



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 18, 2019

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

RE: Notice of Exempt Modification
889A Colonel Ledyard Hwy, Ledyard CT 06339
Latitude: 41.46194167
Longitude: -72.02361111
T-Mobile Site#: CTNL058A_L600 NHP18

Dear Ms. Bachman:

T-Mobile currently maintains nine (9) antennas at the 185-foot level of the existing 345-foot guyed tower at 889A Colonel Ledyard Hwy, Ledyard CT 06339. The 345-foot tower and property are both owned by Red Wolf Broadcasting. T-Mobile now intends to replace three (3) of its existing antennas with three (3) new 600/700 MHz antenna. The new antennas would be installed at the 185-foot level of the tower. T-Mobile is also proposing tower mount modifications. As shown on the enclosed mount analysis.

Planned Modifications:

Remove: NONE

Remove and Replace:

(3) LNX6515 Antenna (**Remove**) - (3) APXVAARR24_43U-NA20 Antenna 600/700 MHz (**Replace**)
(3)RRUS11 B12 (**Remove**) - (3) RRU 4449 B12/B71 (**Replace**)

Install New:

(1) Fiber Hybrid Line

Existing to Remain:

(6) 1-5/8" Coax
(3) TMA
(1) Fiber Hybrid Line
(3) AIR21B2A B4P - 1900 MHZ Antenna
(3) AIR21B2P B4A – 2100 MHZ Antenna

Ground:

Install New:

(1) Delta 25KW DC Generator – 250 gallon double walled self-contained tank with fuel sensor.
Requires two (2) 20 minute run cycles monthly.

This facility was approved by the Town of Ledyard P&Z. Please see attached.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Mayor Fred Allyn, III, Elected Official and Elizabeth Burdick, Planning Director for the Town of Ledyard, 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 Fred Allyn, III –Ledyard elected official

Town of Ledyard
741 Colonel Ledyard Highway
Ledyard, CT 06339

Town of Ledyard
741 Colonel Ledyard Highway
Ledyard, CT 06339
Planning and Zoning Dept.
Elizabeth Burdick –Planning Director

Red Wolf Broadcasting - as property and tower owner
PO Box 357
Ledyard, CT 06339
Attn: John J. Fuller – President and GM

Exhibit A

Antenna 889 CLH Ledyard

Kyle Faulise <zoning.official@ledyardct.org>

Thu, Jul 18, 2019 at 11:31 AM

To: "victoria@northeastsitesolutions.com" <victoria@northeastsitesolutions.com>

Victoria,

Per our telephone conversation I have attached a scanned document from 2007. The document is a letter from the previous mayor to the siting council with some of the specs on the tower. Also as previously discussed we are still in the process of researching documents to locate what you are looking for in terms of an original zoning/ building permit. We have a wealth of documents/ reports from over the years that we need to go through. The building department has also advised me that they have found documentation that may suggest that the original tower was demolished and replaced. I can not confirm this at this time however I would like to discuss this with the Building Official on Monday 7/22/19, as he has been here for quite some time and probably has further knowledge on the subject.

Sincerely,

Kyle J. Faulise



Zoning and Wetlands Official, [Town of Ledyard](#)

[741 Colonel Ledyard Hwy.](#)

[Ledyard, CT 06339](#)

[\(860\) 464-3216](#)

zoning.official@ledyardct.org



Letter Previous Mayor-Siting Council re. tower specs 889A CLH.pdf

100K

889A Colonel
Ledyard
Hwy.



TOWN OF LEDYARD
CONNECTICUT
OFFICE OF THE MAYOR

741 Colonel Ledyard Highway
Ledyard, CT 06339-1551
(860) 464-3222
FAX (860) 464-8455

Susan B. Mendenhall
Mayor
Mark J. Bancroft
Mayoral Assistant

September 26, 2007

S. Derek Phelps
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: Public Act 04-226 – 3rd Annual Report

Dear Mr. Phelps:

Pursuant to Public Act 04-226, please find attached the Town's third annual report to the Siting Council containing the location, type, and height of each existing telecommunications tower within our local jurisdiction. There are no changes from our first report. It is noted that there is a new tower proposed at 12 Orchard Lane.

If you have any questions regarding this report please contact the Town Zoning Official, Scott Duffus, at (860) 464-3216.

Sincerely,

Susan B. Mendenhall
Mayor

Enclosure: 1

Cc: Zoning Official
Town Clerk

Town of Ledyard
 Connecticut Siting Council Database Worksheet
 CT General Statute 7-163b

Address	Latitude	Longitude	Twr Type	Owner	Ant Height	Twr Height
136 Vinegar Hill Rd	41-25-32	72-03-25	ssl	DPS	110.00	180.00
136 Vinegar Hill Rd	41-25-32	72-03-25	ssl	DPS	170.00	180.00
136 Vinegar Hill Rd	41-25-32	72-03-25	ssl	DPS	176.00	180.00
136 Vinegar Hill Rd	41-25-32	72-03-25	ssl	DPS	66-180	180.00
136 Vinegar Hill Rd	41-25-32	72-03-25	ssl	DPS	196.00	180.00
136 Vinegar Hill Rd	41-25-32	72-03-25	ssl	DPS	187.00	180.00
889A Colonel Ledyard Hwy.	41-27-43.11	72-01-24.92	gl	Red Wolf Broadcasting	180.00	347.00
889A Colonel Ledyard Hwy.	41-27-43.11	72-01-24.92	gl	Red Wolf Broadcasting	295 & 270	347.00
889A Colonel Ledyard Hwy.	41-27-43.11	72-01-24.92	gl	Red Wolf Broadcasting	200.00	347.00
889A Colonel Ledyard Hwy.	41-27-43.11	72-01-24.92	gl	Red Wolf Broadcasting	190.00	347.00
889A Colonel Ledyard Hwy.	41-27-43.11	72-01-24.92	gl	Red Wolf Broadcasting	180.00	347.00
889A Colonel Ledyard Hwy.	41-27-43.11	72-01-24.92	gl	Red Wolf Broadcasting	190.00	347.00

737
 9:30

0333

Bentman

ANTHONY PRESUMP.
 ANTHONY PRESUMP.

Exhibit B

Town of Ledyard Property Summary Report

889A COLONEL LEDYARD HWY

PARCEL ID:	40-530-889-A
LOCATION:	889A COLONEL LEDYARD HWY
OWNER NAME:	RED WOLF BROADCASTING



OWNER OF RECORD
RED WOLF BROADCASTING
P O BOX 357
LEDYARD, CT 06339

LIVING AREA:	null	ZONING:	R60	ACREAGE:	0.00
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SALES HISTORY

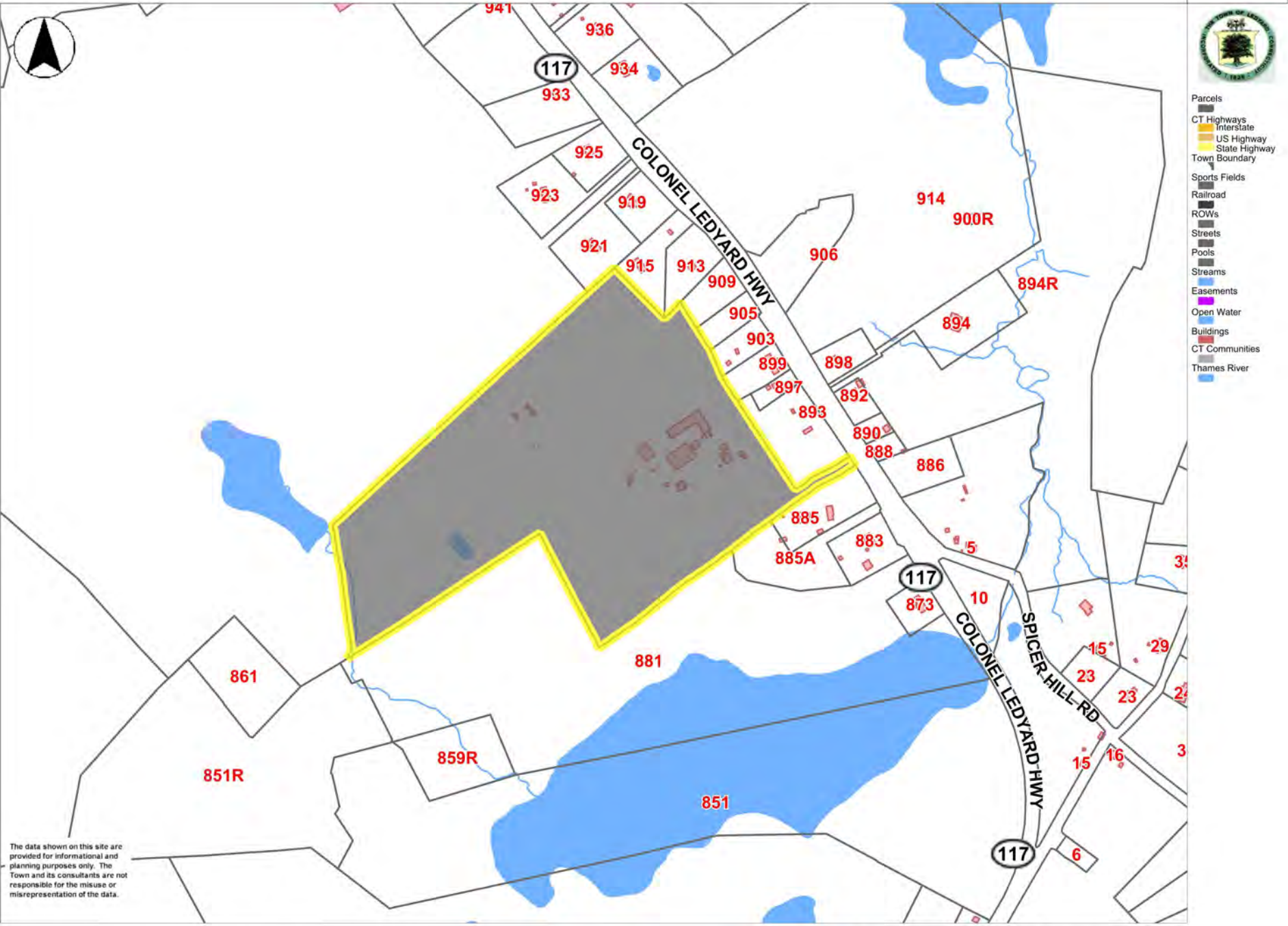
OWNER	BOOK / PAGE	SALE DATE	SALE PRICE
RED WOLF BROADCASTING			\$0.00

CURRENT ASSESSED VALUE

TOTAL:	\$113,820.00	IMPROVEMENTS:	\$113,820.00	LAND:	\$0.00
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ASSESSING HISTORY

FISCAL YEAR	TOTAL VALUE	IMPROVEMENT VALUE	LAND VALUE
2018	\$113,820.00	\$113,820.00	\$0.00
2017	\$113,820.00	\$113,820.00	\$0.00
2016	\$113,820.00	\$113,820.00	\$0.00
2015	\$113,820.00	\$113,820.00	\$0.00
2014	\$113,820.00	\$113,820.00	\$0.00



- Parcels
- CT Highways
 - Interstate
 - US Highway
 - State Highway
- Town Boundary
- Sports Fields
- Railroad
- ROWs
- Streets
- Pools
- Streams
- Easements
- Open Water
- Buildings
- CT Communities
- Thames River

The data shown on this site are provided for informational and planning purposes only. The Town and its consultants are not responsible for the misuse or misrepresentation of the data.

0 800 1600 ft

Printed on 07/11/2019 at 08:48 AM

Ledyard, CT MapsOnline

Exhibit C

MODIFICATION OF EXISTING WIRELESS FACILITY BY



T-MOBILE NORTHEAST LLC

PROJECT: L600 AND NATIONAL HARDENING

SITE NUMBER: CTNL058A

SITE NAME: NL058/REDWOLF_ET

SITE ADDRESS: 889A COLONEL LEDYARD HIGHWAY

LEDYARD, CT 06339

(RF CONFIGURATION: 67D02C_2XAIR+1OP)

APPLICANT:

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

PROJECT MANAGER:

NSS NORTHEAST SITE SOLUTIONS
Turkey 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

PROFESSIONAL SEAL

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REV	DESCRIPTION	DATE
A	PRELIMINARY	05/16/19
B	REVISED PER COMMENTS	06/05/19
0	FINAL ISSUED	06/23/19
1	COMBINED WITH NHP	07/15/19

SITE NUMBER: CTNL058A
 SITE NAME: NL058/REDWOLF_ET
 SITE ADDRESS: 889A COLONEL LEDYARD HIGHWAY
 LEDYARD, CT 06339

SHEET TITLE:
 T-1: TITLE SHEET

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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.

STRUCTURAL NOTES:

PRIOR TO INSTALLATION OF THE PROPOSED EQUIPMENT CONTRACTOR SHOULD REVIEW THE STRUCTURAL EVALUATION REPORT-REV.1, DATED JULY 7, 2019 AND MOUNT EVALUATION REPORT DATED MAY 22, 2019, BOTH PREPARED BY DESTEK ENGINEERING, LLC. AND ADHERE TO THE REPORTS FULLY AND ALL THE RECOMMENDATIONS THEREIN, INCLUDING BUT NOT LIMITED TO ANTENNA PLACEMENT, COAX ROUTING, STRUCTURAL IMPROVEMENTS, ETC.

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.

APPROVALS:

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

SITE IMAGE:



SITE VICINITY :



PROJECT SCOPE:

THE PROPOSED PROJECT SCOPE WILL CONSIST OF:
 UPGRADE EXISTING RBS 6131 INTERNALLY.
 UPGRADE EXISTING CABINET CIRCUIT BREAKER TO 125 AMP.
 REPLACE (3) OF EXISTING (9) ANTENNAS.
 REPLACE (3) OF EXISTING (3) REMOTE RADIO UNITS (RRU) AT THE ANTENNA.
 ADD (1) 6X12 HCS HYBRID CABLES FOR FINAL CONFIGURATION OF (2) HYBRID AND (6) COAX CABLES.

PROJECT INFORMATION:

ADDRESS: 889A COLONEL LEDYARD HIGHWAY
 LEDYARD, CT 06339
 COORDINATES: 41° 27' 42.99" N, 72° 01' 24.99" W
 STRUCTURE TYPE: GUYED TOWER
 JURISDICTION: TOWN OF LEDYARD, CT
 CURRENT USE: TELECOMMUNICATIONS FACILITY
 PROPOSED USE: TELECOMMUNICATIONS FACILITY
 TOWER OWNER: RED WOLF COMMUNICATIONS

PROJECT TEAM:

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

PROJECT MANAGER: NORTHEAST SITE SOLUTIONS
 420 MAIN STREET, BLDG 4
 STURBRIDGE, MA 01566
 SHELDON FREINCLE
 SHELDON@NORTHEASTSITE SOLUTIONS.COM
 201-776-8521

CONSULTANTS: FORESITE LLC
 462 WALNUT ST
 NEWTON, MA 02460
 SAEED MOSSAVAT
 SMOSSAVAT@FORESITELLC.COM
 617-212-3123

SHEET INDEX:

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 N-1: GENERAL NOTES
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 A-2: ELEVATION AND ANTENNA PLANS
 A-3: ANTENNA AND EQUIPMENT DETAILS
 A-4: GENERATOR SPECIFICATIONS
 A-5: GENERATOR SPECIFICATIONS
 E-1: ANTENNA GROUNDING DETAILS
 E-2: GENERATOR GROUNDING AND ELECTRICAL

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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. 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
15. 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.

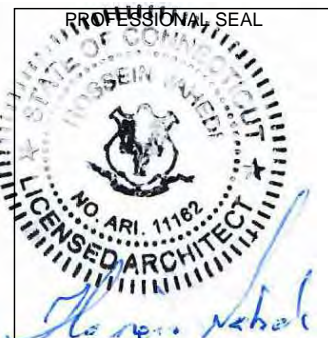
APPLICANT:

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

PROJECT MANAGER

NSS NORTHEAST
Turnkey Wireless Development
 420 MAIN STREET, BLDG 4
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CONSULTANT:

FORESITE LLC
 Architects . Engineers . Surveyors
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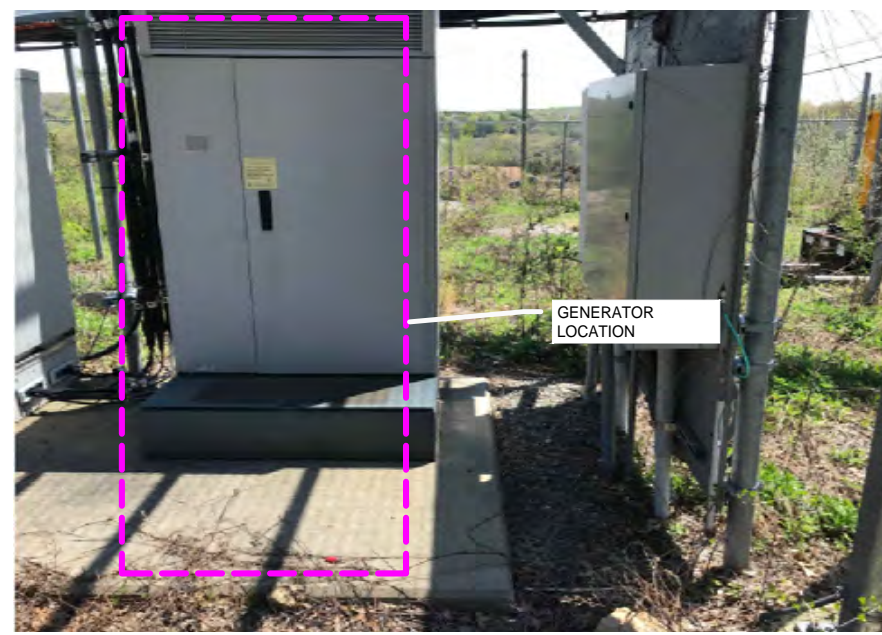
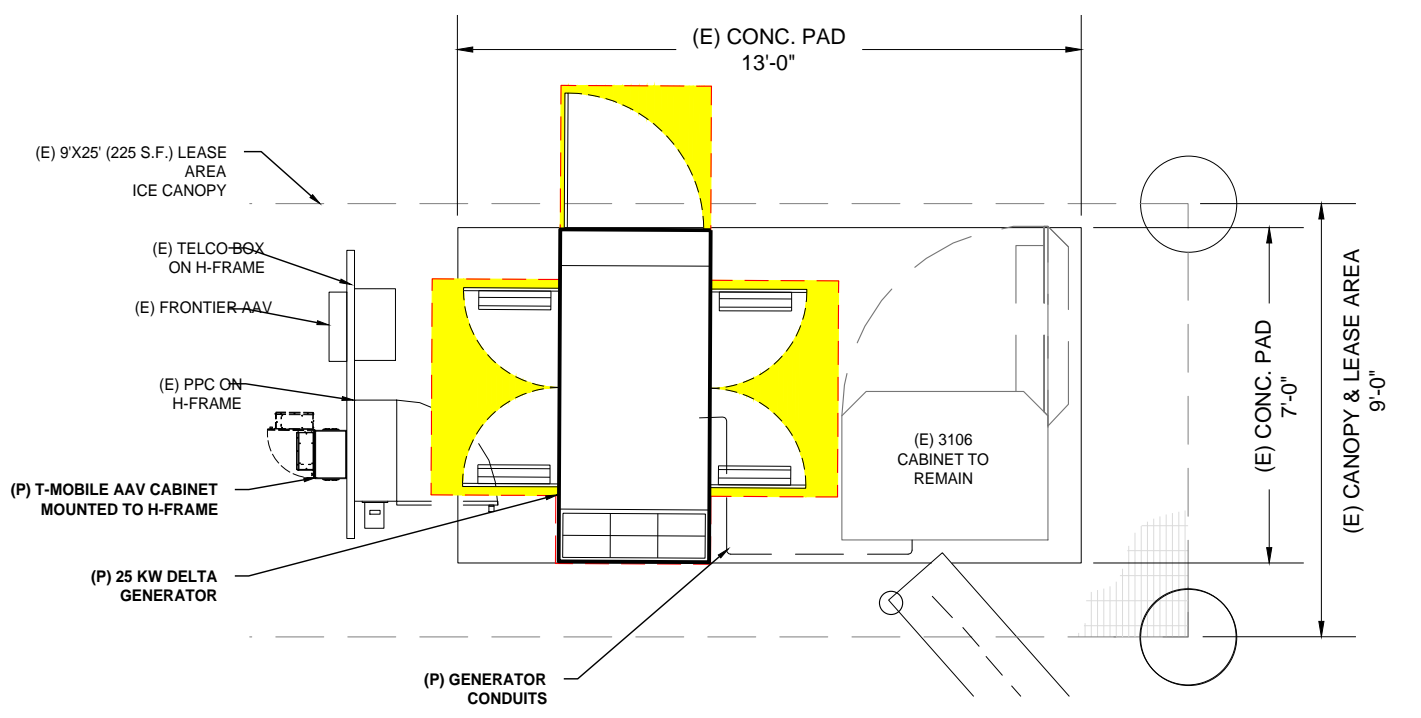
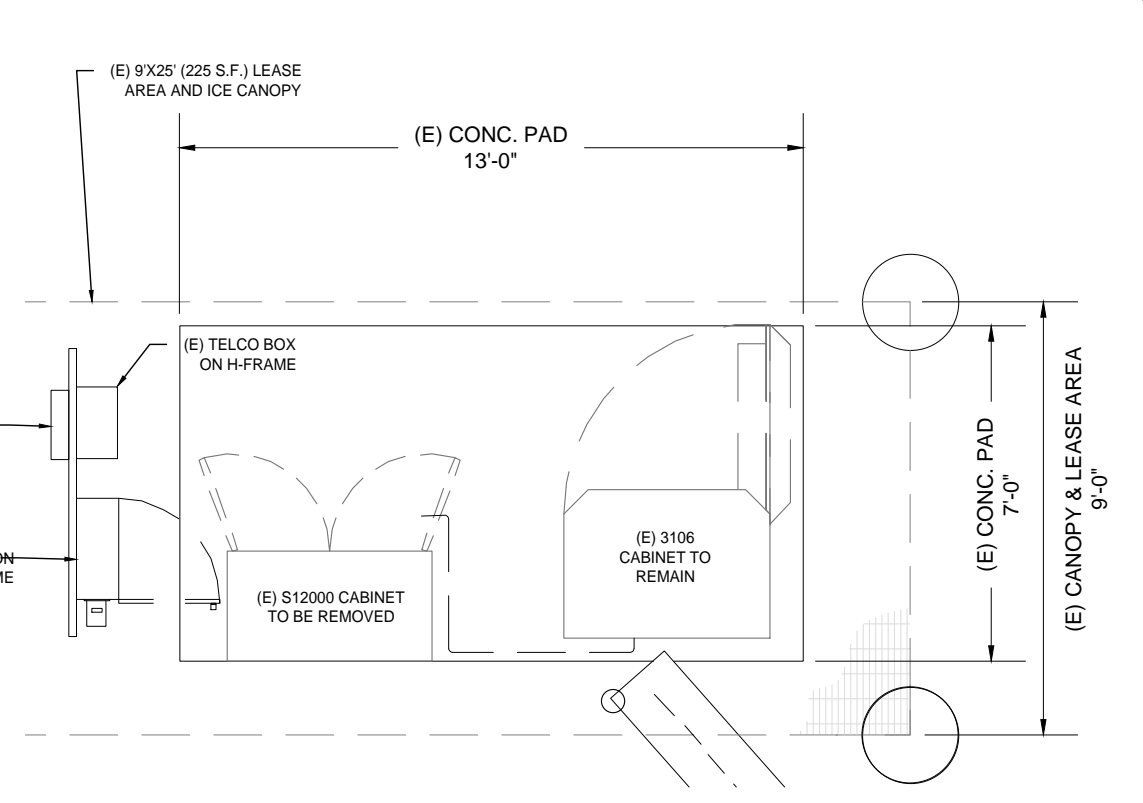
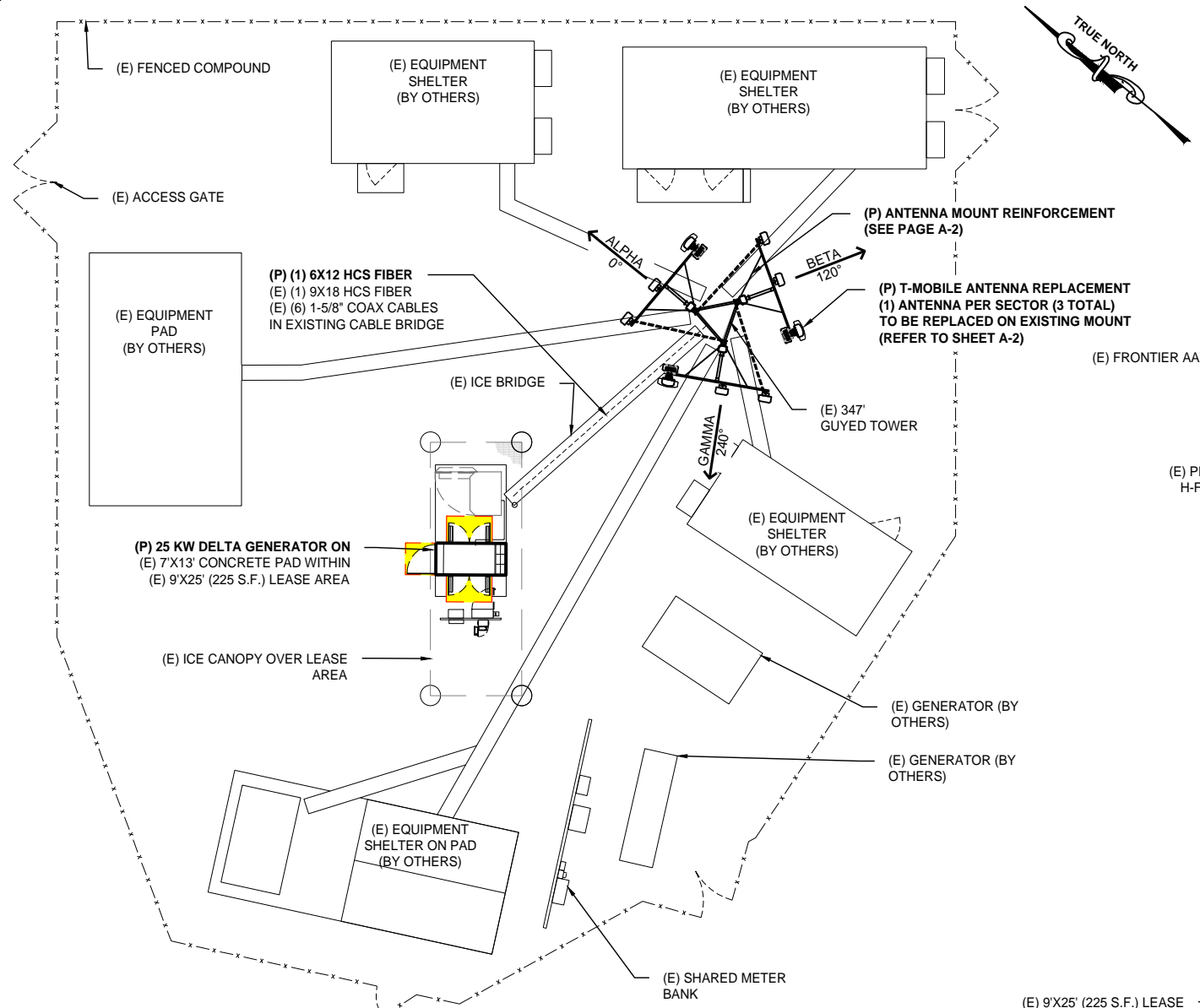
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REV	DESCRIPTION	DATE
A	PRELIMINARY	05/16/19
B	REVISED PER COMMENTS	06/05/19
0	FINAL ISSUED	06/23/19
1	COMBINED WITH NHP	07/15/19

SITE NUMBER: CTNL058A
 SITE NAME: NL058/REDWOLF_ET
 SITE ADDRESS: 889A COLONEL LEDYARD
 HIGHWAY
 LEDYARD, CT 06339

SHEET TITLE:
N-1: NOTES AND DISCLAIMERS

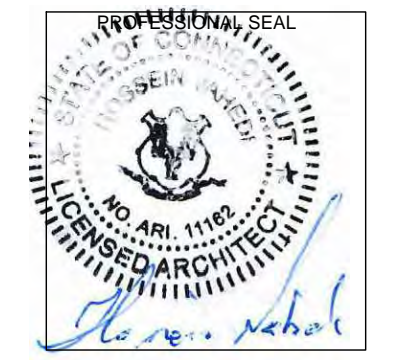
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APPLICANT:
T-Mobile
T-MOBILE NORTHEAST LLC
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
860-692-7100

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



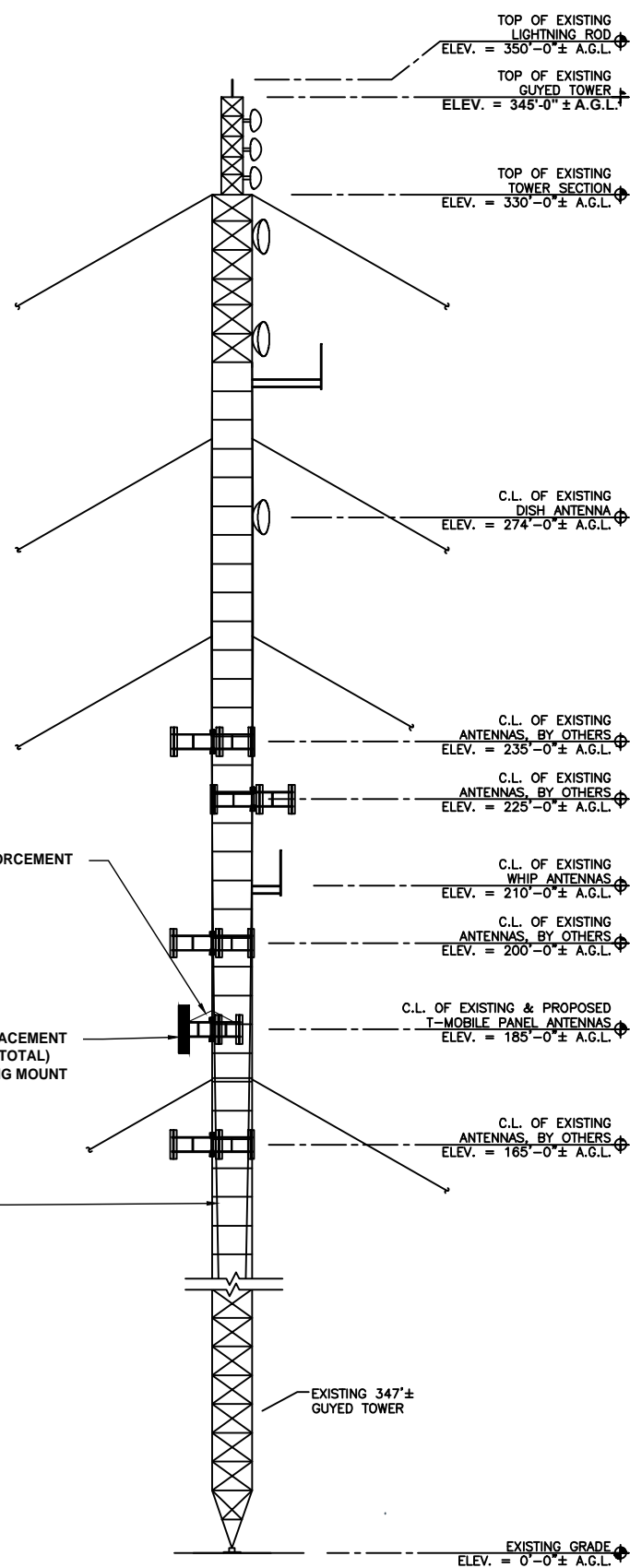
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SITE ADDRESS: 889A COLONEL LEDYARD HIGHWAY
LEDYARD, CT 06339

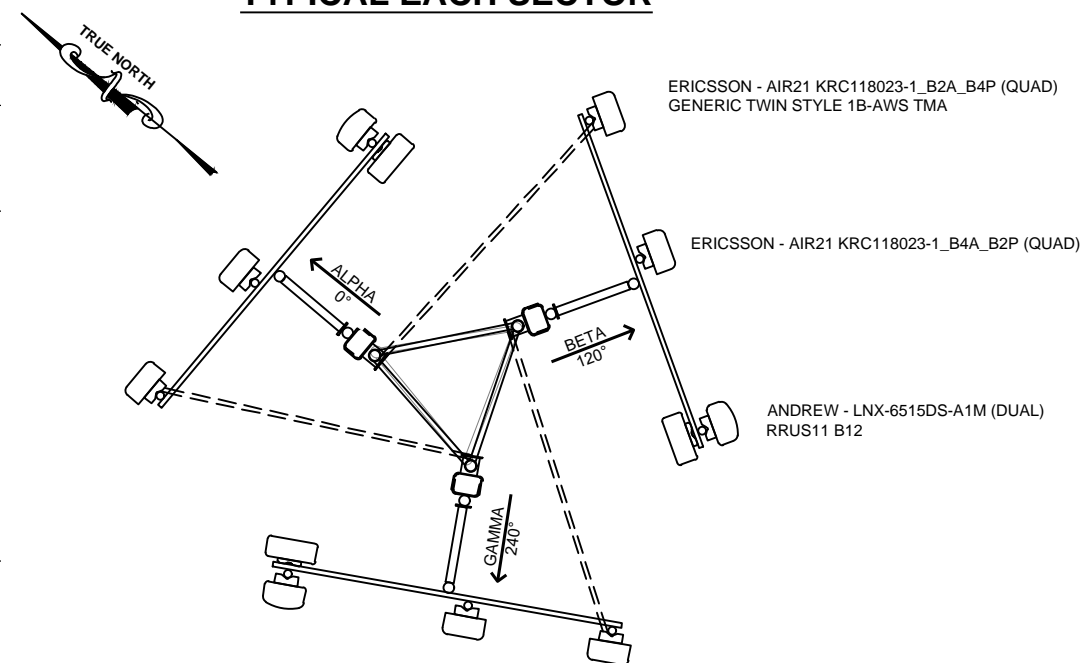
SHEET TITLE:
A-1: PLAN

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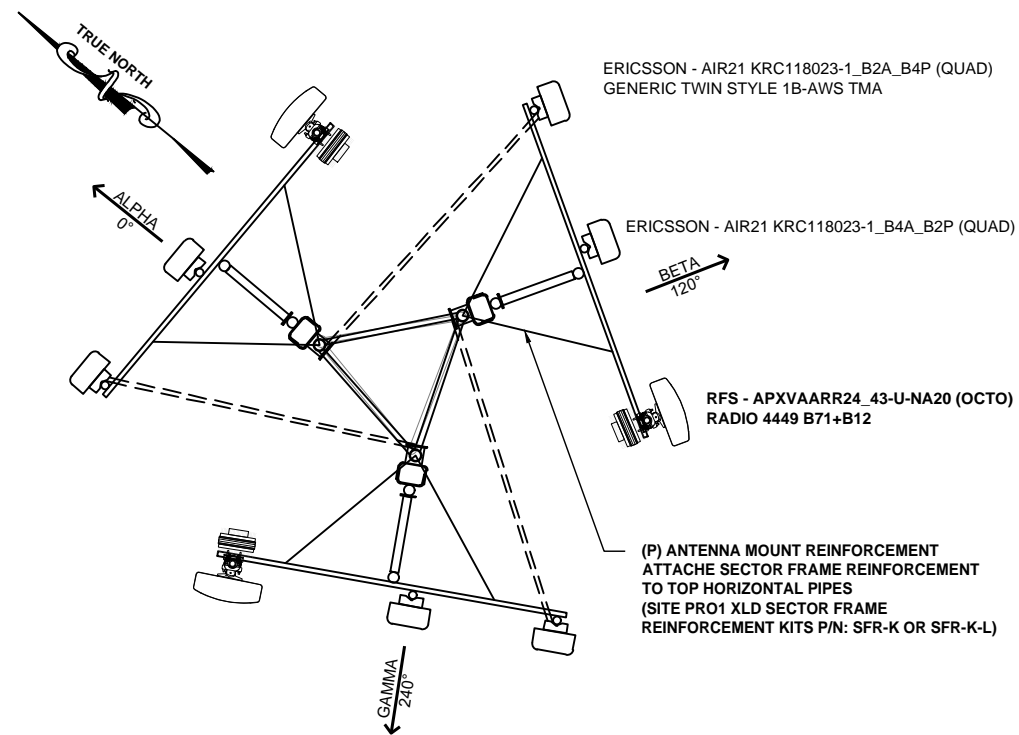
ELEVATION
N.T.S. 1
A-2

TYPICAL EACH SECTOR



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

STRUCTURAL NOTES:
 PRIOR TO INSTALLATION OF THE PROPOSED EQUIPMENT CONTRACTOR SHOULD REVIEW THE STRUCTURAL EVALUATION REPORT-REV.1, DATED JUNE 7, 2019 AND MOUNT EVALUATION REPORT DATED MAY 22, 2019, BOTH PREPARED BY DESTEK ENGINEERING, LLC. AND ADHERE TO THE REPORTS FULLY AND ALL THE RECOMMENDATIONS THEREIN, INCLUDING BUT NOT LIMITED TO ANTENNA PLACEMENT, COAX ROUTING, STRUCTURAL IMPROVEMENTS, ETC.



FINAL ANTENNA PLAN
N.T.S. 3
A-2



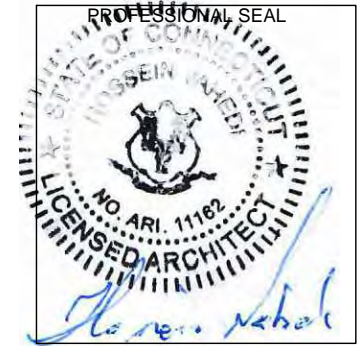
XLD SECTOR FRAME REINFORCEMENT KIT	
MODEL #	SFR-K
MANUF.	SITE PRO 1
WIDTH	12'-6"
WEIGHT	132 LB

SECTOR FRAME REINFORCEMENT
N.T.S. 4
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
Turkey 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



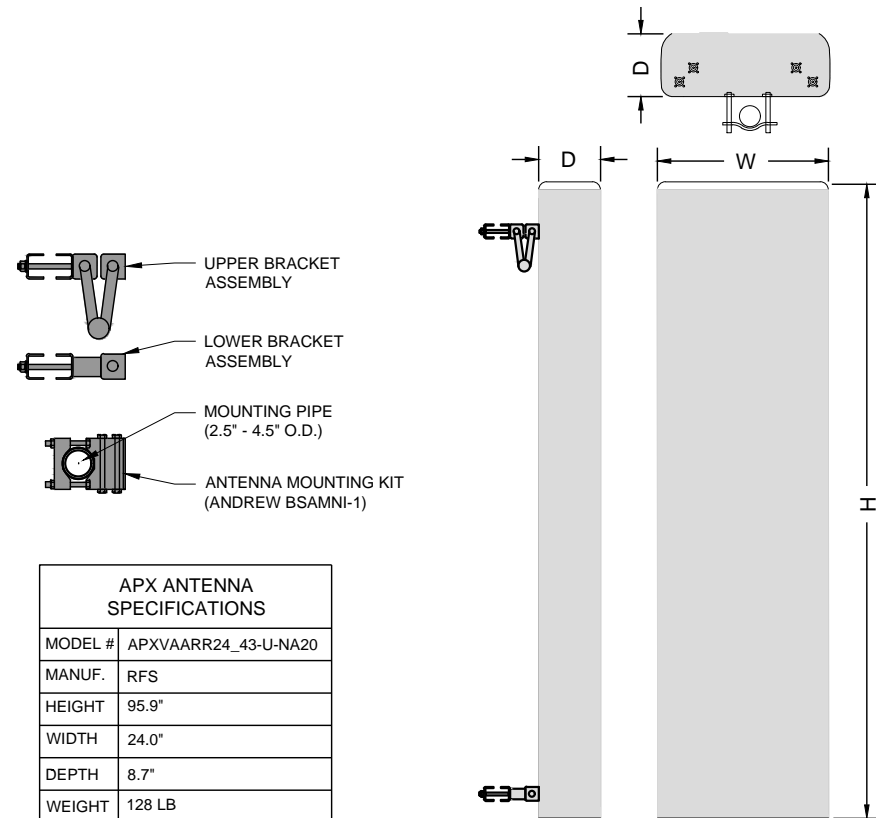
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REV	DESCRIPTION	DATE
A	PRELIMINARY	05/16/19
B	REVISED PER COMMENTS	06/05/19
0	FINAL ISSUED	06/23/19
1	COMBINED WITH NHP	07/15/19

SITE NUMBER: CTNL058A
 SITE NAME: NL058/REDWOLF_ET
 SITE ADDRESS: 889A COLONEL LEDYARD HIGHWAY
 LEDYARD, CT 06339

SHEET TITLE:
 A-2: ELEVATION AND ANTENNA PLANS

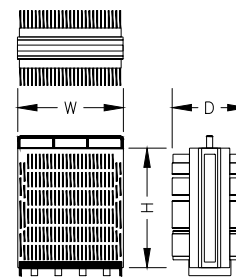
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APX ANTENNA SPECIFICATIONS	
MODEL #	APXVAARR24_43-U-NA20
MANUF.	RFS
HEIGHT	95.9"
WIDTH	24.0"
DEPTH	8.7"
WEIGHT	128 LB

APX ANTENNA
N.T.S.

1
A-3



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

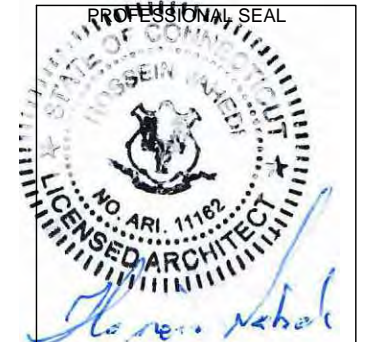
REMOTE RADIO UNIT
N.T.S.

