



NORTHEAST
SITE SOLUTIONS

Turnkey Wireless Development

Northeast Site Solutions
Denise Sabo
4 Angela's Way, Burlington CT 06013
860-209-4690
denise@northeastsitesolutions.com

July 16, 2019

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

RE: Exempt Modification Application
179 Shunpike Road, Cromwell CT 06416
Latitude: 41.623281
Longitude: -72.679005
T-Mobile Site#: CT11059C-L600

Dear Ms. Bachman:

T-Mobile is requesting to file an exempt modification for an existing 170-foot lattice tower located at 179 Shunpike Road, Cromwell CT 06416. T-Mobile currently has nine (9) antennas at the 125-foot level of the existing 170-foot tower. The tower and property are owned by Cromwell Fire District. T-Mobile now intends to replace six (6) antenna with three (3) new 600/700 MHz antenna and three (3) 1900/2100 MHz. The new antenna would be installed at the 125-foot and level of the tower.

Planned Tower Modifications:

Remove:
(6) 1-5/8" coax

Remove and Replace:

(3) LNX6515 Antenna 700 MHz (REMOVE) – RFS-APXAARR24_43U-NA20 Antenna 600/700 MHz (REPLACE)
(3) AIR21 Antenna 1900/2100 MHz (REMOVE) – AIR32 Antenna 1900/2100 MHz (REPLACE)
(1) Sector Frame (REMOVE) – Commscope High Capacity Frame (REPLACE)

Install New:

(3) Fiber line
(3) RRU 4449 B71+B12

Existing to Remain:

(6) 1-5/8" coax
(1) Fiber Lines
(3) AIR21 Antenna – 1900/2100 MHz
(3) Twin TMA

Ground:

Upgrade Existing 6131 Cabinet (Internally)

This facility was approved by the CT Siting Council Tower Share No.TS-VOICESTREAM-033-000609 on June 26, 2000.
This modification complies with this original approval. 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 Mayor Enzo Faienza, Elected Official and Stuart Popper, Director of Planning and Development for the Town of Cromwell, as well as the property owner and the tower owner.

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

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

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

Sincerely,

Denise Sabo
Mobile: 860-209-4690
Fax: 413-521-0558
Office: 4 Angela's Way, Burlington CT 06013
Email: denise@northeastsitesolutions.com

Attachments

cc:

Mayor Enzo Faienza
Cromwell Town Hall
41 West Street
Cromwell, CT 06416

Cromwell Town Hall
41 West Street
Cromwell, CT 06416
Attn: Stuart Popper
Director of Planning and Development

Cromwell Fire District
1 West Street
Cromwell, CT 06416
Attn: Chief Michael Terenzio

Exhibit A



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Ten Franklin Square
New Britain, Connecticut 06051
Phone: (860) 827-2935
Fax: (860) 827-2950

File
Paul
Sharkey
Terry

June 26, 2000

J. Brendan Sharkey, Esq.
VoiceStream Wireless, Inc.
100 Filley Street
Cromwell, CT 06002

RE: TS-VOICESTREAM-033-000609 - VoiceStream Wireless request for an order to approve tower sharing at an existing telecommunications facility located at 179 Shunpike Road in Cromwell, Connecticut.

Dear Attorney Sharkey:

At a public meeting held June 20, 2000, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the Council has ordered the shared use of this facility to avoid the unnecessary proliferation of tower structures. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Any additional change to this facility may require an explicit request to this agency pursuant to General Statutes § 16-50aa or notice pursuant to Regulations of Connecticut State Agencies Section 16-50j-73, as applicable. Such request or notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

This decision applies only to this request for tower sharing and is not applicable to any other request or construction. The proposed shared use is to be implemented as specified in your letter dated June 9, 2000.

Thank you for your attention and cooperation.

Very truly yours,

Mortimer A. Gelston
Chairman

MAG/PMA/grg

c: Honorable Stanley A. Terry, Jr., First Selectman, Town of Cromwell

Exhibit B



Patriot Properties Inc.

Parcel ID: **00109100** Location: **179 SHUNPIKE ROAD** Map-Lot **24-17B** Last Revaluation - **October 1, 2017**

Current Owner
CROMWELL FIRE DISTRICT
Percent 100
0 1 WEST ST
CROMWELL CT 06416

Current Value Information Mkt Adj Cost

Use Code	Land Value	PA 490 Value	Building Value	Outbuildings	Total Value	Total Assessed
920	120,300	0	0	0	120,300	84,210
TOTAL	120,300	0	0	0	120,300	84,210

Previous Value Information

Tax Yr	Land Value	Bldg Value	Outbuildings	Total Value	Total Assesmen
2018	120,300	0	0	120,300	84,210
2017	120,300	0	0	120,300	84,210
2016	118,140	0	0	118,140	82,700
2015	118,140	0	0	118,140	82,700
2014	118,140	0	0	118,140	82,700
2013	118,140	0	0	118,140	82,700

Sales Information

Grantee	Vol-Page	Type	SaleDate	SalePrice	Sale Verif	GeneralNotes
CROMWELL FIRE DISTRICT	86-469		09/21/1970	0		

General Notes

Communication Tower Fire Dept

Previous Owner(s)

Property Factors

Census 5701

Flood:

Topo:

Street: Paved

Dev. Map

Dev. Map

Zoning Data

Desc. %
R-25 100.00

Utilities

6 Septic
9 Well-Pot Wat

BAA

Activity Information

Date	Results	Visited By
09/07/2017	Change - Value Change Company	John Valente
05/19/2017	No Change - Field Review	Dave Stannard
11/13/2014	Permit- Miscellaneous	AO
01/31/2013	Permit- Miscellaneous	AO
01/07/2013	Permit- Miscellaneous	AO
09/11/2012	Permit - Measure Exterior	
09/11/2012	Permit- Miscellaneous	AO
10/22/2010	Permit- Miscellaneous	AO
04/12/2010	Permit- Miscellaneous	AO
04/06/2009	Permit- Miscellaneous	AO

Building Permit Information

Date	Permit #	Description	Amount	% Comp	Visit Date	CO Date	GeneralNotes
11/13/2014	23012	Other	15,000	100	11/13/2014	08/11/2015	Modifications to existing
01/31/2013	21434	Other	5,000	100	01/31/2013		Rplc & insll 2 Telecom ca
01/07/2013	21382	Other	15,000	100	01/07/2013	02/21/2013	Swap 12 of 12 existing an
07/31/2012	20958	Other	25,000	100	09/11/2012		Add 3 new antennas to exs
10/22/2010	19434	Electric	8,000	100	10/22/2010		Feed for cell towers
04/12/2010	18982	Electric	0	100	04/12/2010		Disconnect & re-connect c
04/13/2009	18277	Electric	15,000	100	04/06/2009		rep 6 antennas & modifyin
11/17/2008	18085	Electric	15,000	100	11/06/2008		Electric work at cell sit

Land Data

Use	Description	Units	Unit Type	Neiah	Land Adjustments	Special Land Calc	Appraised Value	PA 490 Asmt	Neigh Order	Notes
920	Mun Land Com	43,560	SF	ED			85,000	0	2700	
920	Mun Land Com	3,000	AC	ED			35,300	0	2700	

Total Area: 4.00 PA 490 Use Asmt: 0 Total Appraised: 120,300 Assessed Value: 84,210

ParcelID: 00109100
 Bldg Seq 1 Of 1

Location: 179 SHUNPIKE ROAD

Printed By: Shawna 04/06/2018 4:42:44PM

Exterior Information

Building Type:
 Story Ht:
 Living Units: 0
 Foundation:
 Prim. Ext. Wall:
 Sec. Ext. Wall:
 Roof Type:
 Roof Cover:
 Avg. Wall Ht:
 Color:

Interior Information

Prime Wall:
 Sec. Wall:
 Floor Type:
 Sec. Floor:
 Heat Fuel:
 Heat Type:
 Sec. Ht Type:
 % A/C: 0
 % Sprinkled: 0
 Bsmt. Gar: 0
 Kitchens: 0 Add. Kit: 0
 Fireplaces: 0 Gas: 0
 Int. Condition: Typical

Room Count

Total Rooms:
 Bedrooms:

Bath Features

Full Baths: 0
 Addl. Full Baths: 0
 Half Baths: 0
 Addl. Half Baths: 0
 Full Bths Below: 0
 Half Bths Below: 0
 Other Fixtures: 0
 Total Baths: 0 0

Condo Information

Name:
 Style:
 Location:
 Tot Units:

General Information

Year Blt:
 Grade:
 Remodeled Yr:
 Rem. Kitchen Yr:
 Rem. Bath Yr:

Depreciation %

Phys Cond Average 0.00
 Func
 Econ
 Spec
 OV
 Total %Dep: 0.00

Calculation

Basic \$/SQ 0.00
 Replacement Cost 0
 Depreciation 0
 Depreciated Value 0
 Final Total (Rounded) 0

Extra Features / Yard Items (1st 10 Lines Displayed)

Code	Description	Qty	Size	Cond.	Year	Unit Price	Dep%	UndepValue	Appraised Value	Assessment
------	-------------	-----	------	-------	------	------------	------	------------	-----------------	------------

Total Sp. Features: Total Yard Items Total Appraised: Total Assessed Value

Sub Area Detail

Code	Desc.	Living	Gross Area
------	-------	--------	------------

Total



Exhibit C

MODIFICATION OF EXISTING WIRELESS FACILITY BY



T-MOBILE NORTHEAST LLC

L600 PROJECT

SITE NUMBER: CT11059C

SITE NAME: ROCKYHILL/ I-91/ X23

SITE ADDRESS: 179 SHUNPIKE ROAD

CROMWELL, CT 06416

(RF CONFIG: 67D92DB_2xAIR+1OP)

APPLICANT:
T-MOBILE NORTHEAST LLC
 35 GRIFFIN ROAD SOUTH
 BLOOMFIELD, CT 06002
 860-692-7100

PROJECT MANAGER:
NSS NORTHEAST SITE SOLUTIONS
Turnkey Wireless Development
 420 MAIN STREET, BLDG 4
 STURBRIDGE, MA 01566
 203-275-6669

CONSULTANT:
FORESITE LLC
 Architects . Engineers . Surveyors

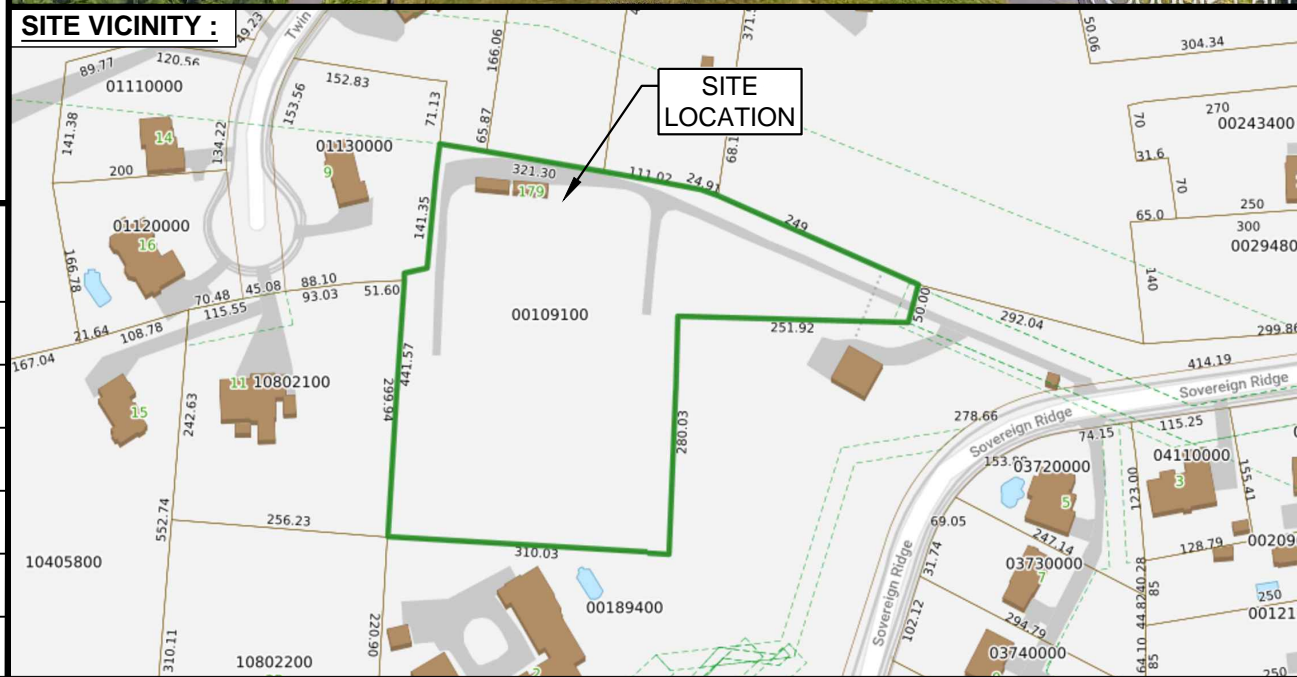
462 WALNUT STREET
 NEWTON, MA 02460
 617-212-3123

THIS DOCUMENT IS THE DESIGN PROPERTY AND COPYRIGHT OF FORESITE, LLC. AND FOR THE EXCLUSIVE USE BY THE TITLE CLIENT. DUPLICATION OR USE WITHOUT THE EXPRESS WRITTEN CONSENT OF THE CREATOR IS STRICTLY PROHIBITED. DRAWING SCALES ARE INTENDED FOR 11"x17" SIZE PRINTED MEDIA ONLY. ALL OTHER PRINTED SIZES ARE DEEMED "NOT TO SCALE".

REV	DESCRIPTION	DATE
A	PRELIMINARY	05/08/19
B	REMOVED GENERATOR	05/16/19
C	REVISED PER NEW RFDS	06/05/19
D	REVISED PER NEW COMMENTS	06/10/19
0	FINAL ISSUED	06/13/19

SITE NUMBER: CT11059C
 SITE NAME: ROCKYHILL/ I-91/ X23
 SITE ADDRESS: 179 SHUNPIKE ROAD
 CROMWELL, CT 06416

SHEET TITLE:
 T-1: TITLE SHEET



- PROJECT NOTES:**
- THIS IS AN UNMANNED TELECOMMUNICATION FACILITY AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS IS NOT REQUIRED. POTABLE WATER OR SANITARY SERVICE IS NOT REQUIRED. NO OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES REQUIRED.
 - CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON THE 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 PLACES THE RESPONSIBILITY ON THE CONTRACTOR TO CORRECT THE DISCREPANCIES AT THE CONTRACTOR'S EXPENSE.
 - DEVELOPMENT AND USE OF THE SITE WILL CONFORM TO ALL APPLICABLE CODES, ORDINANCES AND SPECIFICATIONS.

APPLICABLE CODES AND STANDARDS:
 LATEST EDITION OF:
 CONNECTICUT STATE BUILDING CODE (CSBC).
 ANSI/TIA-222-G STRUCTURAL STANDARD FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS.
 NATIONAL ELECTRICAL CODE (NEC) FOR POWER AND GROUNDING REQUIREMENTS.
 OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).
 NFPA - NATIONAL FIRE PROTECTION ASSOCIATION.

811 Connecticut - Call Before You Dig
 811 or 1-800-922-4455
 Advance Notice: Minimum of 2 working days in advance, no more than 30 days in advance

APPROVALS:

FSA CM	DATE
RF ENGINEER	DATE
FOPS	DATE
T-MOBILE ENGINEERING AND DEVELOPMENT	DATE
	DATE
	DATE

PROJECT SCOPE:
 THE PROPOSED PROJECT SCOPE WILL CONSIST OF:
 UPGRADE EXISTING 6131 CABINET INTERNALLY.
 REPLACE EXISTING SECTOR FRAME ANTENNA MOUNT WITH A HIGH CAPACITY MOUNT.
 REMOVE (6) OF EXISTING (12) 1-5/8" COAX, ADD (3) 6X12 HCS HYBRID CABLES FOR FINAL CONFIGURATION OF (4) HYBRID AND (6) COAX CABLES.
 REPLACE (6) OF EXISTING (9) ANTENNAS.
 ADD (3) REMOTE RADIO UNITS AT THE ANTENNA.

PROJECT INFORMATION:
 ADDRESS: 179 SHUNPIKE ROAD
 CROMWELL, CT 06416
 COORDINATES: 41.623281 N, -72.679005 W
 STRUCTURE TYPE: LATTICE TOWER
 JURISDICTION: CROMWELL, CT

PROJECT TEAM:
 APPLICANT: T-MOBILE NORTHEAST, LLC.
 35 GRIFFIN ROAD SOUTH
 BLOOMFIELD, CT 06002
 860-692-7100
 LANDLORD: CROMWELL FIRE DISTRICT
 1 WEST STREET
 CROMWELL, CT 06416
 PROJECT MANAGER: NORTHEAST SITE SOLUTIONS
 420 MAIN STREET, BLDG 4
 STURBRIDGE, MA 01566
 SHELDON FREINCLE
 SHELDON@NORTHEASTSITESOLUTIONS.COM
 201-776-8521
 CONSULTANTS: FORESITE LLC
 462 WALNUT ST
 NEWTON, MA 02460
 SAEED MOSSAVAT
 SMOSSAVAT@FORESITELLC.COM
 617-212-3123

SHEET INDEX:
 T-1: TITLE SHEET
 N-1: GENERAL NOTES
 A-1: PLAN, ELEVATION AND MOUNTING DETAILS
 A-2: ANTENNA SPECIFICATIONS AND ANTENNA PLANS
 E-1: GROUNDING DETAILS

Copyright © 2018 Foresite LLC. All rights reserved. The details, templates, drawing formats or any portion of this document generated by Foresite LLC may not be duplicated, traced or used otherwise for any profit-driven enterprise.

Copyright © 2018 Foresite LLC all rights reserved. The details, templates, drawing formats or any portion of this document generated by Foresite LLC may not be duplicated, traced or used otherwise for any profit-driven enterprise.

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 HAS 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 CLIENT'S REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK.
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 CONSTRUCTION DOCUMENTS.
6. 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.
7. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS DURING CONSTRUCTION.
8. THE CONTRACTOR SHALL COMPLY WITH ALL PERTINENT SECTIONS OF THE BASIC STATE BUILDING CODE, LATEST EDITION, AND ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJEC
9. THE CONTRACTOR SHALL NOTIFY THE CLIENT'S REPRESENTATIVE IN WRITING 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 CLIENT'S REPRESENTATIVE.
10. THE WORK SHALL CONFORM TO THE CODES AND STANDARDS OF THE FOLLOWING AGENCIES AS FURTHER CITED HEREIN:
 - A. ASTM: AMERICAN SOCIETY FOR TESTING AND MATERIALS, AS PUBLISHED IN "COMPILATION OF ASTM STANDARDS BUILDING CODES" OR LATEST EDITION.
 - B. AWS: AMERICAN WELDING SOCIETY INC. AS PUBLISHED IN "STANDARD D1.1-08, STRUCTURAL WELDING CODE" OR LATEST EDITION.
 - C. AISC: AMERICAN INSTITUTE FOR STEEL CONSTRUCTION AS PUBLISHED IN "CODE FOR STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES"; "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" (LATEST EDITION).
11. BOLTING:
 - A. BOLTS SHALL BE CONFORMING TO ASTM A325 HIGH STRENGTH, HOT DIP GALVANIZED WITH ASTM A153 HEAVY HEX TYPE NUTS.
 - B. BOLTS SHALL BE 3/4"Ø MINIMUM (UNLESS OTHERWISE NOTED)
 - C. ALL CONNECTIONS SHALL BE 2 BOLTS MINIMUM.
12. FABRICATION:
 - A. FABRICATION OF STEEL SHALL CONFORM TO THE AISC AND AWS STANDARDS AND CODES (LATEST EDITION).
 - B. ALL STRUCTURAL STEEL SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 (LATEST EDITION), UNLESS OTHERWISE NOTED.
13. ERECTION OF STEEL:
 - A. PROVIDE ALL ERECTION EQUIPMENT, BRACING, PLANKING, FIELD BOLTS, NUTS, WASHERS, DRIFT PINS, AND SIMILAR MATERIALS WHICH DO NOT FORM A PART OF THE COMPLETED CONSTRUCTION BUT ARE NECESSARY FOR ITS PROPER ERECTION.
 - B. ERECT AND ANCHOR ALL STRUCTURAL STEEL IN ACCORDANCE WITH AISC REFERENCE STANDARDS. ALL WORK SHALL BE ACCURATELY SET TO ESTABLISHED LINES AND ELEVATIONS AND RIGIDLY FASTENED IN PLACE WITH SUITABLE ATTACHMENTS TO THE CONSTRUCTION OF THE BUILDING.
 - C. TEMPORARY BRACING, GUYING AND SUPPORT SHALL BE PROVIDED TO KEEP THE STRUCTURE SAFE AND ALIGNED AT ALL TIMES DURING CONSTRUCTION, AND TO PREVENT DANGER TO PERSONS AND PROPERTY. CHECK ALL TEMPORARY LOADS AND STAY WITHIN SAFE CAPACITY OF ALL BUILDING COMPONENTS.

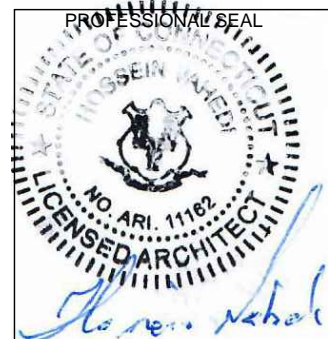
14. ANTENNA INSTALLATION:
 - A. INSTALL ANTENNAS AS INDICATED ON DRAWINGS AND CLIENT'S REPRESENTATIVE SPECIFICATIONS.
 - B. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.
 - C. INSTALL COAXIAL / FIBER CABLES AND TERMINATIONS BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTORS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS.
15. ANTENNA AND COAXIAL / FIBER CABLE GROUNDING:
 - A. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH ANDREWS CONNECTOR/SPLICE WEATHERPROOFING KIT TYPE #221213 OR EQUAL.
 - B. ALL COAXIAL / FIBER CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL / FIBER CABLE (NOT WITHIN BENDS).
16. RELATED WORK, FURNISH THE FOLLOWING WORK AS SPECIFIED UNDER CONSTRUCTION DOCUMENTS, BUT COORDINATE WITH OTHER TRADES PRIOR TO BID:
 - A. FLASHING OF OPENING INTO OUTSIDE WALLS
 - B. SEALING AND CAULKING ALL OPENINGS
 - C. PAINTING
 - D. CUTTING AND PATCHING
17. REQUIREMENTS OF REGULATORY AGENCIES:
 - A. FURNISH U.L. LISTED EQUIPMENT WHERE SUCH LABEL IS AVAILABLE. INSTALL IN CONFORMANCE WITH U.L. STANDARDS WHERE APPLICABLE.
 - B. INSTALL ANTENNA, ANTENNA CABLES, GROUNDING SYSTEM IN ACCORDANCE WITH DRAWINGS AND SPECIFICATION IN EFFECT AT PROJECT LOCATION AND RECOMMENDATIONS OF STATE AND LOCAL BUILDING CODES, AND SPECIAL CODES HAVING JURISDICTION OVER SPECIFIC PORTIONS OF WORK. THIS WORK INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:
 - C. TIA-EIA - 222 (LATEST EDITION). STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES.
 - D. FAA - FEDERAL AVIATION ADMINISTRATION ADVISORY CIRCULAR AC 70/7460-IH, OBSTRUCTION MARKING AND LIGHTING.
 - E. FCC - FEDERAL COMMUNICATIONS COMMISSION RULES AND REGULATIONS FORM 715, OBSTRUCTION MARKING AND LIGHTING SPECIFICATION FOR ANTENNA STRUCTURES AND FORM 715A, HIGH INTENSITY OBSTRUCTION LIGHTING SPECIFICATIONS FOR ANTENNA STRUCTURES.
 - F. AISC - AMERICAN INSTITUTE OF STEEL CONSTRUCTION SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 BOLTS (LATEST EDITION).
 - G. NEC - NATIONAL ELECTRICAL CODE - ON TOWER LIGHTING KITS.
 - H. UL - UNDERWRITER'S LABORATORIES APPROVED ELECTRICAL PRODUCTS.
 - I. IN ALL CASES, PART 77 OF THE FAA RULES AND PARTS 17 AND 22 OF THE FCC RULES ARE APPLICABLE AND IN THE EVENT OF CONFLICT, SUPERSEDE ANY OTHER STANDARDS OR SPECIFICATIONS.
 - J. 2009 LIFE SAFETY CODE NFPA - 101.

APPLICANT:

T-MOBILE NORTHEAST LLC
 35 GRIFFIN ROAD SOUTH
 BLOOMFIELD, CT 06002
 860-692-7100

 **PROJECT MANAGER**
NSS NORTHEAST
Turnkey Wireless Development
 SITE SOLUTIONS
 420 MAIN STREET, BLDG 4
 STURBRIDGE, MA 01566
 203-275-6669

CONSULTANT:

Architects . Engineers . Surveyors
 462 WALNUT STREET
 NEWTON, MA 02460
 617-212-3123



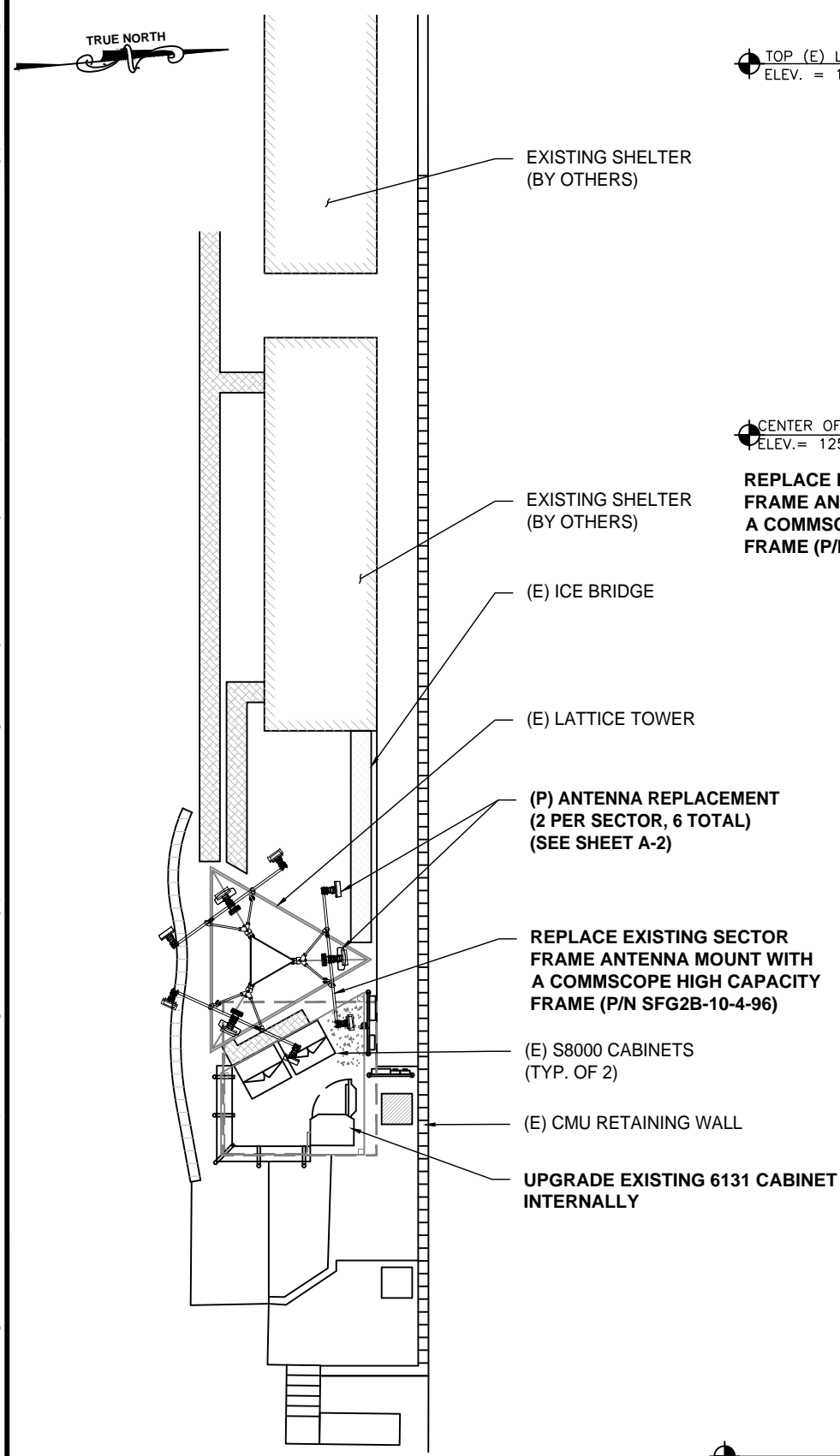
THIS DOCUMENT IS THE DESIGN PROPERTY AND COPYRIGHT OF FORESITE, LLC. AND FOR THE EXCLUSIVE USE BY THE TITLE CLIENT. DUPLICATION OR USE WITHOUT THE EXPRESS WRITTEN CONSENT OF THE CREATOR IS STRICTLY PROHIBITED. DRAWING SCALES ARE INTENDED FOR 11"x17" SIZE PRINTED MEDIA ONLY. ALL OTHER PRINTED SIZES ARE DEEMED "NOT TO SCALE".

