



October 15, 2018

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

**Re:** Notice of Exempt Modification – Antenna Add  
**Property Address:** 130 East Side Blvd Naugatuck, Ct AKA Clark Hill Rd.  
**Applicant:** AT&T Mobility, LLC

Dear Ms. Bachman:

On behalf of AT&T, please accept this application as notification pursuant to R.C.S.A. §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16-50j-72(b) (2).

AT&T currently maintains a wireless telecommunications facility consisting of nine (9) wireless telecommunication antennas at an antenna center line height of 156-feet on an existing 276 – guyed tower, owned by WTIC TV FOX 61 / 20 INC. C/O Tribune Broadcasting Hartford, LLC 285 BROAD STREET HARTFORD, CT 06115 and located at 130 East Side Blvd. AKA 0 Clark Hill Rd Naugatuck, CT 06770. AT&T now intends INSTALL (9) NEW RRU'S, (3) PER SECTOR REMOVE (3) EXISTING RRU'S, (3) PER SECTOR · INSTALL (3) NEW PANEL ANTENNAS, (1) PER SECTOR · INSTALL (6) LOW BAND COMBINERS, (2) PER SECTOR · INSTALL (1) NEW DC-6 SURGE SUPPRESSION DOME · INSTALL (1) NEW 18-PAIR FIBER TRUNK · and INSTALL (2) NEW 6/C DC CABLES

This facility was approved at the Zoning Commission meeting held on: Wednesday July 7<sup>th</sup>, 1991 for a certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of telecommunications antennas, associated equipment, and building to provide Domestic Public Cellular radio Telecommunication service in the Connecticut- New England area.

The following is a list of subsequent decisions:

**EM-CING-088-050616** – New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 103 East Side Boulevard, **Naugatuck**, Connecticut.

**EM-CING-088-130109** - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 103 Eastside Boulevard, **Naugatuck**, Connecticut.

**EM-CING-088-130802** - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 103 Eastside Boulevard, **Naugatuck**, Connecticut.



**EM-AT&T-088-170807** – AT&T notice of intent to modify an existing telecommunications facility located at 0 Clark Hill Road (a/k/a 130 East Side Boulevard), **Naugatuck**, Connecticut. [Decision](#)

**EM-AT&T-088-170831** – AT&T notice of intent to modify an existing telecommunications facility located at 130 East Side Boulevard (a/k/a Clark Hill Road), **Naugatuck**, Connecticut. [Decision](#)

Please accept this letter pursuant to Regulation of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-510j-72(b) (2). In accordance with R.C.S.A., a copy of this letter is being sent to Mayor: N. Warren "Pete" Hess III and Town Planner/ZEO/WEO, Sue Goggin Registry Land Use Office Borough of Naugatuck Town Hall 229 Church St Naugatuck, CT 06770. A copy of this letter is also being sent to Tower/Land Owner- Tribune Broadcasting Hartford, LLC 285 Broad St Hartford, CT 06115

The planned modifications to AT&T's 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 tower. AT&T's replacement antennas will be installed at the 156-foot level of the 276-guyed tower.
2. The proposed modifications will not involve any changes to ground-mounted equipment and, therefore, will not require an extension of the site boundary.
3. The proposed modifications will not increase the noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the modified facility will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative worst-case RF emissions calculation for AT&T's modified facility is provided in the RF Emissions Compliance Report, included in [Tab 2](#).
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The tower and its foundation can support AT&T's proposed modifications. (See Structural Analysis Report included in [Tab 3](#)).

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



Sincerely,

David Barbagallo

Enclosures:

| Mayor: N. Warren "Pete" Hess III  
Town Planner/ZEO/WEO, Sue Goggin  
Tower/Land Owner Tribune Broadcasting HartfordLLC



# Borough of Naugatuck, CT

Property Listing Report

Map Block Lot

K-20E138-A

Account

011-3060

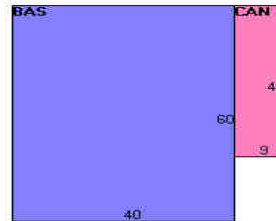
## Property Information

Property Location	<b>0 CLARK HILL RD</b>
Owner	<b>CHANNEL 20 INC C/O WTIC TV</b>
Co-Owner	
Mailing Address	<b>C/O EQUITY PROPERTY TAX GROUP CHICAGO IL 60606-6115</b>
Land Use	<b>4330 RAD/TV TR</b>
Land Class	<b>I</b>
Zoning Code	
Census Tract	
Sub Lot	
Neighborhood	<b>D</b>
Acreage	<b>7.9</b>
Utilities	
Lot Setting/Desc	
Survey Map	
Additional Info	

## Photo



## Sketch



## Primary Construction Details

Year Built	<b>1980</b>
Stories	<b>1</b>
Building Style	<b>Transmit Bldg</b>
Building Use	<b>Ind/Comm</b>
Building Condition	<b>C</b>
Floors	<b>Concrete</b>
Total Rooms	

Bedrooms	
Full Bathrooms	<b>1</b>
Half Bathrooms	
Bath Style	
Kitchen Style	
Roof Style	<b>Gable</b>
Roof Cover	<b>Metal/Tin</b>

Exterior Walls	<b>Pre-finsh Metl</b>
Interior Walls	<b>Drywall</b>
Heating Type	<b>Forced Hot Air</b>
Heating Fuel	<b>Electric</b>
AC Type	<b>Central</b>
Gross Bldg Area	<b>2778</b>
Total Living Area	<b>2400</b>



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Signed for by: J.D



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**FROM**

Smartlink LLC  
Dave Barbagallo  
265 Lincoln St  
KENSINGTON, CT US 06037  
860 681-7708

**TO**

NaugatuckTown Hill  
Mayor N. Warren Pete Hess  
NAUGATUCK, CT US 06770  
203 720-7000

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**Shipment Facts**



**DELIVERY ATTEMPTS**

1

**DELIVERED TO**

Receptionist/Front Desk

**TOTAL PIECES**

1

**TOTAL SHIPMENT WEIGHT**

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**TERMS**

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**FROM**

Smartlink LLC  
Dave Barbagallo  
265 Lincoln St  
KENSINGTON, CT US 06037  
860 681-7708

**TO**

Tribune Broadcasting LLC  
Dean Maluski  
HARTFORD, CT US 06115  
860 888-4858

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Shipment Facts



**DELIVERY ATTEMPTS**

1

**DELIVERED TO**

Guard/Security Station

**TOTAL PIECES**

1

**TOTAL SHIPMENT WEIGHT**

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**TERMS**

Not Available

**PACKAGING**

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**FROM**

Smartlink LLC  
Dave Barbagallo  
265 Lincoln St  
KENSINGTON, CT US 06037  
860 681-7708

**TO**

Naugatuck Town hall  
Sue Goggin Town Planner  
NAUGATUCK, CT US 06770  
203 720-7000

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**DELIVERY ATTEMPTS**

1

**DELIVERED TO**

Receptionist/Front Desk

**TOTAL PIECES**

1

**TOTAL SHIPMENT WEIGHT**

1 lbs / 0.45 kgs

**TERMS**

Not Available

**PACKAGING**

FedEx Pak

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**PROJECT NOTES**

1. SITE INFORMATION OBTAINED FROM THE FOLLOWING:
  - A. PLAN ENTITLED "NAUGATUCK EAST BLVD ROAD" PREPARED BY FULLERTON ENGINEERING - DESIGN OF SCHAUMBURG, IL LAST REVISED 08/07/2017.
  - B. LIMITED FIELD OBSERVATION BY MASER CONSULTING ON 05/17/2018.
2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITY COMPANIES OR OTHER PUBLIC/GOVERNING AUTHORITIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
4. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE AS A RESULT OF CONSTRUCTION OF THIS FACILITY AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
6. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION DRAWINGS.
8. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THESE DRAWINGS MUST BE VERIFIED. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
9. SINCE THE CELL SITE MAY BE ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE REQUIRED TO BE WORN TO ALERT OF ANY POTENTIALLY DANGEROUS EXPOSURE LEVELS.
10. THE PROPOSED FACILITY WILL CAUSE NO INCREASE IN STORM WATER RUNOFF, THEREFORE, NO DRAINAGE STRUCTURES ARE PROPOSED.
11. NO NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY AS TO CAUSE A NUISANCE.
12. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (NO HANDICAP ACCESS IS REQUIRED).
13. THE FACILITY DOES NOT REQUIRE POTABLE WATER OR SANITARY SERVICE.
14. CONTRACTOR SHALL VERIFY ANTENNA ELEVATION AND AZIMUTHS WITH RF ENGINEERING PRIOR TO INSTALLATION.
15. THE TOWER, MOUNTS AND ANTENNAS SHALL BE DESIGNED TO MEET EIA/TIA-222-G AS PER IBC REQUIREMENTS.
16. ALL STRUCTURAL ELEMENTS SHALL BE HOT DIPPED GALVANIZED STEEL.
17. CONTRACTOR MUST FIELD LOCATE ALL EXISTING UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION.
18. CONSTRUCTION SHALL NOT COMMENCE UNTIL COMPLETION OF A PASSING STRUCTURAL ANALYSIS CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER. THE STRUCTURAL ANALYSIS IS TO BE PERFORMED BY OTHERS.
19. CONTRACTOR SHALL CONTACT STATE SPECIFIC ONE CALL SYSTEM THREE WORKING DAYS PRIOR TO ANY EARTH MOVING ACTIVITIES.

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**SITE NAME: NAUGATUCK EASTSIDE BOULEVARD**  
**FA NUMBER: 10050930**  
**SITE NUMBER: CTL02056**  
**5G NR UPGRADE - MRCTB032149**  
**6C - MRCTB031574**  
**7C - MRCTB031326**  
**130 EASTSIDE BOULEVARD**  
**NAUGATUCK, CT 06770**  
**NEW HAVEN COUNTY**

**VICINITY MAP**



**CODE COMPLIANCE**

- ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES.
- |   |  |
|---|--|
| 1. 2016 CONNECTICUT STATE BUILDING CODE, INCORPORATING THE 2012 IBC | 8. INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS 81 IEEE C2 LATEST EDITION                                |
| 2. 2014 NATIONAL ELECTRICAL CODE - NFPA 70                          | 9. TELCORDIA GR-1275   |
| 3. 2012 NFPA 101  | 10. ANSI T1.311  |
| 4. AMERICAN INSTITUTE OF STEEL CONSTRUCTION 360-10                  | 11. PROPOSED USE: UNMANNED TELECOM FACILITY  |
| 5. AMERICAN CONCRETE INSTITUTE                                      | 12. HANDICAP REQUIREMENTS: FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS NOT REQUIRED. |
| 6. TIA-222-G  | 13. CONSTRUCTION TYPE: IIB   |
| 7. TIA 607 FOR GROUNDING  | 14. USE GROUP: U   |

**PROJECT INFORMATION**

**SITE INFORMATION**

LATITUDE: 41.51777° N  
 LONGITUDE: 73.01861° W  
 JURISDICTION: NEW HAVEN COUNTY

**APPLICANT/LESSEE**

COMPANY: NEW CINGULAR WIRELESS PCS, LLC  
 ADDRESS: 550 COCHITUATE ROAD  
 CITY, STATE, ZIP: FRAMINGHAM, MA 01701

**STRUCTURE OWNER**

COMPANY: WTIC TV FOX 61  
 ADDRESS: 285 BROAD STREET  
 CITY, STATE, ZIP: HARTFORD, CT 06115

**CLIENT REPRESENTATIVE**

COMPANY: SMARTLINK, LLC  
 ADDRESS: 85 RANGEWAY ROAD, BUILDING 3, STE. 102  
 CITY, STATE, ZIP: NORTH BILLERICA, MA 01862  
 CONTACT: TODD OLIVER  
 E-MAIL: TODD.OLIVER@SMARTLINKLLC.COM

**SITE ACQUISITION**

COMPANY: SMARTLINK, LLC  
 ADDRESS: 85 RANGEWAY ROAD, BUILDING 3, STE. 102  
 CITY, STATE, ZIP: NORTH BILLERICA, MA 01862  
 CONTACT: SHARON KEEFE  
 E-MAIL: SHARON.KEEFE@SMARTLINKLLC.COM

**CONSTRUCTION MANAGER**

COMPANY: SMARTLINK, LLC  
 ADDRESS: 85 RANGEWAY ROAD, BUILDING 3, STE. 102  
 CITY, STATE, ZIP: NORTH BILLERICA, MA 01862  
 CONTACT: MARK DONNELLY  
 E-MAIL: MARK.DONNELLY@SMARTLINKLLC.COM

**ENGINEER**

COMPANY: MASER CONSULTING P.A.  
 ADDRESS: 331 NEWMAN SPRINGS ROAD, SUITE 203  
 CITY, STATE, ZIP: RED BANK, NJ 07701-5699  
 CONTACT: ROBERT ANDREWS  
 PHONE: (856) 797-0412  
 E-MAIL: RANDREWS@MASERCONSULTING.COM

**PROJECT DESCRIPTION/  
SCOPE OF WORK**

- INSTALL (9) NEW RRU'S, (3) PER SECTOR
- REMOVE (3) EXISTING RRU'S, (3) PER SECTOR
- INSTALL (3) NEW PANEL ANTENNAS, (1) PER SECTOR
- INSTALL (6) LOW BAND COMBINERS, (2) PER SECTOR
- INSTALL (1) NEW DC-6 SURGE SUPPRESSION DOME
- INSTALL (1) NEW 18-PAIR FIBER TRUNK
- INSTALL (2) NEW 6/C DC CABLES
- ADD 2ND 5216 ,(1) IDLe AND (1) 6630
- REMOVE EXISTING POWER PLANT
- REMOVE EXISTING BATTERY RACK
- INSTALL NEW NETSURE 7100 POWER PLANT W/ BATTERIES
- INSTALL NEW BATTERY RACK

PROPOSED PROJECT SCOPE BASED ON RFDS ID# 2310392, VERSION 3.00, LAST UPDATED 07/18/2018.

**SHEET INDEX**

SHEET	DESCRIPTION
T-1	TITLE SHEET
GN-1	GENERAL NOTES
C-1	COMPOUND PLAN
C-2	EQUIPMENT LAYOUT AND ELEVATION VIEW
C-3	ANTENNA LAYOUTS AND ANTENNA SCHEDULE
A-1	CONSTRUCTION DETAILS
A-2	CONSTRUCTION DETAILS
A-3	CONSTRUCTION DETAILS
A-4	RF PLUMBING DIAGRAM
G-1	GROUNDING DETAILS AND NOTES



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SCALE:	JOB NUMBER:
AS SHOWN	18946008A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
2	09/24/18	REVISED PER COMMENTS	AJC	RA
1	09/10/18	REVISED PER COMMENTS	AJC	RA
0	08/16/18	ISSUED FOR REVIEW	AJC	RA



IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS THEY ARE ACTING UNDER THE DIRECTION OF THE RESPONSIBLE ENGINEER TO SIGN THIS DOCUMENT.

**SITE NAME:  
NAUGATUCK EASTSIDE  
BOULEVARD  
FA# 10050930  
SITE# CTL02056**  
**130 EASTSIDE BOULEVARD  
NAUGATUCK, CT 06770  
NEW HAVEN COUNTY**



SHEET TITLE:  
**TITLE SHEET**

SHEET NUMBER:  
**T-1**



**GENERAL NOTES:**

- THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
- ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
- THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 50 HMS OR LESS.
- THE SUBCONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT.
- METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
- METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
- EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE EQUIPMENT GROUND RING WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS; 2 AWG STRANDED COPPER FOR OUTDOOR BTS.
- CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED. BACK TO BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITTED.
- ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING, SHALL BE #2 AWG SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
- ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
- USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED. ALL BENDS SHALL BE MADE WITH 12" RADIUS OR LARGER.
- EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
- ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS EXCEPT FOR GROUND BAR CONNECTION FROM MGB TO OUTSIDE EXTERIOR GROUND SHALL ALL BE CADWELD CONNECTIONS.
- COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
- ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED TO THE TOWER GROUND BAR.
- APPROVED ANTIOXIDANT COATINGS (I.E. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
- ALL EXTERIOR AND INTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
- MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
- BOND ALL METALLIC OBJECTS WITHIN 6 FT OF MAIN GROUND WIRES WITH 1-#2 AWG TIN-PLATED COPPER GROUND CONDUCTOR.
- GROUND CONDUCTORS USED IN THE FACILITY GROUND AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC PLASTIC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (E.G. NON-METALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
- ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/4" IN. OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50.
- FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
  - CONTRACTOR - SMARTLINK
  - SUBCONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)
  - OWNER - AT&T (NEW CINGULAR WIRELESS PCS, LLC)
- ALL SITE WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
- DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.
- ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

- THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
- THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
- THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY THE RESPONSIBLE ENGINEER. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING & EXCAVATION.
- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE RESPONSIBLE ENGINEER, AND SUBJECT TO THE APPROVAL OF THE OWNER AND/OR LOCAL UTILITIES.
- THE AREAS OF THE OWNER'S PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY SHALL BE GRADED TO A UNIFORM SLOPE AND STABILIZED TO PREVENT EROSION.
- SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- THE SUBGRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
- IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE.
- SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
- PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR.
- SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
- ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.
- ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS.
- ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCHUP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
- CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T MOBILITY SITES."
- SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
- THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION, ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
- SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN ALERT OF DANGEROUS EXPOSURE LEVELS.



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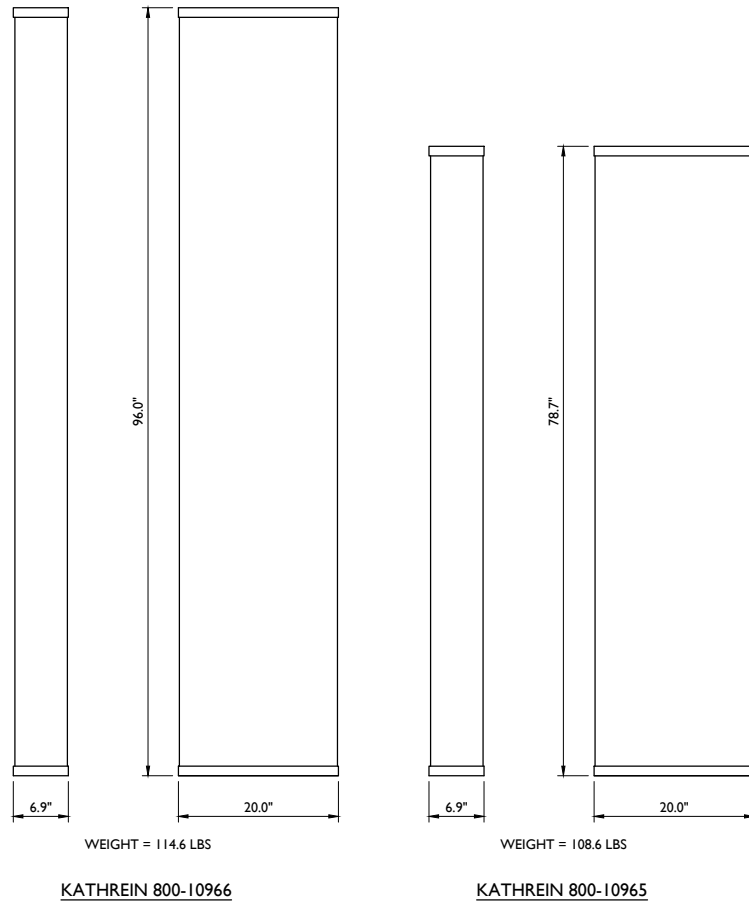
SHEET TITLE:  
**GENERAL NOTES**

SHEET NUMBER:  
**GN-1**

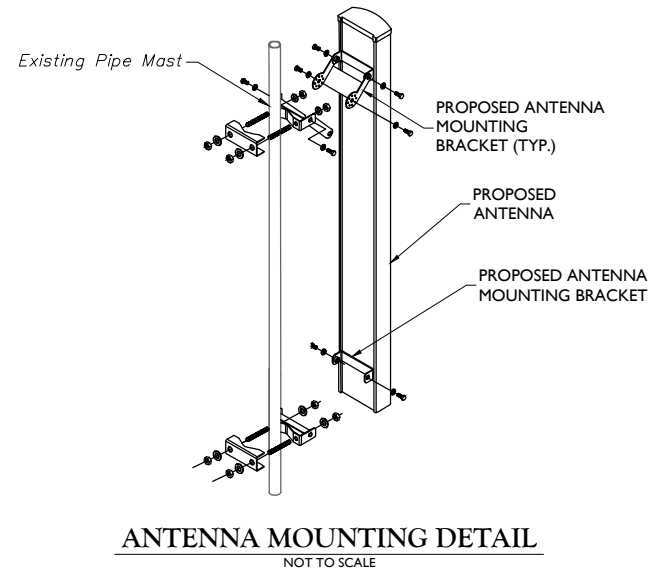






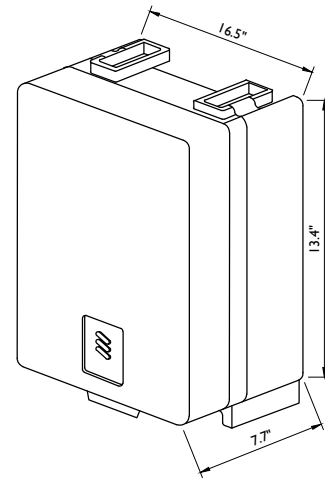


**ANTENNA DETAILS**  
NOT TO SCALE



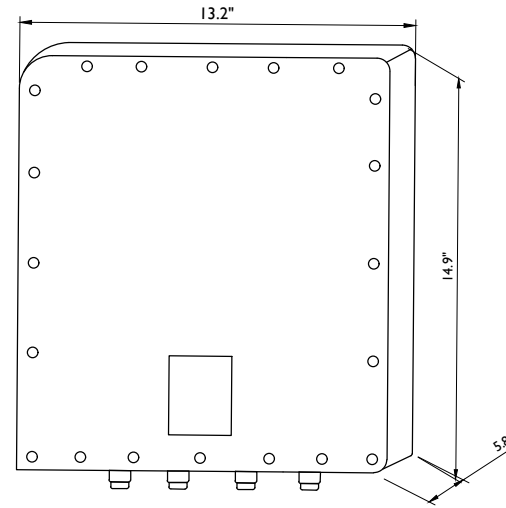
**ANTENNA MOUNTING DETAIL**  
NOT TO SCALE

**NOTE:**  
EQUIPMENT MOUNTED TO ANTENNA PIPE MASTS MUST MAINTAIN A MINIMUM DISTANCE OF 8" FROM BACK OF EXISTING/PROPOSED PANEL ANTENNA



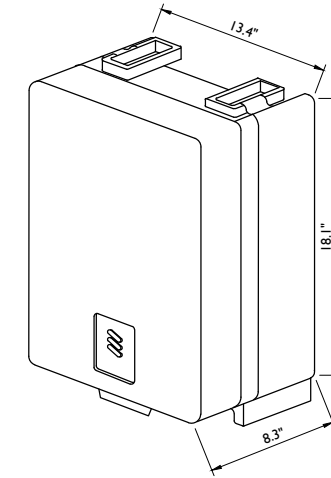
DIMENSIONS (H X W X D): 16.5"H X 13.4"W X 7.7"D (INCLUDES SUNSHIELD)  
WEIGHT: 59.9 LBS

**RRU-4478-B5 DETAIL**  
NOT TO SCALE



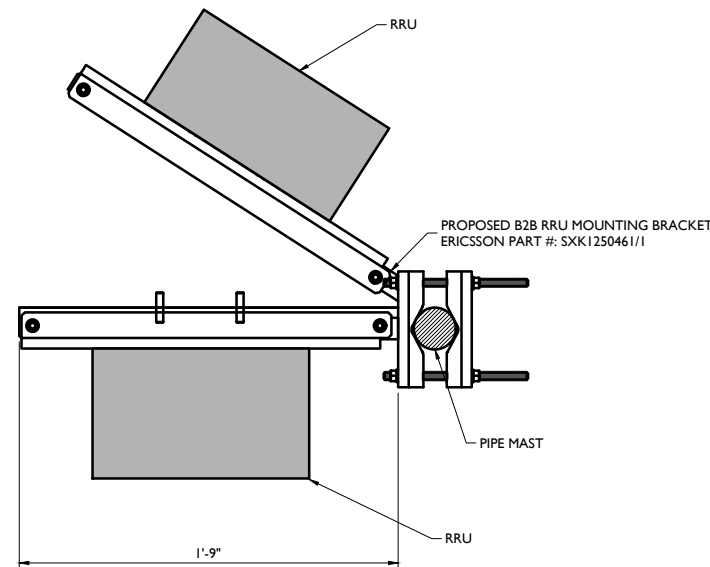
RRUS 4426 B66 DIMENSIONS (H X W X D): 14.9" X 13.2" X 5.9"  
(INCLUDES SUNSHIELD) WEIGHT: 48 LBS

**RRUS 4426 B66 DETAIL**  
NOT TO SCALE



DIMENSIONS (H X W X D): 18.1"H X 13.4"W X 8.3"D (INCLUDES SUNSHIELD)  
WEIGHT: 59.4 LBS

**RRUS-4478 B14 DETAIL**  
NOT TO SCALE



**RRU MOUNTING DETAIL**  
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Red Bank, NJ 07701-5699  
Phone: 732.383.1950  
Fax: 732.383.1984  
email: solutions@maserconsulting.com

SHEET TITLE:  
**CONSTRUCTION DETAILS**

SHEET NUMBER:  
**A-1**





## Technical Specifications

### AC INPUT

Range	Single phase 85 VAC to 300 VAC (Nominal: 200 VAC to 240 VAC)
Line Frequency	50 or 60 Hz (45 Hz to 65 Hz)
Connections	Terminal or distribution for up to 18 circuit breakers
Surge Protection	Optional

### DC OUTPUT

Adjustable Range	-42 VDC to -58 VDC (Nominal: -48 VDC)
Power, Maximum	63 kW (18 x 3.5 kW rectifier modules)
Efficiency, Peak	98.3% eSure™ R48-3500e3 rectifier

### DC SYSTEM UNITS

Distribution Units	Available for circuit breakers, cartridge fuses, NH00 fuses, NH2 fuses
Circuit Breakers	From 2 A up to 200 A
Fuses	NH00 (up to 400 A) and NH2 (up to 400 A)
Intelligent Load Management	Optional, equipment for all distribution units
Battery Connections	4 x (300 A or 400 A) circuit breakers or fuses
Battery Shelves	Optional, up to 4 x 8 U

### PHYSICAL CHARACTERISTICS

Mounting	Top cabling
Dimensions (H x W x D)	2020 mm x 600 mm x 600 mm (per cabinet)
Weight	170 kg per cabinet (fully equipped)
Access and Security	Front access, IP20, door with lock as option

### ENVIRONMENTAL

Temperature Range, Operating	-5 °C to +60 °C (full power up to +40 °C)
Relative Humidity, Operating	<90%
Altitude	2000 m
Audible Noise	59dB for R48-3500e3
Ventilation	Forced ventilated (rectifier fans)

### SAFETY AND STANDARDS COMPLIANCE

Electrical	CE EN60950-1
EMC	EN 300 386-2, Class B
Environmental	REACH, RoHS 6



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SHEET TITLE:  
**CONSTRUCTION  
DETAILS**

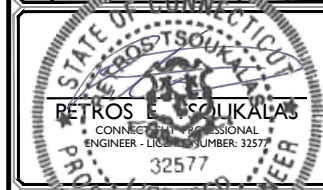
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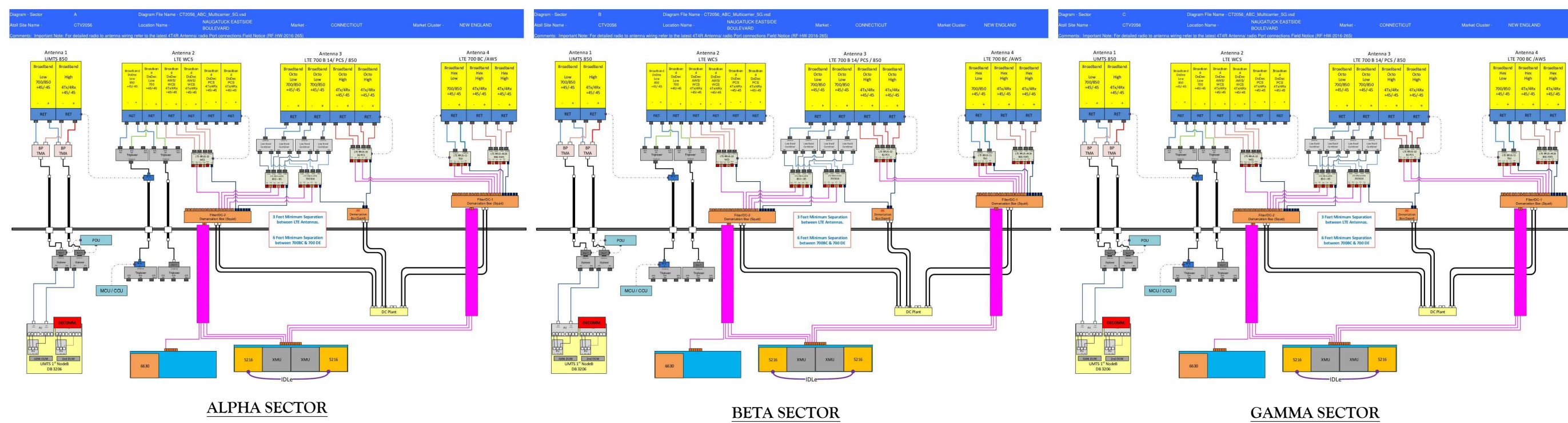
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SHEET TITLE:  
**RF PLUMBING DIAGRAM**

SHEET NUMBER:  
**A-4**



BASED ON: RF ENGINEERING DESIGN ENTITLED "NEW-ENGLAND\_CONNECTICUT\_CTV2056\_2019-LTE-Next-Carrier\_LTE\_sp656b\_2051AOGKKR\_10050930\_82711\_04-01-2018\_Final-Approved\_v3.00", LAST REVISED 07/18/2018.

**RF PLUMBING DIAGRAMS**

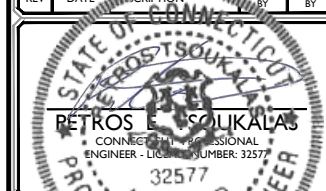
6/10/2018 CT2056\_CD\_Rev1.dwg k4 By: ACCA





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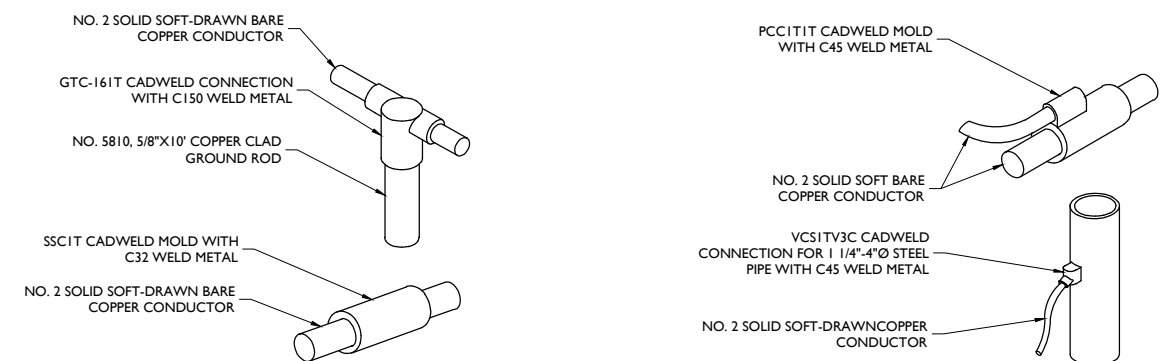
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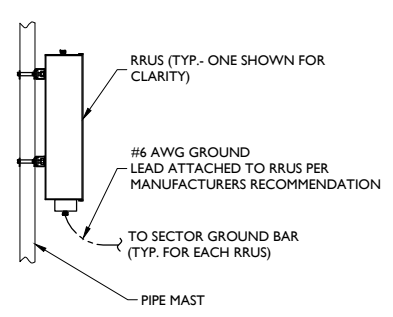
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SHEET TITLE:  
**GROUNDING DETAILS**

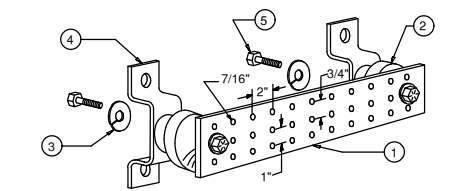
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**CADWELD DETAILS**  
NOT TO SCALE



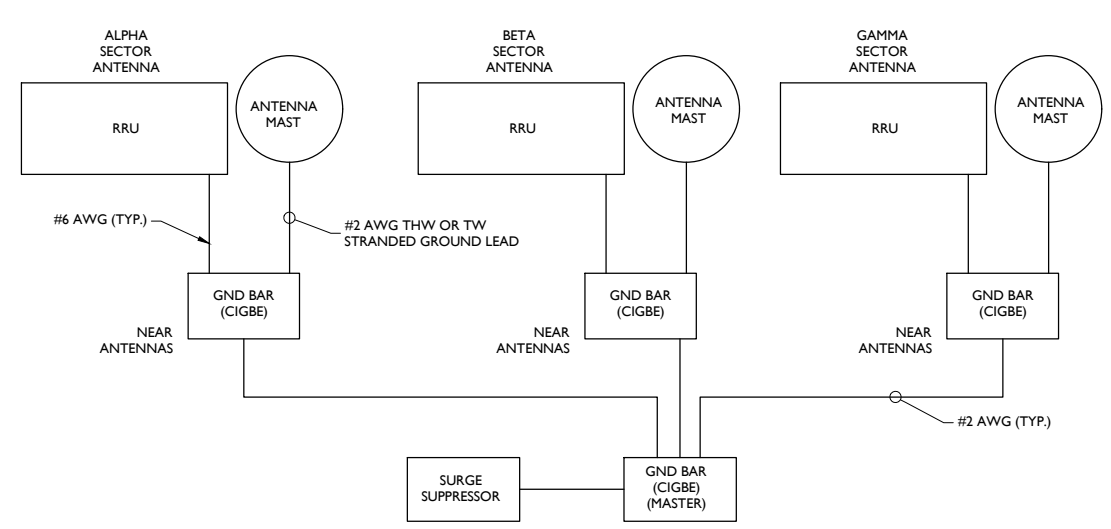
**RRU GROUNDING**  
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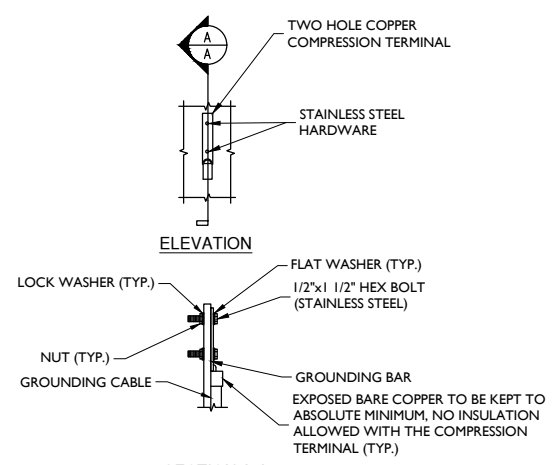
- LEGEND**
- 1- TINNED COPPER GROUND BAR, 1/4"x4"x20", NEWTON INSTRUMENT CO. CAT. NO. B-6142 OR EQUAL. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
  - 2- INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4
  - 3- 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8
  - 4- WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT. NO. A-5056
  - 5- 5/8-11 X 1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT. NO. 3012-1
  - 6- EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

- SECTION "P" - SURGE PRODUCERS**
- CABLE ENTRY PORTS (HATCH PLATES) (#2)
  - GENERATOR FRAMEWORK (IF AVAILABLE) (#2)
  - TELCO GROUND BAR
  - COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2)
  - +24V POWER SUPPLY RETURN BAR (#2)
  - 48V POWER SUPPLY RETURN BAR (#2)
  - RECTIFIER FRAMES.
- SECTION "A" - SURGE ABSORBERS**
- INTERIOR GROUND RING (#2)
  - EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2)
  - METALLIC COLD WATER PIPE (IF AVAILABLE) (#2)
  - BUILDING STEEL (IF AVAILABLE) (#2)

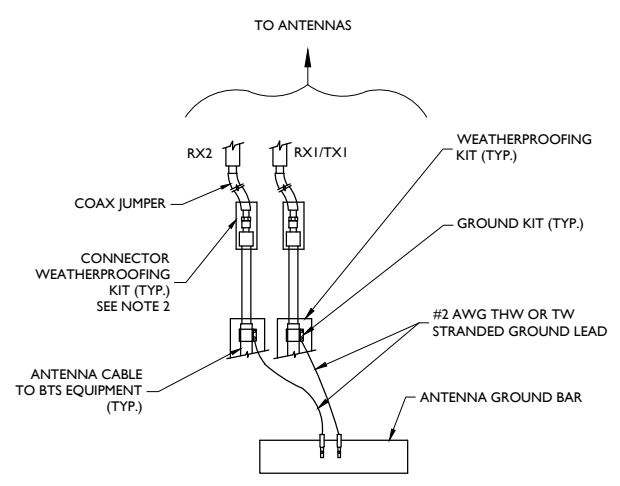
**MASTER GROUND BAR**  
NOT TO SCALE



**SCHEMATIC DIAGRAM GROUNDING SYSTEM**

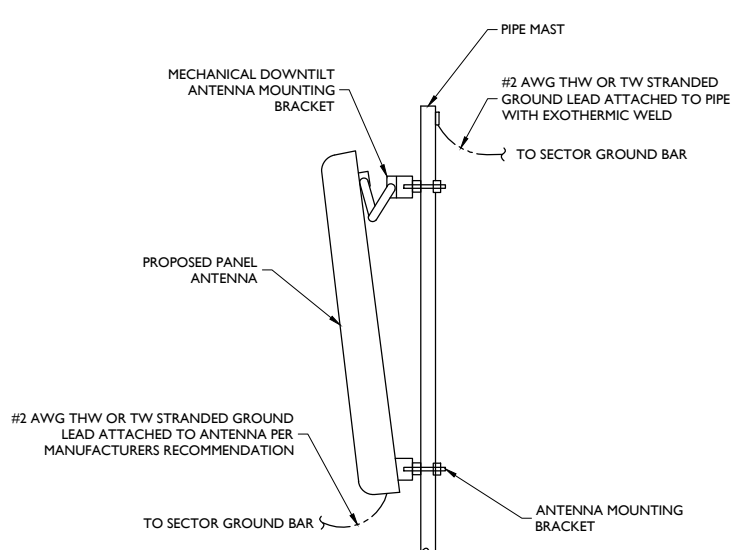


**TYPICAL GROUND BAR CONNECTION DETAIL**  
NOT TO SCALE



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

**TYPICAL GROUND WIRE TO GROUNDING BAR**  
NOT TO SCALE



**ANTENNA GROUNDING**



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— CONNECTICUT —

---

## Guyed Tower Analysis

FOR  
CTL02056 – Naugatuck Eastside Boulevard

FA #: 10050930  
130 Eastside Boulevard  
Naugatuck, CT 06770  
New Haven County

LTE 5G NR Upgrade – MRCTB032149  
LTE 6C – MRCTB031574  
LTE 7C – MRCTB031326

**Tower Utilization: 93.4%**

September 25, 2018

*Prepared For*

**AT&T**  
550 Cochituate Road  
Framingham, MA 01701

*Prepared By*

**Maser Consulting Connecticut**  
331 Newman Springs Road, Suite 203  
Red Bank, NJ 07011  
Tel: 303.193.1939



Petros E. Boukalis, P.E.  
Geographic Discipline Leader  
Connecticut License No. 32577

MC Project No. 18946008A



### **Objective:**

The objective of this report is to determine the capacity of the existing guyed tower at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards.

### **Introduction:**

Maser Consulting Connecticut has performed limited field observations on May 16, 2018 to verify the existing condition of the structure and to locate and quantify the existing wireless appurtenances where possible, from ground level. Maser Consulting Connecticut has reviewed the following documents in completing this report:

- Structural Analysis prepared by Fullerton Engineering, dated July 21, 2017.
- RFDS 2310392 provided by Smartlink, dated July 18, 2018.

The proposed **AT&T** equipment is to be supported on an existing antenna support mount constructed of structural steel antenna support pipes supported by pipes at a centerline of approximately 180'-0" above ground level. This report is based only upon this information.

### **Codes, Standards and Loading:**

Maser Consulting Connecticut utilized the following codes and standards:

- 2016 Connecticut State Building Code, Incorporating the 2012 IBC
- Structural Standards for Antenna Supporting Structures and Antennas ANSI/TIA-222-G
  - Ultimate Wind Speed – 125 mph (3 Second Gust)
  - Basic Wind Speed – 97 mph (3 Second Gust)
  - Exposure Category – B
  - Structural Class – II
  - Topographic Category – 1
  - Ice Wind – 50 mph
  - Ice Thickness – 0.75"
- Specification for Structural Steel Buildings ANSI/AISC 360-10, American Institute of Steel Construction (AISC)

Maser Consulting Connecticut understands the final AT&T loading to be the following:

Quantity	Manufacturer	Antenna/ Appurtenance	Status	Sector
3	POWERWAVE	7770	Existing	Alpha, Beta, & Gamma
1	CCI	TPA-65R-LCUUUU-H8	Existing	Alpha
2	QUINTEL	QS66512-2	Existing	Beta & Gamma
1	KATHREIN	80010966	Proposed	Alpha
2	KATHREIN	80010965	Proposed	Beta & Gamma
1	CCI	HPA-65R-BUU-H8	Existing	Alpha
2	CCI	HPA-65R-BUU-H6	Existing	Beta & Gamma
3	ERICSSON	RRUS 32	Existing	Alpha, Beta, & Gamma
3	ERICSSON	RRUS 32 B2	Existing	Alpha, Beta, & Gamma
3	ERICSSON	RRUS 11	Existing	Alpha, Beta, & Gamma
3	ERICSSON	RRUS 4478 B14	Proposed	Alpha, Beta, & Gamma
3	ERICSSON	RRUS 4478 B5	Proposed	Alpha, Beta, & Gamma
3	ERICSSON	RRUS 4426 B66	Proposed	Alpha, Beta, & Gamma
3	RAYCAP	DC6-48-60-18-8F	Existing/Proposed	Alpha, Beta, & Gamma
6	CCI	TPX-070821 Triplexer	Existing	Alpha, Beta, & Gamma
6	POWERWAVE	LGP 21401 TMA	Existing	Alpha, Beta, & Gamma
6	-	LOW-BAND COMBINERS	Proposed	Alpha, Beta, & Gamma

(Attached to tower)

(2 existing attached to tower)

### Analysis Approach & Assumptions:

The analysis approach used in this structural analysis is based on the premise that if the existing guyed structure is structurally adequate to support the existing and proposed equipment per the aforementioned codes and standards, or if the increase in the forces in the structure are deemed to be negligible or acceptable, then the proposed equipment can be installed as intended. Tower Numerics, tnx Tower, a tower analysis and design program, designed specifically for the telecommunications industry and for all applicable codes and standards was used for this structural analysis.

### General Site Design Assumption:

- All engineering services are performed on the basis that the information used is current and correct.
- It is assumed that the telecommunication equipment supports, antenna supports, and existing structure have been designed by a registered licensed professional engineer for the existing loads acting on the structure, as required by all applicable codes, prior to the proposed modifications listed within this report, if any.
- It is assumed that information provided by the client regarding the structure itself, the antenna models, feed lines, and other relevant information is current and correct.
- It is the responsibility of the client to ensure that the information provided to Maser Consulting Connecticut and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that the original design, material production, fabrication, and erection of the existing structure was performed in accordance with accepted industry design standards and in accordance with all applicable codes. Further, it is assumed that the existing structure and appurtenances have been properly maintained in accordance with all applicable codes and manufacturer's specifications and no structural defects and/or deterioration to the structural members has occurred.
- It is assumed all other existing appurtenances, antennas, cables, etc. belonging to others have been installed and supported per code and per specifications so as not to damage any existing structural support members, and that any contributing loads from adjacent equipment has been taken into consideration for their design.
- All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Maser Consulting Connecticut is not responsible for the conclusion, opinions, and recommendations made by others based on the information we supply.

### Site Specific Design Parameters and Assumptions:

The following design parameters have been utilized in this report:

- *Structural Steel HSS Tubes are assumed to be constructed of A500 Grade B 46 Steel*
- *Structural Steel Pipes are assumed to be constructed of A53 Grade B Steel*
- *The proposed antenna in position 3 shall be installed on a 10' long 2.0 STD pipe mast for all sectors.*
- *The existing antenna in position 2 shall be relocated 2' closer to the UMTS antenna in position 1.*
- *The proposed RRUS 4478 B14 and RRUS 4478 B5 shall be installed on a RRU dual mounting bracket (Ericsson P/N SXX1250461/1 or approved engineer equivalent) behind the antenna in position 3 for all sectors.*
- *The proposed RRUS 4426 B66 and existing RRUS-32, located behind the antenna in position 4, shall be installed on a RRU dual mounting bracket (Ericsson P/N SXX1250461/1 or approved engineer equivalent) behind the antenna in position 4 for all sectors.*
- *The proposed DC6 shall be installed on the vertical 2.0 STD pipe mast in Alpha Sector.*
- ***It is assumed that all tower and appurtenance information in the referenced analysis is accurate and reflective of the current condition of the tower. It is assumed that all tower modifications in the referenced analysis have been installed as intended.***

### Calculations:

The calculations are found in Appendix A of this report.

### Conclusion:

The existing guyed tower was analyzed for the loading in the applicable codes and standards. The tower has been determined to be structurally **ADEQUATE** to support the proposed and existing loading, based upon the aforementioned assumptions. The guyed tower has been determined to be stressed to a maximum of **93.4%** of its structural capacity with the maximum usage occurring at the tower legs between elevations 102'-122'. Therefore, the proposed **AT&T** installation **CAN** be installed as intended in all sectors.

Additionally, Maser Consulting Connecticut has compared the foundation reactions from this analysis to the previous referenced analysis foundation calculations. Due to the minimal increase in reactions, the foundations have been determined to be **ADEQUATE** to support the existing and proposed loading. Therefore, the proposed **AT&T** installation **CAN** be installed as intended in all sectors.

Maser Consulting Connecticut reserves the right to amend this report if additional information about the existing members is provided. Any change to the installation will require a revision to this structural analysis.



We appreciate the opportunity to be of service on this project. If you should have any questions or require any additional information, please do not hesitate to call our office.  
Sincerely,

Maser Consulting Connecticut

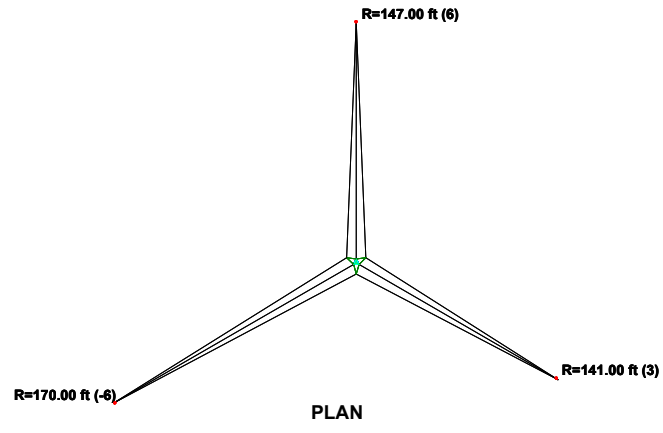
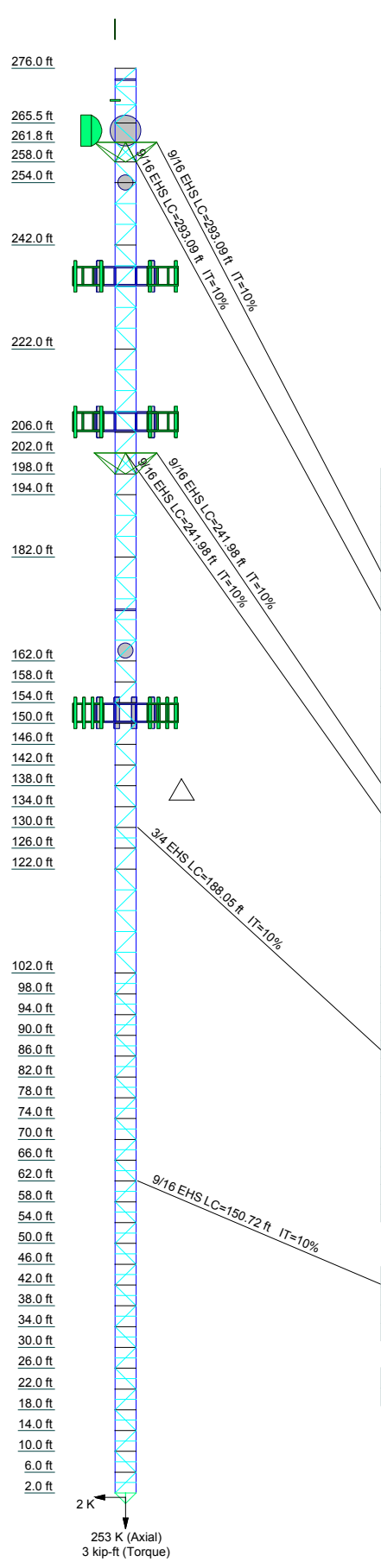
Petros E. Tsoukalas, P.E.  
Geographic Discipline Leader

Lauren Luzier, E.I.T.  
Engineer



# APPENDIX A

Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15	T16	T17	T18	T19	T20	T21	T22	T23	T24	T25	T26	T27	T28	T29	T30	T31	T32	T33	T34	T35	T36	T37	T38	T39	T40	T41	T42	T43	T44	T45	T46	T47	T48					
Legs	SR 1 3/4																																																				
Leg Grade	A572-50																								A36																												
Diagonals	L2x2x3/16																								L2x2x3/8																												
Top Girts	L2x2x3/16																								L2x2x3/16																												
Horizontal	N.A.																								N.A.																												
Sec. Horizontalis	N.A.																								N.A.																												
Top Guy Pull-Offs	N.A.																																																				
Face Width (ft)	64 @ 4																																																				
# Panels @ (ft)	E 3 @ 3.5																																																				
Weight (K)	16.9	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3



**DESIGNED APPURTENANCE LOADING**

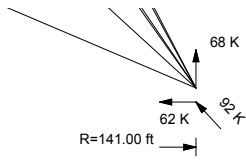
TYPE	ELEVATION	TYPE	ELEVATION
5/8" x 5'-0" Lightning Rod	281.5	RRUS11 B12 (Partial Shielded by 11.9" Antenna)	152
Ice Shield 6x5	274	RRUS11 B12 (Partial Shielded by 11.9" Antenna)	152
Ice Shield 6x5	270	RRUS11 B12 (Partial Shielded by 11.9" Antenna)	152
Andrew HP6	264	RRUS11 B12 (Partial Shielded by 11.9" Antenna)	152
Andrew HP6	264	(2) TMA shielded by antenna	152
2'x4' Grid	254	(2) TMA shielded by antenna	152
DBXNH-6565A-A2M with 6" pipe	236	(2) TMA shielded by antenna	152
DBXNH-6565A-A2M with 6" pipe	236	DC6-48-06-18-8F	152
DBXNH-6565A-A2M with 6" pipe	236	DC6-48-06-18-8F	152
AIR 32 B66A B2A	236	DC6-48-06-18-8F	152
AIR 32 B66A B2A	236	DC6-48-06-18-8F	152
AIR 32 B66A B2A	236	QS66512-2	152
RRUS11 B12 (Partial Shielded by 11.9" Antenna)	236	QS66512-2	152
RRUS11 B12 (Partial Shielded by 11.9" Antenna)	236	TPA-65R-LCUUUU-H8	152
RRUS11 B12 (Partial Shielded by 11.9" Antenna)	236	80010966	152
RRUS11 B12 (Partial Shielded by 11.9" Antenna)	236	800-10965	152
RRUS11 B12 (Partial Shielded by 11.9" Antenna)	236	800-10965	152
Pirod 10' PCS Frame (1)	236	CCI HPA-65R-BUU-UH8 w/9.5ft 2.0 STD Pipe	152
Pirod 10' PCS Frame (1)	236	CCI HPA-65R-BUU-H6	152
Pirod 10' PCS Frame (1)	236	CCI HPA-65R-BUU-H6	152
APXVSP18-C	208	RRUS 32	152
APXVSP18-C	208	RRUS 32	152
APXVSP18-C	208	RRUS 32	152
FR65-17-DP	208	RRUS 32	152
FR65-17-DP	208	RRUSB14 + 4478 B5 Shielded	152
FR65-17-DP	208	RRUSB14 + 4478 B5 Shielded	152
RRH 800 MHz	208	RRUSB14 + 4478 B5 Shielded	152
RRH 800 MHz	208	RRUS 32 B2	152
RRH 800 MHz	208	RRUS 32 B2	152
(2) RRH 1900 MHz	208	RRUS 32 B2	152
(2) RRH 1900 MHz	208	RRUS 4426 B66	152
(2) RRH 1900 MHz	208	RRUS 4426 B66	152
Pirod 12' T-Frame Sector Mount (1)	208	RRUS 4426 B66	152
Pirod 12' T-Frame Sector Mount (1)	208	Pirod 12' T-Frame Sector Mount (1)	152
Pirod 12' T-Frame Sector Mount (1)	208	7770	152
Ice Shield 6x5	172	Pirod 12' T-Frame Sector Mount (1)	152
2'x4' Grid	164	Pirod 12' T-Frame Sector Mount (1)	152
4' Dipole	162	4' Dipole	115
7770	152	4' Dipole	115
7770	152		

**SYMBOL LIST**

MARK	SIZE	MARK	SIZE
A	L2 1/2x2 1/2x1/4	D	L2x2x3/16
B	L2 1/2x2 1/2x3/8	E	2 @ 3.75
C	N.A.		