2
A-3

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

PROJECT MANAGER
NSS NORTHEAST
SITE SOLUTIONS
Turkey 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



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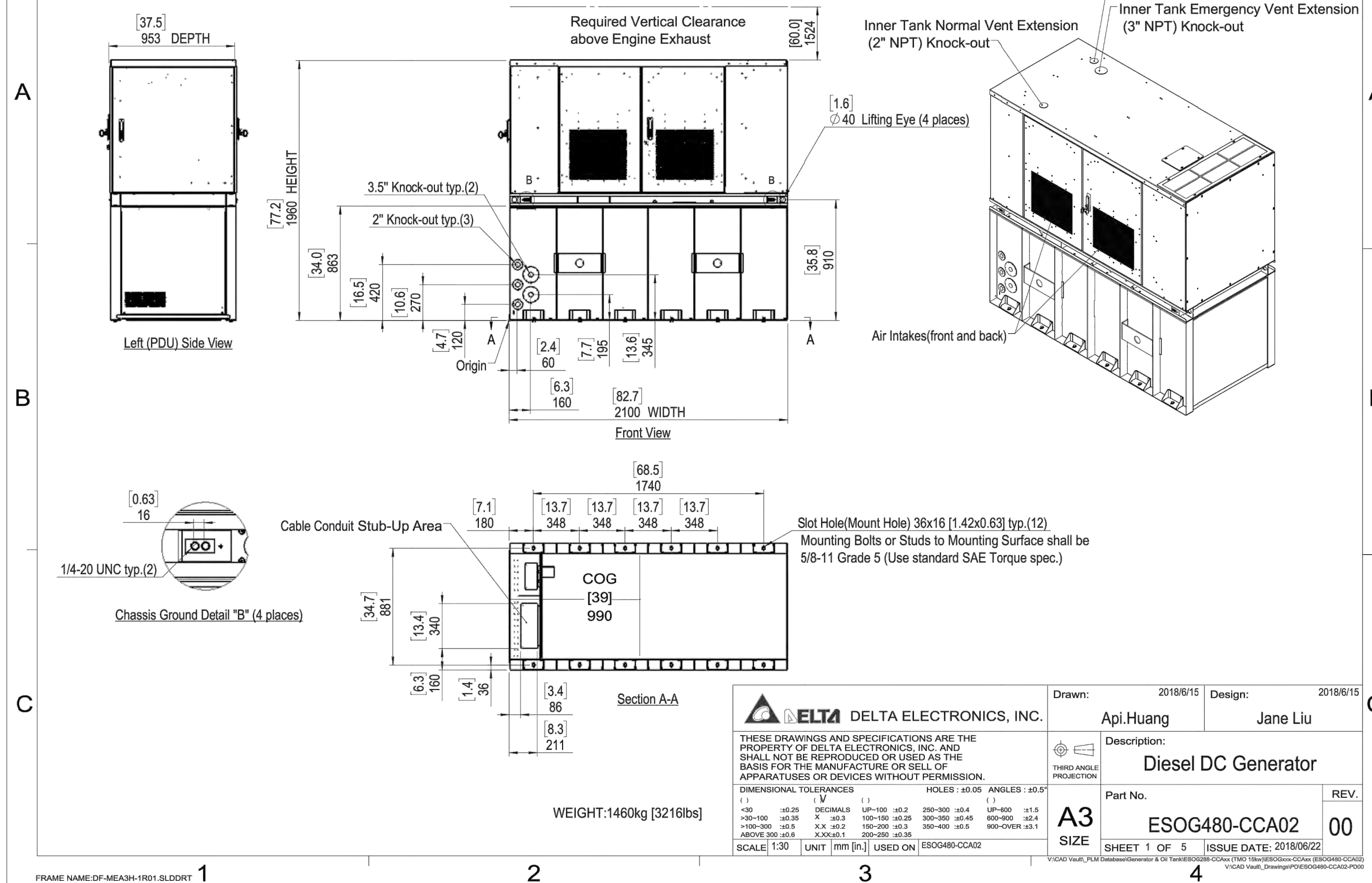
SITE NUMBER: CTNL058A
SITE NAME: NL058/REDWOLF_ET
SITE ADDRESS: 889A COLONEL LEDYARD HIGHWAY
LEDYARD, CT 06339

SHEET TITLE:
A-3: EQUIPMENT SPECIFICATIONS

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DELTA 25 KW DC GENERATOR

GENERATOR SPECIFICATIONS
 MANUF.: POWERGEN 25000 (25 KW DC)
 HEIGHT: 77.2"
 WIDTH: 82.7"
 DEPTH: 37.5"
 WEIGHT: 3,220 LBS

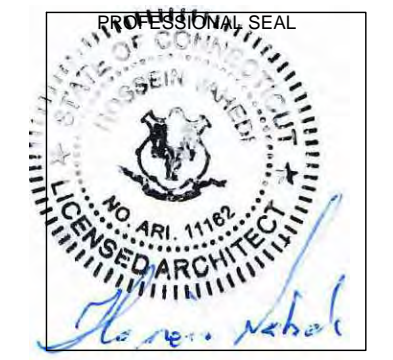


DELTA ELECTRONICS, INC.		Drawn: 2018/6/15	Design: 2018/6/15
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DIMENSIONAL TOLERANCES () DECIMALS UP-100 ±0.2 250-300 ±0.4 UP-600 ±1.5 >30-100 ±0.35 X ±0.3 100-150 ±0.25 300-350 ±0.45 600-900 ±2.4 >100-300 ±0.5 XX ±0.2 150-200 ±0.3 350-400 ±0.5 900-OVER ±3.1 ABOVE 300 ±0.6 XXX ±0.1 200-250 ±0.35		Description: Diesel DC Generator	
HOLES : ±0.05 ANGLES : ±0.5° THIRD ANGLE PROJECTION		Part No.	REV.
SCALE 1:30 UNIT mm [in.] USED ON ESOG480-CCA02		ESOG480-CCA02	00
SHEET 1 OF 5 ISSUE DATE: 2018/06/22			

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
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 NEWTON, MA 02460
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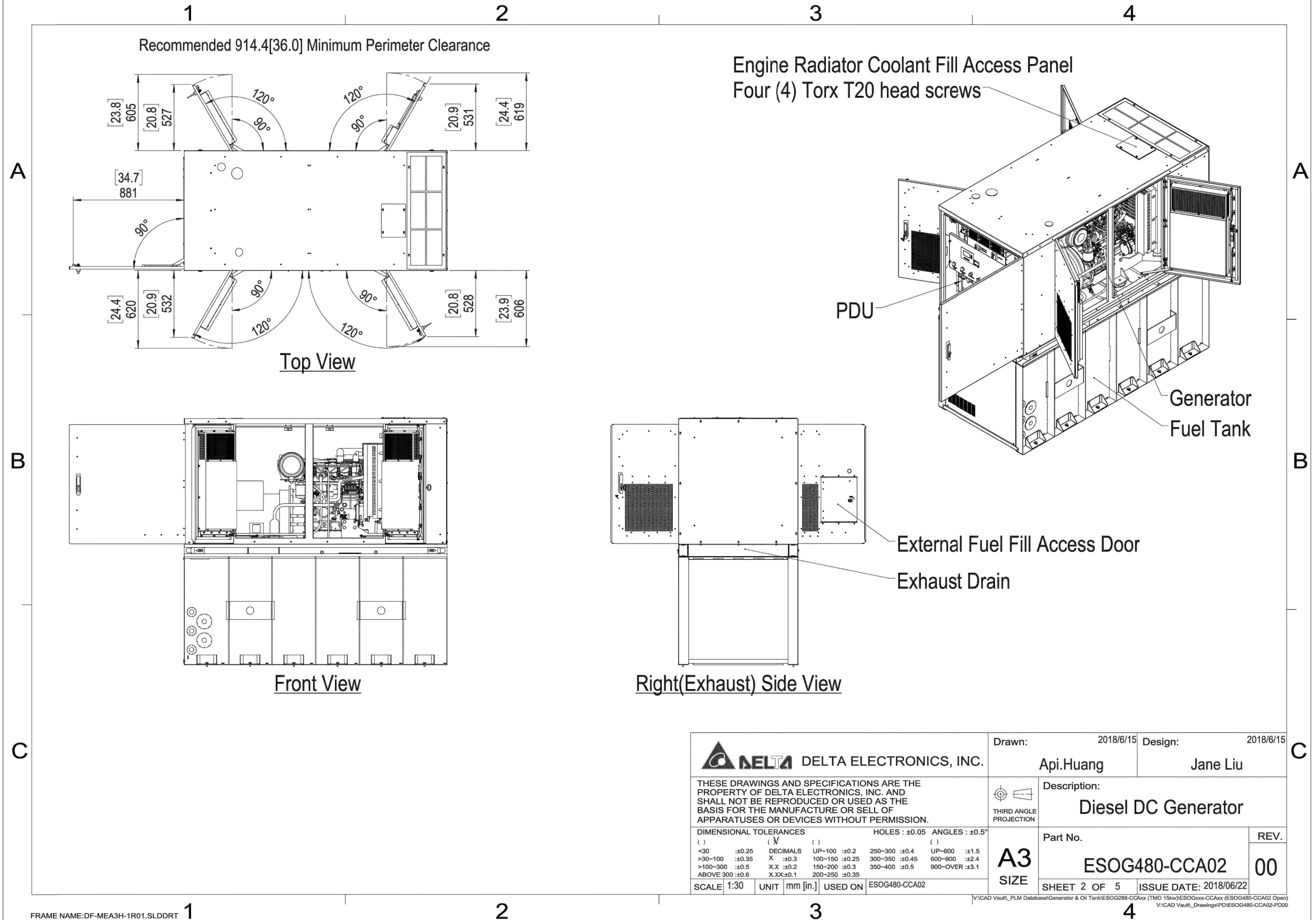
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 SITE NAME: NL058/REDWOLF_ET
 SITE ADDRESS: 889A COLONEL LEDYARD HIGHWAY
 LEDYARD, CT 06339

SHEET TITLE:
 A-4: GENERATOR SPECIFICATIONS

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DIMENSIONAL TOLERANCES () () () <30 ±0.25 DECIMALS UP-100 ±0.2 250-300 ±0.4 UP-600 ±1.5 >30-100 ±0.35 X ±0.3 100-150 ±0.25 300-350 ±0.45 600-900 ±2.4 >100-300 ±0.5 X.X ±0.2 150-200 ±0.3 350-400 ±0.5 900-OVER ±3.1 ABOVE 300 ±0.6 X.XX±0.1 200-250 ±0.35		Description: Diesel DC Generator	
SCALE 1:30	UNIT mm [in.]	USED ON	REV.
		ESOG480-CCA02	00
		A3 SIZE	
		SHEET 2 OF 5	ISSUE DATE: 2018/06/22

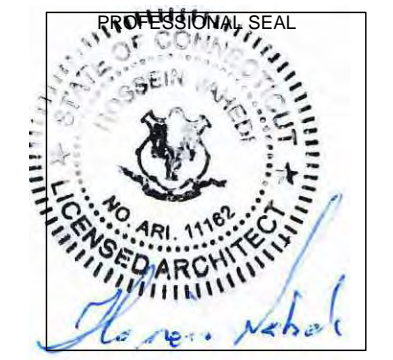
APPLICANT:
T-Mobile
T-MOBILE NORTHEAST LLC
 35 GRIFFIN ROAD SOUTH
 BLOOMFIELD, CT 06002
 860-692-7100

PROJECT MANAGER

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

CONSULTANT:

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 617-212-3123



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 SITE ADDRESS: 889A COLONEL LEDYARD HIGHWAY
 LEDYARD, CT 06339

SHEET TITLE:
 A-5: GENERATOR SPECIFICATIONS

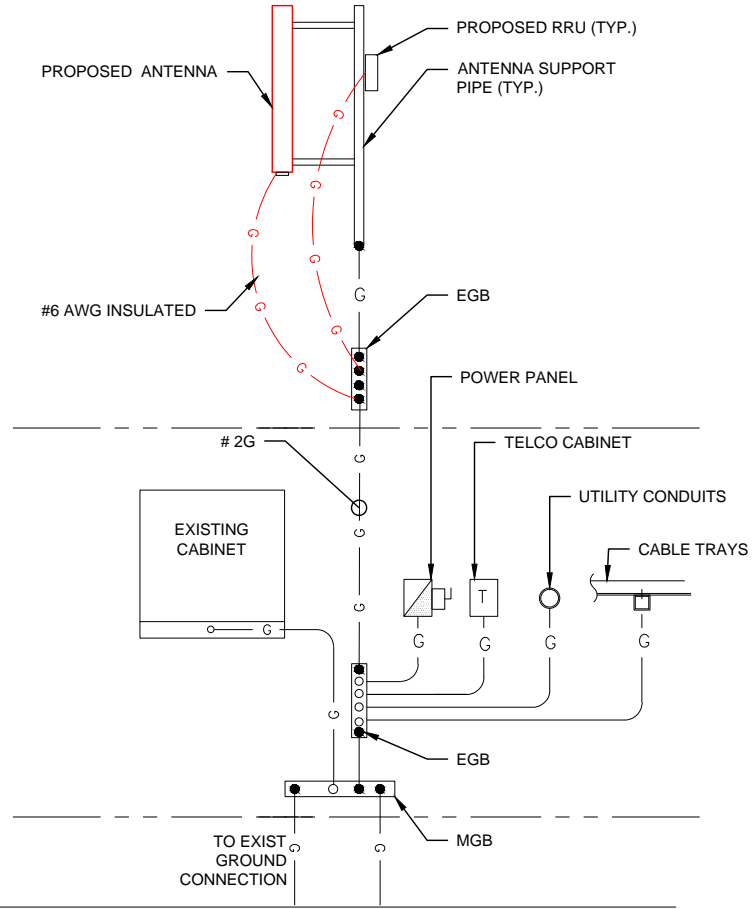
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V:\CAD Vault\PLM Database\Generator & Oil Tank\ESOG288-CCA02 (TMO 15kw)\ESOGxxxx-CCA02 (ESOG480-CCA02 Open)
 V:\CAD Vault_Drawings\PD\ESOG480-CCA02-PD00

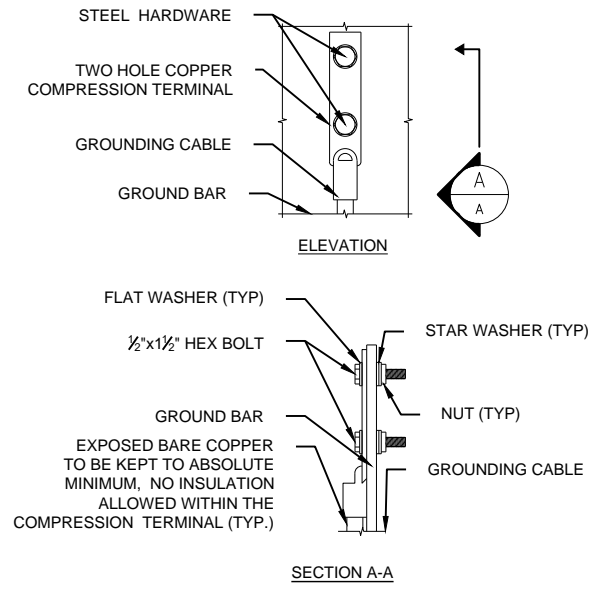
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ELECTRICAL & GROUNDING NOTES

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.

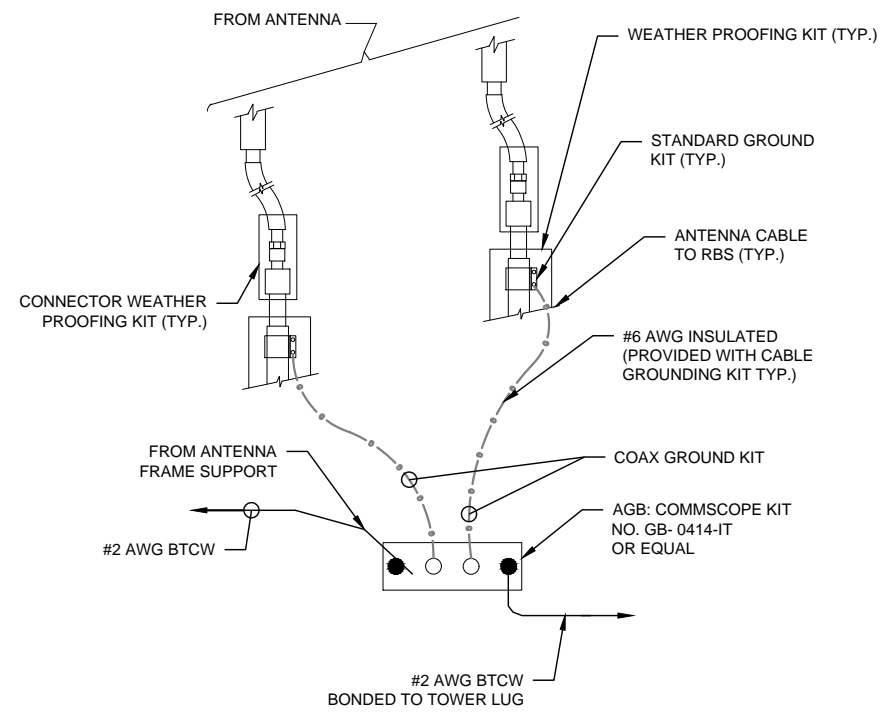


GROUNDING RISER DIAGRAM 1
N.T.S. E-1



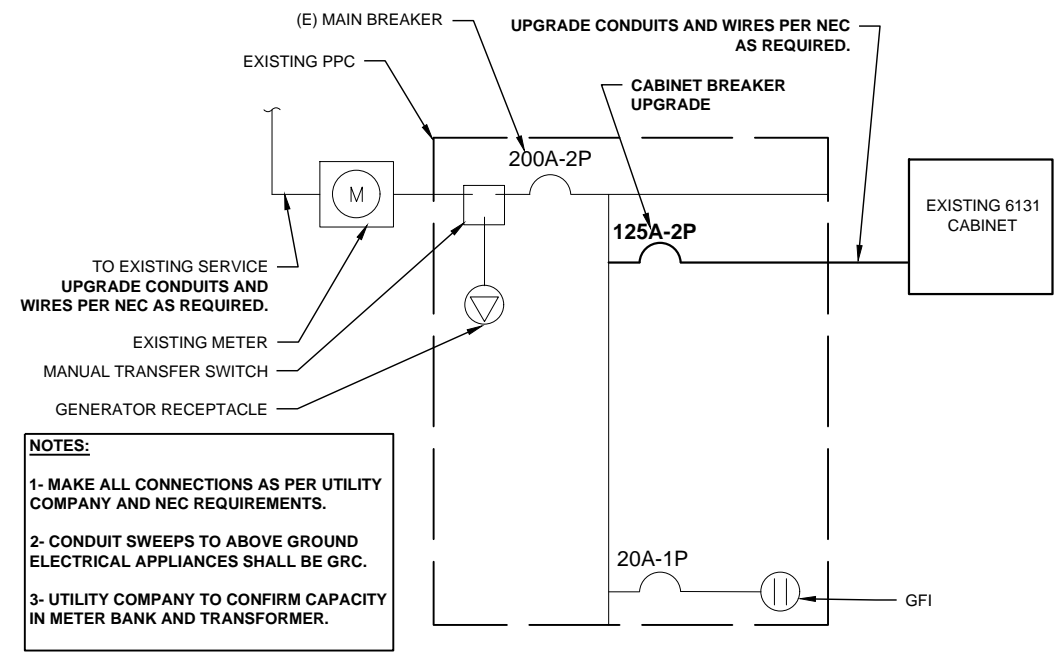
- NOTES:
 1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
 2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.

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
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 LEDYARD, CT 06339

SHEET TITLE:
 E-1: GROUNDING DETAILS

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GENERAL ELECTRICAL NOTES

- ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES INCLUDING LATEST EDITIONS OF:
 NFPA - NATIONAL FIRE PROTECTION ASSOCIATION
 UL - UNDERWRITERS LABORATORIES
 NEC - 2014 NATIONAL ELECTRICAL CODE NEMA - NATIONAL ELECTRIC MANUFACTURERS ASSOCIATION
 OSHA - OCCUPATIONAL SAFETY AND HEALTH ACT
 IBC - 2009 INTERNATIONAL BUILDING CODE
- ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PRODUCED PER SPECIFICATION REQUIREMENTS.
- THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
- GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
- ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
- RIGID STEEL CONDUITS SHALL BE GROUNDED AT BOTH ENDS.
- ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THIN INSULATION.
- ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NAME 3R ENCLOSURE.
- GROUNING SHALL COMPLY WITH NEC ART. 250.
- GROUNING COAX CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURES COAX CABLE GROUNING KITS SUPPLIED BY PROJECT OWNER.
- USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSTALLATION FOR ABOVE GRADE GROUNING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNING AS INDICATED ON THE GROUND.
- 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.
- ROUTE GROUNING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNING 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.
- 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).
- CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
- APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTION.
- TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION.
- BOND ANY METAL OBJECTS WITHIN 7 FEET OF PROPOSED EQUIPMENT OR CABINET TO MASTER GROUND BAR.
- VERIFY PROPOSED SERVICE UPGRADE WITH LOCAL UTILITY COMPANY PRIOR TO CONSTRUCTION.
- EXISTING UNDERGROUND UTILITY LOCATIONS ARE UNKNOWN. GENERAL CONTRACTOR SHALL HAND-EXCAVATE TO REQUIRED SUB-GRADE DEPTH, SUFFICIENT TEST HOLES OR AS DIRECTED / REQUIRED BY CONSTRUCTION MANAGER. ALL PROPOSED UNDERGROUND UTILITY TRENCHES SHALL BE HAND-EXCAVATE AS REQUIRED. GENERAL CONTRACTOR IS RESPONSIBLE FOR ANY REQUIRED SPECIAL TEMPORARY PROTECTION OF, PHYSICAL DAMAGE TO, OR REPAIR OF EXISTING UNDERGROUND CONDUIT INCLUDING RESTORATION OF SERVICE.

GROUNING NOTES:

- GROUNING SHALL COMPLY WITH NEC ART. 250 AND MANUFACTURER'S RECOMMENDATIONS. TIE INTO THE EXISTING GROUNING SYSTEM.
- CONTRACTOR SHALL INSTALL GROUND RODS ON ALL UNDERGROUND GROUNING RUNS LONGER THAN 10'. GROUND RODS WILL BE INSTALLED ON 20' CENTERS MAXIMUM.
- ALL DOWN CONDUCTORS MUST GO DOWN PER NFPA 780.
- CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER WHEN THE GROUNING SYSTEM IS COMPLETE. THE CONSTRUCTION MANAGER SHALL INSPECT THE GROUNING SYSTEM PRIOR TO BACKFILLING.
- CONTRACTOR MY USE EXISTING CONDUITS AND CONDUCTORS PROVIDED THEY ARE IN GOOD CONDITION AND ARE SUFFICIENTLY RATED.

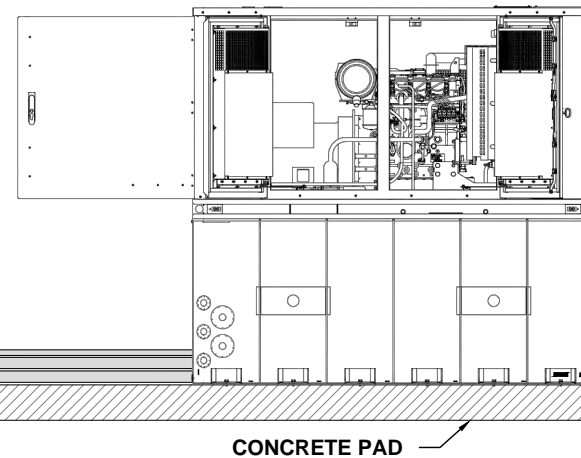
CONSTRUCTION NOTES:

(HAND-DUG UTILITY TRENCH EXCAVATION REQUIRED):

EXISTING UNDERGROUND UTILITY LOCATIONS ARE UNKNOWN. GENERAL CONTRACTOR SHALL HAND-EXCAVATE TO REQUIRED SUB-GRADE DEPTH, SUFFICIENT TEST HOLES. ALL PROPOSED UNDERGROUND UTILITY TRENCHES SHALL BE HAND-EXCAVATE AS REQUIRED.

GENERAL CONTRACTOR IS RESPONSIBLE FOR ANY REQUIRED SPECIAL TEMPORARY PROTECTION OF, PHYSICAL DAMAGE TO, OR REPAIR OF EXISTING UNDERGROUND CONDUIT INCLUDING RESTORATION OF SERVICE.

- (1) CAT5 ALARM CABLE IN 1" LIQUATIGHT (AG) CONDUIT PER MANUFACTURER SPECIFICATIONS TO CABINET
- 2" LIQUATIGHT (AG) CONDUITS WITH CONDUCTORS PER NEC AND MANUFACTURER TO CABINET



PROPOSED (1) 1" NON-METALLIC FLEX CONDUIT W/ #2 AWG BARE TINNED SOLID COPPER CONDUCTOR FROM PROPOSED GENERATOR TO EXISTING GROUND RING.

GROUNING AND ELECTRIC RISER DIAGRAM

SCALE: N.T.S

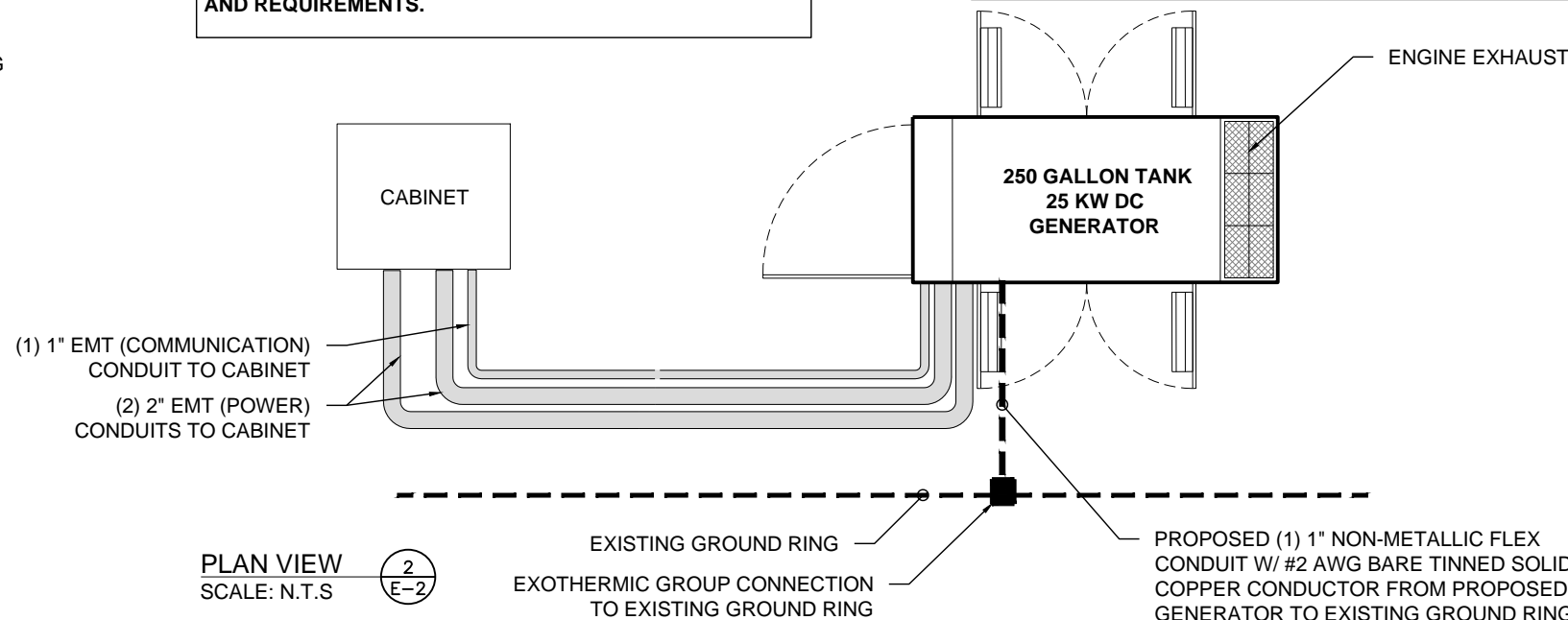


NOTES:

DIAGRAM AS SHOWN, IS A GENERIC ROUTING SCHEMATIC BASED ON AVAILABLE INFORMATION AND MAY NOT REPRESENT ACTUAL FIELD CONDITIONS. CONTRACTOR SHOULD INSTALL THE GENERATOR, EQUIPMENT AND CONNECTIONS BASED ON VERIFIED ELECTRICAL AUDITS AND PER MANUFACTURER'S INSTALLATION GUIDES AS WELL AS ALL APPLICABLE LOCAL AND NATIONAL CODES AND REQUIREMENTS.

NOTES:

G.C. TO VERIFY THAT THE EXISTING AND PROPOSED CONDUITS AND WIRE SIZES ARE ADEQUATE FOR THE PROPOSED SCOPE IN ACCORDANCE WITH NEC AND INCLUDE ELECTRICAL UPGRADES IN THE SCOPE OF WORK AS REQUIRED.



PLAN VIEW

SCALE: N.T.S



APPLICANT:
T-Mobile
T-MOBILE NORTHEAST LLC

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

PROJECT MANAGER

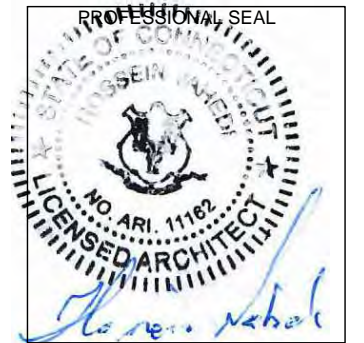
NSS NORTHEAST SITE SOLUTIONS
Turkey Wireless Development
 420 MAIN STREET, BLDG 4
 STURBRIDGE, MA 01566
 203-275-6669

CONSULTANT:

FORESITE LLC

Architects . Engineers . Surveyors

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



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REV	DESCRIPTION	DATE
A	PRELIMINARY	05/16/19
B	REVISED PER COMMENTS	06/05/19
0	FINAL ISSUED	06/23/19
1	COMBINED WITH NHP	07/15/19

SITE NUMBER: CTNL058A
 SITE NAME: NL058/REDWOLF_ET
 SITE ADDRESS: 889A COLONEL LEDYARD HIGHWAY
 LEDYARD, CT 06339

SHEET TITLE:
E-2: GENERATOR GROUNING AND ELECTRICAL DETAILS



PowerGen 25000

DC Generator Product Features

- 25kW DC Standby Power with telcom HE rectifiers
- Direct connect to positive ground Site Support Cabinet -48V DC plant
- Site -48V DC powered charger of engine start 12V Supercap.
- Telcom grade enclosure with noise reduction features
- Status/alarming via telcom standard dry contacts, WEB GUI/SNMP
- Easy access installation and maintenance.
- OBD2 Port for GEOTAB monitoring
- Maintenance interval over 500hrs



Smarter. Greener. Together.

Specifications

Model	PowerGen 25000 DC Generator
1. General	
Rated Power	Output: 25 kW @ 52 V _{DC} Standby Load: 200 W (excluding 500W engine heater)
Dimensions (W x H x D)	83" x 78" x 38" (with standard 250 gallon tank)
Weight	3220 lbs.
Fuel consumption	1.29 gallons/hour (50% load)
	1.61 gallons/hour (75% load)
	2.19 gallons/hour (100% load)
Acoustics	65 dB(A) at 23 feet (7 meters)
Cooling Air Flow	5500 ft ³ / minute
Output Voltage	-52 V _{DC} (Positive Ground, Configurable -48 to -56 V _{DC})
Voltage Regulation	+/- 1%
Ripple Voltage	< 250 mVp-p
User Interfaces	LCD with LED Indicators,
	Form C Alarm Dry Contacts
	Remote EPO
	WEB GUI and SNMP
Features	Auto start based site battery voltage (-50V default)
	Local manual/Emergency mode
	Configurable cycling exercise self-test
	Alarm renaming with configurable severity
	Generator DC output energy meter
	Engine run hour meter Engine start counter.
Safety	UL LISTED including UL142 fuel tank
EMC	FCC Part 15 Class A
2. Engine	
Make	Perkins 404D-22TG (Tier 4i, Turbocharged 4 cyl. Diesel)
Power	30 kW @ fixed 1800 RPM
Exhaust Flow	265 ft ³ / minute (7.5 m ³ / minute)
Oil Capacity	10.6 liters
Coolant Capacity	9.3 liters
Engine Start Source	Internal 12V Supercap
Engine Start Charger	Delta 48V DC powered
3. Alternator	
Make	Leroy (Insulation Class H)
Voltage Regulator	AS480 (± 1%, excited AVR)
4. Environment	
Operating temperature	-25°C to +45°C (-13°F to +113°F)
	Derate power 5% per 5°C above +35°C
Altitude	Derate power 3% per 1000 feet above 3000 feet
Humidity (relative)	95%, non-condensing (Max.)
5. PowerGen Part Numbers	
Standard (250 gallon tank)	ESOG480-CCA02
*All specifications are subject to change without prior notice	

Delta Group Website:
www.deltaww.com

Product Website:
www.deltapowersolutions.com

Delta Electronics (US)
2925 E. Plano Parkway
Plano (Texas) 75074
DEUSTPS.Sales@deltaww.com
877-DELTA-08 (877-335-8208)

FS_PowerGen-2500-48DC_en_rev02 0622

Exhibit D

**STRUCTURAL ANALYSIS REPORT – REV.1
GUYED TOWER**



Prepared For:



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



Structure Rating:

Guyed Tower:	81.0%(Pass)
Base Foundation:	44.3%(Pass)
Anchor Block Fnd:	46.9%(Pass)

Sincerely,
Destek Engineering, LLC
Firm License No: PEC0001429

06-07-2019



Ahmet Colakoglu, PE
Connecticut Professional Engineer
License No: 27057

**Site ID: CTNL058A
Site Name: NL058/REDWOLF_ET
889A COLONEL LEDYARD HIGHWAY
LEDYARD, CT 06339**

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 existing 345 ft tall guyed tower located at 889A Colonel Ledyard Highway, Ledyard, CT 06339 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 04/29/2019.
- Mount Structural Evaluation by Destek Engineering, dated 05/22/2019.
- Structural Analysis Report prepared by Maser Consulting, dated 04/12/2018.
- Structural Analysis Report prepared by CENTEK Engineering, dated 05/14/2015.
- Construction Drawings prepared by Foresite, LLC dated 08/07/2018.
- Photographs provided by Foresite, LLC, dated 06/24/2015.

1.1 STRUCTURE

The structure is a 345 feet tall, triangular based guyed tower. Solid round legs are X-braced along the entire height with solid round diagonals and girts. The tower is guyed at five (5) different elevations above the grade line; 330 feet, 297.4 feet, 270.1 feet, 177.2 feet and 99.9 feet. For each side of the tower all guy wires terminate at a common anchor that is 205 feet from the tower base. 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
185	(3) Ericsson AIR21 B2A/B4P (3) Ericsson AIR21 B2P/B4A (3) Andrew LNX-6515DS-A1M (3) Ericsson RRUS11 B12 (3) Generic Twin Style 1B - AWS	(6) 1-5/8" (1) 9x18 Hybrid	(3) Valmont/Site Pro 1 VFA10-U

Proposed and Final Configuration of T-Mobile Appurtenances:

Rad Center (ft.)	Antennas & Equipment	Coax	Mounts
185	(3) Ericsson AIR21 B2A/B4P (3) Ericsson AIR21 B2P/B4A (3) RFS APXVAARR24_43-U-NA20 (3) Ericsson Radio 4449 B71+B12* (3) Generic Twin Style 1B - AWS	(6) 1-5/8" (1) 9x18 Hybrid (1) 6x12 Hybrid	(3) Valmont/Site Pro 1 VFA10-U With New Valmont/Site Pro 1 XLD Sector Frame Reinforcement Kits (P/N: SFR-K or SFR-K-L)

* Proposed RRUs to be mounted behind the antennas

Appurtenances by Others:

Rad Center (ft.)	Antennas & Equipment	Coax	Mounts
317.5	(1) P-9A120GN-S	(1) 1-5/8"	-
308	(1) P-9A72GN-S	(1) 1-5/8"	-
294	(3) 3" Dia 20' Omni	(3)1-1/4"	(2) Side Arm Mounts
288	(1) 1105-1A		-
274	(1) 1105-1A (1) SPD6-58	(1) 1-5/8"	-
264.25	(1) 3" Dia 20' Omni	(1) 7/8"	(1) Side Arm Mount
252	(1) 3" Dia 20' Omni	(1) 7/8"	(1) Side Arm Mount
251	(1) P-9A72GN-S	(1) 1-5/8"	-
226.5	(3) Commscope NNVV-65B-R4 (3) rfs celwaveAPXV9TM14-ALU-I20 (3) alcatel lucent RRH4x45-1900 (6) alcatel lucent RRH2x50-800 (3) alcatel lucent RRH8x20-25	(6) 1-5/8"	(3) T-Arm Mounts
219.5	(1) 1105-1A	(1) 7/8"	-
213	15' Omni	-	-
209	(1) MFF-950B	(1) 1-1/4"	(1) Pipe Mount
204	(2) PiRod 6-8' Box Arm (3) Powerwave 7770.0		-
200	(2) KMW AM-X-CD-14-65-00T-RET (3) cci antennas DTMABP7819VG12A (6) Ericsson RRUS11 (1) raycap DC6-48-60-18-8F	(12) 1-5/8" (2) 3/4" (1) 3/8"	(3) T-Arm Mounts

Appurtenances by Others (Cont.):

Rad Center (ft.)	Antennas & Equipment	Coax	Mounts
169.5	(2) LPA-80080-4CF-EDIN (4) LPA-80063/4CFx5 (3) BXA-70063-6CF-EDIN (3) BXA-171063-12BF-EDIN-2 (6) E15V95P08	(12) 1-5/8"	(3) T-Arm Mounts
150.5	13' Dipole	(1) 5/8"	(3) Pipe Mounts
138.5	(1) 3" Dia 20' Omni	(1) 7/8"	(1) Side Arm Mount
130	(1) P-9A72GN-S	(1) 1-5/8"	-
123.5	HP2-18	(1) 3/16"	-
106.5	HP2-18	(2) 1/4"	-
112	(1) MTZ-940B	(1) 1-5/8"	(1) Side Arm Mount
90	(1) PR-950	(1) 1/2"	(1) Pipe Mount
36	(1) SPD3-2.4NS	(2) 1/2"	-

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 135 mph (Risk Category II) converted to a nominal 3-second gust wind speed of 105 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 105 mph without ice (V)
- Basic wind speed of 50 mph concurrent with the design ice thickness of 3/4 " (Vi and ti)
- Exposure Category B, 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:

- $1.2D + 1.0Dg + 1.6W_o$
- $0.9D + 1.0Dg + 1.6W_o$
- $1.2D + 1.0Dg + 1.0D_i + 1.0W_i + 1.0T_i$

D: Dead load of structures and appurtenances

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

D_g: Dead Load of guy assemblies

W_o: 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.

6.0 RESULTS AND CONCLUSION

Based on a structural analysis per *ANSI/TIA-222-G*, the existing guyed tower has **adequate** structural capacity for the proposed changes by T-Mobile. For the code specified load combinations and as a maximum, the tower diagonals from 0 ft. to 6.7 ft. are stressed to **81.0%** of their structural capacity. The tower legs, secondary horizontals and guy wires are stressed to **63.1%**, **35.2%**, and **58.7%** of their structural capacity, respectively.

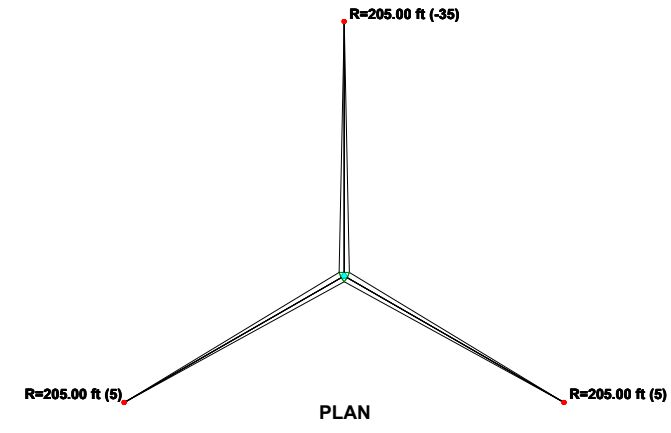
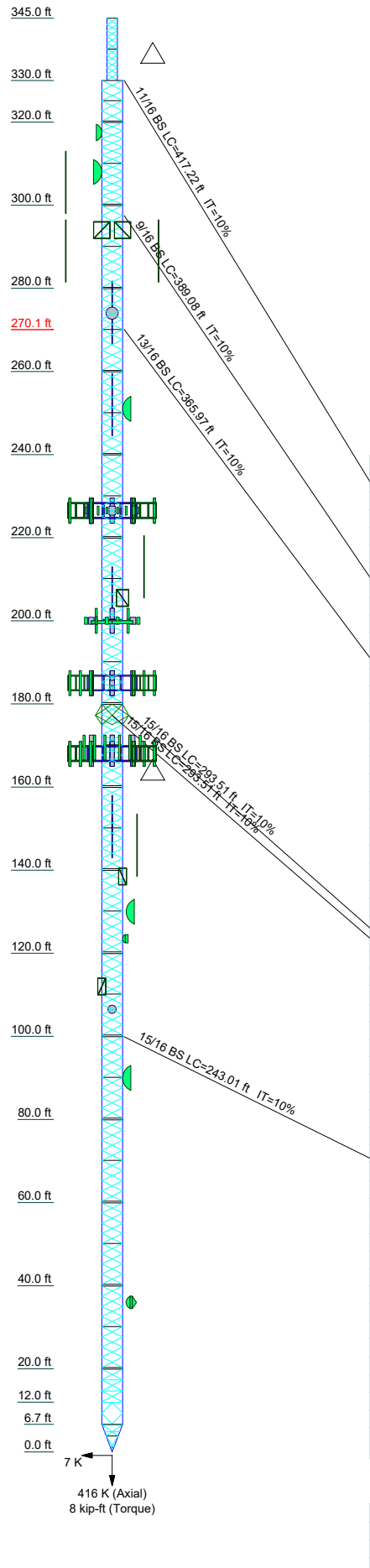
The tower foundation system has **adequate** structural capacity for the proposed changes by T-Mobile. The tower base foundation and the anchor block foundations are stressed to **44.3%** and **46.9%** of their structural capacity.