REV	DESCRIPTION	DATE
A	PRELIMINARY	05/08/19
B	REMOVED GENERATOR	05/16/19
C	REVISED PER NEW RFDS	06/05/19
D	REVISED PER NEW COMMENTS	06/10/19
0	FINAL ISSUED	06/13/19

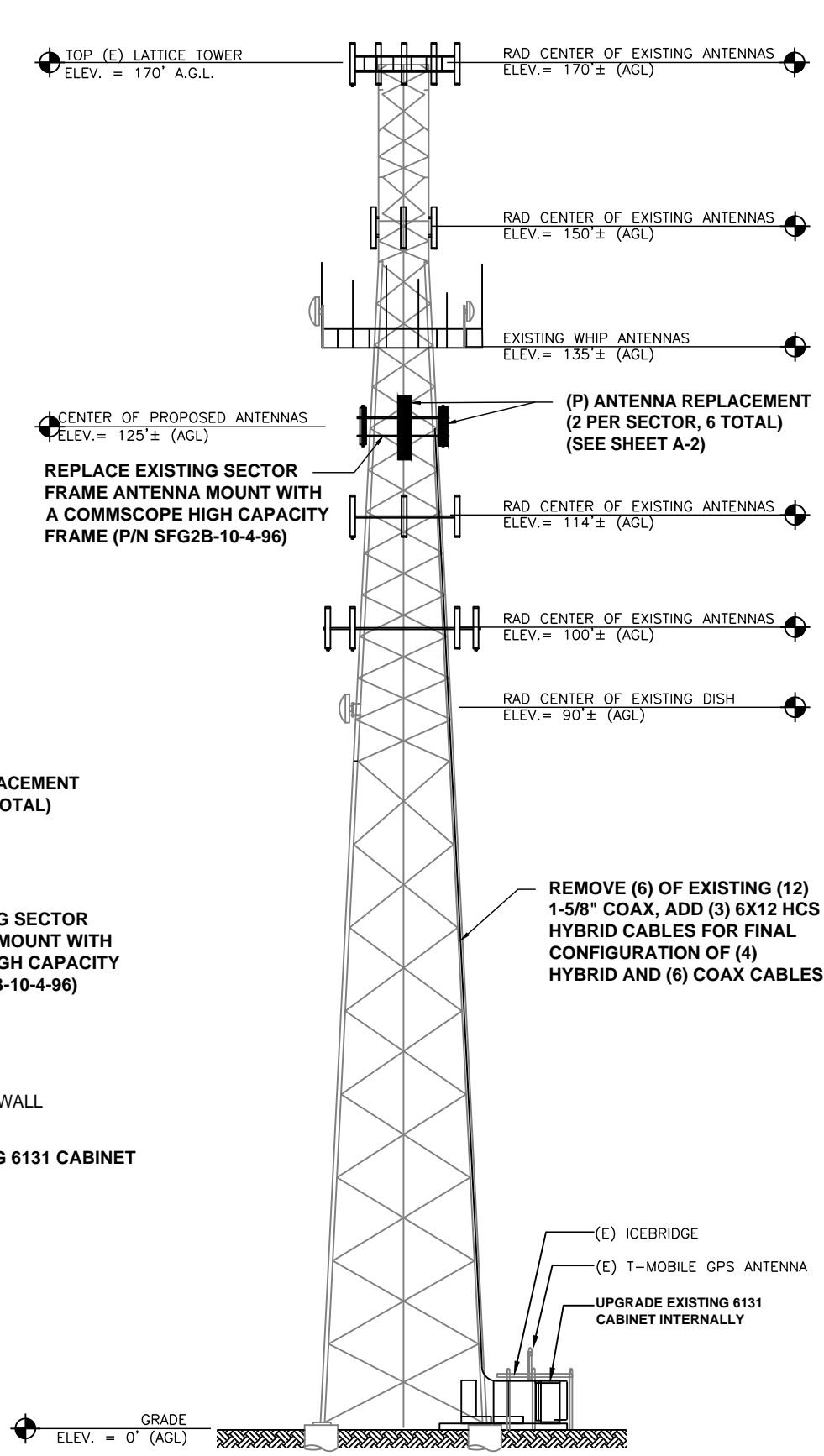
SITE NUMBER: CT11059C
 SITE NAME: ROCKYHILL/ I-91/ X23
 SITE ADDRESS: 179 SHUNPIKE ROAD
 CROMWELL, CT 06416

SHEET TITLE:
N-1: GENERAL NOTES

Copyright © 2018 Foresite LLC all rights reserved. The details, templates, drawing formats or any portion of this document generated by Foresite LLC may not be duplicated, traced or used otherwise for any profit-driven enterprise.

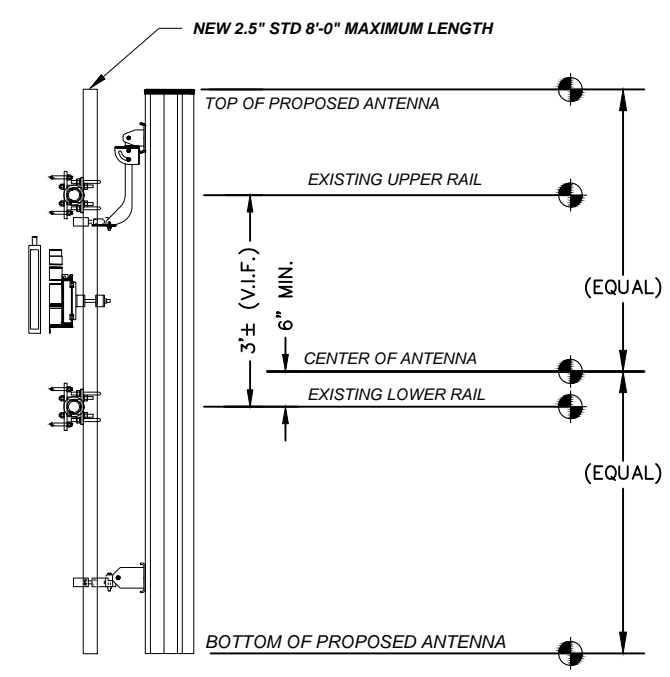


SITE PLAN
SCALE: 1/16" = 1'-0"
1
A-1

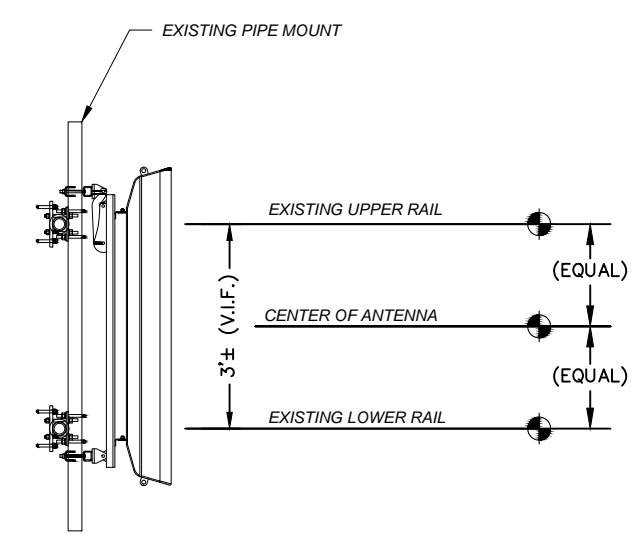


ELEVATION
SCALE: NTS
2
A-1

STRUCTURAL NOTES:
PRIOR TO COMMENCING CONSTRUCTION, GC SHALL REFER TO TOWER STRUCTURAL ANALYSIS AND MOUNT EVALUATION REPORT PREPARED BY DESTEK ENGINEERING LLC, DATED June 11, 2019 TO DETERMINE IF THERE ARE ANY SUPPLEMENTAL OR SPECIAL REQUIREMENTS FOR TOWER TOP EQUIPMENT AND FOR CABLE BUNDLING, SHIELDING, MOUNTING OR RELOCATION ARRANGEMENTS.



APXVAARR24_43-U-NA20
ANTENNA MOUNTING
N.T.S.
3
A-1



AIR32 KRD901146-1_B66A_B2A
ANTENNA MOUNTING
N.T.S.
4
A-1

APPLICANT:
T-Mobile
T-MOBILE NORTHEAST LLC
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
860-692-7100

PROJECT MANAGER
NSS NORTHEAST
SITE SOLUTIONS
Turnkey Wireless Development
420 MAIN STREET, BLDG 4
STURBRIDGE, MA 01566
203-275-6669

CONSULTANT:
FORESITE LLC
Architects . Engineers . Surveyors
462 WALNUT STREET
NEWTON, MA 02460
617-212-3123

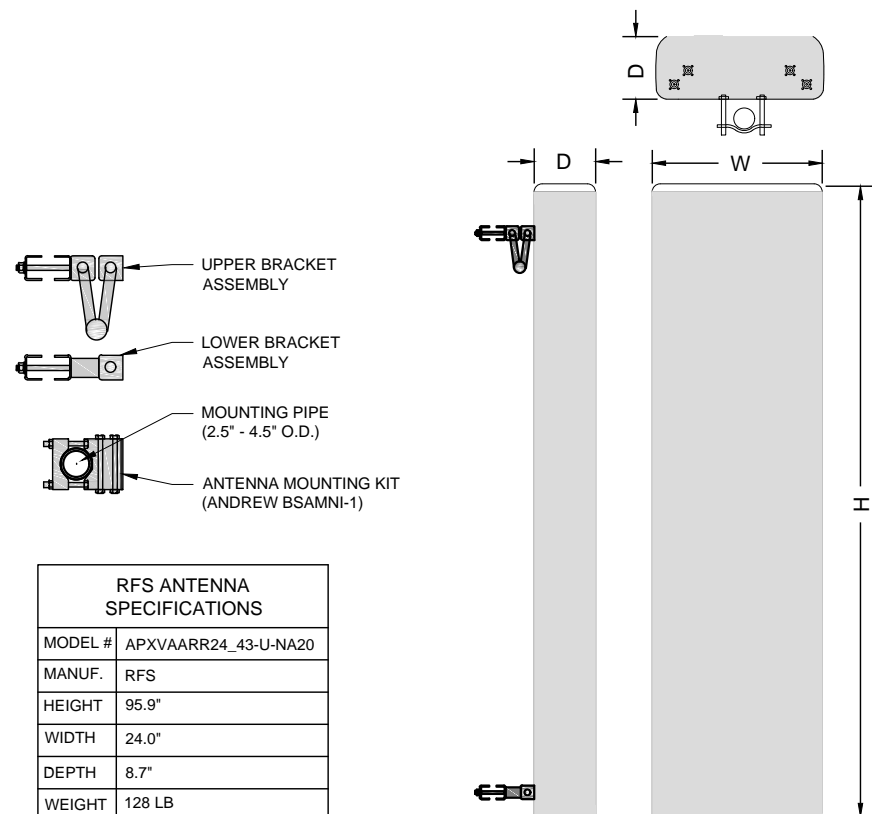
THIS DOCUMENT IS THE DESIGN PROPERTY AND COPYRIGHT OF FORESITE, LLC. AND FOR THE EXCLUSIVE USE BY THE TITLE CLIENT. DUPLICATION OR USE WITHOUT THE EXPRESS WRITTEN CONSENT OF THE CREATOR IS STRICTLY PROHIBITED. DRAWING SCALES ARE INTENDED FOR 11"x17" SIZE PRINTED MEDIA ONLY. ALL OTHER PRINTED SIZES ARE DEEMED "NOT TO SCALE".

REV	DESCRIPTION	DATE
A	PRELIMINARY	05/08/19
B	REMOVED GENERATOR	05/16/19
C	REVISED PER NEW RFDS	06/05/19
D	REVISED PER NEW COMMENTS	06/10/19
0	FINAL ISSUED	06/13/19

SITE NUMBER: CT11059C
SITE NAME: ROCKYHILL/ I-91/ X23
SITE ADDRESS: 179 SHUNPIKE ROAD
CROMWELL, CT 06416

SHEET TITLE:
A-1: PLAN, ELEVATION AND MOUNTING DETAILS

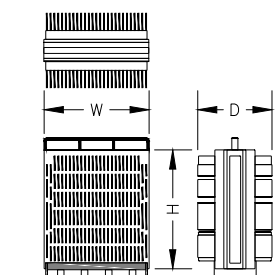
Copyright © 2018 Foresite LLC all rights reserved. The details, templates, drawing formats or any portion of this document generated by Foresite LLC may not be duplicated, traced or used otherwise for any profit-driven enterprise.



RFS ANTENNA SPECIFICATIONS	
MODEL #	APXVAARR24_43-U-NA20
MANUF.	RFS
HEIGHT	95.9"
WIDTH	24.0"
DEPTH	8.7"
WEIGHT	128 LB

RFS APX ANTENNA
N.T.S.

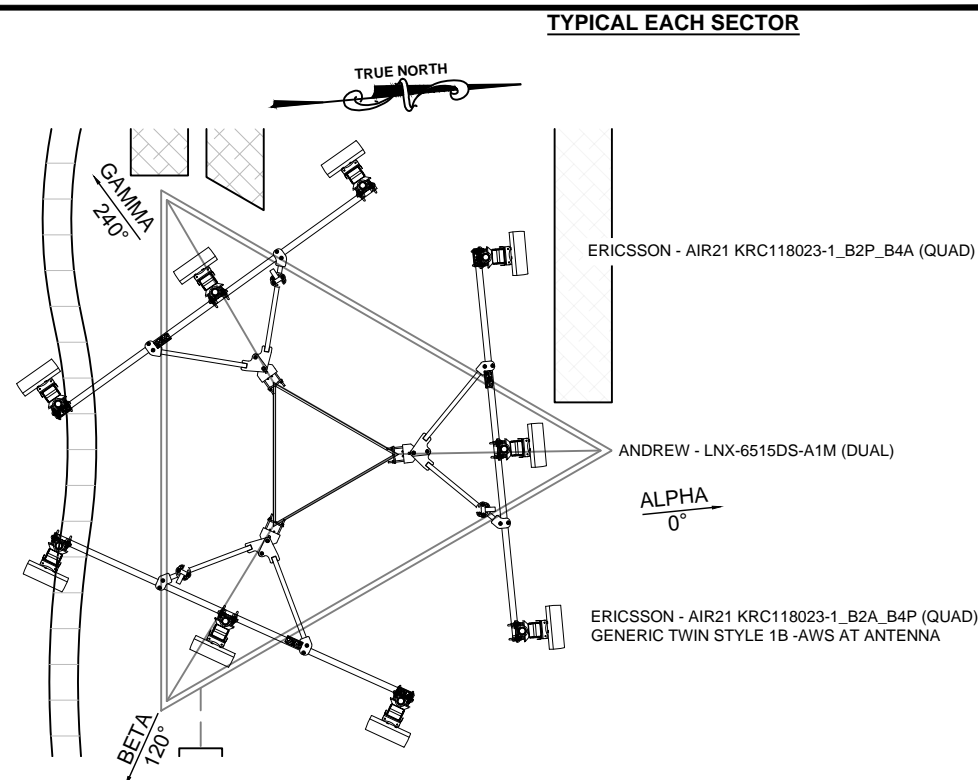
1
A-2



REMOTE RADIO UNIT SPECIFICATIONS	
MODEL #	RADIO 4449 B71+B12
MANUF.	ERICSSON
HEIGHT	14.9"
WIDTH	13.2"
DEPTH	10.4"
WEIGHT	74 LB

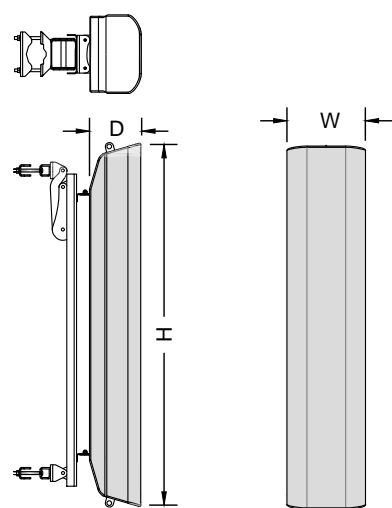
REMOTE RADIO UNIT
N.T.S.

2
A-2



EXISTING ANTENNA PLAN
N.T.S.

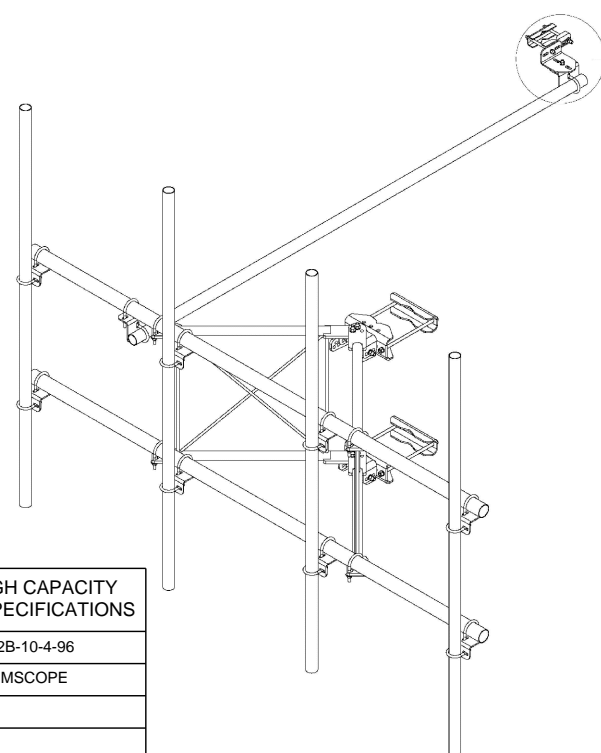
5
A-2



ERICSSON ANTENNA SPECIFICATIONS	
MODEL #	AIR32 KRD901146-1 B66A_B2A
MANUF.	ERICSSON
HEIGHT	56.6"
WIDTH	12.9"
DEPTH	8.7"
WEIGHT	132.2 LB

AIR32 ANTENNA
N.T.S.

3
A-2

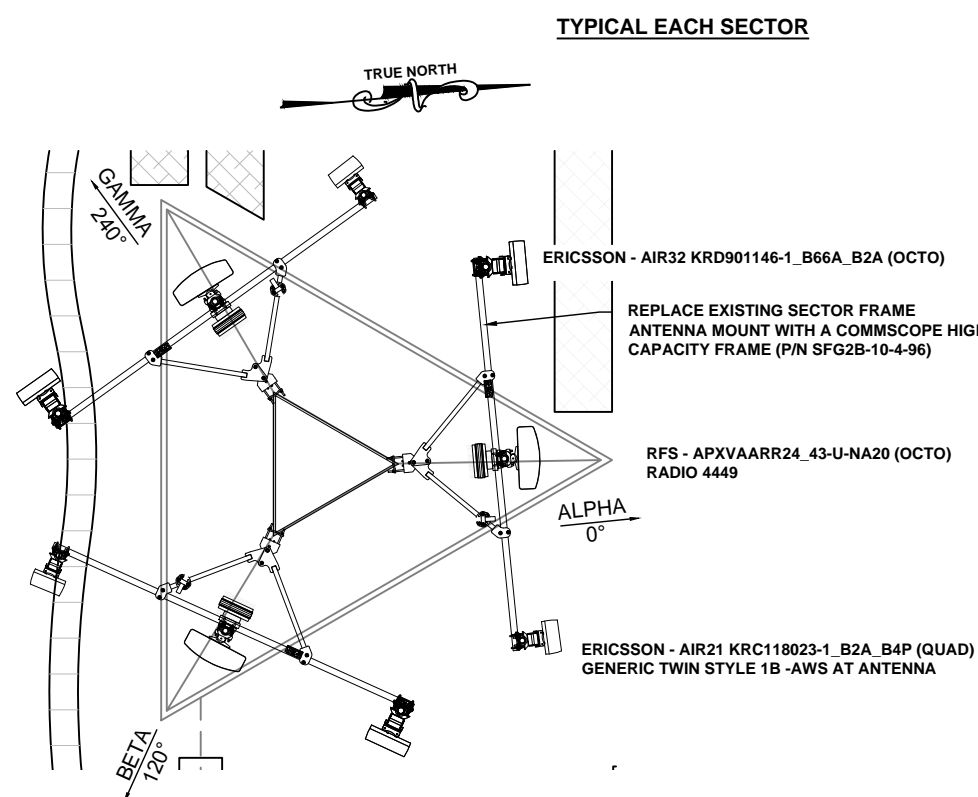


COMMSCOPE HIGH CAPACITY SECTOR FRAME SPECIFICATIONS	
MODEL #	SFG2B-10-4-96
MANUF.	COMMSCOPE
HEIGHT	96.0"
FACE WIDTH	10.5'
MOUNTING DIA.	1 1/2" MIN, 8 5/8" MAX.
WEIGHT	380 LB

NOTE:
INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

SECTOR FRAME
N.T.S.

4
A-2



FINAL ANTENNA PLAN
N.T.S.

6
A-2

APPLICANT:
T-Mobile
T-MOBILE NORTHEAST LLC

35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
860-692-7100

PROJECT MANAGER

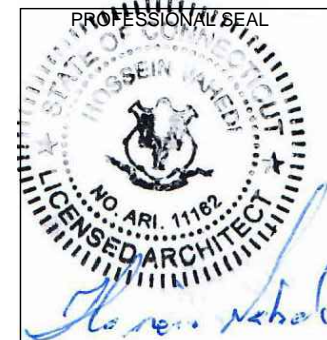
NSS NORTHEAST
SITE SOLUTIONS
Turnkey Wireless Development
420 MAIN STREET, BLDG 4
STURBRIDGE, MA 01566
203-275-6669

CONSULTANT:

FORESITE LLC

Architects . Engineers . Surveyors

462 WALNUT STREET
NEWTON, MA 02460
617-212-3123



THIS DOCUMENT IS THE DESIGN PROPERTY AND COPYRIGHT OF FORESITE, LLC. AND FOR THE EXCLUSIVE USE BY THE TITLE CLIENT. DUPLICATION OR USE WITHOUT THE EXPRESS WRITTEN CONSENT OF THE CREATOR IS STRICTLY PROHIBITED. DRAWING SCALES ARE INTENDED FOR 11"x17" SIZE PRINTED MEDIA ONLY. ALL OTHER PRINTED SIZES ARE DEEMED "NOT TO SCALE".

REV	DESCRIPTION	DATE
A	PRELIMINARY	05/08/19
B	REMOVED GENERATOR	05/16/19
C	REVISED PER NEW RFDS	06/05/19
D	REVISED PER NEW COMMENTS	06/10/19
0	FINAL ISSUED	06/13/19

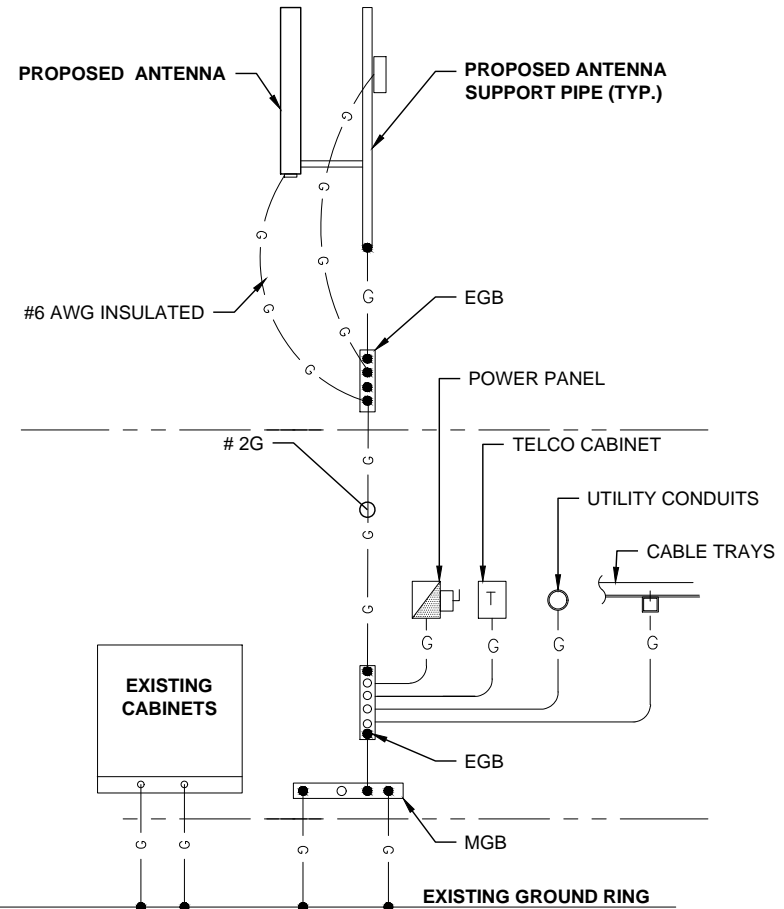
SITE NUMBER: CT11059C
SITE NAME: ROCKYHILL/ I-91/ X23
SITE ADDRESS: 179 SHUNPIKE ROAD
CROMWELL, CT 06416

SHEET TITLE:
A-2: ANTENNA SPECIFICATIONS AND ANTENNA PLANS

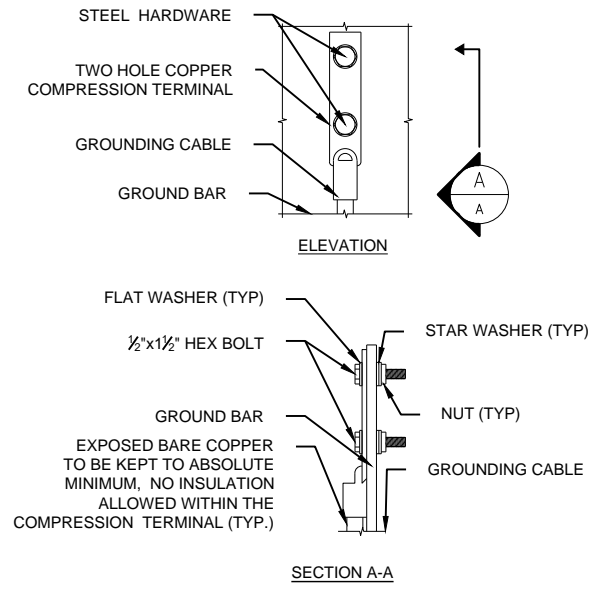
Copyright © 2018 Foresite LLC all rights reserved. The details, templates, drawing formats or any portion of this document generated by Foresite LLC may not be duplicated, traced or used otherwise for any profit-driven enterprise.