**MATERIAL STRENGTH**

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



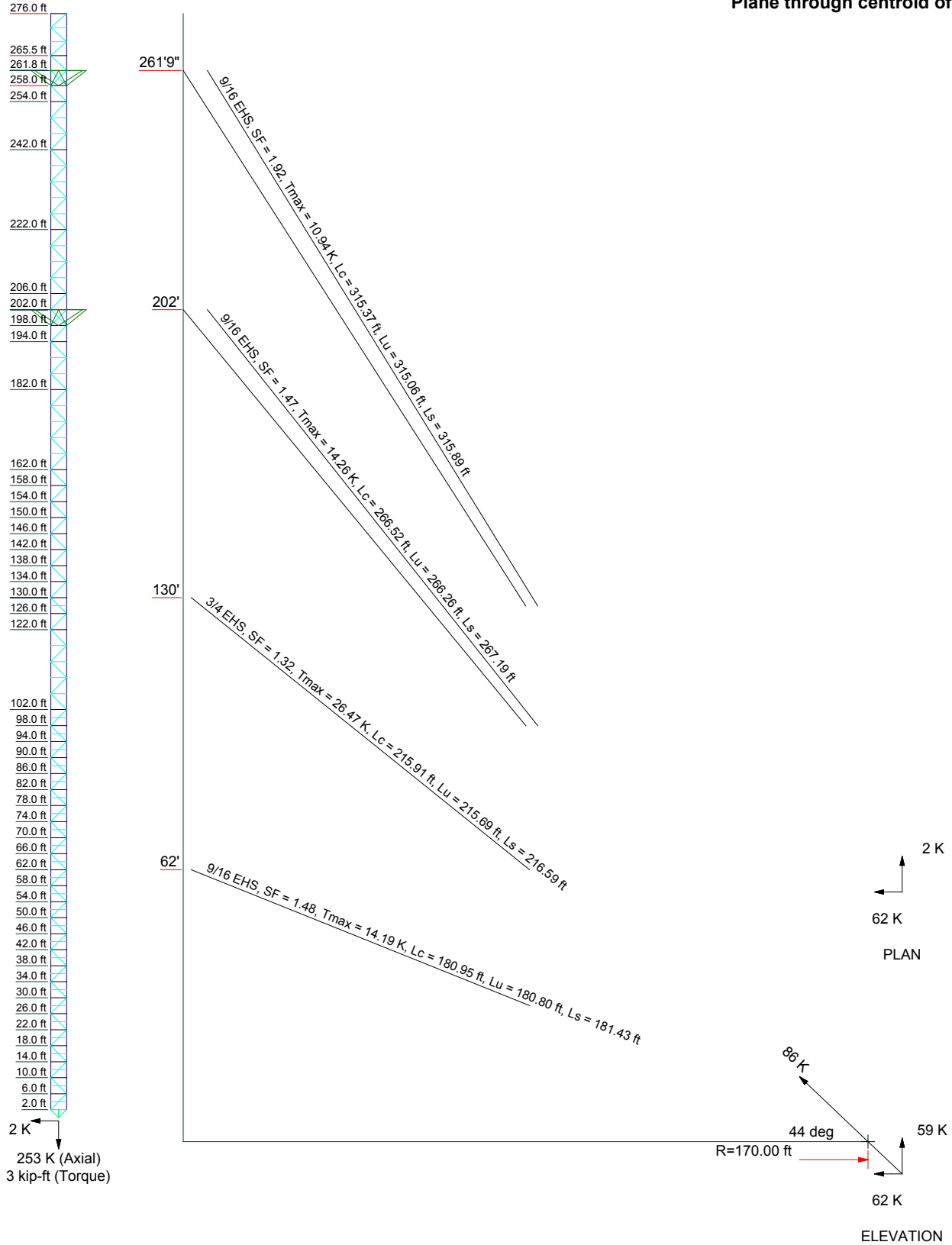
ALL REACTIONS ARE FACTORED

<p><b>Maser Consulting</b> 2000 Midlantic Drive, Suite 100 Mt. Laurel, NJ Phone: 856 797-0412 FAX: 856 722-1120</p>	Job: <b>18946008A</b>
	Project: <b>CTL02056</b>
	Client: <b>AT&amp;T</b> Drawn by:
	Code: <b>TIA-222-G</b> Date: <b>09/25/18</b> Scale: <b>NTS</b>
	Path:      Dwg No. <b>E-1</b>

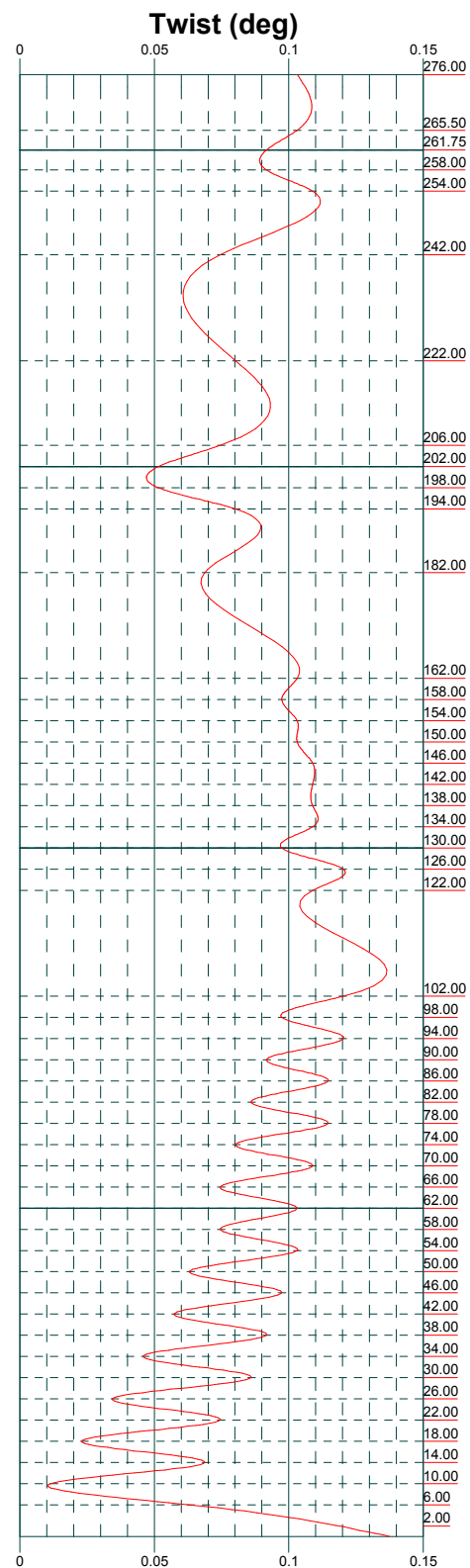
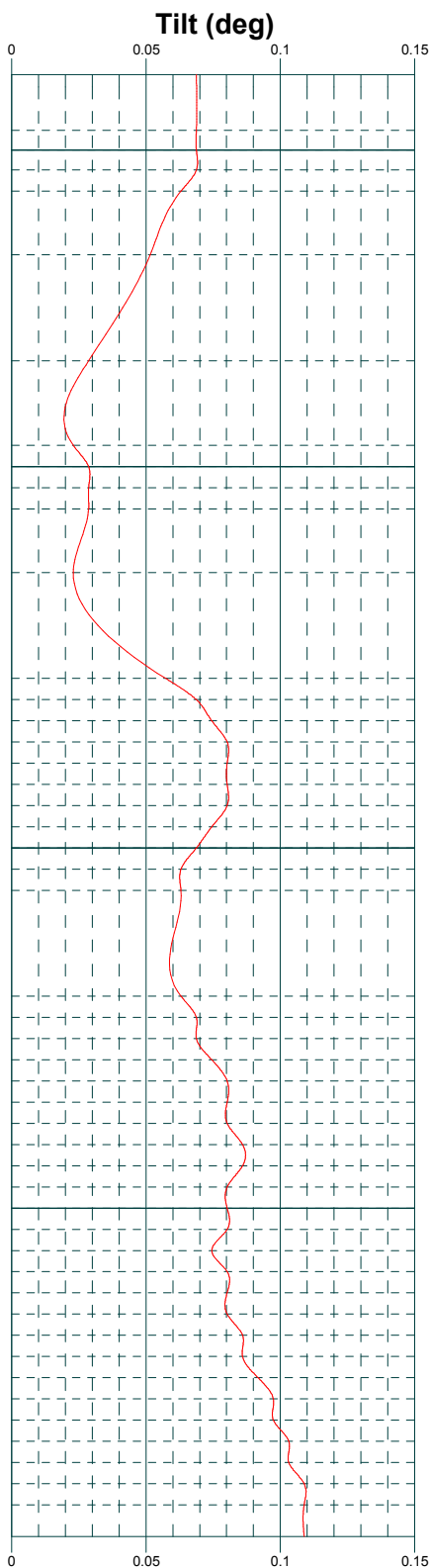
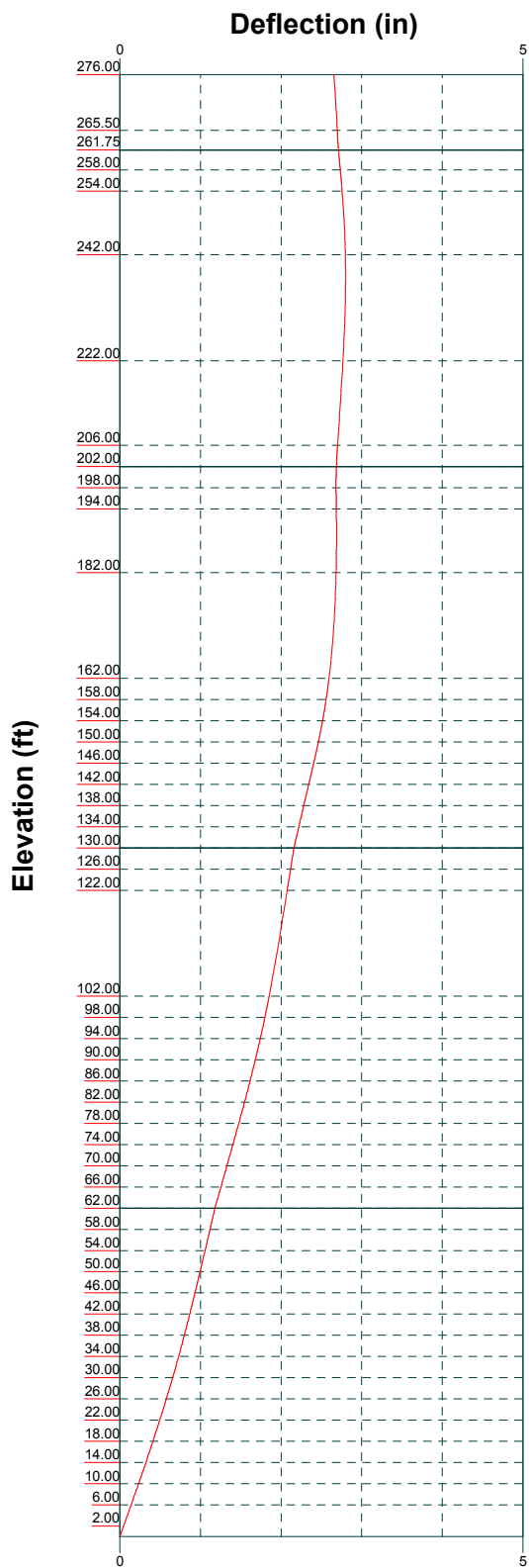


**Guy Tensions and Tower Reactions**  
**TIA-222-G - 97 mph/50 mph 0.7500 in Ice Exposure B**

**Maximum Values**  
**Anchor 'C' @ 170 ft Azimuth 240 deg Elev -6 ft**  
**Plane through centroid of tower**



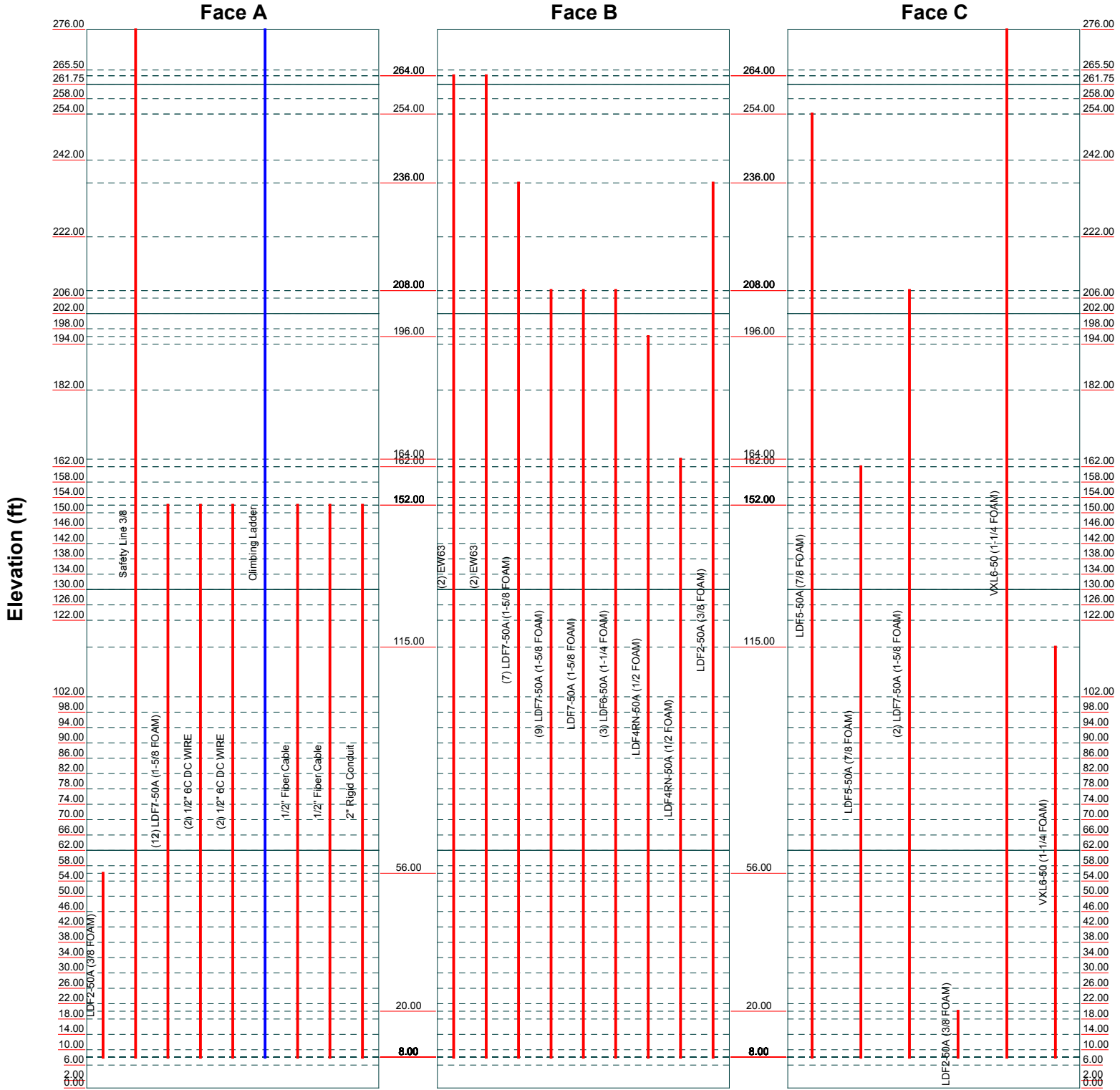
<b>Maser Consulting</b>		<b>Job: 18946008A</b>	
2000 Midlantic Drive, Suite 100		<b>Project: CTL02056</b>	
Mt. Laurel, NJ		Client: AT&T	Drawn by:
Phone: 856 797-0412		Code: TIA-222-G	Date: 09/25/18
FAX: 856 722-1120		Path:	Scale: NTS
		Dwg No. E-6	



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			Project: <b>CTL02056</b>		
Client: <b>AT&amp;T</b>		Drawn by:		App'd:	
Code: <b>TIA-222-G</b>		Date: <b>09/25/18</b>		Scale: <b>NTS</b>	
Path:			Dwg No. <b>E-5</b>		

# Feed Line Distribution Chart 0' - 276'

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



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Job: <b>18946008A</b>		
Project: <b>CTL02056</b>		
Client: AT&T	Drawn by:	App'd:
Code: TIA-222-G	Date: 09/25/18	Scale: NTS
Path:		Dwg No. E-7

<b>tnxTower</b>  <b>Maser Consulting</b> 2000 Midlantic Drive, Suite 100 Mt. Laurel, NJ Phone: 856 797-0412 FAX: 856 722-1120	<b>Job</b> 18946008A	<b>Page</b> 1 of 133
	<b>Project</b> CTL02056	<b>Date</b> 17:35:35 09/25/18
	<b>Client</b> AT&T	<b>Designed by</b>

## Tower Input Data

The main tower is a 3x guyed tower with an overall height of 276.00 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 4.00 ft at the top and 4.00 ft at the base.

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

The following design criteria apply:

Tower is located in New London County, Connecticut.

ASCE 7-10 Wind Data is used (wind speeds converted to nominal values).

Basic wind speed of 97 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.

Weld together tower sections have flange connections..

Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications..

Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards..

Welds are fabricated with ER-70S-6 electrodes..

I-Beam base is 2.00 ft above the pivot.

Pressures are calculated at each section.

Safety factor used in guy design is 1.

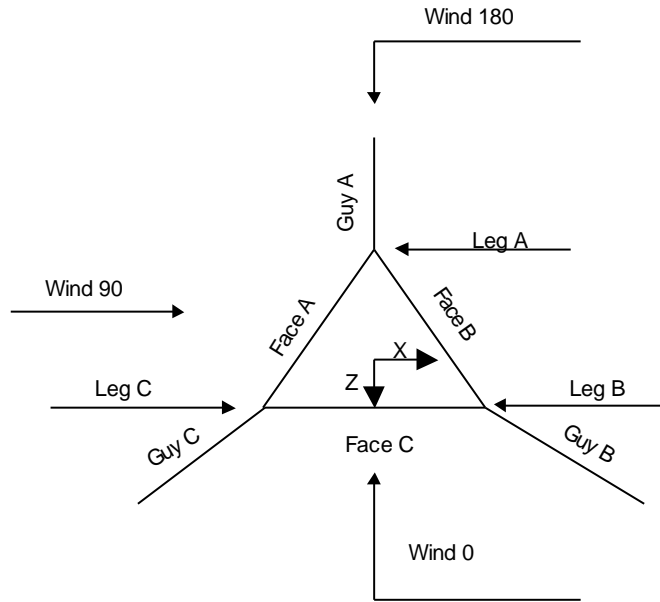
Stress ratio used in tower member design is 1.

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

## Options

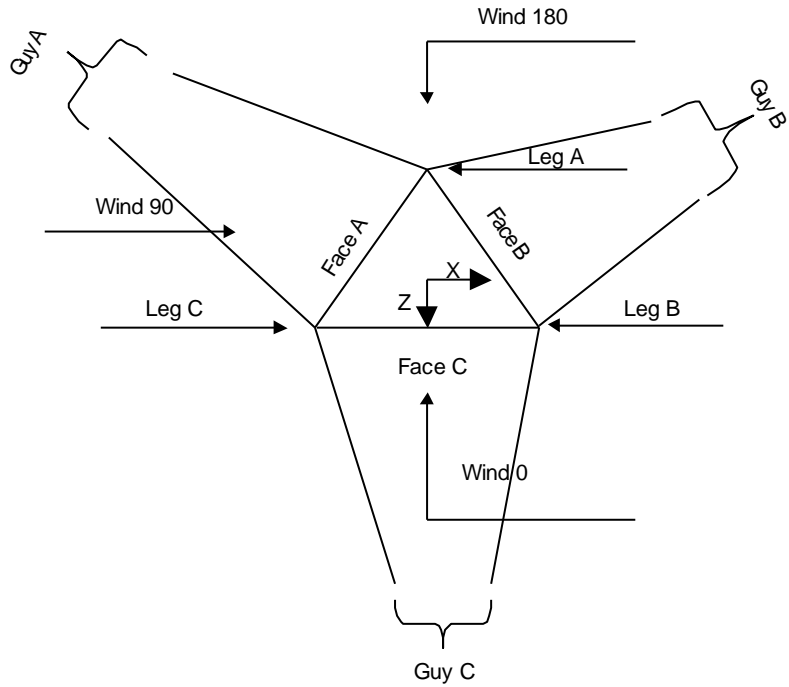
<ul style="list-style-type: none"> <li>Consider Moments - Legs</li> <li>Consider Moments - Horizontals</li> <li>Consider Moments - Diagonals</li> <li>Use Moment Magnification</li> <li>√ Use Code Stress Ratios</li> <li>√ Use Code Safety Factors - Guys</li> <li>Escalate Ice</li> <li>Always Use Max Kz</li> <li>Use Special Wind Profile</li> <li>Include Bolts In Member Capacity</li> <li>Leg Bolts Are At Top Of Section</li> <li>√ Secondary Horizontal Braces Leg</li> <li>Use Diamond Inner Bracing (4 Sided)</li> <li>SR Members Have Cut Ends</li> <li>SR Members Are Concentric</li> </ul>	<ul style="list-style-type: none"> <li>Distribute Leg Loads As Uniform</li> <li>Assume Legs Pinned</li> <li>√ Assume Rigid Index Plate</li> <li>√ Use Clear Spans For Wind Area</li> <li>√ Use Clear Spans For KL/r</li> <li>√ Retension Guys To Initial Tension</li> <li>√ Bypass Mast Stability Checks</li> <li>Use Azimuth Dish Coefficients</li> <li>√ Project Wind Area of Appurt.</li> <li>Autocalc Torque Arm Areas</li> <li>Add IBC .6D+W Combination</li> <li>Sort Capacity Reports By Component</li> <li>Triangulate Diamond Inner Bracing</li> <li>Treat Feed Line Bundles As Cylinder</li> </ul>	<ul style="list-style-type: none"> <li>Use ASCE 10 X-Brace Ly Rules</li> <li>√ Calculate Redundant Bracing Forces</li> <li>Ignore Redundant Members in FEA</li> <li>SR Leg Bolts Resist Compression</li> <li>All Leg Panels Have Same Allowable</li> <li>Offset Girt At Foundation</li> <li>√ Consider Feed Line Torque</li> <li>Include Angle Block Shear Check</li> <li>Use TIA-222-G Bracing Resist. Exemption</li> <li>Use TIA-222-G Tension Splice Exemption</li> <li style="text-align: center;">Poles</li> <li>Include Shear-Torsion Interaction</li> <li>Always Use Sub-Critical Flow</li> <li>Use Top Mounted Sockets</li> </ul>
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<b>Job</b>	18946008A	<b>Page</b>	2 of 133
<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
<b>Client</b>	AT&T	<b>Designed by</b>	



**Corner & Starmount Guyed Tower**

<b>tnxTower</b>  <b>Maser Consulting</b> 2000 Midlantic Drive, Suite 100 Mt. Laurel, NJ Phone: 856 797-0412 FAX: 856 722-1120	<b>Job</b> 18946008A	<b>Page</b> 3 of 133
	<b>Project</b> CTL02056	<b>Date</b> 17:35:35 09/25/18
	<b>Client</b> AT&T	<b>Designed by</b>



**Face Guyed**

**Tower Section Geometry**

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	ft			ft		ft
T1	276.00-265.50			4.00	1	10.50
T2	265.50-261.75			4.00	1	3.75
T3	261.75-258.00			4.00	1	3.75
T4	258.00-254.00			4.00	1	4.00
T5	254.00-242.00			4.00	1	12.00
T6	242.00-222.00			4.00	1	20.00
T7	222.00-206.00			4.00	1	16.00
T8	206.00-202.00			4.00	1	4.00
T9	202.00-198.00			4.00	1	4.00
T10	198.00-194.00			4.00	1	4.00
T11	194.00-182.00			4.00	1	12.00
T12	182.00-162.00			4.00	1	20.00
T13	162.00-158.00			4.00	1	4.00
T14	158.00-154.00			4.00	1	4.00
T15	154.00-150.00			4.00	1	4.00
T16	150.00-146.00			4.00	1	4.00

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	<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
	<b>Client</b>	AT&T	<b>Designed by</b>	

<i>Tower Section</i>	<i>Tower Elevation</i>	<i>Assembly Database</i>	<i>Description</i>	<i>Section Width</i>	<i>Number of Sections</i>	<i>Section Length</i>
	<i>ft</i>			<i>ft</i>		<i>ft</i>
T17	146.00-142.00			4.00	1	4.00
T18	142.00-138.00			4.00	1	4.00
T19	138.00-134.00			4.00	1	4.00
T20	134.00-130.00			4.00	1	4.00
T21	130.00-126.00			4.00	1	4.00
T22	126.00-122.00			4.00	1	4.00
T23	122.00-102.00			4.00	1	20.00
T24	102.00-98.00			4.00	1	4.00
T25	98.00-94.00			4.00	1	4.00
T26	94.00-90.00			4.00	1	4.00
T27	90.00-86.00			4.00	1	4.00
T28	86.00-82.00			4.00	1	4.00
T29	82.00-78.00			4.00	1	4.00
T30	78.00-74.00			4.00	1	4.00
T31	74.00-70.00			4.00	1	4.00
T32	70.00-66.00			4.00	1	4.00
T33	66.00-62.00			4.00	1	4.00
T34	62.00-58.00			4.00	1	4.00
T35	58.00-54.00			4.00	1	4.00
T36	54.00-50.00			4.00	1	4.00
T37	50.00-46.00			4.00	1	4.00
T38	46.00-42.00			4.00	1	4.00
T39	42.00-38.00			4.00	1	4.00
T40	38.00-34.00			4.00	1	4.00
T41	34.00-30.00			4.00	1	4.00
T42	30.00-26.00			4.00	1	4.00
T43	26.00-22.00			4.00	1	4.00
T44	22.00-18.00			4.00	1	4.00
T45	18.00-14.00			4.00	1	4.00
T46	14.00-10.00			4.00	1	4.00
T47	10.00-6.00			4.00	1	4.00
T48	6.00-2.00			4.00	1	4.00

### Tower Section Geometry (cont'd)

<i>Tower Section</i>	<i>Tower Elevation</i>	<i>Diagonal Spacing</i>	<i>Bracing Type</i>	<i>Has K Brace End Panels</i>	<i>Has Horizontals</i>	<i>Top Girt Offset</i>	<i>Bottom Girt Offset</i>
	<i>ft</i>	<i>ft</i>				<i>in</i>	<i>in</i>
T1	276.00-265.50	3.50	K Brace Left	No	Yes	0.0000	0.0000
T2	265.50-261.75	3.75	Diag Down	No	Yes	0.0000	0.0000
T3	261.75-258.00	3.75	X Brace	No	Yes	0.0000	0.0000
T4	258.00-254.00	4.00	Diag Down	No	Yes	0.0000	0.0000
T5	254.00-242.00	4.00	K Brace Left	No	Yes	0.0000	0.0000
T6	242.00-222.00	4.00	K Brace Right	No	Yes	0.0000	0.0000
T7	222.00-206.00	4.00	K Brace Right	No	Yes	0.0000	0.0000
T8	206.00-202.00	4.00	Diag Up	No	Yes	0.0000	0.0000
T9	202.00-198.00	4.00	X Brace	No	Yes	0.0000	0.0000
T10	198.00-194.00	4.00	Diag Up	No	Yes	0.0000	0.0000
T11	194.00-182.00	4.00	K Brace Right	No	Yes	0.0000	0.0000
T12	182.00-162.00	4.00	K Brace Left	No	Yes	0.0000	0.0000
T13	162.00-158.00	4.00	Diag Down	No	Yes	0.0000	0.0000
T14	158.00-154.00	4.00	Diag Up	No	Yes	0.0000	0.0000
T15	154.00-150.00	4.00	Diag Down	No	Yes	0.0000	0.0000
T16	150.00-146.00	4.00	Diag Up	No	Yes	0.0000	0.0000

<b>tnxTower</b>  <b>Maser Consulting</b> 2000 Midlantic Drive, Suite 100 Mt. Laurel, NJ Phone: 856 797-0412 FAX: 856 722-1120	<b>Job</b>	18946008A	<b>Page</b>	5 of 133
	<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
	<b>Client</b>	AT&T	<b>Designed by</b>	

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
T17	146.00-142.00	4.00	Diag Down	No	Yes	0.0000	0.0000
T18	142.00-138.00	4.00	Diag Up	No	Yes	0.0000	0.0000
T19	138.00-134.00	4.00	Diag Down	No	Yes	0.0000	0.0000
T20	134.00-130.00	4.00	Diag Up	No	Yes	0.0000	0.0000
T21	130.00-126.00	4.00	Diag Down	No	Yes	0.0000	0.0000
T22	126.00-122.00	4.00	Diag Up	No	Yes	0.0000	0.0000
T23	122.00-102.00	4.00	K Brace Right	No	Yes	0.0000	0.0000
T24	102.00-98.00	4.00	Diag Up	No	Yes	0.0000	0.0000
T25	98.00-94.00	4.00	Diag Down	No	Yes	0.0000	0.0000
T26	94.00-90.00	4.00	Diag Up	No	Yes	0.0000	0.0000
T27	90.00-86.00	4.00	Diag Down	No	Yes	0.0000	0.0000
T28	86.00-82.00	4.00	Diag Up	No	Yes	0.0000	0.0000
T29	82.00-78.00	4.00	Diag Down	No	Yes	0.0000	0.0000
T30	78.00-74.00	4.00	Diag Up	No	Yes	0.0000	0.0000
T31	74.00-70.00	4.00	Diag Down	No	Yes	0.0000	0.0000
T32	70.00-66.00	4.00	Diag Up	No	Yes	0.0000	0.0000
T33	66.00-62.00	4.00	Diag Down	No	Yes	0.0000	0.0000
T34	62.00-58.00	4.00	Diag Up	No	Yes	0.0000	0.0000
T35	58.00-54.00	4.00	Diag Down	No	Yes	0.0000	0.0000
T36	54.00-50.00	4.00	Diag Up	No	Yes	0.0000	0.0000
T37	50.00-46.00	4.00	Diag Down	No	Yes	0.0000	0.0000
T38	46.00-42.00	4.00	Diag Up	No	Yes	0.0000	0.0000
T39	42.00-38.00	4.00	Diag Down	No	Yes	0.0000	0.0000
T40	38.00-34.00	4.00	Diag Up	No	Yes	0.0000	0.0000
T41	34.00-30.00	4.00	Diag Down	No	Yes	0.0000	0.0000
T42	30.00-26.00	4.00	Diag Up	No	Yes	0.0000	0.0000
T43	26.00-22.00	4.00	Diag Down	No	Yes	0.0000	0.0000
T44	22.00-18.00	4.00	Diag Up	No	Yes	0.0000	0.0000
T45	18.00-14.00	4.00	Diag Down	No	Yes	0.0000	0.0000
T46	14.00-10.00	4.00	Diag Up	No	Yes	0.0000	0.0000
T47	10.00-6.00	4.00	Diag Down	No	Yes	0.0000	0.0000
T48	6.00-2.00	4.00	Diag Up	No	Yes	0.0000	0.0000

### Tower Section Geometry (cont'd)

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 276.00-265.50	Solid Round	1 3/4	A572-50 (50 ksi)	Equal Angle	L1 3/4x1 3/4x3/16	A36 (36 ksi)
T2 265.50-261.75	Solid Round	1 3/4	A572-50 (50 ksi)	Equal Angle	L1 3/4x1 3/4x3/16	A36 (36 ksi)
T3 261.75-258.00	Solid Round	1 3/4	A572-50 (50 ksi)	Equal Angle	L1 3/4x1 3/4x3/16	A36 (36 ksi)
T4 258.00-254.00	Solid Round	1 3/4	A572-50 (50 ksi)	Equal Angle	L1 3/4x1 3/4x3/16	A36 (36 ksi)
T5 254.00-242.00	Solid Round	1 3/4	A572-50 (50 ksi)	Equal Angle	L1 3/4x1 3/4x3/16	A36 (36 ksi)
T6 242.00-222.00	Solid Round	1 3/4	A572-50 (50 ksi)	Equal Angle	L1 3/4x1 3/4x3/16	A36 (36 ksi)
T7 222.00-206.00	Solid Round	2	A572-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)
T8 206.00-202.00	Solid Round	2	A572-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x3/8	A36 (36 ksi)
T9 202.00-198.00	Solid Round	2	A572-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x3/8	A36 (36 ksi)
T10	Solid Round	2	A572-50	Equal Angle	L2 1/2x2 1/2x3/8	A36



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<i>Tower Elevation ft</i>	<i>Leg Type</i>	<i>Leg Size</i>	<i>Leg Grade</i>	<i>Diagonal Type</i>	<i>Diagonal Size</i>	<i>Diagonal Grade</i>
198.00-194.00			(50 ksi)			(36 ksi)
T11	Solid Round	2	A572-50	Equal Angle	L2 1/2x2 1/2x1/4	A36
194.00-182.00			(50 ksi)			(36 ksi)
T12	Solid Round	2	A572-50	Equal Angle	L2x2x1/4	A36
182.00-162.00			(50 ksi)			(36 ksi)
T13	Solid Round	2	A572-50	Equal Angle	L2x2x1/4	A36
162.00-158.00			(50 ksi)			(36 ksi)
T14	Solid Round	2	A572-50	Equal Angle	L2x2x1/4	A36
158.00-154.00			(50 ksi)			(36 ksi)
T15	Solid Round	2	A572-50	Equal Angle	L2x2x1/4	A36
154.00-150.00			(50 ksi)			(36 ksi)
T16	Solid Round	2	A572-50	Equal Angle	L2x2x1/4	A36
150.00-146.00			(50 ksi)			(36 ksi)
T17	Solid Round	2	A572-50	Equal Angle	L2x2x3/8	A36
146.00-142.00			(50 ksi)			(36 ksi)
T18	Solid Round	2	A572-50	Equal Angle	L2x2x3/8	A36
142.00-138.00			(50 ksi)			(36 ksi)
T19	Solid Round	2	A572-50	Equal Angle	L2x2x3/8	A36
138.00-134.00			(50 ksi)			(36 ksi)
T20	Solid Round	2	A572-50	Equal Angle	L2x2x3/8	A36
134.00-130.00			(50 ksi)			(36 ksi)
T21	Solid Round	2	A572-50	Equal Angle	L2x2x1/4	A36
130.00-126.00			(50 ksi)			(36 ksi)
T22	Solid Round	2	A572-50	Equal Angle	L2x2x1/4	A36
126.00-122.00			(50 ksi)			(36 ksi)
T23	Solid Round	2	A572-50	Equal Angle	L2x2x1/4	A36
122.00-102.00			(50 ksi)			(36 ksi)
T24 102.00-98.00	Solid Round	2	A572-50	Equal Angle	L2x2x3/16	A36
			(50 ksi)			(36 ksi)
T25 98.00-94.00	Solid Round	2	A572-50	Equal Angle	L2x2x3/16	A36
			(50 ksi)			(36 ksi)
T26 94.00-90.00	Solid Round	2	A572-50	Equal Angle	L2x2x3/16	A36
			(50 ksi)			(36 ksi)
T27 90.00-86.00	Solid Round	2	A572-50	Equal Angle	L2x2x3/16	A36
			(50 ksi)			(36 ksi)
T28 86.00-82.00	Solid Round	2	A572-50	Equal Angle	L2x2x3/16	A36
			(50 ksi)			(36 ksi)
T29 82.00-78.00	Solid Round	2	A572-50	Equal Angle	L2x2x3/16	A36
			(50 ksi)			(36 ksi)
T30 78.00-74.00	Solid Round	2	A572-50	Equal Angle	L2x2x3/16	A36
			(50 ksi)			(36 ksi)
T31 74.00-70.00	Solid Round	2	A572-50	Equal Angle	L2x2x1/4	A36
			(50 ksi)			(36 ksi)
T32 70.00-66.00	Solid Round	2	A572-50	Equal Angle	L2x2x1/4	A36
			(50 ksi)			(36 ksi)
T33 66.00-62.00	Solid Round	2	A572-50	Equal Angle	L2x2x1/4	A36
			(50 ksi)			(36 ksi)
T34 62.00-58.00	Solid Round	2	A572-50	Equal Angle	L2x2x1/4	A36
			(50 ksi)			(36 ksi)
T35 58.00-54.00	Solid Round	2	A572-50	Equal Angle	L2x2x1/4	A36
			(50 ksi)			(36 ksi)
T36 54.00-50.00	Solid Round	2	A572-50	Equal Angle	L2x2x1/4	A36
			(50 ksi)			(36 ksi)
T37 50.00-46.00	Solid Round	2	A572-50	Equal Angle	L2x2x1/4	A36
			(50 ksi)			(36 ksi)
T38 46.00-42.00	Solid Round	2	A572-50	Equal Angle	L2x2x3/16	A36
			(50 ksi)			(36 ksi)
T39 42.00-38.00	Solid Round	2	A572-50	Equal Angle	L2x2x3/16	A36
			(50 ksi)			(36 ksi)
T40 38.00-34.00	Solid Round	2	A572-50	Equal Angle	L2x2x3/16	A36
			(50 ksi)			(36 ksi)

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Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T41 34.00-30.00	Solid Round	2	A572-50 (50 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T42 30.00-26.00	Solid Round	2	A572-50 (50 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T43 26.00-22.00	Solid Round	2	A572-50 (50 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T44 22.00-18.00	Solid Round	2	A572-50 (50 ksi)	Equal Angle	L2x2x1/4	A36 (36 ksi)
T45 18.00-14.00	Solid Round	2	A572-50 (50 ksi)	Equal Angle	L2x2x1/4	A36 (36 ksi)
T46 14.00-10.00	Solid Round	2	A572-50 (50 ksi)	Equal Angle	L2x2x1/4	A36 (36 ksi)
T47 10.00-6.00	Solid Round	2	A572-50 (50 ksi)	Equal Angle	L2x2x1/4	A36 (36 ksi)
T48 6.00-2.00	Solid Round	2	A572-50 (50 ksi)	Equal Angle	L2x2x1/4	A36 (36 ksi)

### Tower Section Geometry (cont'd)

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 276.00-265.50	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T2 265.50-261.75	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T3 261.75-258.00	Equal Angle	L2x2x3/16	A53-B-42 (42 ksi)	Pipe		A53-B-42 (42 ksi)
T4 258.00-254.00	Equal Angle	L2x2x3/16	A53-B-42 (42 ksi)	Pipe		A53-B-42 (42 ksi)
T5 254.00-242.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T6 242.00-222.00	Equal Angle	L2x2x3/16	A53-B-42 (42 ksi)	Pipe		A53-B-42 (42 ksi)
T7 222.00-206.00	Equal Angle	L2x2x3/16	A53-B-42 (42 ksi)	Pipe		A53-B-42 (42 ksi)
T8 206.00-202.00	Equal Angle	L2x2x3/16	A53-B-42 (42 ksi)	Pipe		A53-B-42 (42 ksi)
T9 202.00-198.00	Equal Angle	L2x2x3/16	A53-B-42 (42 ksi)	Pipe		A53-B-42 (42 ksi)
T10 198.00-194.00	Equal Angle	L2x2x3/16	A53-B-42 (42 ksi)	Pipe		A53-B-42 (42 ksi)
T11 194.00-182.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T12 182.00-162.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T13 162.00-158.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T14 158.00-154.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T15 154.00-150.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T16 150.00-146.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T17 146.00-142.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)

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<i>Tower Elevation ft</i>	<i>Top Girt Type</i>	<i>Top Girt Size</i>	<i>Top Girt Grade</i>	<i>Bottom Girt Type</i>	<i>Bottom Girt Size</i>	<i>Bottom Girt Grade</i>
T18 142.00-138.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T19 138.00-134.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T20 134.00-130.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T21 130.00-126.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T22 126.00-122.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T23 122.00-102.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T24 102.00-98.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T25 98.00-94.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T26 94.00-90.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T27 90.00-86.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T28 86.00-82.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T29 82.00-78.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T30 78.00-74.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T31 74.00-70.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T32 70.00-66.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T33 66.00-62.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T34 62.00-58.00	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T35 58.00-54.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T36 54.00-50.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T37 50.00-46.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T38 46.00-42.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T39 42.00-38.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T40 38.00-34.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T41 34.00-30.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T42 30.00-26.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T43 26.00-22.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T44 22.00-18.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T45 18.00-14.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T46 14.00-10.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T47 10.00-6.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)
T48 6.00-2.00	Equal Angle	L2x2x3/16	A36	Equal Angle		A36

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<i>Tower Elevation</i> <i>ft</i>	<i>Top Girt Type</i>	<i>Top Girt Size</i>	<i>Top Girt Grade</i>	<i>Bottom Girt Type</i>	<i>Bottom Girt Size</i>	<i>Bottom Girt Grade</i>
			(36 ksi)			(36 ksi)

### Tower Section Geometry (cont'd)

<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 276.00-265.50	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T2 265.50-261.75	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T3 261.75-258.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T4 258.00-254.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T5 254.00-242.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T6 242.00-222.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T7 222.00-206.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T8 206.00-202.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T9 202.00-198.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T10 198.00-194.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T11 194.00-182.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T12 182.00-162.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T13 162.00-158.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T14 158.00-154.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T15 154.00-150.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T16 150.00-146.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T17 146.00-142.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T18 142.00-138.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)
T19 138.00-134.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)
T20 134.00-130.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)
T21 130.00-126.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)
T22 126.00-122.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)
T23 122.00-102.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T24 102.00-98.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)

<p style="text-align: center;"><b>tnxTower</b></p> <p style="text-align: center;"><b>Maser Consulting</b> 2000 Midlantic Drive, Suite 100 Mt. Laurel, NJ Phone: 856 797-0412 FAX: 856 722-1120</p>	<b>Job</b>	18946008A	<b>Page</b>	10 of 133
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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>
T25 98.00-94.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T26 94.00-90.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T27 90.00-86.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T28 86.00-82.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T29 82.00-78.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T30 78.00-74.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T31 74.00-70.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T32 70.00-66.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T33 66.00-62.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T34 62.00-58.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T35 58.00-54.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T36 54.00-50.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T37 50.00-46.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T38 46.00-42.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T39 42.00-38.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T40 38.00-34.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T41 34.00-30.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T42 30.00-26.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T43 26.00-22.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T44 22.00-18.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T45 18.00-14.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T46 14.00-10.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T47 10.00-6.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T48 6.00-2.00	None	Flat Bar		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 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>
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<i>Tower Elevation</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>
<i>ft</i>						
T21 130.00-126.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T24 102.00-98.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T25 98.00-94.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T26 94.00-90.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T27 90.00-86.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T28 86.00-82.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T29 82.00-78.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T30 78.00-74.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T31 74.00-70.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T32 70.00-66.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T33 66.00-62.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T34 62.00-58.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T35 58.00-54.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T36 54.00-50.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T37 50.00-46.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T38 46.00-42.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T39 42.00-38.00	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T40 38.00-34.00	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T41 34.00-30.00	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T42 30.00-26.00	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T43 26.00-22.00	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T44 22.00-18.00	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T45 18.00-14.00	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T46 14.00-10.00	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T47 10.00-6.00	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)	Single Angle		A36 (36 ksi)
T48 6.00-2.00	Equal Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)	Single Angle		A36 (36 ksi)

**Tower Section Geometry (cont'd)**

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<i>Tower Elevation</i>	<i>Gusset Area (per face)</i>	<i>Gusset Thickness</i>	<i>Gusset Grade</i>	<i>Adjust. Factor A<sub>f</sub></i>	<i>Adjust. Factor A<sub>r</sub></i>	<i>Weight Mult.</i>	<i>Double Angle Stitch Bolt Spacing Diagonals in</i>	<i>Double Angle Stitch Bolt Spacing Horizontals in</i>	<i>Double Angle Stitch Bolt Spacing Redundants in</i>
<i>ft</i>	<i>ft<sup>2</sup></i>	<i>in</i>							
T1	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
276.00-265.50			(36 ksi)						
T2	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
265.50-261.75			(36 ksi)						
T3	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
261.75-258.00			(36 ksi)						
T4	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
258.00-254.00			(36 ksi)						
T5	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
254.00-242.00			(36 ksi)						
T6	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
242.00-222.00			(36 ksi)						
T7	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
222.00-206.00			(36 ksi)						
T8	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
206.00-202.00			(36 ksi)						
T9	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
202.00-198.00			(36 ksi)						
T10	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
198.00-194.00			(36 ksi)						
T11	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
194.00-182.00			(36 ksi)						
T12	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
182.00-162.00			(36 ksi)						
T13	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
162.00-158.00			(36 ksi)						
T14	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
158.00-154.00			(36 ksi)						
T15	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
154.00-150.00			(36 ksi)						
T16	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
150.00-146.00			(36 ksi)						
T17	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
146.00-142.00			(36 ksi)						
T18	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
142.00-138.00			(36 ksi)						
T19	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
138.00-134.00			(36 ksi)						
T20	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
134.00-130.00			(36 ksi)						
T21	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
130.00-126.00			(36 ksi)						
T22	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
126.00-122.00			(36 ksi)						
T23	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
122.00-102.00			(36 ksi)						
T24	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
102.00-98.00			(36 ksi)						
T25	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
98.00-94.00			(36 ksi)						
T26	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
94.00-90.00			(36 ksi)						
T27	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
90.00-86.00			(36 ksi)						
T28	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
86.00-82.00			(36 ksi)						
T29	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000
82.00-78.00			(36 ksi)						
T30	0.00	0.0000	A36	1	1	1.02	Mid-Pt	36.0000	36.0000











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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
T35 58.00-54.00	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
T36 54.00-50.00	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
T37 50.00-46.00	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
T38 46.00-42.00	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
T39 42.00-38.00	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
T40 38.00-34.00	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
T41 34.00-30.00	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
T42 30.00-26.00	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
T43 26.00-22.00	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
T44 22.00-18.00	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
T45 18.00-14.00	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
T46 14.00-10.00	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
T47 10.00-6.00	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
T48 6.00-2.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

### Tower Section Geometry (cont'd)

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T1 276.00-265.50	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T2 265.50-261.75	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T3 261.75-258.00	Flange	0.7500	0	0.6250	0	0.5000	0	0.5000	0	0.6250	0	0.6250	0	0.6250	0
T4 258.00-254.00	Flange	0.7500	0	0.6250	0	0.5000	0	0.5000	0	0.6250	0	0.5000	0	0.6250	0
T5 254.00-242.00	Flange	0.7500	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T6 242.00-222.00	Flange	0.7500	0	0.5000	0	0.5000	0	0.5000	0	0.6250	0	0.5000	0	0.6250	0
T7 222.00-206.00	Flange	0.7500	0	0.6250	0	0.5000	0	0.5000	0	0.6250	0	0.6250	0	0.6250	0
T8 206.00-202.00	Flange	0.7500	0	0.5000	0	0.5000	0	0.5000	0	0.6250	0	0.5000	0	0.6250	0
T9 202.00-198.00	Flange	0.7500	0	0.6250	0	0.5000	0	0.5000	0	0.6250	0	0.6250	0	0.6250	0