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

Section	T19	T18	T17	T16	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1	L1		
Legs	SR 1 1/4																					
Leg Grade	SR 1 1/4																					
Diagonals	SR 1 1/4																					
Diagonal Grade	SR 1 1/4																					
Top Girts	C	B	A	SR 1 1/4																		
Mid Girts	C	N.A.	SR 1 1/4																			
Bottom Girts	C	N.A.	SR 1 1/4																			
Horizontals	N.A.	C	A	N.A.																		
Sec. Horizontals	N.A.																					
Face Width (ft)	80 @ 2.44375																					
# Panels @ (ft)	37.1																					
Weight (K)	H	G	F	32 @ 2.45469																	E	D
	1.1	1.0	1.1	1.7																	1.0	0.3
	5	2.5																				



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
P-9A120GN-S	317.5	AIR 21 B4A/B2P w/ Mount Pipe	185
P-9A72GN-S	308	AIR 21 B4A/B2P w/ Mount Pipe	185
3" Dia 20' Omni	305.5	APXVAARR24_43-U-NA20 w/ Mount Pipe	185
LeBlanc 10' Standoff (3)	294	APXVAARR24_43-U-NA20 w/ Mount Pipe	185
LeBlanc 10' Standoff (3)	294	APXVAARR24_43-U-NA20 w/ Mount Pipe	185
3" Dia 20' Omni	289	APXVAARR24_43-U-NA20 w/ Mount Pipe	185
3" Dia 20' Omni	289	APXVAARR24_43-U-NA20 w/ Mount Pipe	185
1105-1A	288	RADIO 4449 B12/B71	185
1105-1A	279	RADIO 4449 B12/B71	185
3" Dia 20' Omni	274.25	RADIO 4449 B12/B71	185
SPD6-58	274	Generic Twin Style 1B	185
5'3"x4" Pipe mount	274	Generic Twin Style 1B	185
PiRod 4' Side Mount Standoff	264.25	Generic Twin Style 1B	185
PiRod 4' Side Mount Standoff	262	Generic Twin Style 1B	185
3" Dia 20' Omni	252	SFR-K Mod	185
P-9A72GN-S	251	SFR-K Mod	185
APXV9TM14-ALU-I20	226.5	SFR-K Mod	185
APXV9TM14-ALU-I20	226.5	Sector Mount [SM 502-3]	185
Alcatel TME-FD-RRH-4x45-1900	226.5	AIR 21 B2A/B4P w/ Mount Pipe	185
Alcatel TME-FD-RRH-4x45-1900	226.5	AIR 21 B2A/B4P w/ Mount Pipe	185
Alcatel TME-FD-RRH-4x45-1900	226.5	AIR 21 B2A/B4P w/ Mount Pipe	185
(2) FD-RRH-2x50-800	226.5	AIR 21 B4A/B2P w/ Mount Pipe	185
(2) FD-RRH-2x50-800	226.5	BXA-70063-6CF-EDIN w/ Mount Pipe	169.5
(2) FD-RRH-2x50-800	226.5	BXA-70063-6CF-EDIN w/ Mount Pipe	169.5
TD-RRH8x20-25	226.5	BXA-171063-12BF-EDIN-2 w/ Mount Pipe	169.5
TD-RRH8x20-25	226.5	BXA-171063-12BF-EDIN-2 w/ Mount Pipe	169.5
TD-RRH8x20-25	226.5	BXA-171063-12BF-EDIN-2 w/ Mount Pipe	169.5
Site Pro LTF12-4126	226.5	BXA-171063-12BF-EDIN-2 w/ Mount Pipe	169.5
Site Pro LTF12-4126	226.5	(2) E15V95P08	169.5
Site Pro LTF12-4126	226.5	(2) E15V95P08	169.5
APXV9TM14-ALU-I20	226.5	(2) E15V95P08	169.5
NNVV-65B-R4	226.5	(2) LPA-80080-4CF-EDIN w/ Mount Pipe	169.5
NNVV-65B-R4	226.5	(2) LPA-80063/4CFx5 w/ Mount Pipe	169.5
NNVV-65B-R4	226.5	(2) LPA-80063/4CFx5 w/ Mount Pipe	169.5
1105-1A	219.5	BXA-70063-6CF-EDIN w/ Mount Pipe	169.5
15' Omni	213	PiRod 12' T-Frame Sector	168
4'-P1.5x0.145	209	PiRod 12' T-Frame Sector	168
MFF-950B	209	PiRod 12' T-Frame Sector	168
8'-2" Dia Pipe	208	PiRod 12' T-Frame Sector	168
PiRod 6'-8" Box Arm	205.5	(3) 4'-P1.5x0.145	150.5
PiRod 6'-8" Box Arm	204	13' Dipole	150.5
DTMABP7819VG12A	200	3" dia x 20' Omni	146
DTMABP7819VG12A	200	PiRod 4' Side Mount Standoff	138.5
DTMABP7819VG12A	200	P-9A72GN-S	130
(2) RRUS 11	200	2.5"x4" Pipe Mount	130
(2) RRUS 11	200	(2) HP2-18	123.5
(2) RRUS 11	200	MTZ-940B	112
DC6-48-60-18-8F	200	3' Side Arm	112
PiRod 10' PCS Frame	200	(2) HP2-18	106.5
PiRod 10' PCS Frame	200	PR-950	90
PiRod 10' PCS Frame	200	4'-P1.5x0.145	90
7770.00 w/ Mount Pipe	200	SPD3-2.4NS	36
7770.00 w/ Mount Pipe	200		
7770.00 w/ Mount Pipe	200		
AM-X-CD-14-65-00T-RET w/ Mount Pipe	200		

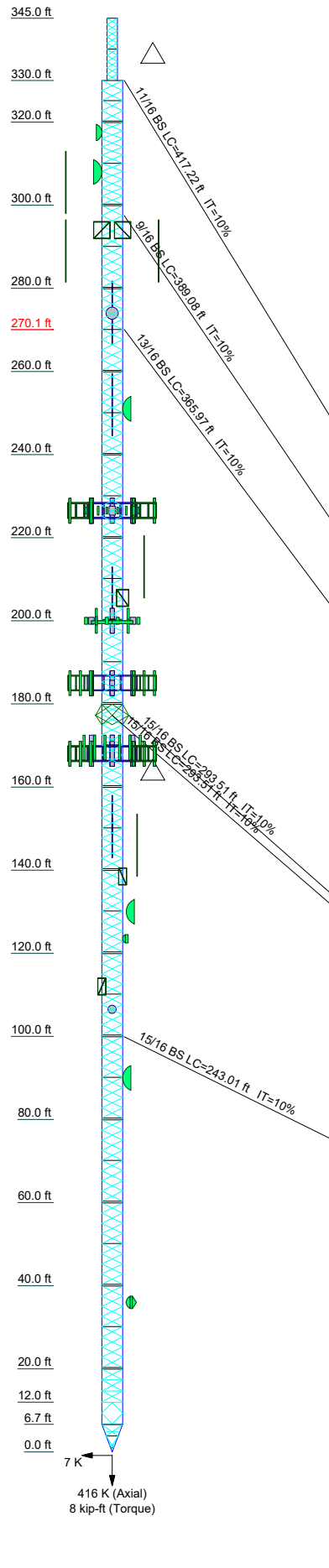
SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	SR 7/8	E	4 @ 2.43021
B	N.A.	F	3 @ 2.61111
C	6x3/4	G	2 @ 2.56667
D	10 @ 1.49167	H	2 @ 2.80833

Destek Engineering, LLC
1281 Kennestone Circle, Ste 100
Marietta, GA
Phone: (770) 693-0835
FAX:

Job: **CTNL058A**
Project: **1975083**
Client: **Foresite LLC** | Drawn by: **Ahmet Colakoglu** | App'd:
Code: **TIA-222-G** | Date: **06/07/19** | Scale: **NTS**
Path: | Dwg No. **E-1**

Section	T19	T18	T17	T16	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1	L1	
Legs	SR 2 3/4																				
Leg Grade	A572-50																				
Diagonals	SR 1 1/4																				
Diagonal Grade	A572-50																				
Top Girts	C	B	A																		
Mid Girts	C	N.A.	SR 1 1/4	SR 1 1/4	SR 1 1/2	SR 1 1/2	SR 1 1/2	SR 1 1/4	SR 1 1/4	SR 1 1/4	SR 1 1/4	SR 1 1/4	SR 1 1/4	SR 1	SR 1	SR 1	SR 1	SR 1	SR 1	SR 1	SR 1
Bottom Girts	C	N.A.	SR 1 1/4	SR 1 1/4	SR 1 1/2	SR 1 1/2	SR 1 1/2	SR 1 1/4	SR 1 1/4	SR 1 1/4	SR 1 1/4	SR 1 1/4	SR 1 1/4	SR 1	SR 1	SR 1	SR 1	SR 1	SR 1	SR 1	SR 1
Horizontals	C	N.A.	SR 1 1/4	SR 1 1/4	SR 1 1/2	SR 1 1/2	SR 1 1/2	SR 1 1/4	SR 1 1/4	SR 1 1/4	SR 1 1/4	SR 1 1/4	SR 1 1/4	SR 1	SR 1	SR 1	SR 1	SR 1	SR 1	SR 1	SR 1
Sec. Horizontals	N.A.																				
Face Width (ft)	A																				
# Panels @ (ft)	H	G	F	80 @ 2.44375																	
Weight (K)	37.1	1.1	1.0	1.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
					5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
					E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	
					10 @ 1.96375	10 @ 1.96375	10 @ 1.96375	10 @ 1.96375	10 @ 1.96375	10 @ 1.96375	10 @ 1.96375	10 @ 1.96375	10 @ 1.96375	10 @ 1.96375	10 @ 1.96375	10 @ 1.96375	10 @ 1.96375	10 @ 1.96375	10 @ 1.96375	10 @ 1.96375	



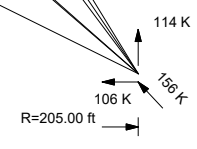
SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	SR 7/8	E	4 @ 2.43021
B	N.A.	F	3 @ 2.61111
C	6x3/4	G	2 @ 2.56667
D	10 @ 1.49167	H	2 @ 2.80833

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi			

- TOWER DESIGN NOTES**
1. Tower is located in New London County, Connecticut.
 2. Tower designed for Exposure B to the TIA-222-G Standard.
 3. Tower designed for a 105 mph basic wind in accordance with the TIA-222-G Standard.
 4. Tower is also designed for a 50 mph basic wind with 0.75 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: 81%



ALL REACTIONS ARE FACTORED

Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job: CTNL058A
	Project: 1975083
	Client: Foresite LLC
	Code: TIA-222-G
	Path: S:\Projects\2019\75 - Foresite LLC\083 - CTNL058A\TX\Rev1\CTNL058A-Rev1.dwg
Drawn by: Ahmet Colakoglu	App'd:
Date: 06/07/19	Scale: NTS
	Dwg No. E-1

<p style="text-align: center;"><i>tnxTower</i></p> <p>Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:</p>	Job CTNL058A	Page 1 of 80
	Project 1975083	Date 15:32:54 06/07/19
	Client Foresite LLC	Designed by Ahmet Colakoglu

Tower Input Data

The main tower is a 3x guyed tower with an overall height of 345.00 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 tapered at the base.

An index plate is provided at the 3 sided -tower connection.

There is a 3 sided latticed pole with a face width of 2.50 ft.

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

The following design criteria apply:

Tower is located in New London County, Connecticut.

Basic wind speed of 105 mph.

Structure Class II.

Exposure Category B.

Topographic Category 1.

Crest Height 0.00 ft.

Nominal ice thickness of 0.7500 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.

Pressures are calculated at each section.

Stress ratio used in latticed pole member design is 1.

Safety factor used in guy design is 1.

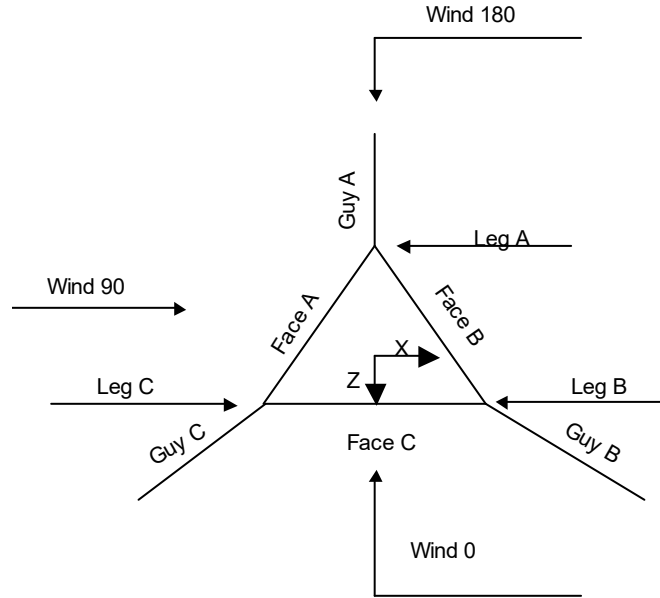
Stress ratio used in tower member design is 1.

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

Options

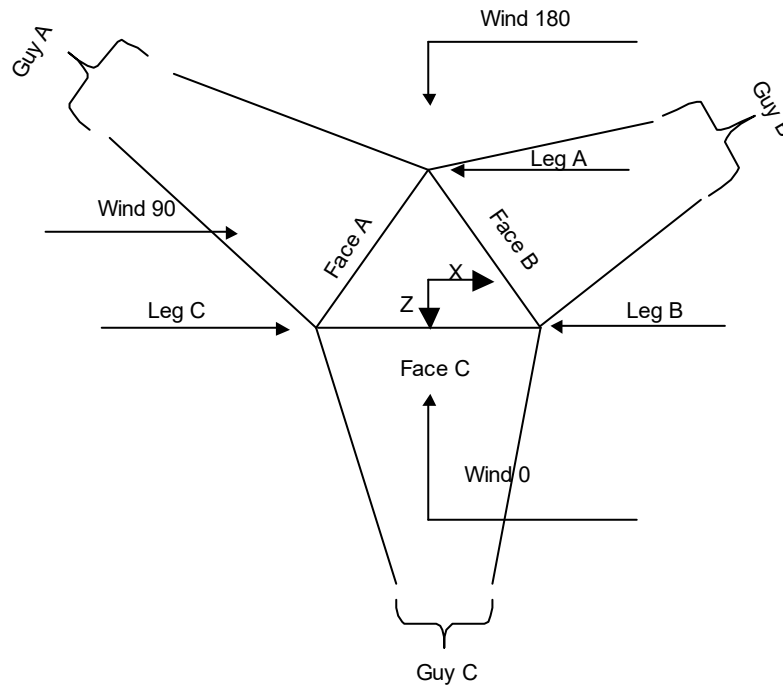
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|--|---|---|
| <ul style="list-style-type: none"> Consider Moments - Legs Consider Moments - Horizontals Consider Moments - Diagonals Use Moment Magnification √ Use Code Stress Ratios √ Use Code Safety Factors - Guys Escalate Ice Always Use Max Kz 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 |
|--|---|---|

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Corner & Starmount Guyed Tower

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Face Guyed

3 Sided Latted Pole Section Geometry

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	ft			ft		ft
L1	345.00-330.00			2.50	1	15.00

3 Sided Latted Pole 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
	ft	ft				in	in
L1	345.00-330.00	1.49	X Brace	No	No	0.0000	1.0000

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¹Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.

3 Sided Latticed Pole Section Geometry (cont'd)

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
L1 345.00-330.00	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

Tower Section	Tower Elevation ft	Assembly Database	Description	Section Width ft	Number of Sections	Section Length ft
T1	330.00-320.00			5.00	1	10.00
T2	320.00-300.00			5.00	1	20.00
T3	300.00-280.00			5.00	1	20.00
T4	280.00-260.00			5.00	1	20.00
T5	260.00-240.00			5.00	1	20.00
T6	240.00-220.00			5.00	1	20.00
T7	220.00-200.00			5.00	1	20.00
T8	200.00-180.00			5.00	1	20.00
T9	180.00-160.00			5.00	1	20.00
T10	160.00-140.00			5.00	1	20.00
T11	140.00-120.00			5.00	1	20.00
T12	120.00-100.00			5.00	1	20.00
T13	100.00-80.00			5.00	1	20.00
T14	80.00-60.00			5.00	1	20.00
T15	60.00-40.00			5.00	1	20.00
T16	40.00-20.00			5.00	1	20.00
T17	20.00-12.00			5.00	1	8.00
T18	12.00-6.70			5.00	1	5.30
T19	6.70-0.00			5.00	1	6.70

Tower Section Geometry (cont'd)

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
T1	330.00-320.00	2.43	X Brace	No	No	0.0000	3.3500
T2	320.00-300.00	1.96	X Brace	No	No	1.0000	3.3500
T3	300.00-280.00	2.45	X Brace	No	No	1.0000	3.3500
T4	280.00-260.00	2.45	X Brace	No	No	1.0000	3.3500
T5	260.00-240.00	2.45	X Brace	No	No	1.0000	3.3500

<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	CTNL058A	Page	6 of 80
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Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset	Bottom Girt Offset
	ft	ft				in	in
T6	240.00-220.00	2.45	X Brace	No	No	1.0000	3.3500
T7	220.00-200.00	2.44	X Brace	No	No	1.0000	4.4000
T8	200.00-180.00	2.44	X Brace	No	No	1.0000	4.4000
T9	180.00-160.00	2.44	X Brace	No	No	1.0000	4.4000
T10	160.00-140.00	2.44	X Brace	No	No	1.0000	4.4000
T11	140.00-120.00	2.44	X Brace	No	No	1.0000	4.4000
T12	120.00-100.00	2.44	X Brace	No	No	1.0000	4.4000
T13	100.00-80.00	2.44	X Brace	No	No	1.0000	4.4000
T14	80.00-60.00	2.44	X Brace	No	No	1.0000	4.4000
T15	60.00-40.00	2.44	X Brace	No	No	1.0000	4.4000
T16	40.00-20.00	2.44	X Brace	No	No	1.0000	4.4000
T17	20.00-12.00	2.61	X Brace	No	Yes	1.0000	1.0000
T18	12.00-6.70	2.57	Diamond	No	Yes	1.0000	1.0000
T19	6.70-0.00	2.81	X Brace	No	Yes	1.0000	12.0000

Tower Section Geometry (cont'd)

Tower Elevation	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
ft						
T1 330.00-320.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	7/8	A572-50 (50 ksi)
T2 320.00-300.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	7/8	A572-50 (50 ksi)
T3 300.00-280.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	7/8	A572-50 (50 ksi)
T4 280.00-260.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T5 260.00-240.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T6 240.00-220.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T7 220.00-200.00	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T8 200.00-180.00	Solid Round	2 3/4	A572-50 (50 ksi)	Solid Round	1 1/4	A572-50 (50 ksi)
T9 180.00-160.00	Solid Round	2 3/4	A572-50 (50 ksi)	Solid Round	1 1/4	A572-50 (50 ksi)
T10 160.00-140.00	Solid Round	2 3/4	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T11 140.00-120.00	Solid Round	2 3/4	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T12 120.00-100.00	Solid Round	2 3/4	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T13 100.00-80.00	Solid Round	2 3/4	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T14 80.00-60.00	Solid Round	2 3/4	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T15 60.00-40.00	Solid Round	2 3/4	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T16 40.00-20.00	Solid Round	2 3/4	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T17 20.00-12.00	Solid Round	2 3/4	A572-50 (50 ksi)	Solid Round	1 1/4	A572-50 (50 ksi)
T18 12.00-6.70	Solid Round	2 3/4	A572-50 (50 ksi)	Solid Round	1 1/4	A572-50 (50 ksi)

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Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T19 6.70-0.00	Solid Round	2 3/4	A572-50 (50 ksi)	Solid Round	1 1/4	A572-50 (50 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 330.00-320.00	Flat Bar	6x3/4	A36 (36 ksi)	Solid Round	1	A572-50 (50 ksi)
T2 320.00-300.00	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T3 300.00-280.00	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T4 280.00-260.00	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T5 260.00-240.00	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T6 240.00-220.00	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T7 220.00-200.00	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	1 1/4	A572-50 (50 ksi)
T8 200.00-180.00	Solid Round	1 1/2	A572-50 (50 ksi)	Solid Round	1 1/2	A572-50 (50 ksi)
T9 180.00-160.00	Solid Round	1 1/2	A572-50 (50 ksi)	Solid Round	1 1/2	A572-50 (50 ksi)
T10 160.00-140.00	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	1 1/4	A572-50 (50 ksi)
T11 140.00-120.00	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	1 1/4	A572-50 (50 ksi)
T12 120.00-100.00	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	1 1/4	A572-50 (50 ksi)
T13 100.00-80.00	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	1 1/4	A572-50 (50 ksi)
T14 80.00-60.00	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	1 1/4	A572-50 (50 ksi)
T15 60.00-40.00	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	1 1/4	A572-50 (50 ksi)
T16 40.00-20.00	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	1 1/4	A572-50 (50 ksi)
T17 20.00-12.00	Solid Round	7/8	A572-50 (50 ksi)	Solid Round		A572-50 (50 ksi)
T19 6.70-0.00	Flat Bar	6x3/4	A36 (36 ksi)	Flat Bar	6x3/4	A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
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<i>Tower Elevation</i> <i>ft</i>	<i>No. of Mid Girts</i>	<i>Mid Girt Type</i>	<i>Mid Girt Size</i>	<i>Mid Girt Grade</i>	<i>Horizontal Type</i>	<i>Horizontal Size</i>	<i>Horizontal Grade</i>
T1 330.00-320.00	1	Solid Round	1	A572-50 (50 ksi)	Flat Bar		A572-50 (50 ksi)
T2 320.00-300.00	1	Solid Round	1	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T3 300.00-280.00	1	Solid Round	1	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T4 280.00-260.00	1	Solid Round	1	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T5 260.00-240.00	1	Solid Round	1	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T6 240.00-220.00	1	Solid Round	1	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T7 220.00-200.00	1	Solid Round	1 1/4	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T8 200.00-180.00	1	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T9 180.00-160.00	1	Solid Round	1 1/2	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T10 160.00-140.00	1	Solid Round	1 1/4	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T11 140.00-120.00	1	Solid Round	1 1/4	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T12 120.00-100.00	1	Solid Round	1 1/4	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T13 100.00-80.00	1	Solid Round	1 1/4	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T14 80.00-60.00	1	Solid Round	1 1/4	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T15 60.00-40.00	1	Solid Round	1 1/4	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T16 40.00-20.00	1	Solid Round	1 1/4	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T17 20.00-12.00	None	Solid Round		A36 (36 ksi)	Solid Round	7/8	A572-50 (50 ksi)
T18 12.00-6.70	None	Flat Bar		A36 (36 ksi)	Flat Bar	6x3/4	A36 (36 ksi)
T19 6.70-0.00	1	Flat Bar	6x3/4	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)

Tower Section Geometry (cont'd)

<i>Tower Elevation</i> <i>ft</i>	<i>Secondary Horizontal Type</i>	<i>Secondary Horizontal Size</i>	<i>Secondary Horizontal Grade</i>	<i>Inner Bracing Type</i>	<i>Inner Bracing Size</i>	<i>Inner Bracing Grade</i>
T19 6.70-0.00	Solid Round	7/8	A572-50 (50 ksi)	Solid Round		A572-50 (50 ksi)

Tower Section Geometry (cont'd)

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Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals	Double Angle Stitch Bolt Spacing Horizontals	Double Angle Stitch Bolt Spacing Redundants
ft	ft ²	in					in	in	in
T1	0.00	0.0000	A36	1.05	1.05	1.05	36.0000	36.0000	36.0000
330.00-320.00			(36 ksi)						
T2	0.00	0.0000	A36	1.05	1.05	1.05	36.0000	36.0000	36.0000
320.00-300.00			(36 ksi)						
T3	0.00	0.0000	A36	1.05	1.05	1.05	36.0000	36.0000	36.0000
300.00-280.00			(36 ksi)						
T4	0.00	0.0000	A36	1.05	1.05	1.05	36.0000	36.0000	36.0000
280.00-260.00			(36 ksi)						
T5	0.00	0.0000	A36	1.05	1.05	1.05	36.0000	36.0000	36.0000
260.00-240.00			(36 ksi)						
T6	0.00	0.0000	A36	1.05	1.05	1.05	36.0000	36.0000	36.0000
240.00-220.00			(36 ksi)						
T7	0.00	0.0000	A36	1.05	1.05	1.05	36.0000	36.0000	36.0000
220.00-200.00			(36 ksi)						
T8	0.00	0.0000	A36	1.05	1.05	1.05	36.0000	36.0000	36.0000
200.00-180.00			(36 ksi)						
T9	0.00	0.0000	A36	1.05	1.05	1.05	36.0000	36.0000	36.0000
180.00-160.00			(36 ksi)						
T10	0.00	0.0000	A36	1.05	1.05	1.05	36.0000	36.0000	36.0000
160.00-140.00			(36 ksi)						
T11	0.00	0.0000	A36	1.05	1.05	1.05	36.0000	36.0000	36.0000
140.00-120.00			(36 ksi)						
T12	0.00	0.0000	A36	1.05	1.05	1.05	36.0000	36.0000	36.0000
120.00-100.00			(36 ksi)						
T13	0.00	0.0000	A36	1.05	1.05	1.05	36.0000	36.0000	36.0000
100.00-80.00			(36 ksi)						
T14	0.00	0.0000	A36	1.05	1.05	1.05	36.0000	36.0000	36.0000
80.00-60.00			(36 ksi)						
T15	0.00	0.0000	A36	1.05	1.05	1.05	36.0000	36.0000	36.0000
60.00-40.00			(36 ksi)						
T16	0.00	0.0000	A36	1.05	1.05	1.05	36.0000	36.0000	36.0000
40.00-20.00			(36 ksi)						
T17	0.00	0.0000	A36	1.05	1.05	1.05	36.0000	36.0000	36.0000
20.00-12.00			(36 ksi)						
T18 12.00-6.70	0.00	0.0000	A36	1.05	1.05	1.05	36.0000	36.0000	36.0000
			(36 ksi)						
T19 6.70-0.00	0.00	0.0000	A36	1.05	1.05	1.05	36.0000	36.0000	36.0000
			(36 ksi)						

Tower Section Geometry (cont'd)

Tower Elevation	Calc K Single Angles	Calc K Solid Rounds	Legs	<i>K Factors¹</i>						
				X Brace Diags	K Brace Diags	Single Diags	Girts	Horiz.	Sec. Horiz.	Inner Brace
				X Y	X Y	X Y	X Y	X Y	X Y	X Y
T1	Yes	Yes	1	1	1	1	1	1	1	1
330.00-320.00				1	1	1	1	1	1	1
T2	Yes	Yes	1	1	1	1	1	1	1	1
320.00-300.00				1	1	1	1	1	1	1
T3	Yes	Yes	1	1	1	1	1	1	1	1
300.00-280.00				1	1	1	1	1	1	1
T4	Yes	Yes	1	1	1	1	1	1	1	1
280.00-260.00				1	1	1	1	1	1	1

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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.
T11 140.00-120.00	Flange	0.8750	5	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T12 120.00-100.00	Flange	0.8750	5	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T13 100.00-80.00	Flange	0.8750	5	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T14 80.00-60.00	Flange	0.7500	5	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T15 60.00-40.00	Flange	0.7500	5	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T16 40.00-20.00	Flange	0.7500	5	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T17 20.00-12.00	Flange	0.7500	5	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T18 12.00-6.70	Flange	0.0000	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T19 6.70-0.00	Flange	1.7500	3	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	

Guy Data

Guy Elevation ft	Guy Grade	Guy Size	Initial Tension K	%	Guy Modulus ksi	Guy Weight plf	L_u ft	Anchor Radius ft	Anchor Azimuth Adj. °	Anchor Elevation ft	End Fitting Efficiency %
330	BS	A 11/16	6	10%	24000	0.990	416.88	205.00	0.0000	-35.00	100%
		B 11/16	6	10%	24000	0.990	382.40	205.00	0.0000	5.00	100%
		C 11/16	6	10%	24000	0.990	382.40	205.00	0.0000	5.00	100%
297.462	BS	A 9/16	4	10%	24000	0.660	388.76	205.00	0.0000	-35.00	100%
		B 9/16	4	10%	24000	0.660	355.22	205.00	0.0000	5.00	100%
		C 9/16	4	10%	24000	0.660	355.22	205.00	0.0000	5.00	100%
270.098	BS	A 13/16	8	10%	24000	1.390	365.67	205.00	0.0000	-35.00	100%
		B 13/16	8	10%	24000	1.390	333.09	205.00	0.0000	5.00	100%
		C 13/16	8	10%	24000	1.390	333.09	205.00	0.0000	5.00	100%
177.25	BS	A 15/16	11	10%	24000	1.850	293.27	205.00	0.0000	-35.00	100%
		B 15/16	11	10%	24000	1.850	265.81	205.00	0.0000	5.00	100%
		C 15/16	11	10%	24000	1.850	265.81	205.00	0.0000	5.00	100%
99.9167	BS	A 15/16	11	10%	24000	1.850	242.81	205.00	0.0000	-35.00	100%
		B 15/16	11	10%	24000	1.850	223.11	205.00	0.0000	5.00	100%
		C 15/16	11	10%	24000	1.850	223.11	205.00	0.0000	5.00	100%

Guy Data(cont'd)

Guy Elevation ft	Mount Type	Torque-Arm Spread ft	Torque-Arm Leg Angle °	Torque-Arm Style	Torque-Arm Grade	Torque-Arm Type	Torque-Arm Size
330	Corner						
297.462	Corner						
270.098	Corner						

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Guy Elevation ft	Mount Type	Torque-Arm Spread ft	Torque-Arm Leg Angle °	Torque-Arm Style	Torque-Arm Grade	Torque-Arm Type	Torque-Arm Size
177.25	Torque Arm	8.00	30.0000	Wing	A36 (36 ksi)	Double Equal Angle	2L4x4x3/8
99.9167	Corner						

Guy Data (cont'd)

Guy Elevation ft	Diagonal Grade	Diagonal Type	Upper Diagonal Size	Lower Diagonal Size	Is Strap.	Pull-Off Grade	Pull-Off Type	Pull-Off Size
330.00	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Flat Bar	
297.46	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Flat Bar	
270.10	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Flat Bar	
177.25	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Solid Round	
99.92	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Flat Bar	

Guy Data (cont'd)

Guy Elevation ft	Cable Weight A K	Cable Weight B K	Cable Weight C K	Cable Weight D K	Tower Intercept A ft	Tower Intercept B ft	Tower Intercept C ft	Tower Intercept D ft
330	0	0	0		14.40	12.16	12.16	
					6.6 sec/pulse	6.0 sec/pulse	6.0 sec/pulse	
297.462	0	0	0		12.77	10.70	10.70	
					6.2 sec/pulse	5.6 sec/pulse	5.6 sec/pulse	
270.098	1	0	0		11.33	9.43	9.43	
					5.8 sec/pulse	5.3 sec/pulse	5.3 sec/pulse	
177.25	1	0	0		7.24	5.97	5.97	
					4.6 sec/pulse	4.2 sec/pulse	4.2 sec/pulse	
99.9167	0	0	0		5.00	4.23	4.23	
					3.9 sec/pulse	3.6 sec/pulse	3.6 sec/pulse	

Guy Data (cont'd)

Guy Elevation ft	Calc K Single Angles	Calc K Solid Rounds	Torque Arm		Pull Off		Diagonal	
			K _x	K _y	K _x	K _y	K _x	K _y
330	No	No			1	1	1	1
297.462	No	No			1	1	1	1
270.098	No	No			1	1	1	1

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Guy Elevation ft	Calc K Single Angles	Calc K Solid Rounds	Torque Arm		Pull Off		Diagonal	
			K _x	K _y	K _x	K _y	K _x	K _y
177.25	Yes	Yes	1	1	1	1	1	1
99.9167	No	No			1	1	1	1

Guy Data (cont'd)

Guy Elevation ft	Torque-Arm				Pull Off				Diagonal			
	Bolt Size in	Number	Net Width Deduct in	U	Bolt Size in	Number	Net Width Deduct in	U	Bolt Size in	Number	Net Width Deduct in	U
330	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
297.462	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
270.098	0.0000 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
177.25	1.0000 A325N	4	0.0000	1	1.0000 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
99.9167	0.6250 A325N	0	0.0000	0.75	1.0000 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75

Guy Pressures

Guy Elevation ft	Guy Location	z ft	q _z psf	q _z Ice psf	Ice Thickness in
330	A	147.50	26	6	1.7423
	B	167.50	27	6	1.7646
	C	167.50	27	6	1.7646
297.462	A	131.23	26	6	1.7220
	B	151.23	27	6	1.7466
	C	151.23	27	6	1.7466
270.098	A	117.55	25	6	1.7032
	B	137.55	26	6	1.7302
	C	137.55	26	6	1.7302
177.25	A	71.13	22	5	1.6197
	B	91.13	23	5	1.6604
	C	91.13	23	5	1.6604
99.9167	A	32.46	17	4	1.4975
	B	52.46	20	4	1.5712
	C	52.46	20	4	1.5712

Guy-Mast Forces (Excluding Wind) - No Ice

Guy Elevation ft	Guy Location	Chord Angle °	Guy Tension Top Bottom K	F _x K	F _y K	F _z K	M _x kip-ft	M _y kip-ft	M _z kip-ft
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Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom K	F _x	F _y	F _z	M _x	M _y	M _z
ft		°		K	K	K	kip-ft	kip-ft	kip-ft
330	A	61.0252	6	0	5	-3	-15.70	0.00	0.00
			6						
	B	58.1231	6	3	5	2	7.58	0.00	-13.13
			6						
	C	58.1231	6	-3	5	2	7.58	-0.00	13.13
			6						
	Sum:			0	16	0	-0.54	0.00	0.00
297.462	A	58.7034	4	0	3	-2	-10.01	0.00	0.00
			4						
	B	55.3526	4	2	3	1	4.80	0.00	-8.31
			4						
	C	55.3526	4	-2	3	1	4.80	-0.00	8.31
			4						
	Sum:			0	10	0	-0.42	0.00	0.00
270.098	A	56.4774	8	0	7	-5	-20.50	0.00	0.00
			8						
	B	52.6777	8	4	7	2	9.73	0.00	-16.85
			8						
	C	52.6777	8	-4	7	2	9.73	-0.00	16.85
			8						
	Sum:			0	21	0	-1.04	0.00	0.00
177.25	A	46.3142	11	0	8	-8	-18.99	30.71	-32.89
			11						
	A	46.3142	11	0	8	-8	-18.99	-30.71	32.89
			11						
	B	40.3530	11	7	7	4	33.91	33.77	0.00
			11						
	B	40.3530	11	7	7	4	-16.95	-33.77	-29.37
			11						
	C	40.3530	11	-7	7	4	-16.95	33.77	29.37
			11						
	C	40.3530	11	-7	7	4	33.91	-33.77	0.00
			11						
	Sum:			0	46	2	-4.07	0.00	0.00
99.9167	A	33.7243	11	0	6	-9	-18.16	0.00	0.00
			11						
	B	25.1557	11	9	5	5	6.98	0.00	-12.09
			11						
	C	25.1557	11	-9	5	5	6.98	-0.00	12.09
			11						
	Sum:			0	16	1	-4.20	0.00	0.00

Guy-Mast Forces (Excluding Wind) - Ice

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom K	F _x	F _y	F _z	M _x	M _y	M _z
ft		°		K	K	K	kip-ft	kip-ft	kip-ft
330	A	61.0252	12	0	11	-5	-32.34	0.00	0.00
			10						
	B	58.1231	12	5	11	3	15.69	0.00	-27.18
			10						
	C	58.1231	12	-5	11	3	15.69	-0.00	27.18

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Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom K	F _x	F _y	F _z	M _x	M _y	M _z
ft		°	K	K	K	K	kip-ft	kip-ft	kip-ft
297.462	A	58.7034	10	0	33	1	-0.95	0.00	0.00
			Sum:	9	0	8	-4	-23.92	0.00
	B	55.3526	8	4	8	2	11.55	0.00	-20.01
			Sum:	9	-4	8	2	11.55	-0.00
270.098	A	56.4774	8	0	24	0	-0.82	0.00	0.00
			Sum:	15	0	13	-8	-37.96	0.00
	B	52.6777	13	8	13	4	18.15	0.00	-31.44
			Sum:	14	-8	13	4	18.15	-0.00
177.25	A	46.3142	14	0	38	1	-1.66	0.00	0.00
			Sum:	19	0	14	-12	-32.04	49.63
	A	46.3142	17	0	14	-12	-32.04	-49.63	55.50
			Sum:	19	12	13	7	57.88	55.10
	B	40.3530	17	12	13	7	-28.94	-55.10	-50.13
			Sum:	19	-12	13	7	-28.94	55.10
C	40.3530	17	-12	13	7	57.88	-55.10	0.00	
		Sum:	18	0	78	3	-6.20	0.00	0.00
99.9167	A	33.7243	17	0	10	-14	-29.92	0.00	0.00
			Sum:	18	14	8	8	11.81	0.00
	B	25.1557	17	14	8	8	11.81	-0.00	20.46
			Sum:	18	-14	8	8	11.81	-0.00
C	25.1557	17	-14	8	8	11.81	-0.00	20.46	
		Sum:	17	0	27	1	-6.29	0.00	0.00

Guy-Mast Forces (Excluding Wind) - Service

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom K	F _x	F _y	F _z	M _x	M _y	M _z
ft		°	K	K	K	K	kip-ft	kip-ft	kip-ft
330	A	61.0252	6	0	5	-3	-15.70	0.00	0.00
			Sum:	6	3	5	2	7.58	0.00
	B	58.1231	6	-3	5	2	7.58	-0.00	13.13
Sum:			6	0	16	0	-0.54	0.00	0.00
297.462	A	58.7034	4	0	3	-2	-10.01	0.00	0.00
			Sum:	4	2	3	1	4.80	0.00
	B	55.3526	4	2	3	1	4.80	0.00	-8.31

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Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom K	F _x	F _y	F _z	M _x	M _y	M _z
ft		°		K	K	K	kip-ft	kip-ft	kip-ft
270.098	C	55.3526	4	-2	3	1	4.80	-0.00	8.31
			4						
	A	56.4774	Sum:	0	10	0	-0.42	0.00	0.00
			8	0	7	-5	-20.50	0.00	0.00
177.25	B	52.6777	8	4	7	2	9.73	0.00	-16.85
			8						
	C	52.6777	Sum:	0	21	0	-1.04	0.00	0.00
			8	0	8	-8	-18.99	30.71	-32.89
	A	46.3142	11	0	8	-8	-18.99	-30.71	32.89
			11						
	B	40.3530	11	7	7	4	33.91	33.77	0.00
			11						
	B	40.3530	11	7	7	4	-16.95	-33.77	-29.37
			11						
C	40.3530	11	-7	7	4	-16.95	33.77	29.37	
		11							
C	40.3530	11	-7	7	4	33.91	-33.77	0.00	
		11							
99.9167	A	33.7243	Sum:	0	46	2	-4.07	0.00	0.00
			11	0	6	-9	-18.16	0.00	0.00
	B	25.1557	11	9	5	5	6.98	0.00	-12.09
			11						
C	25.1557	11	-9	5	5	6.98	-0.00	12.09	
		11							
			Sum:	0	16	1	-4.20	0.00	0.00

Guy-Tensioning Information

		Temperature At Time Of Tensioning															
Guy Elevation	H	V	0 F		20 F		40 F		60 F		80 F		100 F		120 F		
			Initial Tension	Intercept	Initial Tension	Intercept	Initial Tension	Intercept	Initial Tension	Intercept	Initial Tension	Intercept	Initial Tension	Intercept	Initial Tension	Intercept	
			K	ft	K	ft	K	ft	K	ft	K	ft	K	ft	K	ft	K
330	A	202.11	365.00	6.372	13.14	6.180	13.53	5.989	13.96	5.800	14.40	5.613	14.87	5.427	15.36	5.244	15.88
	B	202.11	325.00	6.480	10.91	6.251	11.30	6.025	11.71	5.800	12.16	5.578	12.63	5.359	13.13	5.143	13.67
	C	202.11	325.00	6.480	10.91	6.251	11.30	6.025	11.71	5.800	12.16	5.578	12.63	5.359	13.13	5.143	13.67
297.462	A	202.11	332.46	4.238	11.48	4.091	11.88	3.945	12.31	3.800	12.77	3.657	13.26	3.516	13.77	3.377	14.33
	B	202.11	292.46	4.326	9.42	4.149	9.82	3.973	10.24	3.800	10.70	3.629	11.19	3.461	11.72	3.296	12.29
	C	202.11	292.46	4.326	9.42	4.149	9.82	3.973	10.24	3.800	10.70	3.629	11.19	3.461	11.72	3.296	12.29
270.098	A	202.11	305.10	9.034	10.06	8.686	10.45	8.341	10.87	8.000	11.33	7.663	11.81	7.332	12.34	7.005	12.89
	B	202.11	265.10	9.249	8.18	8.828	8.56	8.411	8.98	8.000	9.43	7.595	9.92	7.198	10.46	6.809	11.04
	C	202.11	265.10	9.249	8.18	8.828	8.56	8.411	8.98	8.000	9.43	7.595	9.92	7.198	10.46	6.809	11.04
177.25	A	202.73	212.25	12.975	6.04	12.240	6.40	11.514	6.80	10.800	7.24	10.099	7.74	9.415	8.29	8.752	8.90
	B	202.73	172.25	13.451	4.80	12.554	5.14	11.669	5.53	10.800	5.97	9.952	6.47	9.131	7.04	8.342	7.70
	C	202.73	172.25	13.451	4.80	12.554	5.14	11.669	5.53	10.800	5.97	9.952	6.47	9.131	7.04	8.342	7.70
99.9167	A	202.11	134.92	13.970	3.87	12.895	4.19	11.836	4.56	10.800	5.00	9.793	5.50	8.826	6.10	7.910	6.80
	B	202.11	94.92	14.568	3.14	13.288	3.44	12.029	3.80	10.800	4.23	9.613	4.75	8.484	5.38	7.436	6.13
	C	202.11	94.92	14.568	3.14	13.288	3.44	12.029	3.80	10.800	4.23	9.613	4.75	8.484	5.38	7.436	6.13

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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)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf

*													

*													
LDF7-50A(1-5/8")	B	No	No	Ar (CaAa)	200.00 - 6.00	0.0000	-0.35	4	4	0.5000 1.9800	1.9800		0.82
WR-VG86ST-BRD(3/4)	B	No	No	Ar (CaAa)	200.00 - 6.00	0.0000	-0.3	2	2	0.2500	0.7950		0.58
LDF2-50A(3/8")	B	No	No	Ar (CaAa)	200.00 - 6.00	0.0000	-0.25	1	1	0.4400	0.4400		0.08
LDF7-50A(1-5/8")	B	No	No	Ar (CaAa)	200.00 - 6.00	-3.0000	-0.26	6	3	0.1000 0.2500	1.9800		0.82
LDF7-50A(1-5/8")	B	No	No	Ar (CaAa)	200.00 - 6.00	-1.0000	-0.36	2	2	0.1000 0.2500	1.9800		0.82

*													

*													
LDF5-50A(7/8)	B	No	No	Ar (CaAa)	219.50 - 6.00	0.0000	0.3	1	1	1.0300	1.0300		0.33
LDF4-50A(1/2)	B	No	No	Ar (CaAa)	90.00 - 6.00	0.0000	0.35	1	1	0.6250	0.6250		0.15
LDF5-50A(7/8)	B	No	No	Ar (CaAa)	136.00 - 6.00	0.0000	0.4	1	1	1.0300	1.0300		0.33
LDF12-50A(2-1/4)	B	No	No	Ar (CaAa)	297.00 - 6.00	0.0000	0.45	1	1	2.3500	2.3500		1.22
LDF7-50A(1-5/8")	B	No	No	Ar (CaAa)	169.50 - 6.00	-5.0000	0.37	12	4	0.1000 0.2500	1.9800		0.82
LDF4-50A(1/2)	C	No	No	Ar (CaAa)	36.00 - 6.00	0.0000	-0.45	2	2	0.6250	0.6250		0.15
HFT1206-24S V2-200(1-1/2")	C	No	No	Ar (CaAa)	345.00 - 6.00	0.0000	0	1	1	1.5500	1.5500		1.89
LDF5-50A(7/8)	C	No	No	Ar (CaAa)	264.25 - 6.00	0.0000	0.4	1	1	1.0300	1.0300		0.33
LDF6-50A(1-1/4)	C	No	No	Ar (CaAa)	205.50 - 6.00	0.0000	0.45	1	1	1.5500	1.5500		0.60
LDF7-50A(1-5/8)	C	No	No	Ar (CaAa)	251.00 - 6.00	-1.0000	0.18	1	1	1.9800	1.9800		0.82
LDF6-50A(1-1/4")	C	No	No	Ar (CaAa)	294.00 - 6.00	-1.0000	0.3	3	3	2.0000 0.2500	1.5500		0.66
LDF4-50A(1/2)	C	No	No	Ar (CaAa)	332.50 - 6.00	-1.0000	0.38	1	1	0.6250	0.6250		0.15
LDF4-50A(1/2)	C	No	No	Ar (CaAa)	274.00 - 6.00	-1.0000	0.4	1	1	0.6250	0.6250		0.15

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LDF7-50A(1-5/8)	A	No	No	Ar (CaAa)	274.00 - 6.00	0.0000	-0.4	1	1	1.9800	1.9800		0.82
LDF7-50A(1-5/8)	A	No	No	Ar (CaAa)	308.00 - 6.00	0.0000	-0.3	1	1	1.9800	1.9800		0.82
LDF7-50A(1-5/8)	A	No	No	Ar (CaAa)	317.50 - 6.00	0.0000	-0.28	1	1	1.9800	1.9800		0.82
LDF4-50A(1/2)	A	No	No	Ar (CaAa)	312.00 - 6.00	0.0000	-0.24	1	1	0.6250	0.6250		0.15

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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
LDF4-50A(1/2)	A	No	No	Ar (CaAa)	279.00 - 6.00	0.0000	-0.2	1	1	0.6250	0.6250		0.15
LDF7-50A(1-5/8)	A	No	No	Ar (CaAa)	342.25 - 6.00	0.0000	-0.16	1	1	1.9800	1.9800		0.82
LDF7-50A(1-5/8)	A	No	No	Ar (CaAa)	130.00 - 6.00	-1.0000	-0.24	1	1	1.9800	1.9800		0.82
LDF7-50A(1-5/8)	A	No	No	Ar (CaAa)	112.00 - 6.00	-1.0000	-0.28	1	1	1.9800	1.9800		0.82
LDF7-50A(1-5/8)	A	No	No	Ar (CaAa)	204.00 - 6.00	-1.0000	-0.32	1	1	1.9800	1.9800		0.82
LDF5-50A(7/8)	A	No	No	Ar (CaAa)	252.00 - 6.00	0.0000	0.18	1	1	1.0300	1.0300		0.33
LDF4.5-50(5/8)	A	No	No	Ar (CaAa)	150.60 - 6.00	0.0000	0.21	1	1	0.8650	0.8650		0.15
LDF6-50A(1-1/4)	A	No	No	Ar (CaAa)	209.00 - 6.00	0.0000	0.24	1	1	1.5500	1.5500		0.60
LDF7-50A(1-5/8)	A	No	No	Ar (CaAa)	226.50 - 6.00	0.0000	0.4	6	6	0.5000 1.5000	1.9800		0.82
LDF1-50A(1/4")	A	No	No	Ar (CaAa)	106.50 - 6.00	-1.0000	0.45	2	2	0.3450	0.3450		0.06
FJ-2SM-001-75M(3/16")	A	No	No	Ar (CaAa)	123.50 - 6.00	-1.0000	0.49	1	1	0.2500	0.1890		0.02