ELECTRICAL & 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 PRODUCED 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 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) ND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
6. RIGID STEEL CONDUITS SHALL BE GROUNDED AT BOTH ENDS.
7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THIN INSULATION.
8. RUN ELECTRICAL CONDUIT OR CABLING BETWEEN ELECTRICAL ROOM AND PROPOSED CELL SITE ARE PEDESTAL 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 PROPOSED CELL SITE TELECOM CABINET AND RBS CABINET AS INDICATED ON DRAWING A -1. PROVIDE FULL LENGTH PULL ROPE INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
10. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NAME 3R ENCLOSURE.
11. GROUNDING SHALL COMPLY WITH NEC ART. 250.
12. GROUNDING COAX CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURES COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
13. USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSTALLATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE GROUND.
14. ALL GROUND CONNECTION TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
15. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AS RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY BOND ANY METER OBJECTS WITHIN 7 FEET OF PROPOSED EQUIPMENT OR CABINET TO MASTER GROUND BAR.
16. CONNECTIONS TO MGB SHALL BE ARRANGED IN THREE MAIN GROUPS: SURGE PROCEDURES (COAXIAL CABLE GROUND KITS, TELCO AND POWER PANEL GROUND); (GROUNDING ELECTRODE RING OR BUILDING STEEL); NON-SURGING OBJECTS (EGB GROUND IN RBS UNIT).
17. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
18. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTION.
19. BOND ANTENNA MOUNTING BRACKETS, COAXIAL CABLE GROUND KITS, AND ALNA TO EGB PLACED NEAR THE ANTENNA LOCATION.
20. BOND ANTENNA EGB'S AND MGB TO WATER MAIN.
21. TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION.
22. BOND ANY METAL OBJECTS WITHIN 7 FEET OF PROPOSED EQUIPMENT OR CABINET TO MASTER GROUND BAR.
23. VERIFY PROPOSED SERVICE UPGRADE WITH LOCAL UTILITY COMPANY PRIOR TO CONSTRUCTION.

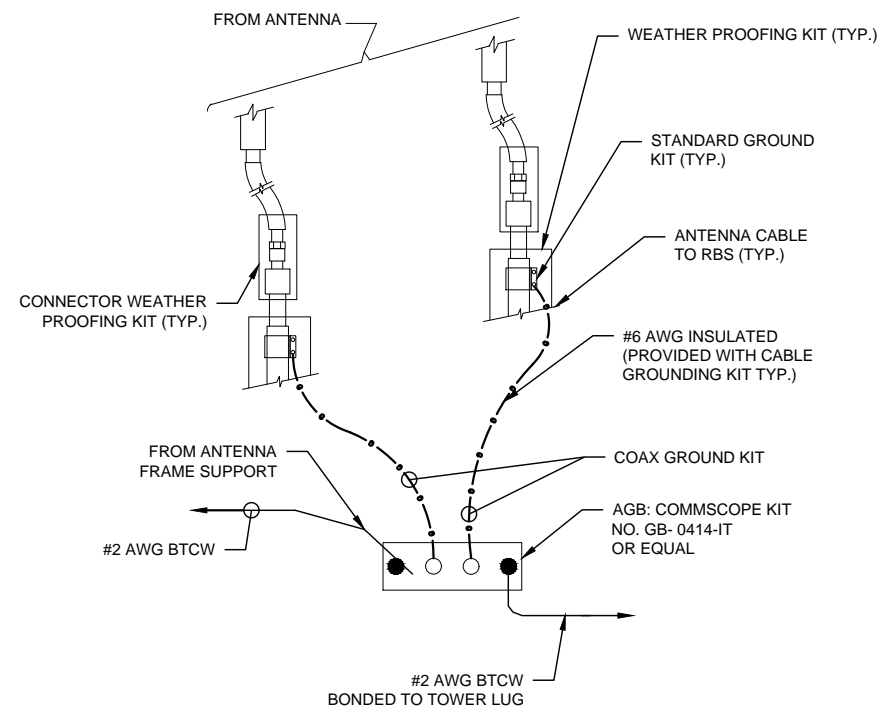


GROUNDING RISER DIAGRAM 1
N.T.S. E-1



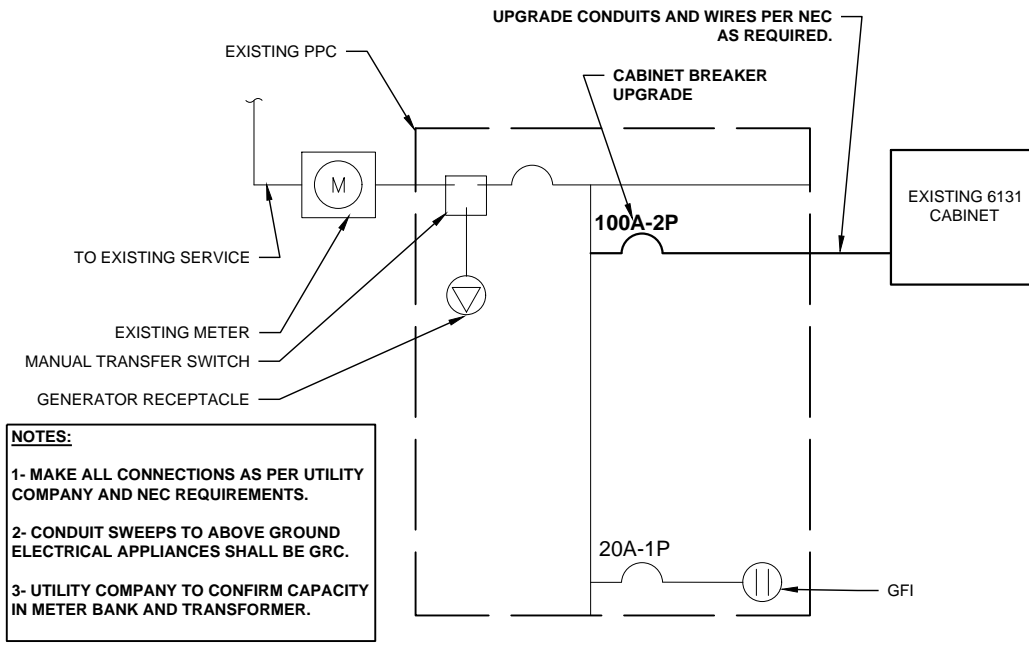
- NOTES:
 1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
 2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.

GROUND BAR CONNECTIONS 3
N.T.S. E-1



- NOTES:
 INSTALL CABLE GROUND KIT ABOVE HORIZONTAL BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO AGB/EGB

ANTENNA CABLE GROUNDING 2
N.T.S. E-1



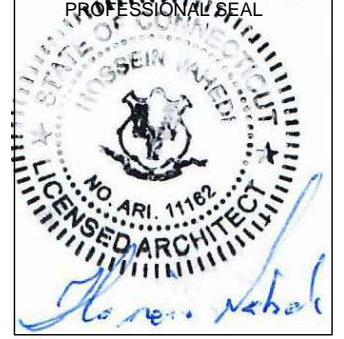
- NOTES:
 1- MAKE ALL CONNECTIONS AS PER UTILITY COMPANY AND NEC REQUIREMENTS.
 2- CONDUIT SWEEPS TO ABOVE GROUND ELECTRICAL APPLIANCES SHALL BE GRC.
 3- UTILITY COMPANY TO CONFIRM CAPACITY IN METER BANK AND TRANSFORMER.

TYPICAL ONE LINE DIAGRAM 4
N.T.S. E-1

APPLICANT:
T-Mobile
T-MOBILE NORTHEAST LLC
 35 GRIFFIN ROAD SOUTH
 BLOOMFIELD, CT 06002
 860-692-7100

PROJECT MANAGER
NSS NORTHEAST
 SITE SOLUTIONS
Turnkey Wireless Development
 420 MAIN STREET, BLDG 4
 STURBRIDGE, MA 01566
 203-275-6669

CONSULTANT:
FORESITE LLC
 Architects . Engineers . Surveyors
 462 WALNUT STREET
 NEWTON, MA 02460
 617-212-3123



THIS DOCUMENT IS THE DESIGN PROPERTY AND COPYRIGHT OF FORESITE, LLC. AND FOR THE EXCLUSIVE USE BY THE TITLE CLIENT. DUPLICATION OR USE WITHOUT THE EXPRESS WRITTEN CONSENT OF THE CREATOR IS STRICTLY PROHIBITED. DRAWING SCALES ARE INTENDED FOR 11"x17" SIZE PRINTED MEDIA ONLY. ALL OTHER PRINTED SIZES ARE DEEMED "NOT TO SCALE".

REV	DESCRIPTION	DATE
A	PRELIMINARY	05/08/19
B	REMOVED GENERATOR	05/16/19
C	REVISED PER NEW RFDS	06/05/19
D	REVISED PER NEW COMMENTS	06/10/19
0	FINAL ISSUED	06/13/19

SITE NUMBER: CT11059C
 SITE NAME: ROCKYHILL/ I-91/ X23
 SITE ADDRESS: 179 SHUNPIKE ROAD
 CROMWELL, CT 06416

SHEET TITLE:
 E-1: GROUNDING DETAILS

Exhibit D

Prepared For:



T-Mobile Northeast, LLC
35 Griffin Road South
Bloomfield, CT 06002



Structure Rating:

Self-Support Tower:	82.2% (Pass)
Anchor Rods:	69.3% (Pass)

Sincerely,
Destek Engineering, LLC
Firm License No: PEC0001429

06-11-2019



Ahmet Colakoglu, PE
Connecticut Professional Engineer
License No: 27057

Site ID: CT11059C
Site Name: ROCKYHILL/I-91/X23
179 Shunpike Road
Cromwell, CT 06416

CONTENTS

1.0 - SUBJECT AND REFERENCES

1.1 - STRUCTURE

2.0 - EXISTING AND PROPOSED APPURTENANCES

3.0 - CODES AND LOADING

4.0 - STANDARD CONDITIONS FOR ENGINEERING SERVICES ON EXISTING
STRUCTURES

5.0 - ANALYSIS AND ASSUMPTIONS

6.0 - RESULTS AND CONCLUSION

APPENDICES

A - SOFTWARE OUTPUT

1.0 SUBJECT AND REFERENCES

The purpose of this analysis is to evaluate the structural capacity of the 170' tall self-support tower located at 179 Shunpike Road, Cromwell, CT 06416 for the additions and alterations proposed by T-Mobile.

The structural analysis is based on the following documentation provided to Destek Engineering, LLC (Destek):

- RFDS provided by T-Mobile, dated 04/30/2019.
- Structural Analysis Report prepared by Hudson Design Group, dated 04/09/2018.
- Structural Analysis Report-Upgrade prepared by URS Corporation, dated 09/23/2014.
- Photographs provided by Foresite, LLC, dated 05/05/2014.

1.1 STRUCTURE

The subject structure is a three-sided, 170' tall self-support lattice tower formed by (7) 20' sections and (3) 10' section. Truss legs are X-braced with single angle diagonals from base to 150 ft. and Solid round legs are X-braced with single angle diagonals from 150 ft. to the top. The tower tapers from 20 feet wide at the base to 5 ft. wide at 150 ft. Between 150 ft. and 170 ft., the tower is 5 feet wide. Please refer to the software output in Appendix A for tower geometry, member sizes, and other details.

2.0 EXISTING AND PROPOSED APPURTENANCES

Existing Configuration of T-Mobile Appurtenances:

Rad Center (ft.)	Antennas & Equipment	Coax	Mounts
125	(3) Ericsson AIR21 B2A/B4P (3) Ericsson AIR21 B2P/B4A (3) Andrew LNX-6515DS-A1M (3) Ericsson RRUS11 (3) Generic Twin Style 1B - AWS	(12) 1-5/8" (1) 9x18 HCS	(3) Sector Mounts

Proposed and Final Configuration of T-Mobile Appurtenances:

Rad Center (ft.)	Antennas & Equipment	Coax	Mounts
125	(3) Ericsson AIR21 B2A/B4P (3) Ericsson AIR32 B66A/B2A (3) RFS APXVAARR24_43-U-NA20 (3) Ericsson Radio 4449 B71+B12* (3) Generic Twin Style 1B - AWS	(6) 1-5/8" (1) 9x18 HCS (3) 6x12 HCS	(3) Proposed SFG2B-10-4-96

* Proposed RRUs to be mounted behind the antennas

Appurtenances by Others:

Rad Center (ft.)	Antennas & Equipment	Coax	Mounts
183	(1) tx rx systems 101 -90-08-0-01	-	Leg mounted 9' Arm Halo Mount
179.75	(1) 2.5''x15' Mount pipe		
178	(1) 3''x20' Omni		
178	(1) 2.5''x20.5' Whip		
175	(3) 2.5''x14' Omni		
174	(1) 1.5''x12' Omni		
170	(3) rfs celwave APXVSP18-C-A20 (3) rfs celwave APXV9TM14-C-120 (3) Panasomic RRH 1900MHz (3) Andrew RRH 800MHz (3) alcatel lucent TD-RRH8x20-25 (1) alvarion SU-RA (1) PTP49600	(8) 7/8'' (1) 3/8'' (1) 1-1/2'' (1) 1-5/8'' (4) 1-1/4''	
168	(1) radiowaves HPD2-5.2 Dish	(1) 3/8''	-
159.5	(3) rfs celwave APXV18-206517S-C	(6) 1-5/8''	
158.5	(1) SC420-HFL1LDF		
144	(2) 3''x20' Omni (1) 2.5''x20.5' Whip	(1) 1/2'' (2) 7/8''	
141	(1) 2''x15' Omni	(2) 1/2''	
139	(1) 1.5''x10' Omni (1) 4''x9' Omni		
134	(3) LLPX310R (3) Panasomic RRH 1900MHz (3) Andrew VHLP2.5-180 Dish (1) VHLP2-180 Dish	(6) Category 5e 1'' wire (4) 1/2''	(1) Pirod 20' Universal Platform
115	(3) Powerwave 7770.00 (3) quintel technology QS66512-2 (3) cci antennas HPA-65R-BUU-H6 (3) Ericsson RRUS11 (6) Ericsson RRUS12 (6) Ericsson RRUS32 (3) Powerwave technology LGP21401 (1) raycap DC6-48-60-18-8F (1) raycap DC6-48-60-18-8C	(12) 1-5/8'' (2) 7/16'' (1) 3/8''	(3) Sector Mounts

Appurtenances by Others (Cont.):

Rad Center (ft.)	Antennas & Equipment	Coax	Mounts
101	(3) Amphenol BXA-171063-12CF-EDIN (3) Commscope HBX-6517DS-VTM (6) Andrew LNX-6514DS-VTM (1) rfs celwave DB-T1-6Z-8AB-0Z (3) alcatel lucent RRH2x40-AWS (3) Diplexers FD9R6004	(13) 1-5/8"	(3) Sector Mounts
83	(2) 22"x3"x2" Panel Antenna (1) Commscope VHLP3-11W Dish (3) TMA's	(3) Category 5e 1" wire	(2) Side Arm Mount
30	(1) Camera	(3) 1/2"	-
24	(1) PC9013N	-	-

3.0 CODES AND LOADING

This analysis has been performed in accordance with the 2018 Connecticut Building Code (2015 IBC) based upon an ultimate 3-second gust wind speed of 125 mph (Risk Category II) converted to a nominal 3-second gust wind speed of 97 mph per section 1609.3.1 as required for use in the TIA-222-G Standard per Exception #5 of Section 1609.1.1. The following loading criteria were used in the analysis:

- Basic wind speed of 97 mph without ice (V)
- Basic wind speed of 50 mph concurrent with the design ice thickness of 1" (V_i and t_i)
- Exposure Category C, Topographic Category 1

The following load combinations were used with wind blowing at 0°, 30°, 60°, and 90°, measured from a line normal to the face of the tower:

- $1.2 D + 1.6 W_0$
- $0.9 D + 1.6 W_0$
- $1.2 D + 1.0 D_i + 1.0 W_i + 1.0 T_i$

D: Dead load of structures and appurtenances

D_i : Weight of ice due to factored ice thickness (based upon t_i)

T_i : Load effects due to temperature

W_0 : Wind load without ice (based upon V)

W_i : Wind load with ice (based upon V_i)

4.0 STANDARD CONDITIONS FOR ENGINEERING SERVICES ON EXISTING STRUCTURES

The analysis is based on the information provided to Destek and is assumed to be current and correct. Unless otherwise noted, the structure and the foundation system are assumed to be in good condition, free of defects and can achieve theoretical strength.

It is assumed that the structure has been maintained and shall be maintained during its service. The superstructure and the foundation system are assumed to be designed with proper engineering practice and fabricated, constructed and erected in accordance with the design documents. Destek will accept no liability which may arise due to any existing deficiency in design, material, fabrication, erection, construction, etc. or lack of maintenance.

The analysis does not include a qualification of the mounts attached on the structure or their connections. The analysis is performed to verify the capacity of the main structural members, which is the current practice in the tower industry.

The analysis results presented in this report are only applicable for the previously mentioned existing and proposed additions and alterations. Any deviation of the proposed equipment and placement, etc., will require Destek to generate an additional structural analysis.

5.0 ANALYSIS AND ASSUMPTIONS

The tower was analyzed by utilizing tnxTower, a non-linear, three-dimensional, finite element-analysis software package, a product of Tower Numerics, Inc. Software output for this analysis is provided in Appendix A of this report.

The truss leg reinforcement bars installed at sections between 0'-40' and 60'-90' were assumed to be 1" solid rods and A36 steel. Destek should be notified if this assumption is discovered to be incorrect.

6.0 RESULTS AND CONCLUSION

Based on a structural analysis per *ANSI/TIA-222-G*, the existing self-support tower has **adequate** structural capacity for the proposed changes by T-Mobile. For the code specified load combinations and as a maximum, the tower legs from 20ft. to 40ft. are stressed to **82.2%** of their structural capacity. The diagonals, girts, and anchor bolts are stressed to **74.2%, 34.7%, and 69.3%** of their structural capacity, respectively.

Information regarding the tower base foundation was not available at the time of this analysis, thus a qualification of the foundation could not be completed.

Therefore, the proposed additions and alterations by T-Mobile **can** be implemented as intended and with the conditions outlined in this report.

Should you have any questions about this report, please contact us at (770) 693-0835.

APPENDIX A
SOFTWARE OUTPUT

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
101-90-08-0-01	183	ERICSSON AIR 21 B2A B4P	125
2.5" Dia 15' Mount Pipe	179.75	AIR 32 B2a/B66Aa	125
3" Dia 20' Omni	178	AIR 32 B2a/B66Aa	125
2.5"x20.5' Whip	178	QS66512-2 w/ Mount Pipe	115
(3) 2.5"x14' Omni	175	(2) LGP21401	115
1.5"x12' Omni	174	(2) LGP21401	115
APXVSPP18-C-A20 w/ Mount Pipe	170	(2) LGP21401	115
APXVSPP18-C-A20 w/ Mount Pipe	170	RRUS 11	115
APXVSPP18-C-A20 w/ Mount Pipe	170	RRUS 11	115
Panasonic RRH 1900MHZ	170	RRUS 11	115
Panasonic RRH 1900MHZ	170	(2) RRUS 12	115
Panasonic RRH 1900MHZ	170	(2) RRUS 12	115
Andrew 800MHz RRH	170	(2) RRUS 12	115
Andrew 800MHz RRH	170	(2) RRUS 32	115
Andrew 800MHz RRH	170	(2) RRUS 32	115
APXV9TM14-C-120 w/ Mount Pipe	170	(2) RRUS 32	115
APXV9TM14-C-120 w/ Mount Pipe	170	DC6-48-60-18-8F	115
APXV9TM14-C-120 w/ Mount Pipe	170	HPA-65R-BUU-H6 w/ Mount Pipe	115
TD-RRH8x20-25	170	HPA-65R-BUU-H6 w/ Mount Pipe	115
TD-RRH8x20-25	170	HPA-65R-BUU-H6 w/ Mount Pipe	115
TD-RRH8x20-25	170	DC6-48-60-18-8C	115
SU-RA	168	Sabre 12' V-Boom	115
PTP49600-SK	168	Sabre 12' V-Boom	115
Sector Mount [SM 412-1]	168	Sabre 12' V-Boom	115
HPD2-5.2	168	7770.00 w/ Mount Pipe	115
APXV18-206517S-C w/ Mount Pipe	159.5	7770.00 w/ Mount Pipe	115
APXV18-206517S-C w/ Mount Pipe	159.5	7770.00 w/ Mount Pipe	115
APXV18-206517S-C w/ Mount Pipe	159.5	QS66512-2 w/ Mount Pipe	115
SC420-HFL1LDF-SK	158.5	QS66512-2 w/ Mount Pipe	115
3" Dia 20' Omni	144	HBX-6517DS-A1M w/ Mount Pipe	101
2.5"x20.5' Whip	144	(2) LNX-6514DS-VTM w/ Mount Pipe	101
3" Dia 20' Omni	144	(2) LNX-6514DS-VTM w/ Mount Pipe	101
2"x15' Omni	141	(2) LNX-6514DS-VTM w/ Mount Pipe	101
1.5"x10' Omni	139	RRH2x40-AWS	101
Omni 4"x9'	138.5	RRH2x40-AWS	101
LLPX310R w/ Mount Pipe	134	RRH2x40-AWS	101
LLPX310R w/ Mount Pipe	134	DB-T1-6Z-8AB-0Z	101
Panasonic RRH 1900MHZ	134	(2) FD9R6004	101
Panasonic RRH 1900MHZ	134	(2) FD9R6004	101
Panasonic RRH 1900MHZ	134	(2) FD9R6004	101
Pirod 20' Universal Platform	134	PIROD 12' Lightweight T-Frame	101
VHLP2.5-180	134	PIROD 12' Lightweight T-Frame	101
VHLP2.5-180	134	PIROD 12' Lightweight T-Frame	101
VHLP2.5-180	134	BXA-171063-12CF-EDIN-X w/ Mount Pipe	101
VHLP2.180	134	BXA-171063-12CF-EDIN-X w/ Mount Pipe	101
LLPX310R w/ Mount Pipe	134	BXA-171063-12CF-EDIN-X w/ Mount Pipe	101
AIR 32 B2a/B66Aa	125	BXA-171063-12CF-EDIN-X w/ Mount Pipe	101
APXVAARR24_43-U-NA20 w/ Mount Pipe	125	HBX-6517DS-A1M w/ Mount Pipe	101
APXVAARR24_43-U-NA20 w/ Mount Pipe	125	HBX-6517DS-A1M w/ Mount Pipe	101
APXVAARR24_43-U-NA20 w/ Mount Pipe	125	3"x2"x22" Panel	87
RADIO 4449 B12/B71	125	TMA	84.5
RADIO 4449 B12/B71	125	3' Stand Off	83.5
RADIO 4449 B12/B71	125	3' Stand Off	83.5
Generic Style 1B - Twin AWS	125	VHLP3-11W	83
Generic Style 1B - Twin AWS	125	TMA	83
Generic Style 1B - Twin AWS	125	TMA	82.5
Generic Style 1B - Twin AWS	125	3"x2"x22" Panel	80
Sector Mount [SM 502-3]	125	Camera	30
ERICSSON AIR 21 B2A B4P	125	PC9013N	24
ERICSSON AIR 21 B2A B4P	125		

ALL R
ARE F
MAX.
DO
SH
UP
SH

SHEAR
24 K

TORQ
50 mph WIN

SHEAR
65 K

TORQ

REACTIONS - 97 mph wind

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	Pirod 105217 w/ 1"rod 36ksi	D	Pirod 105220 w/ 1"rod 36ksi
B	Pirod 105218 w/ 1"rod 36ksi	E	L2 1/2x2 1/2x3/16
C	Pirod 105219 w/ 1"rod 36ksi		

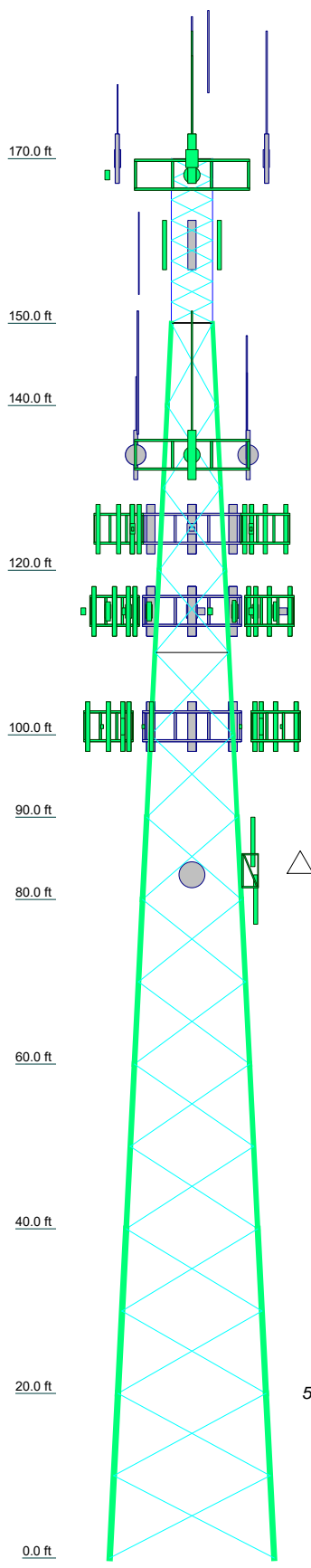
MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in Middlesex County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-G Standard.
3. Tower designed for a 97 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.

Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10
Legs	SR 1 3/4	Pirod 105244	Pirod 105216	Pirod 105217	A	B	C	D		
Leg Grade					A572-50					
Diagonals										
Diagonal Grade										
Top Girts										
Mid Girts										
Bottom Girts										
Face Width (ft)	5	6	8	10	11	12	14	16	18	20
# Panels @ (ft)						15 @ 10				
Weight (K)	1.2	1.1	2.1	2.8	1.5	1.7	4.1	4.5	5.3	5.9



<p>Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:</p>	<p>Job: CT11059C-Rev2</p> <p>Project: 1975064</p>
	<p>Client: Foresite LLC Drawn by: Ahmet Colakoglu App'd:</p> <p>Code: TIA-222-G Date: 06/11/19 Scale: NTS</p> <p>Path: S:\Projects\2019\75 - Foresite LLC\064 - CT11059C\TINX\Rev2\CT11059C-Rev2.dwg Dwg No. E-1</p>

SYMBOL LIST

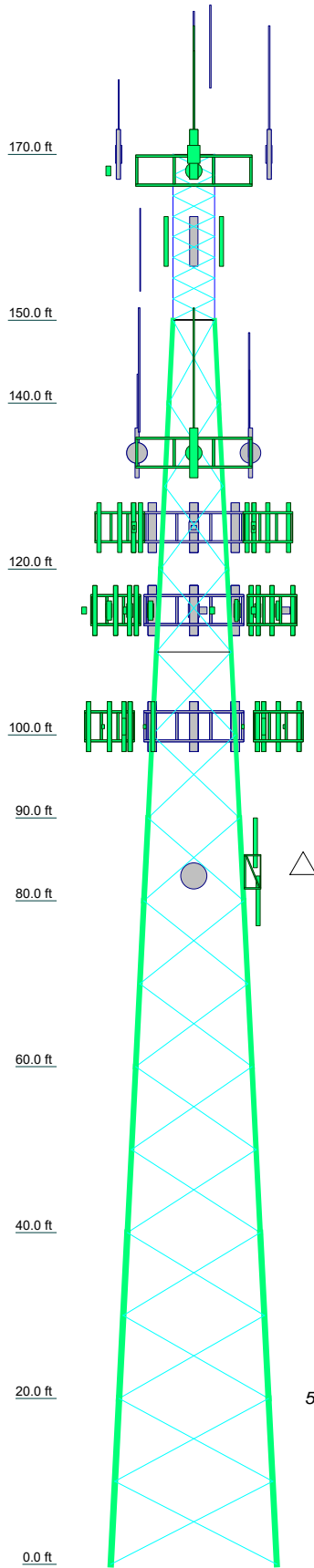
MARK	SIZE	MARK	SIZE
A	Pirolod 105217 w/ 1"rod 36ksi	D	Pirolod 105220 w/ 1"rod 36ksi
B	Pirolod 105218 w/ 1"rod 36ksi	E	L2 1/2x2 1/2x3/16
C	Pirolod 105219 w/ 1"rod 36ksi		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in Middlesex County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-G Standard.
3. Tower designed for a 97 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 82.2%

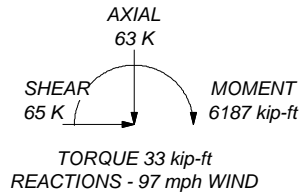
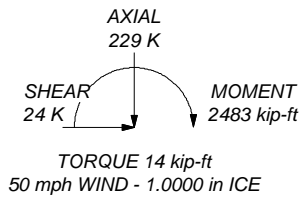


ALL REACTIONS
ARE FACTORED

MAX. CORNER REACTIONS AT BASE:

DOWN: 378 K
SHEAR: 42 K

UPLIFT: -334 K
SHEAR: 38 K



Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10
Legs	SR 1 3/4	Pirolod 105244	Pirolod 105216	Pirolod 105217	A	A	B	C	D	
Leg Grade						A572-50				
Diagonals	SR 7/8	E	L3x3x3/16	L3x3x1/4	L3x3x5/16	L3x3x5/16	L3x3x3/8	L3 1/2x3 1/2x5/16	L3 1/2x3 1/2x3/8	L4x4x5/16
Diagonal Grade	A572-50					A36				
Top Girts	SR 7/8	L3x3x3/16					N.A.			
Mid Girts		N.A.								
Bottom Girts	SR 7/8			L3x3x3/16		N.A.				
Face Width (ft)	5	6	8	10	11	12	14	16	18	20
# Panels @ (ft)	8 @ 2.48958	1.1	2.1	2.8	1.5	15 @ 10	4.1	4.5	5.3	5.9
Weight (K)	1.2									

<p>Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:</p>	<p>Job: CT11059C-Rev2</p>		
	<p>Project: 1975064</p>	<p>Client: Foresite LLC</p>	<p>Code: TIA-222-G</p>
<p>Drawn by: Ahmet Colakoglu</p>	<p>Date: 06/11/19</p>	<p>Scale: NTS</p>	<p>Dwg No. E-1</p>

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job CT11059C-Rev2	Page 1 of 36
	Project 1975064	Date 10:12:16 06/11/19
	Client Foresite LLC	Designed by Ahmet Colakoglu

Tower Input Data

The main tower is a 3x free standing tower with an overall height of 170.00 ft above the ground line.

The base of the tower is set at an elevation of 0.00 ft above the ground line.

The face width of the tower is 5.00 ft at the top and 20.00 ft at the base.

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

The following design criteria apply:

Tower is located in Middlesex County, Connecticut.

Basic wind speed of 97 mph.

Structure Class II.

Exposure Category C.

Topographic Category 1.

Crest Height 0.00 ft.

Nominal ice thickness of 1.0000 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

A wind speed of 50 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

A non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

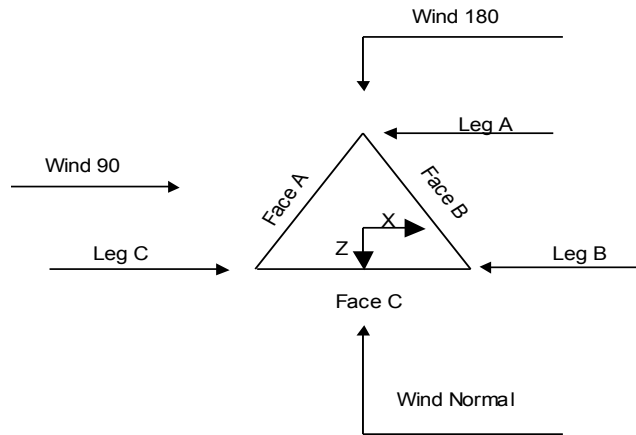
Stress ratio used in tower member design is 1.

Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

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

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job CT11059C-Rev2	Page 2 of 36
	Project 1975064	Date 10:12:16 06/11/19
	Client Foresite LLC	Designed by Ahmet Colakoglu



Triangular Tower

Tower Section Geometry

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	<i>ft</i>			<i>ft</i>		<i>ft</i>
T1	170.00-150.00			5.00	1	20.00
T2	150.00-140.00			5.00	1	10.00
T3	140.00-120.00			6.00	1	20.00
T4	120.00-100.00			8.00	1	20.00
T5	100.00-90.00			10.00	1	10.00
T6	90.00-80.00			11.00	1	10.00
T7	80.00-60.00			12.00	1	20.00
T8	60.00-40.00			14.00	1	20.00
T9	40.00-20.00			16.00	1	20.00
T10	20.00-0.00			18.00	1	20.00

Tower Section Geometry (cont'd)

Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset	Bottom Girt Offset
	<i>ft</i>	<i>ft</i>				<i>in</i>	<i>in</i>
T1	170.00-150.00	2.49	X Brace	No	No	0.0000	1.0000
T2	150.00-140.00	10.00	X Brace	No	No	0.0000	0.0000
T3	140.00-120.00	10.00	X Brace	No	No	0.0000	0.0000
T4	120.00-100.00	10.00	X Brace	No	No	0.0000	0.0000
T5	100.00-90.00	10.00	X Brace	No	No	0.0000	0.0000

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job	CT11059C-Rev2	Page	3 of 36
	Project	1975064	Date	10:12:16 06/11/19
	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Tower Section	Tower Elevation ft	Diagonal Spacing ft	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset in	Bottom Girt Offset in
T6	90.00-80.00	10.00	X Brace	No	No	0.0000	0.0000
T7	80.00-60.00	10.00	X Brace	No	No	0.0000	0.0000
T8	60.00-40.00	10.00	X Brace	No	No	0.0000	0.0000
T9	40.00-20.00	10.00	X Brace	No	No	0.0000	0.0000
T10	20.00-0.00	10.00	X Brace	No	No	0.0000	0.0000

Tower Section Geometry (cont'd)

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 170.00-150.00	Solid Round	1 3/4	A572-50 (50 ksi)	Solid Round	7/8	A572-50 (50 ksi)
T2 150.00-140.00	Truss Leg	Pirod 105244	A572-50 (50 ksi)	Single Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)
T3 140.00-120.00	Truss Leg	Pirod 105216	A572-50 (50 ksi)	Single Angle	L3x3x3/16	A36 (36 ksi)
T4 120.00-100.00	Truss Leg	Pirod 105217	A572-50 (50 ksi)	Single Angle	L3x3x1/4	A36 (36 ksi)
T5 100.00-90.00	Truss Leg	Pirod 105217	A572-50 (50 ksi)	Single Angle	L3x3x5/16	A36 (36 ksi)
T6 90.00-80.00	Truss Leg	Pirod 105217 w/ 1"rod 36ksi	A572-50 (50 ksi)	Single Angle	L3x3x5/16	A36 (36 ksi)
T7 80.00-60.00	Truss Leg	Pirod 105218 w/ 1"rod 36ksi	A572-50 (50 ksi)	Single Angle	L3x3x3/8	A36 (36 ksi)
T8 60.00-40.00	Truss Leg	Pirod 105219	A572-50 (50 ksi)	Single Angle	L3 1/2x3 1/2x5/16	A36 (36 ksi)
T9 40.00-20.00	Truss Leg	Pirod 105219 w/ 1"rod 36ksi	A572-50 (50 ksi)	Single Angle	L3 1/2x3 1/2x3/8	A36 (36 ksi)
T10 20.00-0.00	Truss Leg	Pirod 105220 w/ 1"rod 36ksi	A572-50 (50 ksi)	Single Angle	L4x4x5/16	A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 170.00-150.00	Solid Round	7/8	A572-50 (50 ksi)	Solid Round	7/8	A572-50 (50 ksi)
T2 150.00-140.00	Single Angle	L3x3x3/16	A36 (36 ksi)	Solid Round		A36 (36 ksi)

Tower Section Geometry (cont'd)

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job	CT11059C-Rev2	Page	6 of 36
	Project	1975064	Date	10:12:16 06/11/19
	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Tower Elevation ft	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T3 140.00-120.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T4 120.00-100.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T5 100.00-90.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T6 90.00-80.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T7 80.00-60.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T8 60.00-40.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T9 40.00-20.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T10 20.00-0.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

Tower Section Geometry (cont'd)

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T1 170.00-150.00	Flange	0.7500	0	0.6250	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T2 150.00-140.00	Flange	1.0000	6	1.0000	1	1.0000	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T3 140.00-120.00	Flange	1.0000	6	1.0000	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T4 120.00-100.00	Flange	1.0000	6	1.0000	1	0.6250	0	0.6250	0	1.0000	1	0.6250	0	0.6250	1
T5 100.00-90.00	Flange	1.0000	6	1.0000	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	1
T6 90.00-80.00	Flange	1.0000	6	1.0000	1	0.6250	0	0.6250	0	1.0000	0	0.6250	0	0.6250	1
T7 80.00-60.00	Flange	1.0000	6	1.0000	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	1
T8 60.00-40.00	Flange	1.2500	6	1.2500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	1
T9 40.00-20.00	Flange	1.2500	6	1.2500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	1
T10 20.00-0.00	Flange	1.2500	6	1.2500	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	1

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Row	Clear Per Spacing in	Width or Diameter in	Perimeter in	Weight plf
-------------	-------------------	-----------------	--	-------------------	-----------------	----------------------	--------------------------------	---	----------	-------------------------------	----------------------------	-----------------	---------------

Job	CT11059C-Rev2	Page	7 of 36
Project	1975064	Date	10:12:16 06/11/19
Client	Foresite LLC	Designed by	Ahmet Colakoglu

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf

CATEGORY 5e (1 WIRE)	C	No	No	Ar (CaAa)	87.00 - 7.00	0.0000	0.49	4	2	1.0000	1.0000		0.21
CATEGORY 5e (1 WIRE)	C	No	No	Ar (CaAa)	83.00 - 7.00	0.0000	0.46	2	1	1.0000	1.0000		0.21
LDF4-50A(1/2")	A	No	No	Ar (CaAa)	144.00 - 7.00	0.0000	0.125	1	1	0.6300	0.6300		0.15
LDF5-50A(7/8")	A	No	No	Ar (CaAa)	144.00 - 7.00	0.0000	0.125	2	1	1.0900	1.0900		0.33
LDF4-50A(1/2")	A	No	No	Ar (CaAa)	140.00 - 7.00	0.0000	0.13	2	1	0.6300	0.6300		0.15
LDF5-50A(7/8")	A	No	No	Ar (CaAa)	170.00 - 7.00	0.0000	0.14	3	1	1.0900	1.0900		0.33
LDF5-50A(7/8")	A	No	No	Ar (CaAa)	170.00 - 7.00	0.0000	0.14	1	1	1.0900	1.0900		0.33

LDF2-50(3/8")	A	No	No	Ar (CaAa)	168.00 - 7.00	0.0000	0.12	1	1	0.4400	0.4400		0.08
LDF2-50(3/8")	A	No	No	Ar (CaAa)	170.00 - 7.00	0.0000	0.12	1	1	0.4400	0.4400		0.08
HFT1206-24S V2-200(1-1/2")	A	No	No	Ar (CaAa)	170.00 - 7.00	0.0000	0.12	1	1	1.5500	1.5500		1.89
LDF7-50A(1-5/8")	C	No	No	Ar (CaAa)	101.00 - 7.00	0.0000	0.12	12	6	0.5000	1.9800		0.82
LDF7-50A(1-5/8")	C	No	No	Ar (CaAa)	115.00 - 7.00	0.0000	0.17	12	6	0.5000	1.9800		0.82

LDF5-50A(7/8")	C	No	No	Ar (CaAa)	170.00 - 7.00	0.0000	0.17	2	2	1.0900	1.0900		0.33
LDF7-50A(1-5/8")	A	No	No	Ar (CaAa)	160.00 - 7.00	0.0000	0.1	6	3	1.9800	1.9800		0.82
CATEGORY 5e (1 WIRE)	B	No	No	Ar (CaAa)	134.00 - 7.00	0.0000	-0.3	6	6	1.0000	1.0000		0.21
LDF4-50A(1/2")	B	No	No	Ar (CaAa)	134.00 - 7.00	0.0000	-0.3	4	4	0.6300	0.6300		0.15
LDF4-50A(1/2")	A	No	No	Ar (CaAa)	30.00 - 7.00	0.0000	0.08	3	1	0.6300	0.6300		0.15

LDF7-50A(1-5/8")	A	No	No	Ar (CaAa)	170.00 - 7.00	0.0000	0.38	1	1	1.9800	1.9800		0.82
LDF6-50A(1-1/4")	A	No	No	Ar (CaAa)	170.00 - 7.00	0.0000	0.16	4	2	1.5500	1.5500		0.66
LDF5-50A(7/8")	A	No	No	Ar (CaAa)	170.00 - 7.00	0.0000	0.132	2	2	1.0900	1.0900		0.33
LDF7-50A(1-5/8")	C	No	No	Ar (CaAa)	101.00 - 7.00	0.0000	0.1	1	1	1.9800	1.9800		0.82

FB-L98-002-XXX(3/8")	C	No	No	Ar (CaAa)	115.00 - 7.00	0.0000	0.34	1	1	0.3937	0.3937		0.06
WR-VG122S T-BRDA(7/16	C	No	No	Ar (CaAa)	115.00 - 7.00	0.0000	0.35	2	2	0.3937	0.3937		0.06

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job CT11059C-Rev2	Page 8 of 36
	Project 1975064	Date 10:12:16 06/11/19
	Client Foresite LLC	Designed by Ahmet Colakoglu

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	# Rows	# Per Spacing	Clear in	Width or Diameter in	Perimeter in	Weight plf
) ***** ***** ***** ***** **125ft T-Mobile** LDF7-50A(1-5/8")													
	B	No	No	Ar (CaAa)	125.00 - 7.00	0.0000	0.1	10	10	1.9800	1.9800		0.82

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	C _{AA} ft ² /ft	Weight plf
***** * ***** * ***** * ***** * ***** *								

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
T1	170.00-150.00	A	0.000	0.000	46.092	0.000	0.20
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	4.360	0.000	0.01
T2	150.00-140.00	A	0.000	0.000	30.154	0.000	0.13
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	2.180	0.000	0.01
T3	140.00-120.00	A	0.000	0.000	66.200	0.000	0.27
		B	0.000	0.000	21.828	0.000	0.07
		C	0.000	0.000	4.360	0.000	0.01
T4	120.00-100.00	A	0.000	0.000	66.200	0.000	0.27
		B	0.000	0.000	56.640	0.000	0.20
		C	0.000	0.000	44.346	0.000	0.17
T5	100.00-90.00	A	0.000	0.000	33.100	0.000	0.14
		B	0.000	0.000	28.320	0.000	0.10
		C	0.000	0.000	52.861	0.000	0.21
T6	90.00-80.00	A	0.000	0.000	33.100	0.000	0.14
		B	0.000	0.000	28.320	0.000	0.10
		C	0.000	0.000	56.261	0.000	0.22

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job	CT11059C-Rev2	Page	9 of 36
	Project	1975064	Date	10:12:16 06/11/19
	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
T7	80.00-60.00	A	0.000	0.000	66.200	0.000	0.27
		B	0.000	0.000	56.640	0.000	0.20
		C	0.000	0.000	117.722	0.000	0.45
T8	60.00-40.00	A	0.000	0.000	66.200	0.000	0.27
		B	0.000	0.000	56.640	0.000	0.20
		C	0.000	0.000	117.722	0.000	0.45
T9	40.00-20.00	A	0.000	0.000	68.090	0.000	0.27
		B	0.000	0.000	56.640	0.000	0.20
		C	0.000	0.000	117.722	0.000	0.45
T10	20.00-0.00	A	0.000	0.000	45.487	0.000	0.18
		B	0.000	0.000	36.816	0.000	0.13
		C	0.000	0.000	76.519	0.000	0.29

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
T1	170.00-150.00	A	2.342	0.000	0.000	166.102	0.000	3.09
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	24.572	0.000	0.30
T2	150.00-140.00	A	2.319	0.000	0.000	101.281	0.000	1.92
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	12.206	0.000	0.15
T3	140.00-120.00	A	2.294	0.000	0.000	242.844	0.000	4.45
		B		0.000	0.000	73.878	0.000	1.16
		C		0.000	0.000	24.236	0.000	0.29
T4	120.00-100.00	A	2.256	0.000	0.000	240.341	0.000	4.36
		B		0.000	0.000	173.471	0.000	2.90
		C		0.000	0.000	87.896	0.000	1.47
T5	100.00-90.00	A	2.223	0.000	0.000	119.090	0.000	2.14
		B		0.000	0.000	86.425	0.000	1.43
		C		0.000	0.000	84.481	0.000	1.57
T6	90.00-80.00	A	2.198	0.000	0.000	118.280	0.000	2.11
		B		0.000	0.000	86.193	0.000	1.42
		C		0.000	0.000	96.633	0.000	1.73
T7	80.00-60.00	A	2.156	0.000	0.000	233.778	0.000	4.11
		B		0.000	0.000	171.587	0.000	2.78
		C		0.000	0.000	215.048	0.000	3.74
T8	60.00-40.00	A	2.085	0.000	0.000	229.083	0.000	3.94
		B		0.000	0.000	170.243	0.000	2.70
		C		0.000	0.000	211.526	0.000	3.62
T9	40.00-20.00	A	1.981	0.000	0.000	232.835	0.000	3.89
		B		0.000	0.000	168.292	0.000	2.58
		C		0.000	0.000	206.404	0.000	3.44
T10	20.00-0.00	A	1.775	0.000	0.000	148.492	0.000	2.32
		B		0.000	0.000	106.884	0.000	1.52
		C		0.000	0.000	127.562	0.000	2.01

Feed Line Center of Pressure

Section	Elevation ft	CP _x in	CP _z in	CP _x Ice in	CP _z Ice in

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job	CT11059C-Rev2	Page	10 of 36
	Project	1975064	Date	10:12:16 06/11/19
	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Section	Elevation	CP _x	CP _z	CP _x	CP _z
	ft	in	in	Ice in	Ice in
T1	170.00-150.00	-6.7315	-8.8734	-4.6767	-5.6364
T2	150.00-140.00	-4.8217	-6.5907	-2.2836	-2.7844
T3	140.00-120.00	-4.1964	-10.2390	-4.3273	-8.2273
T4	120.00-100.00	-3.3540	-9.8212	-5.6172	-9.3968
T5	100.00-90.00	-5.7467	-8.1462	-8.1974	-8.8448
T6	90.00-80.00	-7.2738	-7.5006	-10.4088	-8.4221
T7	80.00-60.00	-8.7017	-7.2609	-13.0084	-8.1772
T8	60.00-40.00	-9.3391	-7.8197	-14.4522	-9.1969
T9	40.00-20.00	-10.3308	-8.6909	-16.0709	-10.4718
T10	20.00-0.00	-8.3310	-6.9893	-13.4918	-9.1435

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T1	9	LDF5-50A(7/8")	150.00 - 170.00	0.6000	0.4027
T1	10	LDF5-50A(7/8")	150.00 - 170.00	0.6000	0.4027
T1	12	LDF2-50(3/8")	150.00 - 168.00	0.6000	0.4027
T1	13	LDF2-50(3/8")	150.00 - 170.00	0.6000	0.4027
T1	14	HFT1206-24SV2-200(1-1/2")	150.00 - 170.00	0.6000	0.4027
T1	18	LDF5-50A(7/8")	150.00 - 170.00	0.6000	0.4027
T1	19	LDF7-50A(1-5/8")	150.00 - 160.00	0.6000	0.4027
T1	25	LDF7-50A(1-5/8")	150.00 - 170.00	0.6000	0.4027
T1	26	LDF6-50A(1-1/4")	150.00 - 170.00	0.6000	0.4027
T1	27	LDF5-50A(7/8")	150.00 - 170.00	0.6000	0.4027
T2	6	LDF4-50A(1/2")	140.00 - 144.00	0.6000	0.2137
T2	7	LDF5-50A(7/8")	140.00 - 144.00	0.6000	0.2137
T2	9	LDF5-50A(7/8")	140.00 - 150.00	0.6000	0.2137
T2	10	LDF5-50A(7/8")	140.00 - 150.00	0.6000	0.2137
T2	12	LDF2-50(3/8")	140.00 - 150.00	0.6000	0.2137
T2	13	LDF2-50(3/8")	140.00 - 150.00	0.6000	0.2137
T2	14	HFT1206-24SV2-200(1-1/2")	140.00 - 150.00	0.6000	0.2137
T2	18	LDF5-50A(7/8")	140.00 - 150.00	0.6000	0.2137
T2	19	LDF7-50A(1-5/8")	140.00 - 150.00	0.6000	0.2137
T2	25	LDF7-50A(1-5/8")	140.00 - 150.00	0.6000	0.2137

Job	CT11059C-Rev2	Page	11 of 36
Project	1975064	Date	10:12:16 06/11/19
Client	Foresite LLC	Designed by	Ahmet Colakoglu

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T2	26	LDF6-50A(1-1/4")	140.00 - 150.00	0.6000	0.2137
T2	27	LDF5-50A(7/8")	140.00 - 150.00	0.6000	0.2137
T3	6	LDF4-50A(1/2")	120.00 - 140.00	0.6000	0.3649
T3	7	LDF5-50A(7/8")	120.00 - 140.00	0.6000	0.3649
T3	8	LDF4-50A(1/2")	120.00 - 140.00	0.6000	0.3649
T3	9	LDF5-50A(7/8")	120.00 - 140.00	0.6000	0.3649
T3	10	LDF5-50A(7/8")	120.00 - 140.00	0.6000	0.3649
T3	12	LDF2-50(3/8")	120.00 - 140.00	0.6000	0.3649
T3	13	LDF2-50(3/8")	120.00 - 140.00	0.6000	0.3649
T3	14	HFT1206-24SV2-200(1-1/2")	120.00 - 140.00	0.6000	0.3649
T3	18	LDF5-50A(7/8")	120.00 - 140.00	0.6000	0.3649
T3	19	LDF7-50A(1-5/8")	120.00 - 140.00	0.6000	0.3649
T3	20	CATEGORY 5e (1 WIRE)	120.00 - 134.00	0.6000	0.3649
T3	21	LDF4-50A(1/2")	120.00 - 134.00	0.6000	0.3649
T3	25	LDF7-50A(1-5/8")	120.00 - 140.00	0.6000	0.3649
T3	26	LDF6-50A(1-1/4")	120.00 - 140.00	0.6000	0.3649
T3	27	LDF5-50A(7/8")	120.00 - 140.00	0.6000	0.3649
T3	35	LDF7-50A(1-5/8")	120.00 - 125.00	0.6000	0.3649
T4	6	LDF4-50A(1/2")	100.00 - 120.00	0.6000	0.4437
T4	7	LDF5-50A(7/8")	100.00 - 120.00	0.6000	0.4437
T4	8	LDF4-50A(1/2")	100.00 - 120.00	0.6000	0.4437
T4	9	LDF5-50A(7/8")	100.00 - 120.00	0.6000	0.4437
T4	10	LDF5-50A(7/8")	100.00 - 120.00	0.6000	0.4437
T4	12	LDF2-50(3/8")	100.00 - 120.00	0.6000	0.4437
T4	13	LDF2-50(3/8")	100.00 - 120.00	0.6000	0.4437
T4	14	HFT1206-24SV2-200(1-1/2")	100.00 - 120.00	0.6000	0.4437
T4	15	LDF7-50A(1-5/8")	100.00 - 101.00	0.6000	0.4437
T4	16	LDF7-50A(1-5/8")	100.00 - 115.00	0.6000	0.4437
T4	18	LDF5-50A(7/8")	100.00 - 120.00	0.6000	0.4437
T4	19	LDF7-50A(1-5/8")	100.00 - 120.00	0.6000	0.4437
T4	20	CATEGORY 5e (1 WIRE)	100.00 - 120.00	0.6000	0.4437

Job	CT11059C-Rev2	Page	12 of 36
Project	1975064	Date	10:12:16 06/11/19
Client	Foresite LLC	Designed by	Ahmet Colakoglu