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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.
T39 42.00-38.00	Flange	0.7500	0	0.7500	0	0.5000	0	0.0000	0	0.6250	0	0.5000	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T40 38.00-34.00	Flange	0.7500	0	0.7500	0	0.5000	0	0.0000	0	0.6250	0	0.5000	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T41 34.00-30.00	Flange	0.7500	0	0.7500	0	0.5000	0	0.0000	0	0.6250	0	0.5000	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T42 30.00-26.00	Flange	0.7500	0	0.7500	0	0.5000	0	0.0000	0	0.6250	0	0.5000	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T43 26.00-22.00	Flange	0.7500	0	0.7500	0	0.5000	0	0.0000	0	0.6250	0	0.5000	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T44 22.00-18.00	Flange	0.7500	0	0.7500	0	0.5000	0	0.0000	0	0.6250	0	0.5000	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T45 18.00-14.00	Flange	0.7500	0	0.7500	0	0.5000	0	0.0000	0	0.6250	0	0.5000	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T46 14.00-10.00	Flange	0.7500	0	0.7500	0	0.5000	0	0.0000	0	0.6250	0	0.5000	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T47 10.00-6.00	Flange	0.7500	0	0.7500	0	0.5000	0	0.0000	0	0.6250	0	0.5000	0	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T48 6.00-2.00	Flange	0.7500	0	0.7500	0	0.5000	0	0.0000	0	0.6250	0	0.5000	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 <sub>u</sub> ft	Anchor Radius ft	Anchor Azimuth Adj. °	Anchor Elevation ft	End Fitting Efficiency %
261.75	EHS	A 9/16	3.50	10%	21000	0.671	293.09	147.00	0.0000	6.00	100%
		B 9/16	3.50	10%	21000	0.671	292.84	141.00	0.0000	3.00	100%
		C 9/16	3.50	10%	21000	0.671	315.11	170.00	0.0000	-6.00	100%
202	EHS	A 9/16	3.50	10%	21000	0.671	242.81	147.00	0.0000	6.00	100%
		B 9/16	3.50	10%	21000	0.671	241.77	141.00	0.0000	3.00	100%
		C 9/16	3.50	10%	21000	0.671	266.30	170.00	0.0000	-6.00	100%
130	EHS	A 3/4	5.83	10%	19000	1.155	190.39	147.00	0.0000	6.00	100%
		B 3/4	5.83	10%	19000	1.155	187.89	141.00	0.0000	3.00	100%
		C 3/4	5.83	10%	19000	1.155	215.72	170.00	0.0000	-6.00	100%
62	EHS	A 9/16	3.50	10%	21000	0.671	155.02	147.00	0.0000	6.00	100%
		B 9/16	3.50	10%	21000	0.671	150.59	141.00	0.0000	3.00	100%
		C 9/16	3.50	10%	21000	0.671	180.80	170.00	0.0000	-6.00	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
261.75	Torque Arm	12.00	30.0000	Bat Ear	A36 (36 ksi)	Equal Angle	L3 1/2x3 1/2x3/8
202	Torque Arm	12.00	30.0000	Bat Ear	A36 (36 ksi)	Equal Angle	L3 1/2x3 1/2x3/8

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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
130	Corner						
62	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
261.75	A572-50 (50 ksi)	Solid Round			No	A36 (36 ksi)	Equal Angle	L2 1/2x2 1/2x3/8
202.00	A572-50 (50 ksi)	Solid Round			No	A36 (36 ksi)	Equal Angle	L2 1/2x2 1/2x3/8
130.00	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Solid Round	
62.00	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Solid Round	

### 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
261.75	0.20	0.20	0.21		8.04	8.03	9.29	
					4.9 sec/pulse	4.9 sec/pulse	5.3 sec/pulse	
202	0.16	0.16	0.18		5.55	5.50	6.67	
					4.1 sec/pulse	4.1 sec/pulse	4.5 sec/pulse	
130	0.22	0.22	0.25		3.55	3.46	4.55	
					3.3 sec/pulse	3.2 sec/pulse	3.7 sec/pulse	
62	0.10	0.10	0.12		2.29	2.16	3.12	
					2.6 sec/pulse	2.5 sec/pulse	3.0 sec/pulse	

### Guy Data (cont'd)

Guy Elevation ft	Calc K Single Angles	Calc K Solid Rounds	Torque Arm		Pull Off		Diagonal	
			K <sub>x</sub>	K <sub>y</sub>	K <sub>x</sub>	K <sub>y</sub>	K <sub>x</sub>	K <sub>y</sub>
261.75	No	No	1	1	1	1	1	1
202	No	No	1	1	1	1	1	1
130	No	No			1	1	1	1
62	No	No			1	1	1	1

### Guy Data (cont'd)

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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
261.75	0.0000	0	0.0000	1	0.6250	0	0.0000	0.75	0.6250	0	0.0000	0.75
	A325N				A325N				A325N			
202	0.0000	0	0.0000	1	0.6250	0	0.0000	0.75	0.6250	0	0.0000	0.75
	A325N				A325N				A325N			
130	0.0000	0	0.0000	1	0.6250	0	0.0000	0.75	0.6250	0	0.0000	0.75
	A325N				A325N				A325N			
62	0.0000	0	0.0000	1	0.6250	0	0.0000	0.75	0.6250	0	0.0000	0.75
	A325N				A325N				A325N			

### Guy Pressures

Guy Elevation ft	Guy Location	z ft	q <sub>z</sub> psf	q <sub>z</sub> Ice psf	Ice Thickness in
261.75	A	133.88	22	6	1.7255
	B	132.38	22	6	1.7235
	C	127.88	22	6	1.7176
202	A	104.00	20	5	1.6825
	B	102.50	20	5	1.6800
	C	98.00	20	5	1.6725
130	A	68.00	18	5	1.6125
	B	66.50	18	5	1.6089
	C	62.00	18	5	1.5976
62	A	34.00	15	4	1.5045
	B	32.50	15	4	1.4977
	C	28.00	14	4	1.4756

### Guy-Tensioning Information

Temperature At Time Of Tensioning																	
Guy Elevation ft	H ft	V ft	0 F		20 F		40 F		60 F		80 F		100 F		120 F		
			Initial Tension K	Intercept ft	Initial Tension K	Intercept ft	Initial Tension K	Intercept ft	Initial Tension K	Intercept ft	Initial Tension K	Intercept ft	Initial Tension K	Intercept ft	Initial Tension K	Intercept ft	
261.75	A	143.66	255.75	3.861	7.31	3.740	7.54	3.620	7.78	3.500	8.04	3.381	8.32	3.263	8.62	3.146	8.93
	B	137.67	258.75	3.833	7.34	3.722	7.56	3.611	7.79	3.500	8.03	3.390	8.28	3.281	8.55	3.173	8.84
	C	166.64	267.75	3.913	8.33	3.774	8.63	3.636	8.95	3.500	9.29	3.365	9.65	3.231	10.04	3.099	10.46
202	A	143.66	196.00	4.027	4.84	3.850	5.05	3.674	5.29	3.500	5.55	3.327	5.84	3.157	6.15	2.988	6.49
	B	137.67	199.00	3.990	4.84	3.826	5.04	3.662	5.26	3.500	5.50	3.339	5.76	3.180	6.05	3.022	6.36
	C	166.64	208.00	4.080	5.74	3.885	6.02	3.691	6.33	3.500	6.67	3.311	7.04	3.126	7.45	2.944	7.91
130	A	144.69	124.00	7.194	2.88	6.735	3.08	6.280	3.30	5.830	3.55	5.387	3.84	4.954	4.17	4.532	4.55
	B	138.69	127.00	7.121	2.84	6.687	3.02	6.256	3.22	5.830	3.46	5.410	3.72	4.997	4.03	4.593	4.37
	C	167.69	136.00	7.234	3.68	6.760	3.93	6.291	4.22	5.830	4.55	5.378	4.93	4.939	5.36	4.515	5.86
62	A	144.69	56.00	4.825	1.67	4.377	1.84	3.935	2.04	3.500	2.29	3.076	2.61	2.668	3.00	2.286	3.50
	B	138.69	59.00	4.794	1.58	4.358	1.74	3.925	1.93	3.500	2.16	3.084	2.45	2.683	2.82	2.304	3.28
	C	167.69	68.00	4.788	2.28	4.351	2.51	3.921	2.78	3.500	3.12	3.092	3.52	2.704	4.03	2.343	4.64

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



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Description	Face or Leg	Allow Shield	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
EW63	B	No	Ar (CaAa)	264.00 - 8.00	-0.2000	0.1	2	1	1.5742	1.5742		0.51
EW63	B	No	Ar (CaAa)	264.00 - 8.00	-1.0000	0.25	2	2	1.5742	1.5742		0.51
LDF5-50A (7/8 FOAM)	C	No	Ar (CaAa)	254.00 - 8.00	-1.0000	0.1	1	1	1.0900	1.0900		0.33
LDF5-50A (7/8 FOAM)	C	No	Ar (CaAa)	162.00 - 8.00	-1.0000	0.14	1	1	1.0900	1.0900		0.33
LDF7-50A (1-5/8 FOAM)	B	No	Ar (CaAa)	236.00 - 8.00	0.0000	-0.2	7	4	1.9800	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	B	No	Ar (CaAa)	208.00 - 8.00	-5.0000	-0.2	9	3	1.9800	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	B	No	Ar (CaAa)	208.00 - 8.00	-0.7500	-0.1	1	1	1.9800	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	C	No	Ar (CaAa)	208.00 - 8.00	-1.0000	-0.1	2	2	1.9800	1.9800		0.82
LDF6-50A (1-1/4 FOAM)	B	No	Ar (CaAa)	208.00 - 8.00	-2.0000	-0.35	3	2	1.5500	1.5500		0.66
LDF4RN-50A (1/2 FOAM)	B	No	Ar (CaAa)	196.00 - 8.00	-1.0000	0.18	1	1	0.6300	0.6300		0.15
LDF4RN-50A (1/2 FOAM)	B	No	Ar (CaAa)	164.00 - 8.00	0.0000	-0.08	1	1	0.6300	0.6300		0.15
LDF2-50A (3/8 FOAM)	B	No	Ar (CaAa)	236.00 - 8.00	0.0000	-0.05	1	1	0.4400	0.4400		0.08
LDF2-50A (3/8 FOAM)	A	No	Ar (CaAa)	56.00 - 8.00	0.0000	-0.5	1	1	0.4400	0.4400		0.08
LDF2-50A (3/8 FOAM)	C	No	Ar (CaAa)	20.00 - 8.00	-0.5000	-0.5	1	1	0.4400	0.4400		0.08
Safety Line 3/8	A	No	Ar (CaAa)	276.00 - 8.00	-6.0000	-0.3	1	1	0.3750	0.3750		0.22
LDF7-50A (1-5/8 FOAM)	A	No	Ar (CaAa)	152.00 - 8.00	-4.0000	0.1	12	6	1.9800	1.9800		0.82
1/2" 6C DC WIRE	A	No	Ar (CaAa)	152.00 - 8.00	0.0000	0.28	2	1	0.5000	0.5000		1.00
1/2" 6C DC WIRE	A	No	Ar (CaAa)	152.00 - 8.00	0.0000	0.3	2	1	0.5000	0.5000		1.00
VXL6-50 (1-1/4 FOAM)	C	No	Ar (CaAa)	276.00 - 8.00	-1.0000	0	1	1	1.5500	1.5500		0.50
VXL6-50 (1-1/4 FOAM)	C	No	Af (CaAa)	115.00 - 8.00	-1.0000	0.05	1	1	1.5500	1.5500		0.50
1/2" Fiber Cable	A	No	Ar (CaAa)	152.00 - 8.00	0.0000	0.26	1	1	0.3750	0.3750		1.00
1/2" Fiber Cable	A	No	Ar (CaAa)	152.00 - 8.00	2.0000	0.26	1	1	0.3750	0.3750		1.00
2" Rigid Conduit	A	No	Ar (CaAa)	152.00 - 8.00	0.0000	0	1	1	2.0000	2.0000		2.80

### Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	CAAA	Weight plf	
Climbing Ladder	A	No	CaAa (In Face)	276.00 - 8.00	-1.0000	-0.38	1	No Ice	0.29	7.90
								1/2" Ice	0.55	10.60
								1" Ice	0.81	13.30

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### Feed Line/Linear Appurtenances Section Areas

<i>Tower Section</i>	<i>Tower Elevation</i> <i>ft</i>	<i>Face</i>	<i>A<sub>R</sub></i> <i>ft<sup>2</sup></i>	<i>A<sub>F</sub></i> <i>ft<sup>2</sup></i>	<i>C<sub>AA</sub></i> <i>In Face</i> <i>ft<sup>2</sup></i>	<i>C<sub>AA</sub></i> <i>Out Face</i> <i>ft<sup>2</sup></i>	<i>Weight</i> <i>K</i>
T1	276.00-265.50	A	0.000	0.000	3.439	0.000	0.09
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	1.627	0.000	0.01
T2	265.50-261.75	A	0.000	0.000	1.228	0.000	0.03
		B	0.000	0.000	1.417	0.000	0.00
		C	0.000	0.000	0.581	0.000	0.00
T3	261.75-258.00	A	0.000	0.000	1.228	0.000	0.03
		B	0.000	0.000	2.361	0.000	0.01
		C	0.000	0.000	0.581	0.000	0.00
T4	258.00-254.00	A	0.000	0.000	1.310	0.000	0.03
		B	0.000	0.000	2.519	0.000	0.01
		C	0.000	0.000	0.620	0.000	0.00
T5	254.00-242.00	A	0.000	0.000	3.930	0.000	0.10
		B	0.000	0.000	7.556	0.000	0.02
		C	0.000	0.000	3.168	0.000	0.01
T6	242.00-222.00	A	0.000	0.000	6.550	0.000	0.16
		B	0.000	0.000	32.614	0.000	0.12
		C	0.000	0.000	5.280	0.000	0.02
T7	222.00-206.00	A	0.000	0.000	5.240	0.000	0.13
		B	0.000	0.000	37.845	0.000	0.15
		C	0.000	0.000	5.016	0.000	0.02
T8	206.00-202.00	A	0.000	0.000	1.310	0.000	0.03
		B	0.000	0.000	18.019	0.000	0.07
		C	0.000	0.000	2.640	0.000	0.01
T9	202.00-198.00	A	0.000	0.000	1.310	0.000	0.03
		B	0.000	0.000	18.019	0.000	0.07
		C	0.000	0.000	2.640	0.000	0.01
T10	198.00-194.00	A	0.000	0.000	1.310	0.000	0.03
		B	0.000	0.000	18.145	0.000	0.07
		C	0.000	0.000	2.640	0.000	0.01
T11	194.00-182.00	A	0.000	0.000	3.930	0.000	0.10
		B	0.000	0.000	54.812	0.000	0.22
		C	0.000	0.000	7.920	0.000	0.03
T12	182.00-162.00	A	0.000	0.000	6.550	0.000	0.16
		B	0.000	0.000	91.480	0.000	0.36
		C	0.000	0.000	13.200	0.000	0.05
T13	162.00-158.00	A	0.000	0.000	1.310	0.000	0.03
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	3.076	0.000	0.01
T14	158.00-154.00	A	0.000	0.000	1.310	0.000	0.03
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	3.076	0.000	0.01
T15	154.00-150.00	A	0.000	0.000	7.012	0.000	0.07
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	3.076	0.000	0.01
T16	150.00-146.00	A	0.000	0.000	12.714	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	3.076	0.000	0.01
T17	146.00-142.00	A	0.000	0.000	12.714	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	3.076	0.000	0.01
T18	142.00-138.00	A	0.000	0.000	12.714	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	3.076	0.000	0.01
T19	138.00-134.00	A	0.000	0.000	12.714	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	3.076	0.000	0.01
T20	134.00-130.00	A	0.000	0.000	12.714	0.000	0.11

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<i>Tower Section</i>	<i>Tower Elevation ft</i>	<i>Face</i>	<i>A<sub>R</sub></i> ft <sup>2</sup>	<i>A<sub>F</sub></i> ft <sup>2</sup>	<i>C<sub>AA</sub></i> <i>In Face</i> ft <sup>2</sup>	<i>C<sub>AA</sub></i> <i>Out Face</i> ft <sup>2</sup>	<i>Weight</i> K
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	3.076	0.000	0.01
T21	130.00-126.00	A	0.000	0.000	12.714	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	3.076	0.000	0.01
T22	126.00-122.00	A	0.000	0.000	12.714	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	3.076	0.000	0.01
T23	122.00-102.00	A	0.000	0.000	63.570	0.000	0.54
		B	0.000	0.000	92.614	0.000	0.37
		C	0.000	0.000	18.738	0.000	0.06
T24	102.00-98.00	A	0.000	0.000	12.714	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	4.109	0.000	0.01
T25	98.00-94.00	A	0.000	0.000	12.714	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	4.109	0.000	0.01
T26	94.00-90.00	A	0.000	0.000	12.714	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	4.109	0.000	0.01
T27	90.00-86.00	A	0.000	0.000	12.714	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	4.109	0.000	0.01
T28	86.00-82.00	A	0.000	0.000	12.714	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	4.109	0.000	0.01
T29	82.00-78.00	A	0.000	0.000	12.714	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	4.109	0.000	0.01
T30	78.00-74.00	A	0.000	0.000	12.714	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	4.109	0.000	0.01
T31	74.00-70.00	A	0.000	0.000	12.714	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	4.109	0.000	0.01
T32	70.00-66.00	A	0.000	0.000	12.714	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	4.109	0.000	0.01
T33	66.00-62.00	A	0.000	0.000	12.714	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	4.109	0.000	0.01
T34	62.00-58.00	A	0.000	0.000	12.714	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	4.109	0.000	0.01
T35	58.00-54.00	A	0.000	0.000	12.802	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	4.109	0.000	0.01
T36	54.00-50.00	A	0.000	0.000	12.890	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	4.109	0.000	0.01
T37	50.00-46.00	A	0.000	0.000	12.890	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	4.109	0.000	0.01
T38	46.00-42.00	A	0.000	0.000	12.890	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	4.109	0.000	0.01
T39	42.00-38.00	A	0.000	0.000	12.890	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
		C	0.000	0.000	4.109	0.000	0.01
T40	38.00-34.00	A	0.000	0.000	12.890	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07

<b>tnxTower</b>  <b>Maser Consulting</b> 2000 Midlantic Drive, Suite 100 Mt. Laurel, NJ Phone: 856 797-0412 FAX: 856 722-1120	<b>Job</b> 18946008A	<b>Page</b> 25 of 133
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	<b>Client</b> AT&T	<b>Designed by</b>

Tower Section	Tower Elevation ft	Face	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>	Weight K
T41	34.00-30.00	C	0.000	0.000	4.109	0.000	0.01
		A	0.000	0.000	12.890	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
T42	30.00-26.00	C	0.000	0.000	4.109	0.000	0.01
		A	0.000	0.000	12.890	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
T43	26.00-22.00	C	0.000	0.000	4.109	0.000	0.01
		A	0.000	0.000	12.890	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
T44	22.00-18.00	C	0.000	0.000	4.109	0.000	0.01
		A	0.000	0.000	12.890	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
T45	18.00-14.00	C	0.000	0.000	4.197	0.000	0.01
		A	0.000	0.000	12.890	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
T46	14.00-10.00	C	0.000	0.000	4.285	0.000	0.01
		A	0.000	0.000	12.890	0.000	0.11
		B	0.000	0.000	18.523	0.000	0.07
T47	10.00-6.00	C	0.000	0.000	4.285	0.000	0.01
		A	0.000	0.000	6.445	0.000	0.05
		B	0.000	0.000	9.261	0.000	0.04
T48	6.00-2.00	C	0.000	0.000	2.143	0.000	0.01
		A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00

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

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>	Weight K
T1	276.00-265.50	A	1.851	0.000	0.000	17.435	0.000	0.24
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	5.515	0.000	0.09
T2	265.50-261.75	A	1.846	0.000	0.000	6.214	0.000	0.09
		B		0.000	0.000	5.584	0.000	0.07
		C		0.000	0.000	1.966	0.000	0.03
T3	261.75-258.00	A	1.844	0.000	0.000	6.206	0.000	0.09
		B		0.000	0.000	9.301	0.000	0.12
		C		0.000	0.000	1.964	0.000	0.03
T4	258.00-254.00	A	1.841	0.000	0.000	6.612	0.000	0.09
		B		0.000	0.000	9.913	0.000	0.12
		C		0.000	0.000	2.093	0.000	0.03
T5	254.00-242.00	A	1.835	0.000	0.000	19.786	0.000	0.28
		B		0.000	0.000	29.691	0.000	0.37
		C		0.000	0.000	11.977	0.000	0.18
T6	242.00-222.00	A	1.823	0.000	0.000	32.801	0.000	0.46
		B		0.000	0.000	89.965	0.000	1.42
		C		0.000	0.000	19.864	0.000	0.30
T7	222.00-206.00	A	1.808	0.000	0.000	26.072	0.000	0.36
		B		0.000	0.000	94.441	0.000	1.60
		C		0.000	0.000	18.566	0.000	0.27
T8	206.00-202.00	A	1.800	0.000	0.000	6.493	0.000	0.09
		B		0.000	0.000	38.973	0.000	0.73
		C		0.000	0.000	9.461	0.000	0.13
T9	202.00-198.00	A	1.796	0.000	0.000	6.483	0.000	0.09
		B		0.000	0.000	38.943	0.000	0.72
		C		0.000	0.000	9.451	0.000	0.13

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<i>Tower Section</i>	<i>Tower Elevation ft</i>	<i>Face or Leg</i>	<i>Ice Thickness in</i>	<i>A<sub>R</sub> ft<sup>2</sup></i>	<i>A<sub>F</sub> ft<sup>2</sup></i>	<i>C<sub>AA</sub> In Face ft<sup>2</sup></i>	<i>C<sub>AA</sub> Out Face ft<sup>2</sup></i>	<i>Weight K</i>
T10	198.00-194.00	A	1.793	0.000	0.000	6.472	0.000	0.09
		B		0.000	0.000	39.755	0.000	0.73
		C		0.000	0.000	9.440	0.000	0.13
T11	194.00-182.00	A	1.785	0.000	0.000	19.353	0.000	0.27
		B		0.000	0.000	121.585	0.000	2.23
		C		0.000	0.000	28.253	0.000	0.38
T12	182.00-162.00	A	1.769	0.000	0.000	32.027	0.000	0.45
		B		0.000	0.000	202.737	0.000	3.70
		C		0.000	0.000	46.854	0.000	0.62
T13	162.00-158.00	A	1.757	0.000	0.000	6.369	0.000	0.09
		B		0.000	0.000	41.919	0.000	0.75
		C		0.000	0.000	11.174	0.000	0.15
T14	158.00-154.00	A	1.752	0.000	0.000	6.356	0.000	0.09
		B		0.000	0.000	41.874	0.000	0.75
		C		0.000	0.000	11.157	0.000	0.15
T15	154.00-150.00	A	1.748	0.000	0.000	18.933	0.000	0.35
		B		0.000	0.000	41.828	0.000	0.75
		C		0.000	0.000	11.140	0.000	0.15
T16	150.00-146.00	A	1.743	0.000	0.000	31.479	0.000	0.61
		B		0.000	0.000	41.781	0.000	0.75
		C		0.000	0.000	11.123	0.000	0.15
T17	146.00-142.00	A	1.738	0.000	0.000	31.434	0.000	0.61
		B		0.000	0.000	41.732	0.000	0.75
		C		0.000	0.000	11.105	0.000	0.15
T18	142.00-138.00	A	1.733	0.000	0.000	31.388	0.000	0.61
		B		0.000	0.000	41.683	0.000	0.75
		C		0.000	0.000	11.086	0.000	0.15
T19	138.00-134.00	A	1.728	0.000	0.000	31.341	0.000	0.61
		B		0.000	0.000	41.632	0.000	0.74
		C		0.000	0.000	11.068	0.000	0.15
T20	134.00-130.00	A	1.723	0.000	0.000	31.293	0.000	0.60
		B		0.000	0.000	41.580	0.000	0.74
		C		0.000	0.000	11.048	0.000	0.15
T21	130.00-126.00	A	1.718	0.000	0.000	31.243	0.000	0.60
		B		0.000	0.000	41.526	0.000	0.74
		C		0.000	0.000	11.028	0.000	0.15
T22	126.00-122.00	A	1.712	0.000	0.000	31.192	0.000	0.60
		B		0.000	0.000	41.471	0.000	0.74
		C		0.000	0.000	11.008	0.000	0.14
T23	122.00-102.00	A	1.695	0.000	0.000	155.148	0.000	2.98
		B		0.000	0.000	206.475	0.000	3.66
		C		0.000	0.000	62.477	0.000	0.82
T24	102.00-98.00	A	1.676	0.000	0.000	30.851	0.000	0.59
		B		0.000	0.000	41.101	0.000	0.72
		C		0.000	0.000	13.245	0.000	0.17
T25	98.00-94.00	A	1.669	0.000	0.000	30.787	0.000	0.59
		B		0.000	0.000	41.032	0.000	0.72
		C		0.000	0.000	13.213	0.000	0.17
T26	94.00-90.00	A	1.662	0.000	0.000	30.720	0.000	0.59
		B		0.000	0.000	40.960	0.000	0.72
		C		0.000	0.000	13.181	0.000	0.17
T27	90.00-86.00	A	1.655	0.000	0.000	30.651	0.000	0.59
		B		0.000	0.000	40.886	0.000	0.72
		C		0.000	0.000	13.147	0.000	0.17
T28	86.00-82.00	A	1.647	0.000	0.000	30.579	0.000	0.58
		B		0.000	0.000	40.808	0.000	0.71
		C		0.000	0.000	13.112	0.000	0.17
T29	82.00-78.00	A	1.639	0.000	0.000	30.504	0.000	0.58
		B		0.000	0.000	40.727	0.000	0.71
		C		0.000	0.000	13.076	0.000	0.17
T30	78.00-74.00	A	1.631	0.000	0.000	30.425	0.000	0.58

**tnxTower**

**Maser Consulting**  
 2000 Midlantic Drive, Suite 100  
 Mt. Laurel, NJ  
 Phone: 856 797-0412  
 FAX: 856 722-1120

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<i>Tower Section</i>	<i>Tower Elevation ft</i>	<i>Face or Leg</i>	<i>Ice Thickness in</i>	<i>A<sub>R</sub> ft<sup>2</sup></i>	<i>A<sub>F</sub> ft<sup>2</sup></i>	<i>C<sub>AA</sub> In Face ft<sup>2</sup></i>	<i>C<sub>AA</sub> Out Face ft<sup>2</sup></i>	<i>Weight K</i>
		B		0.000	0.000	40.642	0.000	0.71
		C		0.000	0.000	13.037	0.000	0.17
T31	74.00-70.00	A	1.622	0.000	0.000	30.343	0.000	0.58
		B		0.000	0.000	40.553	0.000	0.71
		C		0.000	0.000	12.997	0.000	0.17
T32	70.00-66.00	A	1.612	0.000	0.000	30.256	0.000	0.57
		B		0.000	0.000	40.459	0.000	0.70
		C		0.000	0.000	12.955	0.000	0.16
T33	66.00-62.00	A	1.603	0.000	0.000	30.165	0.000	0.57
		B		0.000	0.000	40.360	0.000	0.70
		C		0.000	0.000	12.911	0.000	0.16
T34	62.00-58.00	A	1.592	0.000	0.000	30.068	0.000	0.57
		B		0.000	0.000	40.256	0.000	0.70
		C		0.000	0.000	12.864	0.000	0.16
T35	58.00-54.00	A	1.581	0.000	0.000	30.686	0.000	0.57
		B		0.000	0.000	40.145	0.000	0.69
		C		0.000	0.000	12.814	0.000	0.16
T36	54.00-50.00	A	1.570	0.000	0.000	31.288	0.000	0.58
		B		0.000	0.000	40.027	0.000	0.69
		C		0.000	0.000	12.760	0.000	0.16
T37	50.00-46.00	A	1.557	0.000	0.000	31.161	0.000	0.57
		B		0.000	0.000	39.900	0.000	0.68
		C		0.000	0.000	12.703	0.000	0.16
T38	46.00-42.00	A	1.544	0.000	0.000	31.024	0.000	0.57
		B		0.000	0.000	39.764	0.000	0.68
		C		0.000	0.000	12.642	0.000	0.16
T39	42.00-38.00	A	1.529	0.000	0.000	30.875	0.000	0.57
		B		0.000	0.000	39.615	0.000	0.67
		C		0.000	0.000	12.575	0.000	0.15
T40	38.00-34.00	A	1.513	0.000	0.000	30.712	0.000	0.56
		B		0.000	0.000	39.453	0.000	0.67
		C		0.000	0.000	12.502	0.000	0.15
T41	34.00-30.00	A	1.495	0.000	0.000	30.532	0.000	0.56
		B		0.000	0.000	39.274	0.000	0.66
		C		0.000	0.000	12.421	0.000	0.15
T42	30.00-26.00	A	1.476	0.000	0.000	30.330	0.000	0.55
		B		0.000	0.000	39.073	0.000	0.66
		C		0.000	0.000	12.331	0.000	0.15
T43	26.00-22.00	A	1.453	0.000	0.000	30.101	0.000	0.55
		B		0.000	0.000	38.845	0.000	0.65
		C		0.000	0.000	12.228	0.000	0.14
T44	22.00-18.00	A	1.427	0.000	0.000	29.834	0.000	0.54
		B		0.000	0.000	38.579	0.000	0.64
		C		0.000	0.000	12.767	0.000	0.15
T45	18.00-14.00	A	1.395	0.000	0.000	29.514	0.000	0.53
		B		0.000	0.000	38.261	0.000	0.63
		C		0.000	0.000	13.257	0.000	0.15
T46	14.00-10.00	A	1.356	0.000	0.000	29.112	0.000	0.52
		B		0.000	0.000	37.861	0.000	0.62
		C		0.000	0.000	13.045	0.000	0.14
T47	10.00-6.00	A	1.302	0.000	0.000	14.282	0.000	0.25
		B		0.000	0.000	18.658	0.000	0.30
		C		0.000	0.000	6.378	0.000	0.07
T48	6.00-2.00	A	1.215	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00

<b>tnxTower</b>  <b>Maser Consulting</b> 2000 Midlantic Drive, Suite 100 Mt. Laurel, NJ Phone: 856 797-0412 FAX: 856 722-1120	<b>Job</b>	18946008A	<b>Page</b>	28 of 133
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**Feed Line Center of Pressure**

<i>Section</i>	<i>Elevation</i>	<i>CP<sub>x</sub></i>	<i>CP<sub>z</sub></i>	<i>CP<sub>x</sub></i>	<i>CP<sub>z</sub></i>
	<i>ft</i>	<i>in</i>	<i>in</i>	<i>Ice</i>	<i>Ice</i>
				<i>in</i>	<i>in</i>
T1	276.00-265.50	-1.1898	0.9144	-1.5035	1.0472
T2	265.50-261.75	-0.0691	0.7603	-0.7062	0.8260
T3	261.75-258.00	0.3854	0.5890	-0.2310	0.5277
T4	258.00-254.00	0.4519	0.6906	-0.3146	0.7198
T5	254.00-242.00	0.3634	0.8185	-0.3705	0.8716
T6	242.00-222.00	1.0522	-0.8109	0.0806	0.1288
T7	222.00-206.00	1.1802	-1.3090	0.2519	-0.1888
T8	206.00-202.00	1.2105	-1.8725	0.4084	-0.5823
T9	202.00-198.00	1.1380	-1.7604	0.3473	-0.4952
T10	198.00-194.00	1.2233	-1.8617	0.4560	-0.5723
T11	194.00-182.00	1.2360	-1.8510	0.5023	-0.5627
T12	182.00-162.00	1.2511	-1.8724	0.5156	-0.5780
T13	162.00-158.00	1.2136	-1.7957	0.5032	-0.5243
T14	158.00-154.00	1.2136	-1.7957	0.5040	-0.5256
T15	154.00-150.00	0.6337	-1.9374	0.1464	-0.8950
T16	150.00-146.00	0.2364	-2.0344	-0.1118	-1.1619
T17	146.00-142.00	0.2364	-2.0344	-0.1112	-1.1629
T18	142.00-138.00	0.2364	-2.0344	-0.1106	-1.1639
T19	138.00-134.00	0.2364	-2.0344	-0.1100	-1.1650
T20	134.00-130.00	0.2364	-2.0344	-0.1094	-1.1661
T21	130.00-126.00	0.2315	-1.9924	-0.1297	-1.1113
T22	126.00-122.00	0.2364	-2.0344	-0.1080	-1.1684
T23	122.00-102.00	0.2218	-1.9450	-0.1225	-1.0565
T24	102.00-98.00	0.2099	-1.8599	-0.1525	-0.9295
T25	98.00-94.00	0.2099	-1.8599	-0.1515	-0.9314
T26	94.00-90.00	0.2099	-1.8599	-0.1505	-0.9335
T27	90.00-86.00	0.2099	-1.8599	-0.1494	-0.9356
T28	86.00-82.00	0.2099	-1.8599	-0.1482	-0.9378
T29	82.00-78.00	0.2099	-1.8599	-0.1470	-0.9402
T30	78.00-74.00	0.2099	-1.8599	-0.1458	-0.9426
T31	74.00-70.00	0.2099	-1.8599	-0.1445	-0.9452
T32	70.00-66.00	0.2099	-1.8599	-0.1431	-0.9479
T33	66.00-62.00	0.2099	-1.8599	-0.1417	-0.9507
T34	62.00-58.00	0.2088	-1.8506	-0.1426	-0.9463
T35	58.00-54.00	0.1961	-1.8482	-0.1843	-0.9229
T36	54.00-50.00	0.1823	-1.8366	-0.2275	-0.8929
T37	50.00-46.00	0.1823	-1.8366	-0.2255	-0.8967
T38	46.00-42.00	0.1823	-1.8366	-0.2232	-0.9009
T39	42.00-38.00	0.1814	-1.8274	-0.2226	-0.8985
T40	38.00-34.00	0.1814	-1.8274	-0.2199	-0.9035
T41	34.00-30.00	0.1814	-1.8274	-0.2169	-0.9090
T42	30.00-26.00	0.1814	-1.8274	-0.2135	-0.9153
T43	26.00-22.00	0.1814	-1.8274	-0.2096	-0.9224
T44	22.00-18.00	0.1941	-1.8162	-0.1594	-0.8998
T45	18.00-14.00	0.2068	-1.8051	-0.1096	-0.8797
T46	14.00-10.00	0.2068	-1.8051	-0.1035	-0.8931
T47	10.00-6.00	0.1856	-1.6204	-0.0837	-0.8025
T48	6.00-2.00	0.0000	0.0000	0.0000	0.0000

**Shielding Factor Ka**

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<b>Client</b>	AT&T	<b>Designed by</b>	

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K<sub>a</sub> No Ice</i>	<i>K<sub>a</sub> Ice</i>
T1	15	Safety Line 3/8	265.50 - 276.00	0.6000	0.5292
T1	19	VXL6-50 (1-1/4 FOAM)	265.50 - 276.00	0.6000	0.5292
T1	21	Climbing Ladder	265.50 - 276.00	0.6000	0.5292
T2	1	EW63	261.75 - 264.00	0.6000	0.5433
T2	2	EW63	261.75 - 264.00	0.6000	0.5433
T2	15	Safety Line 3/8	261.75 - 265.50	0.6000	0.5433
T2	19	VXL6-50 (1-1/4 FOAM)	261.75 - 265.50	0.6000	0.5433
T2	21	Climbing Ladder	261.75 - 265.50	0.6000	0.5433
T3	1	EW63	258.00 - 261.75	0.6000	0.3908
T3	2	EW63	258.00 - 261.75	0.6000	0.3908
T3	15	Safety Line 3/8	258.00 - 261.75	0.6000	0.3908
T3	19	VXL6-50 (1-1/4 FOAM)	258.00 - 261.75	0.6000	0.3908
T3	21	Climbing Ladder	258.00 - 261.75	0.6000	0.3908
T4	1	EW63	254.00 - 258.00	0.6000	0.5557
T4	2	EW63	254.00 - 258.00	0.6000	0.5557
T4	15	Safety Line 3/8	254.00 - 258.00	0.6000	0.5557
T4	19	VXL6-50 (1-1/4 FOAM)	254.00 - 258.00	0.6000	0.5557
T4	21	Climbing Ladder	254.00 - 258.00	0.6000	0.5557
T5	1	EW63	242.00 - 254.00	0.6000	0.5565
T5	2	EW63	242.00 - 254.00	0.6000	0.5565
T5	3	LDF5-50A (7/8 FOAM)	242.00 - 254.00	0.6000	0.5565
T5	15	Safety Line 3/8	242.00 - 254.00	0.6000	0.5565
T5	19	VXL6-50 (1-1/4 FOAM)	242.00 - 254.00	0.6000	0.5565
T5	21	Climbing Ladder	242.00 - 254.00	0.6000	0.5565
T6	1	EW63	222.00 - 242.00	0.6000	0.5583
T6	2	EW63	222.00 - 242.00	0.6000	0.5583
T6	3	LDF5-50A (7/8 FOAM)	222.00 - 242.00	0.6000	0.5583
T6	5	LDF7-50A (1-5/8 FOAM)	222.00 - 236.00	0.6000	0.5583
T6	12	LDF2-50A (3/8 FOAM)	222.00 - 236.00	0.6000	0.5583
T6	15	Safety Line 3/8	222.00 - 242.00	0.6000	0.5583
T6	19	VXL6-50 (1-1/4 FOAM)	222.00 - 242.00	0.6000	0.5583



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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<sub>a</sub> No Ice</i>	<i>K<sub>a</sub> Ice</i>
T6	21	Climbing Ladder	222.00 - 242.00	0.6000	0.5583
T7	1	EW63	206.00 - 222.00	0.6000	0.5352
T7	2	EW63	206.00 - 222.00	0.6000	0.5352
T7	3	LDF5-50A (7/8 FOAM)	206.00 - 222.00	0.6000	0.5352
T7	5	LDF7-50A (1-5/8 FOAM)	206.00 - 222.00	0.6000	0.5352
T7	6	LDF7-50A (1-5/8 FOAM)	206.00 - 208.00	0.6000	0.5352
T7	7	LDF7-50A (1-5/8 FOAM)	206.00 - 208.00	0.6000	0.5352
T7	8	LDF7-50A (1-5/8 FOAM)	206.00 - 208.00	0.6000	0.5352
T7	9	LDF6-50A (1-1/4 FOAM)	206.00 - 208.00	0.6000	0.5352
T7	12	LDF2-50A (3/8 FOAM)	206.00 - 222.00	0.6000	0.5352
T7	15	Safety Line 3/8	206.00 - 222.00	0.6000	0.5352
T7	19	VXL6-50 (1-1/4 FOAM)	206.00 - 222.00	0.6000	0.5352
T7	21	Climbing Ladder	206.00 - 222.00	0.6000	0.5352
T8	1	EW63	202.00 - 206.00	0.6000	0.5367
T8	2	EW63	202.00 - 206.00	0.6000	0.5367
T8	3	LDF5-50A (7/8 FOAM)	202.00 - 206.00	0.6000	0.5367
T8	5	LDF7-50A (1-5/8 FOAM)	202.00 - 206.00	0.6000	0.5367
T8	6	LDF7-50A (1-5/8 FOAM)	202.00 - 206.00	0.6000	0.5367
T8	7	LDF7-50A (1-5/8 FOAM)	202.00 - 206.00	0.6000	0.5367
T8	8	LDF7-50A (1-5/8 FOAM)	202.00 - 206.00	0.6000	0.5367
T8	9	LDF6-50A (1-1/4 FOAM)	202.00 - 206.00	0.6000	0.5367
T8	12	LDF2-50A (3/8 FOAM)	202.00 - 206.00	0.6000	0.5367
T8	15	Safety Line 3/8	202.00 - 206.00	0.6000	0.5367
T8	19	VXL6-50 (1-1/4 FOAM)	202.00 - 206.00	0.6000	0.5367
T8	21	Climbing Ladder	202.00 - 206.00	0.6000	0.5367
T9	1	EW63	198.00 - 202.00	0.6000	0.3742
T9	2	EW63	198.00 - 202.00	0.6000	0.3742
T9	3	LDF5-50A (7/8 FOAM)	198.00 - 202.00	0.6000	0.3742
T9	5	LDF7-50A (1-5/8 FOAM)	198.00 - 202.00	0.6000	0.3742
T9	6	LDF7-50A (1-5/8 FOAM)	198.00 - 202.00	0.6000	0.3742
T9	7	LDF7-50A (1-5/8 FOAM)	198.00 - 202.00	0.6000	0.3742

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K<sub>a</sub> No Ice</i>	<i>K<sub>a</sub> Ice</i>
T9	8	LDF7-50A (1-5/8 FOAM)	198.00 - 202.00	0.6000	0.3742
T9	9	LDF6-50A (1-1/4 FOAM)	198.00 - 202.00	0.6000	0.3742
T9	12	LDF2-50A (3/8 FOAM)	198.00 - 202.00	0.6000	0.3742
T9	15	Safety Line 3/8	198.00 - 202.00	0.6000	0.3742
T9	19	VXL6-50 (1-1/4 FOAM)	198.00 - 202.00	0.6000	0.3742
T9	21	Climbing Ladder	198.00 - 202.00	0.6000	0.3742
T10	1	EW63	194.00 - 198.00	0.6000	0.5378
T10	2	EW63	194.00 - 198.00	0.6000	0.5378
T10	3	LDF5-50A (7/8 FOAM)	194.00 - 198.00	0.6000	0.5378
T10	5	LDF7-50A (1-5/8 FOAM)	194.00 - 198.00	0.6000	0.5378
T10	6	LDF7-50A (1-5/8 FOAM)	194.00 - 198.00	0.6000	0.5378
T10	7	LDF7-50A (1-5/8 FOAM)	194.00 - 198.00	0.6000	0.5378
T10	8	LDF7-50A (1-5/8 FOAM)	194.00 - 198.00	0.6000	0.5378
T10	9	LDF6-50A (1-1/4 FOAM)	194.00 - 198.00	0.6000	0.5378
T10	10	LDF4RN-50A (1/2 FOAM)	194.00 - 196.00	0.6000	0.5378
T10	12	LDF2-50A (3/8 FOAM)	194.00 - 198.00	0.6000	0.5378
T10	15	Safety Line 3/8	194.00 - 198.00	0.6000	0.5378
T10	19	VXL6-50 (1-1/4 FOAM)	194.00 - 198.00	0.6000	0.5378
T10	21	Climbing Ladder	194.00 - 198.00	0.6000	0.5378
T11	1	EW63	182.00 - 194.00	0.6000	0.5388
T11	2	EW63	182.00 - 194.00	0.6000	0.5388
T11	3	LDF5-50A (7/8 FOAM)	182.00 - 194.00	0.6000	0.5388
T11	5	LDF7-50A (1-5/8 FOAM)	182.00 - 194.00	0.6000	0.5388
T11	6	LDF7-50A (1-5/8 FOAM)	182.00 - 194.00	0.6000	0.5388
T11	7	LDF7-50A (1-5/8 FOAM)	182.00 - 194.00	0.6000	0.5388
T11	8	LDF7-50A (1-5/8 FOAM)	182.00 - 194.00	0.6000	0.5388
T11	9	LDF6-50A (1-1/4 FOAM)	182.00 - 194.00	0.6000	0.5388
T11	10	LDF4RN-50A (1/2 FOAM)	182.00 - 194.00	0.6000	0.5388
T11	12	LDF2-50A (3/8 FOAM)	182.00 - 194.00	0.6000	0.5388
T11	15	Safety Line 3/8	182.00 - 194.00	0.6000	0.5388
T11	19	VXL6-50 (1-1/4 FOAM)	182.00 - 194.00	0.6000	0.5388

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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<sub>a</sub> No Ice</i>	<i>K<sub>a</sub> Ice</i>
T11	21	Climbing Ladder	182.00 - 194.00	0.6000	0.5388
T12	1	EW63	162.00 - 182.00	0.6000	0.5538
T12	2	EW63	162.00 - 182.00	0.6000	0.5538
T12	3	LDF5-50A (7/8 FOAM)	162.00 - 182.00	0.6000	0.5538
T12	5	LDF7-50A (1-5/8 FOAM)	162.00 - 182.00	0.6000	0.5538
T12	6	LDF7-50A (1-5/8 FOAM)	162.00 - 182.00	0.6000	0.5538
T12	7	LDF7-50A (1-5/8 FOAM)	162.00 - 182.00	0.6000	0.5538
T12	8	LDF7-50A (1-5/8 FOAM)	162.00 - 182.00	0.6000	0.5538
T12	9	LDF6-50A (1-1/4 FOAM)	162.00 - 182.00	0.6000	0.5538
T12	10	LDF4RN-50A (1/2 FOAM)	162.00 - 182.00	0.6000	0.5538
T12	11	LDF4RN-50A (1/2 FOAM)	162.00 - 164.00	0.6000	0.5538
T12	12	LDF2-50A (3/8 FOAM)	162.00 - 182.00	0.6000	0.5538
T12	15	Safety Line 3/8	162.00 - 182.00	0.6000	0.5538
T12	19	VXL6-50 (1-1/4 FOAM)	162.00 - 182.00	0.6000	0.5538
T12	21	Climbing Ladder	162.00 - 182.00	0.6000	0.5538
T13	1	EW63	158.00 - 162.00	0.6000	0.5556
T13	2	EW63	158.00 - 162.00	0.6000	0.5556
T13	3	LDF5-50A (7/8 FOAM)	158.00 - 162.00	0.6000	0.5556
T13	4	LDF5-50A (7/8 FOAM)	158.00 - 162.00	0.6000	0.5556
T13	5	LDF7-50A (1-5/8 FOAM)	158.00 - 162.00	0.6000	0.5556
T13	6	LDF7-50A (1-5/8 FOAM)	158.00 - 162.00	0.6000	0.5556
T13	7	LDF7-50A (1-5/8 FOAM)	158.00 - 162.00	0.6000	0.5556
T13	8	LDF7-50A (1-5/8 FOAM)	158.00 - 162.00	0.6000	0.5556
T13	9	LDF6-50A (1-1/4 FOAM)	158.00 - 162.00	0.6000	0.5556
T13	10	LDF4RN-50A (1/2 FOAM)	158.00 - 162.00	0.6000	0.5556
T13	11	LDF4RN-50A (1/2 FOAM)	158.00 - 162.00	0.6000	0.5556
T13	12	LDF2-50A (3/8 FOAM)	158.00 - 162.00	0.6000	0.5556
T13	15	Safety Line 3/8	158.00 - 162.00	0.6000	0.5556
T13	19	VXL6-50 (1-1/4 FOAM)	158.00 - 162.00	0.6000	0.5556
T13	21	Climbing Ladder	158.00 - 162.00	0.6000	0.5556
T14	1	EW63	154.00 - 158.00	0.6000	0.5562

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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<sub>a</sub> No Ice</i>	<i>K<sub>a</sub> Ice</i>
T14	2	EW63	154.00 - 158.00	0.6000	0.5562
T14	3	LDF5-50A (7/8 FOAM)	154.00 - 158.00	0.6000	0.5562
T14	4	LDF5-50A (7/8 FOAM)	154.00 - 158.00	0.6000	0.5562
T14	5	LDF7-50A (1-5/8 FOAM)	154.00 - 158.00	0.6000	0.5562
T14	6	LDF7-50A (1-5/8 FOAM)	154.00 - 158.00	0.6000	0.5562
T14	7	LDF7-50A (1-5/8 FOAM)	154.00 - 158.00	0.6000	0.5562
T14	8	LDF7-50A (1-5/8 FOAM)	154.00 - 158.00	0.6000	0.5562
T14	9	LDF6-50A (1-1/4 FOAM)	154.00 - 158.00	0.6000	0.5562
T14	10	LDF4RN-50A (1/2 FOAM)	154.00 - 158.00	0.6000	0.5562
T14	11	LDF4RN-50A (1/2 FOAM)	154.00 - 158.00	0.6000	0.5562
T14	12	LDF2-50A (3/8 FOAM)	154.00 - 158.00	0.6000	0.5562
T14	15	Safety Line 3/8	154.00 - 158.00	0.6000	0.5562
T14	19	VXL6-50 (1-1/4 FOAM)	154.00 - 158.00	0.6000	0.5562
T14	21	Climbing Ladder	154.00 - 158.00	0.6000	0.5562
T15	1	EW63	150.00 - 154.00	0.6000	0.5569
T15	2	EW63	150.00 - 154.00	0.6000	0.5569
T15	3	LDF5-50A (7/8 FOAM)	150.00 - 154.00	0.6000	0.5569
T15	4	LDF5-50A (7/8 FOAM)	150.00 - 154.00	0.6000	0.5569
T15	5	LDF7-50A (1-5/8 FOAM)	150.00 - 154.00	0.6000	0.5569
T15	6	LDF7-50A (1-5/8 FOAM)	150.00 - 154.00	0.6000	0.5569
T15	7	LDF7-50A (1-5/8 FOAM)	150.00 - 154.00	0.6000	0.5569
T15	8	LDF7-50A (1-5/8 FOAM)	150.00 - 154.00	0.6000	0.5569
T15	9	LDF6-50A (1-1/4 FOAM)	150.00 - 154.00	0.6000	0.5569
T15	10	LDF4RN-50A (1/2 FOAM)	150.00 - 154.00	0.6000	0.5569
T15	11	LDF4RN-50A (1/2 FOAM)	150.00 - 154.00	0.6000	0.5569
T15	12	LDF2-50A (3/8 FOAM)	150.00 - 154.00	0.6000	0.5569
T15	15	Safety Line 3/8	150.00 - 154.00	0.6000	0.5569
T15	16	LDF7-50A (1-5/8 FOAM)	150.00 - 152.00	0.6000	0.5569
T15	17	1/2" 6C DC WIRE	150.00 - 152.00	0.6000	0.5569
T15	18	1/2" 6C DC WIRE	150.00 - 152.00	0.6000	0.5569
T15	19	VXL6-50 (1-1/4 FOAM)	150.00 - 154.00	0.6000	0.5569

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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<sub>a</sub> No Ice</i>	<i>K<sub>a</sub> Ice</i>
T15	21	Climbing Ladder	150.00 - 154.00	0.6000	0.5569
T15	22	1/2" Fiber Cable	150.00 - 152.00	0.6000	0.5569
T15	23	1/2" Fiber Cable	150.00 - 152.00	0.6000	0.5569
T15	24	2" Rigid Conduit	150.00 - 152.00	1.0000	1.0000
T16	1	EW63	146.00 - 150.00	0.6000	0.5576
T16	2	EW63	146.00 - 150.00	0.6000	0.5576
T16	3	LDF5-50A (7/8 FOAM)	146.00 - 150.00	0.6000	0.5576
T16	4	LDF5-50A (7/8 FOAM)	146.00 - 150.00	0.6000	0.5576
T16	5	LDF7-50A (1-5/8 FOAM)	146.00 - 150.00	0.6000	0.5576
T16	6	LDF7-50A (1-5/8 FOAM)	146.00 - 150.00	0.6000	0.5576
T16	7	LDF7-50A (1-5/8 FOAM)	146.00 - 150.00	0.6000	0.5576
T16	8	LDF7-50A (1-5/8 FOAM)	146.00 - 150.00	0.6000	0.5576
T16	9	LDF6-50A (1-1/4 FOAM)	146.00 - 150.00	0.6000	0.5576
T16	10	LDF4RN-50A (1/2 FOAM)	146.00 - 150.00	0.6000	0.5576
T16	11	LDF4RN-50A (1/2 FOAM)	146.00 - 150.00	0.6000	0.5576
T16	12	LDF2-50A (3/8 FOAM)	146.00 - 150.00	0.6000	0.5576
T16	15	Safety Line 3/8	146.00 - 150.00	0.6000	0.5576
T16	16	LDF7-50A (1-5/8 FOAM)	146.00 - 150.00	0.6000	0.5576
T16	17	1/2" 6C DC WIRE	146.00 - 150.00	0.6000	0.5576
T16	18	1/2" 6C DC WIRE	146.00 - 150.00	0.6000	0.5576
T16	19	VXL6-50 (1-1/4 FOAM)	146.00 - 150.00	0.6000	0.5576
T16	21	Climbing Ladder	146.00 - 150.00	0.6000	0.5576
T16	22	1/2" Fiber Cable	146.00 - 150.00	0.6000	0.5576
T16	23	1/2" Fiber Cable	146.00 - 150.00	0.6000	0.5576
T16	24	2" Rigid Conduit	146.00 - 150.00	1.0000	1.0000
T17	1	EW63	142.00 - 146.00	0.6000	0.5583
T17	2	EW63	142.00 - 146.00	0.6000	0.5583
T17	3	LDF5-50A (7/8 FOAM)	142.00 - 146.00	0.6000	0.5583
T17	4	LDF5-50A (7/8 FOAM)	142.00 - 146.00	0.6000	0.5583
T17	5	LDF7-50A (1-5/8 FOAM)	142.00 - 146.00	0.6000	0.5583
T17	6	LDF7-50A (1-5/8 FOAM)	142.00 - 146.00	0.6000	0.5583