* Climbing Ladder (Rail)	A	No	No	Ar (CaAa)	345.00 - 6.00	0.0000	-0.25	1	1	0.2500	0.2500		3.00
* Climbing Ladder (Rungs)	A	No	No	Ar (CaAa)	345.00 - 6.00	0.0000	-0.25	1	1	0.6250	0.6250		2.09
185ft T-Mobile													
LDF7-50A(1-5/8)	A	No	No	Ar (CaAa)	188.50 - 6.00	-1.0000	0.15	2	2	1.0000 1.9800	1.9800		0.82
LDF7-50A(1-5/8)	A	No	No	Ar (CaAa)	188.50 - 6.00	-1.0000	0.3	4	4	1.0000 1.9800	1.9800		0.82
LDF6-50A(1-1/4)	A	No	No	Ar (CaAa)	188.50 - 6.00	-1.0000	0.4	1	1	1.0000 1.5500	1.5500		0.60
LDF7-50A(1-5/8)	A	No	No	Ar (CaAa)	188.50 - 6.00	-1.0000	0.43	1	1	1.0000 1.9800	1.9800		0.82
*** Feedline Ladder (Rail)	A	No	No	Af (CaAa)	330.00 - 0.00	0.0000	-0.25	1	1	1.7500	1.7500		3.00
*** Feedline Ladder (Rail)	A	No	No	Af (CaAa)	330.00 - 0.00	0.0000	0.25	1	1	1.7500	1.7500		3.00
*** Feedline Ladder (Rail)	B	No	No	Af (CaAa)	330.00 - 0.00	0.0000	-0.25	1	1	1.7500	1.7500		3.00
*** Feedline Ladder (Rail)	C	No	No	Af (CaAa)	330.00 - 0.00	0.0000	-0.25	1	1	1.7500	1.7500		3.00

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	C _A A _A ft ² /ft	Weight plf
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	Client	Foresite LLC	Designed by	Ahmet Colakoglu

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}		Weight K
					In Face ft ²	Out Face ft ²	
L1	345.00-330.00	A	0.000	0.000	3.738	0.000	0
		B	0.000	0.000	0.000	0.000	0
		C	0.000	0.000	2.481	0.000	0
T1	330.00-320.00	A	0.000	0.000	8.688	0.000	0
		B	0.000	0.000	2.917	0.000	0
		C	0.000	0.000	5.092	0.000	0
T2	320.00-300.00	A	0.000	0.000	23.176	0.000	0
		B	0.000	0.000	5.833	0.000	0
		C	0.000	0.000	10.183	0.000	0
T3	300.00-280.00	A	0.000	0.000	26.547	0.000	0
		B	0.000	0.000	9.828	0.000	0
		C	0.000	0.000	16.693	0.000	0
T4	280.00-260.00	A	0.000	0.000	30.506	0.000	0
		B	0.000	0.000	10.533	0.000	0
		C	0.000	0.000	20.796	0.000	0
T5	260.00-240.00	A	0.000	0.000	32.993	0.000	0
		B	0.000	0.000	10.533	0.000	0
		C	0.000	0.000	24.971	0.000	0
T6	240.00-220.00	A	0.000	0.000	41.539	0.000	0
		B	0.000	0.000	10.533	0.000	0
		C	0.000	0.000	26.753	0.000	0
T7	220.00-200.00	A	0.000	0.000	59.764	0.000	0
		B	0.000	0.000	12.542	0.000	0
		C	0.000	0.000	27.606	0.000	0
T8	200.00-180.00	A	0.000	0.000	77.735	0.000	0
		B	0.000	0.000	64.173	0.000	0
		C	0.000	0.000	29.853	0.000	0
T9	180.00-160.00	A	0.000	0.000	95.457	0.000	1
		B	0.000	0.000	86.745	0.000	0
		C	0.000	0.000	29.853	0.000	0
T10	160.00-140.00	A	0.000	0.000	96.374	0.000	1
		B	0.000	0.000	111.693	0.000	1
		C	0.000	0.000	29.853	0.000	0
T11	140.00-120.00	A	0.000	0.000	99.233	0.000	1
		B	0.000	0.000	113.341	0.000	1
		C	0.000	0.000	29.853	0.000	0
T12	120.00-100.00	A	0.000	0.000	104.349	0.000	1
		B	0.000	0.000	113.753	0.000	1
		C	0.000	0.000	29.853	0.000	0
T13	100.00-80.00	A	0.000	0.000	106.865	0.000	1
		B	0.000	0.000	114.378	0.000	1
		C	0.000	0.000	29.853	0.000	0
T14	80.00-60.00	A	0.000	0.000	106.865	0.000	1
		B	0.000	0.000	115.003	0.000	1
		C	0.000	0.000	29.853	0.000	0
T15	60.00-40.00	A	0.000	0.000	106.865	0.000	1

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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
T16	40.00-20.00	B	0.000	0.000	115.003	0.000	1
		C	0.000	0.000	29.853	0.000	0
		A	0.000	0.000	106.865	0.000	1
T17	20.00-12.00	B	0.000	0.000	115.003	0.000	1
		C	0.000	0.000	31.853	0.000	0
		A	0.000	0.000	42.746	0.000	0
T18	12.00-6.70	B	0.000	0.000	46.001	0.000	0
		C	0.000	0.000	12.941	0.000	0
		A	0.000	0.000	28.319	0.000	0
T19	6.70-0.00	B	0.000	0.000	30.476	0.000	0
		C	0.000	0.000	8.574	0.000	0
		A	0.000	0.000	7.240	0.000	0
		B	0.000	0.000	5.775	0.000	0
		C	0.000	0.000	2.882	0.000	0

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
L1	345.00-330.00	A	1.893	0.000	0.000	19.731	0.000	0
		B		0.000	0.000	0.000	0.000	0
		C		0.000	0.000	9.105	0.000	0
T1	330.00-320.00	A	1.886	0.000	0.000	27.543	0.000	1
		B		0.000	0.000	6.688	0.000	0
		C		0.000	0.000	16.405	0.000	0
T2	320.00-300.00	A	1.877	0.000	0.000	74.783	0.000	1
		B		0.000	0.000	13.340	0.000	0
		C		0.000	0.000	32.703	0.000	1
T3	300.00-280.00	A	1.864	0.000	0.000	86.199	0.000	2
		B		0.000	0.000	23.623	0.000	0
		C		0.000	0.000	56.102	0.000	1
T4	280.00-260.00	A	1.851	0.000	0.000	101.950	0.000	2
		B		0.000	0.000	25.340	0.000	0
		C		0.000	0.000	74.017	0.000	1
T5	260.00-240.00	A	1.837	0.000	0.000	110.868	0.000	2
		B		0.000	0.000	25.227	0.000	0
		C		0.000	0.000	89.907	0.000	1
T6	240.00-220.00	A	1.821	0.000	0.000	129.299	0.000	2
		B		0.000	0.000	25.105	0.000	0
		C		0.000	0.000	94.529	0.000	1
T7	220.00-200.00	A	1.805	0.000	0.000	167.209	0.000	3
		B		0.000	0.000	34.021	0.000	1
		C		0.000	0.000	96.863	0.000	1
T8	200.00-180.00	A	1.787	0.000	0.000	217.168	0.000	3
		B		0.000	0.000	149.506	0.000	2
		C		0.000	0.000	103.724	0.000	2
T9	180.00-160.00	A	1.767	0.000	0.000	264.823	0.000	4
		B		0.000	0.000	166.950	0.000	2
		C		0.000	0.000	103.041	0.000	2
T10	160.00-140.00	A	1.745	0.000	0.000	267.690	0.000	4
		B		0.000	0.000	186.071	0.000	3
		C		0.000	0.000	102.282	0.000	2
T11	140.00-120.00	A	1.720	0.000	0.000	276.402	0.000	4
		B		0.000	0.000	191.968	0.000	3
		C		0.000	0.000	101.426	0.000	1
T12	120.00-100.00	A	1.692	0.000	0.000	296.336	0.000	4
		B		0.000	0.000	192.200	0.000	3

<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	CTNL058A	Page	22 of 80
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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
T13	100.00-80.00	C	1.658	0.000	0.000	100.442	0.000	1
		A		0.000	0.000	306.935	0.000	4
		B		0.000	0.000	194.305	0.000	3
T14	80.00-60.00	C	1.617	0.000	0.000	99.282	0.000	1
		A		0.000	0.000	302.713	0.000	4
		B		0.000	0.000	195.835	0.000	3
T15	60.00-40.00	C	1.564	0.000	0.000	97.861	0.000	1
		A		0.000	0.000	297.225	0.000	4
		B		0.000	0.000	192.700	0.000	3
T16	40.00-20.00	C	1.486	0.000	0.000	96.015	0.000	1
		A		0.000	0.000	289.241	0.000	4
		B		0.000	0.000	188.139	0.000	3
T17	20.00-12.00	C	1.395	0.000	0.000	105.401	0.000	1
		A		0.000	0.000	111.986	0.000	1
		B		0.000	0.000	73.136	0.000	1
T18	12.00-6.70	C	1.322	0.000	0.000	41.866	0.000	1
		A		0.000	0.000	72.210	0.000	1
		B		0.000	0.000	47.322	0.000	1
T19	6.70-0.00	C	1.193	0.000	0.000	26.935	0.000	0
		A		0.000	0.000	15.439	0.000	0
		B		0.000	0.000	9.168	0.000	0
		C		0.000	0.000	6.553	0.000	0

Feed Line Center of Pressure

Section	Elevation ft	CP _X in	CP _Z in	CP _X Ice in	CP _Z Ice in
L1	345.00-330.00	-1.9548	1.0989	-0.6374	0.2864
T1	330.00-320.00	-2.0873	-0.1921	-2.3382	0.2518
T2	320.00-300.00	-4.2206	0.1953	-3.7719	0.5415
T3	300.00-280.00	-4.6188	1.5794	-5.0722	1.6526
T4	280.00-260.00	-5.7648	2.3211	-6.3529	2.3727
T5	260.00-240.00	-6.5201	2.7615	-7.1188	2.7501
T6	240.00-220.00	-6.5160	0.5259	-7.1596	1.7522
T7	220.00-200.00	-5.9890	-3.0998	-6.5684	-0.0249
T8	200.00-180.00	-4.4591	-8.4493	-5.3218	-4.5946
T9	180.00-160.00	-3.3792	-8.7053	-4.7331	-5.4155
T10	160.00-140.00	-2.3524	-7.9974	-4.3042	-5.2894
T11	140.00-120.00	-2.3155	-7.8031	-4.1145	-5.2034
T12	120.00-100.00	-2.6230	-7.6028	-4.2862	-5.3868
T13	100.00-80.00	-2.6701	-7.5574	-4.1913	-5.5415
T14	80.00-60.00	-2.5911	-7.5151	-4.0251	-5.5136
T15	60.00-40.00	-2.5911	-7.5151	-4.0407	-5.5883
T16	40.00-20.00	-2.3302	-7.3900	-3.5689	-5.4363
T17	20.00-12.00	-2.2150	-7.2098	-3.2467	-5.1743
T18	12.00-6.70	-1.8098	-6.2060	-2.9387	-4.8716
T19	6.70-0.00	-0.7864	-1.9689	-0.1970	-0.3125

Shielding Factor Ka

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L1	16	HFT1206-24SV2-200(1-1/2")	330.00 - 345.00	0.6000	0.1770
L1	21	LDF4-50A(1/2)	330.00 - 332.50	0.6000	0.1770
L1	30	LDF7-50A(1-5/8)	330.00 - 342.25	0.6000	0.1770
L1	41	Climbing Ladder (Rail)	330.00 - 345.00	0.6000	0.1770
L1	42	Climbing Ladder (Rungs)	330.00 - 345.00	0.6000	0.1770
T1	16	HFT1206-24SV2-200(1-1/2")	320.00 - 330.00	0.6000	0.3444
T1	21	LDF4-50A(1/2)	320.00 - 330.00	0.6000	0.3444
T1	30	LDF7-50A(1-5/8)	320.00 - 330.00	0.6000	0.3444
T1	41	Climbing Ladder (Rail)	320.00 - 330.00	0.6000	0.3444
T1	42	Climbing Ladder (Rungs)	320.00 - 330.00	0.6000	0.3444
T1	49	Feedline Ladder (Rail)	320.00 - 330.00	0.6000	0.3444
T1	50	Feedline Ladder (Rail)	320.00 - 330.00	0.6000	0.3444
T1	51	Feedline Ladder (Rail)	320.00 - 330.00	0.6000	0.3444
T1	52	Feedline Ladder (Rail)	320.00 - 330.00	0.6000	0.3444
T2	16	HFT1206-24SV2-200(1-1/2")	300.00 - 320.00	0.6000	0.3737
T2	21	LDF4-50A(1/2)	300.00 - 320.00	0.6000	0.3737
T2	26	LDF7-50A(1-5/8)	300.00 - 308.00	0.6000	0.3737
T2	27	LDF7-50A(1-5/8)	300.00 - 317.50	0.6000	0.3737
T2	28	LDF4-50A(1/2)	300.00 - 312.00	0.6000	0.3737
T2	30	LDF7-50A(1-5/8)	300.00 - 320.00	0.6000	0.3737
T2	41	Climbing Ladder (Rail)	300.00 - 320.00	0.6000	0.3737
T2	42	Climbing Ladder (Rungs)	300.00 - 320.00	0.6000	0.3737
T2	49	Feedline Ladder (Rail)	300.00 - 320.00	0.6000	0.3737
T2	50	Feedline Ladder (Rail)	300.00 - 320.00	0.6000	0.3737
T2	51	Feedline Ladder (Rail)	300.00 - 320.00	0.6000	0.3737
T2	52	Feedline Ladder (Rail)	300.00 - 320.00	0.6000	0.3737
T3	13	LDF12-50A(2-1/4)	280.00 - 297.00	0.6000	0.4412
T3	16	HFT1206-24SV2-200(1-1/2")	280.00 - 300.00	0.6000	0.4412
T3	20	LDF6-50A(1-1/4")	280.00 - 294.00	0.6000	0.4412
T3	21	LDF4-50A(1/2)	280.00 - 300.00	0.6000	0.4412
T3	26	LDF7-50A(1-5/8)	280.00 - 300.00	0.6000	0.4412

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	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
T3	27	LDF7-50A(1-5/8)	280.00 - 300.00	0.6000	0.4412
T3	28	LDF4-50A(1/2)	280.00 - 300.00	0.6000	0.4412
T3	30	LDF7-50A(1-5/8)	280.00 - 300.00	0.6000	0.4412
T3	41	Climbing Ladder (Rail)	280.00 - 300.00	0.6000	0.4412
T3	42	Climbing Ladder (Rungs)	280.00 - 300.00	0.6000	0.4412
T3	49	Feedline Ladder (Rail)	280.00 - 300.00	0.6000	0.4412
T3	50	Feedline Ladder (Rail)	280.00 - 300.00	0.6000	0.4412
T3	51	Feedline Ladder (Rail)	280.00 - 300.00	0.6000	0.4412
T3	52	Feedline Ladder (Rail)	280.00 - 300.00	0.6000	0.4412
T4	13	LDF12-50A(2-1/4)	260.00 - 280.00	0.6000	0.4354
T4	16	HFT1206-24SV2-200(1-1/2")	260.00 - 280.00	0.6000	0.4354
T4	17	LDF5-50A(7/8)	260.00 - 264.25	0.6000	0.4354
T4	20	LDF6-50A(1-1/4")	260.00 - 280.00	0.6000	0.4354
T4	21	LDF4-50A(1/2)	260.00 - 280.00	0.6000	0.4354
T4	22	LDF4-50A(1/2)	260.00 - 274.00	0.6000	0.4354
T4	25	LDF7-50A(1-5/8)	260.00 - 274.00	0.6000	0.4354
T4	26	LDF7-50A(1-5/8)	260.00 - 280.00	0.6000	0.4354
T4	27	LDF7-50A(1-5/8)	260.00 - 280.00	0.6000	0.4354
T4	28	LDF4-50A(1/2)	260.00 - 280.00	0.6000	0.4354
T4	29	LDF4-50A(1/2)	260.00 - 279.00	0.6000	0.4354
T4	30	LDF7-50A(1-5/8)	260.00 - 280.00	0.6000	0.4354
T4	41	Climbing Ladder (Rail)	260.00 - 280.00	0.6000	0.4354
T4	42	Climbing Ladder (Rungs)	260.00 - 280.00	0.6000	0.4354
T4	49	Feedline Ladder (Rail)	260.00 - 280.00	0.6000	0.4354
T4	50	Feedline Ladder (Rail)	260.00 - 280.00	0.6000	0.4354
T4	51	Feedline Ladder (Rail)	260.00 - 280.00	0.6000	0.4354
T4	52	Feedline Ladder (Rail)	260.00 - 280.00	0.6000	0.4354
T5	13	LDF12-50A(2-1/4)	240.00 - 260.00	0.6000	0.4383
T5	16	HFT1206-24SV2-200(1-1/2")	240.00 - 260.00	0.6000	0.4383
T5	17	LDF5-50A(7/8)	240.00 - 260.00	0.6000	0.4383
T5	19	LDF7-50A(1-5/8)	240.00 - 251.00	0.6000	0.4383

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T5	20	LDF6-50A(1-1/4")	240.00 - 260.00	0.6000	0.4383
T5	21	LDF4-50A(1/2)	240.00 - 260.00	0.6000	0.4383
T5	22	LDF4-50A(1/2)	240.00 - 260.00	0.6000	0.4383
T5	25	LDF7-50A(1-5/8)	240.00 - 260.00	0.6000	0.4383
T5	26	LDF7-50A(1-5/8)	240.00 - 260.00	0.6000	0.4383
T5	27	LDF7-50A(1-5/8)	240.00 - 260.00	0.6000	0.4383
T5	28	LDF4-50A(1/2)	240.00 - 260.00	0.6000	0.4383
T5	29	LDF4-50A(1/2)	240.00 - 260.00	0.6000	0.4383
T5	30	LDF7-50A(1-5/8)	240.00 - 260.00	0.6000	0.4383
T5	34	LDF5-50A(7/8)	240.00 - 252.00	0.6000	0.4383
T5	41	Climbing Ladder (Rail)	240.00 - 260.00	0.6000	0.4383
T5	42	Climbing Ladder (Rungs)	240.00 - 260.00	0.6000	0.4383
T5	49	Feedline Ladder (Rail)	240.00 - 260.00	0.6000	0.4383
T5	50	Feedline Ladder (Rail)	240.00 - 260.00	0.6000	0.4383
T5	51	Feedline Ladder (Rail)	240.00 - 260.00	0.6000	0.4383
T5	52	Feedline Ladder (Rail)	240.00 - 260.00	0.6000	0.4383
T6	13	LDF12-50A(2-1/4)	220.00 - 240.00	0.6000	0.4415
T6	16	HFT1206-24SV2-200(1-1/2")	220.00 - 240.00	0.6000	0.4415
T6	17	LDF5-50A(7/8)	220.00 - 240.00	0.6000	0.4415
T6	19	LDF7-50A(1-5/8)	220.00 - 240.00	0.6000	0.4415
T6	20	LDF6-50A(1-1/4")	220.00 - 240.00	0.6000	0.4415
T6	21	LDF4-50A(1/2)	220.00 - 240.00	0.6000	0.4415
T6	22	LDF4-50A(1/2)	220.00 - 240.00	0.6000	0.4415
T6	25	LDF7-50A(1-5/8)	220.00 - 240.00	0.6000	0.4415
T6	26	LDF7-50A(1-5/8)	220.00 - 240.00	0.6000	0.4415
T6	27	LDF7-50A(1-5/8)	220.00 - 240.00	0.6000	0.4415
T6	28	LDF4-50A(1/2)	220.00 - 240.00	0.6000	0.4415
T6	29	LDF4-50A(1/2)	220.00 - 240.00	0.6000	0.4415
T6	30	LDF7-50A(1-5/8)	220.00 - 240.00	0.6000	0.4415
T6	34	LDF5-50A(7/8)	220.00 - 240.00	0.6000	0.4415
T6	37	LDF7-50A(1-5/8)	220.00 - 226.50	0.6000	0.4415

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T6	41	Climbing Ladder (Rail)	220.00 - 240.00	0.6000	0.4415
T6	42	Climbing Ladder (Rungs)	220.00 - 240.00	0.6000	0.4415
T6	49	Feedline Ladder (Rail)	220.00 - 240.00	0.6000	0.4415
T6	50	Feedline Ladder (Rail)	220.00 - 240.00	0.6000	0.4415
T6	51	Feedline Ladder (Rail)	220.00 - 240.00	0.6000	0.4415
T6	52	Feedline Ladder (Rail)	220.00 - 240.00	0.6000	0.4415
T7	10	LDF5-50A(7/8)	200.00 - 219.50	0.6000	0.4380
T7	13	LDF12-50A(2-1/4)	200.00 - 220.00	0.6000	0.4380
T7	16	HFT1206-24SV2-200(1-1/2")	200.00 - 220.00	0.6000	0.4380
T7	17	LDF5-50A(7/8)	200.00 - 220.00	0.6000	0.4380
T7	18	LDF6-50A(1-1/4)	200.00 - 205.50	0.6000	0.4380
T7	19	LDF7-50A(1-5/8)	200.00 - 220.00	0.6000	0.4380
T7	20	LDF6-50A(1-1/4")	200.00 - 220.00	0.6000	0.4380
T7	21	LDF4-50A(1/2)	200.00 - 220.00	0.6000	0.4380
T7	22	LDF4-50A(1/2)	200.00 - 220.00	0.6000	0.4380
T7	25	LDF7-50A(1-5/8)	200.00 - 220.00	0.6000	0.4380
T7	26	LDF7-50A(1-5/8)	200.00 - 220.00	0.6000	0.4380
T7	27	LDF7-50A(1-5/8)	200.00 - 220.00	0.6000	0.4380
T7	28	LDF4-50A(1/2)	200.00 - 220.00	0.6000	0.4380
T7	29	LDF4-50A(1/2)	200.00 - 220.00	0.6000	0.4380
T7	30	LDF7-50A(1-5/8)	200.00 - 220.00	0.6000	0.4380
T7	33	LDF7-50A(1-5/8)	200.00 - 204.00	0.6000	0.4380
T7	34	LDF5-50A(7/8)	200.00 - 220.00	0.6000	0.4380
T7	36	LDF6-50A(1-1/4)	200.00 - 209.00	0.6000	0.4380
T7	37	LDF7-50A(1-5/8)	200.00 - 220.00	0.6000	0.4380
T7	41	Climbing Ladder (Rail)	200.00 - 220.00	0.6000	0.4380
T7	42	Climbing Ladder (Rungs)	200.00 - 220.00	0.6000	0.4380
T7	49	Feedline Ladder (Rail)	200.00 - 220.00	0.6000	0.4380
T7	50	Feedline Ladder (Rail)	200.00 - 220.00	0.6000	0.4380
T7	51	Feedline Ladder (Rail)	200.00 - 220.00	0.6000	0.4380
T7	52	Feedline Ladder (Rail)	200.00 - 220.00	0.6000	0.4380

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T8	3	LDF7-50A(1-5/8")	180.00 - 200.00	0.6000	0.4179
T8	4	WR-VG86ST-BRD(3/4)	180.00 - 200.00	0.6000	0.4179
T8	5	LDF2-50A(3/8")	180.00 - 200.00	0.6000	0.4179
T8	6	LDF7-50A(1-5/8")	180.00 - 200.00	0.6000	0.4179
T8	7	LDF7-50A(1-5/8")	180.00 - 200.00	0.6000	0.4179
T8	10	LDF5-50A(7/8)	180.00 - 200.00	0.6000	0.4179
T8	13	LDF12-50A(2-1/4)	180.00 - 200.00	0.6000	0.4179
T8	16	HFT1206-24SV2-200(1-1/2")	180.00 - 200.00	0.6000	0.4179
T8	17	LDF5-50A(7/8)	180.00 - 200.00	0.6000	0.4179
T8	18	LDF6-50A(1-1/4)	180.00 - 200.00	0.6000	0.4179
T8	19	LDF7-50A(1-5/8)	180.00 - 200.00	0.6000	0.4179
T8	20	LDF6-50A(1-1/4")	180.00 - 200.00	0.6000	0.4179
T8	21	LDF4-50A(1/2)	180.00 - 200.00	0.6000	0.4179
T8	22	LDF4-50A(1/2)	180.00 - 200.00	0.6000	0.4179
T8	25	LDF7-50A(1-5/8)	180.00 - 200.00	0.6000	0.4179
T8	26	LDF7-50A(1-5/8)	180.00 - 200.00	0.6000	0.4179
T8	27	LDF7-50A(1-5/8)	180.00 - 200.00	0.6000	0.4179
T8	28	LDF4-50A(1/2)	180.00 - 200.00	0.6000	0.4179
T8	29	LDF4-50A(1/2)	180.00 - 200.00	0.6000	0.4179
T8	30	LDF7-50A(1-5/8)	180.00 - 200.00	0.6000	0.4179
T8	33	LDF7-50A(1-5/8)	180.00 - 200.00	0.6000	0.4179
T8	34	LDF5-50A(7/8)	180.00 - 200.00	0.6000	0.4179
T8	36	LDF6-50A(1-1/4)	180.00 - 200.00	0.6000	0.4179
T8	37	LDF7-50A(1-5/8)	180.00 - 200.00	0.6000	0.4179
T8	41	Climbing Ladder (Rail)	180.00 - 200.00	0.6000	0.4179
T8	42	Climbing Ladder (Rungs)	180.00 - 200.00	0.6000	0.4179
T8	44	LDF7-50A(1-5/8)	180.00 - 188.50	0.6000	0.4179
T8	45	LDF7-50A(1-5/8)	180.00 - 188.50	0.6000	0.4179
T8	46	LDF6-50A(1-1/4)	180.00 - 188.50	0.6000	0.4179
T8	47	LDF7-50A(1-5/8)	180.00 - 188.50	0.6000	0.4179
T8	49	Feedline Ladder (Rail)	180.00 - 200.00	0.6000	0.4179

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<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K_a No Ice</i>	<i>K_a Ice</i>
T8	50	Feedline Ladder (Rail)	180.00 - 200.00	0.6000	0.4179
T8	51	Feedline Ladder (Rail)	180.00 - 200.00	0.6000	0.4179
T8	52	Feedline Ladder (Rail)	180.00 - 200.00	0.6000	0.4179
T9	3	LDF7-50A(1-5/8")	160.00 - 180.00	0.6000	0.4219
T9	4	WR-VG86ST-BRD(3/4)	160.00 - 180.00	0.6000	0.4219
T9	5	LDF2-50A(3/8")	160.00 - 180.00	0.6000	0.4219
T9	6	LDF7-50A(1-5/8")	160.00 - 180.00	0.6000	0.4219
T9	7	LDF7-50A(1-5/8")	160.00 - 180.00	0.6000	0.4219
T9	10	LDF5-50A(7/8)	160.00 - 180.00	0.6000	0.4219
T9	13	LDF12-50A(2-1/4)	160.00 - 180.00	0.6000	0.4219
T9	14	LDF7-50A(1-5/8")	160.00 - 169.50	0.6000	0.4219
T9	16	HFT1206-24SV2-200(1-1/2")	160.00 - 180.00	0.6000	0.4219
T9	17	LDF5-50A(7/8)	160.00 - 180.00	0.6000	0.4219
T9	18	LDF6-50A(1-1/4)	160.00 - 180.00	0.6000	0.4219
T9	19	LDF7-50A(1-5/8)	160.00 - 180.00	0.6000	0.4219
T9	20	LDF6-50A(1-1/4")	160.00 - 180.00	0.6000	0.4219
T9	21	LDF4-50A(1/2)	160.00 - 180.00	0.6000	0.4219
T9	22	LDF4-50A(1/2)	160.00 - 180.00	0.6000	0.4219
T9	25	LDF7-50A(1-5/8)	160.00 - 180.00	0.6000	0.4219
T9	26	LDF7-50A(1-5/8)	160.00 - 180.00	0.6000	0.4219
T9	27	LDF7-50A(1-5/8)	160.00 - 180.00	0.6000	0.4219
T9	28	LDF4-50A(1/2)	160.00 - 180.00	0.6000	0.4219
T9	29	LDF4-50A(1/2)	160.00 - 180.00	0.6000	0.4219
T9	30	LDF7-50A(1-5/8)	160.00 - 180.00	0.6000	0.4219
T9	33	LDF7-50A(1-5/8)	160.00 - 180.00	0.6000	0.4219
T9	34	LDF5-50A(7/8)	160.00 - 180.00	0.6000	0.4219
T9	36	LDF6-50A(1-1/4)	160.00 - 180.00	0.6000	0.4219
T9	37	LDF7-50A(1-5/8)	160.00 - 180.00	0.6000	0.4219
T9	41	Climbing Ladder (Rail)	160.00 - 180.00	0.6000	0.4219
T9	42	Climbing Ladder (Rungs)	160.00 - 180.00	0.6000	0.4219
T9	44	LDF7-50A(1-5/8)	160.00 - 180.00	0.6000	0.4219

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T9	45	LDF7-50A(1-5/8)	160.00 - 180.00	0.6000	0.4219
T9	46	LDF6-50A(1-1/4)	160.00 - 180.00	0.6000	0.4219
T9	47	LDF7-50A(1-5/8)	160.00 - 180.00	0.6000	0.4219
T9	49	Feedline Ladder (Rail)	160.00 - 180.00	0.6000	0.4219
T9	50	Feedline Ladder (Rail)	160.00 - 180.00	0.6000	0.4219
T9	51	Feedline Ladder (Rail)	160.00 - 180.00	0.6000	0.4219
T9	52	Feedline Ladder (Rail)	160.00 - 180.00	0.6000	0.4219
T10	3	LDF7-50A(1-5/8")	140.00 - 160.00	0.6000	0.4460
T10	4	WR-VG86ST-BRD(3/4)	140.00 - 160.00	0.6000	0.4460
T10	5	LDF2-50A(3/8")	140.00 - 160.00	0.6000	0.4460
T10	6	LDF7-50A(1-5/8")	140.00 - 160.00	0.6000	0.4460
T10	7	LDF7-50A(1-5/8")	140.00 - 160.00	0.6000	0.4460
T10	10	LDF5-50A(7/8)	140.00 - 160.00	0.6000	0.4460
T10	13	LDF12-50A(2-1/4)	140.00 - 160.00	0.6000	0.4460
T10	14	LDF7-50A(1-5/8")	140.00 - 160.00	0.6000	0.4460
T10	16	HFT1206-24SV2-200(1-1/2")	140.00 - 160.00	0.6000	0.4460
T10	17	LDF5-50A(7/8)	140.00 - 160.00	0.6000	0.4460
T10	18	LDF6-50A(1-1/4)	140.00 - 160.00	0.6000	0.4460
T10	19	LDF7-50A(1-5/8)	140.00 - 160.00	0.6000	0.4460
T10	20	LDF6-50A(1-1/4")	140.00 - 160.00	0.6000	0.4460
T10	21	LDF4-50A(1/2)	140.00 - 160.00	0.6000	0.4460
T10	22	LDF4-50A(1/2)	140.00 - 160.00	0.6000	0.4460
T10	25	LDF7-50A(1-5/8)	140.00 - 160.00	0.6000	0.4460
T10	26	LDF7-50A(1-5/8)	140.00 - 160.00	0.6000	0.4460
T10	27	LDF7-50A(1-5/8)	140.00 - 160.00	0.6000	0.4460
T10	28	LDF4-50A(1/2)	140.00 - 160.00	0.6000	0.4460
T10	29	LDF4-50A(1/2)	140.00 - 160.00	0.6000	0.4460
T10	30	LDF7-50A(1-5/8)	140.00 - 160.00	0.6000	0.4460
T10	33	LDF7-50A(1-5/8)	140.00 - 160.00	0.6000	0.4460
T10	34	LDF5-50A(7/8)	140.00 - 160.00	0.6000	0.4460
T10	35	LDF4.5-50(5/8)	140.00 - 150.60	0.6000	0.4460

<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	CTNL058A	Page	30 of 80
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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T10	36	LDF6-50A(1-1/4)	140.00 - 160.00	0.6000	0.4460
T10	37	LDF7-50A(1-5/8)	140.00 - 160.00	0.6000	0.4460
T10	41	Climbing Ladder (Rail)	140.00 - 160.00	0.6000	0.4460
T10	42	Climbing Ladder (Rungs)	140.00 - 160.00	0.6000	0.4460
T10	44	LDF7-50A(1-5/8)	140.00 - 160.00	0.6000	0.4460
T10	45	LDF7-50A(1-5/8)	140.00 - 160.00	0.6000	0.4460
T10	46	LDF6-50A(1-1/4)	140.00 - 160.00	0.6000	0.4460
T10	47	LDF7-50A(1-5/8)	140.00 - 160.00	0.6000	0.4460
T10	49	Feedline Ladder (Rail)	140.00 - 160.00	0.6000	0.4460
T10	50	Feedline Ladder (Rail)	140.00 - 160.00	0.6000	0.4460
T10	51	Feedline Ladder (Rail)	140.00 - 160.00	0.6000	0.4460
T10	52	Feedline Ladder (Rail)	140.00 - 160.00	0.6000	0.4460
T11	3	LDF7-50A(1-5/8")	120.00 - 140.00	0.6000	0.4511
T11	4	WR-VG86ST-BRD(3/4)	120.00 - 140.00	0.6000	0.4511
T11	5	LDF2-50A(3/8")	120.00 - 140.00	0.6000	0.4511
T11	6	LDF7-50A(1-5/8")	120.00 - 140.00	0.6000	0.4511
T11	7	LDF7-50A(1-5/8")	120.00 - 140.00	0.6000	0.4511
T11	10	LDF5-50A(7/8)	120.00 - 140.00	0.6000	0.4511
T11	12	LDF5-50A(7/8)	120.00 - 136.00	0.6000	0.4511
T11	13	LDF12-50A(2-1/4)	120.00 - 140.00	0.6000	0.4511
T11	14	LDF7-50A(1-5/8")	120.00 - 140.00	0.6000	0.4511
T11	16	HFT1206-24SV2-200(1-1/2")	120.00 - 140.00	0.6000	0.4511
T11	17	LDF5-50A(7/8)	120.00 - 140.00	0.6000	0.4511
T11	18	LDF6-50A(1-1/4)	120.00 - 140.00	0.6000	0.4511
T11	19	LDF7-50A(1-5/8)	120.00 - 140.00	0.6000	0.4511
T11	20	LDF6-50A(1-1/4")	120.00 - 140.00	0.6000	0.4511
T11	21	LDF4-50A(1/2)	120.00 - 140.00	0.6000	0.4511
T11	22	LDF4-50A(1/2)	120.00 - 140.00	0.6000	0.4511
T11	25	LDF7-50A(1-5/8)	120.00 - 140.00	0.6000	0.4511
T11	26	LDF7-50A(1-5/8)	120.00 - 140.00	0.6000	0.4511
T11	27	LDF7-50A(1-5/8)	120.00 - 140.00	0.6000	0.4511

tnxTower Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job CTNL058A	Page 31 of 80
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	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
T11	28	LDF4-50A(1/2)	120.00 - 140.00	0.6000	0.4511
T11	29	LDF4-50A(1/2)	120.00 - 140.00	0.6000	0.4511
T11	30	LDF7-50A(1-5/8)	120.00 - 140.00	0.6000	0.4511
T11	31	LDF7-50A(1-5/8)	120.00 - 130.00	0.6000	0.4511
T11	33	LDF7-50A(1-5/8)	120.00 - 140.00	0.6000	0.4511
T11	34	LDF5-50A(7/8)	120.00 - 140.00	0.6000	0.4511
T11	35	LDF4.5-50(5/8)	120.00 - 140.00	0.6000	0.4511
T11	36	LDF6-50A(1-1/4)	120.00 - 140.00	0.6000	0.4511
T11	37	LDF7-50A(1-5/8)	120.00 - 140.00	0.6000	0.4511
T11	39	FJ-2SM-001-75M(3/16")	120.00 - 123.50	0.6000	0.4511
T11	41	Climbing Ladder (Rail)	120.00 - 140.00	0.6000	0.4511
T11	42	Climbing Ladder (Rungs)	120.00 - 140.00	0.6000	0.4511
T11	44	LDF7-50A(1-5/8)	120.00 - 140.00	0.6000	0.4511
T11	45	LDF7-50A(1-5/8)	120.00 - 140.00	0.6000	0.4511
T11	46	LDF6-50A(1-1/4)	120.00 - 140.00	0.6000	0.4511
T11	47	LDF7-50A(1-5/8)	120.00 - 140.00	0.6000	0.4511
T11	49	Feedline Ladder (Rail)	120.00 - 140.00	0.6000	0.4511
T11	50	Feedline Ladder (Rail)	120.00 - 140.00	0.6000	0.4511
T11	51	Feedline Ladder (Rail)	120.00 - 140.00	0.6000	0.4511
T11	52	Feedline Ladder (Rail)	120.00 - 140.00	0.6000	0.4511
T12	3	LDF7-50A(1-5/8")	100.00 - 120.00	0.6000	0.4569
T12	4	WR-VG86ST-BRD(3/4)	100.00 - 120.00	0.6000	0.4569
T12	5	LDF2-50A(3/8")	100.00 - 120.00	0.6000	0.4569
T12	6	LDF7-50A(1-5/8")	100.00 - 120.00	0.6000	0.4569
T12	7	LDF7-50A(1-5/8")	100.00 - 120.00	0.6000	0.4569
T12	10	LDF5-50A(7/8)	100.00 - 120.00	0.6000	0.4569
T12	12	LDF5-50A(7/8)	100.00 - 120.00	0.6000	0.4569
T12	13	LDF12-50A(2-1/4)	100.00 - 120.00	0.6000	0.4569
T12	14	LDF7-50A(1-5/8")	100.00 - 120.00	0.6000	0.4569
T12	16	HFT1206-24SV2-200(1-1/2")	100.00 - 120.00	0.6000	0.4569
T12	17	LDF5-50A(7/8)	100.00 - 120.00	0.6000	0.4569

<i>tnxTower</i> Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:	Job	CTNL058A	Page	32 of 80
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	Client	Foresite LLC	Designed by	Ahmet Colakoglu

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K_a No Ice</i>	<i>K_a Ice</i>
T12	18	LDF6-50A(1-1/4)	100.00 - 120.00	0.6000	0.4569
T12	19	LDF7-50A(1-5/8)	100.00 - 120.00	0.6000	0.4569
T12	20	LDF6-50A(1-1/4")	100.00 - 120.00	0.6000	0.4569
T12	21	LDF4-50A(1/2)	100.00 - 120.00	0.6000	0.4569
T12	22	LDF4-50A(1/2)	100.00 - 120.00	0.6000	0.4569
T12	25	LDF7-50A(1-5/8)	100.00 - 120.00	0.6000	0.4569
T12	26	LDF7-50A(1-5/8)	100.00 - 120.00	0.6000	0.4569
T12	27	LDF7-50A(1-5/8)	100.00 - 120.00	0.6000	0.4569
T12	28	LDF4-50A(1/2)	100.00 - 120.00	0.6000	0.4569
T12	29	LDF4-50A(1/2)	100.00 - 120.00	0.6000	0.4569
T12	30	LDF7-50A(1-5/8)	100.00 - 120.00	0.6000	0.4569
T12	31	LDF7-50A(1-5/8)	100.00 - 120.00	0.6000	0.4569
T12	32	LDF7-50A(1-5/8)	100.00 - 112.00	0.6000	0.4569
T12	33	LDF7-50A(1-5/8)	100.00 - 120.00	0.6000	0.4569
T12	34	LDF5-50A(7/8)	100.00 - 120.00	0.6000	0.4569
T12	35	LDF4.5-50(5/8)	100.00 - 120.00	0.6000	0.4569
T12	36	LDF6-50A(1-1/4)	100.00 - 120.00	0.6000	0.4569
T12	37	LDF7-50A(1-5/8)	100.00 - 120.00	0.6000	0.4569
T12	38	LDF1-50A(1/4")	100.00 - 106.50	0.6000	0.4569
T12	39	FJ-2SM-001-75M(3/16")	100.00 - 120.00	0.6000	0.4569
T12	41	Climbing Ladder (Rail)	100.00 - 120.00	0.6000	0.4569
T12	42	Climbing Ladder (Rungs)	100.00 - 120.00	0.6000	0.4569
T12	44	LDF7-50A(1-5/8)	100.00 - 120.00	0.6000	0.4569
T12	45	LDF7-50A(1-5/8)	100.00 - 120.00	0.6000	0.4569
T12	46	LDF6-50A(1-1/4)	100.00 - 120.00	0.6000	0.4569
T12	47	LDF7-50A(1-5/8)	100.00 - 120.00	0.6000	0.4569
T12	49	Feedline Ladder (Rail)	100.00 - 120.00	0.6000	0.4569
T12	50	Feedline Ladder (Rail)	100.00 - 120.00	0.6000	0.4569
T12	51	Feedline Ladder (Rail)	100.00 - 120.00	0.6000	0.4569
T12	52	Feedline Ladder (Rail)	100.00 - 120.00	0.6000	0.4569
T13	3	LDF7-50A(1-5/8")	80.00 - 100.00	0.6000	0.4638
T13	4	WR-VG86ST-BRD(3/4)	80.00 - 100.00	0.6000	0.4638

tnxTower

Destek Engineering, LLC
1281 Kennestone Circle, Ste 100
Marietta, GA
Phone: (770) 693-0835
FAX:

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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
T13	5	LDF2-50A(3/8")	80.00 - 100.00	0.6000	0.4638
T13	6	LDF7-50A(1-5/8")	80.00 - 100.00	0.6000	0.4638
T13	7	LDF7-50A(1-5/8")	80.00 - 100.00	0.6000	0.4638
T13	10	LDF5-50A(7/8)	80.00 - 100.00	0.6000	0.4638
T13	11	LDF4-50A(1/2)	80.00 - 90.00	0.6000	0.4638
T13	12	LDF5-50A(7/8)	80.00 - 100.00	0.6000	0.4638
T13	13	LDF12-50A(2-1/4)	80.00 - 100.00	0.6000	0.4638
T13	14	LDF7-50A(1-5/8")	80.00 - 100.00	0.6000	0.4638
T13	16	HFT1206-24SV2-200(1-1/2")	80.00 - 100.00	0.6000	0.4638
T13	17	LDF5-50A(7/8)	80.00 - 100.00	0.6000	0.4638
T13	18	LDF6-50A(1-1/4)	80.00 - 100.00	0.6000	0.4638
T13	19	LDF7-50A(1-5/8)	80.00 - 100.00	0.6000	0.4638
T13	20	LDF6-50A(1-1/4")	80.00 - 100.00	0.6000	0.4638
T13	21	LDF4-50A(1/2)	80.00 - 100.00	0.6000	0.4638
T13	22	LDF4-50A(1/2)	80.00 - 100.00	0.6000	0.4638
T13	25	LDF7-50A(1-5/8)	80.00 - 100.00	0.6000	0.4638
T13	26	LDF7-50A(1-5/8)	80.00 - 100.00	0.6000	0.4638
T13	27	LDF7-50A(1-5/8)	80.00 - 100.00	0.6000	0.4638
T13	28	LDF4-50A(1/2)	80.00 - 100.00	0.6000	0.4638
T13	29	LDF4-50A(1/2)	80.00 - 100.00	0.6000	0.4638
T13	30	LDF7-50A(1-5/8)	80.00 - 100.00	0.6000	0.4638
T13	31	LDF7-50A(1-5/8)	80.00 - 100.00	0.6000	0.4638
T13	32	LDF7-50A(1-5/8)	80.00 - 100.00	0.6000	0.4638
T13	33	LDF7-50A(1-5/8)	80.00 - 100.00	0.6000	0.4638
T13	34	LDF5-50A(7/8)	80.00 - 100.00	0.6000	0.4638
T13	35	LDF4.5-50(5/8)	80.00 - 100.00	0.6000	0.4638
T13	36	LDF6-50A(1-1/4)	80.00 - 100.00	0.6000	0.4638
T13	37	LDF7-50A(1-5/8)	80.00 - 100.00	0.6000	0.4638
T13	38	LDF1-50A(1/4")	80.00 - 100.00	0.6000	0.4638
T13	39	FJ-2SM-001-75M(3/16")	80.00 - 100.00	0.6000	0.4638
T13	41	Climbing Ladder (Rail)	80.00 - 100.00	0.6000	0.4638
T13	42	Climbing Ladder (Rungs)	80.00 - 100.00	0.6000	0.4638
T13	44	LDF7-50A(1-5/8)	80.00 - 100.00	0.6000	0.4638
T13	45	LDF7-50A(1-5/8)	80.00 - 100.00	0.6000	0.4638
T13	46	LDF6-50A(1-1/4)	80.00 - 100.00	0.6000	0.4638
T13	47	LDF7-50A(1-5/8)	80.00 - 100.00	0.6000	0.4638
T13	49	Feedline Ladder (Rail)	80.00 - 100.00	0.6000	0.4638
T13	50	Feedline Ladder (Rail)	80.00 - 100.00	0.6000	0.4638
T13	51	Feedline Ladder (Rail)	80.00 - 100.00	0.6000	0.4638
T13	52	Feedline Ladder (Rail)	80.00 - 100.00	0.6000	0.4638
T14	3	LDF7-50A(1-5/8")	60.00 - 80.00	0.6000	0.4722
T14	4	WR-VG86ST-BRD(3/4)	60.00 - 80.00	0.6000	0.4722
T14	5	LDF2-50A(3/8")	60.00 - 80.00	0.6000	0.4722
T14	6	LDF7-50A(1-5/8")	60.00 - 80.00	0.6000	0.4722
T14	7	LDF7-50A(1-5/8")	60.00 - 80.00	0.6000	0.4722
T14	10	LDF5-50A(7/8)	60.00 - 80.00	0.6000	0.4722
T14	11	LDF4-50A(1/2)	60.00 - 80.00	0.6000	0.4722
T14	12	LDF5-50A(7/8)	60.00 - 80.00	0.6000	0.4722
T14	13	LDF12-50A(2-1/4)	60.00 - 80.00	0.6000	0.4722
T14	14	LDF7-50A(1-5/8")	60.00 - 80.00	0.6000	0.4722
T14	16	HFT1206-24SV2-200(1-1/2")	60.00 - 80.00	0.6000	0.4722
T14	17	LDF5-50A(7/8)	60.00 - 80.00	0.6000	0.4722
T14	18	LDF6-50A(1-1/4)	60.00 - 80.00	0.6000	0.4722
T14	19	LDF7-50A(1-5/8)	60.00 - 80.00	0.6000	0.4722
T14	20	LDF6-50A(1-1/4")	60.00 - 80.00	0.6000	0.4722
T14	21	LDF4-50A(1/2)	60.00 - 80.00	0.6000	0.4722
T14	22	LDF4-50A(1/2)	60.00 - 80.00	0.6000	0.4722
T14	25	LDF7-50A(1-5/8)	60.00 - 80.00	0.6000	0.4722
T14	26	LDF7-50A(1-5/8)	60.00 - 80.00	0.6000	0.4722
T14	27	LDF7-50A(1-5/8)	60.00 - 80.00	0.6000	0.4722
T14	28	LDF4-50A(1/2)	60.00 - 80.00	0.6000	0.4722
T14	29	LDF4-50A(1/2)	60.00 - 80.00	0.6000	0.4722

