J	55	0.0000	0.7934	0.7938	0.0000	0.0%	3.0%	3.0%	10.8%	0.0%	10.8%
M17	J	56	0.0000	0.7922	0.7922	0.0000	0.0%	3.0%	3.0%	10.8%	0.0%	10.8%
M17	J	57	0.0000	0.7909	0.7913	0.0000	0.0%	3.0%	3.0%	10.7%	0.0%	10.7%
M17	J	58	0.0000	0.7900	0.7929	0.0000	0.0%	3.0%	3.0%	10.7%	0.0%	10.7%
M17	J	59	0.0000	0.7897	0.7968	0.0000	0.0%	3.0%	3.0%	10.7%	0.0%	10.7%
M17	J	60	0.0000	0.7901	0.8011	0.0000	0.0%	3.0%	3.0%	10.7%	0.0%	10.7%
M17	J	61	0.0000	0.7910	0.8029	0.0000	0.0%	3.0%	3.0%	10.7%	0.0%	10.7%
M17	J	62	0.0000	0.7922	0.8015	0.0000	0.0%	3.0%	3.0%	10.8%	0.0%	10.8%
M17	J	63	0.0000	0.7934	0.7983	0.0000	0.0%	3.0%	3.0%	10.8%	0.0%	10.8%
M17	J	64	0.0000	0.5498	0.5505	0.0000	0.0%	2.1%	2.1%	7.5%	0.0%	7.5%
M17	J	65	0.0000	0.5501	0.5503	0.0000	0.0%	2.1%	2.1%	7.5%	0.0%	7.5%
M17	J	66	0.0000	0.5498	0.5511	0.0000	0.0%	2.1%	2.1%	7.5%	0.0%	7.5%
M17	J	67	0.0000	0.5489	0.5506	0.0000	0.0%	2.1%	2.1%	7.5%	0.0%	7.5%
M17	J	68	0.0000	0.5477	0.5484	0.0000	0.0%	2.1%	2.1%	7.4%	0.0%	7.4%
M17	J	69	0.0000	0.5465	0.5466	0.0000	0.0%	2.0%	2.0%	7.4%	0.0%	7.4%
M17	J	70	0.0000	0.5456	0.5479	0.0000	0.0%	2.1%	2.1%	7.4%	0.0%	7.4%
M17	J	71	0.0000	0.5453	0.5525	0.0000	0.0%	2.1%	2.1%	7.4%	0.0%	7.4%
M17	J	72	0.0000	0.5456	0.5576	0.0000	0.0%	2.1%	2.1%	7.4%	0.0%	7.4%
M17	J	73	0.0000	0.5465	0.5597	0.0000	0.0%	2.1%	2.1%	7.4%	0.0%	7.4%
M17	J	74	0.0000	0.5477	0.5576	0.0000	0.0%	2.1%	2.1%	7.4%	0.0%	7.4%
M17	J	75	0.0000	0.5489	0.5534	0.0000	0.0%	2.1%	2.1%	7.5%	0.0%	7.5%

EXHIBIT 9

EBI Consulting

environmental | engineering | due diligence

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

T-Mobile Existing Facility

Site ID: CTHA105A

HA105/SBA Stanley_FT
723 Farmington Avenue
New Britain, Connecticut 06053

February 27, 2023

EBI Project Number: 6222005070

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**10.10%**

21 B Street, Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

February 27, 2023

T-Mobile
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, Connecticut 06002

Emissions Analysis for Site: CTHA105A - HA105/SBA Stanley_FT

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **723 Farmington Avenue** in **New Britain, Connecticut** for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu W/cm^2$). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits; therefore, it is necessary to report results and limits in terms of percent MPE rather than power density.

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

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

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately 400 $\mu W/cm^2$ and 467 $\mu W/cm^2$, respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at 723 Farmington Avenue in New Britain, Connecticut using the equipment information listed below. Modeling of the antennas and associated equipment was completed using RoofMaster™ software, which is a widely-used predictive modeling program that has been developed to predict RF power density values for rooftop and tower telecommunications sites produced by vertical collinear antennas that are typically used in the cellular, PCS, paging and other communications services. Using the computational methods set forth in Federal Communications (FCC) Office of Engineering & Technology (OET) Bulletin 65, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields" (OET-65), RoofMaster™ calculates predicted power density in a scalable grid based on the contributions of all RF sources characterized in the study scenario. At each grid location, the cumulative power density is expressed as a percentage of the FCC limits. Manufacturer antenna pattern data is utilized in these calculations. RoofMaster™ models consist of the Far Field model as specified in OET-65 and an implementation of the OET-65 Cylindrical Model (Sula9). The models utilize several operational specifications for different types of antennas to produce a plot of spatially-averaged power densities that can be expressed as a percentage of the applicable exposure limit.

Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower. For power density calculations, the broadcast footprint of the AIR6449 or similar SON antenna has been considered. Due to the beamforming nature of these antennas, the actual beam locations vary depending on demand and are narrow in nature. Using the broadcast footprint accounts for the potential location of beams at any given time.

For all calculations, telecommunications equipment was modeled using the following assumptions:

1) 1 LTE channel (600 MHz Band) was considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.

2) 1 NR channel (600 MHz Band) was considered for each sector of the proposed installation. This Channel has a transmit power of 80 Watts.

3) 1 LTE channel (700 MHz Band) was considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.

4) 1 GSM channel (PCS Band - 1900 MHz) was considered for each sector of the proposed installation. These Channels have a transmit power of 10 Watts per Channel.

5) 1 LTE channel (PCS Band - 1900 MHz) was considered for each sector of the proposed installation. These Channels have a transmit power of 160 Watts per Channel.

6) 1 NR channel (PCS Band - 1900 MHz) was considered for each sector of the proposed installation. These Channels have a transmit power of 80 Watts per Channel.

7) 1 LTE channel (AWS Band – 2100 MHz) was considered for each sector of the proposed installation. These Channels have a transmit power of 160 Watts per Channel.

8) 1 LTE Traffic channel (LTE 1C and 2C BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 45 Watts.

9) 1 LTE Broadcast channel (LTE 1C and 2C BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 15 Watts.

10) 1 NR Traffic channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 90 Watts.

11) 1 NR Broadcast channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 30 Watts.

12) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.

13) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

14) The antennas used in this modeling are the ERICSSON SON_AIR6419 B41 LTE TB 02.09.21 2500 TMO for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s), the RFS APXVAARR24 43-U-NA20 00DT 600 for the 600 MHz / 600 MHz / 700 MHz channel(s), the COMMSCOPE VV-65B-R1B 02DT 1900 for the 1900 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s) in Sector A, the ERICSSON SON_AIR6419 B41 LTE TB 02.09.21 2500 TMO for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s), the RFS APXVAARR24 43-U-NA20 00DT 600 for the 600 MHz / 600 MHz / 700 MHz channel(s), the COMMSCOPE VV-65B-R1B 02DT 1900 for the 1900 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s) in Sector B, the ERICSSON SON_AIR6419 B41 LTE TB 02.09.21 2500 TMO for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s), the RFS APXVAARR24 43-U-NA20 00DT 600 for the 600 MHz / 600 MHz / 700 MHz channel(s), the COMMSCOPE VV-65B-R1B 02DT 1900 for the 1900 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

15) The antenna mounting height centerline of the proposed antennas is 88 feet above ground level (AGL).

16) Emissions values for additional carriers were calculated in Far Field utilizing the antenna models provided in the structural analysis.