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K<sub>a</sub> No Ice</i>	<i>K<sub>a</sub> Ice</i>
T17	7	LDF7-50A (1-5/8 FOAM)	142.00 - 146.00	0.6000	0.5583
T17	8	LDF7-50A (1-5/8 FOAM)	142.00 - 146.00	0.6000	0.5583
T17	9	LDF6-50A (1-1/4 FOAM)	142.00 - 146.00	0.6000	0.5583
T17	10	LDF4RN-50A (1/2 FOAM)	142.00 - 146.00	0.6000	0.5583
T17	11	LDF4RN-50A (1/2 FOAM)	142.00 - 146.00	0.6000	0.5583
T17	12	LDF2-50A (3/8 FOAM)	142.00 - 146.00	0.6000	0.5583
T17	15	Safety Line 3/8	142.00 - 146.00	0.6000	0.5583
T17	16	LDF7-50A (1-5/8 FOAM)	142.00 - 146.00	0.6000	0.5583
T17	17	1/2" 6C DC WIRE	142.00 - 146.00	0.6000	0.5583
T17	18	1/2" 6C DC WIRE	142.00 - 146.00	0.6000	0.5583
T17	19	VXL6-50 (1-1/4 FOAM)	142.00 - 146.00	0.6000	0.5583
T17	21	Climbing Ladder	142.00 - 146.00	0.6000	0.5583
T17	22	1/2" Fiber Cable	142.00 - 146.00	0.6000	0.5583
T17	23	1/2" Fiber Cable	142.00 - 146.00	0.6000	0.5583
T17	24	2" Rigid Conduit	142.00 - 146.00	1.0000	1.0000
T18	1	EW63	138.00 - 142.00	0.6000	0.5590
T18	2	EW63	138.00 - 142.00	0.6000	0.5590
T18	3	LDF5-50A (7/8 FOAM)	138.00 - 142.00	0.6000	0.5590
T18	4	LDF5-50A (7/8 FOAM)	138.00 - 142.00	0.6000	0.5590
T18	5	LDF7-50A (1-5/8 FOAM)	138.00 - 142.00	0.6000	0.5590
T18	6	LDF7-50A (1-5/8 FOAM)	138.00 - 142.00	0.6000	0.5590
T18	7	LDF7-50A (1-5/8 FOAM)	138.00 - 142.00	0.6000	0.5590
T18	8	LDF7-50A (1-5/8 FOAM)	138.00 - 142.00	0.6000	0.5590
T18	9	LDF6-50A (1-1/4 FOAM)	138.00 - 142.00	0.6000	0.5590
T18	10	LDF4RN-50A (1/2 FOAM)	138.00 - 142.00	0.6000	0.5590
T18	11	LDF4RN-50A (1/2 FOAM)	138.00 - 142.00	0.6000	0.5590
T18	12	LDF2-50A (3/8 FOAM)	138.00 - 142.00	0.6000	0.5590
T18	15	Safety Line 3/8	138.00 - 142.00	0.6000	0.5590
T18	16	LDF7-50A (1-5/8 FOAM)	138.00 - 142.00	0.6000	0.5590
T18	17	1/2" 6C DC WIRE	138.00 - 142.00	0.6000	0.5590
T18	18	1/2" 6C DC WIRE	138.00 - 142.00	0.6000	0.5590

**tnxTower**

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<b>Client</b>	AT&T	<b>Designed by</b>	

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K<sub>a</sub> No Ice</i>	<i>K<sub>a</sub> Ice</i>
T18	19	VXL6-50 (1-1/4 FOAM)	138.00 - 142.00	0.6000	0.5590
T18	21	Climbing Ladder	138.00 - 142.00	0.6000	0.5590
T18	22	1/2" Fiber Cable	138.00 - 142.00	0.6000	0.5590
T18	23	1/2" Fiber Cable	138.00 - 142.00	0.6000	0.5590
T18	24	2" Rigid Conduit	138.00 - 142.00	1.0000	1.0000
T19	1	EW63	134.00 - 138.00	0.6000	0.5597
T19	2	EW63	134.00 - 138.00	0.6000	0.5597
T19	3	LDF5-50A (7/8 FOAM)	134.00 - 138.00	0.6000	0.5597
T19	4	LDF5-50A (7/8 FOAM)	134.00 - 138.00	0.6000	0.5597
T19	5	LDF7-50A (1-5/8 FOAM)	134.00 - 138.00	0.6000	0.5597
T19	6	LDF7-50A (1-5/8 FOAM)	134.00 - 138.00	0.6000	0.5597
T19	7	LDF7-50A (1-5/8 FOAM)	134.00 - 138.00	0.6000	0.5597
T19	8	LDF7-50A (1-5/8 FOAM)	134.00 - 138.00	0.6000	0.5597
T19	9	LDF6-50A (1-1/4 FOAM)	134.00 - 138.00	0.6000	0.5597
T19	10	LDF4RN-50A (1/2 FOAM)	134.00 - 138.00	0.6000	0.5597
T19	11	LDF4RN-50A (1/2 FOAM)	134.00 - 138.00	0.6000	0.5597
T19	12	LDF2-50A (3/8 FOAM)	134.00 - 138.00	0.6000	0.5597
T19	15	Safety Line 3/8	134.00 - 138.00	0.6000	0.5597
T19	16	LDF7-50A (1-5/8 FOAM)	134.00 - 138.00	0.6000	0.5597
T19	17	1/2" 6C DC WIRE	134.00 - 138.00	0.6000	0.5597
T19	18	1/2" 6C DC WIRE	134.00 - 138.00	0.6000	0.5597
T19	19	VXL6-50 (1-1/4 FOAM)	134.00 - 138.00	0.6000	0.5597
T19	21	Climbing Ladder	134.00 - 138.00	0.6000	0.5597
T19	22	1/2" Fiber Cable	134.00 - 138.00	0.6000	0.5597
T19	23	1/2" Fiber Cable	134.00 - 138.00	0.6000	0.5597
T19	24	2" Rigid Conduit	134.00 - 138.00	1.0000	1.0000
T20	1	EW63	130.00 - 134.00	0.6000	0.5604
T20	2	EW63	130.00 - 134.00	0.6000	0.5604
T20	3	LDF5-50A (7/8 FOAM)	130.00 - 134.00	0.6000	0.5604
T20	4	LDF5-50A (7/8 FOAM)	130.00 - 134.00	0.6000	0.5604
T20	5	LDF7-50A (1-5/8 FOAM)	130.00 - 134.00	0.6000	0.5604

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<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
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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<sub>a</sub> No Ice</i>	<i>K<sub>a</sub> Ice</i>
T20	6	LDF7-50A (1-5/8 FOAM)	130.00 - 134.00	0.6000	0.5604
T20	7	LDF7-50A (1-5/8 FOAM)	130.00 - 134.00	0.6000	0.5604
T20	8	LDF7-50A (1-5/8 FOAM)	130.00 - 134.00	0.6000	0.5604
T20	9	LDF6-50A (1-1/4 FOAM)	130.00 - 134.00	0.6000	0.5604
T20	10	LDF4RN-50A (1/2 FOAM)	130.00 - 134.00	0.6000	0.5604
T20	11	LDF4RN-50A (1/2 FOAM)	130.00 - 134.00	0.6000	0.5604
T20	12	LDF2-50A (3/8 FOAM)	130.00 - 134.00	0.6000	0.5604
T20	15	Safety Line 3/8	130.00 - 134.00	0.6000	0.5604
T20	16	LDF7-50A (1-5/8 FOAM)	130.00 - 134.00	0.6000	0.5604
T20	17	1/2" 6C DC WIRE	130.00 - 134.00	0.6000	0.5604
T20	18	1/2" 6C DC WIRE	130.00 - 134.00	0.6000	0.5604
T20	19	VXL6-50 (1-1/4 FOAM)	130.00 - 134.00	0.6000	0.5604
T20	21	Climbing Ladder	130.00 - 134.00	0.6000	0.5604
T20	22	1/2" Fiber Cable	130.00 - 134.00	0.6000	0.5604
T20	23	1/2" Fiber Cable	130.00 - 134.00	0.6000	0.5604
T20	24	2" Rigid Conduit	130.00 - 134.00	1.0000	1.0000
T21	1	EW63	126.00 - 130.00	0.6000	0.4637
T21	2	EW63	126.00 - 130.00	0.6000	0.4637
T21	3	LDF5-50A (7/8 FOAM)	126.00 - 130.00	0.6000	0.4637
T21	4	LDF5-50A (7/8 FOAM)	126.00 - 130.00	0.6000	0.4637
T21	5	LDF7-50A (1-5/8 FOAM)	126.00 - 130.00	0.6000	0.4637
T21	6	LDF7-50A (1-5/8 FOAM)	126.00 - 130.00	0.6000	0.4637
T21	7	LDF7-50A (1-5/8 FOAM)	126.00 - 130.00	0.6000	0.4637
T21	8	LDF7-50A (1-5/8 FOAM)	126.00 - 130.00	0.6000	0.4637
T21	9	LDF6-50A (1-1/4 FOAM)	126.00 - 130.00	0.6000	0.4637
T21	10	LDF4RN-50A (1/2 FOAM)	126.00 - 130.00	0.6000	0.4637
T21	11	LDF4RN-50A (1/2 FOAM)	126.00 - 130.00	0.6000	0.4637
T21	12	LDF2-50A (3/8 FOAM)	126.00 - 130.00	0.6000	0.4637
T21	15	Safety Line 3/8	126.00 - 130.00	0.6000	0.4637
T21	16	LDF7-50A (1-5/8 FOAM)	126.00 - 130.00	0.6000	0.4637
T21	17	1/2" 6C DC WIRE	126.00 - 130.00	0.6000	0.4637



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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<sub>a</sub> No Ice</i>	<i>K<sub>a</sub> Ice</i>
T21	18	1/2" 6C DC WIRE	126.00 - 130.00	0.6000	0.4637
T21	19	VXL6-50 (1-1/4 FOAM)	126.00 - 130.00	0.6000	0.4637
T21	21	Climbing Ladder	126.00 - 130.00	0.6000	0.4637
T21	22	1/2" Fiber Cable	126.00 - 130.00	0.6000	0.4637
T21	23	1/2" Fiber Cable	126.00 - 130.00	0.6000	0.4637
T21	24	2" Rigid Conduit	126.00 - 130.00	1.0000	1.0000
T22	1	EW63	122.00 - 126.00	0.6000	0.5620
T22	2	EW63	122.00 - 126.00	0.6000	0.5620
T22	3	LDF5-50A (7/8 FOAM)	122.00 - 126.00	0.6000	0.5620
T22	4	LDF5-50A (7/8 FOAM)	122.00 - 126.00	0.6000	0.5620
T22	5	LDF7-50A (1-5/8 FOAM)	122.00 - 126.00	0.6000	0.5620
T22	6	LDF7-50A (1-5/8 FOAM)	122.00 - 126.00	0.6000	0.5620
T22	7	LDF7-50A (1-5/8 FOAM)	122.00 - 126.00	0.6000	0.5620
T22	8	LDF7-50A (1-5/8 FOAM)	122.00 - 126.00	0.6000	0.5620
T22	9	LDF6-50A (1-1/4 FOAM)	122.00 - 126.00	0.6000	0.5620
T22	10	LDF4RN-50A (1/2 FOAM)	122.00 - 126.00	0.6000	0.5620
T22	11	LDF4RN-50A (1/2 FOAM)	122.00 - 126.00	0.6000	0.5620
T22	12	LDF2-50A (3/8 FOAM)	122.00 - 126.00	0.6000	0.5620
T22	15	Safety Line 3/8	122.00 - 126.00	0.6000	0.5620
T22	16	LDF7-50A (1-5/8 FOAM)	122.00 - 126.00	0.6000	0.5620
T22	17	1/2" 6C DC WIRE	122.00 - 126.00	0.6000	0.5620
T22	18	1/2" 6C DC WIRE	122.00 - 126.00	0.6000	0.5620
T22	19	VXL6-50 (1-1/4 FOAM)	122.00 - 126.00	0.6000	0.5620
T22	21	Climbing Ladder	122.00 - 126.00	0.6000	0.5620
T22	22	1/2" Fiber Cable	122.00 - 126.00	0.6000	0.5620
T22	23	1/2" Fiber Cable	122.00 - 126.00	0.6000	0.5620
T22	24	2" Rigid Conduit	122.00 - 126.00	1.0000	1.0000
T23	1	EW63	102.00 - 122.00	0.6000	0.5645
T23	2	EW63	102.00 - 122.00	0.6000	0.5645
T23	3	LDF5-50A (7/8 FOAM)	102.00 - 122.00	0.6000	0.5645
T23	4	LDF5-50A (7/8 FOAM)	102.00 - 122.00	0.6000	0.5645

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	$K_a$ No Ice	$K_a$ Ice
T23	5	LDF7-50A (1-5/8 FOAM)	102.00 - 122.00	0.6000	0.5645
T23	6	LDF7-50A (1-5/8 FOAM)	102.00 - 122.00	0.6000	0.5645
T23	7	LDF7-50A (1-5/8 FOAM)	102.00 - 122.00	0.6000	0.5645
T23	8	LDF7-50A (1-5/8 FOAM)	102.00 - 122.00	0.6000	0.5645
T23	9	LDF6-50A (1-1/4 FOAM)	102.00 - 122.00	0.6000	0.5645
T23	10	LDF4RN-50A (1/2 FOAM)	102.00 - 122.00	0.6000	0.5645
T23	11	LDF4RN-50A (1/2 FOAM)	102.00 - 122.00	0.6000	0.5645
T23	12	LDF2-50A (3/8 FOAM)	102.00 - 122.00	0.6000	0.5645
T23	15	Safety Line 3/8	102.00 - 122.00	0.6000	0.5645
T23	16	LDF7-50A (1-5/8 FOAM)	102.00 - 122.00	0.6000	0.5645
T23	17	1/2" 6C DC WIRE	102.00 - 122.00	0.6000	0.5645
T23	18	1/2" 6C DC WIRE	102.00 - 122.00	0.6000	0.5645
T23	19	VXL6-50 (1-1/4 FOAM)	102.00 - 122.00	0.6000	0.5645
T23	20	VXL6-50 (1-1/4 FOAM)	102.00 - 115.00	0.6000	0.5645
T23	21	Climbing Ladder	102.00 - 122.00	0.6000	0.5645
T23	22	1/2" Fiber Cable	102.00 - 122.00	0.6000	0.5645
T23	23	1/2" Fiber Cable	102.00 - 122.00	0.6000	0.5645
T23	24	2" Rigid Conduit	102.00 - 122.00	1.0000	1.0000
T24	1	EW63	98.00 - 102.00	0.6000	0.4712
T24	2	EW63	98.00 - 102.00	0.6000	0.4712
T24	3	LDF5-50A (7/8 FOAM)	98.00 - 102.00	0.6000	0.4712
T24	4	LDF5-50A (7/8 FOAM)	98.00 - 102.00	0.6000	0.4712
T24	5	LDF7-50A (1-5/8 FOAM)	98.00 - 102.00	0.6000	0.4712
T24	6	LDF7-50A (1-5/8 FOAM)	98.00 - 102.00	0.6000	0.4712
T24	7	LDF7-50A (1-5/8 FOAM)	98.00 - 102.00	0.6000	0.4712
T24	8	LDF7-50A (1-5/8 FOAM)	98.00 - 102.00	0.6000	0.4712
T24	9	LDF6-50A (1-1/4 FOAM)	98.00 - 102.00	0.6000	0.4712
T24	10	LDF4RN-50A (1/2 FOAM)	98.00 - 102.00	0.6000	0.4712
T24	11	LDF4RN-50A (1/2 FOAM)	98.00 - 102.00	0.6000	0.4712
T24	12	LDF2-50A (3/8 FOAM)	98.00 - 102.00	0.6000	0.4712
T24	15	Safety Line 3/8	98.00 - 102.00	0.6000	0.4712
T24	16	LDF7-50A (1-5/8 FOAM)	98.00 - 102.00	0.6000	0.4712
T24	17	1/2" 6C DC WIRE	98.00 - 102.00	0.6000	0.4712
T24	18	1/2" 6C DC WIRE	98.00 - 102.00	0.6000	0.4712
T24	19	VXL6-50 (1-1/4 FOAM)	98.00 - 102.00	0.6000	0.4712
T24	20	VXL6-50 (1-1/4 FOAM)	98.00 - 102.00	0.6000	0.4712
T24	21	Climbing Ladder	98.00 - 102.00	0.6000	0.4712
T24	22	1/2" Fiber Cable	98.00 - 102.00	0.6000	0.4712
T24	23	1/2" Fiber Cable	98.00 - 102.00	0.6000	0.4712
T24	24	2" Rigid Conduit	98.00 - 102.00	1.0000	1.0000
T25	1	EW63	94.00 - 98.00	0.6000	0.4724
T25	2	EW63	94.00 - 98.00	0.6000	0.4724
T25	3	LDF5-50A (7/8 FOAM)	94.00 - 98.00	0.6000	0.4724
T25	4	LDF5-50A (7/8 FOAM)	94.00 - 98.00	0.6000	0.4724

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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<sub>a</sub> No Ice</i>	<i>K<sub>a</sub> Ice</i>
T25	5	LDF7-50A (1-5/8 FOAM)	94.00 - 98.00	0.6000	0.4724
T25	6	LDF7-50A (1-5/8 FOAM)	94.00 - 98.00	0.6000	0.4724
T25	7	LDF7-50A (1-5/8 FOAM)	94.00 - 98.00	0.6000	0.4724
T25	8	LDF7-50A (1-5/8 FOAM)	94.00 - 98.00	0.6000	0.4724
T25	9	LDF6-50A (1-1/4 FOAM)	94.00 - 98.00	0.6000	0.4724
T25	10	LDF4RN-50A (1/2 FOAM)	94.00 - 98.00	0.6000	0.4724
T25	11	LDF4RN-50A (1/2 FOAM)	94.00 - 98.00	0.6000	0.4724
T25	12	LDF2-50A (3/8 FOAM)	94.00 - 98.00	0.6000	0.4724
T25	15	Safety Line 3/8	94.00 - 98.00	0.6000	0.4724
T25	16	LDF7-50A (1-5/8 FOAM)	94.00 - 98.00	0.6000	0.4724
T25	17	1/2" 6C DC WIRE	94.00 - 98.00	0.6000	0.4724
T25	18	1/2" 6C DC WIRE	94.00 - 98.00	0.6000	0.4724
T25	19	VXL6-50 (1-1/4 FOAM)	94.00 - 98.00	0.6000	0.4724
T25	20	VXL6-50 (1-1/4 FOAM)	94.00 - 98.00	0.6000	0.4724
T25	21	Climbing Ladder	94.00 - 98.00	0.6000	0.4724
T25	22	1/2" Fiber Cable	94.00 - 98.00	0.6000	0.4724
T25	23	1/2" Fiber Cable	94.00 - 98.00	0.6000	0.4724
T25	24	2" Rigid Conduit	94.00 - 98.00	1.0000	1.0000
T26	1	EW63	90.00 - 94.00	0.6000	0.4736
T26	2	EW63	90.00 - 94.00	0.6000	0.4736
T26	3	LDF5-50A (7/8 FOAM)	90.00 - 94.00	0.6000	0.4736
T26	4	LDF5-50A (7/8 FOAM)	90.00 - 94.00	0.6000	0.4736
T26	5	LDF7-50A (1-5/8 FOAM)	90.00 - 94.00	0.6000	0.4736
T26	6	LDF7-50A (1-5/8 FOAM)	90.00 - 94.00	0.6000	0.4736
T26	7	LDF7-50A (1-5/8 FOAM)	90.00 - 94.00	0.6000	0.4736
T26	8	LDF7-50A (1-5/8 FOAM)	90.00 - 94.00	0.6000	0.4736
T26	9	LDF6-50A (1-1/4 FOAM)	90.00 - 94.00	0.6000	0.4736
T26	10	LDF4RN-50A (1/2 FOAM)	90.00 - 94.00	0.6000	0.4736
T26	11	LDF4RN-50A (1/2 FOAM)	90.00 - 94.00	0.6000	0.4736
T26	12	LDF2-50A (3/8 FOAM)	90.00 - 94.00	0.6000	0.4736
T26	15	Safety Line 3/8	90.00 - 94.00	0.6000	0.4736
T26	16	LDF7-50A (1-5/8 FOAM)	90.00 - 94.00	0.6000	0.4736
T26	17	1/2" 6C DC WIRE	90.00 - 94.00	0.6000	0.4736
T26	18	1/2" 6C DC WIRE	90.00 - 94.00	0.6000	0.4736
T26	19	VXL6-50 (1-1/4 FOAM)	90.00 - 94.00	0.6000	0.4736
T26	20	VXL6-50 (1-1/4 FOAM)	90.00 - 94.00	0.6000	0.4736
T26	21	Climbing Ladder	90.00 - 94.00	0.6000	0.4736
T26	22	1/2" Fiber Cable	90.00 - 94.00	0.6000	0.4736
T26	23	1/2" Fiber Cable	90.00 - 94.00	0.6000	0.4736
T26	24	2" Rigid Conduit	90.00 - 94.00	1.0000	1.0000
T27	1	EW63	86.00 - 90.00	0.6000	0.4750
T27	2	EW63	86.00 - 90.00	0.6000	0.4750
T27	3	LDF5-50A (7/8 FOAM)	86.00 - 90.00	0.6000	0.4750
T27	4	LDF5-50A (7/8 FOAM)	86.00 - 90.00	0.6000	0.4750
T27	5	LDF7-50A (1-5/8 FOAM)	86.00 - 90.00	0.6000	0.4750
T27	6	LDF7-50A (1-5/8 FOAM)	86.00 - 90.00	0.6000	0.4750
T27	7	LDF7-50A (1-5/8 FOAM)	86.00 - 90.00	0.6000	0.4750
T27	8	LDF7-50A (1-5/8 FOAM)	86.00 - 90.00	0.6000	0.4750
T27	9	LDF6-50A (1-1/4 FOAM)	86.00 - 90.00	0.6000	0.4750
T27	10	LDF4RN-50A (1/2 FOAM)	86.00 - 90.00	0.6000	0.4750
T27	11	LDF4RN-50A (1/2 FOAM)	86.00 - 90.00	0.6000	0.4750
T27	12	LDF2-50A (3/8 FOAM)	86.00 - 90.00	0.6000	0.4750
T27	15	Safety Line 3/8	86.00 - 90.00	0.6000	0.4750
T27	16	LDF7-50A (1-5/8 FOAM)	86.00 - 90.00	0.6000	0.4750
T27	17	1/2" 6C DC WIRE	86.00 - 90.00	0.6000	0.4750
T27	18	1/2" 6C DC WIRE	86.00 - 90.00	0.6000	0.4750
T27	19	VXL6-50 (1-1/4 FOAM)	86.00 - 90.00	0.6000	0.4750
T27	20	VXL6-50 (1-1/4 FOAM)	86.00 - 90.00	0.6000	0.4750
T27	21	Climbing Ladder	86.00 - 90.00	0.6000	0.4750
T27	22	1/2" Fiber Cable	86.00 - 90.00	0.6000	0.4750
T27	23	1/2" Fiber Cable	86.00 - 90.00	0.6000	0.4750
T27	24	2" Rigid Conduit	86.00 - 90.00	1.0000	1.0000

# tnxTower

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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<sub>a</sub> No Ice</i>	<i>K<sub>a</sub> Ice</i>
T28	1	EW63	82.00 - 86.00	0.6000	0.4763
T28	2	EW63	82.00 - 86.00	0.6000	0.4763
T28	3	LDF5-50A (7/8 FOAM)	82.00 - 86.00	0.6000	0.4763
T28	4	LDF5-50A (7/8 FOAM)	82.00 - 86.00	0.6000	0.4763
T28	5	LDF7-50A (1-5/8 FOAM)	82.00 - 86.00	0.6000	0.4763
T28	6	LDF7-50A (1-5/8 FOAM)	82.00 - 86.00	0.6000	0.4763
T28	7	LDF7-50A (1-5/8 FOAM)	82.00 - 86.00	0.6000	0.4763
T28	8	LDF7-50A (1-5/8 FOAM)	82.00 - 86.00	0.6000	0.4763
T28	9	LDF6-50A (1-1/4 FOAM)	82.00 - 86.00	0.6000	0.4763
T28	10	LDF4RN-50A (1/2 FOAM)	82.00 - 86.00	0.6000	0.4763
T28	11	LDF4RN-50A (1/2 FOAM)	82.00 - 86.00	0.6000	0.4763
T28	12	LDF2-50A (3/8 FOAM)	82.00 - 86.00	0.6000	0.4763
T28	15	Safety Line 3/8	82.00 - 86.00	0.6000	0.4763
T28	16	LDF7-50A (1-5/8 FOAM)	82.00 - 86.00	0.6000	0.4763
T28	17	1/2" 6C DC WIRE	82.00 - 86.00	0.6000	0.4763
T28	18	1/2" 6C DC WIRE	82.00 - 86.00	0.6000	0.4763
T28	19	VXL6-50 (1-1/4 FOAM)	82.00 - 86.00	0.6000	0.4763
T28	20	VXL6-50 (1-1/4 FOAM)	82.00 - 86.00	0.6000	0.4763
T28	21	Climbing Ladder	82.00 - 86.00	0.6000	0.4763
T28	22	1/2" Fiber Cable	82.00 - 86.00	0.6000	0.4763
T28	23	1/2" Fiber Cable	82.00 - 86.00	0.6000	0.4763
T28	24	2" Rigid Conduit	82.00 - 86.00	1.0000	1.0000
T29	1	EW63	78.00 - 82.00	0.6000	0.4778
T29	2	EW63	78.00 - 82.00	0.6000	0.4778
T29	3	LDF5-50A (7/8 FOAM)	78.00 - 82.00	0.6000	0.4778
T29	4	LDF5-50A (7/8 FOAM)	78.00 - 82.00	0.6000	0.4778
T29	5	LDF7-50A (1-5/8 FOAM)	78.00 - 82.00	0.6000	0.4778
T29	6	LDF7-50A (1-5/8 FOAM)	78.00 - 82.00	0.6000	0.4778
T29	7	LDF7-50A (1-5/8 FOAM)	78.00 - 82.00	0.6000	0.4778
T29	8	LDF7-50A (1-5/8 FOAM)	78.00 - 82.00	0.6000	0.4778
T29	9	LDF6-50A (1-1/4 FOAM)	78.00 - 82.00	0.6000	0.4778
T29	10	LDF4RN-50A (1/2 FOAM)	78.00 - 82.00	0.6000	0.4778
T29	11	LDF4RN-50A (1/2 FOAM)	78.00 - 82.00	0.6000	0.4778
T29	12	LDF2-50A (3/8 FOAM)	78.00 - 82.00	0.6000	0.4778
T29	15	Safety Line 3/8	78.00 - 82.00	0.6000	0.4778
T29	16	LDF7-50A (1-5/8 FOAM)	78.00 - 82.00	0.6000	0.4778
T29	17	1/2" 6C DC WIRE	78.00 - 82.00	0.6000	0.4778
T29	18	1/2" 6C DC WIRE	78.00 - 82.00	0.6000	0.4778
T29	19	VXL6-50 (1-1/4 FOAM)	78.00 - 82.00	0.6000	0.4778
T29	20	VXL6-50 (1-1/4 FOAM)	78.00 - 82.00	0.6000	0.4778
T29	21	Climbing Ladder	78.00 - 82.00	0.6000	0.4778
T29	22	1/2" Fiber Cable	78.00 - 82.00	0.6000	0.4778
T29	23	1/2" Fiber Cable	78.00 - 82.00	0.6000	0.4778
T29	24	2" Rigid Conduit	78.00 - 82.00	1.0000	1.0000
T30	1	EW63	74.00 - 78.00	0.6000	0.4792
T30	2	EW63	74.00 - 78.00	0.6000	0.4792
T30	3	LDF5-50A (7/8 FOAM)	74.00 - 78.00	0.6000	0.4792
T30	4	LDF5-50A (7/8 FOAM)	74.00 - 78.00	0.6000	0.4792
T30	5	LDF7-50A (1-5/8 FOAM)	74.00 - 78.00	0.6000	0.4792
T30	6	LDF7-50A (1-5/8 FOAM)	74.00 - 78.00	0.6000	0.4792
T30	7	LDF7-50A (1-5/8 FOAM)	74.00 - 78.00	0.6000	0.4792
T30	8	LDF7-50A (1-5/8 FOAM)	74.00 - 78.00	0.6000	0.4792
T30	9	LDF6-50A (1-1/4 FOAM)	74.00 - 78.00	0.6000	0.4792
T30	10	LDF4RN-50A (1/2 FOAM)	74.00 - 78.00	0.6000	0.4792
T30	11	LDF4RN-50A (1/2 FOAM)	74.00 - 78.00	0.6000	0.4792
T30	12	LDF2-50A (3/8 FOAM)	74.00 - 78.00	0.6000	0.4792
T30	15	Safety Line 3/8	74.00 - 78.00	0.6000	0.4792
T30	16	LDF7-50A (1-5/8 FOAM)	74.00 - 78.00	0.6000	0.4792
T30	17	1/2" 6C DC WIRE	74.00 - 78.00	0.6000	0.4792
T30	18	1/2" 6C DC WIRE	74.00 - 78.00	0.6000	0.4792
T30	19	VXL6-50 (1-1/4 FOAM)	74.00 - 78.00	0.6000	0.4792
T30	20	VXL6-50 (1-1/4 FOAM)	74.00 - 78.00	0.6000	0.4792

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<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
<b>Client</b>	AT&T	<b>Designed by</b>	

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K<sub>a</sub> No Ice</i>	<i>K<sub>a</sub> Ice</i>
T30	21	Climbing Ladder	74.00 - 78.00	0.6000	0.4792
T30	22	1/2" Fiber Cable	74.00 - 78.00	0.6000	0.4792
T30	23	1/2" Fiber Cable	74.00 - 78.00	0.6000	0.4792
T30	24	2" Rigid Conduit	74.00 - 78.00	1.0000	1.0000
T31	1	EW63	70.00 - 74.00	0.6000	0.4808
T31	2	EW63	70.00 - 74.00	0.6000	0.4808
T31	3	LDF5-50A (7/8 FOAM)	70.00 - 74.00	0.6000	0.4808
T31	4	LDF5-50A (7/8 FOAM)	70.00 - 74.00	0.6000	0.4808
T31	5	LDF7-50A (1-5/8 FOAM)	70.00 - 74.00	0.6000	0.4808
T31	6	LDF7-50A (1-5/8 FOAM)	70.00 - 74.00	0.6000	0.4808
T31	7	LDF7-50A (1-5/8 FOAM)	70.00 - 74.00	0.6000	0.4808
T31	8	LDF7-50A (1-5/8 FOAM)	70.00 - 74.00	0.6000	0.4808
T31	9	LDF6-50A (1-1/4 FOAM)	70.00 - 74.00	0.6000	0.4808
T31	10	LDF4RN-50A (1/2 FOAM)	70.00 - 74.00	0.6000	0.4808
T31	11	LDF4RN-50A (1/2 FOAM)	70.00 - 74.00	0.6000	0.4808
T31	12	LDF2-50A (3/8 FOAM)	70.00 - 74.00	0.6000	0.4808
T31	15	Safety Line 3/8	70.00 - 74.00	0.6000	0.4808
T31	16	LDF7-50A (1-5/8 FOAM)	70.00 - 74.00	0.6000	0.4808
T31	17	1/2" 6C DC WIRE	70.00 - 74.00	0.6000	0.4808
T31	18	1/2" 6C DC WIRE	70.00 - 74.00	0.6000	0.4808
T31	19	VXL6-50 (1-1/4 FOAM)	70.00 - 74.00	0.6000	0.4808
T31	20	VXL6-50 (1-1/4 FOAM)	70.00 - 74.00	0.6000	0.4808
T31	21	Climbing Ladder	70.00 - 74.00	0.6000	0.4808
T31	22	1/2" Fiber Cable	70.00 - 74.00	0.6000	0.4808
T31	23	1/2" Fiber Cable	70.00 - 74.00	0.6000	0.4808
T31	24	2" Rigid Conduit	70.00 - 74.00	1.0000	1.0000
T32	1	EW63	66.00 - 70.00	0.6000	0.4825
T32	2	EW63	66.00 - 70.00	0.6000	0.4825
T32	3	LDF5-50A (7/8 FOAM)	66.00 - 70.00	0.6000	0.4825
T32	4	LDF5-50A (7/8 FOAM)	66.00 - 70.00	0.6000	0.4825
T32	5	LDF7-50A (1-5/8 FOAM)	66.00 - 70.00	0.6000	0.4825
T32	6	LDF7-50A (1-5/8 FOAM)	66.00 - 70.00	0.6000	0.4825
T32	7	LDF7-50A (1-5/8 FOAM)	66.00 - 70.00	0.6000	0.4825
T32	8	LDF7-50A (1-5/8 FOAM)	66.00 - 70.00	0.6000	0.4825
T32	9	LDF6-50A (1-1/4 FOAM)	66.00 - 70.00	0.6000	0.4825
T32	10	LDF4RN-50A (1/2 FOAM)	66.00 - 70.00	0.6000	0.4825
T32	11	LDF4RN-50A (1/2 FOAM)	66.00 - 70.00	0.6000	0.4825
T32	12	LDF2-50A (3/8 FOAM)	66.00 - 70.00	0.6000	0.4825
T32	15	Safety Line 3/8	66.00 - 70.00	0.6000	0.4825
T32	16	LDF7-50A (1-5/8 FOAM)	66.00 - 70.00	0.6000	0.4825
T32	17	1/2" 6C DC WIRE	66.00 - 70.00	0.6000	0.4825
T32	18	1/2" 6C DC WIRE	66.00 - 70.00	0.6000	0.4825
T32	19	VXL6-50 (1-1/4 FOAM)	66.00 - 70.00	0.6000	0.4825
T32	20	VXL6-50 (1-1/4 FOAM)	66.00 - 70.00	0.6000	0.4825
T32	21	Climbing Ladder	66.00 - 70.00	0.6000	0.4825
T32	22	1/2" Fiber Cable	66.00 - 70.00	0.6000	0.4825
T32	23	1/2" Fiber Cable	66.00 - 70.00	0.6000	0.4825
T32	24	2" Rigid Conduit	66.00 - 70.00	1.0000	1.0000
T33	1	EW63	62.00 - 66.00	0.6000	0.4842
T33	2	EW63	62.00 - 66.00	0.6000	0.4842
T33	3	LDF5-50A (7/8 FOAM)	62.00 - 66.00	0.6000	0.4842
T33	4	LDF5-50A (7/8 FOAM)	62.00 - 66.00	0.6000	0.4842
T33	5	LDF7-50A (1-5/8 FOAM)	62.00 - 66.00	0.6000	0.4842
T33	6	LDF7-50A (1-5/8 FOAM)	62.00 - 66.00	0.6000	0.4842
T33	7	LDF7-50A (1-5/8 FOAM)	62.00 - 66.00	0.6000	0.4842
T33	8	LDF7-50A (1-5/8 FOAM)	62.00 - 66.00	0.6000	0.4842
T33	9	LDF6-50A (1-1/4 FOAM)	62.00 - 66.00	0.6000	0.4842
T33	10	LDF4RN-50A (1/2 FOAM)	62.00 - 66.00	0.6000	0.4842
T33	11	LDF4RN-50A (1/2 FOAM)	62.00 - 66.00	0.6000	0.4842
T33	12	LDF2-50A (3/8 FOAM)	62.00 - 66.00	0.6000	0.4842
T33	15	Safety Line 3/8	62.00 - 66.00	0.6000	0.4842
T33	16	LDF7-50A (1-5/8 FOAM)	62.00 - 66.00	0.6000	0.4842

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<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
<b>Client</b>	AT&T	<b>Designed by</b>	

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K<sub>a</sub> No Ice</i>	<i>K<sub>a</sub> Ice</i>
T33	17	1/2" 6C DC WIRE	62.00 - 66.00	0.6000	0.4842
T33	18	1/2" 6C DC WIRE	62.00 - 66.00	0.6000	0.4842
T33	19	VXL6-50 (1-1/4 FOAM)	62.00 - 66.00	0.6000	0.4842
T33	20	VXL6-50 (1-1/4 FOAM)	62.00 - 66.00	0.6000	0.4842
T33	21	Climbing Ladder	62.00 - 66.00	0.6000	0.4842
T33	22	1/2" Fiber Cable	62.00 - 66.00	0.6000	0.4842
T33	23	1/2" Fiber Cable	62.00 - 66.00	0.6000	0.4842
T33	24	2" Rigid Conduit	62.00 - 66.00	1.0000	1.0000
T34	1	EW63	58.00 - 62.00	0.6000	0.4770
T34	2	EW63	58.00 - 62.00	0.6000	0.4770
T34	3	LDF5-50A (7/8 FOAM)	58.00 - 62.00	0.6000	0.4770
T34	4	LDF5-50A (7/8 FOAM)	58.00 - 62.00	0.6000	0.4770
T34	5	LDF7-50A (1-5/8 FOAM)	58.00 - 62.00	0.6000	0.4770
T34	6	LDF7-50A (1-5/8 FOAM)	58.00 - 62.00	0.6000	0.4770
T34	7	LDF7-50A (1-5/8 FOAM)	58.00 - 62.00	0.6000	0.4770
T34	8	LDF7-50A (1-5/8 FOAM)	58.00 - 62.00	0.6000	0.4770
T34	9	LDF6-50A (1-1/4 FOAM)	58.00 - 62.00	0.6000	0.4770
T34	10	LDF4RN-50A (1/2 FOAM)	58.00 - 62.00	0.6000	0.4770
T34	11	LDF4RN-50A (1/2 FOAM)	58.00 - 62.00	0.6000	0.4770
T34	12	LDF2-50A (3/8 FOAM)	58.00 - 62.00	0.6000	0.4770
T34	15	Safety Line 3/8	58.00 - 62.00	0.6000	0.4770
T34	16	LDF7-50A (1-5/8 FOAM)	58.00 - 62.00	0.6000	0.4770
T34	17	1/2" 6C DC WIRE	58.00 - 62.00	0.6000	0.4770
T34	18	1/2" 6C DC WIRE	58.00 - 62.00	0.6000	0.4770
T34	19	VXL6-50 (1-1/4 FOAM)	58.00 - 62.00	0.6000	0.4770
T34	20	VXL6-50 (1-1/4 FOAM)	58.00 - 62.00	0.6000	0.4770
T34	21	Climbing Ladder	58.00 - 62.00	0.6000	0.4770
T34	22	1/2" Fiber Cable	58.00 - 62.00	0.6000	0.4770
T34	23	1/2" Fiber Cable	58.00 - 62.00	0.6000	0.4770
T34	24	2" Rigid Conduit	58.00 - 62.00	1.0000	1.0000
T35	1	EW63	54.00 - 58.00	0.6000	0.4880
T35	2	EW63	54.00 - 58.00	0.6000	0.4880
T35	3	LDF5-50A (7/8 FOAM)	54.00 - 58.00	0.6000	0.4880
T35	4	LDF5-50A (7/8 FOAM)	54.00 - 58.00	0.6000	0.4880
T35	5	LDF7-50A (1-5/8 FOAM)	54.00 - 58.00	0.6000	0.4880
T35	6	LDF7-50A (1-5/8 FOAM)	54.00 - 58.00	0.6000	0.4880
T35	7	LDF7-50A (1-5/8 FOAM)	54.00 - 58.00	0.6000	0.4880
T35	8	LDF7-50A (1-5/8 FOAM)	54.00 - 58.00	0.6000	0.4880
T35	9	LDF6-50A (1-1/4 FOAM)	54.00 - 58.00	0.6000	0.4880
T35	10	LDF4RN-50A (1/2 FOAM)	54.00 - 58.00	0.6000	0.4880
T35	11	LDF4RN-50A (1/2 FOAM)	54.00 - 58.00	0.6000	0.4880
T35	12	LDF2-50A (3/8 FOAM)	54.00 - 58.00	0.6000	0.4880
T35	13	LDF2-50A (3/8 FOAM)	54.00 - 56.00	0.6000	0.4880
T35	15	Safety Line 3/8	54.00 - 58.00	0.6000	0.4880
T35	16	LDF7-50A (1-5/8 FOAM)	54.00 - 58.00	0.6000	0.4880
T35	17	1/2" 6C DC WIRE	54.00 - 58.00	0.6000	0.4880
T35	18	1/2" 6C DC WIRE	54.00 - 58.00	0.6000	0.4880
T35	19	VXL6-50 (1-1/4 FOAM)	54.00 - 58.00	0.6000	0.4880
T35	20	VXL6-50 (1-1/4 FOAM)	54.00 - 58.00	0.6000	0.4880
T35	21	Climbing Ladder	54.00 - 58.00	0.6000	0.4880
T35	22	1/2" Fiber Cable	54.00 - 58.00	0.6000	0.4880
T35	23	1/2" Fiber Cable	54.00 - 58.00	0.6000	0.4880
T35	24	2" Rigid Conduit	54.00 - 58.00	1.0000	1.0000
T36	1	EW63	50.00 - 54.00	0.6000	0.4901
T36	2	EW63	50.00 - 54.00	0.6000	0.4901
T36	3	LDF5-50A (7/8 FOAM)	50.00 - 54.00	0.6000	0.4901
T36	4	LDF5-50A (7/8 FOAM)	50.00 - 54.00	0.6000	0.4901
T36	5	LDF7-50A (1-5/8 FOAM)	50.00 - 54.00	0.6000	0.4901
T36	6	LDF7-50A (1-5/8 FOAM)	50.00 - 54.00	0.6000	0.4901
T36	7	LDF7-50A (1-5/8 FOAM)	50.00 - 54.00	0.6000	0.4901
T36	8	LDF7-50A (1-5/8 FOAM)	50.00 - 54.00	0.6000	0.4901
T36	9	LDF6-50A (1-1/4 FOAM)	50.00 - 54.00	0.6000	0.4901

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<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
<b>Client</b>	AT&T	<b>Designed by</b>	

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K<sub>a</sub> No Ice</i>	<i>K<sub>a</sub> Ice</i>
T36	10	LDF4RN-50A (1/2 FOAM)	50.00 - 54.00	0.6000	0.4901
T36	11	LDF4RN-50A (1/2 FOAM)	50.00 - 54.00	0.6000	0.4901
T36	12	LDF2-50A (3/8 FOAM)	50.00 - 54.00	0.6000	0.4901
T36	13	LDF2-50A (3/8 FOAM)	50.00 - 54.00	0.6000	0.4901
T36	15	Safety Line 3/8	50.00 - 54.00	0.6000	0.4901
T36	16	LDF7-50A (1-5/8 FOAM)	50.00 - 54.00	0.6000	0.4901
T36	17	1/2" 6C DC WIRE	50.00 - 54.00	0.6000	0.4901
T36	18	1/2" 6C DC WIRE	50.00 - 54.00	0.6000	0.4901
T36	19	VXL6-50 (1-1/4 FOAM)	50.00 - 54.00	0.6000	0.4901
T36	20	VXL6-50 (1-1/4 FOAM)	50.00 - 54.00	0.6000	0.4901
T36	21	Climbing Ladder	50.00 - 54.00	0.6000	0.4901
T36	22	1/2" Fiber Cable	50.00 - 54.00	0.6000	0.4901
T36	23	1/2" Fiber Cable	50.00 - 54.00	0.6000	0.4901
T36	24	2" Rigid Conduit	50.00 - 54.00	1.0000	1.0000
T37	1	EW63	46.00 - 50.00	0.6000	0.4923
T37	2	EW63	46.00 - 50.00	0.6000	0.4923
T37	3	LDF5-50A (7/8 FOAM)	46.00 - 50.00	0.6000	0.4923
T37	4	LDF5-50A (7/8 FOAM)	46.00 - 50.00	0.6000	0.4923
T37	5	LDF7-50A (1-5/8 FOAM)	46.00 - 50.00	0.6000	0.4923
T37	6	LDF7-50A (1-5/8 FOAM)	46.00 - 50.00	0.6000	0.4923
T37	7	LDF7-50A (1-5/8 FOAM)	46.00 - 50.00	0.6000	0.4923
T37	8	LDF7-50A (1-5/8 FOAM)	46.00 - 50.00	0.6000	0.4923
T37	9	LDF6-50A (1-1/4 FOAM)	46.00 - 50.00	0.6000	0.4923
T37	10	LDF4RN-50A (1/2 FOAM)	46.00 - 50.00	0.6000	0.4923
T37	11	LDF4RN-50A (1/2 FOAM)	46.00 - 50.00	0.6000	0.4923
T37	12	LDF2-50A (3/8 FOAM)	46.00 - 50.00	0.6000	0.4923
T37	13	LDF2-50A (3/8 FOAM)	46.00 - 50.00	0.6000	0.4923
T37	15	Safety Line 3/8	46.00 - 50.00	0.6000	0.4923
T37	16	LDF7-50A (1-5/8 FOAM)	46.00 - 50.00	0.6000	0.4923
T37	17	1/2" 6C DC WIRE	46.00 - 50.00	0.6000	0.4923
T37	18	1/2" 6C DC WIRE	46.00 - 50.00	0.6000	0.4923
T37	19	VXL6-50 (1-1/4 FOAM)	46.00 - 50.00	0.6000	0.4923
T37	20	VXL6-50 (1-1/4 FOAM)	46.00 - 50.00	0.6000	0.4923
T37	21	Climbing Ladder	46.00 - 50.00	0.6000	0.4923
T37	22	1/2" Fiber Cable	46.00 - 50.00	0.6000	0.4923
T37	23	1/2" Fiber Cable	46.00 - 50.00	0.6000	0.4923
T37	24	2" Rigid Conduit	46.00 - 50.00	1.0000	1.0000
T38	1	EW63	42.00 - 46.00	0.6000	0.4948
T38	2	EW63	42.00 - 46.00	0.6000	0.4948
T38	3	LDF5-50A (7/8 FOAM)	42.00 - 46.00	0.6000	0.4948
T38	4	LDF5-50A (7/8 FOAM)	42.00 - 46.00	0.6000	0.4948
T38	5	LDF7-50A (1-5/8 FOAM)	42.00 - 46.00	0.6000	0.4948
T38	6	LDF7-50A (1-5/8 FOAM)	42.00 - 46.00	0.6000	0.4948
T38	7	LDF7-50A (1-5/8 FOAM)	42.00 - 46.00	0.6000	0.4948
T38	8	LDF7-50A (1-5/8 FOAM)	42.00 - 46.00	0.6000	0.4948
T38	9	LDF6-50A (1-1/4 FOAM)	42.00 - 46.00	0.6000	0.4948
T38	10	LDF4RN-50A (1/2 FOAM)	42.00 - 46.00	0.6000	0.4948
T38	11	LDF4RN-50A (1/2 FOAM)	42.00 - 46.00	0.6000	0.4948
T38	12	LDF2-50A (3/8 FOAM)	42.00 - 46.00	0.6000	0.4948
T38	13	LDF2-50A (3/8 FOAM)	42.00 - 46.00	0.6000	0.4948
T38	15	Safety Line 3/8	42.00 - 46.00	0.6000	0.4948
T38	16	LDF7-50A (1-5/8 FOAM)	42.00 - 46.00	0.6000	0.4948
T38	17	1/2" 6C DC WIRE	42.00 - 46.00	0.6000	0.4948
T38	18	1/2" 6C DC WIRE	42.00 - 46.00	0.6000	0.4948
T38	19	VXL6-50 (1-1/4 FOAM)	42.00 - 46.00	0.6000	0.4948
T38	20	VXL6-50 (1-1/4 FOAM)	42.00 - 46.00	0.6000	0.4948
T38	21	Climbing Ladder	42.00 - 46.00	0.6000	0.4948
T38	22	1/2" Fiber Cable	42.00 - 46.00	0.6000	0.4948
T38	23	1/2" Fiber Cable	42.00 - 46.00	0.6000	0.4948
T38	24	2" Rigid Conduit	42.00 - 46.00	1.0000	1.0000
T39	1	EW63	38.00 - 42.00	0.6000	0.4884
T39	2	EW63	38.00 - 42.00	0.6000	0.4884

# tnxTower

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<b>Job</b>	18946008A	<b>Page</b>	45 of 133
<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
<b>Client</b>	AT&T	<b>Designed by</b>	