<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	CTNL058A	Page	34 of 80
	Project	1975083	Date	15:32:54 06/07/19
	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
T14	30	LDF7-50A(1-5/8)	60.00 - 80.00	0.6000	0.4722
T14	31	LDF7-50A(1-5/8)	60.00 - 80.00	0.6000	0.4722
T14	32	LDF7-50A(1-5/8)	60.00 - 80.00	0.6000	0.4722
T14	33	LDF7-50A(1-5/8)	60.00 - 80.00	0.6000	0.4722
T14	34	LDF5-50A(7/8)	60.00 - 80.00	0.6000	0.4722
T14	35	LDF4.5-50(5/8)	60.00 - 80.00	0.6000	0.4722
T14	36	LDF6-50A(1-1/4)	60.00 - 80.00	0.6000	0.4722
T14	37	LDF7-50A(1-5/8)	60.00 - 80.00	0.6000	0.4722
T14	38	LDF1-50A(1/4")	60.00 - 80.00	0.6000	0.4722
T14	39	FJ-2SM-001-75M(3/16")	60.00 - 80.00	0.6000	0.4722
T14	41	Climbing Ladder (Rail)	60.00 - 80.00	0.6000	0.4722
T14	42	Climbing Ladder (Rungs)	60.00 - 80.00	0.6000	0.4722
T14	44	LDF7-50A(1-5/8)	60.00 - 80.00	0.6000	0.4722
T14	45	LDF7-50A(1-5/8)	60.00 - 80.00	0.6000	0.4722
T14	46	LDF6-50A(1-1/4)	60.00 - 80.00	0.6000	0.4722
T14	47	LDF7-50A(1-5/8)	60.00 - 80.00	0.6000	0.4722
T14	49	Feedline Ladder (Rail)	60.00 - 80.00	0.6000	0.4722
T14	50	Feedline Ladder (Rail)	60.00 - 80.00	0.6000	0.4722
T14	51	Feedline Ladder (Rail)	60.00 - 80.00	0.6000	0.4722
T14	52	Feedline Ladder (Rail)	60.00 - 80.00	0.6000	0.4722
T15	3	LDF7-50A(1-5/8")	40.00 - 60.00	0.6000	0.4833
T15	4	WR-VG86ST-BRD(3/4)	40.00 - 60.00	0.6000	0.4833
T15	5	LDF2-50A(3/8")	40.00 - 60.00	0.6000	0.4833
T15	6	LDF7-50A(1-5/8")	40.00 - 60.00	0.6000	0.4833
T15	7	LDF7-50A(1-5/8")	40.00 - 60.00	0.6000	0.4833
T15	10	LDF5-50A(7/8)	40.00 - 60.00	0.6000	0.4833
T15	11	LDF4-50A(1/2)	40.00 - 60.00	0.6000	0.4833
T15	12	LDF5-50A(7/8)	40.00 - 60.00	0.6000	0.4833
T15	13	LDF12-50A(2-1/4)	40.00 - 60.00	0.6000	0.4833
T15	14	LDF7-50A(1-5/8")	40.00 - 60.00	0.6000	0.4833
T15	16	HFT1206-24SV2-200(1-1/2")	40.00 - 60.00	0.6000	0.4833
T15	17	LDF5-50A(7/8)	40.00 - 60.00	0.6000	0.4833
T15	18	LDF6-50A(1-1/4)	40.00 - 60.00	0.6000	0.4833
T15	19	LDF7-50A(1-5/8)	40.00 - 60.00	0.6000	0.4833
T15	20	LDF6-50A(1-1/4")	40.00 - 60.00	0.6000	0.4833
T15	21	LDF4-50A(1/2)	40.00 - 60.00	0.6000	0.4833
T15	22	LDF4-50A(1/2)	40.00 - 60.00	0.6000	0.4833
T15	25	LDF7-50A(1-5/8)	40.00 - 60.00	0.6000	0.4833
T15	26	LDF7-50A(1-5/8)	40.00 - 60.00	0.6000	0.4833
T15	27	LDF7-50A(1-5/8)	40.00 - 60.00	0.6000	0.4833
T15	28	LDF4-50A(1/2)	40.00 - 60.00	0.6000	0.4833
T15	29	LDF4-50A(1/2)	40.00 - 60.00	0.6000	0.4833
T15	30	LDF7-50A(1-5/8)	40.00 - 60.00	0.6000	0.4833
T15	31	LDF7-50A(1-5/8)	40.00 - 60.00	0.6000	0.4833
T15	32	LDF7-50A(1-5/8)	40.00 - 60.00	0.6000	0.4833
T15	33	LDF7-50A(1-5/8)	40.00 - 60.00	0.6000	0.4833
T15	34	LDF5-50A(7/8)	40.00 - 60.00	0.6000	0.4833
T15	35	LDF4.5-50(5/8)	40.00 - 60.00	0.6000	0.4833
T15	36	LDF6-50A(1-1/4)	40.00 - 60.00	0.6000	0.4833
T15	37	LDF7-50A(1-5/8)	40.00 - 60.00	0.6000	0.4833
T15	38	LDF1-50A(1/4")	40.00 - 60.00	0.6000	0.4833
T15	39	FJ-2SM-001-75M(3/16")	40.00 - 60.00	0.6000	0.4833
T15	41	Climbing Ladder (Rail)	40.00 - 60.00	0.6000	0.4833
T15	42	Climbing Ladder (Rungs)	40.00 - 60.00	0.6000	0.4833
T15	44	LDF7-50A(1-5/8)	40.00 - 60.00	0.6000	0.4833
T15	45	LDF7-50A(1-5/8)	40.00 - 60.00	0.6000	0.4833
T15	46	LDF6-50A(1-1/4)	40.00 - 60.00	0.6000	0.4833
T15	47	LDF7-50A(1-5/8)	40.00 - 60.00	0.6000	0.4833
T15	49	Feedline Ladder (Rail)	40.00 - 60.00	0.6000	0.4833
T15	50	Feedline Ladder (Rail)	40.00 - 60.00	0.6000	0.4833
T15	51	Feedline Ladder (Rail)	40.00 - 60.00	0.6000	0.4833
T15	52	Feedline Ladder (Rail)	40.00 - 60.00	0.6000	0.4833

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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
T16	3	LDF7-50A(1-5/8")	20.00 - 40.00	0.6000	0.4994
T16	4	WR-VG86ST-BRD(3/4)	20.00 - 40.00	0.6000	0.4994
T16	5	LDF2-50A(3/8")	20.00 - 40.00	0.6000	0.4994
T16	6	LDF7-50A(1-5/8")	20.00 - 40.00	0.6000	0.4994
T16	7	LDF7-50A(1-5/8")	20.00 - 40.00	0.6000	0.4994
T16	10	LDF5-50A(7/8)	20.00 - 40.00	0.6000	0.4994
T16	11	LDF4-50A(1/2)	20.00 - 40.00	0.6000	0.4994
T16	12	LDF5-50A(7/8)	20.00 - 40.00	0.6000	0.4994
T16	13	LDF12-50A(2-1/4)	20.00 - 40.00	0.6000	0.4994
T16	14	LDF7-50A(1-5/8")	20.00 - 40.00	0.6000	0.4994
T16	15	LDF4-50A(1/2)	20.00 - 36.00	0.6000	0.4994
T16	16	HFT1206-24SV2-200(1-1/2")	20.00 - 40.00	0.6000	0.4994
T16	17	LDF5-50A(7/8)	20.00 - 40.00	0.6000	0.4994
T16	18	LDF6-50A(1-1/4)	20.00 - 40.00	0.6000	0.4994
T16	19	LDF7-50A(1-5/8)	20.00 - 40.00	0.6000	0.4994
T16	20	LDF6-50A(1-1/4")	20.00 - 40.00	0.6000	0.4994
T16	21	LDF4-50A(1/2)	20.00 - 40.00	0.6000	0.4994
T16	22	LDF4-50A(1/2)	20.00 - 40.00	0.6000	0.4994
T16	25	LDF7-50A(1-5/8)	20.00 - 40.00	0.6000	0.4994
T16	26	LDF7-50A(1-5/8)	20.00 - 40.00	0.6000	0.4994
T16	27	LDF7-50A(1-5/8)	20.00 - 40.00	0.6000	0.4994
T16	28	LDF4-50A(1/2)	20.00 - 40.00	0.6000	0.4994
T16	29	LDF4-50A(1/2)	20.00 - 40.00	0.6000	0.4994
T16	30	LDF7-50A(1-5/8)	20.00 - 40.00	0.6000	0.4994
T16	31	LDF7-50A(1-5/8)	20.00 - 40.00	0.6000	0.4994
T16	32	LDF7-50A(1-5/8)	20.00 - 40.00	0.6000	0.4994
T16	33	LDF7-50A(1-5/8)	20.00 - 40.00	0.6000	0.4994
T16	34	LDF5-50A(7/8)	20.00 - 40.00	0.6000	0.4994
T16	35	LDF4.5-50(5/8)	20.00 - 40.00	0.6000	0.4994
T16	36	LDF6-50A(1-1/4)	20.00 - 40.00	0.6000	0.4994
T16	37	LDF7-50A(1-5/8)	20.00 - 40.00	0.6000	0.4994
T16	38	LDF1-50A(1/4")	20.00 - 40.00	0.6000	0.4994
T16	39	FJ-2SM-001-75M(3/16")	20.00 - 40.00	0.6000	0.4994
T16	41	Climbing Ladder (Rail)	20.00 - 40.00	0.6000	0.4994
T16	42	Climbing Ladder (Rungs)	20.00 - 40.00	0.6000	0.4994
T16	44	LDF7-50A(1-5/8)	20.00 - 40.00	0.6000	0.4994
T16	45	LDF7-50A(1-5/8)	20.00 - 40.00	0.6000	0.4994
T16	46	LDF6-50A(1-1/4)	20.00 - 40.00	0.6000	0.4994
T16	47	LDF7-50A(1-5/8)	20.00 - 40.00	0.6000	0.4994
T16	49	Feedline Ladder (Rail)	20.00 - 40.00	0.6000	0.4994
T16	50	Feedline Ladder (Rail)	20.00 - 40.00	0.6000	0.4994
T16	51	Feedline Ladder (Rail)	20.00 - 40.00	0.6000	0.4994
T16	52	Feedline Ladder (Rail)	20.00 - 40.00	0.6000	0.4994
T17	3	LDF7-50A(1-5/8")	12.00 - 20.00	0.6000	0.4561
T17	4	WR-VG86ST-BRD(3/4)	12.00 - 20.00	0.6000	0.4561
T17	5	LDF2-50A(3/8")	12.00 - 20.00	0.6000	0.4561
T17	6	LDF7-50A(1-5/8")	12.00 - 20.00	0.6000	0.4561
T17	7	LDF7-50A(1-5/8")	12.00 - 20.00	0.6000	0.4561
T17	10	LDF5-50A(7/8)	12.00 - 20.00	0.6000	0.4561
T17	11	LDF4-50A(1/2)	12.00 - 20.00	0.6000	0.4561
T17	12	LDF5-50A(7/8)	12.00 - 20.00	0.6000	0.4561
T17	13	LDF12-50A(2-1/4)	12.00 - 20.00	0.6000	0.4561
T17	14	LDF7-50A(1-5/8")	12.00 - 20.00	0.6000	0.4561
T17	15	LDF4-50A(1/2)	12.00 - 20.00	0.6000	0.4561
T17	16	HFT1206-24SV2-200(1-1/2")	12.00 - 20.00	0.6000	0.4561
T17	17	LDF5-50A(7/8)	12.00 - 20.00	0.6000	0.4561
T17	18	LDF6-50A(1-1/4)	12.00 - 20.00	0.6000	0.4561
T17	19	LDF7-50A(1-5/8)	12.00 - 20.00	0.6000	0.4561
T17	20	LDF6-50A(1-1/4")	12.00 - 20.00	0.6000	0.4561
T17	21	LDF4-50A(1/2)	12.00 - 20.00	0.6000	0.4561
T17	22	LDF4-50A(1/2)	12.00 - 20.00	0.6000	0.4561
T17	25	LDF7-50A(1-5/8)	12.00 - 20.00	0.6000	0.4561

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	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
T17	26	LDF7-50A(1-5/8)	12.00 - 20.00	0.6000	0.4561
T17	27	LDF7-50A(1-5/8)	12.00 - 20.00	0.6000	0.4561
T17	28	LDF4-50A(1/2)	12.00 - 20.00	0.6000	0.4561
T17	29	LDF4-50A(1/2)	12.00 - 20.00	0.6000	0.4561
T17	30	LDF7-50A(1-5/8)	12.00 - 20.00	0.6000	0.4561
T17	31	LDF7-50A(1-5/8)	12.00 - 20.00	0.6000	0.4561
T17	32	LDF7-50A(1-5/8)	12.00 - 20.00	0.6000	0.4561
T17	33	LDF7-50A(1-5/8)	12.00 - 20.00	0.6000	0.4561
T17	34	LDF5-50A(7/8)	12.00 - 20.00	0.6000	0.4561
T17	35	LDF4.5-50(5/8)	12.00 - 20.00	0.6000	0.4561
T17	36	LDF6-50A(1-1/4)	12.00 - 20.00	0.6000	0.4561
T17	37	LDF7-50A(1-5/8)	12.00 - 20.00	0.6000	0.4561
T17	38	LDF1-50A(1/4")	12.00 - 20.00	0.6000	0.4561
T17	39	FJ-2SM-001-75M(3/16")	12.00 - 20.00	0.6000	0.4561
T17	41	Climbing Ladder (Rail)	12.00 - 20.00	0.6000	0.4561
T17	42	Climbing Ladder (Rungs)	12.00 - 20.00	0.6000	0.4561
T17	44	LDF7-50A(1-5/8)	12.00 - 20.00	0.6000	0.4561
T17	45	LDF7-50A(1-5/8)	12.00 - 20.00	0.6000	0.4561
T17	46	LDF6-50A(1-1/4)	12.00 - 20.00	0.6000	0.4561
T17	47	LDF7-50A(1-5/8)	12.00 - 20.00	0.6000	0.4561
T17	49	Feedline Ladder (Rail)	12.00 - 20.00	0.6000	0.4561
T17	50	Feedline Ladder (Rail)	12.00 - 20.00	0.6000	0.4561
T17	51	Feedline Ladder (Rail)	12.00 - 20.00	0.6000	0.4561
T17	52	Feedline Ladder (Rail)	12.00 - 20.00	0.6000	0.4561
T18	3	LDF7-50A(1-5/8")	6.70 - 12.00	0.6000	0.4155
T18	4	WR-VG86ST-BRD(3/4)	6.70 - 12.00	0.6000	0.4155
T18	5	LDF2-50A(3/8")	6.70 - 12.00	0.6000	0.4155
T18	6	LDF7-50A(1-5/8")	6.70 - 12.00	0.6000	0.4155
T18	7	LDF7-50A(1-5/8")	6.70 - 12.00	0.6000	0.4155
T18	10	LDF5-50A(7/8)	6.70 - 12.00	0.6000	0.4155
T18	11	LDF4-50A(1/2)	6.70 - 12.00	0.6000	0.4155
T18	12	LDF5-50A(7/8)	6.70 - 12.00	0.6000	0.4155
T18	13	LDF12-50A(2-1/4)	6.70 - 12.00	0.6000	0.4155
T18	14	LDF7-50A(1-5/8")	6.70 - 12.00	0.6000	0.4155
T18	15	LDF4-50A(1/2)	6.70 - 12.00	0.6000	0.4155
T18	16	HFT1206-24SV2-200(1-1/2")	6.70 - 12.00	0.6000	0.4155
T18	17	LDF5-50A(7/8)	6.70 - 12.00	0.6000	0.4155
T18	18	LDF6-50A(1-1/4)	6.70 - 12.00	0.6000	0.4155
T18	19	LDF7-50A(1-5/8)	6.70 - 12.00	0.6000	0.4155
T18	20	LDF6-50A(1-1/4")	6.70 - 12.00	0.6000	0.4155
T18	21	LDF4-50A(1/2)	6.70 - 12.00	0.6000	0.4155
T18	22	LDF4-50A(1/2)	6.70 - 12.00	0.6000	0.4155
T18	25	LDF7-50A(1-5/8)	6.70 - 12.00	0.6000	0.4155
T18	26	LDF7-50A(1-5/8)	6.70 - 12.00	0.6000	0.4155
T18	27	LDF7-50A(1-5/8)	6.70 - 12.00	0.6000	0.4155
T18	28	LDF4-50A(1/2)	6.70 - 12.00	0.6000	0.4155
T18	29	LDF4-50A(1/2)	6.70 - 12.00	0.6000	0.4155
T18	30	LDF7-50A(1-5/8)	6.70 - 12.00	0.6000	0.4155
T18	31	LDF7-50A(1-5/8)	6.70 - 12.00	0.6000	0.4155
T18	32	LDF7-50A(1-5/8)	6.70 - 12.00	0.6000	0.4155
T18	33	LDF7-50A(1-5/8)	6.70 - 12.00	0.6000	0.4155
T18	34	LDF5-50A(7/8)	6.70 - 12.00	0.6000	0.4155
T18	35	LDF4.5-50(5/8)	6.70 - 12.00	0.6000	0.4155
T18	36	LDF6-50A(1-1/4)	6.70 - 12.00	0.6000	0.4155
T18	37	LDF7-50A(1-5/8)	6.70 - 12.00	0.6000	0.4155
T18	38	LDF1-50A(1/4")	6.70 - 12.00	0.6000	0.4155
T18	39	FJ-2SM-001-75M(3/16")	6.70 - 12.00	0.6000	0.4155
T18	41	Climbing Ladder (Rail)	6.70 - 12.00	0.6000	0.4155
T18	42	Climbing Ladder (Rungs)	6.70 - 12.00	0.6000	0.4155
T18	44	LDF7-50A(1-5/8)	6.70 - 12.00	0.6000	0.4155
T18	45	LDF7-50A(1-5/8)	6.70 - 12.00	0.6000	0.4155
T18	46	LDF6-50A(1-1/4)	6.70 - 12.00	0.6000	0.4155

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T18	47	LDF7-50A(1-5/8)	6.70 - 12.00	0.6000	0.4155
T18	49	Feedline Ladder (Rail)	6.70 - 12.00	0.6000	0.4155
T18	50	Feedline Ladder (Rail)	6.70 - 12.00	0.6000	0.4155
T18	51	Feedline Ladder (Rail)	6.70 - 12.00	0.6000	0.4155
T18	52	Feedline Ladder (Rail)	6.70 - 12.00	0.6000	0.4155
T19	3	LDF7-50A(1-5/8")	6.00 - 6.70	0.4777	0.0743
T19	4	WR-VG86ST-BRD(3/4)	6.00 - 6.70	0.4777	0.0743
T19	5	LDF2-50A(3/8")	6.00 - 6.70	0.4777	0.0743
T19	6	LDF7-50A(1-5/8")	6.00 - 6.70	0.4777	0.0743
T19	7	LDF7-50A(1-5/8")	6.00 - 6.70	0.4777	0.0743
T19	10	LDF5-50A(7/8)	6.00 - 6.70	0.4777	0.0743
T19	11	LDF4-50A(1/2)	6.00 - 6.70	0.4777	0.0743
T19	12	LDF5-50A(7/8)	6.00 - 6.70	0.4777	0.0743
T19	13	LDF12-50A(2-1/4)	6.00 - 6.70	0.4777	0.0743
T19	14	LDF7-50A(1-5/8")	6.00 - 6.70	0.4777	0.0743
T19	15	LDF4-50A(1/2)	6.00 - 6.70	0.4777	0.0743
T19	16	HFT1206-24SV2-200(1-1/2")	6.00 - 6.70	0.4777	0.0743
T19	17	LDF5-50A(7/8)	6.00 - 6.70	0.4777	0.0743
T19	18	LDF6-50A(1-1/4)	6.00 - 6.70	0.4777	0.0743
T19	19	LDF7-50A(1-5/8)	6.00 - 6.70	0.4777	0.0743
T19	20	LDF6-50A(1-1/4")	6.00 - 6.70	0.4777	0.0743
T19	21	LDF4-50A(1/2)	6.00 - 6.70	0.4777	0.0743
T19	22	LDF4-50A(1/2)	6.00 - 6.70	0.4777	0.0743
T19	25	LDF7-50A(1-5/8)	6.00 - 6.70	0.4777	0.0743
T19	26	LDF7-50A(1-5/8)	6.00 - 6.70	0.4777	0.0743
T19	27	LDF7-50A(1-5/8)	6.00 - 6.70	0.4777	0.0743
T19	28	LDF4-50A(1/2)	6.00 - 6.70	0.4777	0.0743
T19	29	LDF4-50A(1/2)	6.00 - 6.70	0.4777	0.0743
T19	30	LDF7-50A(1-5/8)	6.00 - 6.70	0.4777	0.0743
T19	31	LDF7-50A(1-5/8)	6.00 - 6.70	0.4777	0.0743
T19	32	LDF7-50A(1-5/8)	6.00 - 6.70	0.4777	0.0743
T19	33	LDF7-50A(1-5/8)	6.00 - 6.70	0.4777	0.0743
T19	34	LDF5-50A(7/8)	6.00 - 6.70	0.4777	0.0743
T19	35	LDF4.5-50(5/8)	6.00 - 6.70	0.4777	0.0743
T19	36	LDF6-50A(1-1/4)	6.00 - 6.70	0.4777	0.0743
T19	37	LDF7-50A(1-5/8)	6.00 - 6.70	0.4777	0.0743
T19	38	LDF1-50A(1/4")	6.00 - 6.70	0.4777	0.0743
T19	39	FJ-2SM-001-75M(3/16")	6.00 - 6.70	0.4777	0.0743
T19	41	Climbing Ladder (Rail)	6.00 - 6.70	0.4777	0.0743
T19	42	Climbing Ladder (Rungs)	6.00 - 6.70	0.4777	0.0743
T19	44	LDF7-50A(1-5/8)	6.00 - 6.70	0.4777	0.0743
T19	45	LDF7-50A(1-5/8)	6.00 - 6.70	0.4777	0.0743
T19	46	LDF6-50A(1-1/4)	6.00 - 6.70	0.4777	0.0743
T19	47	LDF7-50A(1-5/8)	6.00 - 6.70	0.4777	0.0743
T19	49	Feedline Ladder (Rail)	0.00 - 6.70	0.4777	0.0743
T19	50	Feedline Ladder (Rail)	0.00 - 6.70	0.4777	0.0743
T19	51	Feedline Ladder (Rail)	0.00 - 6.70	0.4777	0.0743
T19	52	Feedline Ladder (Rail)	0.00 - 6.70	0.4777	0.0743

Discrete Tower Loads

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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

305.5ft								
3" Dia 20' Omni	C	From Leg	10.00 0.00 0.00	0.0000	305.50	No Ice 4.00 1/2" Ice 6.00 1" Ice 8.00	4.00 6.00 8.00	0 0 0
3" Dia 20' Omni	B	From Leg	10.00 0.00 0.00	0.0000	289.00	No Ice 4.00 1/2" Ice 6.00 1" Ice 8.00	4.00 6.00 8.00	0 0 0
3" Dia 20' Omni	C	From Leg	10.00 0.00 0.00	0.0000	289.00	No Ice 4.00 1/2" Ice 6.00 1" Ice 8.00	4.00 6.00 8.00	0 0 0
LeBlanc 10' Standoff (3)	B	From Leg	0.00 0.00 0.00	0.0000	294.00	No Ice 34.00 1/2" Ice 44.00 1" Ice 54.00	34.00 44.00 54.00	2 2 3
LeBlanc 10' Standoff (3)	C	From Leg	0.00 0.00 0.00	0.0000	294.00	No Ice 34.00 1/2" Ice 44.00 1" Ice 54.00	34.00 44.00 54.00	2 2 3
1105-1A	C	From Leg	0.00 0.00 0.00	0.0000	288.00	No Ice 4.00 1/2" Ice 5.00 1" Ice 6.00	4.00 5.00 6.00	0 0 0
1105-1A	C	From Leg	0.00 0.00 0.00	0.0000	279.00	No Ice 4.00 1/2" Ice 5.00 1" Ice 6.00	4.00 5.00 6.00	0 0 0
5'3"x4" Pipe mount	A	From Leg	0.00 0.00 0.00	0.0000	274.00	No Ice 1.41 1/2" Ice 2.21 1" Ice 3.01	1.41 2.21 3.01	0 0 0

3" Dia 20' Omni	A	From Leg	4.00 0.00 0.00	0.0000	274.25	No Ice 4.00 1/2" Ice 6.00 1" Ice 8.00	4.00 6.00 8.00	0 0 0
Pirod 4' Side Mount Standoff	A	From Leg	0.00 0.00 0.00	0.0000	264.25	No Ice 2.72 1/2" Ice 4.91 1" Ice 7.10	2.72 4.91 7.10	0 0 0
3" Dia 20' Omni	A	From Leg	4.00 0.00 0.00	0.0000	252.00	No Ice 4.00 1/2" Ice 6.00 1" Ice 8.00	4.00 6.00 8.00	0 0 0
Pirod 4' Side Mount Standoff	A	From Leg	0.00 0.00 0.00	0.0000	262.00	No Ice 2.72 1/2" Ice 4.91 1" Ice 7.10	2.72 4.91 7.10	0 0 0
226.5ft Sprint								
NNVV-65B-R4	A	From Leg	3.00 0.00 0.00	0.0000	226.50	No Ice 12.27 1/2" Ice 12.77 1" Ice 13.27	5.75 6.21 6.67	0 0 0
NNVV-65B-R4	B	From Leg	3.00 0.00 0.00	0.0000	226.50	No Ice 12.27 1/2" Ice 12.77 1" Ice 13.27	5.75 6.21 6.67	0 0 0
NNVV-65B-R4	C	From Leg	3.00 0.00 0.00	0.0000	226.50	No Ice 12.27 1/2" Ice 12.77 1" Ice 13.27	5.75 6.21 6.67	0 0 0
APXV9TM14-ALU-I20	A	From Leg	3.00 0.00 0.00	0.0000	226.50	No Ice 6.34 1/2" Ice 6.72 1" Ice 7.10	3.61 3.97 4.33	0 0 0
APXV9TM14-ALU-I20	B	From Leg	3.00 0.00 0.00	0.0000	226.50	No Ice 6.34 1/2" Ice 6.72 1" Ice 7.10	3.61 3.97 4.33	0 0 0
APXV9TM14-ALU-I20	C	From Leg	3.00 0.00 0.00	0.0000	226.50	No Ice 6.34 1/2" Ice 6.72 1" Ice 7.10	3.61 3.97 4.33	0 0 0

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	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Lateral					
			0.00						
			0.00			1/2" Ice	6.72	3.97	0
			0.00			1" Ice	7.10	4.33	0
Alcatel	A	From Leg	1.00	0.0000	226.50	No Ice	2.32	2.24	0
TME-FD-RRH-4x45-1900			0.00			1/2" Ice	2.52	2.44	0
			0.00			1" Ice	2.74	2.65	0
Alcatel	B	From Leg	1.00	0.0000	226.50	No Ice	2.32	2.24	0
TME-FD-RRH-4x45-1900			0.00			1/2" Ice	2.52	2.44	0
			0.00			1" Ice	2.74	2.65	0
Alcatel	C	From Leg	1.00	0.0000	226.50	No Ice	2.32	2.24	0
TME-FD-RRH-4x45-1900			0.00			1/2" Ice	2.52	2.44	0
			0.00			1" Ice	2.74	2.65	0
(2) FD-RRH-2x50-800	A	From Leg	1.50	0.0000	226.50	No Ice	1.36	3.01	0
			0.00			1/2" Ice	1.52	3.22	0
			0.00			1" Ice	1.68	3.45	0
(2) FD-RRH-2x50-800	B	From Leg	1.50	0.0000	226.50	No Ice	1.36	3.01	0
			0.00			1/2" Ice	1.52	3.22	0
			0.00			1" Ice	1.68	3.45	0
(2) FD-RRH-2x50-800	C	From Leg	1.50	0.0000	226.50	No Ice	1.36	3.01	0
			0.00			1/2" Ice	1.52	3.22	0
			0.00			1" Ice	1.68	3.45	0
TD-RRH8x20-25	A	From Leg	3.00	0.0000	226.50	No Ice	4.05	1.53	0
			0.00			1/2" Ice	4.30	1.71	0
			0.00			1" Ice	4.56	1.90	0
TD-RRH8x20-25	B	From Leg	3.00	0.0000	226.50	No Ice	4.05	1.53	0
			0.00			1/2" Ice	4.30	1.71	0
			0.00			1" Ice	4.56	1.90	0
TD-RRH8x20-25	C	From Leg	3.00	0.0000	226.50	No Ice	4.05	1.53	0
			0.00			1/2" Ice	4.30	1.71	0
			0.00			1" Ice	4.56	1.90	0
Site Pro LTF12-4126	A	From Leg	0.00	0.0000	226.50	No Ice	30.70	30.70	1
			0.00			1/2" Ice	42.00	42.00	1
			0.00			1" Ice	53.30	53.30	1
Site Pro LTF12-4126	B	From Leg	0.00	0.0000	226.50	No Ice	30.70	30.70	1
			0.00			1/2" Ice	42.00	42.00	1
			0.00			1" Ice	53.30	53.30	1
Site Pro LTF12-4126	C	From Leg	0.00	0.0000	226.50	No Ice	30.70	30.70	1
			0.00			1/2" Ice	42.00	42.00	1
			0.00			1" Ice	53.30	53.30	1

219.5ft									
1105-1A	A	From Leg	0.00	0.0000	219.50	No Ice	4.00	4.00	0
			0.00			1/2" Ice	5.00	5.00	0
			0.00			1" Ice	6.00	6.00	0

4'-P1.5x0.145	C	From Leg	0.00	0.0000	209.00	No Ice	0.76	0.76	0
			0.00			1/2" Ice	1.01	1.01	0
			0.00			1" Ice	1.26	1.26	0
MF-950B	C	From Leg	0.00	0.0000	209.00	No Ice	8.40	8.40	0
			0.00			1/2" Ice	8.79	8.79	0
			0.00			1" Ice	9.20	9.20	0
PiRod 6-8' Box Arm	A	From Leg	0.00	0.0000	204.00	No Ice	4.50	4.50	0
			0.00			1/2" Ice	9.87	9.87	0
			0.00			1" Ice	15.24	15.24	0
8'-2" Dia Pipe	A	From Leg	6.00	0.0000	208.00	No Ice	1.60	1.60	0
			0.00			1/2" Ice	2.40	2.40	0
			0.00			1" Ice	3.20	3.20	0
PiRod 6-8' Box Arm	B	From Leg	0.00	0.0000	205.50	No Ice	4.50	4.50	0

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	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Vert					
			ft	ft	°	ft	ft ²	ft ²	K
			0.00			1/2" Ice	9.87	9.87	0
			0.00			1" Ice	15.24	15.24	0
15' Omni	B	From Leg	6.00	0.0000	213.00	No Ice	1.80	1.80	0
			0.00			1/2" Ice	2.73	2.73	0
			0.00			1" Ice	3.66	3.66	0

200ft AT&T									
7770.00 w/ Mount Pipe	A	From Leg	1.50	0.0000	200.00	No Ice	5.75	4.25	0
			0.00			1/2" Ice	6.18	5.01	0
			0.00			1" Ice	6.61	5.71	0
7770.00 w/ Mount Pipe	B	From Leg	1.50	0.0000	200.00	No Ice	5.75	4.25	0
			0.00			1/2" Ice	6.18	5.01	0
			0.00			1" Ice	6.61	5.71	0
7770.00 w/ Mount Pipe	C	From Leg	1.50	0.0000	200.00	No Ice	5.75	4.25	0
			0.00			1/2" Ice	6.18	5.01	0
			0.00			1" Ice	6.61	5.71	0
(2)	A	From Leg	1.50	0.0000	200.00	No Ice	5.23	4.02	0
AM-X-CD-14-65-00T-RET			0.00			1/2" Ice	5.62	4.63	0
w/ Mount Pipe			0.00			1" Ice	6.01	5.26	0
DTMABP7819VG12A	A	From Leg	1.50	0.0000	200.00	No Ice	0.98	0.34	0
			0.00			1/2" Ice	1.10	0.42	0
			0.00			1" Ice	1.23	0.51	0
DTMABP7819VG12A	B	From Leg	1.50	0.0000	200.00	No Ice	0.98	0.34	0
			0.00			1/2" Ice	1.10	0.42	0
			0.00			1" Ice	1.23	0.51	0
DTMABP7819VG12A	C	From Leg	1.50	0.0000	200.00	No Ice	0.98	0.34	0
			0.00			1/2" Ice	1.10	0.42	0
			0.00			1" Ice	1.23	0.51	0
(2) RRUS 11	A	From Leg	1.50	0.0000	200.00	No Ice	2.78	1.19	0
			0.00			1/2" Ice	2.99	1.33	0
			0.00			1" Ice	3.21	1.49	0
(2) RRUS 11	B	From Leg	1.50	0.0000	200.00	No Ice	2.78	1.19	0
			0.00			1/2" Ice	2.99	1.33	0
			0.00			1" Ice	3.21	1.49	0
(2) RRUS 11	C	From Leg	1.50	0.0000	200.00	No Ice	2.78	1.19	0
			0.00			1/2" Ice	2.99	1.33	0
			0.00			1" Ice	3.21	1.49	0
DC6-48-60-18-8F	C	From Leg	1.50	0.0000	200.00	No Ice	0.79	0.79	0
			0.00			1/2" Ice	1.27	1.27	0
			0.00			1" Ice	1.45	1.45	0
Pirod 10' PCS Frame	A	From Leg	0.00	0.0000	200.00	No Ice	9.00	9.00	0
			0.00			1/2" Ice	13.20	13.20	0
			0.00			1" Ice	17.40	17.40	0
Pirod 10' PCS Frame	B	From Leg	0.00	0.0000	200.00	No Ice	9.00	9.00	0
			0.00			1/2" Ice	13.20	13.20	0
			0.00			1" Ice	17.40	17.40	0
Pirod 10' PCS Frame	C	From Leg	0.00	0.0000	200.00	No Ice	9.00	9.00	0
			0.00			1/2" Ice	13.20	13.20	0
			0.00			1" Ice	17.40	17.40	0

185ft T-Mobile									
AIR 21 B2A/B4P w/ Mount Pipe	A	From Leg	3.00	0.0000	185.00	No Ice	6.16	5.55	0
			0.00			1/2" Ice	6.60	6.30	0
			0.00			1" Ice	7.03	7.00	0
AIR 21 B2A/B4P w/ Mount Pipe	B	From Leg	3.00	0.0000	185.00	No Ice	6.16	5.55	0
			0.00			1/2" Ice	6.60	6.30	0

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight	
			Horz	Lateral						Vert
AIR 21 B2A/B4P w/ Mount Pipe	C	From Leg	0.00		0.0000	185.00	1" Ice	7.03	7.00	0
			3.00				No Ice	6.16	5.55	0
			0.00				1/2" Ice	6.60	6.30	0
			0.00				1" Ice	7.03	7.00	0
AIR 21 B4A/B2P w/ Mount Pipe	A	From Leg	3.00		0.0000	185.00	No Ice	6.16	5.55	0
			0.00				1/2" Ice	6.60	6.30	0
			0.00				1" Ice	7.03	7.00	0
			0.00				No Ice	6.16	5.55	0
AIR 21 B4A/B2P w/ Mount Pipe	B	From Leg	3.00		0.0000	185.00	1/2" Ice	6.60	6.30	0
			0.00				1" Ice	7.03	7.00	0
			0.00				No Ice	6.16	5.55	0
			0.00				1/2" Ice	6.60	6.30	0
AIR 21 B4A/B2P w/ Mount Pipe	C	From Leg	3.00		0.0000	185.00	1" Ice	7.03	7.00	0
			0.00				No Ice	6.16	5.55	0
			0.00				1/2" Ice	6.60	6.30	0
			0.00				1" Ice	7.03	7.00	0
APXVAARR24_43-U-NA20 w/ Mount Pipe	A	From Leg	3.00		0.0000	185.00	No Ice	20.48	11.02	0
			0.00				1/2" Ice	21.23	12.55	0
			0.00				1" Ice	21.99	14.10	0
			0.00				No Ice	20.48	11.02	0
APXVAARR24_43-U-NA20 w/ Mount Pipe	B	From Leg	3.00		0.0000	185.00	1/2" Ice	21.23	12.55	0
			0.00				1" Ice	21.99	14.10	0
			0.00				No Ice	20.48	11.02	0
			0.00				1/2" Ice	21.23	12.55	0
APXVAARR24_43-U-NA20 w/ Mount Pipe	C	From Leg	3.00		0.0000	185.00	1" Ice	21.99	14.10	0
			0.00				No Ice	20.48	11.02	0
			0.00				1/2" Ice	21.23	12.55	0
			0.00				1" Ice	21.99	14.10	0
RADIO 4449 B12/B71	A	From Leg	3.00		0.0000	185.00	No Ice	1.65	1.30	0
			0.00				1/2" Ice	1.81	1.44	0
			0.00				1" Ice	1.98	1.60	0
			0.00				No Ice	1.65	1.30	0
RADIO 4449 B12/B71	B	From Leg	3.00		0.0000	185.00	1/2" Ice	1.81	1.44	0
			0.00				1" Ice	1.98	1.60	0
			0.00				No Ice	1.65	1.30	0
			0.00				1/2" Ice	1.81	1.44	0
RADIO 4449 B12/B71	C	From Leg	3.00		0.0000	185.00	1" Ice	1.98	1.60	0
			0.00				No Ice	1.65	1.30	0
			0.00				1/2" Ice	1.81	1.44	0
			0.00				1" Ice	1.98	1.60	0
Generic Twin Style 1B	A	From Leg	3.00		0.0000	185.00	No Ice	0.78	0.29	0
			0.00				1/2" Ice	0.90	0.38	0
			0.00				1" Ice	1.02	0.47	0
			0.00				No Ice	0.78	0.29	0
Generic Twin Style 1B	B	From Leg	3.00		0.0000	185.00	1/2" Ice	0.90	0.38	0
			0.00				1" Ice	1.02	0.47	0
			0.00				No Ice	0.78	0.29	0
			0.00				1/2" Ice	0.90	0.38	0
Generic Twin Style 1B	C	From Leg	3.00		0.0000	185.00	1" Ice	1.02	0.47	0
			0.00				No Ice	0.78	0.29	0
			0.00				1/2" Ice	0.90	0.38	0
			0.00				1" Ice	1.02	0.47	0
SFR-K Mod	A	From Leg	3.00		0.0000	185.00	No Ice	8.75	8.75	0
			0.00				1/2" Ice	9.24	9.24	0
			0.00				1" Ice	9.73	9.73	0
			0.00				No Ice	8.75	8.75	0
SFR-K Mod	B	From Leg	3.00		0.0000	185.00	1/2" Ice	9.24	9.24	0
			0.00				1" Ice	9.73	9.73	0
			0.00				No Ice	8.75	8.75	0
			0.00				1/2" Ice	9.24	9.24	0
SFR-K Mod	C	From Leg	3.00		0.0000	185.00	1" Ice	9.73	9.73	0
			0.00				No Ice	8.75	8.75	0
			0.00				1/2" Ice	9.24	9.24	0
			0.00				1" Ice	9.73	9.73	0
Sector Mount [SM 502-3]	A	None			0.0000	185.00	No Ice	33.02	33.02	2
							1/2" Ice	47.36	47.36	2
							1" Ice	61.70	61.70	3
							No Ice	33.02	33.02	2

169.5ft Verizon										
(2) LPA-80080-4CF-EDIN w/ Mount Pipe	A	From Leg	2.00		0.0000	169.50	No Ice	3.35	5.98	0
			0.00				1/2" Ice	3.97	7.08	0
			0.00				1" Ice	4.47	7.89	0