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T4	21	LDF4-50A(1/2")	100.00 - 120.00	0.6000	0.4437
T4	25	LDF7-50A(1-5/8")	100.00 - 120.00	0.6000	0.4437
T4	26	LDF6-50A(1-1/4")	100.00 - 120.00	0.6000	0.4437
T4	27	LDF5-50A(7/8")	100.00 - 120.00	0.6000	0.4437
T4	28	LDF7-50A(1-5/8")	100.00 - 101.00	0.6000	0.4437
T4	30	FB-L98-002-XXX(3/8")	100.00 - 115.00	0.6000	0.4437
T4	31	WR-VG122ST-BRDA(7/16)	100.00 - 115.00	0.6000	0.4437
T4	35	LDF7-50A(1-5/8")	100.00 - 120.00	0.6000	0.4437
T5	6	LDF4-50A(1/2")	90.00 - 100.00	0.6000	0.5245
T5	7	LDF5-50A(7/8")	90.00 - 100.00	0.6000	0.5245
T5	8	LDF4-50A(1/2")	90.00 - 100.00	0.6000	0.5245
T5	9	LDF5-50A(7/8")	90.00 - 100.00	0.6000	0.5245
T5	10	LDF5-50A(7/8")	90.00 - 100.00	0.6000	0.5245
T5	12	LDF2-50(3/8")	90.00 - 100.00	0.6000	0.5245
T5	13	LDF2-50(3/8")	90.00 - 100.00	0.6000	0.5245
T5	14	HFT1206-24SV2-200(1-1/2")	90.00 - 100.00	0.6000	0.5245
T5	15	LDF7-50A(1-5/8")	90.00 - 100.00	0.6000	0.5245
T5	16	LDF7-50A(1-5/8")	90.00 - 100.00	0.6000	0.5245
T5	18	LDF5-50A(7/8")	90.00 - 100.00	0.6000	0.5245
T5	19	LDF7-50A(1-5/8")	90.00 - 100.00	0.6000	0.5245
T5	20	CATEGORY 5e (1 WIRE)	90.00 - 100.00	0.6000	0.5245
T5	21	LDF4-50A(1/2")	90.00 - 100.00	0.6000	0.5245
T5	25	LDF7-50A(1-5/8")	90.00 - 100.00	0.6000	0.5245
T5	26	LDF6-50A(1-1/4")	90.00 - 100.00	0.6000	0.5245
T5	27	LDF5-50A(7/8")	90.00 - 100.00	0.6000	0.5245
T5	28	LDF7-50A(1-5/8")	90.00 - 100.00	0.6000	0.5245
T5	30	FB-L98-002-XXX(3/8")	90.00 - 100.00	0.6000	0.5245
T5	31	WR-VG122ST-BRDA(7/16)	90.00 - 100.00	0.6000	0.5245
T5	35	LDF7-50A(1-5/8")	90.00 - 100.00	0.6000	0.5245
T6	4	CATEGORY 5e (1 WIRE)	80.00 - 87.00	0.6000	0.5529
T6	5	CATEGORY 5e (1 WIRE)	80.00 - 83.00	0.6000	0.5529
T6	6	LDF4-50A(1/2")	80.00 - 90.00	0.6000	0.5529
T6	7	LDF5-50A(7/8")	80.00 - 90.00	0.6000	0.5529
T6	8	LDF4-50A(1/2")	80.00 - 90.00	0.6000	0.5529
T6	9	LDF5-50A(7/8")	80.00 - 90.00	0.6000	0.5529
T6	10	LDF5-50A(7/8")	80.00 - 90.00	0.6000	0.5529
T6	12	LDF2-50(3/8")	80.00 - 90.00	0.6000	0.5529
T6	13	LDF2-50(3/8")	80.00 - 90.00	0.6000	0.5529
T6	14	HFT1206-24SV2-200(1-1/2")	80.00 - 90.00	0.6000	0.5529
T6	15	LDF7-50A(1-5/8")	80.00 - 90.00	0.6000	0.5529
T6	16	LDF7-50A(1-5/8")	80.00 - 90.00	0.6000	0.5529
T6	18	LDF5-50A(7/8")	80.00 - 90.00	0.6000	0.5529
T6	19	LDF7-50A(1-5/8")	80.00 - 90.00	0.6000	0.5529
T6	20	CATEGORY 5e (1 WIRE)	80.00 - 90.00	0.6000	0.5529
T6	21	LDF4-50A(1/2")	80.00 - 90.00	0.6000	0.5529
T6	25	LDF7-50A(1-5/8")	80.00 - 90.00	0.6000	0.5529
T6	26	LDF6-50A(1-1/4")	80.00 - 90.00	0.6000	0.5529
T6	27	LDF5-50A(7/8")	80.00 - 90.00	0.6000	0.5529
T6	28	LDF7-50A(1-5/8")	80.00 - 90.00	0.6000	0.5529
T6	30	FB-L98-002-XXX(3/8")	80.00 - 90.00	0.6000	0.5529
T6	31	WR-VG122ST-BRDA(7/16)	80.00 - 90.00	0.6000	0.5529
T6	35	LDF7-50A(1-5/8")	80.00 - 90.00	0.6000	0.5529
T7	4	CATEGORY 5e (1 WIRE)	60.00 - 80.00	0.6000	0.5893
T7	5	CATEGORY 5e (1 WIRE)	60.00 - 80.00	0.6000	0.5893

Job	CT11059C-Rev2	Page	13 of 36
Project	1975064	Date	10:12:16 06/11/19
Client	Foresite LLC	Designed by	Ahmet Colakoglu

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T7	6	LDF4-50A(1/2")	60.00 - 80.00	0.6000	0.5893
T7	7	LDF5-50A(7/8")	60.00 - 80.00	0.6000	0.5893
T7	8	LDF4-50A(1/2")	60.00 - 80.00	0.6000	0.5893
T7	9	LDF5-50A(7/8")	60.00 - 80.00	0.6000	0.5893
T7	10	LDF5-50A(7/8")	60.00 - 80.00	0.6000	0.5893
T7	12	LDF2-50(3/8")	60.00 - 80.00	0.6000	0.5893
T7	13	LDF2-50(3/8")	60.00 - 80.00	0.6000	0.5893
T7	14	HFT1206-24SV2-200(1-1/2")	60.00 - 80.00	0.6000	0.5893
T7	15	LDF7-50A(1-5/8")	60.00 - 80.00	0.6000	0.5893
T7	16	LDF7-50A(1-5/8")	60.00 - 80.00	0.6000	0.5893
T7	18	LDF5-50A(7/8")	60.00 - 80.00	0.6000	0.5893
T7	19	LDF7-50A(1-5/8")	60.00 - 80.00	0.6000	0.5893
T7	20	CATEGORY 5e (1 WIRE)	60.00 - 80.00	0.6000	0.5893
T7	21	LDF4-50A(1/2")	60.00 - 80.00	0.6000	0.5893
T7	25	LDF7-50A(1-5/8")	60.00 - 80.00	0.6000	0.5893
T7	26	LDF6-50A(1-1/4")	60.00 - 80.00	0.6000	0.5893
T7	27	LDF5-50A(7/8")	60.00 - 80.00	0.6000	0.5893
T7	28	LDF7-50A(1-5/8")	60.00 - 80.00	0.6000	0.5893
T7	30	FB-L98-002-XXX(3/8")	60.00 - 80.00	0.6000	0.5893
T7	31	WR-VG122ST-BRDA(7/16)	60.00 - 80.00	0.6000	0.5893
T7	35	LDF7-50A(1-5/8")	60.00 - 80.00	0.6000	0.5893
T8	4	CATEGORY 5e (1 WIRE)	40.00 - 60.00	0.6000	0.6000
T8	5	CATEGORY 5e (1 WIRE)	40.00 - 60.00	0.6000	0.6000
T8	6	LDF4-50A(1/2")	40.00 - 60.00	0.6000	0.6000
T8	7	LDF5-50A(7/8")	40.00 - 60.00	0.6000	0.6000
T8	8	LDF4-50A(1/2")	40.00 - 60.00	0.6000	0.6000
T8	9	LDF5-50A(7/8")	40.00 - 60.00	0.6000	0.6000
T8	10	LDF5-50A(7/8")	40.00 - 60.00	0.6000	0.6000
T8	12	LDF2-50(3/8")	40.00 - 60.00	0.6000	0.6000
T8	13	LDF2-50(3/8")	40.00 - 60.00	0.6000	0.6000
T8	14	HFT1206-24SV2-200(1-1/2")	40.00 - 60.00	0.6000	0.6000
T8	15	LDF7-50A(1-5/8")	40.00 - 60.00	0.6000	0.6000
T8	16	LDF7-50A(1-5/8")	40.00 - 60.00	0.6000	0.6000
T8	18	LDF5-50A(7/8")	40.00 - 60.00	0.6000	0.6000
T8	19	LDF7-50A(1-5/8")	40.00 - 60.00	0.6000	0.6000
T8	20	CATEGORY 5e (1 WIRE)	40.00 - 60.00	0.6000	0.6000
T8	21	LDF4-50A(1/2")	40.00 - 60.00	0.6000	0.6000
T8	25	LDF7-50A(1-5/8")	40.00 - 60.00	0.6000	0.6000
T8	26	LDF6-50A(1-1/4")	40.00 - 60.00	0.6000	0.6000
T8	27	LDF5-50A(7/8")	40.00 - 60.00	0.6000	0.6000
T8	28	LDF7-50A(1-5/8")	40.00 - 60.00	0.6000	0.6000
T8	30	FB-L98-002-XXX(3/8")	40.00 - 60.00	0.6000	0.6000
T8	31	WR-VG122ST-BRDA(7/16)	40.00 - 60.00	0.6000	0.6000
T8	35	LDF7-50A(1-5/8")	40.00 - 60.00	0.6000	0.6000
T9	4	CATEGORY 5e (1 WIRE)	20.00 - 40.00	0.6000	0.6000
T9	5	CATEGORY 5e (1 WIRE)	20.00 - 40.00	0.6000	0.6000
T9	6	LDF4-50A(1/2")	20.00 - 40.00	0.6000	0.6000
T9	7	LDF5-50A(7/8")	20.00 - 40.00	0.6000	0.6000
T9	8	LDF4-50A(1/2")	20.00 - 40.00	0.6000	0.6000
T9	9	LDF5-50A(7/8")	20.00 - 40.00	0.6000	0.6000
T9	10	LDF5-50A(7/8")	20.00 - 40.00	0.6000	0.6000
T9	12	LDF2-50(3/8")	20.00 - 40.00	0.6000	0.6000
T9	13	LDF2-50(3/8")	20.00 - 40.00	0.6000	0.6000
T9	14	HFT1206-24SV2-200(1-1/2")	20.00 - 40.00	0.6000	0.6000
T9	15	LDF7-50A(1-5/8")	20.00 - 40.00	0.6000	0.6000
T9	16	LDF7-50A(1-5/8")	20.00 - 40.00	0.6000	0.6000
T9	18	LDF5-50A(7/8")	20.00 - 40.00	0.6000	0.6000
T9	19	LDF7-50A(1-5/8")	20.00 - 40.00	0.6000	0.6000
T9	20	CATEGORY 5e (1 WIRE)	20.00 - 40.00	0.6000	0.6000
T9	21	LDF4-50A(1/2")	20.00 - 40.00	0.6000	0.6000
T9	22	LDF4-50A(1/2")	20.00 - 30.00	0.6000	0.6000
T9	25	LDF7-50A(1-5/8")	20.00 - 40.00	0.6000	0.6000

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job CT11059C-Rev2	Page 14 of 36
	Project 1975064	Date 10:12:16 06/11/19
	Client Foresite LLC	Designed by Ahmet Colakoglu

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T9	26	LDF6-50A(1-1/4")	20.00 - 40.00	0.6000	0.6000
T9	27	LDF5-50A(7/8")	20.00 - 40.00	0.6000	0.6000
T9	28	LDF7-50A(1-5/8")	20.00 - 40.00	0.6000	0.6000
T9	30	FB-L98-002-XXX(3/8")	20.00 - 40.00	0.6000	0.6000
T9	31	WR-VG122ST-BRDA(7/16)	20.00 - 40.00	0.6000	0.6000
T9	35	LDF7-50A(1-5/8")	20.00 - 40.00	0.6000	0.6000
T10	4	CATEGORY 5e (1 WIRE)	7.00 - 20.00	0.6000	0.6000
T10	5	CATEGORY 5e (1 WIRE)	7.00 - 20.00	0.6000	0.6000
T10	6	LDF4-50A(1/2")	7.00 - 20.00	0.6000	0.6000
T10	7	LDF5-50A(7/8")	7.00 - 20.00	0.6000	0.6000
T10	8	LDF4-50A(1/2")	7.00 - 20.00	0.6000	0.6000
T10	9	LDF5-50A(7/8")	7.00 - 20.00	0.6000	0.6000
T10	10	LDF5-50A(7/8")	7.00 - 20.00	0.6000	0.6000
T10	12	LDF2-50(3/8")	7.00 - 20.00	0.6000	0.6000
T10	13	LDF2-50(3/8")	7.00 - 20.00	0.6000	0.6000
T10	14	HFT1206-24SV2-200(1-1/2")	7.00 - 20.00	0.6000	0.6000
T10	15	LDF7-50A(1-5/8")	7.00 - 20.00	0.6000	0.6000
T10	16	LDF7-50A(1-5/8")	7.00 - 20.00	0.6000	0.6000
T10	18	LDF5-50A(7/8")	7.00 - 20.00	0.6000	0.6000
T10	19	LDF7-50A(1-5/8")	7.00 - 20.00	0.6000	0.6000
T10	20	CATEGORY 5e (1 WIRE)	7.00 - 20.00	0.6000	0.6000
T10	21	LDF4-50A(1/2")	7.00 - 20.00	0.6000	0.6000
T10	22	LDF4-50A(1/2")	7.00 - 20.00	0.6000	0.6000
T10	25	LDF7-50A(1-5/8")	7.00 - 20.00	0.6000	0.6000
T10	26	LDF6-50A(1-1/4")	7.00 - 20.00	0.6000	0.6000
T10	27	LDF5-50A(7/8")	7.00 - 20.00	0.6000	0.6000
T10	28	LDF7-50A(1-5/8")	7.00 - 20.00	0.6000	0.6000
T10	30	FB-L98-002-XXX(3/8")	7.00 - 20.00	0.6000	0.6000
T10	31	WR-VG122ST-BRDA(7/16)	7.00 - 20.00	0.6000	0.6000
T10	35	LDF7-50A(1-5/8")	7.00 - 20.00	0.6000	0.6000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	Placement	C_{AA} Front	C_{AA} Side	Weight
			ft ft ft	°	ft	ft ²	ft ²	K

183ft Municipal								
101-90-08-0-01	A	From Leg	9.00	0.0000	183.00	No Ice	3.14	0.04
			0.00			1/2" Ice	4.31	0.06
			0.00			1" Ice	4.93	0.09
2.5" Dia 15' Mount Pipe	A	From Leg	9.00	0.0000	179.75	No Ice	3.75	0.09
			0.00			1/2" Ice	5.28	0.12
			0.00			1" Ice	6.81	0.15
3" Dia 20' Omni	B	From Face	9.00	0.0000	178.00	No Ice	6.00	0.06
			0.00			1/2" Ice	13.30	0.10
			0.00			1" Ice	16.60	0.14
2.5"x20.5' Whip	C	From Face	9.00	0.0000	178.00	No Ice	5.13	0.15
			0.00			1/2" Ice	11.95	0.19

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job	CT11059C-Rev2	Page	15 of 36
	Project	1975064	Date	10:12:16 06/11/19
	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight	
			Horz	Lateral						Vert
(3) 2.5"x14' Omni	C	From Face	0.00		0.0000	175.00	1" Ice	15.38	15.38	0.23
			9.00				No Ice	3.50	3.50	0.03
			0.00				1/2" Ice	8.16	8.16	0.06
			0.00				1" Ice	10.50	10.50	0.09
1.5"x12' Omni	A	From Face	9.00		0.0000	174.00	No Ice	2.10	2.10	0.06
			0.00				1/2" Ice	5.80	5.80	0.07
			0.00				1" Ice	8.16	8.16	0.08
			0.00							

170ft Sprint										
APXVSPP18-C-A20 w/ Mount Pipe	A	From Face	9.00		0.0000	170.00	No Ice	4.60	4.01	0.09
			0.00				1/2" Ice	5.05	4.45	0.15
			0.00				1" Ice	5.50	4.89	0.23
APXVSPP18-C-A20 w/ Mount Pipe	B	From Face	9.00		0.0000	170.00	No Ice	4.60	4.01	0.09
			0.00				1/2" Ice	5.05	4.45	0.15
			0.00				1" Ice	5.50	4.89	0.23
APXVSPP18-C-A20 w/ Mount Pipe	C	From Face	9.00		0.0000	170.00	No Ice	4.60	4.01	0.09
			0.00				1/2" Ice	5.05	4.45	0.15
			0.00				1" Ice	5.50	4.89	0.23
Panasonic RRH 1900MHZ	A	From Face	8.00		0.0000	170.00	No Ice	2.32	2.32	0.09
			0.00				1/2" Ice	2.53	2.53	0.12
			0.00				1" Ice	2.74	2.74	0.15
Panasonic RRH 1900MHZ	B	From Face	8.00		0.0000	170.00	No Ice	2.32	2.32	0.09
			0.00				1/2" Ice	2.53	2.53	0.12
			0.00				1" Ice	2.74	2.74	0.15
Panasonic RRH 1900MHZ	C	From Face	8.00		0.0000	170.00	No Ice	2.32	2.32	0.09
			0.00				1/2" Ice	2.53	2.53	0.12
			0.00				1" Ice	2.74	2.74	0.15
Andrew 800MHz RRH	A	From Face	8.00		0.0000	170.00	No Ice	2.13	2.13	0.06
			0.00				1/2" Ice	2.32	2.32	0.08
			0.00				1" Ice	2.51	2.51	0.10
Andrew 800MHz RRH	B	From Face	8.00		0.0000	170.00	No Ice	2.13	2.13	0.06
			0.00				1/2" Ice	2.32	2.32	0.08
			0.00				1" Ice	2.51	2.51	0.10
Andrew 800MHz RRH	C	From Face	8.00		0.0000	170.00	No Ice	2.13	2.13	0.06
			0.00				1/2" Ice	2.32	2.32	0.08
			0.00				1" Ice	2.51	2.51	0.10
APXV9TM14-C-120 w/ Mount Pipe	A	From Face	9.00		0.0000	170.00	No Ice	6.09	4.67	0.07
			0.00				1/2" Ice	6.53	5.44	0.12
			0.00				1" Ice	6.96	6.14	0.18
APXV9TM14-C-120 w/ Mount Pipe	B	From Face	9.00		0.0000	170.00	No Ice	6.09	4.67	0.07
			0.00				1/2" Ice	6.53	5.44	0.12
			0.00				1" Ice	6.96	6.14	0.18
APXV9TM14-C-120 w/ Mount Pipe	C	From Face	9.00		0.0000	170.00	No Ice	6.09	4.67	0.07
			0.00				1/2" Ice	6.53	5.44	0.12
			0.00				1" Ice	6.96	6.14	0.18
TD-RRH8x20-25	A	From Face	9.00		0.0000	170.00	No Ice	4.05	1.53	0.07
			0.00				1/2" Ice	4.30	1.71	0.10
			0.00				1" Ice	4.56	1.90	0.13
TD-RRH8x20-25	B	From Face	9.00		0.0000	170.00	No Ice	4.05	1.53	0.07
			0.00				1/2" Ice	4.30	1.71	0.10
			0.00				1" Ice	4.56	1.90	0.13
TD-RRH8x20-25	C	From Face	9.00		0.0000	170.00	No Ice	4.05	1.53	0.07
			0.00				1/2" Ice	4.30	1.71	0.10
			0.00				1" Ice	4.56	1.90	0.13
SU-RA	B	From Face	9.00		0.0000	168.00	No Ice	1.21	0.30	0.01
			0.00				1/2" Ice	1.35	0.38	0.01
			0.00				1" Ice	1.49	0.47	0.02

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job	CT11059C-Rev2	Page	16 of 36
	Project	1975064	Date	10:12:16 06/11/19
	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	CAAA Front ft ²	CAAA Side ft ²	Weight K	
PTP49600-SK	C	From Leg	9.00 0.00 0.00	0.0000	168.00	No Ice 1.75 1/2" Ice 1.92 1" Ice 2.09	0.48 0.58 0.69	0.01 0.02 0.04	
Sector Mount [SM 412-1]	C	None		0.0000	168.00	No Ice 70.47 1/2" Ice 100.14 1" Ice 129.81	70.47 100.14 129.81	3.08 4.50 5.92	

APXV18-206517S-C w/ Mount Pipe	A	From Leg	1.00 0.00 0.00	0.0000	159.50	No Ice 3.79 1/2" Ice 4.38 1" Ice 4.99	3.16 3.75 4.35	0.05 0.09 0.15	
APXV18-206517S-C w/ Mount Pipe	B	From Leg	1.00 0.00 0.00	0.0000	159.50	No Ice 3.79 1/2" Ice 4.38 1" Ice 4.99	3.16 3.75 4.35	0.05 0.09 0.15	
APXV18-206517S-C w/ Mount Pipe	C	From Leg	1.00 0.00 0.00	0.0000	159.50	No Ice 3.79 1/2" Ice 4.38 1" Ice 4.99	3.16 3.75 4.35	0.05 0.09 0.15	
SC420-HFL1LDF-SK	A	From Face	6.00 0.00 0.00	0.0000	158.50	No Ice 2.14 1/2" Ice 3.02 1" Ice 3.79	2.14 3.02 3.79	0.02 0.03 0.05	
3" Dia 20' Omni	C	From Face	6.00 0.00 0.00	0.0000	144.00	No Ice 6.00 1/2" Ice 13.30 1" Ice 16.60	6.00 13.30 16.60	0.06 0.10 0.14	
3" Dia 20' Omni	A	From Face	6.00 0.00 0.00	0.0000	144.00	No Ice 6.00 1/2" Ice 13.30 1" Ice 16.60	6.00 13.30 16.60	0.06 0.10 0.14	
2.5"x20.5' Whip	A	From Face	6.00 0.00 0.00	0.0000	144.00	No Ice 5.13 1/2" Ice 11.90 1" Ice 15.40	5.13 11.90 15.40	0.15 0.19 0.23	
2"x15' Omni	B	From Face	6.00 0.00 0.00	0.0000	141.00	No Ice 3.00 1/2" Ice 7.50 1" Ice 10.00	3.00 7.50 10.00	0.04 0.06 0.08	
1.5"x10' Omni	B	From Face	6.00 0.00 0.00	0.0000	139.00	No Ice 1.50 1/2" Ice 4.16 1" Ice 5.83	1.50 4.16 5.83	0.06 0.07 0.08	
Omni 4"x9'	A	From Face	6.00 0.00 0.00	0.0000	138.50	No Ice 3.60 1/2" Ice 7.50 1" Ice 9.00	3.60 7.50 9.00	0.12 0.17 0.22	

134ft Clearwire									
LLPX310R w/ Mount Pipe	A	From Face	6.00 0.00 0.00	0.0000	134.00	No Ice 4.54 1/2" Ice 4.89 1" Ice 5.25	2.98 3.53 4.09	0.05 0.08 0.13	
LLPX310R w/ Mount Pipe	B	From Face	6.00 0.00 0.00	0.0000	134.00	No Ice 4.54 1/2" Ice 4.89 1" Ice 5.25	2.98 3.53 4.09	0.05 0.08 0.13	
LLPX310R w/ Mount Pipe	C	From Face	6.00 0.00 0.00	0.0000	134.00	No Ice 4.54 1/2" Ice 4.89 1" Ice 5.25	2.98 3.53 4.09	0.05 0.08 0.13	
Panasomic RRH 1900MHZ	A	From Face	6.00 0.00 0.00	0.0000	134.00	No Ice 2.13 1/2" Ice 2.32 1" Ice 2.51	2.13 2.32 2.51	0.04 0.06 0.08	
Panasomic RRH 1900MHZ	B	From Face	6.00 0.00 0.00	0.0000	134.00	No Ice 2.13 1/2" Ice 2.32 1" Ice 2.51	2.13 2.32 2.51	0.04 0.06 0.08	
Panasomic RRH 1900MHZ	C	From Face	6.00 0.00 0.00	0.0000	134.00	No Ice 2.13 1/2" Ice 2.32	2.13 2.32	0.04 0.06	

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job	CT11059C-Rev2	Page	17 of 36
	Project	1975064	Date	10:12:16 06/11/19
	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight
			Horz	Lateral					
			ft	ft	°	ft	ft ²	ft ²	K
Pirol 20' Universal Platform	C	None	0.00		0.0000	134.00	1" Ice 2.51 No Ice 33.10 1/2" Ice 47.10 1" Ice 61.10	2.51 33.10 47.10 61.10	0.08 2.27 2.70 3.13
***** ***** **125ft T-Mobile**									
ERICSSON AIR 21 B2A B4P	A	From Leg	4.00 0.00 0.00		0.0000	125.00	No Ice 6.09 1/2" Ice 6.46 1" Ice 6.84	4.30 4.65 5.00	0.09 0.13 0.18
ERICSSON AIR 21 B2A B4P	B	From Leg	4.00 0.00 0.00		0.0000	125.00	No Ice 6.09 1/2" Ice 6.46 1" Ice 6.84	4.30 4.65 5.00	0.09 0.13 0.18
ERICSSON AIR 21 B2A B4P	C	From Leg	4.00 0.00 0.00		0.0000	125.00	No Ice 6.09 1/2" Ice 6.46 1" Ice 6.84	4.30 4.65 5.00	0.09 0.13 0.18
AIR 32 B2a/B66Aa	A	From Leg	4.00 0.00 0.00		0.0000	125.00	No Ice 6.51 1/2" Ice 6.89 1" Ice 7.27	4.71 5.07 5.43	0.13 0.18 0.23
AIR 32 B2a/B66Aa	B	From Leg	4.00 0.00 0.00		0.0000	125.00	No Ice 6.51 1/2" Ice 6.89 1" Ice 7.27	4.71 5.07 5.43	0.13 0.18 0.23
AIR 32 B2a/B66Aa	C	From Leg	4.00 0.00 0.00		0.0000	125.00	No Ice 6.51 1/2" Ice 6.89 1" Ice 7.27	4.71 5.07 5.43	0.13 0.18 0.23
APXVAARR24_43-U-NA20 w/ Mount Pipe	A	From Leg	4.00 0.00 0.00		0.0000	125.00	No Ice 20.48 1/2" Ice 21.23 1" Ice 21.99	11.02 12.55 14.10	0.16 0.30 0.44
APXVAARR24_43-U-NA20 w/ Mount Pipe	B	From Leg	4.00 0.00 0.00		0.0000	125.00	No Ice 20.48 1/2" Ice 21.23 1" Ice 21.99	11.02 12.55 14.10	0.16 0.30 0.44
APXVAARR24_43-U-NA20 w/ Mount Pipe	C	From Leg	4.00 0.00 0.00		0.0000	125.00	No Ice 20.48 1/2" Ice 21.23 1" Ice 21.99	11.02 12.55 14.10	0.16 0.30 0.44
RADIO 4449 B12/B71	A	From Leg	4.00 0.00 0.00		0.0000	125.00	No Ice 1.65 1/2" Ice 1.81 1" Ice 1.98	1.30 1.44 1.60	0.08 0.09 0.11
RADIO 4449 B12/B71	B	From Leg	4.00 0.00 0.00		0.0000	125.00	No Ice 1.65 1/2" Ice 1.81 1" Ice 1.98	1.30 1.44 1.60	0.08 0.09 0.11
RADIO 4449 B12/B71	C	From Leg	4.00 0.00 0.00		0.0000	125.00	No Ice 1.65 1/2" Ice 1.81 1" Ice 1.98	1.30 1.44 1.60	0.08 0.09 0.11
Generic Style 1B - Twin AWS	A	From Leg	4.00 0.00 0.00		0.0000	125.00	No Ice 0.40 1/2" Ice 0.49 1" Ice 0.57	0.16 0.22 0.28	0.01 0.01 0.02
Generic Style 1B - Twin AWS	B	From Leg	4.00 0.00 0.00		0.0000	125.00	No Ice 0.40 1/2" Ice 0.49 1" Ice 0.57	0.16 0.22 0.28	0.01 0.01 0.02
Generic Style 1B - Twin AWS	C	From Leg	4.00 0.00 0.00		0.0000	125.00	No Ice 0.40 1/2" Ice 0.49 1" Ice 0.57	0.16 0.22 0.28	0.01 0.01 0.02
Sector Mount [SM 502-3]	C	None	0.00		0.0000	125.00	No Ice 33.02 1/2" Ice 47.36 1" Ice 61.70	33.02 47.36 61.70	1.67 2.22 2.77
***** *****									