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K<sub>a</sub> No Ice</i>	<i>K<sub>a</sub> Ice</i>
T39	3	LDF5-50A (7/8 FOAM)	38.00 - 42.00	0.6000	0.4884
T39	4	LDF5-50A (7/8 FOAM)	38.00 - 42.00	0.6000	0.4884
T39	5	LDF7-50A (1-5/8 FOAM)	38.00 - 42.00	0.6000	0.4884
T39	6	LDF7-50A (1-5/8 FOAM)	38.00 - 42.00	0.6000	0.4884
T39	7	LDF7-50A (1-5/8 FOAM)	38.00 - 42.00	0.6000	0.4884
T39	8	LDF7-50A (1-5/8 FOAM)	38.00 - 42.00	0.6000	0.4884
T39	9	LDF6-50A (1-1/4 FOAM)	38.00 - 42.00	0.6000	0.4884
T39	10	LDF4RN-50A (1/2 FOAM)	38.00 - 42.00	0.6000	0.4884
T39	11	LDF4RN-50A (1/2 FOAM)	38.00 - 42.00	0.6000	0.4884
T39	12	LDF2-50A (3/8 FOAM)	38.00 - 42.00	0.6000	0.4884
T39	13	LDF2-50A (3/8 FOAM)	38.00 - 42.00	0.6000	0.4884
T39	15	Safety Line 3/8	38.00 - 42.00	0.6000	0.4884
T39	16	LDF7-50A (1-5/8 FOAM)	38.00 - 42.00	0.6000	0.4884
T39	17	1/2" 6C DC WIRE	38.00 - 42.00	0.6000	0.4884
T39	18	1/2" 6C DC WIRE	38.00 - 42.00	0.6000	0.4884
T39	19	VXL6-50 (1-1/4 FOAM)	38.00 - 42.00	0.6000	0.4884
T39	20	VXL6-50 (1-1/4 FOAM)	38.00 - 42.00	0.6000	0.4884
T39	21	Climbing Ladder	38.00 - 42.00	0.6000	0.4884
T39	22	1/2" Fiber Cable	38.00 - 42.00	0.6000	0.4884
T39	23	1/2" Fiber Cable	38.00 - 42.00	0.6000	0.4884
T39	24	2" Rigid Conduit	38.00 - 42.00	1.0000	1.0000
T40	1	EW63	34.00 - 38.00	0.6000	0.4912
T40	2	EW63	34.00 - 38.00	0.6000	0.4912
T40	3	LDF5-50A (7/8 FOAM)	34.00 - 38.00	0.6000	0.4912
T40	4	LDF5-50A (7/8 FOAM)	34.00 - 38.00	0.6000	0.4912
T40	5	LDF7-50A (1-5/8 FOAM)	34.00 - 38.00	0.6000	0.4912
T40	6	LDF7-50A (1-5/8 FOAM)	34.00 - 38.00	0.6000	0.4912
T40	7	LDF7-50A (1-5/8 FOAM)	34.00 - 38.00	0.6000	0.4912
T40	8	LDF7-50A (1-5/8 FOAM)	34.00 - 38.00	0.6000	0.4912
T40	9	LDF6-50A (1-1/4 FOAM)	34.00 - 38.00	0.6000	0.4912
T40	10	LDF4RN-50A (1/2 FOAM)	34.00 - 38.00	0.6000	0.4912
T40	11	LDF4RN-50A (1/2 FOAM)	34.00 - 38.00	0.6000	0.4912
T40	12	LDF2-50A (3/8 FOAM)	34.00 - 38.00	0.6000	0.4912
T40	13	LDF2-50A (3/8 FOAM)	34.00 - 38.00	0.6000	0.4912
T40	15	Safety Line 3/8	34.00 - 38.00	0.6000	0.4912
T40	16	LDF7-50A (1-5/8 FOAM)	34.00 - 38.00	0.6000	0.4912
T40	17	1/2" 6C DC WIRE	34.00 - 38.00	0.6000	0.4912
T40	18	1/2" 6C DC WIRE	34.00 - 38.00	0.6000	0.4912
T40	19	VXL6-50 (1-1/4 FOAM)	34.00 - 38.00	0.6000	0.4912
T40	20	VXL6-50 (1-1/4 FOAM)	34.00 - 38.00	0.6000	0.4912
T40	21	Climbing Ladder	34.00 - 38.00	0.6000	0.4912
T40	22	1/2" Fiber Cable	34.00 - 38.00	0.6000	0.4912
T40	23	1/2" Fiber Cable	34.00 - 38.00	0.6000	0.4912
T40	24	2" Rigid Conduit	34.00 - 38.00	1.0000	1.0000
T41	1	EW63	30.00 - 34.00	0.6000	0.4944
T41	2	EW63	30.00 - 34.00	0.6000	0.4944
T41	3	LDF5-50A (7/8 FOAM)	30.00 - 34.00	0.6000	0.4944
T41	4	LDF5-50A (7/8 FOAM)	30.00 - 34.00	0.6000	0.4944
T41	5	LDF7-50A (1-5/8 FOAM)	30.00 - 34.00	0.6000	0.4944
T41	6	LDF7-50A (1-5/8 FOAM)	30.00 - 34.00	0.6000	0.4944
T41	7	LDF7-50A (1-5/8 FOAM)	30.00 - 34.00	0.6000	0.4944
T41	8	LDF7-50A (1-5/8 FOAM)	30.00 - 34.00	0.6000	0.4944
T41	9	LDF6-50A (1-1/4 FOAM)	30.00 - 34.00	0.6000	0.4944
T41	10	LDF4RN-50A (1/2 FOAM)	30.00 - 34.00	0.6000	0.4944
T41	11	LDF4RN-50A (1/2 FOAM)	30.00 - 34.00	0.6000	0.4944
T41	12	LDF2-50A (3/8 FOAM)	30.00 - 34.00	0.6000	0.4944
T41	13	LDF2-50A (3/8 FOAM)	30.00 - 34.00	0.6000	0.4944
T41	15	Safety Line 3/8	30.00 - 34.00	0.6000	0.4944
T41	16	LDF7-50A (1-5/8 FOAM)	30.00 - 34.00	0.6000	0.4944
T41	17	1/2" 6C DC WIRE	30.00 - 34.00	0.6000	0.4944
T41	18	1/2" 6C DC WIRE	30.00 - 34.00	0.6000	0.4944
T41	19	VXL6-50 (1-1/4 FOAM)	30.00 - 34.00	0.6000	0.4944



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<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
<b>Client</b>	AT&T	<b>Designed by</b>	

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K<sub>a</sub> No Ice</i>	<i>K<sub>a</sub> Ice</i>
T41	20	VXL6-50 (1-1/4 FOAM)	30.00 - 34.00	0.6000	0.4944
T41	21	Climbing Ladder	30.00 - 34.00	0.6000	0.4944
T41	22	1/2" Fiber Cable	30.00 - 34.00	0.6000	0.4944
T41	23	1/2" Fiber Cable	30.00 - 34.00	0.6000	0.4944
T41	24	2" Rigid Conduit	30.00 - 34.00	1.0000	1.0000
T42	1	EW63	26.00 - 30.00	0.6000	0.4980
T42	2	EW63	26.00 - 30.00	0.6000	0.4980
T42	3	LDF5-50A (7/8 FOAM)	26.00 - 30.00	0.6000	0.4980
T42	4	LDF5-50A (7/8 FOAM)	26.00 - 30.00	0.6000	0.4980
T42	5	LDF7-50A (1-5/8 FOAM)	26.00 - 30.00	0.6000	0.4980
T42	6	LDF7-50A (1-5/8 FOAM)	26.00 - 30.00	0.6000	0.4980
T42	7	LDF7-50A (1-5/8 FOAM)	26.00 - 30.00	0.6000	0.4980
T42	8	LDF7-50A (1-5/8 FOAM)	26.00 - 30.00	0.6000	0.4980
T42	9	LDF6-50A (1-1/4 FOAM)	26.00 - 30.00	0.6000	0.4980
T42	10	LDF4RN-50A (1/2 FOAM)	26.00 - 30.00	0.6000	0.4980
T42	11	LDF4RN-50A (1/2 FOAM)	26.00 - 30.00	0.6000	0.4980
T42	12	LDF2-50A (3/8 FOAM)	26.00 - 30.00	0.6000	0.4980
T42	13	LDF2-50A (3/8 FOAM)	26.00 - 30.00	0.6000	0.4980
T42	15	Safety Line 3/8	26.00 - 30.00	0.6000	0.4980
T42	16	LDF7-50A (1-5/8 FOAM)	26.00 - 30.00	0.6000	0.4980
T42	17	1/2" 6C DC WIRE	26.00 - 30.00	0.6000	0.4980
T42	18	1/2" 6C DC WIRE	26.00 - 30.00	0.6000	0.4980
T42	19	VXL6-50 (1-1/4 FOAM)	26.00 - 30.00	0.6000	0.4980
T42	20	VXL6-50 (1-1/4 FOAM)	26.00 - 30.00	0.6000	0.4980
T42	21	Climbing Ladder	26.00 - 30.00	0.6000	0.4980
T42	22	1/2" Fiber Cable	26.00 - 30.00	0.6000	0.4980
T42	23	1/2" Fiber Cable	26.00 - 30.00	0.6000	0.4980
T42	24	2" Rigid Conduit	26.00 - 30.00	1.0000	1.0000
T43	1	EW63	22.00 - 26.00	0.6000	0.5021
T43	2	EW63	22.00 - 26.00	0.6000	0.5021
T43	3	LDF5-50A (7/8 FOAM)	22.00 - 26.00	0.6000	0.5021
T43	4	LDF5-50A (7/8 FOAM)	22.00 - 26.00	0.6000	0.5021
T43	5	LDF7-50A (1-5/8 FOAM)	22.00 - 26.00	0.6000	0.5021
T43	6	LDF7-50A (1-5/8 FOAM)	22.00 - 26.00	0.6000	0.5021
T43	7	LDF7-50A (1-5/8 FOAM)	22.00 - 26.00	0.6000	0.5021
T43	8	LDF7-50A (1-5/8 FOAM)	22.00 - 26.00	0.6000	0.5021
T43	9	LDF6-50A (1-1/4 FOAM)	22.00 - 26.00	0.6000	0.5021
T43	10	LDF4RN-50A (1/2 FOAM)	22.00 - 26.00	0.6000	0.5021
T43	11	LDF4RN-50A (1/2 FOAM)	22.00 - 26.00	0.6000	0.5021
T43	12	LDF2-50A (3/8 FOAM)	22.00 - 26.00	0.6000	0.5021
T43	13	LDF2-50A (3/8 FOAM)	22.00 - 26.00	0.6000	0.5021
T43	15	Safety Line 3/8	22.00 - 26.00	0.6000	0.5021
T43	16	LDF7-50A (1-5/8 FOAM)	22.00 - 26.00	0.6000	0.5021
T43	17	1/2" 6C DC WIRE	22.00 - 26.00	0.6000	0.5021
T43	18	1/2" 6C DC WIRE	22.00 - 26.00	0.6000	0.5021
T43	19	VXL6-50 (1-1/4 FOAM)	22.00 - 26.00	0.6000	0.5021
T43	20	VXL6-50 (1-1/4 FOAM)	22.00 - 26.00	0.6000	0.5021
T43	21	Climbing Ladder	22.00 - 26.00	0.6000	0.5021
T43	22	1/2" Fiber Cable	22.00 - 26.00	0.6000	0.5021
T43	23	1/2" Fiber Cable	22.00 - 26.00	0.6000	0.5021
T43	24	2" Rigid Conduit	22.00 - 26.00	1.0000	1.0000
T44	1	EW63	18.00 - 22.00	0.6000	0.5068
T44	2	EW63	18.00 - 22.00	0.6000	0.5068
T44	3	LDF5-50A (7/8 FOAM)	18.00 - 22.00	0.6000	0.5068
T44	4	LDF5-50A (7/8 FOAM)	18.00 - 22.00	0.6000	0.5068
T44	5	LDF7-50A (1-5/8 FOAM)	18.00 - 22.00	0.6000	0.5068
T44	6	LDF7-50A (1-5/8 FOAM)	18.00 - 22.00	0.6000	0.5068
T44	7	LDF7-50A (1-5/8 FOAM)	18.00 - 22.00	0.6000	0.5068
T44	8	LDF7-50A (1-5/8 FOAM)	18.00 - 22.00	0.6000	0.5068
T44	9	LDF6-50A (1-1/4 FOAM)	18.00 - 22.00	0.6000	0.5068
T44	10	LDF4RN-50A (1/2 FOAM)	18.00 - 22.00	0.6000	0.5068
T44	11	LDF4RN-50A (1/2 FOAM)	18.00 - 22.00	0.6000	0.5068

# tnxTower

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<b>Job</b>	18946008A	<b>Page</b>	47 of 133
<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
<b>Client</b>	AT&T	<b>Designed by</b>	

<i>Tower Section</i>	<i>Feed Line Record No.</i>	<i>Description</i>	<i>Feed Line Segment Elev.</i>	<i>K<sub>a</sub> No Ice</i>	<i>K<sub>a</sub> Ice</i>
T44	12	LDF2-50A (3/8 FOAM)	18.00 - 22.00	0.6000	0.5068
T44	13	LDF2-50A (3/8 FOAM)	18.00 - 22.00	0.6000	0.5068
T44	14	LDF2-50A (3/8 FOAM)	18.00 - 20.00	0.6000	0.5068
T44	15	Safety Line 3/8	18.00 - 22.00	0.6000	0.5068
T44	16	LDF7-50A (1-5/8 FOAM)	18.00 - 22.00	0.6000	0.5068
T44	17	1/2" 6C DC WIRE	18.00 - 22.00	0.6000	0.5068
T44	18	1/2" 6C DC WIRE	18.00 - 22.00	0.6000	0.5068
T44	19	VXL6-50 (1-1/4 FOAM)	18.00 - 22.00	0.6000	0.5068
T44	20	VXL6-50 (1-1/4 FOAM)	18.00 - 22.00	0.6000	0.5068
T44	21	Climbing Ladder	18.00 - 22.00	0.6000	0.5068
T44	22	1/2" Fiber Cable	18.00 - 22.00	0.6000	0.5068
T44	23	1/2" Fiber Cable	18.00 - 22.00	0.6000	0.5068
T44	24	2" Rigid Conduit	18.00 - 22.00	1.0000	1.0000
T45	1	EW63	14.00 - 18.00	0.6000	0.5125
T45	2	EW63	14.00 - 18.00	0.6000	0.5125
T45	3	LDF5-50A (7/8 FOAM)	14.00 - 18.00	0.6000	0.5125
T45	4	LDF5-50A (7/8 FOAM)	14.00 - 18.00	0.6000	0.5125
T45	5	LDF7-50A (1-5/8 FOAM)	14.00 - 18.00	0.6000	0.5125
T45	6	LDF7-50A (1-5/8 FOAM)	14.00 - 18.00	0.6000	0.5125
T45	7	LDF7-50A (1-5/8 FOAM)	14.00 - 18.00	0.6000	0.5125
T45	8	LDF7-50A (1-5/8 FOAM)	14.00 - 18.00	0.6000	0.5125
T45	9	LDF6-50A (1-1/4 FOAM)	14.00 - 18.00	0.6000	0.5125
T45	10	LDF4RN-50A (1/2 FOAM)	14.00 - 18.00	0.6000	0.5125
T45	11	LDF4RN-50A (1/2 FOAM)	14.00 - 18.00	0.6000	0.5125
T45	12	LDF2-50A (3/8 FOAM)	14.00 - 18.00	0.6000	0.5125
T45	13	LDF2-50A (3/8 FOAM)	14.00 - 18.00	0.6000	0.5125
T45	14	LDF2-50A (3/8 FOAM)	14.00 - 18.00	0.6000	0.5125
T45	15	Safety Line 3/8	14.00 - 18.00	0.6000	0.5125
T45	16	LDF7-50A (1-5/8 FOAM)	14.00 - 18.00	0.6000	0.5125
T45	17	1/2" 6C DC WIRE	14.00 - 18.00	0.6000	0.5125
T45	18	1/2" 6C DC WIRE	14.00 - 18.00	0.6000	0.5125
T45	19	VXL6-50 (1-1/4 FOAM)	14.00 - 18.00	0.6000	0.5125
T45	20	VXL6-50 (1-1/4 FOAM)	14.00 - 18.00	0.6000	0.5125
T45	21	Climbing Ladder	14.00 - 18.00	0.6000	0.5125
T45	22	1/2" Fiber Cable	14.00 - 18.00	0.6000	0.5125
T45	23	1/2" Fiber Cable	14.00 - 18.00	0.6000	0.5125
T45	24	2" Rigid Conduit	14.00 - 18.00	1.0000	1.0000
T46	1	EW63	10.00 - 14.00	0.6000	0.5197
T46	2	EW63	10.00 - 14.00	0.6000	0.5197
T46	3	LDF5-50A (7/8 FOAM)	10.00 - 14.00	0.6000	0.5197
T46	4	LDF5-50A (7/8 FOAM)	10.00 - 14.00	0.6000	0.5197
T46	5	LDF7-50A (1-5/8 FOAM)	10.00 - 14.00	0.6000	0.5197
T46	6	LDF7-50A (1-5/8 FOAM)	10.00 - 14.00	0.6000	0.5197
T46	7	LDF7-50A (1-5/8 FOAM)	10.00 - 14.00	0.6000	0.5197
T46	8	LDF7-50A (1-5/8 FOAM)	10.00 - 14.00	0.6000	0.5197
T46	9	LDF6-50A (1-1/4 FOAM)	10.00 - 14.00	0.6000	0.5197
T46	10	LDF4RN-50A (1/2 FOAM)	10.00 - 14.00	0.6000	0.5197
T46	11	LDF4RN-50A (1/2 FOAM)	10.00 - 14.00	0.6000	0.5197
T46	12	LDF2-50A (3/8 FOAM)	10.00 - 14.00	0.6000	0.5197
T46	13	LDF2-50A (3/8 FOAM)	10.00 - 14.00	0.6000	0.5197
T46	14	LDF2-50A (3/8 FOAM)	10.00 - 14.00	0.6000	0.5197
T46	15	Safety Line 3/8	10.00 - 14.00	0.6000	0.5197
T46	16	LDF7-50A (1-5/8 FOAM)	10.00 - 14.00	0.6000	0.5197
T46	17	1/2" 6C DC WIRE	10.00 - 14.00	0.6000	0.5197
T46	18	1/2" 6C DC WIRE	10.00 - 14.00	0.6000	0.5197
T46	19	VXL6-50 (1-1/4 FOAM)	10.00 - 14.00	0.6000	0.5197
T46	20	VXL6-50 (1-1/4 FOAM)	10.00 - 14.00	0.6000	0.5197
T46	21	Climbing Ladder	10.00 - 14.00	0.6000	0.5197
T46	22	1/2" Fiber Cable	10.00 - 14.00	0.6000	0.5197
T46	23	1/2" Fiber Cable	10.00 - 14.00	0.6000	0.5197
T46	24	2" Rigid Conduit	10.00 - 14.00	1.0000	1.0000
T47	1	EW63	8.00 - 10.00	0.6000	0.5295

<b>tnxTower</b>  <b>Maser Consulting</b> 2000 Midlantic Drive, Suite 100 Mt. Laurel, NJ Phone: 856 797-0412 FAX: 856 722-1120	<b>Job</b> 18946008A	<b>Page</b> 48 of 133
	<b>Project</b> CTL02056	<b>Date</b> 17:35:35 09/25/18
	<b>Client</b> AT&T	<b>Designed by</b>

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	$K_a$ No Ice	$K_a$ Ice
T47	2	EW63	8.00 - 10.00	0.6000	0.5295
T47	3	LDF5-50A (7/8 FOAM)	8.00 - 10.00	0.6000	0.5295
T47	4	LDF5-50A (7/8 FOAM)	8.00 - 10.00	0.6000	0.5295
T47	5	LDF7-50A (1-5/8 FOAM)	8.00 - 10.00	0.6000	0.5295
T47	6	LDF7-50A (1-5/8 FOAM)	8.00 - 10.00	0.6000	0.5295
T47	7	LDF7-50A (1-5/8 FOAM)	8.00 - 10.00	0.6000	0.5295
T47	8	LDF7-50A (1-5/8 FOAM)	8.00 - 10.00	0.6000	0.5295
T47	9	LDF6-50A (1-1/4 FOAM)	8.00 - 10.00	0.6000	0.5295
T47	10	LDF4RN-50A (1/2 FOAM)	8.00 - 10.00	0.6000	0.5295
T47	11	LDF4RN-50A (1/2 FOAM)	8.00 - 10.00	0.6000	0.5295
T47	12	LDF2-50A (3/8 FOAM)	8.00 - 10.00	0.6000	0.5295
T47	13	LDF2-50A (3/8 FOAM)	8.00 - 10.00	0.6000	0.5295
T47	14	LDF2-50A (3/8 FOAM)	8.00 - 10.00	0.6000	0.5295
T47	15	Safety Line 3/8	8.00 - 10.00	0.6000	0.5295
T47	16	LDF7-50A (1-5/8 FOAM)	8.00 - 10.00	0.6000	0.5295
T47	17	1/2" 6C DC WIRE	8.00 - 10.00	0.6000	0.5295
T47	18	1/2" 6C DC WIRE	8.00 - 10.00	0.6000	0.5295
T47	19	VXL6-50 (1-1/4 FOAM)	8.00 - 10.00	0.6000	0.5295
T47	20	VXL6-50 (1-1/4 FOAM)	8.00 - 10.00	0.6000	0.5295
T47	21	Climbing Ladder	8.00 - 10.00	0.6000	0.5295
T47	22	1/2" Fiber Cable	8.00 - 10.00	0.6000	0.5295
T47	23	1/2" Fiber Cable	8.00 - 10.00	0.6000	0.5295
T47	24	2" Rigid Conduit	8.00 - 10.00	1.0000	1.0000

### Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	$C_{AA}$ Front	$C_{AA}$ Side	Weight
			Horz Lateral	Vert					
			ft	ft	°	ft	ft <sup>2</sup>	ft <sup>2</sup>	K
5/8" x 5'-0" Lightning Rod	C	From Leg	0.00	0.0000	281.50	No Ice	0.31	0.31	0.01
			0.00			1/2" Ice	0.83	0.83	0.01
			2.00			1" Ice	1.32	1.32	0.02
Ice Shield 6x5	A	From Leg	0.00	0.0000	274.00	No Ice	7.20	7.20	0.30
			0.00			1/2" Ice	7.67	7.67	0.53
			0.00			1" Ice	8.15	8.15	0.77
Ice Shield 6x5	C	From Leg	0.00	0.0000	270.00	No Ice	7.20	7.20	0.30
			0.00			1/2" Ice	7.67	7.67	0.53
			0.00			1" Ice	8.15	8.15	0.77
Pirod 10' PCS Frame (1)	A	From Leg	1.50	0.0000	236.00	No Ice	9.00	9.00	0.25
			0.00			1/2" Ice	13.20	13.20	0.35
			0.00			1" Ice	17.40	17.40	0.45
Pirod 10' PCS Frame (1)	B	From Leg	1.50	0.0000	236.00	No Ice	9.00	9.00	0.25
			0.00			1/2" Ice	13.20	13.20	0.35
			0.00			1" Ice	17.40	17.40	0.45
Pirod 10' PCS Frame (1)	C	From Leg	1.50	0.0000	236.00	No Ice	9.00	9.00	0.25
			0.00			1/2" Ice	13.20	13.20	0.35
			0.00			1" Ice	17.40	17.40	0.45
DBXNH-6565A-A2M with 6' pipe	A	From Leg	2.50	0.0000	236.00	No Ice	5.80	4.95	0.06
			-6.00			1/2" Ice	6.29	5.77	0.11
			0.00			1" Ice	6.74	6.47	0.17
DBXNH-6565A-A2M with 6'	B	From Leg	2.50	0.0000	236.00	No Ice	5.80	4.95	0.06

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Vert					
			ft	ft	°	ft	ft <sup>2</sup>	ft <sup>2</sup>	K
pipe			-6.00			1/2" Ice	6.29	5.77	0.11
			0.00			1" Ice	6.74	6.47	0.17
DBXNH-6565A-A2M with 6' pipe	C	From Leg	2.50		0.0000	No Ice	5.80	4.95	0.06
			-6.00			1/2" Ice	6.29	5.77	0.11
			0.00			1" Ice	6.74	6.47	0.17
AIR 32 B66A B2A	A	From Leg	2.50		0.0000	No Ice	6.81	6.14	0.15
			6.00			1/2" Ice	7.30	6.99	0.22
			0.00			1" Ice	7.76	7.73	0.28
AIR 32 B66A B2A	B	From Leg	2.50		0.0000	No Ice	6.81	6.14	0.15
			6.00			1/2" Ice	7.30	6.99	0.22
			0.00			1" Ice	7.76	7.73	0.28
AIR 32 B66A B2A	C	From Leg	2.50		0.0000	No Ice	6.81	6.14	0.15
			6.00			1/2" Ice	7.30	6.99	0.22
			0.00			1" Ice	7.76	7.73	0.28
RRUS11 B12 (Partial Shielded by 11.9" Antenna)	A	From Leg	2.50		0.0000	No Ice	0.88	1.18	0.05
			0.00			1/2" Ice	1.02	1.33	0.06
			0.00			1" Ice	1.16	1.48	0.07
RRUS11 B12 (Partial Shielded by 11.9" Antenna)	B	From Leg	2.50		0.0000	No Ice	0.88	1.18	0.05
			0.00			1/2" Ice	1.02	1.33	0.06
			0.00			1" Ice	1.16	1.48	0.07
RRUS11 B12 (Partial Shielded by 11.9" Antenna)	C	From Leg	2.50		0.0000	No Ice	0.88	1.18	0.05
			0.00			1/2" Ice	1.02	1.33	0.06
			0.00			1" Ice	1.16	1.48	0.07
Pirod 12' T-Frame Sector Mount (1)	A	From Leg	2.00		0.0000	No Ice	13.60	13.60	0.47
			0.00			1/2" Ice	18.40	18.40	0.60
			0.00			1" Ice	23.20	23.20	0.73
Pirod 12' T-Frame Sector Mount (1)	B	From Leg	2.00		0.0000	No Ice	13.60	13.60	0.47
			0.00			1/2" Ice	18.40	18.40	0.60
			0.00			1" Ice	23.20	23.20	0.73
Pirod 12' T-Frame Sector Mount (1)	C	From Leg	2.00		0.0000	No Ice	13.60	13.60	0.47
			0.00			1/2" Ice	18.40	18.40	0.60
			0.00			1" Ice	23.20	23.20	0.73
APXVSPP18-C	A	From Leg	3.00		0.0000	No Ice	8.02	5.28	0.06
			0.00			1/2" Ice	8.48	5.74	0.11
			0.00			1" Ice	8.94	6.20	0.16
APXVSPP18-C	B	From Leg	3.00		0.0000	No Ice	8.02	5.28	0.06
			0.00			1/2" Ice	8.48	5.74	0.11
			0.00			1" Ice	8.94	6.20	0.16
APXVSPP18-C	C	From Leg	3.00		0.0000	No Ice	8.02	5.28	0.06
			0.00			1/2" Ice	8.48	5.74	0.11
			0.00			1" Ice	8.94	6.20	0.16
FR65-17-DP	A	From Leg	3.00		0.0000	No Ice	4.36	1.97	0.02
			0.00			1/2" Ice	4.70	2.31	0.04
			0.00			1" Ice	5.06	2.66	0.07
FR65-17-DP	B	From Leg	3.00		0.0000	No Ice	4.36	1.97	0.02
			0.00			1/2" Ice	4.70	2.31	0.04
			0.00			1" Ice	5.06	2.66	0.07
FR65-17-DP	C	From Leg	3.00		0.0000	No Ice	4.36	1.97	0.02
			0.00			1/2" Ice	4.70	2.31	0.04
			0.00			1" Ice	5.06	2.66	0.07
RRH 800 MHz	A	From Leg	3.00		0.0000	No Ice	2.40	2.25	0.06
			0.00			1/2" Ice	2.61	2.46	0.09
			0.00			1" Ice	2.83	2.68	0.11
RRH 800 MHz	B	From Leg	3.00		0.0000	No Ice	2.40	2.25	0.06
			0.00			1/2" Ice	2.61	2.46	0.09
			0.00			1" Ice	2.83	2.68	0.11
RRH 800 MHz	C	From Leg	3.00		0.0000	No Ice	2.40	2.25	0.06

**tnxTower**

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Lateral					
			0.00						
			0.00			1/2" Ice	2.61	2.46	0.09
			0.00			1" Ice	2.83	2.68	0.11
(2) RRH 1900 MHz	A	From Leg	3.00	0.0000	208.00	No Ice	2.58	2.54	0.06
			0.00			1/2" Ice	2.79	2.75	0.09
			0.00			1" Ice	3.01	2.97	0.12
(2) RRH 1900 MHz	B	From Leg	3.00	0.0000	208.00	No Ice	2.58	2.54	0.06
			0.00			1/2" Ice	2.79	2.75	0.09
			0.00			1" Ice	3.01	2.97	0.12
(2) RRH 1900 MHz	C	From Leg	3.00	0.0000	208.00	No Ice	2.58	2.54	0.06
			0.00			1/2" Ice	2.79	2.75	0.09
			0.00			1" Ice	3.01	2.97	0.12
Ice Shield 6x5	A	From Leg	0.00	0.0000	172.00	No Ice	7.20	7.20	0.30
			0.00			1/2" Ice	7.67	7.67	0.53
			0.00			1" Ice	8.15	8.15	0.77
4' Dipole	C	None		0.0000	162.00	No Ice	0.79	0.79	0.02
						1/2" Ice	1.03	1.03	0.03
						1" Ice	1.28	1.28	0.04
Pirod 12' T-Frame Sector Mount (1)	A	From Leg	2.00	0.0000	152.00	No Ice	13.60	13.60	0.47
			0.00			1/2" Ice	18.40	18.40	0.60
			0.00			1" Ice	23.20	23.20	0.73
Pirod 12' T-Frame Sector Mount (1)	B	From Leg	2.00	0.0000	152.00	No Ice	13.60	13.60	0.47
			0.00			1/2" Ice	18.40	18.40	0.60
			0.00			1" Ice	23.20	23.20	0.73
Pirod 12' T-Frame Sector Mount (1)	C	From Leg	2.00	0.0000	152.00	No Ice	13.60	13.60	0.47
			0.00			1/2" Ice	18.40	18.40	0.60
			0.00			1" Ice	23.20	23.20	0.73
7770	A	From Leg	4.00	0.0000	152.00	No Ice	5.51	2.93	0.04
			6.00			1/2" Ice	5.87	3.27	0.07
			0.00			1" Ice	6.23	3.63	0.11
7770	B	From Leg	4.00	0.0000	152.00	No Ice	5.51	2.93	0.04
			6.00			1/2" Ice	5.87	3.27	0.07
			0.00			1" Ice	6.23	3.63	0.11
7770	C	From Leg	4.00	0.0000	152.00	No Ice	5.51	2.93	0.04
			6.00			1/2" Ice	5.87	3.27	0.07
			0.00			1" Ice	6.23	3.63	0.11
RRUS11 B12 (Partial Shielded by 11.9" Antenna)	A	From Leg	4.00	0.0000	152.00	No Ice	0.88	1.18	0.05
			0.00			1/2" Ice	1.02	1.33	0.06
			0.00			1" Ice	1.16	1.48	0.07
RRUS11 B12 (Partial Shielded by 11.9" Antenna)	B	From Leg	4.00	0.0000	152.00	No Ice	0.88	1.18	0.05
			0.00			1/2" Ice	1.02	1.33	0.06
			0.00			1" Ice	1.16	1.48	0.07
RRUS11 B12 (Partial Shielded by 11.9" Antenna)	C	From Leg	4.00	0.0000	152.00	No Ice	0.88	1.18	0.05
			0.00			1/2" Ice	1.02	1.33	0.06
			0.00			1" Ice	1.16	1.48	0.07
(2) TMA shielded by antenna	A	From Leg	4.00	0.0000	152.00	No Ice	0.00	0.00	0.00
			0.00			1/2" Ice	0.00	0.00	0.00
			0.00			1" Ice	0.00	0.00	0.00
(2) TMA shielded by antenna	B	From Leg	4.00	0.0000	152.00	No Ice	0.00	0.00	0.00
			0.00			1/2" Ice	0.00	0.00	0.00
			0.00			1" Ice	0.00	0.00	0.00
(2) TMA shielded by antenna	C	From Leg	4.00	0.0000	152.00	No Ice	0.00	0.00	0.00
			0.00			1/2" Ice	0.00	0.00	0.00
			0.00			1" Ice	0.00	0.00	0.00
DC6-48-06-18-8F	A	From Leg	1.00	0.0000	152.00	No Ice	1.20	1.20	0.03
			0.00			1/2" Ice	1.88	1.88	0.05
			0.00			1" Ice	2.09	2.09	0.08
DC6-48-06-18-8F	B	From Leg	1.00	0.0000	152.00	No Ice	1.20	1.20	0.03

<p><b>tnxTower</b></p> <p><b>Maser Consulting</b> 2000 Midlantic Drive, Suite 100 Mt. Laurel, NJ Phone: 856 797-0412 FAX: 856 722-1120</p>	<b>Job</b>	18946008A	<b>Page</b>	51 of 133
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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Vert					
			ft	ft	°	ft	ft <sup>2</sup>	ft <sup>2</sup>	K
			0.00			1/2" Ice	1.88	1.88	0.05
			0.00			1" Ice	2.09	2.09	0.08
DC6-48-06-18-8F	C	From Leg	1.00		0.0000	No Ice	1.20	1.20	0.03
			0.00			1/2" Ice	1.88	1.88	0.05
			0.00			1" Ice	2.09	2.09	0.08
QS66512-2	A	From Leg	4.00		0.0000	No Ice	8.13	6.80	0.11
			-2.00			1/2" Ice	8.59	7.27	0.17
			0.00			1" Ice	9.05	7.72	0.23
QS66512-2	B	From Leg	4.00		0.0000	No Ice	8.13	6.80	0.11
			-2.00			1/2" Ice	8.59	7.27	0.17
			0.00			1" Ice	9.05	7.72	0.23
TPA-65R-LCUUUU-H8	C	From Leg	4.00		0.0000	No Ice	13.30	8.82	0.08
			-2.00			1/2" Ice	13.90	9.42	0.15
			0.00			1" Ice	14.50	10.03	0.24
80010966	A	From Leg	4.00		0.0000	No Ice	17.36	9.40	0.16
			-6.00			1/2" Ice	17.99	10.82	0.27
			0.00			1" Ice	18.63	12.09	0.40
800-10965	B	From Leg	4.00		0.0000	No Ice	14.16	7.73	0.14
			-6.00			1/2" Ice	14.84	9.05	0.24
			0.00			1" Ice	15.50	10.22	0.34
800-10965	C	From Leg	4.00		0.0000	No Ice	14.16	7.73	0.14
			-6.00			1/2" Ice	14.84	9.05	0.24
			0.00			1" Ice	15.50	10.22	0.34
CCI HPA-65R-BUU-H8 w/9.5ft 2.0 STD Pipe	A	From Leg	4.00		0.0000	No Ice	13.18	9.74	0.09
			-6.00			1/2" Ice	13.95	11.29	0.19
			0.00			1" Ice	14.72	12.86	0.29
CCI HPA-65R-BUU-H6	B	From Leg	4.00		0.0000	No Ice	9.66	7.88	0.07
			-6.00			1/2" Ice	10.13	8.84	0.15
			0.00			1" Ice	10.61	9.68	0.24
CCI HPA-65R-BUU-H6	C	From Leg	4.00		0.0000	No Ice	9.66	7.88	0.07
			-6.00			1/2" Ice	10.13	8.84	0.15
			0.00			1" Ice	10.61	9.68	0.24
RRUS 32	A	From Leg	4.00		0.0000	No Ice	2.72	1.67	0.05
			-6.00			1/2" Ice	2.94	1.86	0.07
			0.00			1" Ice	3.17	2.05	0.10
RRUS 32	B	From Leg	4.00		0.0000	No Ice	2.72	1.67	0.05
			-6.00			1/2" Ice	2.94	1.86	0.07
			0.00			1" Ice	3.17	2.05	0.10
RRUS 32	C	From Leg	4.00		0.0000	No Ice	2.72	1.67	0.05
			-6.00			1/2" Ice	2.94	1.86	0.07
			0.00			1" Ice	3.17	2.05	0.10
RRUSB14 + 4478 B5 Shielded	A	From Leg	4.00		0.0000	No Ice	0.02	1.66	0.11
			-6.00			1/2" Ice	0.15	1.82	0.11
			0.00			1" Ice	0.25	1.99	0.12
RRUSB14 + 4478 B5 Shielded	B	From Leg	4.00		0.0000	No Ice	0.02	1.66	0.11
			-6.00			1/2" Ice	0.15	1.82	0.11
			0.00			1" Ice	0.25	1.99	0.12
RRUSB14 + 4478 B5 Shielded	C	From Leg	4.00		0.0000	No Ice	0.02	1.66	0.11
			-6.00			1/2" Ice	0.15	1.82	0.11
			0.00			1" Ice	0.25	1.99	0.12
RRUS 32 B2	A	From Leg	4.00		0.0000	No Ice	2.72	1.67	0.05
			-6.00			1/2" Ice	2.94	1.86	0.07
			0.00			1" Ice	3.17	2.05	0.10
RRUS 32 B2	B	From Face	4.00		0.0000	No Ice	2.72	1.67	0.05
			-6.00			1/2" Ice	2.94	1.86	0.07
			0.00			1" Ice	3.17	2.05	0.10
RRUS 32 B2	C	From Leg	4.00		0.0000	No Ice	2.72	1.67	0.05

<b>tnxTower</b>  <b>Maser Consulting</b> 2000 Midlantic Drive, Suite 100 Mt. Laurel, NJ Phone: 856 797-0412 FAX: 856 722-1120	<b>Job</b>	18946008A	<b>Page</b>	52 of 133
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	<b>Client</b>	AT&T	<b>Designed by</b>	

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>AA</sub> Front	C <sub>AA</sub> Side	Weight	
			Horz	Lateral						
			ft	ft	°	ft	ft <sup>2</sup>	ft <sup>2</sup>	K	
RRUS 4426 B66	A	From Leg	-6.00		0.0000	152.00	1/2" Ice	2.94	1.86	0.07
			0.00				1" Ice	3.17	2.05	0.10
			4.00				No Ice	1.65	0.68	0.05
			-6.00				1/2" Ice	1.81	0.79	0.06
RRUS 4426 B66	B	From Leg	0.00		0.0000	152.00	1" Ice	1.98	0.92	0.07
			4.00				No Ice	1.65	0.68	0.05
			-6.00				1/2" Ice	1.81	0.79	0.06
			0.00				1" Ice	1.98	0.92	0.07
RRUS 4426 B66	C	From Leg	4.00		0.0000	152.00	No Ice	1.65	0.68	0.05
			-6.00				1/2" Ice	1.81	0.79	0.06
			0.00				1" Ice	1.98	0.92	0.07
			4' Dipole	C			None	0.0000	115.00	No Ice
4' Dipole	C	None			0.0000	115.00	1/2" Ice	1.03	1.03	0.03
							1" Ice	1.28	1.28	0.04
							No Ice	0.79	0.79	0.02
							1/2" Ice	1.03	1.03	0.03
						1" Ice	1.28	1.28	0.04	

### Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets:		Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter	Aperture Area	Weight	
				Horz	Lateral							
			ft	ft	°	°	ft	ft	ft <sup>2</sup>	K		
Andrew HP6	A	Paraboloid w/Shroud (HP)	From Leg	2.00		Worst		264.00	6.00	No Ice	28.27	0.38
				0.00						1/2" Ice	29.07	0.62
				0.00						1" Ice	29.87	0.86
Andrew HP6	C	Paraboloid w/Shroud (HP)	From Leg	3.00		Worst		264.00	6.00	No Ice	28.27	0.38
				0.00						1/2" Ice	29.07	0.62
				0.00						1" Ice	29.87	0.86
2'x4' Grid	A	Grid	From Leg	1.00		Worst		254.00	3.00	No Ice	7.07	0.01
				0.00						1/2" Ice	7.47	0.05
				0.00						1" Ice	7.86	0.18
2'x4' Grid	A	Grid	From Leg	1.00		Worst		164.00	3.00	No Ice	7.07	0.01
				0.00						1/2" Ice	7.47	0.05
				0.00						1" Ice	7.86	0.18

### Tower Pressures - No Ice

$$G_H = 0.850$$

Section Elevation	z	K <sub>Z</sub>	q <sub>z</sub>	A <sub>G</sub>	F <sub>a</sub>	A <sub>F</sub>	A <sub>R</sub>	A <sub>leg</sub>	Leg %	C <sub>AA</sub> In Face	C <sub>AA</sub> Out Face
ft	ft		psf	ft <sup>2</sup>	A	ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>		ft <sup>2</sup>	ft <sup>2</sup>
T1	270.75	1.314	27	43.531	A	4.168	3.063	3.063	42.36	3.439	0.000

# tnxTower

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<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
<b>Client</b>	AT&T	<b>Designed by</b>	

Section Elevation ft	z ft	K <sub>Z</sub>	q <sub>z</sub> psf	A <sub>G</sub> ft <sup>2</sup>	F a c e	A <sub>F</sub> ft <sup>2</sup>	A <sub>R</sub> ft <sup>2</sup>	A <sub>leg</sub> ft <sup>2</sup>	Leg %	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>
276.00-265.50					B	4.168	3.063		42.36	0.000	0.000
					C	4.168	3.063		42.36	1.627	0.000
T2	263.63	1.304	27	15.547	A	1.413	1.094	1.094	43.64	1.228	0.000
265.50-261.75					B	1.413	1.094		43.64	1.417	0.000
					C	1.413	1.094		43.64	0.581	0.000
T3	259.88	1.298	27	15.547	A	2.344	1.094	1.094	31.82	1.228	0.000
261.75-258.00					B	2.344	1.094		31.82	2.361	0.000
					C	2.344	1.094		31.82	0.581	0.000
T4	256.00	1.293	26	16.583	A	1.437	1.167	1.167	44.80	1.310	0.000
258.00-254.00					B	1.437	1.167		44.80	2.519	0.000
					C	1.437	1.167		44.80	0.620	0.000
T5	248.00	1.281	26	49.750	A	4.312	3.500	3.500	44.80	3.930	0.000
254.00-242.00					B	4.312	3.500		44.80	7.556	0.000
					C	4.312	3.500		44.80	3.168	0.000
T6	232.00	1.257	26	82.917	A	7.186	5.833	5.833	44.80	6.550	0.000
242.00-222.00					B	7.186	5.833		44.80	32.614	0.000
					C	7.186	5.833		44.80	5.280	0.000
T7	214.00	1.228	25	66.667	A	7.080	5.333	5.333	42.97	5.240	0.000
222.00-206.00					B	7.080	5.333		42.97	37.845	0.000
					C	7.080	5.333		42.97	5.016	0.000
T8	204.00	1.212	25	16.667	A	1.768	1.333	1.333	42.99	1.310	0.000
206.00-202.00					B	1.768	1.333		42.99	18.019	0.000
					C	1.768	1.333		42.99	2.640	0.000
T9	200.00	1.205	25	16.667	A	3.057	1.333	1.333	30.37	1.310	0.000
202.00-198.00					B	3.057	1.333		30.37	18.019	0.000
					C	3.057	1.333		30.37	2.640	0.000
T10	196.00	1.198	25	16.667	A	1.768	1.333	1.333	42.99	1.310	0.000
198.00-194.00					B	1.768	1.333		42.99	18.145	0.000
					C	1.768	1.333		42.99	2.640	0.000
T11	188.00	1.184	24	50.000	A	5.305	4.000	4.000	42.99	3.930	0.000
194.00-182.00					B	5.305	4.000		42.99	54.812	0.000
					C	5.305	4.000		42.99	7.920	0.000
T12	172.00	1.154	24	83.333	A	7.712	6.667	6.667	46.36	6.550	0.000
182.00-162.00					B	7.712	6.667		46.36	91.480	0.000
					C	7.712	6.667		46.36	13.200	0.000
T13	160.00	1.13	23	16.667	A	1.542	1.333	1.333	46.36	1.310	0.000
162.00-158.00					B	1.542	1.333		46.36	18.523	0.000
					C	1.542	1.333		46.36	3.076	0.000
T14	156.00	1.122	23	16.667	A	1.542	1.333	1.333	46.36	1.310	0.000
158.00-154.00					B	1.542	1.333		46.36	18.523	0.000
					C	1.542	1.333		46.36	3.076	0.000
T15	152.00	1.114	23	16.667	A	1.542	1.333	1.333	46.36	7.012	0.000
154.00-150.00					B	1.542	1.333		46.36	18.523	0.000
					C	1.542	1.333		46.36	3.076	0.000
T16	148.00	1.105	23	16.667	A	1.542	1.333	1.333	46.36	12.714	0.000
150.00-146.00					B	1.542	1.333		46.36	18.523	0.000
					C	1.542	1.333		46.36	3.076	0.000
T17	144.00	1.097	22	16.667	A	1.542	1.333	1.333	46.36	12.714	0.000
146.00-142.00					B	1.542	1.333		46.36	18.523	0.000
					C	1.542	1.333		46.36	3.076	0.000
T18	140.00	1.088	22	16.667	A	1.542	1.333	1.333	46.36	12.714	0.000
142.00-138.00					B	1.542	1.333		46.36	18.523	0.000
					C	1.542	1.333		46.36	3.076	0.000
T19	136.00	1.079	22	16.667	A	1.542	1.333	1.333	46.36	12.714	0.000
138.00-134.00					B	1.542	1.333		46.36	18.523	0.000
					C	1.542	1.333		46.36	3.076	0.000
T20	132.00	1.07	22	16.667	A	1.542	1.333	1.333	46.36	12.714	0.000
134.00-130.00					B	1.542	1.333		46.36	18.523	0.000
					C	1.542	1.333		46.36	3.076	0.000
T21	128.00	1.06	22	16.667	A	2.181	1.333	1.333	37.94	12.714	0.000



# tnxTower

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<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
<b>Client</b>	AT&T	<b>Designed by</b>	

Section Elevation ft	z ft	K <sub>Z</sub>	q <sub>z</sub> psf	A <sub>G</sub> ft <sup>2</sup>	F a c e	A <sub>F</sub> ft <sup>2</sup>	A <sub>R</sub> ft <sup>2</sup>	A <sub>leg</sub> ft <sup>2</sup>	Leg %	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>
130.00-126.00					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	3.076	0.000
T22	124.00	1.051	22	16.667	A	1.542	1.333	1.333	46.36	12.714	0.000
126.00-122.00					B	1.542	1.333		46.36	18.523	0.000
					C	1.542	1.333		46.36	3.076	0.000
T23	112.00	1.021	21	83.333	A	7.712	6.667	6.667	46.36	63.570	0.000
122.00-102.00					B	7.712	6.667		46.36	92.614	0.000
					C	7.712	6.667		46.36	18.738	0.000
T24	100.00	0.988	20	16.667	A	2.181	1.333	1.333	37.94	12.714	0.000
102.00-98.00					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T25	96.00	0.977	20	16.667	A	2.181	1.333	1.333	37.94	12.714	0.000
98.00-94.00					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T26	92.00	0.965	20	16.667	A	2.181	1.333	1.333	37.94	12.714	0.000
94.00-90.00					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T27	88.00	0.953	20	16.667	A	2.181	1.333	1.333	37.94	12.714	0.000
90.00-86.00					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T28	84.00	0.94	19	16.667	A	2.181	1.333	1.333	37.94	12.714	0.000
86.00-82.00					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T29	80.00	0.927	19	16.667	A	2.181	1.333	1.333	37.94	12.714	0.000
82.00-78.00					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T30	76.00	0.914	19	16.667	A	2.181	1.333	1.333	37.94	12.714	0.000
78.00-74.00					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T31	72.00	0.9	18	16.667	A	2.181	1.333	1.333	37.94	12.714	0.000
74.00-70.00					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T32	68.00	0.885	18	16.667	A	2.181	1.333	1.333	37.94	12.714	0.000
70.00-66.00					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T33	64.00	0.87	18	16.667	A	2.181	1.333	1.333	37.94	12.714	0.000
66.00-62.00					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T34	60.00	0.854	17	16.667	A	2.341	1.333	1.333	36.29	12.714	0.000
62.00-58.00					B	2.341	1.333		36.29	18.523	0.000
					C	2.341	1.333		36.29	4.109	0.000
T35	56.00	0.837	17	16.667	A	2.181	1.333	1.333	37.94	12.802	0.000
58.00-54.00					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T36	52.00	0.82	17	16.667	A	2.181	1.333	1.333	37.94	12.890	0.000
54.00-50.00					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T37	48.00	0.801	16	16.667	A	2.181	1.333	1.333	37.94	12.890	0.000
50.00-46.00					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T38	44.00	0.782	16	16.667	A	2.181	1.333	1.333	37.94	12.890	0.000
46.00-42.00					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T39	40.00	0.761	16	16.667	A	2.341	1.333	1.333	36.29	12.890	0.000
42.00-38.00					B	2.341	1.333		36.29	18.523	0.000
					C	2.341	1.333		36.29	4.109	0.000
T40	36.00	0.738	15	16.667	A	2.341	1.333	1.333	36.29	12.890	0.000
38.00-34.00					B	2.341	1.333		36.29	18.523	0.000
					C	2.341	1.333		36.29	4.109	0.000
T41	32.00	0.714	15	16.667	A	2.341	1.333	1.333	36.29	12.890	0.000

<b>tnxTower</b>  <b>Maser Consulting</b> 2000 Midlantic Drive, Suite 100 Mt. Laurel, NJ Phone: 856 797-0412 FAX: 856 722-1120	<b>Job</b>	18946008A	<b>Page</b>	55 of 133
	<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
	<b>Client</b>	AT&T	<b>Designed by</b>	

Section Elevation ft	z ft	K <sub>Z</sub>	q <sub>z</sub> psf	A <sub>G</sub> ft <sup>2</sup>	F a c e	A <sub>F</sub> ft <sup>2</sup>	A <sub>R</sub> ft <sup>2</sup>	A <sub>leg</sub> ft <sup>2</sup>	Leg %	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>
34.00-30.00					B	2.341	1.333		36.29	18.523	0.000
					C	2.341	1.333		36.29	4.109	0.000
T42	28.00	0.7	14	16.667	A	2.341	1.333	1.333	36.29	12.890	0.000
30.00-26.00					B	2.341	1.333		36.29	18.523	0.000
					C	2.341	1.333		36.29	4.109	0.000
T43	24.00	0.7	14	16.667	A	2.341	1.333	1.333	36.29	12.890	0.000
26.00-22.00					B	2.341	1.333		36.29	18.523	0.000
					C	2.341	1.333		36.29	4.109	0.000
T44	20.00	0.7	14	16.667	A	2.341	1.333	1.333	36.29	12.890	0.000
22.00-18.00					B	2.341	1.333		36.29	18.523	0.000
					C	2.341	1.333		36.29	4.197	0.000
T45	16.00	0.7	14	16.667	A	2.341	1.333	1.333	36.29	12.890	0.000
18.00-14.00					B	2.341	1.333		36.29	18.523	0.000
					C	2.341	1.333		36.29	4.285	0.000
T46	12.00	0.7	14	16.667	A	2.341	1.333	1.333	36.29	12.890	0.000
14.00-10.00					B	2.341	1.333		36.29	18.523	0.000
					C	2.341	1.333		36.29	4.285	0.000
T47 10.00-6.00	8.00	0.7	14	16.667	A	2.341	1.333	1.333	36.29	6.445	0.000
					B	2.341	1.333		36.29	9.261	0.000
					C	2.341	1.333		36.29	2.143	0.000
T48 6.00-2.00	4.00	0.7	14	16.667	A	2.341	1.333	1.333	36.29	0.000	0.000
					B	2.341	1.333		36.29	0.000	0.000
					C	2.341	1.333		36.29	0.000	0.000

### Tower Pressure - With Ice

$G_H = 0.850$

Section Elevation ft	z ft	K <sub>Z</sub>	q <sub>z</sub> psf	t <sub>z</sub> in	A <sub>G</sub> ft <sup>2</sup>	F a c e	A <sub>F</sub> ft <sup>2</sup>	A <sub>R</sub> ft <sup>2</sup>	A <sub>leg</sub> ft <sup>2</sup>	Leg %	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>
T1	270.75	1.314	7	1.8514	46.771	A	4.168	17.851	9.542	43.34	17.435	0.000
276.00-265.50						B	4.168	17.851		43.34	0.000	0.000
						C	4.168	17.851		43.34	5.515	0.000
T2	263.63	1.304	7	1.8465	16.701	A	1.413	6.214	3.402	44.61	6.214	0.000
265.50-261.75						B	1.413	6.214		44.61	5.584	0.000
						C	1.413	6.214		44.61	1.966	0.000
T3	259.88	1.298	7	1.8438	16.699	A	2.344	7.830	3.399	33.40	6.206	0.000
261.75-258.00						B	2.344	7.830		33.40	9.301	0.000
						C	2.344	7.830		33.40	1.964	0.000
T4	256.00	1.293	7	1.8410	17.811	A	1.437	6.476	3.621	45.76	6.612	0.000
258.00-254.00						B	1.437	6.476		45.76	9.913	0.000
						C	1.437	6.476		45.76	2.093	0.000
T5	248.00	1.281	7	1.8352	53.420	A	4.312	19.379	10.841	45.76	19.786	0.000
254.00-242.00						B	4.312	19.379		45.76	29.691	0.000
						C	4.312	19.379		45.76	11.977	0.000
T6	232.00	1.257	7	1.8230	88.993	A	7.186	32.122	17.987	45.76	32.801	0.000
242.00-222.00						B	7.186	32.122		45.76	89.965	0.000
						C	7.186	32.122		45.76	19.864	0.000
T7	214.00	1.228	7	1.8083	71.489	A	7.080	26.145	14.978	45.08	26.072	0.000
222.00-206.00						B	7.080	26.145		45.08	94.441	0.000
						C	7.080	26.145		45.08	18.566	0.000
T8	204.00	1.212	7	1.7997	17.866	A	1.768	6.509	3.733	45.10	6.493	0.000
206.00-202.00						B	1.768	6.509		45.10	38.973	0.000
						C	1.768	6.509		45.10	9.461	0.000