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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
(2) LPA-80063/4CFx5 w/ Mount Pipe	B	From Leg	2.00 0.00 0.00	0.0000	169.50	No Ice 6.87 1/2" Ice 7.53 1" Ice 8.06	7.09 8.15 8.92	0 0 0
(2) LPA-80063/4CFx5 w/ Mount Pipe	C	From Leg	2.00 0.00 0.00	0.0000	169.50	No Ice 6.87 1/2" Ice 7.53 1" Ice 8.06	7.09 8.15 8.92	0 0 0
BXA-70063-6CF-EDIN w/ Mount Pipe	A	From Leg	2.00 0.00 0.00	0.0000	169.50	No Ice 7.81 1/2" Ice 8.36 1" Ice 8.87	5.80 6.95 7.82	0 0 0
BXA-70063-6CF-EDIN w/ Mount Pipe	B	From Leg	2.00 0.00 0.00	0.0000	169.50	No Ice 7.81 1/2" Ice 8.36 1" Ice 8.87	5.80 6.95 7.82	0 0 0
BXA-70063-6CF-EDIN w/ Mount Pipe	C	From Leg	2.00 0.00 0.00	0.0000	169.50	No Ice 7.81 1/2" Ice 8.36 1" Ice 8.87	5.80 6.95 7.82	0 0 0
BXA-171063-12BF-EDIN-2 w/ Mount Pipe	A	From Leg	2.00 0.00 0.00	0.0000	169.50	No Ice 3.72 1/2" Ice 4.34 1" Ice 4.85	3.53 4.57 5.32	0 0 0
BXA-171063-12BF-EDIN-2 w/ Mount Pipe	B	From Leg	2.00 0.00 0.00	0.0000	169.50	No Ice 3.72 1/2" Ice 4.34 1" Ice 4.85	3.53 4.57 5.32	0 0 0
BXA-171063-12BF-EDIN-2 w/ Mount Pipe	C	From Leg	2.00 0.00 0.00	0.0000	169.50	No Ice 3.72 1/2" Ice 4.34 1" Ice 4.85	3.53 4.57 5.32	0 0 0
(2) E15V95P08	A	From Leg	2.00 0.00 0.00	0.0000	169.50	No Ice 0.39 1/2" Ice 0.46 1" Ice 0.55	0.11 0.17 0.23	0 0 0
(2) E15V95P08	B	From Leg	2.00 0.00 0.00	0.0000	169.50	No Ice 0.39 1/2" Ice 0.46 1" Ice 0.55	0.11 0.17 0.23	0 0 0
(2) E15V95P08	C	From Leg	2.00 0.00 0.00	0.0000	169.50	No Ice 0.39 1/2" Ice 0.46 1" Ice 0.55	0.11 0.17 0.23	0 0 0
Pirot 12' T-Frame Sector	A	From Leg	0.00 0.00 0.00	0.0000	168.00	No Ice 13.60 1/2" Ice 18.40 1" Ice 23.20	13.60 18.40 23.20	0 1 1
Pirot 12' T-Frame Sector	B	From Leg	0.00 0.00 0.00	0.0000	168.00	No Ice 13.60 1/2" Ice 18.40 1" Ice 23.20	13.60 18.40 23.20	0 1 1
Pirot 12' T-Frame Sector	C	From Leg	0.00 0.00 0.00	0.0000	168.00	No Ice 13.60 1/2" Ice 18.40 1" Ice 23.20	13.60 18.40 23.20	0 1 1
***** *****								
13' Dipole	A	From Leg	4.00 0.00 0.00	0.0000	150.50	No Ice 4.00 1/2" Ice 6.00 1" Ice 8.00	4.00 6.00 8.00	0 0 0
(3) 4'-P1.5x0.145	A	From Leg	0.00 0.00 0.00	0.0000	150.50	No Ice 0.76 1/2" Ice 1.01 1" Ice 1.26	0.76 1.01 1.26	0 0 0

3" dia x 20' Omni	B	From Leg	4.00 0.00 0.00	0.0000	146.00	No Ice 6.00 1/2" Ice 8.03 1" Ice 10.08	6.00 8.03 10.08	0 0 0
Pirot 4' Side Mount Standoff	B	From Leg	0.00 0.00 0.00	0.0000	138.50	No Ice 2.72 1/2" Ice 4.91 1" Ice 7.10	2.72 4.91 7.10	0 0 0

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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
2.5'x4" Pipe Mount	B	From Leg	0.00 0.00 0.00	0.0000	130.00	No Ice 0.64 1/2" Ice 0.91 1" Ice 1.18	0.64 0.91 1.18	0 0 0

3' Side Arm	C	From Leg	0.00 0.00 0.00	0.0000	112.00	No Ice 5.30 1/2" Ice 7.20 1" Ice 9.10	5.30 7.20 9.10	0 0 0
MTZ-940B	A	From Leg	0.00 0.00 0.00	0.0000	112.00	No Ice 8.40 1/2" Ice 8.79 1" Ice 9.20	12.60 13.07 13.55	0 0 0

PR-950	B	From Leg	0.00 0.00 0.00	0.0000	90.00	No Ice 6.35 1/2" Ice 11.43 1" Ice 16.51	6.35 11.43 16.51	0 0 0
4'-P1.5x0.145	B	From Leg	0.00 0.00 0.00	0.0000	90.00	No Ice 0.76 1/2" Ice 1.01 1" Ice 1.26	0.76 1.01 1.26	0 0 0

Dishes

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

**										

**										
SPD3-2.4NS	B	Paraboloid w/Radome	From Leg	1.00 0.00 0.00	0.0000		36.00	3.00	No Ice 12.60 1/2" Ice 13.09 1" Ice 13.58	0 0 0
(2) HP2-18	A	Paraboloid w/Shroud (HP)	From Leg	0.00 0.00 0.00	0.0000		106.50	2.00	No Ice 3.14 1/2" Ice 3.41 1" Ice 3.68	0 0 0
(2) HP2-18	B	Paraboloid w/Shroud (HP)	From Leg	0.00 0.00 0.00	0.0000		123.50	2.00	No Ice 3.14 1/2" Ice 3.41 1" Ice 3.68	0 0 0
P-9A72GN-S	B	Paraboloid w/o Radome	From Leg	1.00 0.00 0.00	0.0000		130.00	6.00	No Ice 22.60 1/2" Ice 29.05 1" Ice 35.50	0 0 0
P-9A72GN-S	B	Paraboloid w/o Radome	From Leg	0.00 0.00 0.00	0.0000		251.00	6.00	No Ice 22.60 1/2" Ice 29.05 1" Ice 35.50	0 0 0
SPD6-58	A	Paraboloid w/o Radome	From Leg	0.00 0.00 0.00	0.0000		274.00	3.00	No Ice 5.70 1/2" Ice 7.46 1" Ice 9.22	0 0 0
P-9A72GN-S	C	Paraboloid w/o Radome	From Leg	0.00 0.00 0.00	0.0000		308.00	6.00	No Ice 22.60 1/2" Ice 29.05 1" Ice 35.50	0 0 0
P-9A120GN-S	C	Paraboloid w/o Radome	From Leg	0.00	0.0000		317.50	4.00	No Ice 10.10	0

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	Client	Foresite LLC	Designed by	Ahmet Colakoglu

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft	Aperture Area ft ²	Weight K
		Radome	Leg	0.00				1/2" Ice	13.09	0
				0.00				1" Ice	16.08	0

Load Combinations

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

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<i>Comb. No.</i>	<i>Description</i>
50	1.2D+1.6W (pattern 6) 180 deg - No Ice+1.0 Guy
51	1.2 Dead+1.6 Wind 210 deg - No Ice+1.0 Guy
52	1.2D+1.6W (pattern 1) 210 deg - No Ice+1.0 Guy
53	1.2D+1.6W (pattern 2) 210 deg - No Ice+1.0 Guy
54	1.2D+1.6W (pattern 3) 210 deg - No Ice+1.0 Guy
55	1.2D+1.6W (pattern 4) 210 deg - No Ice+1.0 Guy
56	1.2D+1.6W (pattern 5) 210 deg - No Ice+1.0 Guy
57	1.2D+1.6W (pattern 6) 210 deg - No Ice+1.0 Guy
58	1.2 Dead+1.6 Wind 240 deg - No Ice+1.0 Guy
59	1.2D+1.6W (pattern 1) 240 deg - No Ice+1.0 Guy
60	1.2D+1.6W (pattern 2) 240 deg - No Ice+1.0 Guy
61	1.2D+1.6W (pattern 3) 240 deg - No Ice+1.0 Guy
62	1.2D+1.6W (pattern 4) 240 deg - No Ice+1.0 Guy
63	1.2D+1.6W (pattern 5) 240 deg - No Ice+1.0 Guy
64	1.2D+1.6W (pattern 6) 240 deg - No Ice+1.0 Guy
65	1.2 Dead+1.6 Wind 270 deg - No Ice+1.0 Guy
66	1.2D+1.6W (pattern 1) 270 deg - No Ice+1.0 Guy
67	1.2D+1.6W (pattern 2) 270 deg - No Ice+1.0 Guy
68	1.2D+1.6W (pattern 3) 270 deg - No Ice+1.0 Guy
69	1.2D+1.6W (pattern 4) 270 deg - No Ice+1.0 Guy
70	1.2D+1.6W (pattern 5) 270 deg - No Ice+1.0 Guy
71	1.2D+1.6W (pattern 6) 270 deg - No Ice+1.0 Guy
72	1.2 Dead+1.6 Wind 300 deg - No Ice+1.0 Guy
73	1.2D+1.6W (pattern 1) 300 deg - No Ice+1.0 Guy
74	1.2D+1.6W (pattern 2) 300 deg - No Ice+1.0 Guy
75	1.2D+1.6W (pattern 3) 300 deg - No Ice+1.0 Guy
76	1.2D+1.6W (pattern 4) 300 deg - No Ice+1.0 Guy
77	1.2D+1.6W (pattern 5) 300 deg - No Ice+1.0 Guy
78	1.2D+1.6W (pattern 6) 300 deg - No Ice+1.0 Guy
79	1.2 Dead+1.6 Wind 330 deg - No Ice+1.0 Guy
80	1.2D+1.6W (pattern 1) 330 deg - No Ice+1.0 Guy
81	1.2D+1.6W (pattern 2) 330 deg - No Ice+1.0 Guy
82	1.2D+1.6W (pattern 3) 330 deg - No Ice+1.0 Guy
83	1.2D+1.6W (pattern 4) 330 deg - No Ice+1.0 Guy
84	1.2D+1.6W (pattern 5) 330 deg - No Ice+1.0 Guy
85	1.2D+1.6W (pattern 6) 330 deg - No Ice+1.0 Guy
86	1.2 Dead+1.0 Ice+1.0 Temp+Guy
87	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp+1.0 Guy
88	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp+1.0 Guy
89	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp+1.0 Guy
90	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp+1.0 Guy
91	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp+1.0 Guy
92	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp+1.0 Guy
93	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp+1.0 Guy
94	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp+1.0 Guy
95	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp+1.0 Guy
96	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp+1.0 Guy
97	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp+1.0 Guy
98	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp+1.0 Guy
99	Dead+Wind 0 deg - Service+Guy
100	Dead+Wind 30 deg - Service+Guy
101	Dead+Wind 60 deg - Service+Guy
102	Dead+Wind 90 deg - Service+Guy
103	Dead+Wind 120 deg - Service+Guy
104	Dead+Wind 150 deg - Service+Guy
105	Dead+Wind 180 deg - Service+Guy
106	Dead+Wind 210 deg - Service+Guy
107	Dead+Wind 240 deg - Service+Guy
108	Dead+Wind 270 deg - Service+Guy
109	Dead+Wind 300 deg - Service+Guy
110	Dead+Wind 330 deg - Service+Guy

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Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	345 - 330	Latticed Pole Leg	Max Tension	75	3	-0.03	-0.01
			Max. Compression	61	-3	0.00	0.00
			Max. Mx	97	1	-0.03	-0.02
			Max. My	93	1	-0.00	0.04
			Max. Vy	97	0	0.00	0.00
		Latticed Pole Diagonal	Max. Vx	93	0	0.00	0.00
			Max Tension	94	0	0.00	0.00
			Max. Compression	54	0	0.00	0.00
			Max. Mx	96	0	-0.00	0.00
			Max. My	87	0	-0.00	-0.00
		Latticed Pole Top Girt	Max. Vy	94	0	-0.00	-0.00
			Max. Vx	87	0	0.00	0.00
			Max Tension	1	0	0.00	0.00
			Max. Compression	89	0	0.00	0.00
			Max. Mx	89	0	0.01	0.00
		Latticed Pole Mid Girt	Max. My	98	0	0.00	-0.00
			Max. Vy	89	0	0.00	0.00
			Max. Vx	98	0	0.00	0.00
			Max Tension	77	0	0.00	0.00
			Max. Compression	95	0	0.00	0.00
T1	330 - 320	Leg	Max. Mx	89	0	0.01	0.00
			Max. My	98	0	0.00	-0.00
			Max. Vy	89	0	0.00	0.00
			Max. Vx	98	0	0.00	0.00
			Max Tension	36	5	-0.23	-0.10
		Diagonal	Max. Compression	50	-22	-0.01	0.16
			Max. Mx	36	5	-0.23	-0.10
			Max. My	8	4	-0.03	0.24
			Max. Vy	36	-1	-0.23	-0.10
			Max. Vx	8	1	-0.03	0.24
		Top Girt	Max Tension	15	1	0.00	0.00
			Max. Compression	15	-2	0.00	0.00
			Max. Mx	93	0	-0.01	-0.00
			Max. My	87	0	-0.01	0.00
			Max. Vy	93	0	-0.01	-0.00
		Bottom Girt	Max. Vx	87	0	0.00	0.00
			Max Tension	87	0	0.00	0.00
			Max. Compression	87	0	0.00	0.00
			Max. Mx	94	0	0.12	0.00
			Max. My	84	0	0.00	0.00
Mid Girt	Max. Vy	94	0	0.00	0.00		
	Max. Vx	84	0	0.00	0.00		
	Max Tension	36	0	0.00	0.00		
	Max. Compression	22	0	0.00	0.00		
	Max. Mx	94	0	0.03	0.00		
	Max. My	98	0	0.00	-0.00		
	Max. Vy	94	0	0.00	0.00		
	Max. Vx	98	0	0.00	0.00		
	Max Tension	95	0	0.00	0.00		
	Max. Compression	50	0	0.00	0.00		
	Max. Mx	94	0	0.03	0.00		
	Max. My	98	0	0.00	-0.00		
	Max. Vy	94	0	0.00	0.00		

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft	
T2	320 - 300	Guy A	Max. Vy	94	0	0.00	0.00	
			Max. Vx	98	0	0.00	0.00	
			Bottom Tension	46	17			
			Top Tension	46	18			
			Top Cable Vert	46	16			
			Top Cable Norm	46	8			
			Top Cable Tan	46	0			
			Bot Cable Vert	46	-15			
			Bot Cable Norm	46	9			
			Bot Cable Tan	46	0			
			Guy B	Bottom Tension	74	16		
				Top Tension	74	16		
		Top Cable Vert		74	14			
		Top Cable Norm		74	8			
		Top Cable Tan		74	0			
		Bot Cable Vert		74	-13			
		Bot Cable Norm		74	9			
		Bot Cable Tan		74	0			
		Guy C		Bottom Tension	18	17		
				Top Tension	18	17		
				Top Cable Vert	18	15		
				Top Cable Norm	18	9		
			Top Cable Tan	18	0			
			Bot Cable Vert	18	-14			
			Bot Cable Norm	18	9			
			Bot Cable Tan	18	0			
			Leg	Max Tension	36	11	-0.01	0.01
				Max. Compression	50	-28	0.02	-0.02
				Max. Mx	36	5	0.26	0.12
				Max. My	8	4	0.03	-0.28
		Max. Vy		76	-1	0.24	0.02	
		Max. Vx		8	1	0.01	-0.16	
		Diagonal		Max Tension	36	1	0.00	0.00
				Max. Compression	76	-1	0.00	0.00
				Max. Mx	92	0	-0.01	0.00
				Max. My	48	-1	-0.00	0.00
				Max. Vy	92	0	-0.01	0.00
				Max. Vx	48	0	-0.00	0.00
			Top Girt	Max Tension	22	0	0.00	0.00
				Max. Compression	36	0	0.00	0.00
				Max. Mx	94	0	0.03	0.00
				Max. My	98	0	0.00	-0.00
Max. Vy	94			0	0.00	0.00		
Max. Vx	98			0	0.00	0.00		
Bottom Girt	Max Tension	1		0	0.00	0.00		
	Max. Compression	6		-1	0.00	0.00		
	Max. Mx	90		-1	0.03	0.00		
	Max. My	98		0	0.00	-0.00		
	Max. Vy	90		0	0.00	0.00		
	Max. Vx	98		0	0.00	0.00		
	Mid Girt	Max Tension	43	0	0.00	0.00		
		Max. Compression	1	0	0.00	0.00		
		Max. Mx	89	0	0.03	0.00		
		Max. My	98	0	0.00	-0.00		
		Max. Vy	89	0	0.00	0.00		
		Max. Vx	98	0	0.00	0.00		
T3		300 - 280	Leg	Max Tension	35	12	-0.35	-0.10
				Max. Compression	50	-41	0.00	0.14
				Max. Mx	25	-36	0.61	0.07
				Max. My	50	-40	0.01	0.52
				Max. Vy	75	-2	0.22	-0.05

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	47	2	0.09	-0.17
		Diagonal	Max Tension	76	3	0.00	0.00
			Max. Compression	68	-3	0.00	0.00
			Max. Mx	87	1	-0.01	-0.00
			Max. My	75	-3	-0.00	-0.00
			Max. Vy	87	0	-0.01	-0.00
		Top Girt	Max. Vx	75	0	-0.00	-0.00
			Max Tension	1	0	0.00	0.00
			Max. Compression	87	-1	0.00	0.00
			Max. Mx	90	-1	0.03	0.00
			Max. My	98	-1	0.00	-0.00
			Max. Vy	90	0	0.00	0.00
		Bottom Girt	Max. Vx	98	0	0.00	0.00
			Max Tension	19	0	0.00	0.00
			Max. Compression	61	0	0.00	0.00
			Max. Mx	96	0	0.03	0.00
			Max. My	47	0	0.00	0.00
			Max. Vy	96	0	0.00	0.00
			Max. Vx	47	0	0.00	0.00
		Mid Girt	Max Tension	1	0	0.00	0.00
			Max. Compression	8	0	0.00	0.00
			Max. Mx	92	0	0.03	0.00
			Max. My	47	0	0.00	0.00
			Max. Vy	92	0	0.00	0.00
			Max. Vx	47	0	0.00	0.00
		Guy A	Bottom Tension	45	13		
			Top Tension	45	13		
			Top Cable Vert	45	11		
			Top Cable Norm	45	6		
			Top Cable Tan	45	0		
			Bot Cable Vert	45	-11		
			Bot Cable Norm	45	7		
			Bot Cable Tan	45	0		
		Guy B	Bottom Tension	74	12		
			Top Tension	74	12		
			Top Cable Vert	74	10		
			Top Cable Norm	74	7		
			Top Cable Tan	74	0		
			Bot Cable Vert	74	-10		
			Bot Cable Norm	74	7		
			Bot Cable Tan	74	0		
		Guy C	Bottom Tension	17	12		
			Top Tension	17	13		
			Top Cable Vert	17	10		
			Top Cable Norm	17	7		
			Top Cable Tan	17	0		
			Bot Cable Vert	17	-10		
			Bot Cable Norm	17	7		
			Bot Cable Tan	17	0		
T4	280 - 260	Leg	Max Tension	35	13	-0.28	-0.33
			Max. Compression	42	-67	0.14	0.29
			Max. Mx	73	-11	0.43	0.24
			Max. My	38	6	-0.15	-0.45
			Max. Vy	73	2	0.43	0.24
			Max. Vx	80	3	0.19	0.44
		Diagonal	Max Tension	73	4	0.00	0.00
			Max. Compression	80	-4	0.00	0.00
			Max. Mx	98	1	-0.01	-0.00
			Max. My	73	-4	-0.00	-0.00
			Max. Vy	87	0	-0.01	-0.00
			Max. Vx	73	0	-0.00	-0.00

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
		Top Girt	Max Tension	5	1	0.00	0.00
			Max. Compression	19	0	0.00	0.00
			Max. Mx	96	0	0.03	0.00
			Max. My	47	0	0.00	0.00
			Max. Vy	96	0	0.00	0.00
			Max. Vx	47	0	0.00	0.00
		Bottom Girt	Max Tension	34	1	0.00	0.00
			Max. Compression	76	0	0.00	0.00
			Max. Mx	96	0	0.03	0.00
			Max. My	47	0	0.00	0.00
			Max. Vy	96	0	0.00	0.00
			Max. Vx	47	0	0.00	0.00
		Mid Girt	Max Tension	3	6	0.00	0.00
			Max. Compression	1	0	0.00	0.00
			Max. Mx	96	3	0.03	0.00
			Max. My	47	4	0.00	0.00
			Max. Vy	96	0	0.00	0.00
			Max. Vx	47	0	0.00	0.00
		Guy A	Bottom Tension	45	28		
			Top Tension	45	28		
			Top Cable Vert	45	24		
			Top Cable Norm	45	15		
			Top Cable Tan	45	0		
			Bot Cable Vert	45	-23		
			Bot Cable Norm	45	16		
			Bot Cable Tan	45	0		
		Guy B	Bottom Tension	73	27		
			Top Tension	73	27		
			Top Cable Vert	73	22		
			Top Cable Norm	73	16		
			Top Cable Tan	73	0		
			Bot Cable Vert	73	-21		
			Bot Cable Norm	73	17		
			Bot Cable Tan	73	0		
		Guy C	Bottom Tension	17	27		
			Top Tension	17	28		
			Top Cable Vert	17	22		
			Top Cable Norm	17	16		
			Top Cable Tan	17	0		
			Bot Cable Vert	17	-21		
			Bot Cable Norm	17	17		
			Bot Cable Tan	17	0		
T5	260 - 240	Leg	Max Tension	35	27	0.00	-0.17
			Max. Compression	77	-82	-0.10	-0.18
			Max. Mx	20	-57	0.45	-0.30
			Max. My	48	-61	0.14	0.53
			Max. Vy	73	2	-0.41	-0.20
			Max. Vx	80	3	-0.32	-0.51
		Diagonal	Max Tension	83	3	0.00	0.00
			Max. Compression	73	-4	0.00	0.00
			Max. Mx	98	-1	-0.01	-0.00
			Max. My	73	-4	-0.00	-0.00
			Max. Vy	98	0	-0.01	-0.00
			Max. Vx	43	0	-0.00	0.00
		Top Girt	Max Tension	76	0	0.00	0.00
			Max. Compression	34	0	0.00	0.00
			Max. Mx	96	0	0.03	0.00
			Max. My	47	0	0.00	0.00
			Max. Vy	96	0	0.00	0.00
			Max. Vx	47	0	0.00	0.00
		Bottom Girt	Max Tension	34	0	0.00	0.00

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft	
T6	240 - 220	Mid Girt	Max. Compression	76	0	0.00	0.00	
			Max. Mx	87	0	0.03	0.00	
			Max. My	46	0	0.00	0.00	
			Max. Vy	87	0	0.00	0.00	
			Max. Vx	46	0	0.00	0.00	
			Max Tension	35	1	0.00	0.00	
			Max. Compression	77	0	0.00	0.00	
			Max. Mx	91	0	0.03	0.00	
			Max. My	47	0	0.00	0.00	
			Max. Vy	91	0	0.00	0.00	
			Max. Vx	47	0	0.00	0.00	
			Max Tension	35	28	0.01	0.02	
			Leg	Max. Compression	77	-83	0.13	0.09
				Max. Mx	70	-35	-0.82	0.07
				Max. My	49	-7	0.02	0.83
				Max. Vy	78	-3	0.37	0.01
		Max. Vx		4	-3	-0.08	0.49	
		Diagonal		Max Tension	78	4	0.00	0.00
				Max. Compression	78	-4	0.00	0.00
				Max. Mx	98	-1	-0.01	-0.00
				Max. My	78	-4	-0.01	-0.00
		Top Girt		Max. Vy	98	0	-0.01	-0.00
				Max. Vx	78	0	-0.01	-0.00
				Max Tension	32	0	0.00	0.00
				Max. Compression	7	0	0.00	0.00
		Bottom Girt		Max. Mx	87	0	0.03	0.00
				Max. My	46	0	0.00	0.00
				Max. Vy	87	0	0.00	0.00
			Max. Vx	46	0	0.00	0.00	
			Max Tension	46	0	0.00	0.00	
			Max. Compression	4	0	0.00	0.00	
			Max. Mx	86	0	0.03	0.00	
Max. My	46		0	0.00	0.00			
Mid Girt	Max. Vy	86	0	0.00	0.00			
	Max. Vx	46	0	0.00	0.00			
	Max Tension	87	0	0.00	0.00			
	Max. Compression	1	0	0.00	0.00			
	Max. Mx	88	0	0.03	0.00			
	Max. My	46	0	0.00	0.00			
	Max. Vy	88	0	0.00	0.00			
	Max. Vx	46	0	0.00	0.00			
T7	220 - 200	Leg	Max Tension	35	15	-0.45	-0.12	
			Max. Compression	42	-74	0.02	-0.50	
			Max. Mx	78	-33	-1.01	-0.33	
			Max. My	4	-44	-0.16	1.03	
			Max. Vy	32	5	-1.01	-0.35	
			Max. Vx	4	-5	-0.16	1.03	
			Diagonal	Max Tension	78	6	0.00	0.00
				Max. Compression	78	-6	0.00	0.00
				Max. Mx	98	1	-0.01	-0.00
				Max. My	78	-6	-0.01	-0.00
				Max. Vy	98	0	-0.01	-0.00
				Max. Vx	78	0	0.00	0.00
		Top Girt	Max Tension	35	1	0.00	0.00	
			Max. Compression	77	-1	0.00	0.00	
			Max. Mx	86	0	0.04	0.00	
			Max. My	46	1	0.00	0.00	
			Max. Vy	86	0	0.00	0.00	
			Max. Vx	46	0	0.00	0.00	
		Bottom Girt	Max Tension	78	1	0.00	0.00	
			Max. Compression	32	-1	0.00	0.00	

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft	
T8	200 - 180	Mid Girt	Max. Mx	89	1	0.04	0.00	
			Max. My	46	0	0.00	0.00	
			Max. Vy	86	0	0.00	0.00	
			Max. Vx	46	0	0.00	0.00	
			Max Tension	87	1	0.00	0.00	
			Max. Compression	1	0	0.00	0.00	
			Max. Mx	86	0	0.04	0.00	
			Max. My	46	0	0.00	0.00	
			Max. Vy	86	0	0.00	0.00	
			Max. Vx	46	0	0.00	0.00	
			Max Tension	72	46	-1.22	-0.47	
			Max. Compression	4	-127	-0.17	1.39	
		Leg	Max. Mx	70	-43	1.82	0.21	
			Max. My	50	-78	-0.24	-1.91	
			Max. Vy	70	-9	1.82	0.21	
			Max. Vx	50	10	-0.24	-1.91	
			Diagonal	Max Tension	53	10	0.00	0.00
				Max. Compression	53	-10	0.00	0.00
				Max. Mx	93	3	-0.02	0.00
				Max. My	50	-10	-0.01	0.01
				Max. Vy	93	0	-0.02	0.00
				Max. Vx	50	0	-0.01	0.01
			Top Girt	Max Tension	35	2	0.00	0.00
				Max. Compression	77	-1	0.00	0.00
		Max. Mx		89	0	0.05	0.00	
		Max. My		46	1	0.00	0.00	
		Max. Vy		86	0	0.00	0.00	
		Max. Vx		46	0	0.00	0.00	
Bottom Girt	Max Tension	78	6	0.00	0.00			
	Max. Compression	36	-6	0.00	0.00			
	Max. Mx	86	0	0.05	0.00			
	Max. My	67	0	0.00	-0.00			
	Max. Vy	86	0	0.00	0.00			
	Max. Vx	67	0	0.00	0.00			
Mid Girt	Max Tension	93	1	0.00	0.00			
	Max. Compression	5	0	0.00	0.00			
	Max. Mx	89	1	0.05	0.00			
	Max. My	67	0	0.00	-0.00			
	Max. Vy	89	0	0.00	0.00			
	Max. Vx	67	0	0.00	0.00			
T9	180 - 160	Leg	Max Tension	72	46	0.92	0.31	
			Max. Compression	4	-148	0.01	0.28	
			Max. Mx	70	-43	2.55	0.26	
			Max. My	50	-94	-0.35	-2.70	
			Max. Vy	70	-9	2.55	0.26	
			Max. Vx	50	10	-0.35	-2.70	
			Diagonal	Max Tension	33	7	0.00	0.00
				Max. Compression	33	-7	0.00	0.00
				Max. Mx	96	-1	-0.02	-0.00
				Max. My	75	-6	-0.01	-0.01
				Max. Vy	96	0	-0.02	-0.00
				Max. Vx	66	0	0.00	0.00
		Top Girt	Max Tension	50	7	0.00	0.00	
			Max. Compression	30	-9	0.00	0.00	
			Max. Mx	86	-1	0.05	0.00	
			Max. My	67	-1	0.00	-0.00	
			Max. Vy	86	0	0.00	0.00	
			Max. Vx	67	0	0.00	0.00	
		Bottom Girt	Max Tension	33	1	0.00	0.00	
			Max. Compression	75	0	0.00	0.00	
			Max. Mx	86	1	0.05	0.00	

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	66	0	0.00	-0.00
			Max. Vy	86	0	0.00	0.00
			Max. Vx	66	0	0.00	0.00
		Mid Girt	Max Tension	67	2	0.00	0.00
			Max. Compression	1	0	0.00	0.00
			Max. Mx	86	1	0.05	0.00
			Max. My	67	1	0.00	-0.00
			Max. Vy	86	0	0.00	0.00
			Max. Vx	67	0	0.00	0.00
		Guy A	Bottom Tension	43	36		
			Top Tension	43	36		
			Top Cable Vert	43	26		
			Top Cable Norm	43	25		
			Top Cable Tan	43	0		
			Bot Cable Vert	43	-26		
			Bot Cable Norm	43	25		
			Bot Cable Tan	43	0		
		Guy B	Bottom Tension	71	34		
			Top Tension	71	35		
			Top Cable Vert	71	23		
			Top Cable Norm	71	26		
			Top Cable Tan	71	0		
			Bot Cable Vert	71	-22		
			Bot Cable Norm	71	26		
			Bot Cable Tan	71	0		
		Guy C	Bottom Tension	29	34		
			Top Tension	29	34		
			Top Cable Vert	29	22		
			Top Cable Norm	29	26		
			Top Cable Tan	29	0		
			Bot Cable Vert	29	-22		
			Bot Cable Norm	29	26		
			Bot Cable Tan	29	0		
		Torque Arm Top	Max Tension	58	29	0.00	0.00
			Max. Compression	1	0	0.00	0.00
			Max. Mx	93	17	0.11	0.00
			Max. My	46	14	0.00	0.00
			Max. Vy	93	0	0.00	0.00
			Max. Vx	46	0	0.00	0.00
		Torque Arm Bottom	Max Tension	79	6	0.00	0.00
			Max. Compression	37	-21	0.00	0.00
			Max. Mx	94	-6	0.11	0.00
			Max. My	69	3	0.00	-0.00
			Max. Vy	94	0	0.00	0.00
			Max. Vx	69	0	0.00	0.00
T10	160 - 140	Leg	Max Tension	1	0	0.00	0.00
			Max. Compression	4	-113	-0.00	-0.43
			Max. Mx	68	-63	-0.71	0.13
			Max. My	47	-35	0.06	0.77
			Max. Vy	68	4	-0.41	0.14
			Max. Vx	5	4	-0.02	-0.29
		Diagonal	Max Tension	75	4	0.00	0.00
			Max. Compression	33	-5	0.00	0.00
			Max. Mx	93	-1	-0.01	-0.00
			Max. My	68	-4	0.00	-0.00
			Max. Vy	93	0	-0.01	-0.00
			Max. Vx	66	0	0.00	0.00
		Top Girt	Max Tension	72	1	0.00	0.00
			Max. Compression	5	0	0.00	0.00
			Max. Mx	89	1	0.04	0.00
			Max. My	66	0	0.00	-0.00

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft	
T11	140 - 120	Bottom Girt	Max. Vy	89	0	0.00	0.00	
			Max. Vx	66	0	0.00	0.00	
			Max Tension	33	1	0.00	0.00	
			Max. Compression	1	0	0.00	0.00	
			Max. Mx	97	0	0.04	0.00	
			Max. My	66	0	0.00	-0.00	
		Mid Girt	Max. Vy	97	0	0.00	0.00	
			Max. Vx	66	0	0.00	0.00	
			Max Tension	97	1	0.00	0.00	
			Max. Compression	1	0	0.00	0.00	
			Max. Mx	89	1	0.04	0.00	
			Max. My	66	1	0.00	-0.00	
		Leg	Max. Vy	89	0	0.00	0.00	
			Max. Vx	66	0	0.00	0.00	
			Max Tension	1	0	0.00	0.00	
			Max. Compression	91	-109	-0.11	-0.07	
			Max. Mx	69	-64	-0.58	-0.04	
			Max. My	41	-61	0.07	0.51	
			Max. Vy	66	-2	-0.30	-0.13	
			Max. Vx	48	2	-0.00	-0.09	
			Diagonal	Max Tension	66	2	0.00	0.00
				Max. Compression	66	-3	0.00	0.00
				Max. Mx	94	0	-0.01	-0.00
				Max. My	66	-2	0.00	-0.00
				Max. Vy	91	0	-0.01	0.00
				Max. Vx	66	0	0.00	0.00
			Top Girt	Max Tension	97	1	0.00	0.00
		Max. Compression		1	0	0.00	0.00	
		Max. Mx		97	1	0.04	0.00	
		Max. My		66	0	0.00	-0.00	
		Max. Vy		97	0	0.00	0.00	
		Max. Vx		66	0	0.00	0.00	
		Bottom Girt	Max Tension	38	1	0.00	0.00	
Max. Compression	1		0	0.00	0.00			
Max. Mx	97		1	0.04	0.00			
Max. My	66		0	0.00	-0.00			
Max. Vy	97		0	0.00	0.00			
Max. Vx	66		0	0.00	0.00			
Mid Girt	Max Tension	87	1	0.00	0.00			
	Max. Compression	1	0	0.00	0.00			
	Max. Mx	97	1	0.04	0.00			
	Max. My	66	1	0.00	-0.00			
	Max. Vy	97	0	0.00	0.00			
	Max. Vx	66	0	0.00	0.00			
T12	120 - 100	Leg	Max Tension	1	0	0.00	0.00	
			Max. Compression	91	-120	-0.44	-0.26	
			Max. Mx	69	-37	1.25	0.55	
			Max. My	41	-36	-0.13	-1.29	
			Max. Vy	69	-7	-1.20	-0.56	
			Max. Vx	41	7	-0.13	-1.29	
		Diagonal	Max Tension	66	4	0.00	0.00	
			Max. Compression	66	-4	0.00	0.00	
			Max. Mx	92	0	-0.01	0.00	
			Max. My	24	-3	0.00	0.00	
			Max. Vy	91	0	-0.01	0.00	
			Max. Vx	24	0	0.00	0.00	
		Top Girt	Max Tension	34	1	0.00	0.00	
			Max. Compression	75	0	0.00	0.00	
			Max. Mx	97	0	0.04	0.00	
Max. My	66		0	0.00	-0.00			
Max. Vy	97		0	0.00	0.00			

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft	
T13	100 - 80	Bottom Girt	Max. Vx	66	0	0.00	0.00	
			Max Tension	34	3	0.00	0.00	
			Max. Compression	1	0	0.00	0.00	
			Max. Mx	86	2	0.04	0.00	
			Max. My	66	2	0.00	-0.00	
			Max. Vy	86	0	0.00	0.00	
		Mid Girt	Max. Vx	66	0	0.00	0.00	
			Max Tension	93	1	0.00	0.00	
			Max. Compression	1	0	0.00	0.00	
			Max. Mx	86	1	0.04	0.00	
			Max. My	66	1	0.00	-0.00	
			Max. Vy	86	0	0.00	0.00	
		Leg	Max. Vx	66	0	0.00	0.00	
			Max Tension	1	0	0.00	0.00	
			Max. Compression	87	-128	0.00	-0.01	
			Max. Mx	69	-37	1.80	0.80	
			Max. My	41	-36	-0.17	-1.87	
			Max. Vy	69	-7	1.25	0.55	
			Diagonal	Max. Vx	41	7	-0.17	-1.87
				Max Tension	81	5	0.00	0.00
				Max. Compression	85	-5	0.00	0.00
				Max. Mx	96	0	-0.01	-0.00
				Max. My	23	-3	-0.00	0.00
				Max. Vy	96	0	-0.01	-0.00
			Top Girt	Max. Vx	23	0	0.00	0.00
				Max Tension	34	10	0.00	0.00
				Max. Compression	1	0	0.00	0.00
				Max. Mx	86	6	0.03	0.00
				Max. My	66	6	0.00	-0.00
				Max. Vy	86	0	0.00	0.00
		Bottom Girt	Max. Vx	66	0	0.00	0.00	
			Max Tension	30	1	0.00	0.00	
			Max. Compression	75	0	0.00	0.00	
			Max. Mx	90	1	0.03	0.00	
			Max. My	66	0	0.00	-0.00	
			Max. Vy	90	0	0.00	0.00	
		Mid Girt	Max. Vx	66	0	0.00	0.00	
			Max Tension	91	1	0.00	0.00	
			Max. Compression	1	0	0.00	0.00	
			Max. Mx	90	1	0.03	0.00	
			Max. My	66	1	0.00	-0.00	
			Max. Vy	90	0	0.00	0.00	
Guy A	Max. Vx	66	0	0.00	0.00			
	Bottom Tension	41	32					
	Top Tension	41	32					
	Top Cable Vert	41	18					
	Top Cable Norm	41	26					
	Top Cable Tan	41	0					
	Bot Cable Vert	41	-17					
	Bot Cable Norm	41	27					
	Bot Cable Tan	41	0					
	Guy B	Bottom Tension	69	31				
		Top Tension	69	31				
		Top Cable Vert	69	13				
Top Cable Norm		69	28					
Top Cable Tan		69	0					
Bot Cable Vert		69	-13					
Guy C	Bot Cable Norm	69	28					
	Bot Cable Tan	69	0					
	Bottom Tension	27	30					
		Top Tension	27	30				

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft	
T14	80 - 60	Leg	Top Cable Vert	27	13			
			Top Cable Norm	27	27			
			Top Cable Tan	27	0			
			Bot Cable Vert	27	-13			
			Bot Cable Norm	27	27			
			Bot Cable Tan	27	0			
			Max Tension	1	0	0.00	0.00	
			Max. Compression	93	-136	0.01	0.36	
			Max. Mx	65	-94	-0.91	-0.29	
			Max. My	44	-85	0.03	0.94	
			Max. Vy	65	3	-0.91	-0.29	
			Max. Vx	4	3	-0.02	-0.32	
		Diagonal	Max Tension	81	3	0.00	0.00	
			Max. Compression	81	-4	0.00	0.00	
			Max. Mx	93	0	-0.01	0.00	
			Max. My	82	-3	-0.00	-0.00	
			Max. Vy	93	0	-0.01	0.00	
			Max. Vx	82	0	-0.00	-0.00	
		Top Girt	Max Tension	72	1	0.00	0.00	
			Max. Compression	4	0	0.00	0.00	
			Max. Mx	90	0	0.03	0.00	
			Max. My	66	0	0.00	-0.00	
			Max. Vy	90	0	0.00	0.00	
			Max. Vx	66	0	0.00	0.00	
		Bottom Girt	Max Tension	30	1	0.00	0.00	
			Max. Compression	75	0	0.00	0.00	
			Max. Mx	90	1	0.03	0.00	
			Max. My	69	0	0.00	-0.00	
			Max. Vy	90	0	0.00	0.00	
			Max. Vx	69	0	0.00	0.00	
Mid Girt	Max Tension	91	1	0.00	0.00			
	Max. Compression	1	0	0.00	0.00			
	Max. Mx	96	1	0.03	0.00			
	Max. My	69	1	0.00	-0.00			
	Max. Vy	96	0	0.00	0.00			
	Max. Vx	69	0	0.00	0.00			
T15	60 - 40	Leg	Max Tension	1	0	0.00	0.00	
			Max. Compression	93	-142	0.01	0.31	
			Max. Mx	65	-118	-0.56	-0.15	
			Max. My	44	-111	0.06	0.56	
			Max. Vy	65	2	-0.56	-0.15	
			Max. Vx	4	1	-0.03	-0.08	
			Diagonal	Max Tension	70	1	0.00	0.00
				Max. Compression	70	-2	0.00	0.00
				Max. Mx	92	-1	-0.01	0.00
				Max. My	69	-1	-0.01	0.00
				Max. Vy	92	0	-0.01	0.00
				Max. Vx	69	0	-0.01	0.00
		Top Girt	Max Tension	97	1	0.00	0.00	
			Max. Compression	1	0	0.00	0.00	
			Max. Mx	90	1	0.03	0.00	
			Max. My	69	0	0.00	-0.00	
			Max. Vy	90	0	0.00	0.00	
			Max. Vx	69	0	0.00	0.00	
		Bottom Girt	Max Tension	87	1	0.00	0.00	
			Max. Compression	1	0	0.00	0.00	
			Max. Mx	86	1	0.03	0.00	
			Max. My	69	0	0.00	-0.00	
			Max. Vy	86	0	0.00	0.00	
			Max. Vx	69	0	0.00	0.00	
		Mid Girt	Max Tension	91	1	0.00	0.00	

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T16	40 - 20	Leg	Max. Compression	1	0	0.00	0.00
			Max. Mx	90	1	0.03	0.00
			Max. My	69	1	0.00	-0.00
			Max. Vy	90	0	0.00	0.00
			Max. Vx	69	0	0.00	0.00
			Max Tension	1	0	0.00	0.00
			Max. Compression	93	-143	-0.00	0.34
			Max. Mx	68	-111	-0.73	-0.42
			Max. My	47	-107	-0.07	0.83
			Max. Vy	68	-3	-0.73	-0.42
			Max. Vx	47	3	0.06	-0.32
			Max Tension	61	2	0.00	0.00
		Diagonal	Max. Compression	61	-3	0.00	0.00
			Max. Mx	93	-1	-0.01	0.00
			Max. My	69	-2	-0.01	0.00
			Max. Vy	93	0	-0.01	0.00
			Max. Vx	69	0	-0.01	0.00
			Max Tension	33	1	0.00	0.00
		Top Girt	Max. Compression	1	0	0.00	0.00
			Max. Mx	86	1	0.03	0.00
			Max. My	69	0	0.00	-0.00
			Max. Vy	86	0	0.00	0.00
			Max. Vx	69	0	0.00	0.00
			Max Tension	93	1	0.00	0.00
Bottom Girt	Max. Compression	1	0	0.00	0.00		
	Max. Mx	86	1	0.03	0.00		
	Max. My	69	1	0.00	-0.00		
	Max. Vy	86	0	0.00	0.00		
	Max. Vx	69	0	0.00	0.00		
	Max Tension	93	1	0.00	0.00		
Mid Girt	Max. Compression	1	0	0.00	0.00		
	Max. Mx	86	1	0.03	0.00		
	Max. My	69	1	0.00	-0.00		
	Max. Vy	86	0	0.00	0.00		
	Max. Vx	69	0	0.00	0.00		
	Max Tension	91	1	0.00	0.00		
T17	20 - 12	Leg	Max. Compression	1	0	0.00	0.00
			Max. Mx	93	-143	0.02	-0.26
			Max. My	68	-79	0.49	-0.10
			Max. Vy	47	-107	0.09	-0.58
			Max. Vx	33	5	-0.14	-0.05
			Max Tension	5	-6	0.02	0.14
		Diagonal	Max. Compression	61	2	0.00	0.00
			Max. Mx	61	-5	0.00	0.00
			Max. My	93	-4	-0.02	0.00
			Max. Vy	69	-4	-0.02	0.00
			Max. Vx	93	0	-0.02	0.00
			Max Tension	69	0	-0.02	0.00
		Horizontal	Max. Compression	91	3	0.00	0.00
			Max. Mx	1	0	0.00	0.00
			Max. My	86	3	0.02	0.00
			Max. Vy	69	2	0.00	-0.00
			Max. Vx	86	0	0.00	0.00
			Max Tension	69	0	0.00	0.00
		Top Girt	Max. Compression	91	1	0.00	0.00
			Max. Mx	1	0	0.00	0.00
			Max. My	86	1	0.02	0.00
			Max. Vy	69	1	0.00	-0.00
			Max. Vx	86	0	0.00	0.00
			Max Tension	69	0	0.00	0.00
Leg	Max. Compression	1	0	0.00	0.00		
	Max. Mx	86	1	0.02	0.00		
	Max. My	69	1	0.00	-0.00		
	Max. Vy	86	0	0.00	0.00		
	Max. Vx	69	0	0.00	0.00		
	Max Tension	93	-142	0.00	0.76		
T18	12 - 6.7	Leg	Max. Compression	93	-142	0.00	0.76