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

T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	ERICSSON SON_AIR6419 B41 LTE TB 02.09.21 2500 TMO	Make / Model:	ERICSSON SON_AIR6419 B41 LTE TB 02.09.21 2500 TMO	Make / Model:	ERICSSON SON_AIR6419 B41 LTE TB 02.09.21 2500 TMO
Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz
Gain:	22.05 dBd / 22.05 dBd / 15.55 dBd / 15.55 dBd	Gain:	22.05 dBd / 22.05 dBd / 15.55 dBd / 15.55 dBd	Gain:	22.05 dBd / 22.05 dBd / 15.55 dBd / 15.55 dBd
Height (AGL):	88 feet	Height (AGL):	88 feet	Height (AGL):	88 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	180.00 Watts	Total TX Power (W):	180.00 Watts	Total TX Power (W):	180.00 Watts
ERP (W):	23,258.96	ERP (W):	23,258.96	ERP (W):	23,258.96
Antenna A1 MPE %:	**12.44%**	Antenna B1 MPE %:	**12.44%**	Antenna C1 MPE %:	**12.44%**
Antenna #:	**2**	Antenna #:	**2**	Antenna #:	**2**
Make / Model:	RFS APXVAARR24 43-U-NA20 00DT 600	Make / Model:	RFS APXVAARR24 43-U-NA20 00DT 600	Make / Model:	RFS APXVAARR24 43-U-NA20 00DT 600
Frequency Bands:	600 MHz / 600 MHz / 700 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz
Gain:	13.09 dBd / 13.09 dBd / 13.17 dBd	Gain:	13.09 dBd / 13.09 dBd / 13.17 dBd	Gain:	13.09 dBd / 13.09 dBd / 13.17 dBd
Height (AGL):	88 feet	Height (AGL):	88 feet	Height (AGL):	88 feet
Channel Count:	3	Channel Count:	3	Channel Count:	3
Total TX Power (W):	160.00 Watts	Total TX Power (W):	160.00 Watts	Total TX Power (W):	160.00 Watts
ERP (W):	2,861.76	ERP (W):	2,861.76	ERP (W):	2,861.76
Antenna A2 MPE %:	**3.69%**	Antenna B2 MPE %:	**3.69%**	Antenna C2 MPE %:	**3.69%**
Antenna #:	**3**	Antenna #:	**3**	Antenna #:	**3**
Make / Model:	COMMSCOPE VV-65B-R1B 02DT 1900	Make / Model:	COMMSCOPE VV-65B-R1B 02DT 1900	Make / Model:	COMMSCOPE VV-65B-R1B 02DT 1900
Frequency Bands:	1900 MHz / 1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 1900 MHz / 1900 MHz / 2100 MHz
Gain:	16.16 dBd / 16.16 dBd / 16.16 dBd / 16.75 dBd	Gain:	16.16 dBd / 16.16 dBd / 16.16 dBd / 16.75 dBd	Gain:	16.16 dBd / 16.16 dBd / 16.16 dBd / 16.75 dBd
Height (AGL):	88 feet	Height (AGL):	88 feet	Height (AGL):	88 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	410.00 Watts	Total TX Power (W):	410.00 Watts	Total TX Power (W):	410.00 Watts
ERP (W):	15,515.68	ERP (W):	15,515.68	ERP (W):	15,515.68
Antenna A3 MPE %:	**8.30%**	Antenna B3 MPE %:	**8.30%**	Antenna C3 MPE %:	**8.30%**

Site Composite MPE %	
Carrier	MPE %
T-Mobile (Combined Sectors):	5.82%
Verizon	1.47%
AT&T	1.35%
Dish	1.46%
Site Total MPE % :	10.10%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	4.35%
T-Mobile Sector B Total:	4.41%
T-Mobile Sector C Total:	4.15%
T-Mobile Total MPE % :	5.82%

T-Mobile Maximum MPE Power Values (Sector B)

T-Mobile Frequency Band / Technology (Sector B)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density (μW/cm²)	Frequency (MHz)	Allowable MPE (μW/cm²)	Calculated % MPE
T-Mobile 2500 MHz LTE	1	7214.604258	88	38.57459282	2500 MHz LTE	1000.0	3.86%
T-Mobile 2500 MHz NR	1	14429.20852	88	77.14918564	2500 MHz NR	1000.0	7.71%
T-Mobile 2500 MHz LTE	1	538.382902	88	2.878591879	2500 MHz LTE	1000.0	0.29%
T-Mobile 2500 MHz NR	1	1076.765804	88	5.757183757	2500 MHz NR	1000.0	0.58%
T-Mobile 600 MHz LTE	1	712.1311635	88	3.807578168	600 MHz LTE	400.0	0.95%
T-Mobile 600 MHz NR	1	1424.262327	88	7.615156337	600 MHz NR	400.0	1.90%
T-Mobile 700 MHz LTE	1	725.3706703	88	3.878366332	700 MHz LTE	467.0	0.83%
T-Mobile 1900 MHz GSM	1	358.0964371	88	1.914647534	1900 MHz GSM	1000.0	0.19%
T-Mobile 1900 MHz LTE	1	5729.542994	88	30.63436054	1900 MHz LTE	1000.0	3.06%
T-Mobile 1900 MHz NR	1	2864.771497	88	15.31718027	1900 MHz NR	1000.0	1.53%
T-Mobile 2100 MHz LTE	1	6563.265648	88	35.09205645	2100 MHz LTE	1000.0	3.51%
						T-Mobile Total:	**5.82%**

• NOTE: Total T-Mobile MPE values reflect all T-Mobile antennas as reported by RoofMaster™ combined modeling.
• NOTE: Totals may vary by approximately 0.01% due to summation of remainders in calculations.

Summary

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

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

T-Mobile Sector	Power Density Value (%)
Sector A:	4.35%
Sector B:	4.41%
Sector C:	4.15%
T-Mobile Maximum MPE % (Sector B):	4.41%
T-Mobile Combined Sectors MPE %:	5.82%
Site Total:	10.10%
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **10.10%** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions or documents available on the Connecticut Siting Council website.

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