# tnxTower

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<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
<b>Client</b>	AT&T	<b>Designed by</b>	

Section Elevation	z	Kz	qz	tz	AG	F a c e	AF	AR	Aleg	Leg %	CAAA In Face ft <sup>2</sup>	CAAA Out Face ft <sup>2</sup>
ft	ft		psf	in	ft <sup>2</sup>		ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>			
T9 202.00-198.00	200.00	1.205	7	1.7962	17.864	A	3.057	8.121	3.728	33.35	6.483	0.000
						B	3.057	8.121		33.35	38.943	0.000
						C	3.057	8.121		33.35	9.451	0.000
T10 198.00-194.00	196.00	1.198	7	1.7925	17.862	A	1.768	6.488	3.723	45.10	6.472	0.000
						B	1.768	6.488		45.10	39.755	0.000
						C	1.768	6.488		45.10	9.440	0.000
T11 194.00-182.00	188.00	1.184	6	1.7851	53.570	A	5.305	19.400	11.140	45.09	19.353	0.000
						B	5.305	19.400		45.09	121.585	0.000
						C	5.305	19.400		45.09	28.253	0.000
T12 182.00-162.00	172.00	1.154	6	1.7693	89.231	A	7.712	32.106	18.462	46.36	32.027	0.000
						B	7.712	32.106		46.36	202.737	0.000
						C	7.712	32.106		46.36	46.854	0.000
T13 162.00-158.00	160.00	1.13	6	1.7565	17.838	A	1.542	6.385	3.675	46.36	6.369	0.000
						B	1.542	6.385		46.36	41.919	0.000
						C	1.542	6.385		46.36	11.174	0.000
T14 158.00-154.00	156.00	1.122	6	1.7521	17.835	A	1.542	6.372	3.669	46.36	6.356	0.000
						B	1.542	6.372		46.36	41.874	0.000
						C	1.542	6.372		46.36	11.157	0.000
T15 154.00-150.00	152.00	1.114	6	1.7475	17.832	A	1.542	6.359	3.663	46.36	18.933	0.000
						B	1.542	6.359		46.36	41.828	0.000
						C	1.542	6.359		46.36	11.140	0.000
T16 150.00-146.00	148.00	1.105	6	1.7429	17.829	A	1.542	6.345	3.657	46.36	31.479	0.000
						B	1.542	6.345		46.36	41.781	0.000
						C	1.542	6.345		46.36	11.123	0.000
T17 146.00-142.00	144.00	1.097	6	1.7381	17.825	A	1.542	6.332	3.651	46.36	31.434	0.000
						B	1.542	6.332		46.36	41.732	0.000
						C	1.542	6.332		46.36	11.105	0.000
T18 142.00-138.00	140.00	1.088	6	1.7332	17.822	A	1.542	6.318	3.644	46.36	31.388	0.000
						B	1.542	6.318		46.36	41.683	0.000
						C	1.542	6.318		46.36	11.086	0.000
T19 138.00-134.00	136.00	1.079	6	1.7282	17.819	A	1.542	6.303	3.638	46.36	31.341	0.000
						B	1.542	6.303		46.36	41.632	0.000
						C	1.542	6.303		46.36	11.068	0.000
T20 134.00-130.00	132.00	1.07	6	1.7230	17.815	A	1.542	6.288	3.631	46.36	31.293	0.000
						B	1.542	6.288		46.36	41.580	0.000
						C	1.542	6.288		46.36	11.048	0.000
T21 130.00-126.00	128.00	1.06	6	1.7178	17.812	A	2.181	7.371	3.624	37.94	31.243	0.000
						B	2.181	7.371		37.94	41.526	0.000
						C	2.181	7.371		37.94	11.028	0.000
T22 126.00-122.00	124.00	1.051	6	1.7123	17.808	A	1.542	6.258	3.616	46.36	31.192	0.000
						B	1.542	6.258		46.36	41.471	0.000
						C	1.542	6.258		46.36	11.008	0.000
T23 122.00-102.00	112.00	1.021	6	1.6950	88.983	A	7.712	31.038	17.966	46.36	155.148	0.000
						B	7.712	31.038		46.36	206.475	0.000
						C	7.712	31.038		46.36	62.477	0.000
T24 102.00-98.00	100.00	0.988	5	1.6759	17.784	A	2.181	7.223	3.568	37.94	30.851	0.000
						B	2.181	7.223		37.94	41.101	0.000
						C	2.181	7.223		37.94	13.245	0.000
T25 98.00-94.00	96.00	0.977	5	1.6690	17.779	A	2.181	7.199	3.559	37.94	30.787	0.000
						B	2.181	7.199		37.94	41.032	0.000
						C	2.181	7.199		37.94	13.213	0.000
T26 94.00-90.00	92.00	0.965	5	1.6620	17.775	A	2.181	7.174	3.549	37.94	30.720	0.000
						B	2.181	7.174		37.94	40.960	0.000
						C	2.181	7.174		37.94	13.181	0.000
T27 90.00-86.00	88.00	0.953	5	1.6546	17.770	A	2.181	7.149	3.539	37.94	30.651	0.000
						B	2.181	7.149		37.94	40.886	0.000
						C	2.181	7.149		37.94	13.147	0.000
T28 86.00-82.00	84.00	0.94	5	1.6469	17.765	A	2.181	7.122	3.529	37.94	30.579	0.000
						B	2.181	7.122		37.94	40.808	0.000
						C	2.181	7.122		37.94	13.112	0.000

# tnxTower

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<b>Job</b>	18946008A	<b>Page</b>	57 of 133
<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
<b>Client</b>	AT&T	<b>Designed by</b>	

Section Elevation ft	z ft	Kz	qz psf	tz in	AG ft <sup>2</sup>	F a c e	AF ft <sup>2</sup>	AR ft <sup>2</sup>	Aleg ft <sup>2</sup>	Leg %	CAAA In Face ft <sup>2</sup>	CAAA Out Face ft <sup>2</sup>
T29 82.00-78.00	80.00	0.927	5	1.6389	17.759	A	2.181	7.093	3.519	37.94	30.504	0.000
						B	2.181	7.093		37.94	40.727	0.000
						C	2.181	7.093		37.94	13.076	0.000
T30 78.00-74.00	76.00	0.914	5	1.6305	17.754	A	2.181	7.064	3.507	37.94	30.425	0.000
						B	2.181	7.064		37.94	40.642	0.000
						C	2.181	7.064		37.94	13.037	0.000
T31 74.00-70.00	72.00	0.9	5	1.6217	17.748	A	2.181	7.033	3.496	37.94	30.343	0.000
						B	2.181	7.033		37.94	40.553	0.000
						C	2.181	7.033		37.94	12.997	0.000
T32 70.00-66.00	68.00	0.885	5	1.6125	17.742	A	2.181	7.001	3.483	37.94	30.256	0.000
						B	2.181	7.001		37.94	40.459	0.000
						C	2.181	7.001		37.94	12.955	0.000
T33 66.00-62.00	64.00	0.87	5	1.6027	17.735	A	2.181	6.966	3.470	37.94	30.165	0.000
						B	2.181	6.966		37.94	40.360	0.000
						C	2.181	6.966		37.94	12.911	0.000
T34 62.00-58.00	60.00	0.854	5	1.5924	17.728	A	2.341	6.930	3.457	37.28	30.068	0.000
						B	2.341	6.930		37.28	40.256	0.000
						C	2.341	6.930		37.28	12.864	0.000
T35 58.00-54.00	56.00	0.837	5	1.5815	17.721	A	2.181	6.892	3.442	37.94	30.686	0.000
						B	2.181	6.892		37.94	40.145	0.000
						C	2.181	6.892		37.94	12.814	0.000
T36 54.00-50.00	52.00	0.82	4	1.5698	17.713	A	2.181	6.851	3.426	37.94	31.288	0.000
						B	2.181	6.851		37.94	40.027	0.000
						C	2.181	6.851		37.94	12.760	0.000
T37 50.00-46.00	48.00	0.801	4	1.5573	17.705	A	2.181	6.807	3.410	37.94	31.161	0.000
						B	2.181	6.807		37.94	39.900	0.000
						C	2.181	6.807		37.94	12.703	0.000
T38 46.00-42.00	44.00	0.782	4	1.5438	17.696	A	2.181	6.759	3.392	37.94	31.024	0.000
						B	2.181	6.759		37.94	39.764	0.000
						C	2.181	6.759		37.94	12.642	0.000
T39 42.00-38.00	40.00	0.761	4	1.5291	17.686	A	2.341	6.708	3.372	37.27	30.875	0.000
						B	2.341	6.708		37.27	39.615	0.000
						C	2.341	6.708		37.27	12.575	0.000
T40 38.00-34.00	36.00	0.738	4	1.5131	17.675	A	2.341	6.651	3.351	37.26	30.712	0.000
						B	2.341	6.651		37.26	39.453	0.000
						C	2.341	6.651		37.26	12.502	0.000
T41 34.00-30.00	32.00	0.714	4	1.4954	17.664	A	2.341	6.589	3.327	37.26	30.532	0.000
						B	2.341	6.589		37.26	39.274	0.000
						C	2.341	6.589		37.26	12.421	0.000
T42 30.00-26.00	28.00	0.7	4	1.4756	17.650	A	2.341	6.519	3.301	37.25	30.330	0.000
						B	2.341	6.519		37.25	39.073	0.000
						C	2.341	6.519		37.25	12.331	0.000
T43 26.00-22.00	24.00	0.7	4	1.4530	17.635	A	2.341	6.440	3.271	37.25	30.101	0.000
						B	2.341	6.440		37.25	38.845	0.000
						C	2.341	6.440		37.25	12.228	0.000
T44 22.00-18.00	20.00	0.7	4	1.4267	17.618	A	2.341	6.348	3.236	37.24	29.834	0.000
						B	2.341	6.348		37.24	38.579	0.000
						C	2.341	6.348		37.24	12.767	0.000
T45 18.00-14.00	16.00	0.7	4	1.3952	17.597	A	2.341	6.237	3.194	37.23	29.514	0.000
						B	2.341	6.237		37.23	38.261	0.000
						C	2.341	6.237		37.23	13.257	0.000
T46 14.00-10.00	12.00	0.7	4	1.3557	17.570	A	2.341	6.098	3.141	37.22	29.112	0.000
						B	2.341	6.098		37.22	37.861	0.000
						C	2.341	6.098		37.22	13.045	0.000
T47 10.00-6.00	8.00	0.7	4	1.3018	17.535	A	2.341	5.909	3.069	37.20	14.282	0.000
						B	2.341	5.909		37.20	18.658	0.000
						C	2.341	5.909		37.20	6.378	0.000
T48 6.00-2.00	4.00	0.7	4	1.2146	17.476	A	2.341	5.602	2.953	37.17	0.000	0.000
						B	2.341	5.602		37.17	0.000	0.000
						C	2.341	5.602		37.17	0.000	0.000

<b>tnxTower</b>  <b>Maser Consulting</b> 2000 Midlantic Drive, Suite 100 Mt. Laurel, NJ Phone: 856 797-0412 FAX: 856 722-1120	<b>Job</b> 18946008A	<b>Page</b> 58 of 133
	<b>Project</b> CTL02056	<b>Date</b> 17:35:35 09/25/18
	<b>Client</b> AT&T	<b>Designed by</b>

## Tower Pressure - Service

$$G_H = 0.850$$

Section Elevation	z	K <sub>Z</sub>	q <sub>z</sub>	A <sub>G</sub>	F a c e	A <sub>F</sub>	A <sub>R</sub>	A <sub>leg</sub>	Leg %	C <sub>A</sub> A <sub>A</sub> In Face ft <sup>2</sup>	C <sub>A</sub> A <sub>A</sub> Out Face ft <sup>2</sup>
ft	ft		psf	ft <sup>2</sup>	e	ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>			
T1 276.00-265.50	270.75	1.314	10	43.531	A	4.168	3.063	3.063	42.36	3.439	0.000
					B	4.168	3.063		42.36	0.000	0.000
					C	4.168	3.063		42.36	1.627	0.000
T2 265.50-261.75	263.63	1.304	10	15.547	A	1.413	1.094	1.094	43.64	1.228	0.000
					B	1.413	1.094		43.64	1.417	0.000
					C	1.413	1.094		43.64	0.581	0.000
T3 261.75-258.00	259.88	1.298	10	15.547	A	2.344	1.094	1.094	31.82	1.228	0.000
					B	2.344	1.094		31.82	2.361	0.000
					C	2.344	1.094		31.82	0.581	0.000
T4 258.00-254.00	256.00	1.293	10	16.583	A	1.437	1.167	1.167	44.80	1.310	0.000
					B	1.437	1.167		44.80	2.519	0.000
					C	1.437	1.167		44.80	0.620	0.000
T5 254.00-242.00	248.00	1.281	10	49.750	A	4.312	3.500	3.500	44.80	3.930	0.000
					B	4.312	3.500		44.80	7.556	0.000
					C	4.312	3.500		44.80	3.168	0.000
T6 242.00-222.00	232.00	1.257	10	82.917	A	7.186	5.833	5.833	44.80	6.550	0.000
					B	7.186	5.833		44.80	32.614	0.000
					C	7.186	5.833		44.80	5.280	0.000
T7 222.00-206.00	214.00	1.228	10	66.667	A	7.080	5.333	5.333	42.97	5.240	0.000
					B	7.080	5.333		42.97	37.845	0.000
					C	7.080	5.333		42.97	5.016	0.000
T8 206.00-202.00	204.00	1.212	9	16.667	A	1.768	1.333	1.333	42.99	1.310	0.000
					B	1.768	1.333		42.99	18.019	0.000
					C	1.768	1.333		42.99	2.640	0.000
T9 202.00-198.00	200.00	1.205	9	16.667	A	3.057	1.333	1.333	30.37	1.310	0.000
					B	3.057	1.333		30.37	18.019	0.000
					C	3.057	1.333		30.37	2.640	0.000
T10 198.00-194.00	196.00	1.198	9	16.667	A	1.768	1.333	1.333	42.99	1.310	0.000
					B	1.768	1.333		42.99	18.145	0.000
					C	1.768	1.333		42.99	2.640	0.000
T11 194.00-182.00	188.00	1.184	9	50.000	A	5.305	4.000	4.000	42.99	3.930	0.000
					B	5.305	4.000		42.99	54.812	0.000
					C	5.305	4.000		42.99	7.920	0.000
T12 182.00-162.00	172.00	1.154	9	83.333	A	7.712	6.667	6.667	46.36	6.550	0.000
					B	7.712	6.667		46.36	91.480	0.000
					C	7.712	6.667		46.36	13.200	0.000
T13 162.00-158.00	160.00	1.13	9	16.667	A	1.542	1.333	1.333	46.36	1.310	0.000
					B	1.542	1.333		46.36	18.523	0.000
					C	1.542	1.333		46.36	3.076	0.000
T14 158.00-154.00	156.00	1.122	9	16.667	A	1.542	1.333	1.333	46.36	1.310	0.000
					B	1.542	1.333		46.36	18.523	0.000
					C	1.542	1.333		46.36	3.076	0.000
T15 154.00-150.00	152.00	1.114	9	16.667	A	1.542	1.333	1.333	46.36	7.012	0.000
					B	1.542	1.333		46.36	18.523	0.000
					C	1.542	1.333		46.36	3.076	0.000
T16 150.00-146.00	148.00	1.105	9	16.667	A	1.542	1.333	1.333	46.36	12.714	0.000
					B	1.542	1.333		46.36	18.523	0.000
					C	1.542	1.333		46.36	3.076	0.000
T17 146.00-142.00	144.00	1.097	9	16.667	A	1.542	1.333	1.333	46.36	12.714	0.000
					B	1.542	1.333		46.36	18.523	0.000

# tnxTower

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<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
<b>Client</b>	AT&T	<b>Designed by</b>	

Section Elevation ft	z ft	K <sub>Z</sub>	q <sub>z</sub> psf	A <sub>G</sub> ft <sup>2</sup>	F a c e	A <sub>F</sub> ft <sup>2</sup>	A <sub>R</sub> ft <sup>2</sup>	A <sub>leg</sub> ft <sup>2</sup>	Leg %	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>
T18 142.00-138.00	140.00	1.088	9	16.667	C	1.542	1.333		46.36	3.076	0.000
					A	1.542	1.333	1.333	46.36	12.714	0.000
					B	1.542	1.333		46.36	18.523	0.000
					C	1.542	1.333		46.36	3.076	0.000
T19 138.00-134.00	136.00	1.079	8	16.667	A	1.542	1.333	1.333	46.36	12.714	0.000
					B	1.542	1.333		46.36	18.523	0.000
					C	1.542	1.333		46.36	3.076	0.000
T20 134.00-130.00	132.00	1.07	8	16.667	A	1.542	1.333	1.333	46.36	12.714	0.000
					B	1.542	1.333		46.36	18.523	0.000
					C	1.542	1.333		46.36	3.076	0.000
T21 130.00-126.00	128.00	1.06	8	16.667	A	2.181	1.333	1.333	37.94	12.714	0.000
					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	3.076	0.000
T22 126.00-122.00	124.00	1.051	8	16.667	A	1.542	1.333	1.333	46.36	12.714	0.000
					B	1.542	1.333		46.36	18.523	0.000
					C	1.542	1.333		46.36	3.076	0.000
T23 122.00-102.00	112.00	1.021	8	83.333	A	7.712	6.667	6.667	46.36	63.570	0.000
					B	7.712	6.667		46.36	92.614	0.000
					C	7.712	6.667		46.36	18.738	0.000
T24 102.00-98.00	100.00	0.988	8	16.667	A	2.181	1.333	1.333	37.94	12.714	0.000
					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T25 98.00-94.00	96.00	0.977	8	16.667	A	2.181	1.333	1.333	37.94	12.714	0.000
					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T26 94.00-90.00	92.00	0.965	8	16.667	A	2.181	1.333	1.333	37.94	12.714	0.000
					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T27 90.00-86.00	88.00	0.953	7	16.667	A	2.181	1.333	1.333	37.94	12.714	0.000
					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T28 86.00-82.00	84.00	0.94	7	16.667	A	2.181	1.333	1.333	37.94	12.714	0.000
					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T29 82.00-78.00	80.00	0.927	7	16.667	A	2.181	1.333	1.333	37.94	12.714	0.000
					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T30 78.00-74.00	76.00	0.914	7	16.667	A	2.181	1.333	1.333	37.94	12.714	0.000
					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T31 74.00-70.00	72.00	0.9	7	16.667	A	2.181	1.333	1.333	37.94	12.714	0.000
					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T32 70.00-66.00	68.00	0.885	7	16.667	A	2.181	1.333	1.333	37.94	12.714	0.000
					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T33 66.00-62.00	64.00	0.87	7	16.667	A	2.181	1.333	1.333	37.94	12.714	0.000
					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T34 62.00-58.00	60.00	0.854	7	16.667	A	2.341	1.333	1.333	36.29	12.714	0.000
					B	2.341	1.333		36.29	18.523	0.000
					C	2.341	1.333		36.29	4.109	0.000
T35 58.00-54.00	56.00	0.837	7	16.667	A	2.181	1.333	1.333	37.94	12.802	0.000
					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T36 54.00-50.00	52.00	0.82	6	16.667	A	2.181	1.333	1.333	37.94	12.890	0.000
					B	2.181	1.333		37.94	18.523	0.000
					C	2.181	1.333		37.94	4.109	0.000
T37 50.00-46.00	48.00	0.801	6	16.667	A	2.181	1.333	1.333	37.94	12.890	0.000
					B	2.181	1.333		37.94	18.523	0.000

<b>tnxTower</b>  <b>Maser Consulting</b> 2000 Midlantic Drive, Suite 100 Mt. Laurel, NJ Phone: 856 797-0412 FAX: 856 722-1120	<b>Job</b> 18946008A	<b>Page</b> 60 of 133
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Section Elevation ft	z ft	K <sub>Z</sub>	q <sub>z</sub> psf	A <sub>G</sub> ft <sup>2</sup>	F <sub>a</sub> c e	A <sub>F</sub> ft <sup>2</sup>	A <sub>R</sub> ft <sup>2</sup>	A <sub>leg</sub> ft <sup>2</sup>	Leg %	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>
T38 46.00-42.00	44.00	0.782	6	16.667	C	2.181	1.333	1.333	37.94	4.109	0.000
					A	2.181	1.333			12.890	0.000
					B	2.181	1.333			18.523	0.000
T39 42.00-38.00	40.00	0.761	6	16.667	C	2.181	1.333	1.333	37.94	4.109	0.000
					A	2.341	1.333			12.890	0.000
					B	2.341	1.333			18.523	0.000
T40 38.00-34.00	36.00	0.738	6	16.667	C	2.341	1.333	1.333	36.29	4.109	0.000
					A	2.341	1.333			12.890	0.000
					B	2.341	1.333			18.523	0.000
T41 34.00-30.00	32.00	0.714	6	16.667	C	2.341	1.333	1.333	36.29	4.109	0.000
					A	2.341	1.333			12.890	0.000
					B	2.341	1.333			18.523	0.000
T42 30.00-26.00	28.00	0.7	5	16.667	C	2.341	1.333	1.333	36.29	4.109	0.000
					A	2.341	1.333			12.890	0.000
					B	2.341	1.333			18.523	0.000
T43 26.00-22.00	24.00	0.7	5	16.667	C	2.341	1.333	1.333	36.29	4.109	0.000
					A	2.341	1.333			12.890	0.000
					B	2.341	1.333			18.523	0.000
T44 22.00-18.00	20.00	0.7	5	16.667	C	2.341	1.333	1.333	36.29	4.197	0.000
					A	2.341	1.333			12.890	0.000
					B	2.341	1.333			18.523	0.000
T45 18.00-14.00	16.00	0.7	5	16.667	C	2.341	1.333	1.333	36.29	4.285	0.000
					A	2.341	1.333			12.890	0.000
					B	2.341	1.333			18.523	0.000
T46 14.00-10.00	12.00	0.7	5	16.667	C	2.341	1.333	1.333	36.29	4.285	0.000
					A	2.341	1.333			12.890	0.000
					B	2.341	1.333			18.523	0.000
T47 10.00-6.00	8.00	0.7	5	16.667	C	2.341	1.333	1.333	36.29	4.285	0.000
					A	2.341	1.333			6.445	0.000
					B	2.341	1.333			9.261	0.000
T48 6.00-2.00	4.00	0.7	5	16.667	C	2.341	1.333	1.333	36.29	2.143	0.000
					A	2.341	1.333			0.000	0.000
					B	2.341	1.333			0.000	0.000
					C	2.341	1.333		36.29	0.000	0.000

### Tower Forces - No Ice - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	F <sub>a</sub> c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T1 276.00-265.50	0.09	0.46	A	0.166	2.713	27	1	1	5.911	0.44	41.54	C
			B	0.166	2.713	1	1	5.911				
			C	0.166	2.713	1	1	5.911				
T2 265.50-261.75	0.04	0.16	A	0.161	2.731	27	1	1	2.035	0.17	45.33	C
			B	0.161	2.731	1	1	2.035				
			C	0.161	2.731	1	1	2.035				
T3 261.75-258.00	0.04	0.24 TA 0.69	A	0.221	2.527	27	1	1	2.977	0.23	60.40	C
			B	0.221	2.527	1	1	2.977				
			C	0.221	2.527	1	1	2.977				
T4 258.00-254.00	0.04	0.17	A	0.157	2.746	26	1	1	2.100	0.19	47.45	C
			B	0.157	2.746	1	1	2.100				
			C	0.157	2.746	1	1	2.100				
T5 254.00-242.00	0.13	0.50	A	0.157	2.746	26	1	1	6.301	0.58	48.48	C
			B	0.157	2.746	1	1	6.301				
			C	0.157	2.746	1	1	6.301				
T6	0.30	0.83	A	0.157	2.746	26	1	1	10.501	1.21	60.70	B

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Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
242.00-222.00			B	0.157	2.746		1	1	10.501			
			C	0.157	2.746		1	1	10.501			
T7	0.29	0.92	A	0.186	2.643	25	1	1	10.131	1.18	73.45	B
222.00-206.00			B	0.186	2.643		1	1	10.131			
			C	0.186	2.643		1	1	10.131			
T8	0.11	0.26	A	0.186	2.643	25	1	1	2.531	0.39	97.85	B
206.00-202.00			B	0.186	2.643		1	1	2.531			
			C	0.186	2.643		1	1	2.531			
T9	0.11	0.41	A	0.263	2.398	25	1	1	3.842	0.44	110.52	B
202.00-198.00		TA 0.69	B	0.263	2.398		1	1	3.842			
			C	0.263	2.398		1	1	3.842			
T10	0.11	0.26	A	0.186	2.643	25	1	1	2.531	0.39	97.13	B
198.00-194.00			B	0.186	2.643		1	1	2.531			
			C	0.186	2.643		1	1	2.531			
T11	0.35	0.69	A	0.186	2.643	24	1	1	7.594	1.16	96.37	B
194.00-182.00			B	0.186	2.643		1	1	7.594			
			C	0.186	2.643		1	1	7.594			
T12	0.58	1.08	A	0.173	2.69	24	1	1	11.514	1.83	91.55	B
182.00-162.00			B	0.173	2.69		1	1	11.514			
			C	0.173	2.69		1	1	11.514			
T13	0.12	0.22	A	0.173	2.69	23	1	1	2.303	0.37	91.63	B
162.00-158.00			B	0.173	2.69		1	1	2.303			
			C	0.173	2.69		1	1	2.303			
T14	0.12	0.22	A	0.173	2.69	23	1	1	2.303	0.36	90.97	B
158.00-154.00			B	0.173	2.69		1	1	2.303			
			C	0.173	2.69		1	1	2.303			
T15	0.15	0.22	A	0.173	2.69	23	1	1	2.303	0.41	103.04	A
154.00-150.00			B	0.173	2.69		1	1	2.303			
			C	0.173	2.69		1	1	2.303			
T16	0.19	0.22	A	0.173	2.69	23	1	1	2.303	0.48	119.48	A
150.00-146.00			B	0.173	2.69		1	1	2.303			
			C	0.173	2.69		1	1	2.303			
T17	0.19	0.24	A	0.173	2.69	22	1	1	2.303	0.47	118.55	A
146.00-142.00			B	0.173	2.69		1	1	2.303			
			C	0.173	2.69		1	1	2.303			
T18	0.19	0.24	A	0.173	2.69	22	1	1	2.303	0.47	117.60	A
142.00-138.00			B	0.173	2.69		1	1	2.303			
			C	0.173	2.69		1	1	2.303			
T19	0.19	0.24	A	0.173	2.69	22	1	1	2.303	0.47	116.63	A
138.00-134.00			B	0.173	2.69		1	1	2.303			
			C	0.173	2.69		1	1	2.303			
T20	0.19	0.24	A	0.173	2.69	22	1	1	2.303	0.46	115.64	A
134.00-130.00			B	0.173	2.69		1	1	2.303			
			C	0.173	2.69		1	1	2.303			
T21	0.19	0.25	A	0.211	2.56	22	1	1	2.950	0.48	120.89	A
130.00-126.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T22	0.19	0.22	A	0.173	2.69	22	1	1	2.303	0.45	113.59	A
126.00-122.00			B	0.173	2.69		1	1	2.303			
			C	0.173	2.69		1	1	2.303			
T23	0.96	1.08	A	0.173	2.69	21	1	1	11.514	2.24	112.13	A
122.00-102.00			B	0.173	2.69		1	1	11.514			
			C	0.173	2.69		1	1	11.514			
T24	0.19	0.23	A	0.211	2.56	20	1	1	2.950	0.46	115.32	A
102.00-98.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T25	0.19	0.23	A	0.211	2.56	20	1	1	2.950	0.46	113.99	A
98.00-94.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T26	0.19	0.23	A	0.211	2.56	20	1	1	2.950	0.45	112.61	A



# tnxTower

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Section Elevation	Add Weight	Self Weight	F a c e	e	C <sub>F</sub>	q <sub>z</sub>	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub>	F	w	Ctrl. Face
ft	K	K				psf			ft <sup>2</sup>	K	plf	
94.00-90.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T27	0.19	0.23	A	0.211	2.56	20	1	1	2.950	0.44	111.19	A
90.00-86.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T28	0.19	0.23	A	0.211	2.56	19	1	1	2.950	0.44	109.72	A
86.00-82.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T29	0.19	0.23	A	0.211	2.56	19	1	1	2.950	0.43	108.20	A
82.00-78.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T30	0.19	0.23	A	0.211	2.56	19	1	1	2.950	0.43	106.63	A
78.00-74.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T31	0.19	0.25	A	0.211	2.56	18	1	1	2.950	0.42	104.99	A
74.00-70.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T32	0.19	0.25	A	0.211	2.56	18	1	1	2.950	0.41	103.29	A
70.00-66.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T33	0.19	0.25	A	0.211	2.56	18	1	1	2.950	0.41	101.52	A
66.00-62.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T34	0.19	0.27	A	0.22	2.529	17	1	1	3.112	0.40	100.85	A
62.00-58.00			B	0.22	2.529		1	1	3.112			
			C	0.22	2.529		1	1	3.112			
T35	0.19	0.25	A	0.211	2.56	17	1	1	2.950	0.39	97.91	A
58.00-54.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T36	0.19	0.25	A	0.211	2.56	17	1	1	2.950	0.38	96.05	A
54.00-50.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T37	0.19	0.25	A	0.211	2.56	16	1	1	2.950	0.38	93.88	A
50.00-46.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T38	0.19	0.23	A	0.211	2.56	16	1	1	2.950	0.37	91.57	A
46.00-42.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T39	0.19	0.25	A	0.22	2.529	16	1	1	3.112	0.36	90.17	A
42.00-38.00			B	0.22	2.529		1	1	3.112			
			C	0.22	2.529		1	1	3.112			
T40	0.19	0.25	A	0.22	2.529	15	1	1	3.112	0.35	87.49	A
38.00-34.00			B	0.22	2.529		1	1	3.112			
			C	0.22	2.529		1	1	3.112			
T41	0.19	0.25	A	0.22	2.529	15	1	1	3.112	0.34	84.60	A
34.00-30.00			B	0.22	2.529		1	1	3.112			
			C	0.22	2.529		1	1	3.112			
T42	0.19	0.25	A	0.22	2.529	14	1	1	3.112	0.33	82.98	A
30.00-26.00			B	0.22	2.529		1	1	3.112			
			C	0.22	2.529		1	1	3.112			
T43	0.19	0.25	A	0.22	2.529	14	1	1	3.112	0.33	82.98	A
26.00-22.00			B	0.22	2.529		1	1	3.112			
			C	0.22	2.529		1	1	3.112			
T44	0.19	0.27	A	0.22	2.529	14	1	1	3.112	0.33	83.14	A
22.00-18.00			B	0.22	2.529		1	1	3.112			
			C	0.22	2.529		1	1	3.112			
T45	0.19	0.27	A	0.22	2.529	14	1	1	3.112	0.33	83.30	A
18.00-14.00			B	0.22	2.529		1	1	3.112			
			C	0.22	2.529		1	1	3.112			
T46	0.19	0.27	A	0.22	2.529	14	1	1	3.112	0.33	83.30	A

<b>tnxTower</b>  <b>Maser Consulting</b> 2000 Midlantic Drive, Suite 100 Mt. Laurel, NJ Phone: 856 797-0412 FAX: 856 722-1120	<b>Job</b>	18946008A	<b>Page</b>	63 of 133
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	<b>Client</b>	AT&T	<b>Designed by</b>	

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
14.00-10.00			B	0.22	2.529		1	1	3.112			
			C	0.22	2.529		1	1	3.112			
T47 10.00-6.00	0.10	0.27	A	0.22	2.529	14	1	1	3.112	0.21	53.64	A
			B	0.22	2.529		1	1	3.112			
			C	0.22	2.529		1	1	3.112			
T48 6.00-2.00	0.00	0.27	A	0.22	2.529	14	1	1	3.112	0.10	23.97	C
			B	0.22	2.529		1	1	3.112			
			C	0.22	2.529		1	1	3.112			
Sum Weight:	9.45	16.91								24.17		

### Tower Forces - No Ice - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T1 276.00-265.50	0.09	0.46	A	0.166	2.713	27	0.8	1	5.078	0.38	36.61	C
			B	0.166	2.713		0.8	1	5.078			
			C	0.166	2.713		0.8	1	5.078			
T2 265.50-261.75	0.04	0.16	A	0.161	2.731	27	0.8	1	1.752	0.15	40.66	C
			B	0.161	2.731		0.8	1	1.752			
			C	0.161	2.731		0.8	1	1.752			
T3 261.75-258.00	0.04	0.24 TA 0.69	A	0.221	2.527	27	0.8	1	2.508	0.20	53.26	C
			B	0.221	2.527		0.8	1	2.508			
			C	0.221	2.527		0.8	1	2.508			
T4 258.00-254.00	0.04	0.17	A	0.157	2.746	26	0.8	1	1.813	0.17	43.01	C
			B	0.157	2.746		0.8	1	1.813			
			C	0.157	2.746		0.8	1	1.813			
T5 254.00-242.00	0.13	0.50	A	0.157	2.746	26	0.8	1	5.438	0.53	44.08	C
			B	0.157	2.746		0.8	1	5.438			
			C	0.157	2.746		0.8	1	5.438			
T6 242.00-222.00	0.30	0.83	A	0.157	2.746	26	0.8	1	9.064	1.13	56.38	C
			B	0.157	2.746		0.8	1	9.064			
			C	0.157	2.746		0.8	1	9.064			
T7 222.00-206.00	0.29	0.92	A	0.186	2.643	25	0.8	1	8.716	1.10	68.45	C
			B	0.186	2.643		0.8	1	8.716			
			C	0.186	2.643		0.8	1	8.716			
T8 206.00-202.00	0.11	0.26	A	0.186	2.643	25	0.8	1	2.178	0.37	92.93	C
			B	0.186	2.643		0.8	1	2.178			
			C	0.186	2.643		0.8	1	2.178			
T9 202.00-198.00	0.11	0.41 TA 0.69	A	0.263	2.398	25	0.8	1	3.230	0.41	102.83	C
			B	0.263	2.398		0.8	1	3.230			
			C	0.263	2.398		0.8	1	3.230			
T10 198.00-194.00	0.11	0.26	A	0.186	2.643	25	0.8	1	2.178	0.37	92.26	C
			B	0.186	2.643		0.8	1	2.178			
			C	0.186	2.643		0.8	1	2.178			
T11 194.00-182.00	0.35	0.69	A	0.186	2.643	24	0.8	1	6.533	1.10	91.56	C
			B	0.186	2.643		0.8	1	6.533			
			C	0.186	2.643		0.8	1	6.533			
T12 182.00-162.00	0.58	1.08	A	0.173	2.69	24	0.8	1	9.971	1.75	87.38	C
			B	0.173	2.69		0.8	1	9.971			
			C	0.173	2.69		0.8	1	9.971			
T13 162.00-158.00	0.12	0.22	A	0.173	2.69	23	0.8	1	1.994	0.35	87.55	C
			B	0.173	2.69		0.8	1	1.994			

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<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
<b>Client</b>	AT&T	<b>Designed by</b>	

Section Elevation	Add Weight	Self Weight	F a c e	e	C <sub>F</sub>	q <sub>c</sub>	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub>	F	w	Ctrl. Face
ft	K	K				psf			ft <sup>2</sup>	K	plf	
T14	0.12	0.22	C	0.173	2.69		0.8	1	1.994			
158.00-154.00			A	0.173	2.69	23	0.8	1	1.994	0.35	86.92	C
			B	0.173	2.69		0.8	1	1.994			
			C	0.173	2.69		0.8	1	1.994			
T15	0.15	0.22	A	0.173	2.69	23	0.8	1	1.994	0.40	99.02	B
154.00-150.00			B	0.173	2.69		0.8	1	1.994			
			C	0.173	2.69		0.8	1	1.994			
T16	0.19	0.22	A	0.173	2.69	23	0.8	1	1.994	0.46	115.49	B
150.00-146.00			B	0.173	2.69		0.8	1	1.994			
			C	0.173	2.69		0.8	1	1.994			
T17	0.19	0.24	A	0.173	2.69	22	0.8	1	1.994	0.46	114.59	B
146.00-142.00			B	0.173	2.69		0.8	1	1.994			
			C	0.173	2.69		0.8	1	1.994			
T18	0.19	0.24	A	0.173	2.69	22	0.8	1	1.994	0.45	113.67	B
142.00-138.00			B	0.173	2.69		0.8	1	1.994			
			C	0.173	2.69		0.8	1	1.994			
T19	0.19	0.24	A	0.173	2.69	22	0.8	1	1.994	0.45	112.74	B
138.00-134.00			B	0.173	2.69		0.8	1	1.994			
			C	0.173	2.69		0.8	1	1.994			
T20	0.19	0.24	A	0.173	2.69	22	0.8	1	1.994	0.45	111.78	B
134.00-130.00			B	0.173	2.69		0.8	1	1.994			
			C	0.173	2.69		0.8	1	1.994			
T21	0.19	0.25	A	0.211	2.56	22	0.8	1	2.514	0.46	115.74	B
130.00-126.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T22	0.19	0.22	A	0.173	2.69	22	0.8	1	1.994	0.44	109.80	B
126.00-122.00			B	0.173	2.69		0.8	1	1.994			
			C	0.173	2.69		0.8	1	1.994			
T23	0.96	1.08	A	0.173	2.69	21	0.8	1	9.971	2.17	108.44	B
122.00-102.00			B	0.173	2.69		0.8	1	9.971			
			C	0.173	2.69		0.8	1	9.971			
T24	0.19	0.23	A	0.211	2.56	20	0.8	1	2.514	0.44	110.52	B
102.00-98.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T25	0.19	0.23	A	0.211	2.56	20	0.8	1	2.514	0.44	109.24	B
98.00-94.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T26	0.19	0.23	A	0.211	2.56	20	0.8	1	2.514	0.43	107.92	B
94.00-90.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T27	0.19	0.23	A	0.211	2.56	20	0.8	1	2.514	0.43	106.56	B
90.00-86.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T28	0.19	0.23	A	0.211	2.56	19	0.8	1	2.514	0.42	105.15	B
86.00-82.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T29	0.19	0.23	A	0.211	2.56	19	0.8	1	2.514	0.41	103.70	B
82.00-78.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T30	0.19	0.23	A	0.211	2.56	19	0.8	1	2.514	0.41	102.19	B
78.00-74.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T31	0.19	0.25	A	0.211	2.56	18	0.8	1	2.514	0.40	100.62	B
74.00-70.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T32	0.19	0.25	A	0.211	2.56	18	0.8	1	2.514	0.40	98.99	B
70.00-66.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T33	0.19	0.25	A	0.211	2.56	18	0.8	1	2.514	0.39	97.29	B
66.00-62.00			B	0.211	2.56		0.8	1	2.514			

<b>tnxTower</b>  <b>Maser Consulting</b> 2000 Midlantic Drive, Suite 100 Mt. Laurel, NJ Phone: 856 797-0412 FAX: 856 722-1120	<b>Job</b> 18946008A	<b>Page</b> 65 of 133
	<b>Project</b> CTL02056	<b>Date</b> 17:35:35 09/25/18
	<b>Client</b> AT&T	<b>Designed by</b>

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T34 62.00-58.00	0.19	0.27	C	0.211	2.56		0.8	1	2.514			
			A	0.22	2.529	17	0.8	1	2.644	0.39	96.45	B
			B	0.22	2.529		0.8	1	2.644			
T35 58.00-54.00	0.19	0.25	C	0.22	2.529		0.8	1	2.644			
			A	0.211	2.56	17	0.8	1	2.514	0.38	93.84	B
			B	0.211	2.56		0.8	1	2.514			
T36 54.00-50.00	0.19	0.25	C	0.211	2.56		0.8	1	2.514			
			A	0.211	2.56	17	0.8	1	2.514	0.37	92.06	B
			B	0.211	2.56		0.8	1	2.514			
T37 50.00-46.00	0.19	0.25	C	0.211	2.56		0.8	1	2.514			
			A	0.211	2.56	16	0.8	1	2.514	0.36	89.98	B
			B	0.211	2.56		0.8	1	2.514			
T38 46.00-42.00	0.19	0.23	C	0.211	2.56		0.8	1	2.514			
			A	0.211	2.56	16	0.8	1	2.514	0.35	87.77	B
			B	0.211	2.56		0.8	1	2.514			
T39 42.00-38.00	0.19	0.25	C	0.211	2.56		0.8	1	2.514			
			A	0.22	2.529	16	0.8	1	2.644	0.34	86.25	B
			B	0.22	2.529		0.8	1	2.644			
T40 38.00-34.00	0.19	0.25	C	0.22	2.529		0.8	1	2.644			
			A	0.22	2.529	15	0.8	1	2.644	0.33	83.69	B
			B	0.22	2.529		0.8	1	2.644			
T41 34.00-30.00	0.19	0.25	C	0.22	2.529		0.8	1	2.644			
			A	0.22	2.529	15	0.8	1	2.644	0.32	80.92	B
			B	0.22	2.529		0.8	1	2.644			
T42 30.00-26.00	0.19	0.25	C	0.22	2.529		0.8	1	2.644			
			A	0.22	2.529	14	0.8	1	2.644	0.32	79.37	B
			B	0.22	2.529		0.8	1	2.644			
T43 26.00-22.00	0.19	0.25	C	0.22	2.529		0.8	1	2.644			
			A	0.22	2.529	14	0.8	1	2.644	0.32	79.37	B
			B	0.22	2.529		0.8	1	2.644			
T44 22.00-18.00	0.19	0.27	C	0.22	2.529		0.8	1	2.644			
			A	0.22	2.529	14	0.8	1	2.644	0.32	79.54	B
			B	0.22	2.529		0.8	1	2.644			
T45 18.00-14.00	0.19	0.27	C	0.22	2.529		0.8	1	2.644			
			A	0.22	2.529	14	0.8	1	2.644	0.32	79.70	B
			B	0.22	2.529		0.8	1	2.644			
T46 14.00-10.00	0.19	0.27	C	0.22	2.529		0.8	1	2.644			
			A	0.22	2.529	14	0.8	1	2.644	0.32	79.70	B
			B	0.22	2.529		0.8	1	2.644			
T47 10.00-6.00	0.10	0.27	C	0.22	2.529		0.8	1	2.644			
			A	0.22	2.529	14	0.8	1	2.644	0.20	50.03	B
			B	0.22	2.529		0.8	1	2.644			
T48 6.00-2.00	0.00	0.27	C	0.22	2.529		0.8	1	2.644			
			A	0.22	2.529	14	0.8	1	2.644	0.08	20.36	C
			B	0.22	2.529		0.8	1	2.644			
Sum Weight:	9.45	16.91								22.98		

### Tower Forces - No Ice - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
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# tnxTower

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<b>Job</b>	18946008A	<b>Page</b>	66 of 133
<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
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Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T1 276.00-265.50	0.09	0.46	A	0.166	2.713	27	0.85	1	5.286	0.40	37.84	C
			B	0.166	2.713		0.85	1	5.286			
			C	0.166	2.713		0.85	1	5.286			
T2 265.50-261.75	0.04	0.16	A	0.161	2.731	27	0.85	1	1.823	0.16	41.82	C
			B	0.161	2.731		0.85	1	1.823			
			C	0.161	2.731		0.85	1	1.823			
T3 261.75-258.00	0.04	0.24 TA 0.69	A	0.221	2.527	27	0.85	1	2.625	0.21	55.04	C
			B	0.221	2.527		0.85	1	2.625			
			C	0.221	2.527		0.85	1	2.625			
T4 258.00-254.00	0.04	0.17	A	0.157	2.746	26	0.85	1	1.885	0.18	44.12	C
			B	0.157	2.746		0.85	1	1.885			
			C	0.157	2.746		0.85	1	1.885			
T5 254.00-242.00	0.13	0.50	A	0.157	2.746	26	0.85	1	5.654	0.54	45.18	C
			B	0.157	2.746		0.85	1	5.654			
			C	0.157	2.746		0.85	1	5.654			
T6 242.00-222.00	0.30	0.83	A	0.157	2.746	26	0.85	1	9.423	1.15	57.46	C
			B	0.157	2.746		0.85	1	9.423			
			C	0.157	2.746		0.85	1	9.423			
T7 222.00-206.00	0.29	0.92	A	0.186	2.643	25	0.85	1	9.069	1.12	69.70	C
			B	0.186	2.643		0.85	1	9.069			
			C	0.186	2.643		0.85	1	9.069			
T8 206.00-202.00	0.11	0.26	A	0.186	2.643	25	0.85	1	2.266	0.38	94.16	C
			B	0.186	2.643		0.85	1	2.266			
			C	0.186	2.643		0.85	1	2.266			
T9 202.00-198.00	0.11	0.41 TA 0.69	A	0.263	2.398	25	0.85	1	3.383	0.42	104.76	C
			B	0.263	2.398		0.85	1	3.383			
			C	0.263	2.398		0.85	1	3.383			
T10 198.00-194.00	0.11	0.26	A	0.186	2.643	25	0.85	1	2.266	0.37	93.48	C
			B	0.186	2.643		0.85	1	2.266			
			C	0.186	2.643		0.85	1	2.266			
T11 194.00-182.00	0.35	0.69	A	0.186	2.643	24	0.85	1	6.798	1.11	92.76	C
			B	0.186	2.643		0.85	1	6.798			
			C	0.186	2.643		0.85	1	6.798			
T12 182.00-162.00	0.58	1.08	A	0.173	2.69	24	0.85	1	10.357	1.77	88.42	C
			B	0.173	2.69		0.85	1	10.357			
			C	0.173	2.69		0.85	1	10.357			
T13 162.00-158.00	0.12	0.22	A	0.173	2.69	23	0.85	1	2.071	0.35	88.57	C
			B	0.173	2.69		0.85	1	2.071			
			C	0.173	2.69		0.85	1	2.071			
T14 158.00-154.00	0.12	0.22	A	0.173	2.69	23	0.85	1	2.071	0.35	87.93	C
			B	0.173	2.69		0.85	1	2.071			
			C	0.173	2.69		0.85	1	2.071			
T15 154.00-150.00	0.15	0.22	A	0.173	2.69	23	0.85	1	2.071	0.42	103.77	C
			B	0.173	2.69		0.85	1	2.071			
			C	0.173	2.69		0.85	1	2.071			
T16 150.00-146.00	0.19	0.22	A	0.173	2.69	23	0.85	1	2.071	0.48	119.35	C
			B	0.173	2.69		0.85	1	2.071			
			C	0.173	2.69		0.85	1	2.071			
T17 146.00-142.00	0.19	0.24	A	0.173	2.69	22	0.85	1	2.071	0.47	118.42	C
			B	0.173	2.69		0.85	1	2.071			
			C	0.173	2.69		0.85	1	2.071			
T18 142.00-138.00	0.19	0.24	A	0.173	2.69	22	0.85	1	2.071	0.47	117.47	C
			B	0.173	2.69		0.85	1	2.071			
			C	0.173	2.69		0.85	1	2.071			
T19 138.00-134.00	0.19	0.24	A	0.173	2.69	22	0.85	1	2.071	0.47	116.50	C
			B	0.173	2.69		0.85	1	2.071			
			C	0.173	2.69		0.85	1	2.071			
T20 134.00-130.00	0.19	0.24	A	0.173	2.69	22	0.85	1	2.071	0.46	115.51	C
			B	0.173	2.69		0.85	1	2.071			
			C	0.173	2.69		0.85	1	2.071			

**tnxTower**

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<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
<b>Client</b>	AT&T	<b>Designed by</b>	

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>c</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T21 130.00-126.00	0.19	0.25	A	0.211	2.56	22	0.85	1	2.623	0.48	119.77	C
			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T22 126.00-122.00	0.19	0.22	A	0.173	2.69	22	0.85	1	2.071	0.45	113.46	C
			B	0.173	2.69		0.85	1	2.071			
			C	0.173	2.69		0.85	1	2.071			
T23 122.00-102.00	0.96	1.08	A	0.173	2.69	21	0.85	1	10.357	2.24	112.00	C
			B	0.173	2.69		0.85	1	10.357			
			C	0.173	2.69		0.85	1	10.357			
T24 102.00-98.00	0.19	0.23	A	0.211	2.56	20	0.85	1	2.623	0.46	114.28	C
			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T25 98.00-94.00	0.19	0.23	A	0.211	2.56	20	0.85	1	2.623	0.45	112.95	C
			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T26 94.00-90.00	0.19	0.23	A	0.211	2.56	20	0.85	1	2.623	0.45	111.59	C
			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T27 90.00-86.00	0.19	0.23	A	0.211	2.56	20	0.85	1	2.623	0.44	110.18	C
			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T28 86.00-82.00	0.19	0.23	A	0.211	2.56	19	0.85	1	2.623	0.43	108.72	C
			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T29 82.00-78.00	0.19	0.23	A	0.211	2.56	19	0.85	1	2.623	0.43	107.22	C
			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T30 78.00-74.00	0.19	0.23	A	0.211	2.56	19	0.85	1	2.623	0.42	105.66	C
			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T31 74.00-70.00	0.19	0.25	A	0.211	2.56	18	0.85	1	2.623	0.42	104.04	C
			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T32 70.00-66.00	0.19	0.25	A	0.211	2.56	18	0.85	1	2.623	0.41	102.35	C
			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T33 66.00-62.00	0.19	0.25	A	0.211	2.56	18	0.85	1	2.623	0.40	100.60	C
			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T34 62.00-58.00	0.19	0.27	A	0.22	2.529	17	0.85	1	2.761	0.40	99.76	C
			B	0.22	2.529		0.85	1	2.761			
			C	0.22	2.529		0.85	1	2.761			
T35 58.00-54.00	0.19	0.25	A	0.211	2.56	17	0.85	1	2.623	0.39	97.02	C
			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T36 54.00-50.00	0.19	0.25	A	0.211	2.56	17	0.85	1	2.623	0.38	95.18	C
			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T37 50.00-46.00	0.19	0.25	A	0.211	2.56	16	0.85	1	2.623	0.37	93.03	C
			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T38 46.00-42.00	0.19	0.23	A	0.211	2.56	16	0.85	1	2.623	0.36	90.74	C
			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T39 42.00-38.00	0.19	0.25	A	0.22	2.529	16	0.85	1	2.761	0.36	89.19	C
			B	0.22	2.529		0.85	1	2.761			
			C	0.22	2.529		0.85	1	2.761			
T40 38.00-34.00	0.19	0.25	A	0.22	2.529	15	0.85	1	2.761	0.35	86.55	C
			B	0.22	2.529		0.85	1	2.761			
			C	0.22	2.529		0.85	1	2.761			