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft	
T19	6.7 - 0	Diagonal	Max. Mx	96	-140	2.08	1.06	
			Max. My	93	-141	-0.11	-2.36	
			Max. Vy	89	30	-2.08	1.08	
			Max. Vx	93	36	-0.11	-2.36	
			Max Tension	61	5	0.00	0.00	
			Max. Compression	61	-5	0.00	0.00	
			Horizontal	Max. Mx	92	0	0.01	0.00
				Max. My	69	3	0.00	-0.00
				Max. Vy	92	0	0.00	0.00
				Max. Vx	69	0	0.00	0.00
				Max Tension	93	21	0.68	0.00
				Max. Compression	93	-2	0.68	-0.00
		Leg		Max. Mx	93	-2	0.72	0.00
				Max. My	34	3	-0.41	-0.00
				Max. Vy	93	0	0.00	0.00
				Max. Vx	34	0	0.00	0.00
				Max Tension	1	0	0.00	0.00
				Max. Compression	93	-154	-0.91	0.81
			Diagonal	Max. Mx	93	-144	2.36	-0.10
				Max. My	69	-91	-0.45	6.33
				Max. Vy	93	23	0.27	-0.09
				Max. Vx	69	-7	-0.45	6.33
				Max Tension	1	0	0.00	0.00
				Max. Compression	69	-22	0.00	0.00
		Secondary Horizontal		Max. Mx	69	-2	0.04	0.04
				Max. My	27	-21	0.02	-0.07
				Max. Vy	69	0	0.00	0.00
				Max. Vx	27	0	0.02	-0.07
				Max Tension	93	3	0.00	0.00
				Max. Compression	93	-3	0.00	0.00
			Top Girt	Max. Mx	69	2	-0.01	-0.01
				Max. My	69	2	-0.01	-0.02
				Max. Vy	69	0	-0.01	-0.01
				Max. Vx	69	0	-0.01	-0.02
				Max Tension	91	20	0.00	0.00
				Max. Compression	1	0	0.00	0.00
		Bottom Girt		Max. Mx	86	19	0.09	0.00
				Max. My	95	19	0.00	0.02
				Max. Vy	86	0	0.00	0.00
				Max. Vx	95	0	0.00	0.00
				Max Tension	91	15	0.00	0.00
				Max. Compression	1	0	0.00	0.00
Mid Girt	Max. Mx		86	14	0.00	0.00		
	Max. My		95	14	0.00	0.00		
	Max. Vy		86	0	0.00	0.00		
	Max. Vx		95	0	0.00	0.00		
	Max Tension		91	13	0.00	0.00		
	Max. Compression		1	0	0.00	0.00		
	Mid Girt	Max. Mx	86	13	0.03	0.00		
		Max. My	95	13	0.00	0.01		
		Max. Vy	86	0	0.00	0.00		
		Max. Vx	95	0	0.00	0.00		

Maximum Reactions

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Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K	
Mast	Max. Vert	92	416	-1	-1	
	Max. H _x	68	242	7	0	
	Max. H _z	5	240	0	6	
	Max. M _x	1	0.00	0	0	
	Max. M _z	1	0.00	0	0	
	Max. Torsion	27	8.14	-6	0	
	Min. Vert	1	176	0	0	
	Min. H _x	26	242	-7	0	
	Min. H _z	47	232	0	-6	
	Min. M _x	1	0.00	0	0	
	Min. M _z	1	0.00	0	0	
	Min. Torsion	69	-8.47	6	0	
	Guy C @ 205 ft Elev 5 ft Azimuth 240 deg	Max. Vert	58	-4	-3	2
		Max. H _x	58	-4	-3	2
Guy B @ 205 ft Elev 5 ft Azimuth 120 deg	Max. H _z	16	-98	-94	54	
	Min. Vert	16	-98	-94	54	
	Min. H _x	23	-97	-95	53	
	Min. H _z	58	-4	-3	2	
	Max. Vert	30	-4	3	2	
	Max. H _x	65	-97	95	54	
Guy A @ 205 ft Elev -35 ft Azimuth 0 deg	Max. H _z	79	-96	93	55	
	Min. Vert	72	-98	95	55	
	Min. H _x	30	-4	3	2	
	Min. H _z	30	-4	3	2	
	Max. Vert	2	-7	0	-4	
	Max. H _x	65	-62	3	-57	
	Max. H _z	2	-7	0	-4	
	Min. Vert	37	-114	-1	-106	
	Min. H _x	23	-62	-3	-57	
	Min. H _z	37	-114	-1	-106	

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	176	0	0	0.00	0.00	-0.00
1.2 Dead+1.6 Wind 0 deg - No Ice+1.0 Guy	257	0	-5	0.00	0.00	-2.80
1.2D+1.6W (pattern 1) 0 deg - No Ice+1.0 Guy	256	0	-4	0.00	0.00	-3.02
1.2D+1.6W (pattern 2) 0 deg - No Ice+1.0 Guy	251	0	-6	0.00	0.00	-2.98
1.2D+1.6W (pattern 3) 0 deg - No Ice+1.0 Guy	240	0	-6	0.00	0.00	-2.87
1.2D+1.6W (pattern 4) 0 deg - No Ice+1.0 Guy	252	0	-5	0.00	0.00	-2.77
1.2D+1.6W (pattern 5) 0 deg - No Ice+1.0 Guy	253	0	-5	0.00	0.00	-2.72
1.2D+1.6W (pattern 6) 0 deg - No Ice+1.0 Guy	256	0	-5	0.00	0.00	-2.80

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Load Combination	Vertical	Shear _x	Shear _z	Overturning Moment, M _x	Overturning Moment, M _z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
1.2 Dead+1.6 Wind 30 deg - No Ice+1.0 Guy	246	3	-5	0.00	0.00	-2.72
1.2D+1.6W (pattern 1) 30 deg - No Ice+1.0 Guy	245	3	-4	0.00	0.00	-2.96
1.2D+1.6W (pattern 2) 30 deg - No Ice+1.0 Guy	242	3	-5	0.00	0.00	-2.94
1.2D+1.6W (pattern 3) 30 deg - No Ice+1.0 Guy	234	3	-5	0.00	0.00	-2.78
1.2D+1.6W (pattern 4) 30 deg - No Ice+1.0 Guy	242	3	-5	0.00	0.00	-2.80
1.2D+1.6W (pattern 5) 30 deg - No Ice+1.0 Guy	243	3	-5	0.00	0.00	-2.69
1.2D+1.6W (pattern 6) 30 deg - No Ice+1.0 Guy	245	3	-5	0.00	0.00	-2.71
1.2 Dead+1.6 Wind 60 deg - No Ice+1.0 Guy	233	5	-3	0.00	0.00	-5.45
1.2D+1.6W (pattern 1) 60 deg - No Ice+1.0 Guy	233	5	-3	0.00	0.00	-5.67
1.2D+1.6W (pattern 2) 60 deg - No Ice+1.0 Guy	232	6	-3	0.00	0.00	-5.59
1.2D+1.6W (pattern 3) 60 deg - No Ice+1.0 Guy	228	6	-3	0.00	0.00	-5.30
1.2D+1.6W (pattern 4) 60 deg - No Ice+1.0 Guy	231	5	-3	0.00	0.00	-5.67
1.2D+1.6W (pattern 5) 60 deg - No Ice+1.0 Guy	232	5	-3	0.00	0.00	-5.45
1.2D+1.6W (pattern 6) 60 deg - No Ice+1.0 Guy	233	5	-3	0.00	0.00	-5.45
1.2 Dead+1.6 Wind 90 deg - No Ice+1.0 Guy	256	6	0	0.00	0.00	-7.85
1.2D+1.6W (pattern 1) 90 deg - No Ice+1.0 Guy	255	5	0	0.00	0.00	-8.00
1.2D+1.6W (pattern 2) 90 deg - No Ice+1.0 Guy	251	6	0	0.00	0.00	-7.92
1.2D+1.6W (pattern 3) 90 deg - No Ice+1.0 Guy	242	7	0	0.00	0.00	-7.76
1.2D+1.6W (pattern 4) 90 deg - No Ice+1.0 Guy	252	6	0	0.00	0.00	-8.14
1.2D+1.6W (pattern 5) 90 deg - No Ice+1.0 Guy	253	6	0	0.00	0.00	-7.88
1.2D+1.6W (pattern 6) 90 deg - No Ice+1.0 Guy	255	6	0	0.00	0.00	-7.85
1.2 Dead+1.6 Wind 120 deg - No Ice+1.0 Guy	274	5	3	0.00	0.00	-3.96
1.2D+1.6W (pattern 1) 120 deg - No Ice+1.0 Guy	273	4	2	0.00	0.00	-3.96
1.2D+1.6W (pattern 2) 120 deg - No Ice+1.0 Guy	267	5	3	0.00	0.00	-3.79
1.2D+1.6W (pattern 3) 120 deg - No Ice+1.0 Guy	254	6	3	0.00	0.00	-3.79
1.2D+1.6W (pattern 4) 120 deg - No Ice+1.0 Guy	268	5	3	0.00	0.00	-4.23
1.2D+1.6W (pattern 5) 120 deg - No Ice+1.0 Guy	269	5	3	0.00	0.00	-4.06
1.2D+1.6W (pattern 6) 120 deg - No Ice+1.0 Guy	273	5	3	0.00	0.00	-3.96
1.2 Dead+1.6 Wind 150 deg - No Ice+1.0 Guy	261	2	5	0.00	0.00	0.42
1.2D+1.6W (pattern 1) 150 deg - No Ice+1.0 Guy	260	2	4	0.00	0.00	0.56
1.2D+1.6W (pattern 2) 150 deg	255	3	5	0.00	0.00	0.82

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Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
- No Ice+1.0 Guy						
1.2D+1.6W (pattern 3) 150 deg	245	3	5	0.00	0.00	0.66
- No Ice+1.0 Guy						
1.2D+1.6W (pattern 4) 150 deg	256	3	5	0.00	0.00	0.23
- No Ice+1.0 Guy						
1.2D+1.6W (pattern 5) 150 deg	258	3	5	0.00	0.00	0.18
- No Ice+1.0 Guy						
1.2D+1.6W (pattern 6) 150 deg	260	2	5	0.00	0.00	0.43
- No Ice+1.0 Guy						
1.2 Dead+1.6 Wind 180 deg - No Ice+1.0 Guy	239	0	6	0.00	0.00	3.41
1.2D+1.6W (pattern 1) 180 deg	238	0	5	0.00	0.00	3.63
- No Ice+1.0 Guy						
1.2D+1.6W (pattern 2) 180 deg	236	0	6	0.00	0.00	3.76
- No Ice+1.0 Guy						
1.2D+1.6W (pattern 3) 180 deg	232	0	6	0.00	0.00	3.41
- No Ice+1.0 Guy						
1.2D+1.6W (pattern 4) 180 deg	236	0	6	0.00	0.00	3.34
- No Ice+1.0 Guy						
1.2D+1.6W (pattern 5) 180 deg	237	0	6	0.00	0.00	3.05
- No Ice+1.0 Guy						
1.2D+1.6W (pattern 6) 180 deg	238	0	6	0.00	0.00	3.41
- No Ice+1.0 Guy						
1.2 Dead+1.6 Wind 210 deg - No Ice+1.0 Guy	258	-2	5	0.00	0.00	3.27
1.2D+1.6W (pattern 1) 210 deg	257	-2	4	0.00	0.00	3.51
- No Ice+1.0 Guy						
1.2D+1.6W (pattern 2) 210 deg	253	-2	5	0.00	0.00	3.51
- No Ice+1.0 Guy						
1.2D+1.6W (pattern 3) 210 deg	243	-3	5	0.00	0.00	3.36
- No Ice+1.0 Guy						
1.2D+1.6W (pattern 4) 210 deg	253	-2	5	0.00	0.00	3.40
- No Ice+1.0 Guy						
1.2D+1.6W (pattern 5) 210 deg	255	-2	5	0.00	0.00	3.07
- No Ice+1.0 Guy						
1.2D+1.6W (pattern 6) 210 deg	257	-2	5	0.00	0.00	3.27
- No Ice+1.0 Guy						
1.2 Dead+1.6 Wind 240 deg - No Ice+1.0 Guy	272	-5	3	0.00	0.00	5.84
1.2D+1.6W (pattern 1) 240 deg	271	-4	2	0.00	0.00	6.06
- No Ice+1.0 Guy						
1.2D+1.6W (pattern 2) 240 deg	266	-5	3	0.00	0.00	5.85
- No Ice+1.0 Guy						
1.2D+1.6W (pattern 3) 240 deg	253	-6	3	0.00	0.00	5.73
- No Ice+1.0 Guy						
1.2D+1.6W (pattern 4) 240 deg	266	-5	3	0.00	0.00	6.08
- No Ice+1.0 Guy						
1.2D+1.6W (pattern 5) 240 deg	268	-5	3	0.00	0.00	5.85
- No Ice+1.0 Guy						
1.2D+1.6W (pattern 6) 240 deg	272	-5	3	0.00	0.00	5.84
- No Ice+1.0 Guy						
1.2 Dead+1.6 Wind 270 deg - No Ice+1.0 Guy	256	-6	0	0.00	0.00	8.19
1.2D+1.6W (pattern 1) 270 deg	255	-5	0	0.00	0.00	8.34
- No Ice+1.0 Guy						
1.2D+1.6W (pattern 2) 270 deg	251	-6	0	0.00	0.00	8.06
- No Ice+1.0 Guy						
1.2D+1.6W (pattern 3) 270 deg	242	-7	0	0.00	0.00	7.97
- No Ice+1.0 Guy						
1.2D+1.6W (pattern 4) 270 deg	252	-6	0	0.00	0.00	8.47
- No Ice+1.0 Guy						

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Load Combination	Vertical	Shear _x	Shear _z	Overturning Moment, M _x	Overturning Moment, M _z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
1.2D+1.6W (pattern 5) 270 deg - No Ice+1.0 Guy	253	-6	0	0.00	0.00	8.38
1.2D+1.6W (pattern 6) 270 deg - No Ice+1.0 Guy	255	-6	0	0.00	0.00	8.19
1.2 Dead+1.6 Wind 300 deg - No Ice+1.0 Guy	233	-6	-3	0.00	0.00	3.68
1.2D+1.6W (pattern 1) 300 deg - No Ice+1.0 Guy	233	-5	-3	0.00	0.00	3.68
1.2D+1.6W (pattern 2) 300 deg - No Ice+1.0 Guy	232	-6	-3	0.00	0.00	3.49
1.2D+1.6W (pattern 3) 300 deg - No Ice+1.0 Guy	228	-6	-3	0.00	0.00	3.47
1.2D+1.6W (pattern 4) 300 deg - No Ice+1.0 Guy	231	-6	-3	0.00	0.00	3.95
1.2D+1.6W (pattern 5) 300 deg - No Ice+1.0 Guy	232	-6	-3	0.00	0.00	3.96
1.2D+1.6W (pattern 6) 300 deg - No Ice+1.0 Guy	233	-6	-3	0.00	0.00	3.67
1.2 Dead+1.6 Wind 330 deg - No Ice+1.0 Guy	248	-3	-5	0.00	0.00	-0.99
1.2D+1.6W (pattern 1) 330 deg - No Ice+1.0 Guy	247	-3	-4	0.00	0.00	-1.12
1.2D+1.6W (pattern 2) 330 deg - No Ice+1.0 Guy	244	-3	-5	0.00	0.00	-1.14
1.2D+1.6W (pattern 3) 330 deg - No Ice+1.0 Guy	235	-3	-6	0.00	0.00	-1.06
1.2D+1.6W (pattern 4) 330 deg - No Ice+1.0 Guy	244	-3	-5	0.00	0.00	-0.85
1.2D+1.6W (pattern 5) 330 deg - No Ice+1.0 Guy	246	-3	-5	0.00	0.00	-0.77
1.2D+1.6W (pattern 6) 330 deg - No Ice+1.0 Guy	247	-3	-5	0.00	0.00	-0.99
1.2 Dead+1.0 Ice+1.0 Temp+Guy	410	0	0	0.00	0.00	0.01
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp+1.0 Guy	413	0	-1	0.00	0.00	-1.10
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp+1.0 Guy	413	1	-1	0.00	0.00	-0.85
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp+1.0 Guy	414	1	0	0.00	0.00	-0.97
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp+1.0 Guy	415	1	0	0.00	0.00	-1.01
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp+1.0 Guy	416	1	1	0.00	0.00	-0.30
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp+1.0 Guy	416	1	1	0.00	0.00	0.72
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp+1.0 Guy	416	0	1	0.00	0.00	1.10
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp+1.0 Guy	416	0	1	0.00	0.00	0.99
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp+1.0 Guy	416	-1	1	0.00	0.00	1.16
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp+1.0 Guy	415	-1	0	0.00	0.00	1.10
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp+1.0 Guy	414	-1	0	0.00	0.00	0.23
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp+1.0 Guy	413	0	-1	0.00	0.00	-0.84
Dead+Wind 0 deg - Service+Guy	177	0	-1	0.00	0.00	-0.55
Dead+Wind 30 deg -	177	1	-1	0.00	0.00	-0.55

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Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
Service+Guy						
Dead+Wind 60 deg -	177	1	-1	0.00	0.00	-1.01
Service+Guy						
Dead+Wind 90 deg -	177	1	0	0.00	0.00	-1.49
Service+Guy						
Dead+Wind 120 deg -	177	1	1	0.00	0.00	-0.77
Service+Guy						
Dead+Wind 150 deg -	176	1	1	0.00	0.00	0.05
Service+Guy						
Dead+Wind 180 deg -	176	0	1	0.00	0.00	0.51
Service+Guy						
Dead+Wind 210 deg -	176	-1	1	0.00	0.00	0.62
Service+Guy						
Dead+Wind 240 deg -	177	-1	1	0.00	0.00	1.13
Service+Guy						
Dead+Wind 270 deg -	177	-1	0	0.00	0.00	1.55
Service+Guy						
Dead+Wind 300 deg -	177	-1	-1	0.00	0.00	0.72
Service+Guy						
Dead+Wind 330 deg -	177	-1	-1	0.00	0.00	-0.15
Service+Guy						

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	-75	0	0	75	0	0.003%
2	-1	-89	-95	1	89	95	0.004%
3	-1	-89	-93	1	89	93	0.004%
4	0	-89	-91	0	89	91	0.004%
5	0	-89	-86	0	89	86	0.004%
6	-1	-89	-93	1	89	93	0.003%
7	-1	-89	-93	1	89	93	0.003%
8	-1	-89	-95	1	89	95	0.003%
9	48	-88	-80	-48	88	80	0.003%
10	47	-88	-78	-47	88	78	0.003%
11	46	-88	-77	-46	88	77	0.003%
12	43	-88	-72	-43	88	72	0.003%
13	46	-88	-78	-46	88	78	0.003%
14	46	-88	-79	-46	88	79	0.003%
15	47	-88	-80	-47	88	80	0.004%
16	84	-88	-48	-84	88	48	0.002%
17	82	-88	-47	-82	88	47	0.002%
18	80	-88	-46	-80	88	46	0.002%
19	76	-88	-44	-76	88	44	0.002%
20	82	-88	-47	-82	88	47	0.003%
21	82	-88	-47	-82	88	47	0.003%
22	84	-88	-48	-84	88	48	0.002%
23	99	-88	-1	-99	88	1	0.003%
24	97	-88	-1	-97	88	1	0.003%
25	94	-88	-1	-94	88	1	0.003%
26	89	-88	-1	-89	88	1	0.003%
27	96	-88	-1	-96	88	1	0.003%
28	97	-88	-1	-97	88	1	0.003%
29	99	-88	-1	-99	88	1	0.003%
30	86	-89	48	-86	89	-48	0.004%
31	84	-89	47	-84	89	-47	0.005%

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Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
32	82	-89	46	-82	89	-46	0.005%
33	78	-89	43	-78	89	-43	0.003%
34	84	-89	47	-84	89	-47	0.003%
35	84	-89	48	-84	89	-48	0.004%
36	85	-89	48	-85	89	-48	0.004%
37	48	-89	83	-48	89	-83	0.004%
38	47	-89	81	-47	89	-81	0.003%
39	45	-89	79	-45	89	-79	0.003%
40	43	-89	75	-43	89	-75	0.003%
41	47	-89	81	-47	89	-81	0.003%
42	47	-89	82	-47	89	-82	0.004%
43	48	-89	83	-48	89	-83	0.004%
44	0	-88	94	0	88	-94	0.003%
45	0	-88	92	0	88	-92	0.003%
46	0	-88	89	0	88	-89	0.003%
47	0	-88	84	0	88	-84	0.003%
48	0	-88	91	0	88	-91	0.003%
49	0	-88	92	0	88	-92	0.003%
50	0	-88	93	0	88	-93	0.003%
51	-46	-89	80	46	89	-80	0.003%
52	-45	-89	79	45	89	-79	0.004%
53	-44	-89	77	44	89	-77	0.004%
54	-42	-89	72	42	89	-72	0.003%
55	-45	-89	78	45	89	-78	0.004%
56	-45	-89	79	45	89	-79	0.004%
57	-46	-89	80	46	89	-80	0.003%
58	-85	-89	47	85	89	-47	0.004%
59	-83	-89	46	83	89	-46	0.005%
60	-81	-89	45	81	89	-45	0.005%
61	-77	-89	43	77	89	-43	0.003%
62	-83	-89	46	83	89	-46	0.003%
63	-84	-89	46	84	89	-46	0.004%
64	-85	-89	47	85	89	-47	0.004%
65	-99	-88	-1	99	88	1	0.003%
66	-97	-88	-1	97	88	1	0.003%
67	-94	-88	-1	94	88	1	0.003%
68	-89	-88	-1	89	88	1	0.003%
69	-97	-88	-1	97	88	1	0.003%
70	-97	-88	-1	97	88	1	0.003%
71	-99	-88	-1	99	88	1	0.004%
72	-85	-88	-49	85	88	49	0.003%
73	-83	-88	-48	83	88	48	0.002%
74	-81	-88	-47	81	88	47	0.003%
75	-77	-88	-44	77	88	44	0.002%
76	-83	-88	-48	83	88	48	0.002%
77	-84	-88	-48	84	88	48	0.002%
78	-85	-88	-49	85	88	49	0.003%
79	-49	-88	-83	49	88	83	0.003%
80	-48	-88	-81	48	88	81	0.003%
81	-47	-88	-79	47	88	79	0.003%
82	-44	-88	-75	44	88	75	0.002%
83	-48	-88	-81	48	88	81	0.002%
84	-49	-88	-82	49	88	82	0.003%
85	-49	-88	-82	49	88	82	0.003%
86	0	-274	0	0	274	0	0.002%
87	0	-274	-33	0	274	33	0.000%
88	16	-273	-28	-16	273	28	0.000%
89	28	-273	-16	-28	273	16	0.001%
90	32	-274	0	-32	274	0	0.000%
91	28	-274	16	-28	274	-16	0.000%
92	16	-274	28	-16	274	-28	0.000%

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Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
93	0	-273	33	0	273	-33	0.001%
94	-16	-274	28	16	274	-28	0.001%
95	-28	-274	16	28	274	-16	0.001%
96	-32	-274	0	32	274	0	0.000%
97	-28	-273	-16	28	273	16	0.000%
98	-17	-273	-28	17	273	28	0.000%
99	0	-75	-19	0	75	19	0.003%
100	10	-75	-16	-10	75	16	0.002%
101	17	-75	-10	-17	75	10	0.003%
102	20	-75	0	-20	75	0	0.003%
103	17	-75	10	-17	75	-10	0.003%
104	10	-75	17	-10	75	-17	0.002%
105	0	-75	19	0	75	-19	0.002%
106	-9	-75	16	9	75	-16	0.002%
107	-17	-75	10	17	75	-10	0.003%
108	-20	-75	0	20	75	0	0.003%
109	-17	-75	-10	17	75	10	0.001%
110	-10	-75	-17	10	75	17	0.002%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	15	0.00000001	0.00003168
2	Yes	28	0.00008162	0.00005092
3	Yes	28	0.00008290	0.00005199
4	Yes	28	0.00008391	0.00005145
5	Yes	27	0.00009945	0.00005430
6	Yes	28	0.00006831	0.00003926
7	Yes	28	0.00006924	0.00003983
8	Yes	28	0.00007944	0.00004890
9	Yes	28	0.00007020	0.00003639
10	Yes	28	0.00007122	0.00003709
11	Yes	28	0.00007131	0.00003632
12	Yes	27	0.00007927	0.00003641
13	Yes	27	0.00008100	0.00003888
14	Yes	27	0.00008192	0.00003969
15	Yes	27	0.00009829	0.00005018
16	Yes	23	0.00008142	0.00003028
17	Yes	23	0.00008205	0.00003061
18	Yes	23	0.00008111	0.00003008
19	Yes	22	0.00008281	0.00003005
20	Yes	22	0.00009278	0.00003350
21	Yes	22	0.00009031	0.00003201
22	Yes	23	0.00007853	0.00002899
23	Yes	31	0.00007772	0.00003829
24	Yes	31	0.00007904	0.00003913
25	Yes	31	0.00007972	0.00003838
26	Yes	30	0.00007907	0.00003373
27	Yes	30	0.00008180	0.00003769
28	Yes	30	0.00008292	0.00003851
29	Yes	31	0.00007429	0.00003613
30	Yes	31	0.00009293	0.00005741
31	Yes	31	0.00009450	0.00005864
32	Yes	31	0.00009634	0.00005836
33	Yes	31	0.00007894	0.00004236

<p style="text-align: center;"><i>tnxTower</i></p> <p>Destek Engineering, LLC 1281 Kennestone Circle, Ste 100 Marietta, GA Phone: (770) 693-0835 FAX:</p>	Job	CTNL058A	Page	65 of 80
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34	Yes	31	0.00007798	0.00004412
35	Yes	31	0.00007864	0.00004525
36	Yes	31	0.00009051	0.00005516
37	Yes	30	0.00009910	0.00005967
38	Yes	31	0.00007240	0.00004385
39	Yes	31	0.00007315	0.00004335
40	Yes	30	0.00007335	0.00003934
41	Yes	30	0.00007523	0.00004161
42	Yes	30	0.00008355	0.00004709
43	Yes	30	0.00009511	0.00005658
44	Yes	21	0.00008521	0.00003989
45	Yes	21	0.00008560	0.00004016
46	Yes	21	0.00008622	0.00004024
47	Yes	21	0.00008112	0.00003784
48	Yes	20	0.00009213	0.00004412
49	Yes	19	0.00007648	0.00004435
50	Yes	21	0.00008169	0.00003815
51	Yes	31	0.00007706	0.00004575
52	Yes	31	0.00007834	0.00004674
53	Yes	31	0.00007892	0.00004605
54	Yes	30	0.00008306	0.00004363
55	Yes	30	0.00008349	0.00004622
56	Yes	30	0.00008738	0.00004807
57	Yes	31	0.00007417	0.00004347
58	Yes	31	0.00009305	0.00005782
59	Yes	31	0.00009461	0.00005910
60	Yes	31	0.00009637	0.00005872
61	Yes	31	0.00007899	0.00004248
62	Yes	31	0.00007800	0.00004506
63	Yes	31	0.00007908	0.00004565
64	Yes	31	0.00009062	0.00005555
65	Yes	31	0.00007478	0.00003709
66	Yes	31	0.00007600	0.00003790
67	Yes	31	0.00007670	0.00003715
68	Yes	30	0.00007683	0.00003306
69	Yes	30	0.00007970	0.00003680
70	Yes	30	0.00008272	0.00003855
71	Yes	30	0.00009992	0.00004886
72	Yes	23	0.00009986	0.00003701
73	Yes	24	0.00007200	0.00002684
74	Yes	23	0.00009970	0.00003685
75	Yes	23	0.00007611	0.00002790
76	Yes	23	0.00007975	0.00002822
77	Yes	23	0.00007202	0.00002556
78	Yes	23	0.00009606	0.00003534
79	Yes	27	0.00009100	0.00005047
80	Yes	27	0.00009248	0.00005153
81	Yes	27	0.00009288	0.00005054
82	Yes	27	0.00006831	0.00003380
83	Yes	27	0.00007144	0.00003627
84	Yes	27	0.00007814	0.00004024
85	Yes	27	0.00008765	0.00004803
86	Yes	19	0.00010000	0.00003086
87	Yes	23	0.00000001	0.00000960
88	Yes	22	0.00000001	0.00001013
89	Yes	23	0.00009058	0.00001106
90	Yes	25	0.00008760	0.00000966
91	Yes	26	0.00000001	0.00000924
92	Yes	25	0.00006740	0.00001020
93	Yes	24	0.00007848	0.00001393
94	Yes	25	0.00009681	0.00001431
95	Yes	26	0.00009798	0.00001178
96	Yes	26	0.00000001	0.00000880
97	Yes	24	0.00008221	0.00001006

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98	Yes	22	0.00000001	0.00000990
99	Yes	12	0.00000001	0.00003074
100	Yes	13	0.00000001	0.00001997
101	Yes	13	0.00000001	0.00002761
102	Yes	13	0.00000001	0.00002406
103	Yes	13	0.00000001	0.00002546
104	Yes	14	0.00000001	0.00002379
105	Yes	15	0.00000001	0.00001908
106	Yes	14	0.00000001	0.00002403
107	Yes	13	0.00000001	0.00002676
108	Yes	13	0.00000001	0.00002534
109	Yes	14	0.00000001	0.00001526
110	Yes	13	0.00000001	0.00001795

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	345 - 330	2.407	105	0.0631	0.2165
T1	330 - 320	2.507	105	0.0661	0.2145
T2	320 - 300	2.582	105	0.0637	0.2148
T3	300 - 280	2.692	105	0.0545	0.2071
T4	280 - 260	2.744	105	0.0395	0.1823
T5	260 - 240	2.756	105	0.0229	0.1579
T6	240 - 220	2.678	105	0.0362	0.1320
T7	220 - 200	2.449	105	0.0699	0.1029
T8	200 - 180	2.103	105	0.0816	0.0799
T9	180 - 160	1.759	105	0.0651	0.0841
T10	160 - 140	1.552	105	0.0437	0.1028
T11	140 - 120	1.391	105	0.0386	0.1323
T12	120 - 100	1.231	104	0.0367	0.1536
T13	100 - 80	1.086	104	0.0265	0.1653
T14	80 - 60	1.006	104	0.0260	0.1704
T15	60 - 40	0.884	104	0.0404	0.1690
T16	40 - 20	0.672	104	0.0616	0.1611
T17	20 - 12	0.366	104	0.0802	0.1483
T18	12 - 6.7	0.224	104	0.0850	0.1441
T19	6.7 - 0	0.125	104	0.0871	0.1397

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
330.00	Guy	105	2.507	0.0661	0.2145	86671
317.50	P-9A120GN-S	105	2.599	0.0628	0.2147	77271
308.00	P-9A72GN-S	105	2.656	0.0588	0.2123	73856
305.50	3" Dia 20' Omni	105	2.668	0.0576	0.2111	73339
297.46	Guy	105	2.701	0.0528	0.2046	79263
294.00	LeBlanc 10' Standoff (3)	105	2.713	0.0504	0.2008	90430
289.00	3" Dia 20' Omni	105	2.726	0.0467	0.1945	95030
288.00	1105-1A	105	2.728	0.0459	0.1931	95695
279.00	1105-1A	105	2.746	0.0387	0.1810	94808
274.25	3" Dia 20' Omni	105	2.753	0.0350	0.1750	80067
274.00	SPD6-58	105	2.753	0.0348	0.1747	79342

<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	CTNL058A	Page	67 of 80
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<i>Elevation</i>	<i>Appurtenance</i>	<i>Gov. Load Comb.</i>	<i>Deflection in</i>	<i>Tilt °</i>	<i>Twist °</i>	<i>Radius of Curvature ft</i>
270.10	Guy	105	2.757	0.0316	0.1700	69519
264.25	PiRod 4' Side Mount Standoff	105	2.758	0.0267	0.1630	58139
262.00	PiRod 4' Side Mount Standoff	105	2.758	0.0246	0.1603	54174
252.00	3" Dia 20' Omni	105	2.740	0.0172	0.1479	36151
251.00	P-9A72GN-S	105	2.736	0.0176	0.1466	34851
226.50	NNVV-65B-R4	105	2.540	0.0604	0.1127	29388
219.50	1105-1A	105	2.442	0.0705	0.1024	33244
213.00	15' Omni	105	2.337	0.0773	0.0951	43829
209.00	4'-P1.5x0.145	105	2.268	0.0800	0.0904	55213
208.00	8'-2" Dia Pipe	105	2.250	0.0805	0.0892	59047
205.50	PiRod 6-8' Box Arm	105	2.205	0.0815	0.0863	71452
204.00	PiRod 6-8' Box Arm	105	2.177	0.0818	0.0845	81814
200.00	7770.00 w/ Mount Pipe	105	2.103	0.0816	0.0799	154980
185.00	AIR 21 B2A/B4P w/ Mount Pipe	105	1.835	0.0709	0.0824	31202
177.25	Guy	105	1.723	0.0618	0.0856	25550
169.50	(2) LPA-80080-4CF-EDIN w/ Mount Pipe	105	1.637	0.0526	0.0917	39704
168.00	PiRod 12' T-Frame Sector	105	1.622	0.0509	0.0932	44599
150.50	13' Dipole	105	1.474	0.0396	0.1167	224479
146.00	3" dia x 20' Omni	105	1.438	0.0389	0.1236	355136
138.50	PiRod 4' Side Mount Standoff	105	1.379	0.0386	0.1344	305268
130.00	P-9A72GN-S	105	1.311	0.0385	0.1444	204455
123.50	(2) HP2-18	104	1.259	0.0376	0.1507	165474
112.00	3' Side Arm	104	1.167	0.0329	0.1592	120384
106.50	(2) HP2-18	104	1.126	0.0298	0.1623	62801
99.92	Guy	104	1.085	0.0265	0.1653	42717
90.00	PR-950	104	1.043	0.0243	0.1686	144162
36.00	SPD3-2.4NS	104	0.618	0.0658	0.1585	47176

Maximum Tower Deflections - Design Wind

<i>Section No.</i>	<i>Elevation ft</i>	<i>Horz. Deflection in</i>	<i>Gov. Load Comb.</i>	<i>Tilt °</i>	<i>Twist °</i>
L1	345 - 330	22.952	60	0.2017	1.0736
T1	330 - 320	22.891	60	0.2160	1.0644
T2	320 - 300	22.928	59	0.2012	1.0688
T3	300 - 280	22.925	59	0.2003	1.0354
T4	280 - 260	22.601	31	0.2544	0.9466
T5	260 - 240	22.098	31	0.2863	0.8663
T6	240 - 220	21.049	31	0.4083	0.7890
T7	220 - 200	19.167	30	0.5754	0.7061
T8	200 - 180	16.698	30	0.6266	0.6055
T9	180 - 160	14.238	30	0.5330	0.6071
T10	160 - 140	12.532	36	0.3962	0.6885
T11	140 - 120	11.166	35	0.3603	0.8136
T12	120 - 100	9.815	35	0.3459	0.8978
T13	100 - 80	8.495	34	0.2911	0.9346
T14	80 - 60	7.519	34	0.2684	0.9497
T15	60 - 40	6.322	34	0.3444	0.9324
T16	40 - 20	4.656	34	0.4570	0.8831
T17	20 - 12	2.485	34	0.5557	0.8098
T18	12 - 6.7	1.514	34	0.5813	0.7866
T19	6.7 - 0	0.848	34	0.5920	0.7627

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Critical Deflections and Radius of Curvature - Design Wind

<i>Elevation</i>	<i>Appurtenance</i>	<i>Gov. Load Comb.</i>	<i>Deflection in</i>	<i>Tilt °</i>	<i>Twist °</i>	<i>Radius of Curvature ft</i>
330.00	Guy	60	22.891	0.2160	1.0644	16823
317.50	P-9A120GN-S	59	22.947	0.1975	1.0682	14460
308.00	P-9A72GN-S	59	22.968	0.1881	1.0589	13048
305.50	3" Dia 20' Omni	59	22.961	0.1851	1.0533	12753
297.46	Guy	59	22.899	0.2078	1.0243	12700
294.00	LeBlanc 10' Standoff (3)	59	22.855	0.2182	1.0084	13453
289.00	3" Dia 20' Omni	59	22.774	0.2327	0.9868	14159
288.00	1105-1A	59	22.755	0.2355	0.9823	14296
279.00	1105-1A	31	22.584	0.2562	0.9423	14500
274.25	3" Dia 20' Omni	31	22.494	0.2636	0.9226	12323
274.00	SPD6-58	31	22.488	0.2639	0.9216	12215
270.10	Guy	31	22.400	0.2691	0.9060	10739
264.25	Pirod 4' Side Mount Standoff	31	22.239	0.2778	0.8830	9092
262.00	Pirod 4' Side Mount Standoff	31	22.167	0.2819	0.8742	8565
252.00	3" Dia 20' Omni	31	21.765	0.3099	0.8352	6354
251.00	P-9A72GN-S	31	21.716	0.3140	0.8314	6181
226.50	NNVV-65B-R4	31	19.867	0.5284	0.7350	5667
219.50	1105-1A	30	19.111	0.5785	0.7038	6447
213.00	15' Omni	30	18.350	0.6106	0.6721	8552
209.00	4'-P1.5x0.145	30	17.856	0.6226	0.6517	10822
208.00	8'-2" Dia Pipe	30	17.730	0.6246	0.6466	11591
205.50	PiRod 6-8' Box Arm	30	17.411	0.6280	0.6337	14094
204.00	PiRod 6-8' Box Arm	30	17.218	0.6288	0.6259	16202
200.00	7770.00 w/ Mount Pipe	30	16.698	0.6266	0.6055	26880
185.00	AIR 21 B2A/B4P w/ Mount Pipe	30	14.797	0.5668	0.6013	5687
177.25	Guy	30	13.958	0.5126	0.6129	4698
169.50	(2) LPA-80080-4CF-EDIN w/ Mount Pipe	36	13.263	0.4529	0.6396	6501
168.00	Pirod 12' T-Frame Sector	36	13.141	0.4417	0.6463	7037
150.50	13' Dipole	35	11.857	0.3693	0.7483	16324
146.00	3" dia x 20' Omni	35	11.560	0.3638	0.7773	19027
138.50	Pirod 4' Side Mount Standoff	35	11.067	0.3598	0.8219	25432
130.00	P-9A72GN-S	35	10.501	0.3568	0.8629	26385
123.50	(2) HP2-18	35	10.058	0.3513	0.8872	22265
112.00	3' Side Arm	35	9.254	0.3264	0.9165	16065
106.50	(2) HP2-18	34	8.885	0.3099	0.9258	10694
99.92	Guy	34	8.490	0.2908	0.9347	7917
90.00	PR-950	34	7.992	0.2709	0.9452	19913
36.00	SPD3-2.4NS	34	4.258	0.4792	0.8684	8498

Bolt Design Data

<i>Section No.</i>	<i>Elevation ft</i>	<i>Component Type</i>	<i>Bolt Grade</i>	<i>Bolt Size in</i>	<i>Number Of Bolts</i>	<i>Maximum Load per Bolt K</i>	<i>Allowable Load per Bolt K</i>	<i>Ratio Load Allowable</i>	<i>Allowable Ratio</i>	<i>Criteria</i>
T1	330	Leg	A325N	1.1250	9	1	67	0.009	1	Bolt Tension
T2	320	Leg	A325N	0.7500	5	1	30	0.050	1	Bolt Tension
T3	300	Leg	A325N	0.7500	5	2	30	0.072	1	Bolt Tension
T4	280	Leg	A325N	0.7500	5	2	30	0.083	1	Bolt Tension
T5	260	Leg	A325N	0.7500	5	4	30	0.149	1	Bolt Tension
T6	240	Leg	A325N	0.7500	5	5	30	0.183	1	Bolt Tension

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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
T7	220	Leg	A325N	0.7500	5	5	30	0.166	1	Bolt Tension
T8	200	Leg	A325N	0.8750	5	4	41	0.100	1	Bolt Tension
T9	180	Leg	A325N	0.8750	5	9	41	0.229	1	Bolt Tension
		Torque Arm Top@177.25	A325N	1.0000	4	7	40	0.185	1	Member Block Shear
		Torque Arm Bottom@177.25	A325N	1.0000	4	5	64	0.083	1	Bolt Shear
T10	160	Leg	A325N	0.8750	5	8	41	0.185	1	Bolt Tension
T11	140	Leg	A325N	0.8750	5	7	41	0.170	1	Bolt Tension
T12	120	Leg	A325N	0.8750	5	7	41	0.179	1	Bolt Tension
T13	100	Leg	A325N	0.8750	5	8	41	0.198	1	Bolt Tension
T14	80	Leg	A325N	0.7500	5	8	30	0.280	1	Bolt Tension
T15	60	Leg	A325N	0.7500	5	9	30	0.304	1	Bolt Tension
T16	40	Leg	A325N	0.7500	5	9	30	0.317	1	Bolt Tension
T17	20	Leg	A325N	0.7500	5	10	30	0.319	1	Bolt Tension
T19	6.7	Leg	A325N	1.7500	3	16	162	0.098	1	Bolt Tension

Guy Design Data

Section No.	Elevation ft	Size	Initial Tension K	Breaking Load K	Actual T_u K	Allowable ϕT_n K	Required S.F.	Actual S.F.
T1	330.00 (A) (1101)	11/16 BS	6	58	18	35	1.000	1.967
	330.00 (B) (1100)	11/16 BS	6	58	16	35	1.000	2.112
	330.00 (C) (1099)	11/16 BS	6	58	17	35	1.000	2.027
T3	297.46 (A) (1104)	9/16 BS	4	38	13	23	1.000	1.771
	297.46 (B) (1103)	9/16 BS	4	38	12	23	1.000	1.865
	297.46 (C) (1102)	9/16 BS	4	38	13	23	1.000	1.819
T4	270.10 (A) (1107)	13/16 BS	8	80	28	48	1.000	1.704
	270.10 (B) (1106)	13/16 BS	8	80	27	48	1.000	1.759
	270.10 (C) (1105)	13/16 BS	8	80	28	48	1.000	1.745
T9	177.25 (A) (1120)	15/16 BS	11	108	35	65	1.000	1.862
	177.25 (A) (1121)	15/16 BS	11	108	36	65	1.000	1.794
	177.25 (B) (1114)	15/16 BS	11	108	34	65	1.000	1.915
	177.25 (B) (1115)	15/16 BS	11	108	35	65	1.000	1.874
	177.25 (C) (1108)	15/16 BS	11	108	34	65	1.000	1.894
	177.25 (C) (1109)	15/16 BS	11	108	32	65	1.000	2.056
T13	99.92 (A) (1128)	15/16 BS	11	108	32	65	1.000	2.031

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Section No.	Elevation ft	Size	Initial Tension K	Breaking Load K	Actual T_u K	Allowable ϕT_n K	Required S.F.	Actual S.F.
	99.92 (B) (1127)	15/16 BS	11	108	31	65	1.000	2.110
	99.92 (C) (1126)	15/16 BS	11	108	30	65	1.000	2.136

Compression Checks

Leg 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 $\frac{P_u}{\phi P_n}$
L1	345 - 330	1 1/4	15.00	1.49	57.3	1.2272	-3	43	0.064 ¹
T1	330 - 320	2 1/4	10.00	2.43	51.8	3.9761	-22	147	0.147 ¹
T2	320 - 300	2 1/4	20.00	1.96	41.9	3.9761	-28	157	0.180 ¹
T3	300 - 280	2 1/4	20.00	2.45	52.4	3.9761	-41	146	0.280 ¹
T4	280 - 260	2 1/4	20.00	2.45	52.4	3.9761	-65	146	0.444 ¹
T5	260 - 240	2 1/4	20.00	2.45	52.4	3.9761	-81	146	0.554 ¹
T6	240 - 220	2 1/4	20.00	2.45	52.4	3.9761	-83	146	0.570 ¹
T7	220 - 200	2 1/2	20.00	2.44	46.9	4.9087	-72	188	0.384 ¹
T8	200 - 180	2 3/4	20.00	2.44	42.7	5.9396	-120	234	0.511 ¹
T9	180 - 160	2 3/4	20.00	2.44	42.7	5.9396	-148	234	0.631 ¹
T10	160 - 140	2 3/4	20.00	2.44	42.7	5.9396	-111	234	0.473 ¹
T11	140 - 120	2 3/4	20.00	2.44	42.7	5.9396	-108	234	0.461 ¹
T12	120 - 100	2 3/4	20.00	2.44	42.7	5.9396	-119	234	0.509 ¹
T13	100 - 80	2 3/4	20.00	2.44	42.7	5.9396	-128	234	0.548 ¹
T14	80 - 60	2 3/4	20.00	2.44	42.7	5.9396	-135	234	0.576 ¹
T15	60 - 40	2 3/4	20.00	2.44	42.7	5.9396	-141	234	0.604 ¹
T16	40 - 20	2 3/4	20.00	2.44	42.7	5.9396	-143	234	0.611 ¹
T17	20 - 12	2 3/4	8.00	2.61	45.6	5.9396	-142	230	0.616 ¹
T18	12 - 6.7	2 3/4	5.30	2.57	44.8	5.9396	-141	231	0.613 ¹
T19	6.7 - 0	2 3/4	7.30	1.09	19.0	5.9396	-154	260	0.591 ¹