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job	CT11059C-Rev2	Page	18 of 36
	Project	1975064	Date	10:12:16 06/11/19
	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight
			Horz	Vert					
115ft AT&T									
7770.00 w/ Mount Pipe	A	From Leg	4.00	0.0000	115.00	No Ice	5.75	4.25	0.06
			0.00			1/2" Ice	6.18	5.01	0.10
			0.00			1" Ice	6.61	5.71	0.16
7770.00 w/ Mount Pipe	B	From Leg	4.00	0.0000	115.00	No Ice	5.75	4.25	0.06
			0.00			1/2" Ice	6.18	5.01	0.10
			0.00			1" Ice	6.61	5.71	0.16
7770.00 w/ Mount Pipe	C	From Leg	4.00	0.0000	115.00	No Ice	5.75	4.25	0.06
			0.00			1/2" Ice	6.18	5.01	0.10
			0.00			1" Ice	6.61	5.71	0.16
QS66512-2 w/ Mount Pipe	A	From Leg	4.00	0.0000	115.00	No Ice	8.37	8.46	0.14
			0.00			1/2" Ice	8.93	9.66	0.21
			0.00			1" Ice	9.46	10.55	0.30
QS66512-2 w/ Mount Pipe	B	From Leg	4.00	0.0000	115.00	No Ice	8.37	8.46	0.14
			0.00			1/2" Ice	8.93	9.66	0.21
			0.00			1" Ice	9.46	10.55	0.30
QS66512-2 w/ Mount Pipe	C	From Leg	4.00	0.0000	115.00	No Ice	8.37	8.46	0.14
			0.00			1/2" Ice	8.93	9.66	0.21
			0.00			1" Ice	9.46	10.55	0.30
(2) LGP21401	A	From Leg	4.00	0.0000	115.00	No Ice	1.10	0.21	0.01
			6.00			1/2" Ice	1.24	0.27	0.02
			0.00			1" Ice	1.38	0.35	0.03
(2) LGP21401	B	From Leg	4.00	0.0000	115.00	No Ice	1.10	0.21	0.01
			6.00			1/2" Ice	1.24	0.27	0.02
			0.00			1" Ice	1.38	0.35	0.03
(2) LGP21401	C	From Leg	4.00	0.0000	115.00	No Ice	1.10	0.21	0.01
			6.00			1/2" Ice	1.24	0.27	0.02
			0.00			1" Ice	1.38	0.35	0.03
RRUS 11	A	From Leg	4.00	0.0000	115.00	No Ice	2.78	1.19	0.05
			0.00			1/2" Ice	2.99	1.33	0.07
			0.00			1" Ice	3.21	1.49	0.10
RRUS 11	B	From Leg	4.00	0.0000	115.00	No Ice	2.78	1.19	0.05
			0.00			1/2" Ice	2.99	1.33	0.07
			0.00			1" Ice	3.21	1.49	0.10
RRUS 11	C	From Leg	4.00	0.0000	115.00	No Ice	2.78	1.19	0.05
			0.00			1/2" Ice	2.99	1.33	0.07
			0.00			1" Ice	3.21	1.49	0.10
(2) RRUS 12	A	From Leg	4.00	0.0000	115.00	No Ice	3.15	1.29	0.06
			0.00			1/2" Ice	3.36	1.44	0.08
			0.00			1" Ice	3.59	1.60	0.11
(2) RRUS 12	B	From Leg	4.00	0.0000	115.00	No Ice	3.15	1.29	0.06
			0.00			1/2" Ice	3.36	1.44	0.08
			0.00			1" Ice	3.59	1.60	0.11
(2) RRUS 12	C	From Leg	4.00	0.0000	115.00	No Ice	3.15	1.29	0.06
			0.00			1/2" Ice	3.36	1.44	0.08
			0.00			1" Ice	3.59	1.60	0.11
(2) RRUS 32	A	From Leg	4.00	0.0000	115.00	No Ice	2.86	1.78	0.06
			0.00			1/2" Ice	3.08	1.97	0.08
			0.00			1" Ice	3.32	2.17	0.10
(2) RRUS 32	B	From Leg	4.00	0.0000	115.00	No Ice	2.86	1.78	0.06
			0.00			1/2" Ice	3.08	1.97	0.08
			0.00			1" Ice	3.32	2.17	0.10
(2) RRUS 32	C	From Leg	4.00	0.0000	115.00	No Ice	2.86	1.78	0.06
			0.00			1/2" Ice	3.08	1.97	0.08
			0.00			1" Ice	3.32	2.17	0.10
DC6-48-60-18-8F	A	From Leg	1.00	0.0000	115.00	No Ice	0.79	0.79	0.02
			0.00			1/2" Ice	1.27	1.27	0.03

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job	CT11059C-Rev2	Page	19 of 36
	Project	1975064	Date	10:12:16 06/11/19
	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight	
			Horz	Vert						
			ft	ft	°	ft	ft ²	ft ²	K	
HPA-65R-BUU-H6 w/ Mount Pipe	A	From Leg	0.00		0.0000	115.00	1" Ice	1.45	1.45	0.05
			4.00				No Ice	9.22	6.25	0.07
			0.00				1/2" Ice	9.98	6.96	0.14
			0.00				1" Ice	10.76	7.70	0.22
HPA-65R-BUU-H6 w/ Mount Pipe	B	From Leg	4.00		0.0000	115.00	No Ice	9.22	6.25	0.07
			0.00				1/2" Ice	9.98	6.96	0.14
			0.00				1" Ice	10.76	7.70	0.22
			0.00				No Ice	9.22	6.25	0.07
HPA-65R-BUU-H6 w/ Mount Pipe	C	From Leg	4.00		0.0000	115.00	1/2" Ice	9.98	6.96	0.14
			0.00				1" Ice	10.76	7.70	0.22
			0.00				No Ice	9.22	6.25	0.07
			0.00				1/2" Ice	9.98	6.96	0.14
DC6-48-60-18-8C	B	From Leg	1.00		0.0000	115.00	No Ice	1.14	1.14	0.03
			0.00				1/2" Ice	1.79	1.79	0.05
			0.00				1" Ice	2.00	2.00	0.07
			0.00				No Ice	15.40	14.00	0.56
Sabre 12' V-Boom	A	From Leg	2.00		0.0000	115.00	1/2" Ice	21.30	20.80	0.74
			0.00				1" Ice	27.20	27.60	0.92
			0.00				No Ice	15.40	14.00	0.56
			0.00				1/2" Ice	21.30	20.80	0.74
Sabre 12' V-Boom	B	From Leg	2.00		0.0000	115.00	1" Ice	27.20	27.60	0.92
			0.00				No Ice	15.40	14.00	0.56
			0.00				1/2" Ice	21.30	20.80	0.74
			0.00				1" Ice	27.20	27.60	0.92
Sabre 12' V-Boom	C	From Leg	2.00		0.0000	115.00	No Ice	15.40	14.00	0.56
			0.00				1/2" Ice	21.30	20.80	0.74
			0.00				1" Ice	27.20	27.60	0.92
			0.00				No Ice	15.40	14.00	0.56

101ft Verizon										
BXA-171063-12CF-EDIN-X w/ Mount Pipe	A	From Leg	4.00		0.0000	101.00	No Ice	5.04	5.30	0.04
			0.00				1/2" Ice	5.59	6.47	0.08
			0.00				1" Ice	6.11	7.36	0.14
			0.00				No Ice	5.04	5.30	0.04
BXA-171063-12CF-EDIN-X w/ Mount Pipe	B	From Leg	4.00		0.0000	101.00	1/2" Ice	5.59	6.47	0.08
			0.00				1" Ice	6.11	7.36	0.14
			0.00				No Ice	5.04	5.30	0.04
			0.00				1/2" Ice	5.59	6.47	0.08
BXA-171063-12CF-EDIN-X w/ Mount Pipe	C	From Leg	4.00		0.0000	101.00	1" Ice	6.11	7.36	0.14
			0.00				No Ice	5.04	5.30	0.04
			0.00				1/2" Ice	5.59	6.47	0.08
			0.00				1" Ice	6.11	7.36	0.14
HBX-6517DS-A1M w/ Mount Pipe	A	From Leg	4.00		0.0000	101.00	No Ice	3.22	2.80	0.04
			0.00				1/2" Ice	3.74	3.31	0.08
			0.00				1" Ice	4.26	3.83	0.13
			0.00				No Ice	3.22	2.80	0.04
HBX-6517DS-A1M w/ Mount Pipe	B	From Leg	4.00		0.0000	101.00	1/2" Ice	3.74	3.31	0.08
			0.00				1" Ice	4.26	3.83	0.13
			0.00				No Ice	3.22	2.80	0.04
			0.00				1/2" Ice	3.74	3.31	0.08
HBX-6517DS-A1M w/ Mount Pipe	C	From Leg	4.00		0.0000	101.00	1" Ice	4.26	3.83	0.13
			0.00				No Ice	3.22	2.80	0.04
			0.00				1/2" Ice	3.74	3.31	0.08
			0.00				1" Ice	4.26	3.83	0.13
(2) LNX-6514DS-VTM w/ Mount Pipe	A	From Leg	4.00		0.0000	101.00	No Ice	8.41	7.08	0.06
			0.00				1/2" Ice	8.97	8.27	0.13
			0.00				1" Ice	9.50	9.18	0.21
			0.00				No Ice	8.41	7.08	0.06
(2) LNX-6514DS-VTM w/ Mount Pipe	B	From Leg	4.00		0.0000	101.00	1/2" Ice	8.97	8.27	0.13
			0.00				1" Ice	9.50	9.18	0.21
			0.00				No Ice	8.41	7.08	0.06
			0.00				1/2" Ice	8.97	8.27	0.13
(2) LNX-6514DS-VTM w/ Mount Pipe	C	From Leg	4.00		0.0000	101.00	1" Ice	9.50	9.18	0.21
			0.00				No Ice	8.41	7.08	0.06
			0.00				1/2" Ice	8.97	8.27	0.13
			0.00				1" Ice	9.50	9.18	0.21
RRH2x40-AWS	A	From Leg	4.00		0.0000	101.00	No Ice	2.16	1.42	0.04
			0.00				1/2" Ice	2.36	1.59	0.06
			0.00				1" Ice	2.57	1.77	0.08
			0.00				No Ice	2.16	1.42	0.04
RRH2x40-AWS	B	From Leg	4.00		0.0000	101.00	1/2" Ice	2.36	1.59	0.06
			0.00				No Ice	2.16	1.42	0.04

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job	CT11059C-Rev2	Page	20 of 36
	Project	1975064	Date	10:12:16 06/11/19
	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight	
			Horz	Lateral						°
RRH2x40-AWS	C	From Leg	0.00		0.0000	101.00	1" Ice	2.57	1.77	0.08
			4.00				No Ice	2.16	1.42	0.04
			0.00				1/2" Ice	2.36	1.59	0.06
			0.00				1" Ice	2.57	1.77	0.08
DB-T1-6Z-8AB-0Z	C	From Leg	0.00		0.0000	101.00	No Ice	4.80	2.00	0.04
			0.00				1/2" Ice	5.07	2.19	0.08
			0.00				1" Ice	5.35	2.39	0.12
			4.00				No Ice	0.31	0.08	0.00
(2) FD9R6004	A	From Leg	0.00		0.0000	101.00	1/2" Ice	0.39	0.12	0.01
			0.00				1" Ice	0.47	0.17	0.01
			4.00				No Ice	0.31	0.08	0.00
			0.00				1/2" Ice	0.39	0.12	0.01
(2) FD9R6004	B	From Leg	0.00		0.0000	101.00	1" Ice	0.47	0.17	0.01
			4.00				No Ice	0.31	0.08	0.00
			0.00				1/2" Ice	0.39	0.12	0.01
			0.00				1" Ice	0.47	0.17	0.01
(2) FD9R6004	C	From Leg	0.00		0.0000	101.00	No Ice	0.31	0.08	0.00
			0.00				1/2" Ice	0.39	0.12	0.01
			0.00				1" Ice	0.47	0.17	0.01
			4.00				No Ice	0.31	0.08	0.00
PiROD 12' Lightweight T-Frame	A	From Leg	0.00		0.0000	101.00	1/2" Ice	0.39	0.12	0.01
			0.00				1" Ice	0.47	0.17	0.01
			2.00				No Ice	10.20	10.20	0.25
			0.00				1/2" Ice	16.20	16.20	0.35
PiROD 12' Lightweight T-Frame	B	From Leg	0.00		0.0000	101.00	1" Ice	22.20	22.20	0.45
			0.00				No Ice	10.20	10.20	0.25
			0.00				1/2" Ice	16.20	16.20	0.35
			0.00				1" Ice	22.20	22.20	0.45
PiROD 12' Lightweight T-Frame	C	From Leg	0.00		0.0000	101.00	No Ice	10.20	10.20	0.25
			0.00				1/2" Ice	16.20	16.20	0.35
			0.00				1" Ice	22.20	22.20	0.45
			2.00				No Ice	10.20	10.20	0.25

3"x2"x22" Panel	B	From Leg	0.00		0.0000	87.00	No Ice	0.65	0.47	0.05
			0.00				1/2" Ice	0.81	0.61	0.05
			0.00				1" Ice	0.97	0.75	0.01
			2.00				No Ice	1.06	0.45	0.02
TMA	B	From Leg	0.00		0.0000	84.50	1/2" Ice	1.21	0.57	0.03
			0.00				1" Ice	1.36	0.69	0.04
			0.00				No Ice	1.00	2.00	0.05
			1.50				1/2" Ice	1.20	2.70	0.07
3' Stand Off	B	From Leg	0.00		0.0000	83.50	1" Ice	1.40	3.40	0.09
			0.00				No Ice	1.00	2.00	0.05
			0.00				1/2" Ice	1.20	2.70	0.07
			0.00				1" Ice	1.40	3.40	0.09
3' Stand Off	A	From Leg	0.00		0.0000	83.50	No Ice	1.00	2.00	0.05
			0.00				1/2" Ice	1.20	2.70	0.07
			0.00				1" Ice	1.40	3.40	0.09
			2.00				No Ice	1.06	0.45	0.02
TMA	A	From Leg	0.00		0.0000	83.00	1/2" Ice	1.21	0.57	0.03
			0.00				1" Ice	1.36	0.69	0.04
			0.00				No Ice	1.06	0.45	0.02
			0.00				1/2" Ice	1.21	0.57	0.03
TMA	B	From Leg	0.00		0.0000	82.50	1" Ice	1.36	0.69	0.04
			0.00				No Ice	1.06	0.45	0.02
			0.00				1/2" Ice	1.21	0.57	0.03
			0.00				1" Ice	1.36	0.69	0.04
3"x2"x22" Panel	B	From Leg	0.00		0.0000	80.00	No Ice	0.65	0.47	0.05
			0.00				1/2" Ice	0.81	0.61	0.05
			0.00				1" Ice	0.97	0.75	0.01
			0.00				No Ice	0.50	0.50	0.01
Camera	A	From Leg	0.00		0.0000	30.00	1/2" Ice	0.60	0.60	0.02
			0.00				1" Ice	0.70	0.70	0.03
			0.00				No Ice	0.46	0.46	0.00
			1.00				1/2" Ice	0.52	0.52	0.00
PC9013N	A	From Leg	0.00		0.0000	24.00	1" Ice	0.58	0.58	0.00
			0.00				No Ice	0.46	0.46	0.00
			0.00				1/2" Ice	0.52	0.52	0.00
			0.00				1" Ice	0.58	0.58	0.00

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job	CT11059C-Rev2	Page	21 of 36
	Project	1975064	Date	10:12:16 06/11/19
	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter	Aperture Area	Weight	
				ft	°	°	ft	ft	ft ²	K	

VHLP3-11W	A	Paraboloid w/Shroud (HP)	From Leg	2.00 0.00 0.00	0.0000		83.00	3.28	No Ice 1/2" Ice 1" Ice	8.47 8.90 9.34	0.05 0.10 0.14
VHLP2.5-180	A	Paraboloid w/o Radome	From Face	6.00 0.00 0.00	0.0000		134.00	2.50	No Ice 1/2" Ice 1" Ice	4.91 5.24 5.57	0.07 0.10 0.12
VHLP2.5-180	A	Paraboloid w/o Radome	From Face	6.00 0.00 0.00	0.0000		134.00	2.50	No Ice 1/2" Ice 1" Ice	4.91 5.24 5.57	0.07 0.10 0.12
VHLP2.5-180	B	Paraboloid w/o Radome	From Face	6.00 0.00 0.00	0.0000		134.00	2.50	No Ice 1/2" Ice 1" Ice	4.91 5.24 5.57	0.07 0.10 0.12
VHLP2-180	C	Paraboloid w/o Radome	From Face	6.00 0.00 0.00	0.0000		134.00	2.00	No Ice 1/2" Ice 1" Ice	3.14 3.41 3.68	0.03 0.04 0.06
HPD2-5.2	C	Paraboloid w/Shroud (HP)	From Face	9.00 0.00 0.00	0.0000		168.00	2.04	No Ice 1/2" Ice 1" Ice	3.27 3.55 3.82	0.03 0.05 0.06

Truss-Leg Properties

Section Designation	Area	Area Ice	Self Weight	Ice Weight	Equiv. Diameter	Equiv. Diameter Ice	Leg Area
	in ²	in ²	K	K	in	in	in ²
Pirod 105244	1026.8606	3412.2617	0.56	0.98	7.1310	23.6963	3.6816
Pirod 105216	1998.0891	6988.8454	0.51	1.83	6.9378	24.2668	3.6816
Pirod 105217	2130.7479	7027.2516	0.62	1.81	7.3984	24.4002	5.3014
Pirod 105217	2130.7479	6998.2291	0.62	1.77	7.3984	24.2994	5.3014
Pirod 105217 w/ 1"rod 36ksi	2249.2872	7040.8200	0.74	1.76	7.8100	24.4473	6.9978
Pirod 105218 w/ 1"rod 36ksi	2367.7164	7067.2485	0.87	1.72	8.2212	24.5391	8.9124
Pirod 105219	2441.8688	7020.0558	0.94	1.67	8.4787	24.3752	9.4248
Pirod 105219 w/ 1"rod 36ksi	2536.0462	6977.9715	1.06	1.55	8.8057	24.2291	11.1213
Pirod 105220 w/ 1"rod 36ksi	2665.2458	6862.6244	1.24	1.33	9.2543	23.8286	13.6248

Load Combinations

<p style="text-align: center;">tnxTower</p> <p style="text-align: center;">Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:</p>	<p>Job</p> <p style="text-align: center;">CT11059C-Rev2</p>	<p>Page</p> <p style="text-align: center;">22 of 36</p>
	<p>Project</p> <p style="text-align: center;">1975064</p>	<p>Date</p> <p style="text-align: center;">10:12:16 06/11/19</p>
	<p>Client</p> <p style="text-align: center;">Foresite LLC</p>	<p>Designed by</p> <p style="text-align: center;">Ahmet Colakoglu</p>

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 30 deg - No Ice
5	0.9 Dead+1.6 Wind 30 deg - No Ice
6	1.2 Dead+1.6 Wind 60 deg - No Ice
7	0.9 Dead+1.6 Wind 60 deg - No Ice
8	1.2 Dead+1.6 Wind 90 deg - No Ice
9	0.9 Dead+1.6 Wind 90 deg - No Ice
10	1.2 Dead+1.6 Wind 120 deg - No Ice
11	0.9 Dead+1.6 Wind 120 deg - No Ice
12	1.2 Dead+1.6 Wind 150 deg - No Ice
13	0.9 Dead+1.6 Wind 150 deg - No Ice
14	1.2 Dead+1.6 Wind 180 deg - No Ice
15	0.9 Dead+1.6 Wind 180 deg - No Ice
16	1.2 Dead+1.6 Wind 210 deg - No Ice
17	0.9 Dead+1.6 Wind 210 deg - No Ice
18	1.2 Dead+1.6 Wind 240 deg - No Ice
19	0.9 Dead+1.6 Wind 240 deg - No Ice
20	1.2 Dead+1.6 Wind 270 deg - No Ice
21	0.9 Dead+1.6 Wind 270 deg - No Ice
22	1.2 Dead+1.6 Wind 300 deg - No Ice
23	0.9 Dead+1.6 Wind 300 deg - No Ice
24	1.2 Dead+1.6 Wind 330 deg - No Ice
25	0.9 Dead+1.6 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T1	170 - 150	Leg	Max Tension	15	31.94	0.01	-0.07
			Max. Compression	18	-36.53	0.37	-0.23
			Max. Mx	10	-36.08	-0.37	-0.21

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job	CT11059C-Rev2	Page	23 of 36
	Project	1975064	Date	10:12:16 06/11/19
	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft	
T2	150 - 140	Diagonal	Max. My	2	-36.35	-0.02	0.43	
			Max. Vy	18	-3.67	0.37	-0.23	
			Max. Vx	2	-4.22	-0.02	0.43	
			Max Tension	8	3.16	0.00	0.00	
			Max. Compression	20	-3.21	0.00	0.00	
			Max. Mx	35	0.97	-0.01	0.00	
			Max. My	20	-2.79	-0.00	-0.00	
			Max. Vy	35	0.02	-0.01	-0.00	
			Max. Vx	20	-0.00	0.00	0.00	
			Max Tension	11	0.21	0.00	0.00	
			Max. Compression	22	-0.25	0.00	0.00	
			Max. Mx	31	0.04	0.04	0.00	
		Max. My	38	-0.04	0.00	-0.00		
		Max. Vy	31	-0.03	0.00	0.00		
		Max. Vx	38	0.00	0.00	0.00		
		Bottom Girt	Max Tension	7	0.17	0.00	0.00	
			Max. Compression	18	-0.17	0.00	0.00	
			Max. Mx	31	-0.09	0.04	0.00	
			Max. My	38	-0.02	0.00	-0.00	
			Max. Vy	31	-0.03	0.00	0.00	
			Max. Vx	38	0.00	0.00	0.00	
			Leg	Max Tension	15	35.91	-0.41	-0.02
				Max. Compression	18	-40.79	2.83	-0.16
				Max. Mx	6	34.79	-3.21	0.14
				Max. My	24	-2.84	-0.22	4.22
				Max. Vy	14	0.59	-3.20	-0.24
				Max. Vx	24	-0.79	-0.22	4.22
		Diagonal		Max Tension	15	4.18	0.00	0.00
				Max. Compression	2	-4.59	0.00	0.00
				Max. Mx	37	0.84	0.06	0.01
				Max. My	36	-2.64	0.02	0.02
				Max. Vy	37	0.04	0.06	0.01
Max. Vx	37			-0.01	0.00	0.00		
Top Girt	Max Tension		14	0.46	0.00	0.00		
	Max. Compression		19	-0.41	0.00	0.00		
	Max. Mx		31	-0.09	-0.07	0.00		
	Max. My		38	0.10	0.00	0.00		
	Max. Vy		31	-0.06	0.00	0.00		
	Max. Vx		38	0.00	0.00	0.00		
T3	140 - 120	Leg	Max Tension	23	64.81	-3.77	-0.06	
			Max. Compression	2	-75.42	3.94	0.08	
			Max. Mx	22	62.62	-4.74	-0.06	
			Max. My	20	-6.33	-0.43	-6.43	
			Max. Vy	14	0.89	-4.71	-0.08	
			Max. Vx	8	-1.13	-0.41	6.40	
		Diagonal	Max Tension	16	7.21	0.00	0.00	
			Max. Compression	16	-7.48	0.00	0.00	
			Max. Mx	27	2.44	0.12	-0.01	
			Max. My	38	-1.22	0.04	0.02	
			Max. Vy	27	-0.06	0.12	-0.01	
			Max. Vx	38	-0.01	0.00	0.00	
T4	120 - 100	Leg	Max Tension	7	105.95	-5.04	0.04	
			Max. Compression	18	-122.77	3.12	-0.10	
			Max. Mx	18	-97.58	5.78	-0.04	
			Max. My	20	-8.90	-0.42	-6.45	
			Max. Vy	6	1.02	-3.83	0.11	
			Max. Vx	20	1.66	-0.42	-6.45	
		Diagonal	Max Tension	7	10.06	0.00	0.00	
			Max. Compression	18	-10.94	0.00	0.00	
			Max. Mx	27	2.25	0.15	-0.02	
			Max. My	16	-10.55	-0.04	-0.04	

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job	CT11059C-Rev2	Page	24 of 36
	Project	1975064	Date	10:12:16 06/11/19
	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T5	100 - 90	Mid Girt	Max. Vy	37	0.08	0.12	-0.01
			Max. Vx	28	-0.01	0.00	0.00
			Max Tension	22	3.52	0.00	0.00
			Max. Compression	19	-2.91	0.00	0.00
			Max. Mx	31	-0.04	-0.23	0.00
			Max. My	27	2.00	0.00	0.01
		Leg	Max. Vy	31	0.10	0.00	0.00
			Max. Vx	27	-0.00	0.00	0.00
			Max Tension	7	131.46	-3.72	0.10
			Max. Compression	18	-151.26	4.20	-0.05
			Max. Mx	18	-151.26	4.20	-0.05
			Max. My	20	-9.68	-0.42	-6.45
			Max. Vy	33	-0.27	-2.86	-0.16
			Max. Vx	24	0.44	-0.41	6.35
Diagonal	Max Tension	16	11.74	0.00	0.00		
	Max. Compression	16	-11.88	0.00	0.00		
	Max. Mx	27	4.14	0.20	-0.02		
	Max. My	28	2.25	0.14	0.02		
	Max. Vy	27	-0.09	0.20	-0.02		
	Max. Vx	27	-0.01	0.00	0.00		
	Max Tension	7	156.10	-3.94	0.04		
	Max. Compression	18	-177.65	5.16	-0.14		
T6	90 - 80	Leg	Max. Mx	18	-177.65	5.16	-0.14
			Max. My	20	-10.64	-0.03	-4.30
			Max. Vy	14	0.40	-5.12	-0.06
			Max. Vx	8	-0.37	-0.04	4.29
			Max Tension	16	11.43	0.00	0.00
			Max. Compression	16	-11.76	0.00	0.00
		Diagonal	Max. Mx	27	3.48	0.19	-0.02
			Max. My	28	1.85	0.14	0.03
			Max. Vy	37	0.10	0.17	0.02
			Max. Vx	28	-0.01	0.00	0.00
			Max Tension	15	201.65	-4.36	-0.03
			Max. Compression	18	-227.96	4.88	-0.03
			Max. Mx	18	-202.66	5.16	-0.14
			Max. My	8	-11.41	-0.07	4.77
T7	80 - 60	Leg	Max. Vy	14	-0.22	-5.12	-0.06
			Max. Vx	12	0.27	-0.08	-4.72
			Max Tension	16	11.92	0.00	0.00
			Max. Compression	16	-12.25	0.00	0.00
			Max. Mx	27	2.92	0.22	0.03
			Max. My	27	-0.07	0.17	0.03
		Diagonal	Max. Vy	37	0.12	0.21	0.03
			Max. Vx	27	0.01	0.00	0.00
			Max Tension	15	245.02	-4.67	-0.01
			Max. Compression	2	-276.01	5.59	0.11
			Max. Mx	2	-276.01	5.59	0.11
			Max. My	20	-14.37	0.03	-5.25
			Max. Vy	3	-0.23	5.57	0.11
			Max. Vx	12	0.25	-0.11	-4.90
T8	60 - 40	Leg	Max Tension	16	12.31	0.00	0.00
			Max. Compression	16	-12.72	0.00	0.00
			Max. Mx	27	3.04	0.29	0.03
			Max. My	27	0.05	0.22	0.04
			Max. Vy	37	0.14	0.27	0.03
			Max. Vx	27	0.01	0.00	0.00
		Diagonal	Max Tension	15	286.02	-4.94	-0.01
			Max. Compression	2	-322.50	5.38	0.00
			Max. Mx	37	54.17	-7.40	-0.02
			Max. My	16	-15.61	-0.18	5.25
			Max. Vy	29	0.86	-7.38	0.08
			Max. Vx	29	0.86	-7.38	0.08
			Max Tension	15	286.02	-4.94	-0.01
			Max. Compression	2	-322.50	5.38	0.00
T9	40 - 20	Leg	Max. Mx	37	54.17	-7.40	-0.02
			Max. My	16	-15.61	-0.18	5.25
			Max. Vy	29	0.86	-7.38	0.08
			Max. Vx	29	0.86	-7.38	0.08
			Max Tension	15	286.02	-4.94	-0.01