<b>tnxTower</b>  <b>Maser Consulting</b> 2000 Midlantic Drive, Suite 100 Mt. Laurel, NJ Phone: 856 797-0412 FAX: 856 722-1120	<b>Job</b>	18946008A	<b>Page</b>	68 of 133
	<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
	<b>Client</b>	AT&T	<b>Designed by</b>	

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T41 34.00-30.00	0.19	0.25	A	0.22	2.529	15	0.85	1	2.761	0.33	83.68	C
			B	0.22	2.529		0.85	1	2.761			
			C	0.22	2.529		0.85	1	2.761			
T42 30.00-26.00	0.19	0.25	A	0.22	2.529	14	0.85	1	2.761	0.33	82.09	C
			B	0.22	2.529		0.85	1	2.761			
			C	0.22	2.529		0.85	1	2.761			
T43 26.00-22.00	0.19	0.25	A	0.22	2.529	14	0.85	1	2.761	0.33	82.09	C
			B	0.22	2.529		0.85	1	2.761			
			C	0.22	2.529		0.85	1	2.761			
T44 22.00-18.00	0.19	0.27	A	0.22	2.529	14	0.85	1	2.761	0.33	82.25	C
			B	0.22	2.529		0.85	1	2.761			
			C	0.22	2.529		0.85	1	2.761			
T45 18.00-14.00	0.19	0.27	A	0.22	2.529	14	0.85	1	2.761	0.33	82.41	C
			B	0.22	2.529		0.85	1	2.761			
			C	0.22	2.529		0.85	1	2.761			
T46 14.00-10.00	0.19	0.27	A	0.22	2.529	14	0.85	1	2.761	0.33	82.41	C
			B	0.22	2.529		0.85	1	2.761			
			C	0.22	2.529		0.85	1	2.761			
T47 10.00-6.00	0.10	0.27	A	0.22	2.529	14	0.85	1	2.761	0.21	51.84	C
			B	0.22	2.529		0.85	1	2.761			
			C	0.22	2.529		0.85	1	2.761			
T48 6.00-2.00	0.00	0.27	A	0.22	2.529	14	0.85	1	2.761	0.09	21.27	C
			B	0.22	2.529		0.85	1	2.761			
			C	0.22	2.529		0.85	1	2.761			
Sum Weight:	9.45	16.91								23.63		

### Tower Forces - With Ice - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T1 276.00-265.50	0.33	1.56	A	0.471	1.941	7	1	1	16.121	0.26	25.13	C
			B	0.471	1.941		1	1	16.121			
			C	0.471	1.941		1	1	16.121			
T2 265.50-261.75	0.19	0.54	A	0.457	1.963	7	1	1	5.530	0.11	29.47	C
			B	0.457	1.963		1	1	5.530			
			C	0.457	1.963		1	1	5.530			
T3 261.75-258.00	0.23	0.79	A	0.609	1.799	7	1	1	8.213	0.13	34.58	C
		TA 1.91	B	0.609	1.799		1	1	8.213			
			C	0.609	1.799		1	1	8.213			
T4 258.00-254.00	0.25	0.55	A	0.444	1.983	7	1	1	5.689	0.13	32.32	C
			B	0.444	1.983		1	1	5.689			
			C	0.444	1.983		1	1	5.689			
T5 254.00-242.00	0.82	1.66	A	0.443	1.984	7	1	1	17.027	0.40	33.56	C
			B	0.443	1.984		1	1	17.027			
			C	0.443	1.984		1	1	17.027			
T6 242.00-222.00	2.18	2.74	A	0.442	1.987	7	1	1	28.235	0.77	38.75	B
			B	0.442	1.987		1	1	28.235			
			C	0.442	1.987		1	1	28.235			
T7 222.00-206.00	2.23	2.62	A	0.465	1.95	7	1	1	24.508	0.67	42.03	B
			B	0.465	1.95		1	1	24.508			
			C	0.465	1.95		1	1	24.508			
T8	0.94	0.68	A	0.463	1.952	7	1	1	6.102	0.21*	52.55	B

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Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
206.00-202.00			B	0.463	1.952		1	1	6.102			
			C	0.463	1.952		1	1	6.102			
T9	0.94	1.04	A	0.626	1.79	7	1	1	9.233	0.19	48.64	B
202.00-198.00		TA 1.88	B	0.626	1.79		1	1	9.233			
			C	0.626	1.79		1	1	9.233			
T10	0.95	0.68	A	0.462	1.954	7	1	1	6.085	0.21*	51.93	B
198.00-194.00			B	0.462	1.954		1	1	6.085			
			C	0.462	1.954		1	1	6.085			
T11	2.88	1.94	A	0.461	1.956	6	1	1	18.202	0.62*	51.31	C
194.00-182.00			B	0.461	1.956		1	1	18.202			
			C	0.461	1.956		1	1	18.202			
T12	4.77	3.01	A	0.446	1.98	6	1	1	28.821	1.00*	49.99	C
182.00-162.00			B	0.446	1.98		1	1	28.821			
			C	0.446	1.98		1	1	28.821			
T13	0.99	0.60	A	0.444	1.983	6	1	1	5.734	0.20*	48.94	C
162.00-158.00			B	0.444	1.983		1	1	5.734			
			C	0.444	1.983		1	1	5.734			
T14	0.99	0.60	A	0.444	1.984	6	1	1	5.724	0.19*	48.58	C
158.00-154.00			B	0.444	1.984		1	1	5.724			
			C	0.444	1.984		1	1	5.724			
T15	1.25	0.59	A	0.443	1.985	6	1	1	5.713	0.19*	48.22	C
154.00-150.00			B	0.443	1.985		1	1	5.713			
			C	0.443	1.985		1	1	5.713			
T16	1.51	0.59	A	0.442	1.986	6	1	1	5.703	0.19*	47.84	C
150.00-146.00			B	0.442	1.986		1	1	5.703			
			C	0.442	1.986		1	1	5.703			
T17	1.50	0.62	A	0.442	1.987	6	1	1	5.691	0.19*	47.46	C
146.00-142.00			B	0.442	1.987		1	1	5.691			
			C	0.442	1.987		1	1	5.691			
T18	1.50	0.62	A	0.441	1.988	6	1	1	5.680	0.19*	47.07	C
142.00-138.00			B	0.441	1.988		1	1	5.680			
			C	0.441	1.988		1	1	5.680			
T19	1.50	0.61	A	0.44	1.99	6	1	1	5.668	0.19*	46.67	C
138.00-134.00			B	0.44	1.99		1	1	5.668			
			C	0.44	1.99		1	1	5.668			
T20	1.49	0.61	A	0.44	1.991	6	1	1	5.657	0.19*	46.27	C
134.00-130.00			B	0.44	1.991		1	1	5.657			
			C	0.44	1.991		1	1	5.657			
T21	1.49	0.73	A	0.536	1.857	6	1	1	7.379	0.18*	45.85	C
130.00-126.00			B	0.536	1.857		1	1	7.379			
			C	0.536	1.857		1	1	7.379			
T22	1.48	0.58	A	0.438	1.994	6	1	1	5.632	0.18*	45.43	C
126.00-122.00			B	0.438	1.994		1	1	5.632			
			C	0.438	1.994		1	1	5.632			
T23	7.46	2.90	A	0.435	1.998	6	1	1	27.958	0.88*	44.10	C
122.00-102.00			B	0.435	1.998		1	1	27.958			
			C	0.435	1.998		1	1	27.958			
T24	1.49	0.70	A	0.529	1.865	5	1	1	7.245	0.17*	42.66	C
102.00-98.00			B	0.529	1.865		1	1	7.245			
			C	0.529	1.865		1	1	7.245			
T25	1.48	0.70	A	0.528	1.867	5	1	1	7.223	0.17*	42.16	C
98.00-94.00			B	0.528	1.867		1	1	7.223			
			C	0.528	1.867		1	1	7.223			
T26	1.48	0.70	A	0.526	1.868	5	1	1	7.200	0.17*	41.64	C
94.00-90.00			B	0.526	1.868		1	1	7.200			
			C	0.526	1.868		1	1	7.200			
T27	1.47	0.69	A	0.525	1.87	5	1	1	7.177	0.16*	41.10	C
90.00-86.00			B	0.525	1.87		1	1	7.177			
			C	0.525	1.87		1	1	7.177			
T28	1.47	0.69	A	0.524	1.871	5	1	1	7.153	0.16*	40.55	C



# tnxTower

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<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
<b>Client</b>	AT&T	<b>Designed by</b>	

Section Elevation	Add Weight	Self Weight	F a c e	e	C <sub>F</sub>	q <sub>z</sub>	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub>	F	w	Ctrl. Face
ft	K	K				psf			ft <sup>2</sup>	K	plf	
86.00-82.00			B	0.524	1.871		1	1	7.153			
			C	0.524	1.871		1	1	7.153			
T29	1.46	0.69	A	0.522	1.873	5	1	1	7.127	0.16*	39.97	C
82.00-78.00			B	0.522	1.873		1	1	7.127			
			C	0.522	1.873		1	1	7.127			
T30	1.45	0.68	A	0.521	1.874	5	1	1	7.101	0.16*	39.38	C
78.00-74.00			B	0.521	1.874		1	1	7.101			
			C	0.521	1.874		1	1	7.101			
T31	1.45	0.69	A	0.519	1.876	5	1	1	7.073	0.16*	38.76	C
74.00-70.00			B	0.519	1.876		1	1	7.073			
			C	0.519	1.876		1	1	7.073			
T32	1.44	0.69	A	0.518	1.878	5	1	1	7.044	0.15*	38.12	C
70.00-66.00			B	0.518	1.878		1	1	7.044			
			C	0.518	1.878		1	1	7.044			
T33	1.43	0.69	A	0.516	1.88	5	1	1	7.013	0.15*	37.45	C
66.00-62.00			B	0.516	1.88		1	1	7.013			
			C	0.516	1.88		1	1	7.013			
T34	1.43	0.72	A	0.523	1.872	5	1	1	7.176	0.15*	36.76	C
62.00-58.00			B	0.523	1.872		1	1	7.176			
			C	0.523	1.872		1	1	7.176			
T35	1.42	0.68	A	0.512	1.885	5	1	1	6.947	0.14*	36.02	C
58.00-54.00			B	0.512	1.885		1	1	6.947			
			C	0.512	1.885		1	1	6.947			
T36	1.42	0.67	A	0.51	1.887	4	1	1	6.911	0.14*	35.25	C
54.00-50.00			B	0.51	1.887		1	1	6.911			
			C	0.51	1.887		1	1	6.911			
T37	1.41	0.67	A	0.508	1.89	4	1	1	6.872	0.14*	34.44	C
50.00-46.00			B	0.508	1.89		1	1	6.872			
			C	0.508	1.89		1	1	6.872			
T38	1.40	0.65	A	0.505	1.893	4	1	1	6.831	0.13*	33.58	C
46.00-42.00			B	0.505	1.893		1	1	6.831			
			C	0.505	1.893		1	1	6.831			
T39	1.39	0.68	A	0.512	1.885	4	1	1	6.978	0.13*	32.66	C
42.00-38.00			B	0.512	1.885		1	1	6.978			
			C	0.512	1.885		1	1	6.978			
T40	1.38	0.67	A	0.509	1.889	4	1	1	6.929	0.13*	31.67	C
38.00-34.00			B	0.509	1.889		1	1	6.929			
			C	0.509	1.889		1	1	6.929			
T41	1.37	0.67	A	0.506	1.893	4	1	1	6.874	0.12*	30.60	C
34.00-30.00			B	0.506	1.893		1	1	6.874			
			C	0.506	1.893		1	1	6.874			
T42	1.35	0.66	A	0.502	1.897	4	1	1	6.814	0.12*	29.99	C
30.00-26.00			B	0.502	1.897		1	1	6.814			
			C	0.502	1.897		1	1	6.814			
T43	1.34	0.65	A	0.498	1.903	4	1	1	6.745	0.12*	29.97	C
26.00-22.00			B	0.498	1.903		1	1	6.745			
			C	0.498	1.903		1	1	6.745			
T44	1.32	0.66	A	0.493	1.909	4	1	1	6.666	0.12*	29.94	C
22.00-18.00			B	0.493	1.909		1	1	6.666			
			C	0.493	1.909		1	1	6.666			
T45	1.31	0.64	A	0.487	1.917	4	1	1	6.572	0.12*	29.90	C
18.00-14.00			B	0.487	1.917		1	1	6.572			
			C	0.487	1.917		1	1	6.572			
T46	1.28	0.63	A	0.48	1.927	4	1	1	6.455	0.12*	29.86	C
14.00-10.00			B	0.48	1.927		1	1	6.455			
			C	0.48	1.927		1	1	6.455			
T47	0.62	0.61	A	0.47	1.941	4	1	1	6.297	0.10	25.20	A
10.00-6.00			B	0.47	1.941		1	1	6.297			
			C	0.47	1.941		1	1	6.297			
T48 6.00-2.00	0.00	0.58	A	0.455	1.966	4	1	1	6.047	0.04	9.62	C

<b>tnxTower</b>  <b>Maser Consulting</b> 2000 Midlantic Drive, Suite 100 Mt. Laurel, NJ Phone: 856 797-0412 FAX: 856 722-1120	<b>Job</b> 18946008A	<b>Page</b> 71 of 133
	<b>Project</b> CTL02056	<b>Date</b> 17:35:35 09/25/18
	<b>Client</b> AT&T	<b>Designed by</b>

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
Sum Weight:	70.94	47.43	B C	0.455 0.455	1.966 1.966		1 1	1 1	6.047 6.047			
					*2.1A <sub>g</sub> limit					10.91		

### Tower Forces - With Ice - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T1 276.00-265.50	0.33	1.56	A B C	0.471 0.471 0.471	1.941 1.941 1.941	7	0.8 0.8 0.8	1 1 1	15.288 15.288 15.288	0.25	24.19	C
T2 265.50-261.75	0.19	0.54	A B C	0.457 0.457 0.457	1.963 1.963 1.963	7	0.8 0.8 0.8	1 1 1	5.247 5.247 5.247	0.11	28.58	C
T3 261.75-258.00	0.23	0.79 TA 1.91	A B C	0.609 0.609 0.609	1.799 1.799 1.799	7	0.8 0.8 0.8	1 1 1	7.745 7.745 7.745	0.12	33.23	C
T4 258.00-254.00	0.25	0.55	A B C	0.444 0.444 0.444	1.983 1.983 1.983	7	0.8 0.8 0.8	1 1 1	5.402 5.402 5.402	0.13	31.47	C
T5 254.00-242.00	0.82	1.66	A B C	0.443 0.443 0.443	1.984 1.984 1.984	7	0.8 0.8 0.8	1 1 1	16.164 16.164 16.164	0.39	32.72	C
T6 242.00-222.00	2.18	2.74	A B C	0.442 0.442 0.442	1.987 1.987 1.987	7	0.8 0.8 0.8	1 1 1	26.798 26.798 26.798	0.76	37.92	C
T7 222.00-206.00	2.23	2.62	A B C	0.465 0.465 0.465	1.95 1.95 1.95	7	0.8 0.8 0.8	1 1 1	23.092 23.092 23.092	0.66	41.05	C
T8 206.00-202.00	0.94	0.68	A B C	0.463 0.463 0.463	1.952 1.952 1.952	7	0.8 0.8 0.8	1 1 1	5.749 5.749 5.749	0.21*	52.55	C
T9 202.00-198.00	0.94	1.04 TA 1.88	A B C	0.626 0.626 0.626	1.79 1.79 1.79	7	0.8 0.8 0.8	1 1 1	8.621 8.621 8.621	0.19	47.11	C
T10 198.00-194.00	0.95	0.68	A B C	0.462 0.462 0.462	1.954 1.954 1.954	7	0.8 0.8 0.8	1 1 1	5.731 5.731 5.731	0.21*	51.93	C
T11 194.00-182.00	2.88	1.94	A B C	0.461 0.461 0.461	1.956 1.956 1.956	6	0.8 0.8 0.8	1 1 1	17.141 17.141 17.141	0.62*	51.31	C
T12 182.00-162.00	4.77	3.01	A B C	0.446 0.446 0.446	1.98 1.98 1.98	6	0.8 0.8 0.8	1 1 1	27.278 27.278 27.278	1.00*	49.99	C
T13 162.00-158.00	0.99	0.60	A B C	0.444 0.444 0.444	1.983 1.983 1.983	6	0.8 0.8 0.8	1 1 1	5.426 5.426 5.426	0.20*	48.94	C
T14 158.00-154.00	0.99	0.60	A B C	0.444 0.444 0.444	1.984 1.984 1.984	6	0.8 0.8 0.8	1 1 1	5.415 5.415 5.415	0.19*	48.58	C
T15	1.25	0.59	A	0.443	1.985	6	0.8	1	5.405	0.19*	48.22	C

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<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
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Section Elevation	Add Weight	Self Weight	F a c e	e	C <sub>F</sub>	q <sub>z</sub>	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub>	F	w	Ctrl. Face
ft	K	K				psf			ft <sup>2</sup>	K	plf	
154.00-150.00			B	0.443	1.985		0.8	1	5.405			
			C	0.443	1.985		0.8	1	5.405			
T16	1.51	0.59	A	0.442	1.986	6	0.8	1	5.394	0.19*	47.84	C
150.00-146.00			B	0.442	1.986		0.8	1	5.394			
			C	0.442	1.986		0.8	1	5.394			
T17	1.50	0.62	A	0.442	1.987	6	0.8	1	5.383	0.19*	47.46	C
146.00-142.00			B	0.442	1.987		0.8	1	5.383			
			C	0.442	1.987		0.8	1	5.383			
T18	1.50	0.62	A	0.441	1.988	6	0.8	1	5.372	0.19*	47.07	C
142.00-138.00			B	0.441	1.988		0.8	1	5.372			
			C	0.441	1.988		0.8	1	5.372			
T19	1.50	0.61	A	0.44	1.99	6	0.8	1	5.360	0.19*	46.67	C
138.00-134.00			B	0.44	1.99		0.8	1	5.360			
			C	0.44	1.99		0.8	1	5.360			
T20	1.49	0.61	A	0.44	1.991	6	0.8	1	5.348	0.19*	46.27	C
134.00-130.00			B	0.44	1.991		0.8	1	5.348			
			C	0.44	1.991		0.8	1	5.348			
T21	1.49	0.73	A	0.536	1.857	6	0.8	1	6.943	0.18*	45.85	C
130.00-126.00			B	0.536	1.857		0.8	1	6.943			
			C	0.536	1.857		0.8	1	6.943			
T22	1.48	0.58	A	0.438	1.994	6	0.8	1	5.323	0.18*	45.43	C
126.00-122.00			B	0.438	1.994		0.8	1	5.323			
			C	0.438	1.994		0.8	1	5.323			
T23	7.46	2.90	A	0.435	1.998	6	0.8	1	26.416	0.88*	44.10	C
122.00-102.00			B	0.435	1.998		0.8	1	26.416			
			C	0.435	1.998		0.8	1	26.416			
T24	1.49	0.70	A	0.529	1.865	5	0.8	1	6.808	0.17*	42.66	C
102.00-98.00			B	0.529	1.865		0.8	1	6.808			
			C	0.529	1.865		0.8	1	6.808			
T25	1.48	0.70	A	0.528	1.867	5	0.8	1	6.787	0.17*	42.16	C
98.00-94.00			B	0.528	1.867		0.8	1	6.787			
			C	0.528	1.867		0.8	1	6.787			
T26	1.48	0.70	A	0.526	1.868	5	0.8	1	6.764	0.17*	41.64	C
94.00-90.00			B	0.526	1.868		0.8	1	6.764			
			C	0.526	1.868		0.8	1	6.764			
T27	1.47	0.69	A	0.525	1.87	5	0.8	1	6.741	0.16*	41.10	C
90.00-86.00			B	0.525	1.87		0.8	1	6.741			
			C	0.525	1.87		0.8	1	6.741			
T28	1.47	0.69	A	0.524	1.871	5	0.8	1	6.716	0.16*	40.55	C
86.00-82.00			B	0.524	1.871		0.8	1	6.716			
			C	0.524	1.871		0.8	1	6.716			
T29	1.46	0.69	A	0.522	1.873	5	0.8	1	6.691	0.16*	39.97	C
82.00-78.00			B	0.522	1.873		0.8	1	6.691			
			C	0.522	1.873		0.8	1	6.691			
T30	1.45	0.68	A	0.521	1.874	5	0.8	1	6.665	0.16*	39.38	C
78.00-74.00			B	0.521	1.874		0.8	1	6.665			
			C	0.521	1.874		0.8	1	6.665			
T31	1.45	0.69	A	0.519	1.876	5	0.8	1	6.637	0.16*	38.76	C
74.00-70.00			B	0.519	1.876		0.8	1	6.637			
			C	0.519	1.876		0.8	1	6.637			
T32	1.44	0.69	A	0.518	1.878	5	0.8	1	6.608	0.15*	38.12	C
70.00-66.00			B	0.518	1.878		0.8	1	6.608			
			C	0.518	1.878		0.8	1	6.608			
T33	1.43	0.69	A	0.516	1.88	5	0.8	1	6.577	0.15*	37.45	C
66.00-62.00			B	0.516	1.88		0.8	1	6.577			
			C	0.516	1.88		0.8	1	6.577			
T34	1.43	0.72	A	0.523	1.872	5	0.8	1	6.708	0.15*	36.76	C
62.00-58.00			B	0.523	1.872		0.8	1	6.708			
			C	0.523	1.872		0.8	1	6.708			
T35	1.42	0.68	A	0.512	1.885	5	0.8	1	6.511	0.14*	36.02	C

<b>tnxTower</b>  <b>Maser Consulting</b> 2000 Midlantic Drive, Suite 100 Mt. Laurel, NJ Phone: 856 797-0412 FAX: 856 722-1120	<b>Job</b>	18946008A	<b>Page</b>	73 of 133
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	<b>Client</b>	AT&T	<b>Designed by</b>	

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face	
58.00-54.00			B	0.512	1.885		0.8	1	6.511				
			C	0.512	1.885		0.8	1	6.511				
T36	1.42	0.67	A	0.51	1.887	4	0.8	1	6.475	0.14*	35.25	C	
54.00-50.00			B	0.51	1.887		0.8	1	6.475				
			C	0.51	1.887		0.8	1	6.475				
T37	1.41	0.67	A	0.508	1.89	4	0.8	1	6.436	0.14*	34.44	C	
50.00-46.00			B	0.508	1.89		0.8	1	6.436				
			C	0.508	1.89		0.8	1	6.436				
T38	1.40	0.65	A	0.505	1.893	4	0.8	1	6.394	0.13*	33.58	C	
46.00-42.00			B	0.505	1.893		0.8	1	6.394				
			C	0.505	1.893		0.8	1	6.394				
T39	1.39	0.68	A	0.512	1.885	4	0.8	1	6.510	0.13*	32.66	C	
42.00-38.00			B	0.512	1.885		0.8	1	6.510				
			C	0.512	1.885		0.8	1	6.510				
T40	1.38	0.67	A	0.509	1.889	4	0.8	1	6.461	0.13*	31.67	C	
38.00-34.00			B	0.509	1.889		0.8	1	6.461				
			C	0.509	1.889		0.8	1	6.461				
T41	1.37	0.67	A	0.506	1.893	4	0.8	1	6.406	0.12*	30.60	C	
34.00-30.00			B	0.506	1.893		0.8	1	6.406				
			C	0.506	1.893		0.8	1	6.406				
T42	1.35	0.66	A	0.502	1.897	4	0.8	1	6.346	0.12*	29.99	C	
30.00-26.00			B	0.502	1.897		0.8	1	6.346				
			C	0.502	1.897		0.8	1	6.346				
T43	1.34	0.65	A	0.498	1.903	4	0.8	1	6.277	0.12*	29.97	C	
26.00-22.00			B	0.498	1.903		0.8	1	6.277				
			C	0.498	1.903		0.8	1	6.277				
T44	1.32	0.66	A	0.493	1.909	4	0.8	1	6.198	0.12*	29.94	C	
22.00-18.00			B	0.493	1.909		0.8	1	6.198				
			C	0.493	1.909		0.8	1	6.198				
T45	1.31	0.64	A	0.487	1.917	4	0.8	1	6.104	0.12*	29.90	C	
18.00-14.00			B	0.487	1.917		0.8	1	6.104				
			C	0.487	1.917		0.8	1	6.104				
T46	1.28	0.63	A	0.48	1.927	4	0.8	1	5.986	0.12*	29.86	C	
14.00-10.00			B	0.48	1.927		0.8	1	5.986				
			C	0.48	1.927		0.8	1	5.986				
T47	0.62	0.61	A	0.47	1.941	4	0.8	1	5.829	0.10	24.46	B	
10.00-6.00			B	0.47	1.941		0.8	1	5.829				
			C	0.47	1.941		0.8	1	5.829				
T48	6.00-2.00	0.00	0.58	A	0.455	1.966	4	0.8	1	5.579	0.04	8.88	C
			B	0.455	1.966		0.8	1	5.579				
			C	0.455	1.966		0.8	1	5.579				
Sum Weight:	70.94	47.43								10.84			

### Tower Forces - With Ice - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T1	0.33	1.56	A	0.471	1.941	7	0.85	1	15.496	0.26	24.42	C
276.00-265.50			B	0.471	1.941		0.85	1	15.496			
			C	0.471	1.941		0.85	1	15.496			
T2	0.19	0.54	A	0.457	1.963	7	0.85	1	5.318	0.11	28.80	C

# tnxTower

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Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
265.50-261.75			B	0.457	1.963		0.85	1	5.318			
			C	0.457	1.963		0.85	1	5.318			
T3	0.23	0.79	A	0.609	1.799	7	0.85	1	7.862	0.13	33.57	C
261.75-258.00		TA 1.91	B	0.609	1.799		0.85	1	7.862			
			C	0.609	1.799		0.85	1	7.862			
T4	0.25	0.55	A	0.444	1.983	7	0.85	1	5.474	0.13	31.68	C
258.00-254.00			B	0.444	1.983		0.85	1	5.474			
			C	0.444	1.983		0.85	1	5.474			
T5	0.82	1.66	A	0.443	1.984	7	0.85	1	16.380	0.40	32.93	C
254.00-242.00			B	0.443	1.984		0.85	1	16.380			
			C	0.443	1.984		0.85	1	16.380			
T6	2.18	2.74	A	0.442	1.987	7	0.85	1	27.157	0.75	37.56	C
242.00-222.00			B	0.442	1.987		0.85	1	27.157			
			C	0.442	1.987		0.85	1	27.157			
T7	2.23	2.62	A	0.465	1.95	7	0.85	1	23.446	0.65	40.54	C
222.00-206.00			B	0.465	1.95		0.85	1	23.446			
			C	0.465	1.95		0.85	1	23.446			
T8	0.94	0.68	A	0.463	1.952	7	0.85	1	5.837	0.21	52.20	C
206.00-202.00			B	0.463	1.952		0.85	1	5.837			
			C	0.463	1.952		0.85	1	5.837			
T9	0.94	1.04	A	0.626	1.79	7	0.85	1	8.774	0.19	46.98	C
202.00-198.00		TA 1.88	B	0.626	1.79		0.85	1	8.774			
			C	0.626	1.79		0.85	1	8.774			
T10	0.95	0.68	A	0.462	1.954	7	0.85	1	5.820	0.21*	51.93	C
198.00-194.00			B	0.462	1.954		0.85	1	5.820			
			C	0.462	1.954		0.85	1	5.820			
T11	2.88	1.94	A	0.461	1.956	6	0.85	1	17.406	0.62*	51.31	C
194.00-182.00			B	0.461	1.956		0.85	1	17.406			
			C	0.461	1.956		0.85	1	17.406			
T12	4.77	3.01	A	0.446	1.98	6	0.85	1	27.664	1.00*	49.99	C
182.00-162.00			B	0.446	1.98		0.85	1	27.664			
			C	0.446	1.98		0.85	1	27.664			
T13	0.99	0.60	A	0.444	1.983	6	0.85	1	5.503	0.20*	48.94	C
162.00-158.00			B	0.444	1.983		0.85	1	5.503			
			C	0.444	1.983		0.85	1	5.503			
T14	0.99	0.60	A	0.444	1.984	6	0.85	1	5.493	0.19*	48.58	C
158.00-154.00			B	0.444	1.984		0.85	1	5.493			
			C	0.444	1.984		0.85	1	5.493			
T15	1.25	0.59	A	0.443	1.985	6	0.85	1	5.482	0.19*	48.22	C
154.00-150.00			B	0.443	1.985		0.85	1	5.482			
			C	0.443	1.985		0.85	1	5.482			
T16	1.51	0.59	A	0.442	1.986	6	0.85	1	5.471	0.19*	47.84	C
150.00-146.00			B	0.442	1.986		0.85	1	5.471			
			C	0.442	1.986		0.85	1	5.471			
T17	1.50	0.62	A	0.442	1.987	6	0.85	1	5.460	0.19*	47.46	C
146.00-142.00			B	0.442	1.987		0.85	1	5.460			
			C	0.442	1.987		0.85	1	5.460			
T18	1.50	0.62	A	0.441	1.988	6	0.85	1	5.449	0.19*	47.07	C
142.00-138.00			B	0.441	1.988		0.85	1	5.449			
			C	0.441	1.988		0.85	1	5.449			
T19	1.50	0.61	A	0.44	1.99	6	0.85	1	5.437	0.19*	46.67	C
138.00-134.00			B	0.44	1.99		0.85	1	5.437			
			C	0.44	1.99		0.85	1	5.437			
T20	1.49	0.61	A	0.44	1.991	6	0.85	1	5.425	0.19*	46.27	C
134.00-130.00			B	0.44	1.991		0.85	1	5.425			
			C	0.44	1.991		0.85	1	5.425			
T21	1.49	0.73	A	0.536	1.857	6	0.85	1	7.052	0.18*	45.85	C
130.00-126.00			B	0.536	1.857		0.85	1	7.052			
			C	0.536	1.857		0.85	1	7.052			
T22	1.48	0.58	A	0.438	1.994	6	0.85	1	5.400	0.18*	45.43	C

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<b>Client</b>	AT&T	<b>Designed by</b>	

Section Elevation	Add Weight	Self Weight	F a c e	e	C <sub>F</sub>	q <sub>c</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
126.00-122.00			B	0.438	1.994		0.85	1	5.400			
			C	0.438	1.994		0.85	1	5.400			
T23	7.46	2.90	A	0.435	1.998	6	0.85	1	26.802	0.88*	44.10	C
122.00-102.00			B	0.435	1.998		0.85	1	26.802			
			C	0.435	1.998		0.85	1	26.802			
T24	1.49	0.70	A	0.529	1.865	5	0.85	1	6.918	0.17*	42.66	C
102.00-98.00			B	0.529	1.865		0.85	1	6.918			
			C	0.529	1.865		0.85	1	6.918			
T25	1.48	0.70	A	0.528	1.867	5	0.85	1	6.896	0.17*	42.16	C
98.00-94.00			B	0.528	1.867		0.85	1	6.896			
			C	0.528	1.867		0.85	1	6.896			
T26	1.48	0.70	A	0.526	1.868	5	0.85	1	6.873	0.17*	41.64	C
94.00-90.00			B	0.526	1.868		0.85	1	6.873			
			C	0.526	1.868		0.85	1	6.873			
T27	1.47	0.69	A	0.525	1.87	5	0.85	1	6.850	0.16*	41.10	C
90.00-86.00			B	0.525	1.87		0.85	1	6.850			
			C	0.525	1.87		0.85	1	6.850			
T28	1.47	0.69	A	0.524	1.871	5	0.85	1	6.825	0.16*	40.55	C
86.00-82.00			B	0.524	1.871		0.85	1	6.825			
			C	0.524	1.871		0.85	1	6.825			
T29	1.46	0.69	A	0.522	1.873	5	0.85	1	6.800	0.16*	39.97	C
82.00-78.00			B	0.522	1.873		0.85	1	6.800			
			C	0.522	1.873		0.85	1	6.800			
T30	1.45	0.68	A	0.521	1.874	5	0.85	1	6.774	0.16*	39.38	C
78.00-74.00			B	0.521	1.874		0.85	1	6.774			
			C	0.521	1.874		0.85	1	6.774			
T31	1.45	0.69	A	0.519	1.876	5	0.85	1	6.746	0.16*	38.76	C
74.00-70.00			B	0.519	1.876		0.85	1	6.746			
			C	0.519	1.876		0.85	1	6.746			
T32	1.44	0.69	A	0.518	1.878	5	0.85	1	6.717	0.15*	38.12	C
70.00-66.00			B	0.518	1.878		0.85	1	6.717			
			C	0.518	1.878		0.85	1	6.717			
T33	1.43	0.69	A	0.516	1.88	5	0.85	1	6.686	0.15*	37.45	C
66.00-62.00			B	0.516	1.88		0.85	1	6.686			
			C	0.516	1.88		0.85	1	6.686			
T34	1.43	0.72	A	0.523	1.872	5	0.85	1	6.825	0.15*	36.76	C
62.00-58.00			B	0.523	1.872		0.85	1	6.825			
			C	0.523	1.872		0.85	1	6.825			
T35	1.42	0.68	A	0.512	1.885	5	0.85	1	6.620	0.14*	36.02	C
58.00-54.00			B	0.512	1.885		0.85	1	6.620			
			C	0.512	1.885		0.85	1	6.620			
T36	1.42	0.67	A	0.51	1.887	4	0.85	1	6.584	0.14*	35.25	C
54.00-50.00			B	0.51	1.887		0.85	1	6.584			
			C	0.51	1.887		0.85	1	6.584			
T37	1.41	0.67	A	0.508	1.89	4	0.85	1	6.545	0.14*	34.44	C
50.00-46.00			B	0.508	1.89		0.85	1	6.545			
			C	0.508	1.89		0.85	1	6.545			
T38	1.40	0.65	A	0.505	1.893	4	0.85	1	6.503	0.13*	33.58	C
46.00-42.00			B	0.505	1.893		0.85	1	6.503			
			C	0.505	1.893		0.85	1	6.503			
T39	1.39	0.68	A	0.512	1.885	4	0.85	1	6.627	0.13*	32.66	C
42.00-38.00			B	0.512	1.885		0.85	1	6.627			
			C	0.512	1.885		0.85	1	6.627			
T40	1.38	0.67	A	0.509	1.889	4	0.85	1	6.578	0.13*	31.67	C
38.00-34.00			B	0.509	1.889		0.85	1	6.578			
			C	0.509	1.889		0.85	1	6.578			
T41	1.37	0.67	A	0.506	1.893	4	0.85	1	6.523	0.12*	30.60	C
34.00-30.00			B	0.506	1.893		0.85	1	6.523			
			C	0.506	1.893		0.85	1	6.523			
T42	1.35	0.66	A	0.502	1.897	4	0.85	1	6.463	0.12*	29.99	C

<b>tnxTower</b>  <b>Maser Consulting</b> 2000 Midlantic Drive, Suite 100 Mt. Laurel, NJ Phone: 856 797-0412 FAX: 856 722-1120	<b>Job</b>	18946008A	<b>Page</b>	76 of 133
	<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
	<b>Client</b>	AT&T	<b>Designed by</b>	

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
30.00-26.00			B	0.502	1.897		0.85	1	6.463			
			C	0.502	1.897		0.85	1	6.463			
T43	1.34	0.65	A	0.498	1.903	4	0.85	1	6.394	0.12*	29.97	C
26.00-22.00			B	0.498	1.903		0.85	1	6.394			
			C	0.498	1.903		0.85	1	6.394			
T44	1.32	0.66	A	0.493	1.909	4	0.85	1	6.315	0.12*	29.94	C
22.00-18.00			B	0.493	1.909		0.85	1	6.315			
			C	0.493	1.909		0.85	1	6.315			
T45	1.31	0.64	A	0.487	1.917	4	0.85	1	6.221	0.12*	29.90	C
18.00-14.00			B	0.487	1.917		0.85	1	6.221			
			C	0.487	1.917		0.85	1	6.221			
T46	1.28	0.63	A	0.48	1.927	4	0.85	1	6.103	0.12*	29.86	C
14.00-10.00			B	0.48	1.927		0.85	1	6.103			
			C	0.48	1.927		0.85	1	6.103			
T47	0.62	0.61	A	0.47	1.941	4	0.85	1	5.946	0.10	24.65	C
10.00-6.00			B	0.47	1.941		0.85	1	5.946			
			C	0.47	1.941		0.85	1	5.946			
T48 6.00-2.00	0.00	0.58	A	0.455	1.966	4	0.85	1	5.696	0.04	9.06	C
			B	0.455	1.966		0.85	1	5.696			
			C	0.455	1.966		0.85	1	5.696			
Sum Weight:	70.94	47.43								10.83		

### Tower Forces - Service - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T1	0.09	0.46	A	0.166	2.713	10	1	1	5.911	0.17	15.89	C
276.00-265.50			B	0.166	2.713		1	1	5.911			
			C	0.166	2.713		1	1	5.911			
T2	0.04	0.16	A	0.161	2.731	10	1	1	2.035	0.07	17.34	C
265.50-261.75			B	0.161	2.731		1	1	2.035			
			C	0.161	2.731		1	1	2.035			
T3	0.04	0.24	A	0.221	2.527	10	1	1	2.977	0.09	23.11	C
261.75-258.00		TA 0.69	B	0.221	2.527		1	1	2.977			
			C	0.221	2.527		1	1	2.977			
T4	0.04	0.17	A	0.157	2.746	10	1	1	2.100	0.07	18.15	C
258.00-254.00			B	0.157	2.746		1	1	2.100			
			C	0.157	2.746		1	1	2.100			
T5	0.13	0.50	A	0.157	2.746	10	1	1	6.301	0.22	18.55	C
254.00-242.00			B	0.157	2.746		1	1	6.301			
			C	0.157	2.746		1	1	6.301			
T6	0.30	0.83	A	0.157	2.746	10	1	1	10.501	0.46	23.22	B
242.00-222.00			B	0.157	2.746		1	1	10.501			
			C	0.157	2.746		1	1	10.501			
T7	0.29	0.92	A	0.186	2.643	10	1	1	10.131	0.45	28.10	B
222.00-206.00			B	0.186	2.643		1	1	10.131			
			C	0.186	2.643		1	1	10.131			
T8	0.11	0.26	A	0.186	2.643	9	1	1	2.531	0.15	37.44	B
206.00-202.00			B	0.186	2.643		1	1	2.531			
			C	0.186	2.643		1	1	2.531			
T9	0.11	0.41	A	0.263	2.398	9	1	1	3.842	0.17	42.29	B

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Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
202.00-198.00		TA 0.69	B	0.263	2.398		1	1	3.842			
			C	0.263	2.398		1	1	3.842			
T10	0.11	0.26	A	0.186	2.643	9	1	1	2.531	0.15	37.16	B
198.00-194.00			B	0.186	2.643		1	1	2.531			
			C	0.186	2.643		1	1	2.531			
T11	0.35	0.69	A	0.186	2.643	9	1	1	7.594	0.44	36.87	B
194.00-182.00			B	0.186	2.643		1	1	7.594			
			C	0.186	2.643		1	1	7.594			
T12	0.58	1.08	A	0.173	2.69	9	1	1	11.514	0.70	35.03	B
182.00-162.00			B	0.173	2.69		1	1	11.514			
			C	0.173	2.69		1	1	11.514			
T13	0.12	0.22	A	0.173	2.69	9	1	1	2.303	0.14	35.06	B
162.00-158.00			B	0.173	2.69		1	1	2.303			
			C	0.173	2.69		1	1	2.303			
T14	0.12	0.22	A	0.173	2.69	9	1	1	2.303	0.14	34.81	B
158.00-154.00			B	0.173	2.69		1	1	2.303			
			C	0.173	2.69		1	1	2.303			
T15	0.15	0.22	A	0.173	2.69	9	1	1	2.303	0.16	39.43	A
154.00-150.00			B	0.173	2.69		1	1	2.303			
			C	0.173	2.69		1	1	2.303			
T16	0.19	0.22	A	0.173	2.69	9	1	1	2.303	0.18	45.72	A
150.00-146.00			B	0.173	2.69		1	1	2.303			
			C	0.173	2.69		1	1	2.303			
T17	0.19	0.24	A	0.173	2.69	9	1	1	2.303	0.18	45.36	A
146.00-142.00			B	0.173	2.69		1	1	2.303			
			C	0.173	2.69		1	1	2.303			
T18	0.19	0.24	A	0.173	2.69	9	1	1	2.303	0.18	45.00	A
142.00-138.00			B	0.173	2.69		1	1	2.303			
			C	0.173	2.69		1	1	2.303			
T19	0.19	0.24	A	0.173	2.69	8	1	1	2.303	0.18	44.62	A
138.00-134.00			B	0.173	2.69		1	1	2.303			
			C	0.173	2.69		1	1	2.303			
T20	0.19	0.24	A	0.173	2.69	8	1	1	2.303	0.18	44.25	A
134.00-130.00			B	0.173	2.69		1	1	2.303			
			C	0.173	2.69		1	1	2.303			
T21	0.19	0.25	A	0.211	2.56	8	1	1	2.950	0.19	46.25	A
130.00-126.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T22	0.19	0.22	A	0.173	2.69	8	1	1	2.303	0.17	43.46	A
126.00-122.00			B	0.173	2.69		1	1	2.303			
			C	0.173	2.69		1	1	2.303			
T23	0.96	1.08	A	0.173	2.69	8	1	1	11.514	0.86	42.90	A
122.00-102.00			B	0.173	2.69		1	1	11.514			
			C	0.173	2.69		1	1	11.514			
T24	0.19	0.23	A	0.211	2.56	8	1	1	2.950	0.18	44.12	A
102.00-98.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T25	0.19	0.23	A	0.211	2.56	8	1	1	2.950	0.17	43.61	A
98.00-94.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T26	0.19	0.23	A	0.211	2.56	8	1	1	2.950	0.17	43.09	A
94.00-90.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T27	0.19	0.23	A	0.211	2.56	7	1	1	2.950	0.17	42.54	A
90.00-86.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T28	0.19	0.23	A	0.211	2.56	7	1	1	2.950	0.17	41.98	A
86.00-82.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T29	0.19	0.23	A	0.211	2.56	7	1	1	2.950	0.17	41.40	A



# tnxTower

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Section Elevation	Add Weight	Self Weight	F a c e	e	C <sub>F</sub>	q <sub>z</sub>	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub>	F	w	Ctrl. Face
ft	K	K				psf			ft <sup>2</sup>	K	plf	
82.00-78.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T30	0.19	0.23	A	0.211	2.56	7	1	1	2.950	0.16	40.80	A
78.00-74.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T31	0.19	0.25	A	0.211	2.56	7	1	1	2.950	0.16	40.17	A
74.00-70.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T32	0.19	0.25	A	0.211	2.56	7	1	1	2.950	0.16	39.52	A
70.00-66.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T33	0.19	0.25	A	0.211	2.56	7	1	1	2.950	0.16	38.84	A
66.00-62.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T34	0.19	0.27	A	0.22	2.529	7	1	1	3.112	0.15	38.59	A
62.00-58.00			B	0.22	2.529		1	1	3.112			
			C	0.22	2.529		1	1	3.112			
T35	0.19	0.25	A	0.211	2.56	7	1	1	2.950	0.15	37.46	A
58.00-54.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T36	0.19	0.25	A	0.211	2.56	6	1	1	2.950	0.15	36.75	A
54.00-50.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T37	0.19	0.25	A	0.211	2.56	6	1	1	2.950	0.14	35.92	A
50.00-46.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T38	0.19	0.23	A	0.211	2.56	6	1	1	2.950	0.14	35.04	A
46.00-42.00			B	0.211	2.56		1	1	2.950			
			C	0.211	2.56		1	1	2.950			
T39	0.19	0.25	A	0.22	2.529	6	1	1	3.112	0.14	34.50	A
42.00-38.00			B	0.22	2.529		1	1	3.112			
			C	0.22	2.529		1	1	3.112			
T40	0.19	0.25	A	0.22	2.529	6	1	1	3.112	0.13	33.48	A
38.00-34.00			B	0.22	2.529		1	1	3.112			
			C	0.22	2.529		1	1	3.112			
T41	0.19	0.25	A	0.22	2.529	6	1	1	3.112	0.13	32.37	A
34.00-30.00			B	0.22	2.529		1	1	3.112			
			C	0.22	2.529		1	1	3.112			
T42	0.19	0.25	A	0.22	2.529	5	1	1	3.112	0.13	31.75	A
30.00-26.00			B	0.22	2.529		1	1	3.112			
			C	0.22	2.529		1	1	3.112			
T43	0.19	0.25	A	0.22	2.529	5	1	1	3.112	0.13	31.75	A
26.00-22.00			B	0.22	2.529		1	1	3.112			
			C	0.22	2.529		1	1	3.112			
T44	0.19	0.27	A	0.22	2.529	5	1	1	3.112	0.13	31.81	A
22.00-18.00			B	0.22	2.529		1	1	3.112			
			C	0.22	2.529		1	1	3.112			
T45	0.19	0.27	A	0.22	2.529	5	1	1	3.112	0.13	31.87	A
18.00-14.00			B	0.22	2.529		1	1	3.112			
			C	0.22	2.529		1	1	3.112			
T46	0.19	0.27	A	0.22	2.529	5	1	1	3.112	0.13	31.87	A
14.00-10.00			B	0.22	2.529		1	1	3.112			
			C	0.22	2.529		1	1	3.112			
T47	0.10	0.27	A	0.22	2.529	5	1	1	3.112	0.08	20.52	A
10.00-6.00			B	0.22	2.529		1	1	3.112			
			C	0.22	2.529		1	1	3.112			
T48	6.00-2.00	0.00	A	0.22	2.529	5	1	1	3.112	0.04	9.17	C
			B	0.22	2.529		1	1	3.112			
			C	0.22	2.529		1	1	3.112			
Sum Weight:	9.45	16.91								9.25		

<b>tnxTower</b>  <b>Maser Consulting</b> 2000 Midlantic Drive, Suite 100 Mt. Laurel, NJ Phone: 856 797-0412 FAX: 856 722-1120	<b>Job</b>	18946008A	<b>Page</b>	79 of 133
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### Tower Forces - Service - Wind 60 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C <sub>F</sub>	q <sub>z</sub>	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub>	F	w	Ctrl. Face
ft	K	K				psf			ft <sup>2</sup>	K	plf	
T1 276.00-265.50	0.09	0.46	A	0.166	2.713	10	0.8	1	5.078	0.15	14.01	C
			B	0.166	2.713		0.8	1	5.078			
			C	0.166	2.713		0.8	1	5.078			
T2 265.50-261.75	0.04	0.16	A	0.161	2.731	10	0.8	1	1.752	0.06	15.56	C
			B	0.161	2.731		0.8	1	1.752			
			C	0.161	2.731		0.8	1	1.752			
T3 261.75-258.00	0.04	0.24	A	0.221	2.527	10	0.8	1	2.508	0.08	20.38	C
		TA 0.69	B	0.221	2.527		0.8	1	2.508			
			C	0.221	2.527		0.8	1	2.508			
T4 258.00-254.00	0.04	0.17	A	0.157	2.746	10	0.8	1	1.813	0.07	16.46	C
			B	0.157	2.746		0.8	1	1.813			
			C	0.157	2.746		0.8	1	1.813			
T5 254.00-242.00	0.13	0.50	A	0.157	2.746	10	0.8	1	5.438	0.20	16.86	C
			B	0.157	2.746		0.8	1	5.438			
			C	0.157	2.746		0.8	1	5.438			
T6 242.00-222.00	0.30	0.83	A	0.157	2.746	10	0.8	1	9.064	0.43	21.57	C
			B	0.157	2.746		0.8	1	9.064			
			C	0.157	2.746		0.8	1	9.064			
T7 222.00-206.00	0.29	0.92	A	0.186	2.643	10	0.8	1	8.716	0.42	26.19	C
			B	0.186	2.643		0.8	1	8.716			
			C	0.186	2.643		0.8	1	8.716			
T8 206.00-202.00	0.11	0.26	A	0.186	2.643	9	0.8	1	2.178	0.14	35.55	C
			B	0.186	2.643		0.8	1	2.178			
			C	0.186	2.643		0.8	1	2.178			
T9 202.00-198.00	0.11	0.41	A	0.263	2.398	9	0.8	1	3.230	0.16	39.35	C
		TA 0.69	B	0.263	2.398		0.8	1	3.230			
			C	0.263	2.398		0.8	1	3.230			
T10 198.00-194.00	0.11	0.26	A	0.186	2.643	9	0.8	1	2.178	0.14	35.30	C
			B	0.186	2.643		0.8	1	2.178			
			C	0.186	2.643		0.8	1	2.178			
T11 194.00-182.00	0.35	0.69	A	0.186	2.643	9	0.8	1	6.533	0.42	35.03	C
			B	0.186	2.643		0.8	1	6.533			
			C	0.186	2.643		0.8	1	6.533			
T12 182.00-162.00	0.58	1.08	A	0.173	2.69	9	0.8	1	9.971	0.67	33.43	C
			B	0.173	2.69		0.8	1	9.971			
			C	0.173	2.69		0.8	1	9.971			
T13 162.00-158.00	0.12	0.22	A	0.173	2.69	9	0.8	1	1.994	0.13	33.50	C
			B	0.173	2.69		0.8	1	1.994			
			C	0.173	2.69		0.8	1	1.994			
T14 158.00-154.00	0.12	0.22	A	0.173	2.69	9	0.8	1	1.994	0.13	33.26	C
			B	0.173	2.69		0.8	1	1.994			
			C	0.173	2.69		0.8	1	1.994			
T15 154.00-150.00	0.15	0.22	A	0.173	2.69	9	0.8	1	1.994	0.15	37.89	B
			B	0.173	2.69		0.8	1	1.994			
			C	0.173	2.69		0.8	1	1.994			
T16 150.00-146.00	0.19	0.22	A	0.173	2.69	9	0.8	1	1.994	0.18	44.19	B
			B	0.173	2.69		0.8	1	1.994			
			C	0.173	2.69		0.8	1	1.994			
T17 146.00-142.00	0.19	0.24	A	0.173	2.69	9	0.8	1	1.994	0.18	43.84	B
			B	0.173	2.69		0.8	1	1.994			
			C	0.173	2.69		0.8	1	1.994			
T18	0.19	0.24	A	0.173	2.69	9	0.8	1	1.994	0.17	43.49	B