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¹ $P_u / \phi P_n$ controls

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 $\frac{P_u}{\phi P_n}$
L1	345 - 330	1/2	2.91	1.39	120.5 K=0.90	0.1963	0	3	0.109 ¹
T1	330 - 320	7/8	5.56	2.68	132.1 K=0.90	0.6013	-2	8	0.197 ¹
T2	320 - 300	7/8	5.37	2.59	127.6 K=0.90	0.6013	-1	8	0.155 ¹
T3	300 - 280	7/8	5.57	2.68	132.3 K=0.90	0.6013	-3	8	0.382 ¹
T4	280 - 260	1	5.57	2.68	115.8 K=0.90	0.7854	-4	13	0.305 ¹
T5	260 - 240	1	5.57	2.68	115.8 K=0.90	0.7854	-4	13	0.271 ¹
T6	240 - 220	1	5.57	2.68	115.8 K=0.90	0.7854	-4	13	0.326 ¹
T7	220 - 200	1	5.57	2.67	115.2 K=0.90	0.7854	-6	13	0.434 ¹
T8	200 - 180	1 1/4	5.57	2.66	101.0 K=0.99	1.2272	-10	26	0.390 ¹
T9	180 - 160	1 1/4	5.57	2.66	101.0 K=0.99	1.2272	-7	26	0.283 ¹
T10	160 - 140	1	5.57	2.66	114.7 K=0.90	0.7854	-5	13	0.337 ¹
T11	140 - 120	1	5.57	2.66	114.7 K=0.90	0.7854	-3	13	0.203 ¹
T12	120 - 100	1	5.57	2.66	114.7 K=0.90	0.7854	-4	13	0.316 ¹
T13	100 - 80	1	5.57	2.66	114.7 K=0.90	0.7854	-5	13	0.361 ¹
T14	80 - 60	1	5.57	2.66	114.7 K=0.90	0.7854	-4	13	0.274 ¹
T15	60 - 40	1	5.57	2.66	114.7 K=0.90	0.7854	-2	13	0.148 ¹
T16	40 - 20	1	5.57	2.66	114.7 K=0.90	0.7854	-3	13	0.224 ¹
T17	20 - 12	1 1/4	5.64	2.69	101.6 K=0.98	1.2272	-5	26	0.186 ¹
T18	12 - 6.7	1 1/4	3.58	3.42	91.9 K=0.70	1.2272	-5	30	0.175 ¹
T19	6.7 - 0	1 1/4	3.39	2.48	97.5 K=1.02	1.2272	-22	28	0.810 ¹

¹ $P_u / \phi P_n$ controls

Horizontal 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 $\frac{P_u}{\phi P_n}$
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Section No.	Elevation ft	Size	L ft	L _u ft	KL/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T18	12 - 6.7	6x3/4	5.00	3.58	198.3 K=1.00	4.5000	-2	26	0.095 ¹

¹ P_u / φP_n controls

Secondary Horizontal 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 $\frac{P_u}{\phi P_n}$
T19	6.7 - 0	7/8	3.61	3.38	129.7 K=0.70	0.6013	-3	8	0.352 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 $\frac{P_u}{\phi P_n}$
L1	345 - 330	3/4	2.50	2.40	107.3 K=0.70	0.4418	0	9	0.001 ¹
T1	330 - 320	6x3/4	5.00	4.81	266.7 K=1.00	4.5000	0	14	0.000 ¹
T2	320 - 300	1	5.00	4.81	161.7 K=0.70	0.7854	0	7	0.022 ¹
T3	300 - 280	1	5.00	4.81	161.7 K=0.70	0.7854	-1	7	0.146 ¹
T4	280 - 260	1	5.00	4.81	161.7 K=0.70	0.7854	0	7	0.031 ¹
T5	260 - 240	1	5.00	4.81	161.7 K=0.70	0.7854	0	7	0.008 ¹
T6	240 - 220	1	5.00	4.81	161.7 K=0.70	0.7854	0	7	0.000 ¹
T7	220 - 200	1 1/4	5.00	4.79	128.8 K=0.70	1.2272	-1	17	0.039 ¹
T8	200 - 180	1 1/2	5.00	4.77	106.9 K=0.70	1.7672	-1	35	0.034 ¹
T9	180 - 160	1 1/2	5.00	4.77	106.9 K=0.70	1.7672	-9	35	0.275 ¹
T10	160 - 140	1 1/4	5.00	4.77	128.2 K=0.70	1.2272	0	17	0.028 ¹
T12	120 - 100	1 1/4	5.00	4.77	128.2 K=0.70	1.2272	0	17	0.000 ¹
T14	80 - 60	1 1/4	5.00	4.77	128.2 K=0.70	1.2272	0	17	0.008 ¹

¹ P_u / φP_n controls

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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	330 - 320	1	5.00	4.81	161.7 K=0.70	0.7854	0	7	0.027 ¹
T2	320 - 300	1	5.00	4.81	161.7 K=0.70	0.7854	-1	7	0.093 ¹
T3	300 - 280	1	5.00	4.81	161.7 K=0.70	0.7854	0	7	0.006 ¹
T4	280 - 260	1	5.00	4.81	161.7 K=0.70	0.7854	0	7	0.050 ¹
T5	260 - 240	1	5.00	4.81	161.7 K=0.70	0.7854	0	7	0.026 ¹
T6	240 - 220	1	5.00	4.81	161.7 K=0.70	0.7854	0	7	0.025 ¹
T7	220 - 200	1 1/4	5.00	4.79	128.8 K=0.70	1.2272	-1	17	0.049 ¹
T8	200 - 180	1 1/2	5.00	4.77	106.9 K=0.70	1.7672	-6	35	0.180 ¹
T9	180 - 160	1 1/2	5.00	4.77	106.9 K=0.70	1.7672	0	35	0.006 ¹
T13	100 - 80	1 1/4	5.00	4.77	128.2 K=0.70	1.2272	0	17	0.018 ¹
T14	80 - 60	1 1/4	5.00	4.77	128.2 K=0.70	1.2272	0	17	0.004 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 $\frac{P_u}{\phi P_n}$
L1	345 - 330	3/4	2.50	2.40	107.3 K=0.70	0.4418	0	9	0.005 ¹
T1	330 - 320	1	5.00	4.81	161.7 K=0.70	0.7854	0	7	0.007 ¹
T3	300 - 280	1	5.00	4.81	161.7 K=0.70	0.7854	0	7	0.026 ¹
T5	260 - 240	1	5.00	4.81	161.7 K=0.70	0.7854	0	7	0.030 ¹
T8	200 - 180	1 1/2	5.00	4.77	106.9 K=0.70	1.7672	0	31	0.000 ¹

¹ P_u / φP_n controls

Torque-Arm Bottom Design Data

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T9	180 - 160 (1112)	2L4x4x3/8	4.61	3.40	33.1 K=1.00	5.7200	-18	175	0.100 ¹
T9	180 - 160 (1113)	2L4x4x3/8	4.61	3.40	33.1 K=1.00	5.7200	-21	175	0.118 ¹
T9	180 - 160 (1118)	2L4x4x3/8	4.61	3.40	33.1 K=1.00	5.7200	-17	175	0.095 ¹
T9	180 - 160 (1119)	2L4x4x3/8	4.61	3.40	33.1 K=1.00	5.7200	-17	175	0.095 ¹
T9	180 - 160 (1124)	2L4x4x3/8	4.61	3.40	33.1 K=1.00	5.7200	-18	175	0.103 ¹
T9	180 - 160 (1125)	2L4x4x3/8	4.61	3.40	33.1 K=1.00	5.7200	-21	175	0.121 ¹

¹ P_u / φP_n controls

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 $\frac{P_u}{\phi P_n}$
L1	345 - 330	1 1/4	15.00	0.08	3.2	1.2272	3	55	0.046 ¹
T1	330 - 320	2 1/4	10.00	0.28	6.0	3.9761	5	179	0.030 ¹
T2	320 - 300	2 1/4	20.00	1.96	41.9	3.9761	11	179	0.063 ¹
T3	300 - 280	2 1/4	20.00	2.45	52.4	3.9761	12	179	0.068 ¹
T4	280 - 260	2 1/4	20.00	0.28	6.0	3.9761	13	179	0.073 ¹
T5	260 - 240	2 1/4	20.00	0.28	6.0	3.9761	27	179	0.150 ¹
T6	240 - 220	2 1/4	20.00	2.45	52.4	3.9761	28	179	0.154 ¹
T7	220 - 200	2 1/2	20.00	0.08	1.6	4.9087	15	221	0.069 ¹
T8	200 - 180	2 3/4	20.00	0.37	6.4	5.9396	46	267	0.174 ¹
T9	180 - 160	2 3/4	20.00	0.08	1.5	5.9396	46	267	0.174 ¹

¹ P_u / φP_n controls

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 $\frac{P_u}{\phi P_n}$
L1	345 - 330	1/2	2.91	1.39	133.9	0.1963	0	9	0.043 ¹
T1	330 - 320	7/8	5.56	2.68	146.8	0.6013	1	27	0.055 ¹
T2	320 - 300	7/8	5.37	2.59	141.8	0.6013	1	27	0.046 ¹
T3	300 - 280	7/8	5.57	2.68	147.0	0.6013	3	27	0.113 ¹
T4	280 - 260	1	5.57	2.68	128.7	0.7854	4	35	0.120 ¹
T5	260 - 240	1	5.57	2.68	128.7	0.7854	3	35	0.096 ¹
T6	240 - 220	1	5.57	2.68	128.7	0.7854	4	35	0.110 ¹
T7	220 - 200	1	5.57	2.67	128.0	0.7854	6	35	0.157 ¹
T8	200 - 180	1 1/4	5.57	2.66	102.0	1.2272	10	55	0.179 ¹

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T9	180 - 160	1 1/4	5.57	2.66	102.0	1.2272	7	55	0.135 ¹
T10	160 - 140	1	5.57	2.66	127.4	0.7854	4	35	0.113 ¹
T11	140 - 120	1	5.57	2.66	127.4	0.7854	2	35	0.062 ¹
T12	120 - 100	1	5.57	2.66	127.4	0.7854	4	35	0.105 ¹
T13	100 - 80	1	5.57	2.66	127.4	0.7854	5	35	0.137 ¹
T14	80 - 60	1	5.57	2.66	127.4	0.7854	3	35	0.087 ¹
T15	60 - 40	1	5.57	2.66	127.4	0.7854	1	35	0.041 ¹
T16	40 - 20	1	5.57	2.66	127.4	0.7854	2	35	0.070 ¹
T17	20 - 12	1 1/4	5.64	2.69	103.3	1.2272	2	55	0.041 ¹
T18	12 - 6.7	1 1/4	3.58	3.42	131.3	1.2272	5	55	0.085 ¹

¹ P_u / φP_n controls

Horizontal 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 $\frac{P_u}{\phi P_n}$
T17	20 - 12	7/8	5.00	4.77	261.7	0.6013	3	27	0.126 ¹
T18	12 - 6.7	6x3/4	5.00	3.58	198.3	4.5000	21	146	0.144 ¹

¹ P_u / φP_n controls

Secondary Horizontal 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 $\frac{P_u}{\phi P_n}$
T19	6.7 - 0	7/8	1.18	0.95	52.3	0.6013	3	27	0.105 ¹

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	330 - 320	6x3/4	5.00	4.81	266.7	4.5000	0	146	0.000 ¹
T2	320 - 300	1	5.00	4.81	231.0	0.7854	0	35	0.005 ¹
T4	280 - 260	1	5.00	4.81	231.0	0.7854	1	35	0.015 ¹
T5	260 - 240	1	5.00	4.81	231.0	0.7854	0	35	0.013 ¹
T6	240 - 220	1	5.00	4.81	231.0	0.7854	0	35	0.007 ¹
T7	220 - 200	1 1/4	5.00	4.79	184.0	1.2272	1	55	0.018 ¹
T8	200 - 180	1 1/2	5.00	4.77	152.7	1.7672	2	80	0.021 ¹
T9	180 - 160	1 1/2	5.00	4.77	152.7	1.7672	7	80	0.091 ¹
T10	160 - 140	1 1/4	5.00	4.77	183.2	1.2272	1	55	0.018 ¹
T11	140 - 120	1 1/4	5.00	4.77	183.2	1.2272	1	55	0.010 ¹

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T12	120 - 100	1 1/4	5.00	4.77	183.2	1.2272	1	55	0.011 ¹
T13	100 - 80	1 1/4	5.00	4.77	183.2	1.2272	10	55	0.182 ¹
T14	80 - 60	1 1/4	5.00	4.77	183.2	1.2272	1	55	0.015 ¹
T15	60 - 40	1 1/4	5.00	4.77	183.2	1.2272	1	55	0.011 ¹
T16	40 - 20	1 1/4	5.00	4.77	183.2	1.2272	1	55	0.013 ¹
T17	20 - 12	7/8	5.00	4.77	261.7	0.6013	1	27	0.053 ¹
T19	6.7 - 0	6x3/4	4.94	4.71	261.0	4.5000	20	146	0.136 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	330 - 320	1	5.00	4.81	231.0	0.7854	0	35	0.008 ¹
T3	300 - 280	1	5.00	4.81	231.0	0.7854	0	35	0.010 ¹
T4	280 - 260	1	5.00	4.81	231.0	0.7854	1	35	0.022 ¹
T5	260 - 240	1	5.00	4.81	231.0	0.7854	0	35	0.013 ¹
T6	240 - 220	1	5.00	4.81	231.0	0.7854	0	35	0.011 ¹
T7	220 - 200	1 1/4	5.00	4.79	184.0	1.2272	1	55	0.020 ¹
T8	200 - 180	1 1/2	5.00	4.77	152.7	1.7672	6	80	0.076 ¹
T9	180 - 160	1 1/2	5.00	4.77	152.7	1.7672	1	80	0.013 ¹
T10	160 - 140	1 1/4	5.00	4.77	183.2	1.2272	1	55	0.011 ¹
T11	140 - 120	1 1/4	5.00	4.77	183.2	1.2272	1	55	0.011 ¹
T12	120 - 100	1 1/4	5.00	4.77	183.2	1.2272	3	55	0.046 ¹
T13	100 - 80	1 1/4	5.00	4.77	183.2	1.2272	1	55	0.019 ¹
T14	80 - 60	1 1/4	5.00	4.77	183.2	1.2272	1	55	0.015 ¹
T15	60 - 40	1 1/4	5.00	4.77	183.2	1.2272	1	55	0.012 ¹
T16	40 - 20	1 1/4	5.00	4.77	183.2	1.2272	1	55	0.026 ¹
T19	6.7 - 0	6x3/4	0.75	0.52	28.7	4.5000	15	146	0.100 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 $\frac{P_u}{\phi P_n}$
L1	345 - 330	3/4	2.50	2.40	153.3	0.4418	0	20	0.000 ¹
T1	330 - 320	1	5.00	4.81	231.0	0.7854	0	35	0.005 ¹
T2	320 - 300	1	5.00	4.81	231.0	0.7854	0	25	0.007 ¹
T4	280 - 260	1	5.00	4.81	231.0	0.7854	6	25	0.249 ¹
T5	260 - 240	1	5.00	4.81	231.0	0.7854	1	25	0.026 ¹
T6	240 - 220	1	5.00	4.81	231.0	0.7854	0	25	0.016 ¹
T7	220 - 200	1 1/4	5.00	4.79	184.0	1.2272	1	40	0.014 ¹
T8	200 - 180	1 1/2	5.00	4.77	152.7	1.7672	1	57	0.013 ¹
T9	180 - 160	1 1/2	5.00	4.77	152.7	1.7672	2	57	0.027 ¹
T10	160 - 140	1 1/4	5.00	4.77	183.2	1.2272	1	40	0.023 ¹
T11	140 - 120	1 1/4	5.00	4.77	183.2	1.2272	1	40	0.023 ¹
T12	120 - 100	1 1/4	5.00	4.77	183.2	1.2272	1	40	0.026 ¹

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T13	100 - 80	1 1/4	5.00	4.77	183.2	1.2272	1	40	0.027 ¹
T14	80 - 60	1 1/4	5.00	4.77	183.2	1.2272	1	40	0.028 ¹
T15	60 - 40	1 1/4	5.00	4.77	183.2	1.2272	1	40	0.030 ¹
T16	40 - 20	1 1/4	5.00	4.77	183.2	1.2272	1	40	0.031 ¹
T19	6.7 - 0	6x3/4	2.84	2.61	144.8	4.5000	13	146	0.090 ¹

¹ P_u / φP_n controls

Torque-Arm Top Design Data

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T9	180 - 160 (1110)	2L4x4x3/8	4.84	3.62	45.9	5.7200	28	185	0.150 ¹
T9	180 - 160 (1111)	2L4x4x3/8	4.84	3.62	45.9	5.7200	29	185	0.157 ¹
T9	180 - 160 (1116)	2L4x4x3/8	4.84	3.62	45.9	5.7200	28	185	0.149 ¹
T9	180 - 160 (1117)	2L4x4x3/8	4.84	3.62	45.9	5.7200	25	185	0.133 ¹
T9	180 - 160 (1122)	2L4x4x3/8	4.84	3.62	45.9	5.7200	25	185	0.134 ¹
T9	180 - 160 (1123)	2L4x4x3/8	4.84	3.62	45.9	5.7200	29	185	0.158 ¹

¹ P_u / φP_n controls

Torque-Arm Bottom Design Data

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T9	180 - 160 (1112)	2L4x4x3/8	4.61	3.40	43.7	5.7200	5	185	0.029 ¹
T9	180 - 160 (1113)	2L4x4x3/8	4.61	3.40	43.7	5.7200	6	185	0.030 ¹
T9	180 - 160 (1118)	2L4x4x3/8	4.61	3.40	43.7	5.7200	5	185	0.030 ¹
T9	180 - 160 (1119)	2L4x4x3/8	4.61	3.40	43.7	5.7200	5	185	0.030 ¹
T9	180 - 160 (1124)	2L4x4x3/8	4.61	3.40	43.7	5.7200	6	185	0.031 ¹
T9	180 - 160 (1125)	2L4x4x3/8	4.61	3.40	43.7	5.7200	6	185	0.033 ¹

¹ P_u / φP_n controls

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Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	345 - 330	Latticed Pole Leg	1 1/4	1	-3	43	6.4	Pass
L1	345 - 330	Latticed Pole Diagonal	1/2	15	0	3	10.9	Pass
L1	345 - 330	Latticed Pole Top Girt	3/4	5	0	9	0.1	Pass
L1	345 - 330	Latticed Pole Mid Girt	3/4	8	0	9	0.5	Pass
T1	330 - 320	Leg	2 1/4	72	-22	147	14.7	Pass
T2	320 - 300	Leg	2 1/4	108	-28	157	18.0	Pass
T3	300 - 280	Leg	2 1/4	180	-41	146	28.0	Pass
T4	280 - 260	Leg	2 1/4	240	-65	146	44.4	Pass
T5	260 - 240	Leg	2 1/4	299	-81	146	55.4	Pass
T6	240 - 220	Leg	2 1/4	359	-83	146	57.0	Pass
T7	220 - 200	Leg	2 1/2	420	-72	188	38.4	Pass
T8	200 - 180	Leg	2 3/4	480	-120	234	51.1	Pass
T9	180 - 160	Leg	2 3/4	540	-148	234	63.1	Pass
T10	160 - 140	Leg	2 3/4	600	-111	234	47.3	Pass
T11	140 - 120	Leg	2 3/4	659	-108	234	46.1	Pass
T12	120 - 100	Leg	2 3/4	719	-119	234	50.9	Pass
T13	100 - 80	Leg	2 3/4	780	-128	234	54.8	Pass
T14	80 - 60	Leg	2 3/4	840	-135	234	57.6	Pass
T15	60 - 40	Leg	2 3/4	900	-141	234	60.4	Pass
T16	40 - 20	Leg	2 3/4	960	-143	234	61.1	Pass
T17	20 - 12	Leg	2 3/4	1020	-142	230	61.6	Pass
T18	12 - 6.7	Leg	2 3/4	1050	-141	231	61.3	Pass
T19	6.7 - 0	Leg	2 3/4	1071	-154	260	59.1	Pass
T1	330 - 320	Diagonal	7/8	105	-2	8	19.7	Pass
T2	320 - 300	Diagonal	7/8	118	-1	8	15.5	Pass
T3	300 - 280	Diagonal	7/8	190	-3	8	38.2	Pass
T4	280 - 260	Diagonal	1	264	-4	13	30.5	Pass
T5	260 - 240	Diagonal	1	354	-4	13	27.1	Pass
T6	240 - 220	Diagonal	1	370	-4	13	32.6	Pass
T7	220 - 200	Diagonal	1	430	-6	13	43.4	Pass
T8	200 - 180	Diagonal	1 1/4	495	-10	26	39.0	Pass
T9	180 - 160	Diagonal	1 1/4	577	-7	26	28.3	Pass
T10	160 - 140	Diagonal	1	655	-5	13	33.7	Pass
T11	140 - 120	Diagonal	1	670	-3	13	20.3	Pass
T12	120 - 100	Diagonal	1	730	-4	13	31.6	Pass
T13	100 - 80	Diagonal	1	828	-5	13	36.1	Pass
T14	80 - 60	Diagonal	1	894	-4	13	27.4	Pass
T15	60 - 40	Diagonal	1	953	-2	13	14.8	Pass
T16	40 - 20	Diagonal	1	975	-3	13	22.4	Pass
T17	20 - 12	Diagonal	1 1/4	1029	-5	26	18.6	Pass
T18	12 - 6.7	Diagonal	1 1/4	1058	-5	30	17.5	Pass
T19	6.7 - 0	Diagonal	1 1/4	1084	-22	28	81.0	Pass
T17	20 - 12	Horizontal	7/8	1032	3	27	12.6	Pass
T18	12 - 6.7	Horizontal	6x3/4	1057	21	146	14.4	Pass
T19	6.7 - 0	Secondary Horizontal	7/8	1097	-3	8	35.2	Pass
T1	330 - 320	Top Girt	6x3/4	74	0	14	0.1	Pass
T2	320 - 300	Top Girt	1	111	0	7	2.2	Pass
T3	300 - 280	Top Girt	1	181	-1	7	14.6	Pass
T4	280 - 260	Top Girt	1	242	0	7	3.1	Pass
T5	260 - 240	Top Girt	1	303	0	35	1.3	Pass
T6	240 - 220	Top Girt	1	363	0	35	0.7	Pass
T7	220 - 200	Top Girt	1 1/4	423	-1	17	3.9	Pass
T8	200 - 180	Top Girt	1 1/2	483	-1	35	3.4	Pass
T9	180 - 160	Top Girt	1 1/2	543	-9	35	27.5	Pass
T10	160 - 140	Top Girt	1 1/4	601	0	17	2.8	Pass

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Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T11	140 - 120	Top Girt	1 1/4	663	1	55	1.0	Pass
T12	120 - 100	Top Girt	1 1/4	723	1	55	1.1	Pass
T13	100 - 80	Top Girt	1 1/4	783	10	55	18.2	Pass
T14	80 - 60	Top Girt	1 1/4	843	1	55	1.5	Pass
T15	60 - 40	Top Girt	1 1/4	903	1	55	1.1	Pass
T16	40 - 20	Top Girt	1 1/4	963	1	55	1.3	Pass
T17	20 - 12	Top Girt	7/8	1023	1	27	5.3	Pass
T19	6.7 - 0	Top Girt	6x3/4	1074	20	146	13.6	Pass
T1	330 - 320	Bottom Girt	1	77	0	7	2.7	Pass
T2	320 - 300	Bottom Girt	1	112	-1	7	9.3	Pass
T3	300 - 280	Bottom Girt	1	185	0	35	1.0	Pass
T4	280 - 260	Bottom Girt	1	246	0	7	5.0	Pass
T5	260 - 240	Bottom Girt	1	306	0	7	2.6	Pass
T6	240 - 220	Bottom Girt	1	364	0	7	2.5	Pass
T7	220 - 200	Bottom Girt	1 1/4	426	-1	17	4.9	Pass
T8	200 - 180	Bottom Girt	1 1/2	486	-6	35	18.0	Pass
T9	180 - 160	Bottom Girt	1 1/2	546	1	80	1.3	Pass
T10	160 - 140	Bottom Girt	1 1/4	606	1	55	1.1	Pass
T11	140 - 120	Bottom Girt	1 1/4	664	1	55	1.1	Pass
T12	120 - 100	Bottom Girt	1 1/4	726	3	55	4.6	Pass
T13	100 - 80	Bottom Girt	1 1/4	786	1	55	1.9	Pass
T14	80 - 60	Bottom Girt	1 1/4	846	1	55	1.5	Pass
T15	60 - 40	Bottom Girt	1 1/4	904	1	55	1.2	Pass
T16	40 - 20	Bottom Girt	1 1/4	964	1	55	2.6	Pass
T19	6.7 - 0	Bottom Girt	6x3/4	1077	15	146	10.0	Pass
T1	330 - 320	Mid Girt	1	79	0	7	0.7	Pass
T2	320 - 300	Mid Girt	1	117	0	25	0.7	Pass
T3	300 - 280	Mid Girt	1	189	0	7	2.6	Pass
T4	280 - 260	Mid Girt	1	247	6	25	24.9	Pass
T5	260 - 240	Mid Girt	1	309	0	7	3.0	Pass
T6	240 - 220	Mid Girt	1	367	0	25	1.6	Pass
T7	220 - 200	Mid Girt	1 1/4	427	1	40	1.4	Pass
T8	200 - 180	Mid Girt	1 1/2	487	1	57	1.3	Pass
T9	180 - 160	Mid Girt	1 1/2	549	2	57	2.7	Pass
T10	160 - 140	Mid Girt	1 1/4	609	1	40	2.3	Pass
T11	140 - 120	Mid Girt	1 1/4	668	1	40	2.3	Pass
T12	120 - 100	Mid Girt	1 1/4	727	1	40	2.6	Pass
T13	100 - 80	Mid Girt	1 1/4	788	1	40	2.7	Pass
T14	80 - 60	Mid Girt	1 1/4	849	1	40	2.8	Pass
T15	60 - 40	Mid Girt	1 1/4	909	1	40	3.0	Pass
T16	40 - 20	Mid Girt	1 1/4	969	1	40	3.1	Pass
T19	6.7 - 0	Mid Girt	6x3/4	1080	13	146	9.0	Pass
T1	330 - 320	Guy A@330	11/16	1101	18	35	50.8	Pass
T3	300 - 280	Guy A@297.462	9/16	1104	13	23	56.5	Pass
T4	280 - 260	Guy A@270.098	13/16	1107	28	48	58.7	Pass
T9	180 - 160	Guy A@177.25	15/16	1121	36	65	55.7	Pass
T13	100 - 80	Guy A@99.9167	15/16	1128	32	65	49.2	Pass
T1	330 - 320	Guy B@330	11/16	1100	16	35	47.3	Pass
T3	300 - 280	Guy B@297.462	9/16	1103	12	23	53.6	Pass
T4	280 - 260	Guy B@270.098	13/16	1106	27	48	56.8	Pass
T9	180 - 160	Guy B@177.25	15/16	1115	35	65	53.4	Pass
T13	100 - 80	Guy B@99.9167	15/16	1127	31	65	47.4	Pass
T1	330 - 320	Guy C@330	11/16	1099	17	35	49.3	Pass
T3	300 - 280	Guy C@297.462	9/16	1102	13	23	55.0	Pass
T4	280 - 260	Guy C@270.098	13/16	1105	28	48	57.3	Pass
T9	180 - 160	Guy C@177.25	15/16	1108	34	65	52.8	Pass
T13	100 - 80	Guy C@99.9167	15/16	1126	30	65	46.8	Pass
T9	180 - 160	Torque Arm Top@177.25	2L4x4x3/8	1123	29	185	15.8	Pass
T9	180 - 160	Torque Arm Bottom@177.25	2L4x4x3/8	1125	-21	175	12.1	Pass

<i>tnxTower</i> <i>Destek Engineering, LLC</i> <i>1281 Kennestone Circle, Ste 100</i> <i>Marietta, GA</i> <i>Phone: (770) 693-0835</i> <i>FAX:</i>	Job	CTNL058A	Page	80 of 80
	Project	1975083	Date	15:32:54 06/07/19
	Client	Foresite LLC	Designed by	Ahmet Colakoglu

<i>Section No.</i>	<i>Elevation ft</i>	<i>Component Type</i>	<i>Size</i>	<i>Critical Element</i>	<i>P K</i>	ϕP_{allow} <i>K</i>	<i>% Capacity</i>	<i>Pass Fail</i>	
							Summary		
						Latticed Pole Leg (L1)	6.4	Pass	
						Latticed Pole Diagonal (L1)	10.9	Pass	
						Latticed Pole Top Girt (L1)	0.1	Pass	
						Latticed Pole Mid Girt (L1)	0.5	Pass	
						Leg (T9)	63.1	Pass	
						Diagonal (T19)	81.0	Pass	
						Horizontal (T18)	14.4	Pass	
						Secondary Horizontal (T19)	35.2	Pass	
						Top Girt (T9)	27.5	Pass	
						Bottom Girt (T8)	18.0	Pass	
						Mid Girt (T4)	24.9	Pass	
						Guy A (T4)	58.7	Pass	
						Guy B (T4)	56.8	Pass	
						Guy C (T4)	57.3	Pass	
						Torque Arm Top (T9)	18.5	Pass	
						Torque Arm Bottom (T9)	12.1	Pass	
						Bolt Checks	31.9	Pass	
							RATING =	81.0	Pass

Pier and Pad Foundation

Site Name:	CTNL058A-Rev1
------------	---------------

TIA-222 Revision:	G
Tower Type:	Guyed

Top & Bot. Pad Rein. Different?:	<input type="checkbox"/>
Block Foundation?:	<input type="checkbox"/>

Superstructure Analysis Reactions		
Compression, P_{comp} :	416	kips
Base Shear, Vu_{comp} :	7	kips
Moment, M_u :	0	ft-kips
Tower Height, H :	345	ft
BP Dist. Above Fdn, bp_{dist} :	3	in
Bolt Circle / Bearing Plate Width, BC :	6	in

Foundation Analysis Checks				
	Capacity	Demand	Rating	Check
<i>Lateral (Sliding) (kips)</i>	127.16	7.00	5.5%	Pass
<i>Bearing Pressure (ksf)</i>	12.29	5.45	44.3%	Pass
<i>Overturning (kip*ft)</i>	1046.37	33.25	3.2%	Pass
<i>Pier Flexure (Comp.) (kip*ft)</i>	934.54	14.00	1.5%	Pass
<i>Pier Compression (kip)</i>	4592.74	419.46	9.1%	Pass
<i>Pad Flexure (kip*ft)</i>	774.45	205.56	26.5%	Pass
<i>Pad Shear - 1-way (kips)</i>	237.04	40.93	17.3%	Pass
<i>Pad Shear - 2-way (Comp) (ksi)</i>	0.164	0.033	20.3%	Pass

Pier Properties		
Pier Shape:	Circular	
Pier Diameter, $dpier$:	3.5	ft
Ext. Above Grade, E :	0.5	ft
Pier Rebar Size, Sc :	9	
Pier Rebar Quantity, mc :	7	
Pier Tie/Spiral Size, St :	3	
Pier Tie/Spiral Quantity, mt :	3	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, cc_{pier} :	3	in

Soil Rating:	44.3%
Structural Rating:	26.5%

Pad Properties		
Depth, D :	4	ft
Pad Width, W :	9.5	ft
Pad Thickness, T :	2.5	ft
Pad Rebar Size (Bottom), Sp :	9	
Pad Rebar Quantity (Bottom), mp :	7	
Pad Clear Cover, cc_{pad} :	3	in

Material Properties		
Rebar Grade, Fy :	60	ksi
Concrete Compressive Strength, $F'c$:	3	ksi
Dry Concrete Density, δc :	150	pcf

Soil Properties		
Total Soil Unit Weight, γ :	120	pcf
Ultimate Net Bearing, Q_{net} :	20.000	ksf
Cohesion, Cu :	0.000	ksf
Friction Angle, ϕ :	30	degrees
SPT Blow Count, N_{blows} :		
Base Friction, μ :	0.45	
Neglected Depth, N :	3.33	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, gw :	N/A	ft

--Toggle between Gross and Net

Guyed Anchor Block Foundation

Checks capacity of anchor blocks for a guyed tower.

Site Name:	CTNL058A-Rev1
Location:	A

TIA-222 Revision: G

Design Reactions		
Shear, S:	106.00	kips
Uplift, Ua:	114.00	kips
Resultant Force, Rf:	155.7	kips
Tower Height, H:	345.00	ft
Guy Anchor Radius, R:	205.00	ft
Resultant Angle to Horizontal, θ:	47.1	deg

Guy Anchor Properties		
Depth to Bottom of Deadman, Da:	12.5	ft
Anchor Width, Wa:	4.5	ft
Anchor Thickness, Ta:	4.5	ft
Anchor Length, La:	20.5	ft
Concrete Volume, Vc:	15.4	yd ³
Toe Width, toe:	0	ft

Anchor Shaft Diameter, ds:		in
Anchor Shaft Quantity, n:		
Anchor Shaft Area Override:		in ²
Shear Lag Factor, u:		

Material Properties

Wt. Avg. Concrete Density, δx:	0.150	kcf
---------------------------------------	-------	-----

Design Checks				
	Capacity	Demand	Rating	Check
Lateral Capacity (kips):	234.03	106.00	45.3%	Pass
Uplift Capacity (kips):	243.08	114.00	46.9%	Pass

Soil Rating:	46.9%
Structural Rating:	N/A
Anchor Shaft Rating:	N/A

Neglect Depth, Neg:	3.33	ft
Groundwater Level, gw:	n/a	ft

Soil Properties:	No. of Soil Layers?			9		
Layer	φ, deg	cu, ksf	δ, pcf	d, ft	Ultimate fs (ksf)	N (blows/ft)
1	30	0.000	110	12.50		
2						
3						
4						
5						
6						
7						
8						
9						

*key:

cu = Cohesion / Undrained Shear Strength
 o = Buoyant Soil Unit Weight

d = Depth to Bottom of Layer

Ultimate fs = Geotechnical Report-provided skin friction / adhesion

N = SPT Blow Count

Exhibit E

May 22, 2019

Re: Mount Structural Evaluation
T-Mobile Site ID: CTNL058A
T-Mobile Site Name: NL058/RedWolf_ET
Site Address: 889A Colonel Ledyard Highway, Ledyard, CT 06339
Destek Job Number: 1975083

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 04/29/2019.
- Structural Analysis Report prepared by Centek Engineering, Inc., dated 05/14/2015.
- Construction Drawings prepared by EBI Consulting, dated 03/11/2015.
- Structural Analysis Report prepared by EBI Consulting, dated 02/19/2015.

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 Radio 4449 B71+B12 – RRUs**
- (3) Existing AIR21 KRC118023-1_B2A-B4P – Antennas
- (3) Existing AIR21 KRC118023-1_B2P-B4A – 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} = 135 mph converted to V_{asd} = 105 mph.
- RAD Center: 185 ft
- Exposure Category B
- Risk Category II

Engineering Evaluation and Conclusion: T-Mobile currently has nine (9) panel antennas supported by Valmont/Site Pro 1 VFA10-U sector mounts attached to the tower legs at a RAD center of 185 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 mounts are reinforced with Valmont/Site Pro 1 XLD Sector Frame Reinforcement Kits (P/N: SFR-K or SFR-K-L) attached to the top horizontal pipes.**

The additions and alterations proposed by T-Mobile **can be implemented as intended once the mounts are modified** 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 Ahmet Colakoglu, a Licensed Professional Engineer in the State of Connecticut. The seal contains the text "STATE OF CONNECTICUT", "AHMET COLAKOGLU", "PEN. 27057", and "LICENSED PROFESSIONAL ENGINEER". 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

Exhibit G

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

T-Mobile Existing Facility

Site ID: CTNL058A

NL058/RedWolf_ET
889A Colonel Ledyard Highway
Ledyard, Connecticut 06339

May 31, 2019

EBI Project Number: 6219001901

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	6.86%

May 31, 2019

T-Mobile

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

Emissions Analysis for Site: CTNL058A - NL058/RedWolf_ET

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **889A Colonel Ledyard Highway** in **Ledyard, 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 889A Colonel Ledyard Highway in Ledyard, 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 GSM/UMTS 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.
- 5) 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.

- 6) 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.
- 7) 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.
- 8) The antennas used in this modeling are the Ericsson AIR 21 for the 1900 MHz / 1900 MHz channel(s), the Ericsson AIR 21 for the 2100 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 700 MHz channel(s) in Sector A, the Ericsson AIR 21 for the 1900 MHz / 1900 MHz channel(s), the Ericsson AIR 21 for the 2100 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 700 MHz channel(s) in Sector B, the Ericsson AIR 21 for the 1900 MHz / 1900 MHz channel(s), the Ericsson AIR 21 for the 2100 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 700 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.
- 9) The antenna mounting height centerline of the proposed antennas is 185 feet above ground level (AGL).
- 10) 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.
- 11) 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 AIR 21	Make / Model:	Ericsson AIR 21	Make / Model:	Ericsson AIR 21
Frequency Bands:	1900 MHz / 1900 MHz	Frequency Bands:	1900 MHz / 1900 MHz	Frequency Bands:	1900 MHz / 1900 MHz
Gain:	15.35 dBd / 15.35 dBd	Gain:	15.35 dBd / 15.35 dBd	Gain:	15.35 dBd / 15.35 dBd
Height (AGL):	185 feet	Height (AGL):	185 feet	Height (AGL):	185 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 %:	0.65%	Antenna B1 MPE %:	0.65%	Antenna C1 MPE %:	0.65%
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	Ericsson AIR 21	Make / Model:	Ericsson AIR 21	Make / Model:	Ericsson AIR 21
Frequency Bands:	2100 MHz	Frequency Bands:	2100 MHz	Frequency Bands:	2100 MHz
Gain:	15.35 dBd	Gain:	15.35 dBd	Gain:	15.35 dBd
Height (AGL):	185 feet	Height (AGL):	185 feet	Height (AGL):	185 feet
Channel Count:	2	Channel Count:	2	Channel Count:	2
Total TX Power (W):	120 Watts	Total TX Power (W):	120 Watts	Total TX Power (W):	120 Watts
ERP (W):	4,113.21	ERP (W):	4,113.21	ERP (W):	4,113.21
Antenna A2 MPE %:	0.43%	Antenna B2 MPE %:	0.43%	Antenna C2 MPE %:	0.43%
Antenna #:	3	Antenna #:	3	Antenna #:	3
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):	185 feet	Height (AGL):	185 feet	Height (AGL):	185 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 A3 MPE %:	0.60%	Antenna B3 MPE %:	0.60%	Antenna C3 MPE %:	0.60%

Site Composite MPE %	
Carrier	MPE %
T-Mobile (Max at Sector A):	1.68%
Red Wolf, WERI	0.57%
Marcus	0.14%
Arch	0.09%
Nextel	0.11%
Sprint	1.13%
AT&T	1.44%
Verizon	1.7%
Site Total MPE % :	6.86%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	1.68%
T-Mobile Sector B Total:	1.68%
T-Mobile Sector C Total:	1.68%
Site Total MPE % :	
	6.86%

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	185.0	4.32	1900 MHz GSM	1000	0.43%
T-Mobile 1900 MHz UMTS	2	1028.30	185.0	2.16	1900 MHz UMTS	1000	0.22%
T-Mobile 2100 MHz LTE	2	2056.61	185.0	4.32	2100 MHz LTE	1000	0.43%
T-Mobile 600 MHz LTE	2	591.73	185.0	1.24	600 MHz LTE	400	0.31%
T-Mobile 700 MHz LTE	2	648.82	185.0	1.36	700 MHz LTE	467	0.29%
						Total:	1.68%

• 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:	1.68%
Sector B:	1.68%
Sector C:	1.68%
T-Mobile Maximum MPE % (Sector A):	1.68%
Site Total:	6.86%
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **6.86%** 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 H




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POSTAL SERVICE®**

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US POSTAGE
 Flat Rate Env
 \$7.35

9405 5036 9930 0062 6178 32 0073 5000 0010 6339



07/19/2019

Mailed from 06002 062S0000000314

PRIORITY MAIL 1-DAY™

Expected Delivery Date: 07/20/19
 Ref#: NL058L600
0024

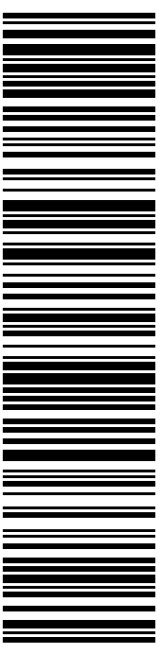
DEBORAH CHASE
 T-MOBILE USA- NSS
 35 GRIFFIN RD S
 BLOOMFIELD CT 06002-1351

Carrier -- Leave if No Response

R010

SHIP
 TO: FRED ALLYN III
 MAYOR OF LEDYARD
 741 COLONEL LEDYARD HWY
 LEDYARD CT 06339-1511

USPS TRACKING #



9405 5036 9930 0062 6178 32

Electronic Rate Approved #038555749



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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 0062 6178 32

Trans. #: 468530112	Priority Mail® Postage: \$7.35
Print Date: 07/18/2019	Total: \$7.35
Ship Date: 07/19/2019	
Expected Delivery Date: 07/20/2019	

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


Ref#: NL058L600

To: FRED ALLYN III
 MAYOR OF LEDYARD
 741 COLONEL LEDYARD HWY
 LEDYARD CT 06339-1511

* 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




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9405 5036 9930 0062 6178 49 0073 5000 0010 6339



07/19/2019

Mailed from 06002 062S0000000101

PRIORITY MAIL 1-DAY™

Expected Delivery Date: 07/20/19
 Ref#: NL058L600
0024

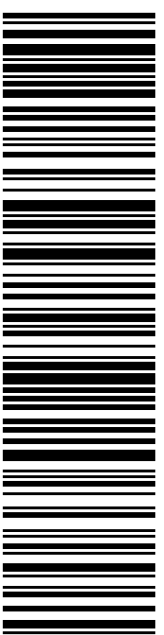
DEBORAH CHASE
 T-MOBILE USA- NSS
 35 GRIFFIN RD S
 BLOOMFIELD CT 06002-1351

Carrier -- Leave if No Response

R010

SHIP TO: ELIZABETH BURDICK
 PLANNING DIRECTOR-TOWN OF LEDYARD
 741 COLONEL LEDYARD HWY
 LEDYARD CT 06339-1511

USPS TRACKING #



9405 5036 9930 0062 6178 49

Electronic Rate Approved #038555749



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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 0062 6178 49

Trans. #: 468530112	Priority Mail® Postage: \$7.35
Print Date: 07/18/2019	Total: \$7.35
Ship Date: 07/19/2019	
Expected Delivery Date: 07/20/2019	

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


Ref#: NL058L600

To: ELIZABETH BURDICK
 PLANNING DIRECTOR-TOWN OF LEDYARD
 741 COLONEL LEDYARD HWY
 LEDYARD CT 06339-1511

* 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

07/19/2019

Mailed from 06002 062S0000000101

9405 5036 9930 0062 6178 56 0073 5000 0010 6339
\$7.35



PRIORITY MAIL 1-DAY™


Expected Delivery Date: 07/20/19
 Ref#: NL058L600
0024

Carrier -- Leave if No Response

B012

SHIP TO: JOHN J FULLER
 RED WOLF BROADCASTING
 PO BOX 357
 LEDYARD CT 06339-0357

USPS TRACKING #



9405 5036 9930 0062 6178 56

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 0062 6178 56

Trans. #: 468530112	Priority Mail® Postage: \$7.35
Print Date: 07/18/2019	Total: \$7.35
Ship Date: 07/19/2019	
Expected Delivery Date: 07/20/2019	

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

Ref#: NL058L600

To: JOHN J FULLER
 RED WOLF BROADCASTING
 PO BOX 357
 LEDYARD CT 06339-0357

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