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job	CT11059C-Rev2	Page	25 of 36
	Project	1975064	Date	10:12:16 06/11/19
	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T10	20 - 0	Diagonal	Max. Vx	12	-0.35	-0.18	-5.12
			Max Tension	16	12.98	0.00	0.00
			Max. Compression	16	-13.42	0.00	0.00
			Max. Mx	35	4.33	0.33	-0.04
			Max. My	27	-0.38	0.26	0.04
			Max. Vy	37	0.15	0.32	0.04
		Leg	Max. Vx	27	0.01	0.00	0.00
			Max Tension	15	323.93	-5.33	0.02
			Max. Compression	2	-366.31	0.00	-0.00
			Max. Mx	35	-201.86	10.54	0.14
			Max. My	16	-18.32	-0.40	8.89
			Max. Vy	29	-1.46	-7.38	0.08
		Diagonal	Max. Vx	20	-1.01	-0.40	-8.73
			Max Tension	17	13.81	0.00	0.00
			Max. Compression	16	-14.41	0.00	0.00
			Max. Mx	35	1.46	0.40	-0.05
			Max. My	33	-6.28	0.33	-0.05
			Max. Vy	37	0.16	0.40	0.05
		Max. Vx	33	0.01	0.00	0.00	

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Leg C	Max. Vert	18	374.64	34.91	-21.04
	Max. H _x	18	374.64	34.91	-21.04
	Max. H _z	7	-329.23	-31.46	19.06
	Min. Vert	7	-329.23	-31.46	19.06
	Min. H _x	7	-329.23	-31.46	19.06
	Min. H _z	18	374.64	34.91	-21.04
Leg B	Max. Vert	10	366.69	-34.31	-19.95
	Max. H _x	23	-321.38	30.78	17.92
	Max. H _z	23	-321.38	30.78	17.92
	Min. Vert	23	-321.38	30.78	17.92
	Min. H _x	10	366.69	-34.31	-19.95
	Min. H _z	10	366.69	-34.31	-19.95
Leg A	Max. Vert	2	378.15	-0.82	41.54
	Max. H _x	21	14.25	3.95	1.15
	Max. H _z	2	378.15	-0.82	41.54
	Min. Vert	15	-333.86	0.82	-37.66
	Min. H _x	9	14.00	-3.95	1.13
	Min. H _z	15	-333.86	0.82	-37.66

Tower Mast Reaction Summary

Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
Dead Only	52.38	0.00	0.00	-0.39	6.58	0.00
1.2 Dead+1.6 Wind 0 deg - No Ice	62.85	0.03	-65.18	-6186.84	3.76	-28.50
0.9 Dead+1.6 Wind 0 deg - No	47.14	0.03	-65.18	-6178.58	1.77	-28.48

<p style="text-align: center;">tnxTower</p> <p style="text-align: center;">Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:</p>	Job	CT11059C-Rev2	Page	26 of 36
	Project	1975064	Date	10:12:16 06/11/19
	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
Ice						
1.2 Dead+1.6 Wind 30 deg - No Ice	62.85	31.73	-55.29	-5281.43	-3018.89	-21.34
0.9 Dead+1.6 Wind 30 deg - No Ice	47.14	31.73	-55.29	-5274.33	-3016.89	-21.32
1.2 Dead+1.6 Wind 60 deg - No Ice	62.85	53.47	-30.71	-2975.31	-5188.34	-26.50
0.9 Dead+1.6 Wind 60 deg - No Ice	47.14	53.48	-30.71	-2971.21	-5183.41	-26.48
1.2 Dead+1.6 Wind 90 deg - No Ice	62.85	61.25	0.21	29.63	-5959.78	-28.58
0.9 Dead+1.6 Wind 90 deg - No Ice	47.14	61.25	0.21	29.72	-5953.82	-28.57
1.2 Dead+1.6 Wind 120 deg - No Ice	62.85	53.55	31.09	3008.23	-5177.98	-4.06
0.9 Dead+1.6 Wind 120 deg - No Ice	47.14	53.55	31.09	3004.36	-5173.06	-4.06
1.2 Dead+1.6 Wind 150 deg - No Ice	62.85	29.93	51.55	5023.32	-2920.06	32.24
0.9 Dead+1.6 Wind 150 deg - No Ice	47.14	29.93	51.55	5016.73	-2918.14	32.23
1.2 Dead+1.6 Wind 180 deg - No Ice	62.85	0.18	63.22	6062.67	-15.94	28.08
0.9 Dead+1.6 Wind 180 deg - No Ice	47.14	0.18	63.22	6054.78	-17.91	28.07
1.2 Dead+1.6 Wind 210 deg - No Ice	62.85	-31.96	55.24	5268.56	3064.76	21.68
0.9 Dead+1.6 Wind 210 deg - No Ice	47.14	-31.96	55.24	5261.75	3058.73	21.66
1.2 Dead+1.6 Wind 240 deg - No Ice	62.85	-55.11	32.02	3073.85	5299.12	26.68
0.9 Dead+1.6 Wind 240 deg - No Ice	47.14	-55.11	32.02	3069.91	5290.11	26.65
1.2 Dead+1.6 Wind 270 deg - No Ice	62.85	-61.16	0.17	25.34	5964.14	29.27
0.9 Dead+1.6 Wind 270 deg - No Ice	47.14	-61.16	0.17	25.42	5954.19	29.26
1.2 Dead+1.6 Wind 300 deg - No Ice	62.85	-51.66	-29.87	-2922.81	5065.50	4.31
0.9 Dead+1.6 Wind 300 deg - No Ice	47.14	-51.66	-29.87	-2918.76	5056.72	4.31
1.2 Dead+1.6 Wind 330 deg - No Ice	62.85	-29.54	-51.59	-5035.12	2884.75	-33.26
0.9 Dead+1.6 Wind 330 deg - No Ice	47.14	-29.54	-51.59	-5028.24	2878.90	-33.25
1.2 Dead+1.0 Ice+1.0 Temp	228.55	0.00	0.00	-66.61	79.11	-0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	228.55	0.01	-23.38	-2442.86	78.16	-14.16
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	228.55	11.99	-20.83	-2166.40	-1128.01	-12.79
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	228.55	20.90	-12.03	-1278.81	-2028.80	-12.95
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	228.55	23.38	0.04	-60.37	-2301.68	-9.95
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	228.55	19.66	11.38	1102.83	-1941.61	0.53
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	228.55	11.23	19.39	1932.61	-1081.13	11.12
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	228.55	0.04	23.15	2296.11	74.33	14.06
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	228.55	-12.04	20.82	2029.72	1293.38	12.86

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job	CT11059C-Rev2	Page	27 of 36
	Project	1975064	Date	10:12:16 06/11/19
	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
Ice+1.0 Temp						
1.2 Dead+1.0 Wind 240 deg+1.0	228.55	-21.08	12.21	1159.45	2196.04	12.99
Ice+1.0 Temp						
1.2 Dead+1.0 Wind 270 deg+1.0	228.55	-23.36	0.04	-60.81	2457.83	10.10
Ice+1.0 Temp						
1.2 Dead+1.0 Wind 300 deg+1.0	228.55	-19.42	-11.22	-1225.09	2084.37	-0.48
Ice+1.0 Temp						
1.2 Dead+1.0 Wind 330 deg+1.0	228.55	-11.15	-19.40	-2069.06	1228.46	-11.35
Ice+1.0 Temp						
Dead+Wind 0 deg - Service	52.38	0.01	-15.59	-1478.51	5.60	-6.81
Dead+Wind 30 deg - Service	52.38	7.59	-13.22	-1262.17	-716.59	-5.11
Dead+Wind 60 deg - Service	52.38	12.79	-7.34	-711.15	-1234.92	-6.33
Dead+Wind 90 deg - Service	52.38	14.65	0.05	6.81	-1419.23	-6.83
Dead+Wind 120 deg - Service	52.38	12.81	7.43	718.46	-1232.44	-0.97
Dead+Wind 150 deg - Service	52.38	7.16	12.33	1199.90	-692.97	7.70
Dead+Wind 180 deg - Service	52.38	0.04	15.12	1448.25	0.90	6.71
Dead+Wind 210 deg - Service	52.38	-7.64	13.21	1258.53	736.97	5.19
Dead+Wind 240 deg - Service	52.38	-13.18	7.66	734.16	1270.82	6.38
Dead+Wind 270 deg - Service	52.38	-14.63	0.04	5.78	1429.71	6.99
Dead+Wind 300 deg - Service	52.38	-12.35	-7.14	-698.62	1215.00	1.03
Dead+Wind 330 deg - Service	52.38	-7.06	-12.34	-1203.31	693.95	-7.94

Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.00	-52.38	0.00	-0.00	52.38	-0.00	0.000%
2	0.03	-62.86	-65.19	-0.03	62.85	65.18	0.001%
3	0.03	-47.14	-65.19	-0.03	47.14	65.18	0.001%
4	31.73	-62.86	-55.29	-31.73	62.85	55.29	0.001%
5	31.73	-47.14	-55.29	-31.73	47.14	55.29	0.001%
6	53.48	-62.86	-30.71	-53.47	62.85	30.71	0.001%
7	53.48	-47.14	-30.71	-53.48	47.14	30.71	0.001%
8	61.25	-62.86	0.21	-61.25	62.85	-0.21	0.001%
9	61.25	-47.14	0.21	-61.25	47.14	-0.21	0.001%
10	53.55	-62.86	31.09	-53.55	62.85	-31.09	0.001%
11	53.55	-47.14	31.09	-53.55	47.14	-31.09	0.001%
12	29.93	-62.86	51.55	-29.93	62.85	-51.55	0.001%
13	29.93	-47.14	51.55	-29.93	47.14	-51.55	0.001%
14	0.18	-62.86	63.22	-0.18	62.85	-63.22	0.001%
15	0.18	-47.14	63.22	-0.18	47.14	-63.22	0.001%
16	-31.96	-62.86	55.24	31.96	62.85	-55.24	0.001%
17	-31.96	-47.14	55.24	31.96	47.14	-55.24	0.001%
18	-55.11	-62.86	32.02	55.11	62.85	-32.02	0.001%
19	-55.11	-47.14	32.02	55.11	47.14	-32.02	0.001%
20	-61.16	-62.86	0.17	61.16	62.85	-0.17	0.001%
21	-61.16	-47.14	0.17	61.16	47.14	-0.17	0.001%
22	-51.67	-62.86	-29.87	51.66	62.85	29.87	0.001%
23	-51.67	-47.14	-29.87	51.66	47.14	29.87	0.001%
24	-29.54	-62.86	-51.59	29.54	62.85	51.59	0.001%
25	-29.54	-47.14	-51.59	29.54	47.14	51.59	0.001%
26	0.00	-228.55	0.00	-0.00	228.55	-0.00	0.000%
27	0.01	-228.55	-23.38	-0.01	228.55	23.38	0.000%
28	11.99	-228.55	-20.84	-11.99	228.55	20.83	0.000%
29	20.90	-228.55	-12.03	-20.90	228.55	12.03	0.000%
30	23.38	-228.55	0.04	-23.38	228.55	-0.04	0.000%
31	19.66	-228.55	11.38	-19.66	228.55	-11.38	0.000%

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job	CT11059C-Rev2	Page	28 of 36
	Project	1975064	Date	10:12:16 06/11/19
	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
32	11.23	-228.55	19.39	-11.23	228.55	-19.39	0.000%
33	0.04	-228.55	23.15	-0.04	228.55	-23.15	0.000%
34	-12.04	-228.55	20.82	12.04	228.55	-20.82	0.000%
35	-21.08	-228.55	12.21	21.08	228.55	-12.21	0.000%
36	-23.36	-228.55	0.04	23.36	228.55	-0.04	0.000%
37	-19.42	-228.55	-11.22	19.42	228.55	11.22	0.000%
38	-11.15	-228.55	-19.40	11.15	228.55	19.40	0.000%
39	0.01	-52.38	-15.59	-0.01	52.38	15.59	0.000%
40	7.59	-52.38	-13.22	-7.59	52.38	13.22	0.000%
41	12.79	-52.38	-7.34	-12.79	52.38	7.34	0.000%
42	14.65	-52.38	0.05	-14.65	52.38	-0.05	0.000%
43	12.81	-52.38	7.43	-12.81	52.38	-7.43	0.000%
44	7.16	-52.38	12.33	-7.16	52.38	-12.33	0.000%
45	0.04	-52.38	15.12	-0.04	52.38	-15.12	0.000%
46	-7.64	-52.38	13.21	7.64	52.38	-13.21	0.000%
47	-13.18	-52.38	7.66	13.18	52.38	-7.66	0.000%
48	-14.63	-52.38	0.04	14.63	52.38	-0.04	0.000%
49	-12.35	-52.38	-7.14	12.35	52.38	7.14	0.000%
50	-7.07	-52.38	-12.34	7.06	52.38	12.34	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	6	0.00000001	0.00000001
2	Yes	10	0.00000001	0.00008073
3	Yes	10	0.00000001	0.00005816
4	Yes	10	0.00000001	0.00008841
5	Yes	10	0.00000001	0.00006568
6	Yes	10	0.00000001	0.00009608
7	Yes	10	0.00000001	0.00007290
8	Yes	10	0.00000001	0.00008894
9	Yes	10	0.00000001	0.00006609
10	Yes	10	0.00000001	0.00008116
11	Yes	10	0.00000001	0.00005851
12	Yes	10	0.00000001	0.00008921
13	Yes	10	0.00000001	0.00006629
14	Yes	10	0.00000001	0.00009565
15	Yes	10	0.00000001	0.00007258
16	Yes	10	0.00000001	0.00008834
17	Yes	10	0.00000001	0.00006563
18	Yes	10	0.00000001	0.00008094
19	Yes	10	0.00000001	0.00005831
20	Yes	10	0.00000001	0.00008905
21	Yes	10	0.00000001	0.00006614
22	Yes	10	0.00000001	0.00009642
23	Yes	10	0.00000001	0.00007313
24	Yes	10	0.00000001	0.00008940
25	Yes	10	0.00000001	0.00006639
26	Yes	9	0.00000001	0.00007618
27	Yes	11	0.00000001	0.00009121
28	Yes	11	0.00000001	0.00009144
29	Yes	11	0.00000001	0.00009157
30	Yes	11	0.00000001	0.00008884
31	Yes	11	0.00000001	0.00008641
32	Yes	11	0.00000001	0.00008735

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job	CT11059C-Rev2	Page	29 of 36
	Project	1975064	Date	10:12:16 06/11/19
	Client	Foresite LLC	Designed by	Ahmet Colakoglu

33	Yes	11	0.00000001	0.00008955
34	Yes	11	0.00000001	0.00008965
35	Yes	11	0.00000001	0.00009004
36	Yes	11	0.00000001	0.00009227
37	Yes	11	0.00000001	0.00009391
38	Yes	11	0.00000001	0.00009273
39	Yes	10	0.00000001	0.00006855
40	Yes	10	0.00000001	0.00007007
41	Yes	10	0.00000001	0.00007195
42	Yes	10	0.00000001	0.00007024
43	Yes	10	0.00000001	0.00006846
44	Yes	10	0.00000001	0.00007028
45	Yes	10	0.00000001	0.00007161
46	Yes	10	0.00000001	0.00006994
47	Yes	10	0.00000001	0.00006866
48	Yes	10	0.00000001	0.00007064
49	Yes	10	0.00000001	0.00007242
50	Yes	10	0.00000001	0.00007083

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	170 - 150	4.400	39	0.2474	0.0186
T2	150 - 140	3.377	39	0.2245	0.0220
T3	140 - 120	2.912	39	0.2097	0.0213
T4	120 - 100	2.088	39	0.1721	0.0146
T5	100 - 90	1.411	39	0.1384	0.0108
T6	90 - 80	1.131	39	0.1181	0.0094
T7	80 - 60	0.890	39	0.1017	0.0080
T8	60 - 40	0.501	39	0.0737	0.0056
T9	40 - 20	0.227	39	0.0455	0.0037
T10	20 - 0	0.067	39	0.0206	0.0019

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
183.00	101-90-08-0-01	39	4.400	0.2474	0.0186	115199
179.75	2.5" Dia 15' Mount Pipe	39	4.400	0.2474	0.0186	115199
178.00	3" Dia 20' Omni	39	4.400	0.2474	0.0186	115199
175.00	(3) 2.5"x14' Omni	39	4.400	0.2474	0.0186	115199
174.00	1.5"x12' Omni	39	4.400	0.2474	0.0186	115199
170.00	APXVSPP18-C-A20 w/ Mount Pipe	39	4.400	0.2474	0.0186	115199
168.00	HPD2-5.2	39	4.295	0.2453	0.0191	115199
159.50	APXV18-206517S-C w/ Mount Pipe	39	3.853	0.2361	0.0206	54856
158.50	SC420-HFLILDF-SK	39	3.802	0.2349	0.0207	50086
144.00	3" Dia 20' Omni	39	3.094	0.2161	0.0219	31765
141.00	2"x15' Omni	39	2.957	0.2114	0.0215	32825
139.00	1.5"x10' Omni	39	2.867	0.2080	0.0211	33211
138.50	Omni 4"x9'	39	2.845	0.2071	0.0210	33265
134.00	VHLP2.5-180	39	2.650	0.1988	0.0197	33360
125.00	ERICSSON AIR 21 B2A B4P	39	2.281	0.1814	0.0164	33322
115.00	7770.00 w/ Mount Pipe	39	1.905	0.1637	0.0135	32437

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job	CT11059C-Rev2	Page	30 of 36
	Project	1975064	Date	10:12:16 06/11/19
	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Elevation	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
101.00	BXA-171063-12CF-EDIN-X w/ Mount Pipe	39	1.441	0.1403	0.0110	29988
87.00	3"x2"x22" Panel	39	1.055	0.1127	0.0089	31824
84.50	TMA	39	0.994	0.1086	0.0086	34383
83.50	3' Stand Off	39	0.971	0.1070	0.0084	35529
83.00	VHLP3-11W	39	0.959	0.1062	0.0084	36106
82.50	TMA	39	0.947	0.1054	0.0083	36677
80.00	3"x2"x22" Panel	39	0.890	0.1017	0.0080	39137
30.00	Camera	39	0.133	0.0325	0.0027	42728
24.00	PC9013N	39	0.090	0.0252	0.0022	42669

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	170 - 150	18.359	2	1.0289	0.0781
T2	150 - 140	14.094	2	0.9349	0.0921
T3	140 - 120	12.156	2	0.8728	0.0892
T4	120 - 100	8.726	2	0.7175	0.0612
T5	100 - 90	5.898	2	0.5776	0.0453
T6	90 - 80	4.729	2	0.4935	0.0392
T7	80 - 60	3.722	2	0.4249	0.0334
T8	60 - 40	2.094	2	0.3082	0.0234
T9	40 - 20	0.951	2	0.1903	0.0153
T10	20 - 0	0.279	2	0.0863	0.0078

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
183.00	101-90-08-0-01	2	18.359	1.0289	0.0781	27932
179.75	2.5" Dia 15' Mount Pipe	2	18.359	1.0289	0.0781	27932
178.00	3" Dia 20' Omni	2	18.359	1.0289	0.0781	27932
175.00	(3) 2.5"x14' Omni	2	18.359	1.0289	0.0781	27932
174.00	1.5"x12' Omni	2	18.359	1.0289	0.0781	27932
170.00	APXVSPPI18-C-A20 w/ Mount Pipe	2	18.359	1.0289	0.0781	27932
168.00	HPD2-5.2	2	17.921	1.0202	0.0799	27932
159.50	APXV18-206517S-C w/ Mount Pipe	2	16.077	0.9824	0.0861	13301
158.50	SC420-HFL1LDF-SK	2	15.863	0.9777	0.0866	12144
144.00	3" Dia 20' Omni	2	12.913	0.8996	0.0918	7694
141.00	2"x15' Omni	2	12.343	0.8798	0.0900	7995
139.00	1.5"x10' Omni	2	11.971	0.8657	0.0883	8115
138.50	Omni 4"x9'	2	11.879	0.8621	0.0878	8131
134.00	VHLP2.5-180	2	11.066	0.8278	0.0823	8154
125.00	ERICSSON AIR 21 B2A B4P	2	9.528	0.7557	0.0686	8126
115.00	7770.00 w/ Mount Pipe	2	7.960	0.6827	0.0564	7852
101.00	BXA-171063-12CF-EDIN-X w/ Mount Pipe	2	6.024	0.5856	0.0460	7191
87.00	3"x2"x22" Panel	2	4.411	0.4709	0.0374	7629
84.50	TMA	2	4.157	0.4537	0.0359	8236

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job	CT11059C-Rev2	Page	31 of 36
	Project	1975064	Date	10:12:16 06/11/19
	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Elevation	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
83.50	3' Stand Off	2	4.058	0.4471	0.0354	8507
83.00	VHLP3-11W	2	4.009	0.4438	0.0351	8644
82.50	TMA	2	3.961	0.4406	0.0348	8779
80.00	3"x2"x22" Panel	2	3.722	0.4249	0.0334	9361
30.00	Camera	2	0.557	0.1358	0.0115	10218
24.00	PC9013N	2	0.376	0.1054	0.0093	10203

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load Allowable	Allowable Ratio	Criteria
T1	170	Diagonal	A325N	0.6250	1	3.21	12.43	0.258	1	Bolt Shear
T2	150	Leg	A325N	1.0000	6	5.99	53.01	0.113	1	Bolt Tension
		Diagonal	A325N	1.0000	1	4.18	9.14	0.457	1	Member Block Shear
		Top Girt	A325N	1.0000	1	0.46	10.16	0.045	1	Member Block Shear
T3	140	Leg	A325N	1.0000	6	8.24	53.01	0.156	1	Bolt Tension
		Diagonal	A325N	1.0000	1	7.21	10.16	0.710	1	Member Block Shear
T4	120	Leg	A325N	1.0000	6	13.95	53.01	0.263	1	Bolt Tension
		Diagonal	A325N	1.0000	1	10.06	13.55	0.742	1	Member Block Shear
		Mid Girt	A325N	1.0000	1	3.52	10.16	0.347	1	Member Block Shear
T5	100	Leg	A325N	1.0000	6	21.91	53.01	0.413	1	Bolt Tension
		Diagonal	A325N	1.0000	1	11.74	16.94	0.693	1	Member Block Shear
T6	90	Leg	A325N	1.0000	6	26.02	53.01	0.491	1	Bolt Tension
		Diagonal	A325N	1.0000	1	11.43	16.94	0.674	1	Member Block Shear
T7	80	Leg	A325N	1.0000	6	29.88	53.01	0.564	1	Bolt Tension
		Diagonal	A325N	1.0000	1	11.92	20.33	0.587	1	Member Block Shear
T8	60	Leg	A325N	1.2500	6	37.31	82.83	0.450	1	Bolt Tension
		Diagonal	A325N	1.2500	1	12.31	20.54	0.599	1	Member Block Shear
T9	40	Leg	A325N	1.2500	6	44.34	82.83	0.535	1	Bolt Tension
		Diagonal	A325N	1.2500	1	12.98	24.64	0.527	1	Member Block Shear
T10	20	Leg	A325N	1.2500	6	51.01	82.83	0.616	1	Bolt Tension
		Diagonal	A325N	1.2500	1	13.81	20.54	0.672	1	Member Block Shear

Compression Checks

Leg Design Data (Compression)

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job CT11059C-Rev2	Page 32 of 36
	Project 1975064	Date 10:12:16 06/11/19
	Client Foresite LLC	Designed by Ahmet Colakoglu

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	170 - 150	1 3/4	20.00	2.49	68.3 K=1.00	2.4053	-34.03	76.97	0.442 ¹
T2	150 - 140	Pirod 105244	10.02	10.02	45.4 K=1.00	3.6816	-40.79	142.49	0.286 ¹
T3	140 - 120	Pirod 105216	20.03	10.02	45.4 K=1.00	3.6816	-75.42	142.49	0.529 ¹
T4	120 - 100	Pirod 105217	20.03	10.02	37.8 K=1.00	5.3014	-122.77	214.86	0.571 ¹
T5	100 - 90	Pirod 105217	10.02	10.02	37.8 K=1.00	5.3014	-151.26	214.86	0.704 ¹
T6	90 - 80	Pirod 105217 w/ 1"rod 36ksi	10.02	10.02	53.3 K=1.00	6.9978	-177.65	255.93	0.694 ¹
T7	80 - 60	Pirod 105218 w/ 1"rod 36ksi	20.03	10.02	55.7 K=1.00	8.9124	-227.96	319.73	0.713 ¹
T8	60 - 40	Pirod 105219	20.03	10.02	28.4 K=1.00	9.4248	-276.01	399.87	0.690 ¹
T9	40 - 20	Pirod 105219 w/ 1"rod 36ksi	20.03	10.02	57.6 K=1.00	11.1213	-322.50	392.52	0.822 ¹
T10	20 - 0	Pirod 105220 w/ 1"rod 36ksi	20.03	10.02	59.2 K=1.00	13.6248	-366.31	474.53	0.772 ¹

¹ P_u / φP_n controls

Truss-Leg Diagonal Data

Section No.	Elevation ft	Diagonal Size	L _d ft	Kl/r	φP _n K	A in ²	V _u K	φV _n K	Stress Ratio
T2	150 - 140	0.5	1.48	121.0	165.67	0.1963	0.83	3.39	0.244
T3	140 - 120	0.5	1.48	121.0	165.67	0.1963	1.14	3.29	0.345
T4	120 - 100	0.5	1.47	120.0	238.57	0.1963	1.67	3.34	0.500
T5	100 - 90	0.5	1.47	120.0	238.57	0.1963	0.45	3.34	0.134
T6	90 - 80	0.5	1.46	119.1	314.90	0.1963	0.40	3.37	0.118
T7	80 - 60	0.5	1.45	118.2	401.06	0.1963	0.27	3.41	0.080
T8	60 - 40	0.625	1.45	94.4	424.12	0.3068	0.25	6.96	0.036
T9	40 - 20	0.625	1.44	93.9	500.46	0.3068	0.86	6.99	0.122
T10	20 - 0	0.625	1.43	93.2	613.12	0.3068	1.46	7.04	0.207

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	170 - 150	7/8	5.59	2.71	133.9 K=0.90	0.6013	-3.21	7.58	0.423 ¹
T2	150 - 140	L2 1/2x2 1/2x3/16	11.42	5.02	121.8 K=1.00	0.9020	-4.59	13.38	0.343 ¹
T3	140 - 120	L3x3x3/16	12.50	5.67	115.6 K=1.01	1.0900	-7.48	17.29	0.433 ¹
T4	120 - 100	L3x3x1/4	13.80	6.37	129.1 K=1.00	1.4400	-10.94	19.40	0.564 ¹
T5	100 - 90	L3x3x5/16	14.50	6.74	137.3	1.7800	-11.88	21.33	0.557 ¹

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job	CT11059C-Rev2	Page	33 of 36
	Project	1975064	Date	10:12:16 06/11/19
	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T6	90 - 80	L3x3x5/16	15.24	7.12	K=1.00 145.1	1.7800	-11.76	19.09	0.616 ¹
T7	80 - 60	L3x3x3/8	16.80	7.92	K=1.00 162.0	2.1100	-12.25	18.17	0.674 ¹
T8	60 - 40	L3 1/2x3 1/2x5/16	18.45	8.73	K=1.00 151.8	2.0900	-12.72	20.49	0.621 ¹
T9	40 - 20	L3 1/2x3 1/2x3/8	20.16	9.59	K=1.00 167.6	2.4800	-13.42	19.95	0.673 ¹
T10	20 - 0	L4x4x5/16	21.92	10.48	K=1.00 159.0	2.4000	-14.41	21.45	0.672 ¹

¹ P_u / φP_n controls

Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	170 - 150	7/8	5.00	4.85	K=0.70 186.4	0.6013	-0.25	3.91	0.063 ¹
T2	150 - 140	L3x3x3/16	5.00	4.52	K=1.16 105.5	1.0900	-0.41	19.37	0.021 ¹

¹ P_u / φP_n controls

Bottom Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	170 - 150	7/8	5.00	4.85	K=0.70 186.4	0.6013	-0.17	3.91	0.044 ¹

¹ P_u / φP_n controls

Mid Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T4	120 - 100	L3x3x3/16	9.00	7.67	K=1.00 154.4	1.0900	-2.91	10.33	0.282 ¹

¹ P_u / φP_n controls

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job CT11059C-Rev2	Page 34 of 36
	Project 1975064	Date 10:12:16 06/11/19
	Client Foresite LLC	Designed by Ahmet Colakoglu

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio P _u / φP _n
T1	170 - 150	1 3/4	20.00	0.08	2.3	2.4053	31.94	108.24	0.295 ¹
T2	150 - 140	Pirod 105244	10.02	10.02	45.4	3.6816	35.91	165.67	0.217 ¹
T3	140 - 120	Pirod 105216	20.03	10.02	45.4	3.6816	64.81	165.67	0.391 ¹
T4	120 - 100	Pirod 105217	20.03	10.02	37.8	5.3014	105.95	238.57	0.444 ¹
T5	100 - 90	Pirod 105217	10.02	10.02	37.8	5.3014	131.46	238.57	0.551 ¹
T6	90 - 80	Pirod 105217 w/ 1"rod 36ksi	10.02	10.02	53.3	6.9978	156.10	314.90	0.496 ¹
T7	80 - 60	Pirod 105218 w/ 1"rod 36ksi	20.03	10.02	55.7	8.9124	201.65	401.06	0.503 ¹
T8	60 - 40	Pirod 105219	20.03	10.02	28.4	9.4248	245.02	424.12	0.578 ¹
T9	40 - 20	Pirod 105219 w/ 1"rod 36ksi	20.03	10.02	57.6	11.1213	286.01	500.46	0.571 ¹
T10	20 - 0	Pirod 105220 w/ 1"rod 36ksi	20.03	10.02	59.2	13.6248	323.93	613.12	0.528 ¹

¹ P_u / φP_n controls

Truss-Leg Diagonal Data

Section No.	Elevation ft	Diagonal Size	L _d ft	Kl/r	φP _n K	A in ²	V _u K	φV _n K	Stress Ratio
T2	150 - 140	0.5	1.48	121.0	165.67	0.1963	0.83	3.39	0.244
T3	140 - 120	0.5	1.48	121.0	165.67	0.1963	1.14	3.29	0.345
T4	120 - 100	0.5	1.47	120.0	238.57	0.1963	1.67	3.34	0.500
T5	100 - 90	0.5	1.47	120.0	238.57	0.1963	0.45	3.34	0.134
T6	90 - 80	0.5	1.46	119.1	314.90	0.1963	0.40	3.37	0.118
T7	80 - 60	0.5	1.45	118.2	401.06	0.1963	0.27	3.41	0.080
T8	60 - 40	0.625	1.45	94.4	424.12	0.3068	0.25	6.96	0.036
T9	40 - 20	0.625	1.44	93.9	500.46	0.3068	0.86	6.99	0.122
T10	20 - 0	0.625	1.43	93.2	613.12	0.3068	1.46	7.04	0.207

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio P _u / φP _n
T1	170 - 150	7/8	5.59	2.71	148.7	0.6013	3.16	27.06	0.117 ¹
T2	150 - 140	L2 1/2x2 1/2x3/16	11.42	5.02	80.1	0.5183	4.18	22.55	0.185 ¹
T3	140 - 120	L3x3x3/16	12.50	5.67	74.6	0.6593	7.21	28.68	0.252 ¹
T4	120 - 100	L3x3x1/4	13.80	6.37	84.3	0.8691	10.06	37.80	0.266 ¹
T5	100 - 90	L3x3x5/16	14.50	6.74	89.9	1.0713	11.74	46.60	0.252 ¹
T6	90 - 80	L3x3x5/16	15.24	7.12	94.9	1.0713	11.43	46.60	0.245 ¹
T7	80 - 60	L3x3x3/8	16.80	7.92	106.3	1.2661	11.92	55.08	0.217 ¹
T8	60 - 40	L3 1/2x3 1/2x5/16	18.45	8.73	99.2	1.2452	12.31	54.17	0.227 ¹
T9	40 - 20	L3 1/2x3 1/2x3/8	20.16	9.59	109.8	1.4733	12.98	64.09	0.203 ¹
T10	20 - 0	L4x4x5/16	21.92	10.48	103.3	1.4777	13.81	64.28	0.215 ¹

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job CT11059C-Rev2	Page 35 of 36
	Project 1975064	Date 10:12:16 06/11/19
	Client Foresite LLC	Designed by Ahmet Colakoglu

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
-------------	-----------------	------	---------	----------------------	------	----------------------	---------------------	----------------------	---------------------------------

¹ P_u / φP_n controls

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	170 - 150	7/8	5.00	4.85	266.3	0.6013	0.21	27.06	0.008 ¹
T2	150 - 140	L3x3x3/16	5.00	4.52	62.0	0.6593	0.46	28.68	0.016 ¹

¹ P_u / φP_n controls

Bottom Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	170 - 150	7/8	5.00	4.85	266.3	0.6013	0.17	27.06	0.006 ¹

¹ P_u / φP_n controls

Mid Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T4	120 - 100	L3x3x3/16	9.00	7.67	102.2	0.6593	3.52	28.68	0.123 ¹

¹ P_u / φP_n controls

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	φP _{allow} K	% Capacity	Pass Fail
T1	170 - 150	Leg	1 3/4	1	-34.03	76.97	44.2	Pass
T2	150 - 140	Leg	Piroad 105244	58	-40.79	142.49	28.6	Pass
T3	140 - 120	Leg	Piroad 105216	72	-75.42	142.49	52.9	Pass
T4	120 - 100	Leg	Piroad 105217	85	-122.77	214.86	57.1	Pass
T5	100 - 90	Leg	Piroad 105217	103	-151.26	214.86	70.4	Pass
T6	90 - 80	Leg	Piroad 105217 w/ 1"rod 36ksi	112	-177.65	255.93	69.4	Pass
T7	80 - 60	Leg	Piroad 105218 w/ 1"rod 36ksi	121	-227.96	319.73	71.3	Pass

<p style="text-align: center;">tnxTower</p> <p style="text-align: center;">Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:</p>	<p>Job</p> <p style="text-align: center;">CT11059C-Rev2</p>	<p>Page</p> <p style="text-align: center;">36 of 36</p>
	<p>Project</p> <p style="text-align: center;">1975064</p>	<p>Date</p> <p style="text-align: center;">10:12:16 06/11/19</p>
	<p>Client</p> <p style="text-align: center;">Foresite LLC</p>	<p>Designed by</p> <p style="text-align: center;">Ahmet Colakoglu</p>

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail	
T8	60 - 40	Leg	Pirod 105219	138	-276.01	399.87	69.0	Pass	
T9	40 - 20	Leg	Pirod 105219 w/ 1"rod 36ksi	153	-322.50	392.52	82.2	Pass	
T10	20 - 0	Leg	Pirod 105220 w/ 1"rod 36ksi	168	-366.31	474.53	77.2	Pass	
T1	170 - 150	Diagonal	7/8	10	-3.21	7.58	42.3	Pass	
T2	150 - 140	Diagonal	L2 1/2x2 1/2x3/16	68	-4.59	13.38	34.3	Pass	
							45.7 (b)		
T3	140 - 120	Diagonal	L3x3x3/16	78	-7.48	17.29	43.3	Pass	
							71.0 (b)		
T4	120 - 100	Diagonal	L3x3x1/4	96	-10.94	19.40	56.4	Pass	
							74.2 (b)		
T5	100 - 90	Diagonal	L3x3x5/16	111	-11.88	21.33	55.7	Pass	
							69.3 (b)		
T6	90 - 80	Diagonal	L3x3x5/16	120	-11.76	19.09	61.6	Pass	
							67.4 (b)		
T7	80 - 60	Diagonal	L3x3x3/8	129	-12.25	18.17	67.4	Pass	
T8	60 - 40	Diagonal	L3 1/2x3 1/2x5/16	144	-12.72	20.49	62.1	Pass	
T9	40 - 20	Diagonal	L3 1/2x3 1/2x3/8	159	-13.42	19.95	67.3	Pass	
T10	20 - 0	Diagonal	L4x4x5/16	174	-14.41	21.45	67.2	Pass	
							67.2 (b)		
T1	170 - 150	Top Girt	7/8	6	-0.25	3.91	6.3	Pass	
T2	150 - 140	Top Girt	L3x3x3/16	62	-0.41	19.37	2.1	Pass	
							4.5 (b)		
T1	170 - 150	Bottom Girt	7/8	8	-0.17	3.91	4.4	Pass	
T4	120 - 100	Mid Girt	L3x3x3/16	89	-2.91	10.33	28.2	Pass	
							34.7 (b)		
							Summary		
							Leg (T9)	82.2	Pass
							Diagonal (T4)	74.2	Pass
							Top Girt (T1)	6.3	Pass
							Bottom Girt (T1)	4.4	Pass
							Mid Girt (T4)	34.7	Pass
							Bolt Checks	74.2	Pass
							RATING =	82.2	Pass

Project Information	
Site Name	CT11059C-Rev2

Tower Information	
Tower Type	Self Support
TIA-222 Rev	G

Load Z Normalization

Applied Loads		
	Comp.	Uplift
Axial (k)	378.00	334.00
Shear (k)	42.00	38.00

Anchor Rod Data	
Quantity:	6
Diameter (in):	1.25
Material Grade:	A687
Grout Considered:	Yes
l_{ar} (in):	0
Eta Factor, η :	0.55
Thread Type:	N-Included
Configuration:	Symmetrical

Fy=105 ksi Fu=150 ksi
 Grout Considered
 Bending Interaction Not Considered

Anchor Rod Results	
Axial, Pu_t (kips)	55.67
Shear, Vu (kips)	6.33
Moment, Mu (kip-in)	-
Axial Cap., ϕPn_t (kips)	96.90
Shear Cap., ϕVn (kips)	-
Moment Cap., ϕMn (kip-in)	-
Stress Rating	69.3%

Pass

Exhibit E

May 22, 2019

Re: Mount Structural Evaluation
T-Mobile Site ID: CT11059C
T-Mobile Site Name: Rockyhill/I-91/X23
Site Address: 179 Shunpike Road, Cromwell, CT 06416
Destek Job Number: 1975064

In accordance with the request of T-Mobile, Destek Engineering, LLC (Destek) evaluated the structural capacity of the existing antenna mounting system located at the above referenced address for the additions and alterations proposed by T-Mobile. This evaluation is based on the following documents.

- RFDS provided by T-Mobile, dated 04/30/2019.
- Structural Analysis Report prepared by Hudson Design Group, LLC, dated 04/09/2018.
- Construction Drawings prepared by Atlantis Design Group, Inc., dated 10/01/2014.
- Structural Analysis Report prepared by URS Corporation, dated 09/23/2014.

Proposed Changes:

T-Mobile is proposing the following antenna and equipment configuration on the sector mounts:

- **(3) Proposed RFS APXVAARR24_43-U-NA20 – Antennas**
- **(3) Proposed AIR32 KRD901146-1_B66A_B2A – Antennas**
- **(3) Proposed Radio 4449 B71+B12 – RRUs**
- (3) Existing AIR21 KRC118023-1_B2A-B4P – Antennas
- (3) Existing Generic Twin Style 1B AWS – TMAs

Evaluation Conditions: It is assumed that all prior additions and alterations by T-Mobile have been properly designed, constructed accordingly, and structural components, including the main structure itself, have been qualified for the changed conditions. Unless otherwise noted, the structure is assumed to be in good condition, free of defects and can achieve theoretical strength. Destek does not assume any liability which may arise due to invalidity of these assumptions or any existing design or construction deficiency. The evaluation results presented in this evaluation are only applicable for the previously mentioned proposed changes. It is assumed that all of the existing bolts and connections are properly secured to the host structure(s). Contractor should verify the connections and contact Destek immediately if any of these assumptions are discovered to be incorrect.

Codes and Loading:

This assessment is in accordance with the following codes and loading:

- *2018 Connecticut State Building Code*
- *ASCE 7-10, Minimum Design Loads for Buildings and Other Structures.*
- *TIA-222-G Structural Standards for Steel Antenna Towers and Antenna Supporting Structures.*
- Basic Wind Speed, V_{ult} = 125 mph converted to V_{asd} = 97 mph.
- RAD Center: 125 ft
- Exposure Category C
- Risk Category II

Engineering Evaluation and Conclusion: T-Mobile currently has nine (9) panel antennas supported by sector mounts attached to the tower legs at a RAD center of 125 feet above grade level. The proposed configuration will replace six (6) existing panel antennas and three (3) existing RRU's with six (6) new panel antennas and three (3) new RRU's of similar dimensions. Based on our experience with similar mount structures and with respect to the changes in applied loads, Destek opines that the mounts **will have adequate** capacity for the proposed T-Mobile loading referenced above ***once the existing mounts are replaced with Commscope High Capacity Sector Frames (P/N: SFG2B-10-4-96). The new mounts should be properly attached to the entire tower truss leg.***

The additions and alterations proposed by T-Mobile **can be implemented as intended once the mounts are replaced** and with the conditions outlined in this letter. Should you need any clarifications about this letter, please contact me at (770) 693-0835 or acolakoglu@destekengineering.com.

Sincerely,
Destek Engineering, LLC
License No: PEC0001429

5/22/2019



A circular red seal for the State of Connecticut Professional Engineer Ahmet Colakoglu, License No. 27057. The seal features the state emblem in the center and the text 'STATE OF CONNECTICUT', 'AHMET COLAKOGLU', 'PEN. 27057', and 'LICENSED PROFESSIONAL ENGINEER' around the perimeter. A blue ink signature is written over the seal.

Ahmet Colakoglu, PE
Connecticut Professional Engineer
License No: 27057

Site Photographs



Existing T-Mobile Antenna Sector Mount on Tower

Exhibit F

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

T-Mobile Existing Facility

Site ID: CT11059C

**RockyHill/ I-91/ X23
179 Shunpike Road
Cromwell, Connecticut 06416**

May 30, 2019

EBI Project Number: 6219001889

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	20.40%

May 30, 2019

T-Mobile

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

Emissions Analysis for Site: CT11059C - RockyHill/ I-91/ X23

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **179 Shunpike Road in Cromwell, 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 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits; therefore, it is necessary to report results and limits in terms of percent MPE rather than power density.

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

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

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

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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at 179 Shunpike Road in Cromwell, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. 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 all calculations, all equipment was calculated using the following assumptions:

- 1) 2 LTE channels (600 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 2) 2 LTE channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 3) 4 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 4) 2 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 5) 2 UMTS channels (AWS Band - 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

- 6) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 7) 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.
- 8) 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.
- 9) The antennas used in this modeling are the Ericsson AIR21 B2A_B4P for the 1900 MHz / 2100 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 700 MHz channel(s), the Ericsson AIR32 B66A_B2A for the 1900 MHz / 2100 MHz channel(s) in Sector A, the Ericsson AIR21 B2A_B4P for the 1900 MHz / 2100 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 700 MHz channel(s), the Ericsson AIR32 B66A_B2A for the 1900 MHz / 2100 MHz channel(s) in Sector B, the Ericsson AIR21 B2A_B4P for the 1900 MHz / 2100 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 700 MHz channel(s), the Ericsson AIR32 B66A_B2A for the 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.
- 10) The antenna mounting height centerline of the proposed antennas is 125 feet above ground level (AGL).
- 11) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.
- 12) 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 AIR21 B2A_B4P	Make / Model:	Ericsson AIR21 B2A_B4P	Make / Model:	Ericsson AIR21 B2A_B4P
Frequency Bands:	1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 2100 MHz
Gain:	15.35 dBd / 15.35 dBd	Gain:	15.35 dBd / 15.35 dBd	Gain:	15.35 dBd / 15.35 dBd
Height (AGL):	125 feet	Height (AGL):	125 feet	Height (AGL):	125 feet
Channel Count:	6	Channel Count:	6	Channel Count:	6
Total TX Power (W):	180 Watts	Total TX Power (W):	180 Watts	Total TX Power (W):	180 Watts
ERP (W):	6,169.82	ERP (W):	6,169.82	ERP (W):	6,169.82
Antenna A1 MPE %:	1.42%	Antenna B1 MPE %:	1.42%	Antenna C1 MPE %:	1.42%
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	RFS APXVAARR24_43-U-NA20	Make / Model:	RFS APXVAARR24_43-U-NA20	Make / Model:	RFS APXVAARR24_43-U-NA20
Frequency Bands:	600 MHz / 700 MHz	Frequency Bands:	600 MHz / 700 MHz	Frequency Bands:	600 MHz / 700 MHz
Gain:	12.95 dBd / 13.35 dBd	Gain:	12.95 dBd / 13.35 dBd	Gain:	12.95 dBd / 13.35 dBd
Height (AGL):	125 feet	Height (AGL):	125 feet	Height (AGL):	125 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	120 Watts	Total TX Power (W):	120 Watts	Total TX Power (W):	120 Watts
ERP (W):	2,481.08	ERP (W):	2,481.08	ERP (W):	2,481.08
Antenna A2 MPE %:	1.32%	Antenna B2 MPE %:	1.32%	Antenna C2 MPE %:	1.32%
Antenna #:	3	Antenna #:	3	Antenna #:	3
Make / Model:	Ericsson AIR32 B66A_B2A	Make / Model:	Ericsson AIR32 B66A_B2A	Make / Model:	Ericsson AIR32 B66A_B2A
Frequency Bands:	1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 2100 MHz
Gain:	15.35 dBd / 15.85 dBd	Gain:	15.35 dBd / 15.85 dBd	Gain:	15.35 dBd / 15.85 dBd
Height (AGL):	125 feet	Height (AGL):	125 feet	Height (AGL):	125 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts
ERP (W):	8,728.31	ERP (W):	8,728.31	ERP (W):	8,728.31
Antenna A3 MPE %:	2.01%	Antenna B3 MPE %:	2.01%	Antenna C3 MPE %:	2.01%

Site Composite MPE %	
Carrier	MPE %
T-Mobile (Max at Sector A):	4.75%
AT&T	7.2%
CR Police Dept.	0.23%
CR Fire Dept.	0.24%
CR Fire Alarm	0.4%
Clearwire	0.11%
Sprint	1.83%
Verizon	5.64%
Site Total MPE % :	20.40%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	4.75%
T-Mobile Sector B Total:	4.75%
T-Mobile Sector C Total:	4.75%
Site Total MPE % :	
	20.40%

T-Mobile Maximum MPE Power Values (Sector A)							
T-Mobile Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
T-Mobile 1900 MHz GSM	4	1028.30	125.0	9.46	1900 MHz GSM	1000	0.95%
T-Mobile 2100 MHz UMTS	2	1028.30	125.0	4.73	2100 MHz UMTS	1000	0.47%
T-Mobile 600 MHz LTE	2	591.73	125.0	2.72	600 MHz LTE	400	0.68%
T-Mobile 700 MHz LTE	2	648.82	125.0	2.99	700 MHz LTE	467	0.64%
T-Mobile 1900 MHz LTE PCS	2	2056.61	125.0	9.46	1900 MHz LTE PCS	1000	0.95%
T-Mobile 2100 MHz LTE AWS	2	2307.55	125.0	10.62	2100 MHz LTE AWS	1000	1.06%
						Total:	4.75%

• 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:	4.75%
Sector B:	4.75%
Sector C:	4.75%
T-Mobile Maximum MPE % (Sector A):	4.75%
Site Total:	20.40%
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **20.40%** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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

Exhibit G




**UNITED STATES
POSTAL SERVICE®**

Click-N-Ship®

P

usps.com
US POSTAGE
 Flat Rate Env
 \$7.35

9405 5036 9930 0060 0375 19 0073 5000 0010 6416



07/16/2019

Mailed from 06002 062S0000000312

PRIORITY MAIL 1-DAY™

DEBORAH CHASE
 T-MOBILE USA- NSS
 35 GRIFFIN RD S
 BLOOMFIELD CT 06002-1351

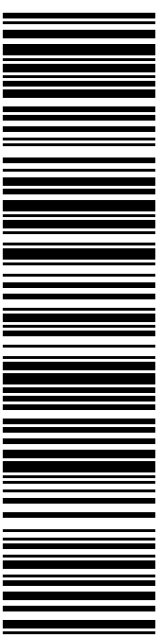
Expected Delivery Date: 07/17/19
 Ref#: 059CZAP
0024

Carrier -- Leave if No Response

C003

SHIP TO: ENZO FAIENZA
 TOWN OF CROMWELL- MAYOR
 41 WEST ST
 CROMWELL CT 06416-2180

USPS TRACKING #



9405 5036 9930 0060 0375 19

Electronic Rate Approved #038555749



Cut on dotted line.

Instructions

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

Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0060 0375 19

Trans. #: 468318566	Priority Mail® Postage: \$7.35
Print Date: 07/16/2019	Total: \$7.35
Ship Date: 07/16/2019	
Expected Delivery Date: 07/17/2019	

From: DEBORAH CHASE
 T-MOBILE USA- NSS
 35 GRIFFIN RD S
 BLOOMFIELD CT 06002-1351


Ref#: 059CZAP

To: ENZO FAIENZA
 TOWN OF CROMWELL- MAYOR
 41 WEST ST
 CROMWELL CT 06416-2180

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



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



**UNITED STATES
POSTAL SERVICE®**

Click-N-Ship®


P

usps.com
US POSTAGE
Flat Rate Env

07/16/2019

Mailed from 06002 062S0000000309

9405 5036 9930 0060 0375 26 0073 5000 0010 6416



PRIORITY MAIL 1-DAY™

Expected Delivery Date: 07/17/19

Ref#: 059CZAP **0024**

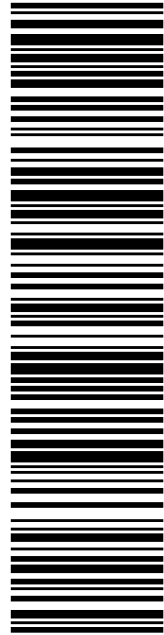
DEBORAH CHASE
T-MOBILE USA- NSS
35 GRIFFIN RD S
BLOOMFIELD CT 06002-1351

Carrier -- Leave if No Response

C003

SHIP TO: STUART POPPER
DIRECTOR OF PLANNING & DEVELOPMENT
41 WEST ST
CROMWELL CT 06416-2180

USPS TRACKING #



9405 5036 9930 0060 0375 26

Electronic Rate Approved #038555749



Cut on dotted line.

Instructions

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

Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0060 0375 26

Trans. #: 468318566	Priority Mail® Postage: \$7.35
Print Date: 07/16/2019	Total: \$7.35
Ship Date: 07/16/2019	
Expected Delivery Date: 07/17/2019	

From: DEBORAH CHASE
T-MOBILE USA- NSS
35 GRIFFIN RD S
BLOOMFIELD CT 06002-1351


Ref#: 059CZAP

To: STUART POPPER
DIRECTOR OF PLANNING & DEVELOPMENT
41 WEST ST
CROMWELL CT 06416-2180

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



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



**UNITED STATES
POSTAL SERVICE®**

Click-N-Ship®

P

usps.com
US POSTAGE
 Flat Rate Env
 \$7.35

9405 5036 9930 0060 0375 33 0073 5000 0010 6416

07/16/2019

Mailed from 06002 062S0000000310

PRIORITY MAIL 1-DAY™

DEBORAH CHASE
 T-MOBILE USA- NSS
 35 GRIFFIN RD S
 BLOOMFIELD CT 06002-1351


Expected Delivery Date: 07/17/19
 Ref#: 059CZAP
0024

Carrier -- Leave if No Response

C003

SHIP TO: CHIEF MICHAEL TERENZIO
 CROMWELL FIRE DISTRICT
 1 WEST ST
 CROMWELL CT 06416-2123

USPS TRACKING #



9405 5036 9930 0060 0375 33

Electronic Rate Approved #038555749



Cut on dotted line.

Instructions

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

Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0060 0375 33

Trans. #: 468318566	Priority Mail® Postage: \$7.35
Print Date: 07/16/2019	Total: \$7.35
Ship Date: 07/16/2019	
Expected Delivery Date: 07/17/2019	

From: DEBORAH CHASE
 T-MOBILE USA- NSS
 35 GRIFFIN RD S
 BLOOMFIELD CT 06002-1351

Ref#: 059CZAP

To: CHIEF MICHAEL TERENZIO
 CROMWELL FIRE DISTRICT
 1 WEST ST
 CROMWELL CT 06416-2123

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



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