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Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
142.00-138.00			B	0.173	2.69		0.8	1	1.994			
			C	0.173	2.69		0.8	1	1.994			
T19	0.19	0.24	A	0.173	2.69	8	0.8	1	1.994	0.17	43.13	B
138.00-134.00			B	0.173	2.69		0.8	1	1.994			
			C	0.173	2.69		0.8	1	1.994			
T20	0.19	0.24	A	0.173	2.69	8	0.8	1	1.994	0.17	42.77	B
134.00-130.00			B	0.173	2.69		0.8	1	1.994			
			C	0.173	2.69		0.8	1	1.994			
T21	0.19	0.25	A	0.211	2.56	8	0.8	1	2.514	0.18	44.28	B
130.00-126.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T22	0.19	0.22	A	0.173	2.69	8	0.8	1	1.994	0.17	42.01	B
126.00-122.00			B	0.173	2.69		0.8	1	1.994			
			C	0.173	2.69		0.8	1	1.994			
T23	0.96	1.08	A	0.173	2.69	8	0.8	1	9.971	0.83	41.49	B
122.00-102.00			B	0.173	2.69		0.8	1	9.971			
			C	0.173	2.69		0.8	1	9.971			
T24	0.19	0.23	A	0.211	2.56	8	0.8	1	2.514	0.17	42.29	B
102.00-98.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T25	0.19	0.23	A	0.211	2.56	8	0.8	1	2.514	0.17	41.80	B
98.00-94.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T26	0.19	0.23	A	0.211	2.56	8	0.8	1	2.514	0.17	41.29	B
94.00-90.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T27	0.19	0.23	A	0.211	2.56	7	0.8	1	2.514	0.16	40.77	B
90.00-86.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T28	0.19	0.23	A	0.211	2.56	7	0.8	1	2.514	0.16	40.23	B
86.00-82.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T29	0.19	0.23	A	0.211	2.56	7	0.8	1	2.514	0.16	39.68	B
82.00-78.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T30	0.19	0.23	A	0.211	2.56	7	0.8	1	2.514	0.16	39.10	B
78.00-74.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T31	0.19	0.25	A	0.211	2.56	7	0.8	1	2.514	0.15	38.50	B
74.00-70.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T32	0.19	0.25	A	0.211	2.56	7	0.8	1	2.514	0.15	37.87	B
70.00-66.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T33	0.19	0.25	A	0.211	2.56	7	0.8	1	2.514	0.15	37.22	B
66.00-62.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T34	0.19	0.27	A	0.22	2.529	7	0.8	1	2.644	0.15	36.90	B
62.00-58.00			B	0.22	2.529		0.8	1	2.644			
			C	0.22	2.529		0.8	1	2.644			
T35	0.19	0.25	A	0.211	2.56	7	0.8	1	2.514	0.14	35.90	B
58.00-54.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T36	0.19	0.25	A	0.211	2.56	6	0.8	1	2.514	0.14	35.22	B
54.00-50.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T37	0.19	0.25	A	0.211	2.56	6	0.8	1	2.514	0.14	34.43	B
50.00-46.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T38	0.19	0.23	A	0.211	2.56	6	0.8	1	2.514	0.13	33.58	B

<b>tnxTower</b>  <b>Maser Consulting</b> 2000 Midlantic Drive, Suite 100 Mt. Laurel, NJ Phone: 856 797-0412 FAX: 856 722-1120	<b>Job</b> 18946008A	<b>Page</b> 81 of 133
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Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
46.00-42.00			B	0.211	2.56		0.8	1	2.514			
			C	0.211	2.56		0.8	1	2.514			
T39	0.19	0.25	A	0.22	2.529	6	0.8	1	2.644	0.13	33.00	B
42.00-38.00			B	0.22	2.529		0.8	1	2.644			
			C	0.22	2.529		0.8	1	2.644			
T40	0.19	0.25	A	0.22	2.529	6	0.8	1	2.644	0.13	32.02	B
38.00-34.00			B	0.22	2.529		0.8	1	2.644			
			C	0.22	2.529		0.8	1	2.644			
T41	0.19	0.25	A	0.22	2.529	6	0.8	1	2.644	0.12	30.96	B
34.00-30.00			B	0.22	2.529		0.8	1	2.644			
			C	0.22	2.529		0.8	1	2.644			
T42	0.19	0.25	A	0.22	2.529	5	0.8	1	2.644	0.12	30.37	B
30.00-26.00			B	0.22	2.529		0.8	1	2.644			
			C	0.22	2.529		0.8	1	2.644			
T43	0.19	0.25	A	0.22	2.529	5	0.8	1	2.644	0.12	30.37	B
26.00-22.00			B	0.22	2.529		0.8	1	2.644			
			C	0.22	2.529		0.8	1	2.644			
T44	0.19	0.27	A	0.22	2.529	5	0.8	1	2.644	0.12	30.43	B
22.00-18.00			B	0.22	2.529		0.8	1	2.644			
			C	0.22	2.529		0.8	1	2.644			
T45	0.19	0.27	A	0.22	2.529	5	0.8	1	2.644	0.12	30.49	B
18.00-14.00			B	0.22	2.529		0.8	1	2.644			
			C	0.22	2.529		0.8	1	2.644			
T46	0.19	0.27	A	0.22	2.529	5	0.8	1	2.644	0.12	30.49	B
14.00-10.00			B	0.22	2.529		0.8	1	2.644			
			C	0.22	2.529		0.8	1	2.644			
T47	0.10	0.27	A	0.22	2.529	5	0.8	1	2.644	0.08	19.14	B
10.00-6.00			B	0.22	2.529		0.8	1	2.644			
			C	0.22	2.529		0.8	1	2.644			
T48 6.00-2.00	0.00	0.27	A	0.22	2.529	5	0.8	1	2.644	0.03	7.79	C
			B	0.22	2.529		0.8	1	2.644			
			C	0.22	2.529		0.8	1	2.644			
Sum Weight:	9.45	16.91								8.79		

### Tower Forces - Service - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T1	0.09	0.46	A	0.166	2.713	10	0.85	1	5.286	0.15	14.48	C
276.00-265.50			B	0.166	2.713		0.85	1	5.286			
			C	0.166	2.713		0.85	1	5.286			
T2	0.04	0.16	A	0.161	2.731	10	0.85	1	1.823	0.06	16.00	C
265.50-261.75			B	0.161	2.731		0.85	1	1.823			
			C	0.161	2.731		0.85	1	1.823			
T3	0.04	0.24	A	0.221	2.527	10	0.85	1	2.625	0.08	21.06	C
261.75-258.00		TA 0.69	B	0.221	2.527		0.85	1	2.625			
			C	0.221	2.527		0.85	1	2.625			
T4	0.04	0.17	A	0.157	2.746	10	0.85	1	1.885	0.07	16.88	C
258.00-254.00			B	0.157	2.746		0.85	1	1.885			
			C	0.157	2.746		0.85	1	1.885			
T5	0.13	0.50	A	0.157	2.746	10	0.85	1	5.654	0.21	17.29	C
254.00-242.00			B	0.157	2.746		0.85	1	5.654			

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<b>Project</b>	CTL02056	<b>Date</b>	17:35:35 09/25/18
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Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T6 242.00-222.00	0.30	0.83	C	0.157	2.746		0.85	1	5.654			
			A	0.157	2.746	10	0.85	1	9.423	0.44	21.99	C
			B	0.157	2.746		0.85	1	9.423			
T7 222.00-206.00	0.29	0.92	C	0.157	2.746		0.85	1	9.423			
			A	0.186	2.643	10	0.85	1	9.069	0.43	26.67	C
			B	0.186	2.643		0.85	1	9.069			
T8 206.00-202.00	0.11	0.26	C	0.186	2.643		0.85	1	9.069			
			A	0.186	2.643	9	0.85	1	2.266	0.14	36.03	C
			B	0.186	2.643		0.85	1	2.266			
T9 202.00-198.00	0.11	0.41 TA 0.69	C	0.186	2.643		0.85	1	2.266			
			A	0.263	2.398	9	0.85	1	3.383	0.16	40.08	C
			B	0.263	2.398		0.85	1	3.383			
T10 198.00-194.00	0.11	0.26	C	0.263	2.398		0.85	1	3.383			
			A	0.186	2.643	9	0.85	1	2.266	0.14	35.77	C
			B	0.186	2.643		0.85	1	2.266			
T11 194.00-182.00	0.35	0.69	C	0.186	2.643		0.85	1	2.266			
			A	0.186	2.643	9	0.85	1	6.798	0.43	35.49	C
			B	0.186	2.643		0.85	1	6.798			
T12 182.00-162.00	0.58	1.08	C	0.186	2.643		0.85	1	6.798			
			A	0.173	2.69	9	0.85	1	10.357	0.68	33.83	C
			B	0.173	2.69		0.85	1	10.357			
T13 162.00-158.00	0.12	0.22	C	0.173	2.69		0.85	1	10.357			
			A	0.173	2.69	9	0.85	1	2.071	0.14	33.89	C
			B	0.173	2.69		0.85	1	2.071			
T14 158.00-154.00	0.12	0.22	C	0.173	2.69		0.85	1	2.071			
			A	0.173	2.69	9	0.85	1	2.071	0.13	33.64	C
			B	0.173	2.69		0.85	1	2.071			
T15 154.00-150.00	0.15	0.22	C	0.173	2.69		0.85	1	2.071			
			A	0.173	2.69	9	0.85	1	2.071	0.16	39.70	C
			B	0.173	2.69		0.85	1	2.071			
T16 150.00-146.00	0.19	0.22	C	0.173	2.69		0.85	1	2.071			
			A	0.173	2.69	9	0.85	1	2.071	0.18	45.66	C
			B	0.173	2.69		0.85	1	2.071			
T17 146.00-142.00	0.19	0.24	C	0.173	2.69		0.85	1	2.071			
			A	0.173	2.69	9	0.85	1	2.071	0.18	45.31	C
			B	0.173	2.69		0.85	1	2.071			
T18 142.00-138.00	0.19	0.24	C	0.173	2.69		0.85	1	2.071			
			A	0.173	2.69	9	0.85	1	2.071	0.18	44.94	C
			B	0.173	2.69		0.85	1	2.071			
T19 138.00-134.00	0.19	0.24	C	0.173	2.69		0.85	1	2.071			
			A	0.173	2.69	8	0.85	1	2.071	0.18	44.57	C
			B	0.173	2.69		0.85	1	2.071			
T20 134.00-130.00	0.19	0.24	C	0.173	2.69		0.85	1	2.071			
			A	0.173	2.69	8	0.85	1	2.071	0.18	44.20	C
			B	0.173	2.69		0.85	1	2.071			
T21 130.00-126.00	0.19	0.25	C	0.173	2.69		0.85	1	2.071			
			A	0.211	2.56	8	0.85	1	2.623	0.18	45.82	C
			B	0.211	2.56		0.85	1	2.623			
T22 126.00-122.00	0.19	0.22	C	0.211	2.56		0.85	1	2.623			
			A	0.173	2.69	8	0.85	1	2.071	0.17	43.41	C
			B	0.173	2.69		0.85	1	2.071			
T23 122.00-102.00	0.96	1.08	C	0.173	2.69		0.85	1	2.071			
			A	0.173	2.69	8	0.85	1	10.357	0.86	42.85	C
			B	0.173	2.69		0.85	1	10.357			
T24 102.00-98.00	0.19	0.23	C	0.173	2.69		0.85	1	10.357			
			A	0.211	2.56	8	0.85	1	2.623	0.17	43.72	C
			B	0.211	2.56		0.85	1	2.623			
T25 98.00-94.00	0.19	0.23	C	0.211	2.56		0.85	1	2.623			
			A	0.211	2.56	8	0.85	1	2.623	0.17	43.22	C

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Section Elevation	Add Weight	Self Weight	F a c e	e	C <sub>F</sub>	q <sub>z</sub>	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub>	F	w	Ctrl. Face
ft	K	K				psf			ft <sup>2</sup>	K	plf	
T26	0.19	0.23	C	0.211	2.56		0.85	1	2.623			
94.00-90.00			A	0.211	2.56	8	0.85	1	2.623	0.17	42.69	C
			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T27	0.19	0.23	A	0.211	2.56	7	0.85	1	2.623	0.17	42.16	C
90.00-86.00			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T28	0.19	0.23	A	0.211	2.56	7	0.85	1	2.623	0.17	41.60	C
86.00-82.00			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T29	0.19	0.23	A	0.211	2.56	7	0.85	1	2.623	0.16	41.02	C
82.00-78.00			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T30	0.19	0.23	A	0.211	2.56	7	0.85	1	2.623	0.16	40.43	C
78.00-74.00			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T31	0.19	0.25	A	0.211	2.56	7	0.85	1	2.623	0.16	39.81	C
74.00-70.00			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T32	0.19	0.25	A	0.211	2.56	7	0.85	1	2.623	0.16	39.16	C
70.00-66.00			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T33	0.19	0.25	A	0.211	2.56	7	0.85	1	2.623	0.15	38.49	C
66.00-62.00			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T34	0.19	0.27	A	0.22	2.529	7	0.85	1	2.761	0.15	38.17	C
62.00-58.00			B	0.22	2.529		0.85	1	2.761			
			C	0.22	2.529		0.85	1	2.761			
T35	0.19	0.25	A	0.211	2.56	7	0.85	1	2.623	0.15	37.12	C
58.00-54.00			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T36	0.19	0.25	A	0.211	2.56	6	0.85	1	2.623	0.15	36.42	C
54.00-50.00			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T37	0.19	0.25	A	0.211	2.56	6	0.85	1	2.623	0.14	35.59	C
50.00-46.00			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T38	0.19	0.23	A	0.211	2.56	6	0.85	1	2.623	0.14	34.72	C
46.00-42.00			B	0.211	2.56		0.85	1	2.623			
			C	0.211	2.56		0.85	1	2.623			
T39	0.19	0.25	A	0.22	2.529	6	0.85	1	2.761	0.14	34.13	C
42.00-38.00			B	0.22	2.529		0.85	1	2.761			
			C	0.22	2.529		0.85	1	2.761			
T40	0.19	0.25	A	0.22	2.529	6	0.85	1	2.761	0.13	33.11	C
38.00-34.00			B	0.22	2.529		0.85	1	2.761			
			C	0.22	2.529		0.85	1	2.761			
T41	0.19	0.25	A	0.22	2.529	6	0.85	1	2.761	0.13	32.02	C
34.00-30.00			B	0.22	2.529		0.85	1	2.761			
			C	0.22	2.529		0.85	1	2.761			
T42	0.19	0.25	A	0.22	2.529	5	0.85	1	2.761	0.13	31.41	C
30.00-26.00			B	0.22	2.529		0.85	1	2.761			
			C	0.22	2.529		0.85	1	2.761			
T43	0.19	0.25	A	0.22	2.529	5	0.85	1	2.761	0.13	31.41	C
26.00-22.00			B	0.22	2.529		0.85	1	2.761			
			C	0.22	2.529		0.85	1	2.761			
T44	0.19	0.27	A	0.22	2.529	5	0.85	1	2.761	0.13	31.47	C
22.00-18.00			B	0.22	2.529		0.85	1	2.761			
			C	0.22	2.529		0.85	1	2.761			
T45	0.19	0.27	A	0.22	2.529	5	0.85	1	2.761	0.13	31.53	C
18.00-14.00			B	0.22	2.529		0.85	1	2.761			

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Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T46 14.00-10.00	0.19	0.27	C	0.22	2.529		0.85	1	2.761			
			A	0.22	2.529	5	0.85	1	2.761	0.13	31.53	C
			B	0.22	2.529		0.85	1	2.761			
			C	0.22	2.529		0.85	1	2.761			
T47 10.00-6.00	0.10	0.27	A	0.22	2.529	5	0.85	1	2.761	0.08	19.83	C
			B	0.22	2.529		0.85	1	2.761			
			C	0.22	2.529		0.85	1	2.761			
T48 6.00-2.00	0.00	0.27	A	0.22	2.529	5	0.85	1	2.761	0.03	8.14	C
			B	0.22	2.529		0.85	1	2.761			
			C	0.22	2.529		0.85	1	2.761			
Sum Weight:	9.45	16.91								9.04		

### Force Totals (Does not include forces on guys)

Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Torques kip-ft
Leg Weight	8.55			
Bracing Weight	8.36			
Total Member Self-Weight	16.91			
Guy Weight	3.23			
Total Weight	38.56			
Wind 0 deg - No Ice		0.04	-29.79	-4.14
Wind 30 deg - No Ice		14.61	-25.28	-6.38
Wind 60 deg - No Ice		25.59	-14.81	-6.97
Wind 90 deg - No Ice		31.18	-0.04	-5.91
Wind 120 deg - No Ice		27.10	15.64	-3.06
Wind 150 deg - No Ice		14.78	25.66	0.78
Wind 180 deg - No Ice		-0.04	28.60	4.18
Wind 210 deg - No Ice		-14.61	25.28	6.38
Wind 240 deg - No Ice		-26.62	15.40	7.07
Wind 270 deg - No Ice		-31.18	0.04	5.91
Wind 300 deg - No Ice		-26.07	-15.05	2.92
Wind 330 deg - No Ice		-14.78	-25.66	-0.78
Member Ice	30.52			
Guy Ice	20.13			
Total Weight Ice	167.81			
Wind 0 deg - Ice		0.01	-13.99	-1.54
Wind 30 deg - Ice		7.00	-12.12	-2.20
Wind 60 deg - Ice		12.12	-7.01	-2.28
Wind 90 deg - Ice		13.99	-0.01	-1.74
Wind 120 deg - Ice		12.11	6.99	-0.73
Wind 150 deg - Ice		6.92	12.00	0.47
Wind 180 deg - Ice		-0.01	13.89	1.54
Wind 210 deg - Ice		-7.00	12.12	2.20
Wind 240 deg - Ice		-12.19	7.04	2.28
Wind 270 deg - Ice		-13.99	0.01	1.74
Wind 300 deg - Ice		-12.02	-6.94	0.74
Wind 330 deg - Ice		-6.92	-12.00	-0.47
Total Weight	38.56			
Wind 0 deg - Service		0.01	-11.40	-1.58
Wind 30 deg - Service		5.59	-9.67	-2.44
Wind 60 deg - Service		9.79	-5.67	-2.67

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Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Torques kip-ft
Wind 90 deg - Service		11.93	-0.01	-2.26
Wind 120 deg - Service		10.37	5.98	-1.17
Wind 150 deg - Service		5.66	9.82	0.30
Wind 180 deg - Service		-0.01	10.94	1.60
Wind 210 deg - Service		-5.59	9.67	2.44
Wind 240 deg - Service		-10.18	5.89	2.70
Wind 270 deg - Service		-11.93	0.01	2.26
Wind 300 deg - Service		-9.98	-5.76	1.12
Wind 330 deg - Service		-5.66	-9.82	-0.30

## Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice+1.0 Guy
3	1.2 Dead+1.6 Wind 30 deg - No Ice+1.0 Guy
4	1.2 Dead+1.6 Wind 60 deg - No Ice+1.0 Guy
5	1.2 Dead+1.6 Wind 90 deg - No Ice+1.0 Guy
6	1.2 Dead+1.6 Wind 120 deg - No Ice+1.0 Guy
7	1.2 Dead+1.6 Wind 150 deg - No Ice+1.0 Guy
8	1.2 Dead+1.6 Wind 180 deg - No Ice+1.0 Guy
9	1.2 Dead+1.6 Wind 210 deg - No Ice+1.0 Guy
10	1.2 Dead+1.6 Wind 240 deg - No Ice+1.0 Guy
11	1.2 Dead+1.6 Wind 270 deg - No Ice+1.0 Guy
12	1.2 Dead+1.6 Wind 300 deg - No Ice+1.0 Guy
13	1.2 Dead+1.6 Wind 330 deg - No Ice+1.0 Guy
14	1.2 Dead+1.0 Ice+1.0 Temp+Guy
15	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp+1.0 Guy
16	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp+1.0 Guy
17	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp+1.0 Guy
18	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp+1.0 Guy
19	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp+1.0 Guy
20	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp+1.0 Guy
21	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp+1.0 Guy
22	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp+1.0 Guy
23	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp+1.0 Guy
24	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp+1.0 Guy
25	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp+1.0 Guy
26	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp+1.0 Guy
27	Dead+Wind 0 deg - Service+Guy
28	Dead+Wind 30 deg - Service+Guy
29	Dead+Wind 60 deg - Service+Guy
30	Dead+Wind 90 deg - Service+Guy
31	Dead+Wind 120 deg - Service+Guy
32	Dead+Wind 150 deg - Service+Guy
33	Dead+Wind 180 deg - Service+Guy
34	Dead+Wind 210 deg - Service+Guy
35	Dead+Wind 240 deg - Service+Guy
36	Dead+Wind 270 deg - Service+Guy
37	Dead+Wind 300 deg - Service+Guy
38	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
T1	276 - 265.5	Leg	Max Tension	12	1.21	-0.03	-0.04
			Max. Compression	23	-2.52	0.03	-0.06
			Max. Mx	10	-0.04	0.44	-0.13
			Max. My	8	-1.52	-0.12	-0.48
			Max. Vy	10	-0.16	0.44	-0.13
		Diagonal	Max. Vx	8	0.17	-0.12	-0.48
			Max Tension	3	0.91	0.00	0.00
			Max. Compression	9	-0.92	0.00	0.00
			Max. Mx	19	-0.13	-0.03	0.00
			Max. My	15	-0.01	0.00	-0.00
		Horizontal	Max. Vy	19	0.02	0.00	0.00
			Max. Vx	15	0.00	0.00	0.00
			Max Tension	8	0.28	0.00	0.00
			Max. Compression	2	-0.29	0.00	0.00
			Max. Mx	21	0.04	-0.03	0.00
		Top Girt	Max. My	15	0.04	0.00	0.00
			Max. Vy	21	0.03	0.00	0.00
			Max. Vx	15	-0.00	0.00	0.00
			Max Tension	4	0.09	0.00	0.00
			Max. Compression	10	-0.09	0.00	0.00
		T2	265.5 - 261.75	Leg	Max. Mx	21	-0.01
Max. My	15				0.01	0.00	0.00
Max. Vy	21				0.03	0.00	0.00
Max. Vx	15				-0.00	0.00	0.00
Max Tension	9				3.93	0.40	-0.23
Diagonal	Max. Compression			2	-5.71	-0.24	0.25
	Max. Mx			10	2.85	-0.88	-0.13
	Max. My			8	-0.44	-0.12	0.98
	Max. Vy			10	0.88	0.44	-0.13
	Max. Vx			8	-0.98	-0.12	-0.48
Top Girt	Max Tension			3	4.35	0.00	0.00
	Max. Compression			9	-4.36	0.00	0.00
	Max. Mx			19	-0.60	-0.03	0.00
	Max. My			20	-0.55	0.00	0.00
	Max. Vy			19	0.02	0.00	0.00
Top Girt	Max. Vx			20	-0.00	0.00	0.00
	Max Tension			8	1.39	0.00	0.00
	Max. Compression			2	-1.39	0.00	0.00
	Max. Mx			21	0.28	-0.03	0.00
	Max. My			15	-0.25	0.00	0.00
T3	261.75 - 258			Leg	Max. Vy	21	-0.03
		Max. Vx	15		0.00	0.00	0.00
		Max Tension	11		1.28	0.23	0.06
		Max. Compression	19		-4.14	0.00	-0.03
		Max. Mx	4		-1.79	-0.43	0.12
		Diagonal	Max. My	2	0.17	0.13	0.49
			Max. Vy	4	-0.16	-0.43	0.12
			Max. Vx	2	0.18	0.13	0.49
			Max Tension	11	3.21	0.00	0.00
			Max. Compression	13	-3.74	0.00	0.00
		Guy A	Max. Mx	20	0.22	0.01	-0.00
			Max. My	13	-3.74	0.01	0.00
			Max. Vy	20	-0.02	0.01	-0.00
			Max. Vx	13	0.00	0.01	0.00
			Bottom Tension	9	11.49		
			Top Tension	9	11.66		
			Top Cable Vert	9	10.25		
			Top Cable Norm	9	5.56		

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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 Cable Tan	9	0.06		
			Bot Cable Vert	9	-9.89		
			Bot Cable Norm	9	5.86		
			Bot Cable Tan	9	0.15		
		Guy B	Bottom Tension	11	11.47		
			Top Tension	11	11.64		
			Top Cable Vert	11	10.36		
			Top Cable Norm	11	5.31		
			Top Cable Tan	11	0.06		
			Bot Cable Vert	11	-10.00		
			Bot Cable Norm	11	5.62		
			Bot Cable Tan	11	0.14		
		Guy C	Bottom Tension	3	10.76		
			Top Tension	3	10.94		
			Top Cable Vert	3	9.39		
			Top Cable Norm	3	5.61		
			Top Cable Tan	3	0.07		
			Bot Cable Vert	3	-8.99		
			Bot Cable Norm	3	5.91		
			Bot Cable Tan	3	0.14		
		Top Guy Pull-Off	Max Tension	8	8.14	0.00	0.00
			Max. Compression	2	-3.50	0.00	0.00
			Max. Mx	21	2.60	-0.04	0.00
			Max. My	3	1.42	0.00	0.00
			Max. Vy	21	0.04	0.00	0.00
			Max. Vx	3	-0.00	0.00	0.00
		Torque Arm Top	Max Tension	10	15.53	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	25	10.28	-0.12	0.00
			Max. My	3	12.85	0.00	0.00
			Max. Vy	25	-0.08	0.00	0.00
			Max. Vx	3	-0.00	0.00	0.00
		Torque Arm Bottom	Max Tension	1	0.00	0.00	0.00
			Max. Compression	12	-17.87	0.00	0.00
			Max. Mx	19	-13.95	-0.14	0.00
			Max. My	15	-9.11	0.00	-0.00
			Max. Vy	19	0.08	0.00	0.00
			Max. Vx	15	0.00	0.00	0.00
T4	258 - 254	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	13	-23.78	0.05	-0.04
			Max. Mx	4	-6.15	0.14	-0.03
			Max. My	2	-18.02	-0.06	-0.15
			Max. Vy	4	0.06	-0.06	0.01
			Max. Vx	2	-0.07	0.04	0.08
		Diagonal	Max Tension	2	3.35	0.00	0.00
			Max. Compression	7	-3.38	0.00	0.00
			Max. Mx	19	0.90	-0.03	0.00
			Max. My	20	0.02	0.00	0.00
			Max. Vy	19	0.02	0.00	0.00
			Max. Vx	20	-0.00	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	2	-2.49	0.00	0.00
			Max. Mx	21	-2.06	-0.03	0.00
			Max. My	15	-2.00	0.00	0.00
			Max. Vy	21	-0.03	0.00	0.00
			Max. Vx	15	0.00	0.00	0.00
T5	254 - 242	Leg	Max Tension	2	6.45	-0.03	0.01
			Max. Compression	8	-29.24	0.06	0.05
			Max. Mx	6	-24.09	0.10	0.01
			Max. My	2	-22.30	-0.04	-0.10
			Max. Vy	5	-0.16	-0.07	0.01

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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	242 - 222	Diagonal	Max. Vx	3	0.12	0.03	0.08		
			Max Tension	7	2.76	0.00	0.00		
			Max. Compression	2	-3.06	0.00	0.00		
			Max. Mx	19	0.66	-0.03	0.00		
			Max. My	20	-0.15	0.00	0.00		
			Max. Vy	19	-0.02	0.00	0.00		
		Horizontal	Max. Vx	20	0.00	0.00	0.00		
			Max Tension	8	0.51	0.00	0.00		
			Max. Compression	8	-0.51	0.00	0.00		
			Max. Mx	21	0.47	-0.03	0.00		
			Max. My	20	0.33	0.00	0.00		
			Max. Vy	21	0.03	0.00	0.00		
		Top Girt	Max. Vx	20	-0.00	0.00	0.00		
			Max Tension	4	0.31	0.00	0.00		
			Max. Compression	10	-0.27	0.00	0.00		
			Max. Mx	21	-0.02	-0.03	0.00		
			Max. My	20	-0.03	0.00	0.00		
			Max. Vy	21	0.03	0.00	0.00		
		Leg		Max. Vx	Max. Vx	20	-0.00	0.00	0.00
					Max Tension	2	9.06	-0.03	0.18
					Max. Compression	8	-31.13	0.06	-0.18
				Diagonal	Max. Mx	11	-15.79	-0.43	0.02
					Max. My	2	-24.26	-0.05	-0.43
					Max. Vy	11	-0.34	0.24	0.02
					Max. Vx	2	-0.34	-0.05	0.23
					Max Tension	3	2.97	0.00	0.00
					Max. Compression	8	-3.34	0.00	0.00
				Horizontal	Max. Mx	19	0.45	-0.03	0.00
					Max. My	20	-0.27	0.00	0.00
					Max. Vy	19	0.02	0.00	0.00
					Max. Vx	20	-0.00	0.00	0.00
					Max Tension	12	0.60	0.00	0.00
					Max. Compression	6	-0.55	0.00	0.00
Top Girt	Max. Mx	22	0.49	-0.03	0.00				
	Max. My	20	0.40	0.00	0.00				
	Max. Vy	22	0.03	0.00	0.00				
	Max. Vx	20	-0.00	0.00	0.00				
	Max Tension	11	0.09	0.00	0.00				
	Max. Compression	6	-0.03	0.00	0.00				
Leg		Max. Mx	Max. Mx	25	0.08	-0.03	0.00		
			Max. My	15	0.01	0.00	0.00		
			Max. Vy	25	0.03	0.00	0.00		
		Diagonal	Max. Vx	15	-0.00	0.00	0.00		
			Max Tension	2	0.72	-0.05	-0.00		
			Max. Compression	15	-29.76	0.06	0.16		
			Max. Mx	5	-21.06	0.58	0.01		
			Max. My	2	-19.80	0.03	-0.58		
			Max. Vy	11	0.47	0.34	0.00		
		Horizontal	Max. Vx	2	0.46	-0.04	0.33		
			Max Tension	3	5.75	0.00	0.00		
			Max. Compression	9	-6.10	0.00	0.00		
			Max. Mx	15	-0.79	-0.05	0.00		
			Max. My	20	-0.82	0.00	0.00		
			Max. Vy	15	0.03	0.00	0.00		
Top Girt	Max. Vx	20	-0.00	0.00	0.00				
	Max Tension	12	0.80	0.00	0.00				
	Max. Compression	6	-0.70	0.00	0.00				
	Max. Mx	21	0.47	-0.03	0.00				
	Max. My	20	0.46	0.00	0.00				
	Max. Vy	21	0.03	0.00	0.00				
Max. Vx	Max. Vx	20	0.00	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	206 - 202	Top Girt	Max Tension	4	0.20	0.00	0.00	
			Max. Compression	2	-0.12	0.00	0.00	
		Leg	Max. Mx	22	0.12	-0.03	0.00	0.00
			Max. My	20	0.01	0.00	0.00	0.00
			Max. Vy	22	0.03	0.00	0.00	0.00
			Max. Vx	20	0.00	0.00	0.00	0.00
			Max Tension	1	0.00	0.00	0.00	0.00
			Max. Compression	20	-29.20	0.02	0.03	0.01
			Max. Mx	5	-16.91	-0.31	0.01	-0.30
			Max. My	8	-18.74	0.01	-0.31	0.01
			Max. Vy	5	-0.11	-0.31	0.01	-0.30
			Max. Vx	8	-0.10	0.01	0.00	0.00
		Diagonal	Max Tension	9	7.79	0.00	0.00	0.00
			Max. Compression	3	-7.71	0.00	0.00	0.00
			Max. Mx	15	-1.98	-0.05	0.00	0.00
			Max. My	20	-2.21	0.00	0.00	0.00
Top Girt	Max. Vy	15	0.04	0.00	0.00	0.00		
	Max. Vx	20	-0.00	0.00	0.00	0.00		
	Max Tension	8	0.79	0.00	0.00	0.00		
	Max. Compression	2	-0.70	0.00	0.00	0.00		
	Max. Mx	26	-0.13	-0.03	0.00	0.00		
	Max. My	20	-0.12	0.00	0.00	0.00		
	Max. Vy	26	0.03	0.00	0.00	0.00		
	Max. Vx	20	-0.00	0.00	0.00	0.00		
	T9	202 - 198	Leg	Max Tension	8	0.06	0.05	0.02
				Max. Compression	15	-23.72	-0.04	-0.06
Diagonal			Max. Mx	23	-21.95	-0.12	-0.01	
			Max. My	19	-22.91	0.05	0.11	
			Max. Vy	11	0.06	0.08	0.01	
			Max. Vx	6	0.05	0.01	-0.09	
			Max Tension	13	4.01	0.00	0.00	
			Max. Compression	12	-7.68	0.00	0.00	
			Max. Mx	13	0.65	0.08	-0.00	
			Max. My	12	-7.53	0.03	-0.02	
			Max. Vy	26	-0.04	0.07	-0.00	
			Max. Vx	8	0.01	0.03	-0.02	
Guy A			Bottom Tension	9	14.87			
			Top Tension	9	15.00			
			Top Cable Vert	9	12.16			
			Top Cable Norm	9	8.79			
	Top Cable Tan	9	0.01					
	Bot Cable Vert	9	-11.86					
Guy B	Bot Cable Norm	9	8.97					
	Bot Cable Tan	9	0.14					
	Bottom Tension	13	15.09					
	Top Tension	13	15.22					
	Top Cable Vert	13	12.57					
	Top Cable Norm	13	8.58					
Guy C	Top Cable Tan	13	0.01					
	Bot Cable Vert	13	-12.28					
	Bot Cable Norm	13	8.78					
	Bot Cable Tan	13	0.14					
	Bottom Tension	3	14.13					
	Top Tension	3	14.26					
Top Guy Pull-Off	Top Cable Vert	3	11.21					
	Top Cable Norm	3	8.82					
	Top Cable Tan	3	0.02					
	Bot Cable Vert	3	-10.88					
	Bot Cable Norm	3	9.01					
	Bot Cable Tan	3	0.14					
		Max Tension	12	15.00	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		
T10	198 - 194	Leg	Max. Compression	10	-5.64	0.00	0.00		
			Max. Mx	26	3.80	-0.04	0.00		
			Max. My	20	7.64	0.00	0.00		
			Max. Vy	26	0.04	0.00	0.00		
			Max. Vx	20	-0.00	0.00	0.00		
			Max Tension	10	19.11	0.00	0.00		
			Max. Compression	1	0.00	0.00	0.00		
			Max. Mx	16	8.98	-0.12	0.00		
			Max. My	20	11.32	0.00	-0.00		
			Max. Vy	16	-0.08	0.00	0.00		
			Max. Vx	20	0.00	0.00	0.00		
			Max Tension	1	0.00	0.00	0.00		
			Max. Compression	13	-20.65	0.00	0.00		
			Max. Mx	19	-11.83	-0.14	0.00		
		Max. My	20	-10.76	0.00	0.00			
		Max. Vy	19	0.08	0.00	0.00			
		Max. Vx	20	0.00	0.00	0.00			
		Max Tension	1	0.00	0.00	0.00			
		Max. Compression	16	-45.96	0.05	0.09			
		Max. Mx	23	-42.81	0.18	0.01			
		Max. My	20	-40.17	-0.08	-0.16			
		Max. Vy	24	-0.09	0.18	0.01			
		Max. Vx	20	0.08	-0.08	-0.16			
		Max Tension	3	5.11	0.00	0.00			
		Max. Compression	13	-5.23	0.00	0.00			
		Max. Mx	15	1.29	-0.05	0.00			
		Max. My	15	-0.37	0.00	-0.00			
		Max. Vy	15	0.04	0.00	0.00			
Max. Vx	15	0.00	0.00	0.00					
Max Tension	12	1.59	0.00	0.00					
Max. Compression	2	-1.90	0.00	0.00					
Max. Mx	26	1.35	-0.03	0.00					
Max. My	20	0.55	0.00	0.00					
Max. Vy	26	-0.03	0.00	0.00					
Max. Vx	20	-0.00	0.00	0.00					
T11	194 - 182	Leg	Max Tension	6	1.61	-0.04	0.10		
			Max. Compression	13	-51.65	0.10	-0.14		
			Max. Mx	21	-49.18	-0.21	-0.00		
			Max. My	18	-50.33	0.10	0.19		
			Max. Vy	23	0.12	0.20	0.01		
			Max. Vx	22	0.10	0.09	-0.18		
			Max Tension	10	4.40	0.00	0.00		
			Max. Compression	3	-4.76	0.00	0.00		
			Max. Mx	26	-0.01	-0.05	0.00		
			Max. My	26	1.37	0.00	-0.00		
			Max. Vy	26	-0.03	0.00	0.00		
			Max. Vx	26	0.00	0.00	0.00		
			Max Tension	13	0.89	0.00	0.00		
			Max. Compression	13	-0.89	0.00	0.00		
		Max. Mx	23	0.82	-0.03	0.00			
		Max. My	26	0.86	0.00	-0.00			
		Max. Vy	23	0.03	0.00	0.00			
		Max. Vx	26	0.00	0.00	0.00			
		Max Tension	12	0.34	0.00	0.00			
		Max. Compression	6	-0.20	0.00	0.00			
		Max. Mx	23	-0.01	-0.03	0.00			
		Max. My	15	-0.01	0.00	0.00			
		Max. Vy	23	0.03	0.00	0.00			
		Max. Vx	15	-0.00	0.00	0.00			
		T12	182 - 162	Leg	Max Tension	2	8.97	0.10	0.00
					Max. Compression	11	-58.05	0.04	-0.16

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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	162 - 158	Diagonal	Max. Mx	23	-50.93	0.25	0.01	
			Max. My	24	-52.60	-0.10	0.22	
			Max. Vy	6	-0.18	-0.20	0.03	
			Max. Vx	13	-0.14	-0.12	0.16	
			Max Tension	3	2.70	0.00	0.00	
			Max. Compression	10	-2.98	0.00	0.00	
			Max. Mx	25	0.50	-0.04	0.00	
			Max. My	24	-0.22	0.00	0.00	
			Max. Vy	25	0.03	0.00	0.00	
			Max. Vx	24	0.00	0.00	0.00	
			Max Tension	11	1.01	0.00	0.00	
			Max. Compression	11	-1.01	0.00	0.00	
		Horizontal	Max. Mx	16	0.76	-0.03	0.00	
			Max. My	10	0.89	0.00	0.00	
			Max. Vy	16	0.03	0.00	0.00	
			Max. Vx	10	-0.00	0.00	0.00	
			Max Tension	8	0.35	0.00	0.00	
			Max. Compression	2	-0.19	0.00	0.00	
		Top Girt	Max. Mx	20	0.22	-0.03	0.00	
			Max. My	10	0.22	0.00	0.00	
			Max. Vy	20	0.03	0.00	0.00	
			Max. Vx	10	-0.00	0.00	0.00	
			Max Tension	2	7.65	0.10	0.02	
			Max. Compression	3	-57.26	0.17	0.01	
		Leg	Max. Mx	10	-50.15	-0.31	0.04	
			Max. My	7	-34.19	0.12	0.27	
			Max. Vy	10	0.16	0.23	0.02	
			Max. Vx	13	0.13	-0.10	0.17	
			Max Tension	11	1.68	0.00	0.00	
			Max. Compression	5	-1.59	0.00	0.00	
			Max. Mx	25	0.85	-0.04	0.00	
			Max. My	24	-0.64	0.00	0.00	
			Max. Vy	25	0.03	0.00	0.00	
Max. Vx	24		0.00	0.00	0.00			
Max Tension	12		0.48	0.00	0.00			
Max. Compression	6		-0.32	0.00	0.00			
Max. Mx	16		0.24	-0.03	0.00			
Max. My	10		-0.22	0.00	0.00			
Max. Vy	16		0.03	0.00	0.00			
Max. Vx	10		-0.00	0.00	0.00			
T14	158 - 154		Leg	Max Tension	2	5.59	-0.08	-0.14
				Max. Compression	3	-56.25	-0.29	0.27
		Max. Mx		10	-49.60	0.60	-0.19	
		Max. My		8	-13.27	-0.07	-0.58	
		Max. Vy		10	-0.24	0.60	-0.19	
		Max. Vx		8	0.22	-0.07	-0.58	
		Diagonal	Max Tension	5	1.41	0.00	0.00	
			Max. Compression	11	-2.07	0.00	0.00	
			Max. Mx	21	0.74	-0.04	0.00	
			Max. My	24	0.06	0.00	0.00	
			Max. Vy	21	0.03	0.00	0.00	
			Max. Vx	24	-0.00	0.00	0.00	
		Top Girt	Max Tension	9	0.19	0.00	0.00	
			Max. Compression	2	-0.00	0.00	0.00	
			Max. Mx	18	0.14	-0.03	0.00	
			Max. My	10	0.14	0.00	0.00	
			Max. Vy	18	0.03	0.00	0.00	
			Max. Vx	10	-0.00	0.00	0.00	
T15	154 - 150	Leg	Max Tension	2	2.07	0.03	0.41	
			Max. Compression	16	-57.54	0.08	0.32	
			Max. Mx	11	-33.56	-1.04	0.02	

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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	150 - 146	Diagonal	Max. My	2	-52.51	0.14	-1.14
			Max. Vy	11	0.82	0.59	0.02
			Max. Vx	2	-0.89	0.14	0.62
			Max Tension	11	4.63	0.00	0.00
			Max. Compression	5	-4.53	0.00	0.00
			Max. Mx	25	1.63	-0.04	0.00
			Max. My	24	-1.14	0.00	0.00
			Max. Vy	25	0.03	0.00	0.00
			Max. Vx	24	-0.00	0.00	0.00
			Max Tension	8	1.45	0.00	0.00
			Max. Compression	2	-1.30	0.00	0.00
			Max. Mx	18	-0.17	-0.03	0.00
		Leg	Max. My	10	-1.05	0.00	0.00
			Max. Vy	19	0.03	0.00	0.00
			Max. Vx	10	-0.00	0.00	0.00
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	19	-56.11	0.02	0.16
			Max. Mx	5	-32.06	-0.58	0.03
			Max. My	2	-44.93	0.14	0.62
			Max. Vy	5	-0.23	-0.58	0.03
			Max. Vx	2	0.24	0.14	0.62
			Max Tension	9	7.73	0.00	0.00
			Max. Compression	3	-7.89	0.00	0.00
			Max. Mx	21	2.32	-0.04	0.00
Top Girt	Max. My	24	0.96	0.00	0.00		
	Max. Vy	21	0.03	0.00	0.00		
	Max. Vx	24	0.00	0.00	0.00		
	Max Tension	4	1.45	0.00	0.00		
	Max. Compression	10	-1.29	0.00	0.00		
	Max. Mx	26	0.17	-0.03	0.00		
	Max. My	10	0.63	0.00	0.00		
	Max. Vy	26	0.03	0.00	0.00		
	Max. Vx	10	-0.00	0.00	0.00		
	Max Tension	1	0.00	0.00	0.00		
	Max. Compression	15	-56.31	-0.13	-0.24		
	Diagonal	Max. Mx	18	-51.28	0.26	-0.01	
Max. My		2	-46.06	-0.11	-0.27		
Max. Vy		18	0.15	-0.26	0.01		
Max. Vx		15	-0.13	0.13	0.23		
Max Tension		3	7.82	0.00	0.00		
Max. Compression		9	-8.26	0.00	0.00		
Max. Mx		25	2.39	-0.04	0.00		
Max. My		24	-1.64	0.00	0.00		
Max. Vy		25	0.03	0.00	0.00		
Max. Vx		24	-0.00	0.00	0.00		
Max Tension		13	0.24	0.00	0.00		
Max. Compression		6	-0.04	0.00	0.00		
Top Girt	Max. Mx	26	0.11	-0.03	0.00		
	Max. My	11	0.02	0.00	0.00		
	Max. Vy	26	-0.03	0.00	0.00		
	Max. Vx	11	-0.00	0.00	0.00		
	Max Tension	1	0.00	0.00	0.00		
	Max. Compression	20	-55.84	0.12	0.21		
	Max. Mx	25	-52.94	0.27	-0.01		
	Max. My	26	-54.42	0.14	0.23		
	Max. Vy	24	-0.14	0.27	-0.01		
	Max. Vx	15	0.12	0.13	0.23		
	Max Tension	9	8.82	0.00	0.00		
	Max. Compression	3	-9.00	0.00	0.00		
Leg	Max. Mx	21	2.55	-0.04	0.00		
	Max. My	10	0.01	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	
T19	138 - 134	Top Girt	Max. Vy	21	0.03	0.00	0.00	
			Max. Vx	10	-0.00	0.00	0.00	
			Max Tension	4	0.45	0.00	0.00	
			Max. Compression	10	-0.25	0.00	0.00	
			Max. Mx	26	0.15	-0.03	0.00	
			Max. My	10	0.28	0.00	0.00	
		Leg	Max. Vy	26	0.03	0.00	0.00	
			Max. Vx	10	-0.00	0.00	0.00	
			Max Tension	1	0.00	0.00	0.00	
			Max. Compression	26	-57.57	-0.12	-0.22	
			Max. Mx	25	-53.43	0.27	-0.01	
			Max. My	21	-53.68	0.12	-0.24	
			Diagonal	Max. Vy	24	0.14	0.27	-0.01
				Max. Vx	21	0.13	0.12	-0.24
				Max Tension	3	9.44	0.00	0.00
				Max. Compression	9	-9.83	0.00	0.00
				Max. Mx	25	2.70	-0.04	0.00
				Max. My	24	-1.86	0.00	0.00
Top Girt	Max. Vy	25	-0.03	0.00	0.00			
	Max. Vx	24	-0.00	0.00	0.00			
	Max Tension	12	0.38	0.00	0.00			
	Max. Compression	6	-0.21	0.00	0.00			
	Max. Mx	20	0.15	-0.03	0.00			
	Max. My	11	-0.14	0.00	0.00			
	Leg	Max. Vy	20	0.03	0.00	0.00		
		Max. Vx	11	-0.00	0.00	0.00		
		Max Tension	1	0.00	0.00	0.00		
		Max. Compression	21	-59.26	0.15	0.20		
		Max. Mx	25	-58.33	0.29	-0.02		
		Max. My	17	-54.39	-0.13	0.25		
Diagonal	Max. Vy	25	-0.15	0.29	-0.02			
	Max. Vx	21	-0.13	0.12	-0.24			
	Max Tension	9	10.17	0.00	0.00			
	Max. Compression	3	-10.34	0.00	0.00			
	Max. Mx	22	3.22	-0.04	0.00			
	Max. My	10	0.10	0.00	0.00			
	Top Girt	Max. Vy	22	0.03	0.00	0.00		
		Max. Vx	10	-0.00	0.00	0.00		
		Max Tension	4	0.37	0.00	0.00		
		Max. Compression	10	-0.16	0.00	0.00		
		Max. Mx	20	0.09	-0.03	0.00		
		Max. My	11	0.33	0.00	0.00		
T21	130 - 126	Leg	Max. Vy	20	0.03	0.00	0.00	
			Max. Vx	11	-0.00	0.00	0.00	
			Max Tension	1	0.00	0.00	0.00	
			Max. Compression	21	-64.50	0.03	-0.01	
			Max. Mx	25	-63.62	0.29	-0.02	
			Max. My	25	-64.15	0.12	0.25	
		Diagonal	Max. Vy	16	0.16	-0.04	0.05	
			Max. Vx	21	0.15	-0.02	-0.08	
			Max Tension	13	5.87	0.00	0.00	
			Max. Compression	7	-6.03	0.00	0.00	
			Max. Mx	24	-1.49	-0.04	0.00	
			Max. My	24	0.25	0.00	0.00	
			Secondary Horizontal	Max. Vy	24	0.03	0.00	0.00
				Max. Vx	24	-0.00	0.00	0.00
				Max Tension	21	1.56	0.00	0.00
				Max. Compression	21	-1.56	0.00	0.00
				Max. Mx	20	1.54	-0.03	0.00
				Max. My	10	1.37	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
			Max. Vy	20	0.03	0.00	0.00
			Max. Vx	10	-0.00	0.00	0.00
		Top Girt	Max Tension	5	11.87	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	20	2.31	-0.03	0.00
			Max. My	11	11.40	0.00	0.00
			Max. Vy	20	0.03	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
		Guy A	Bottom Tension	9	27.18		
			Top Tension	9	27.33		
			Top Cable Vert	9	17.84		
			Top Cable Norm	9	20.70		
			Top Cable Tan	9	0.06		
			Bot Cable Vert	9	-17.50		
			Bot Cable Norm	9	20.80		
			Bot Cable Tan	9	0.20		
		Guy B	Bottom Tension	11	27.87		
			Top Tension	11	28.01		
			Top Cable Vert	11	18.96		
			Top Cable Norm	11	20.62		
			Top Cable Tan	11	0.06		
			Bot Cable Vert	11	-18.63		
			Bot Cable Norm	11	20.72		
			Bot Cable Tan	11	0.20		
		Guy C	Bottom Tension	3	26.31		
			Top Tension	3	26.47		
			Top Cable Vert	3	16.75		
			Top Cable Norm	3	20.50		
			Top Cable Tan	3	0.04		
			Bot Cable Vert	3	-16.38		
			Bot Cable Norm	3	20.59		
			Bot Cable Tan	3	0.19		
T22	126 - 122	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-64.97	0.12	0.25
			Max. Mx	25	-62.98	0.32	-0.00
			Max. My	21	-63.62	-0.15	-0.27
			Max. Vy	24	-0.16	0.32	-0.00
			Max. Vx	21	0.14	-0.15	-0.27
		Diagonal	Max Tension	7	5.13	0.00	0.00
			Max. Compression	13	-5.54	0.00	0.00
			Max. Mx	22	-1.21	-0.04	0.00
			Max. My	24	-1.06	0.00	0.00
			Max. Vy	22	0.03	0.00	0.00
			Max. Vx	24	-0.00	0.00	0.00
		Top Girt	Max Tension	4	0.27	0.00	0.00
			Max. Compression	10	-0.12	0.00	0.00
			Max. Mx	20	0.08	-0.02	0.00
			Max. My	10	0.17	0.00	0.00
			Max. Vy	20	0.02	0.00	0.00
			Max. Vx	10	-0.00	0.00	0.00
T23	122 - 102	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-67.28	-0.15	-0.27
			Max. Mx	24	-65.54	0.33	0.00
			Max. My	26	-67.19	0.17	0.29
			Max. Vy	24	0.18	0.33	0.00
			Max. Vx	15	-0.15	0.16	0.29
		Diagonal	Max Tension	13	4.46	0.00	0.00
			Max. Compression	7	-4.71	0.00	0.00
			Max. Mx	24	-1.22	-0.04	0.00
			Max. My	23	-0.38	0.00	0.00
			Max. Vy	24	0.03	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	
T24	102 - 98	Horizontal	Max. Vx	23	-0.00	0.00	0.00	
			Max Tension	26	1.17	0.00	0.00	
			Max. Compression	26	-1.17	0.00	0.00	
			Max. Mx	20	1.15	-0.02	0.00	
			Max. My	11	0.90	0.00	0.00	
			Max. Vy	20	0.02	0.00	0.00	
		Top Girt	Max. Vx	11	-0.00	0.00	0.00	
			Max Tension	12	0.40	0.00	0.00	
			Max. Compression	6	-0.19	0.00	0.00	
			Max. Mx	20	0.15	-0.02	0.00	
			Max. My	11	-0.11	0.00	0.00	
			Max. Vy	20	0.02	0.00	0.00	
		Leg	Max. Vx	11	-0.00	0.00	0.00	
			Max Tension	1	0.00	0.00	0.00	
			Max. Compression	15	-67.84	0.00	-0.01	
			Max. Mx	24	-66.83	0.34	-0.00	
			Max. My	26	-67.82	0.17	0.29	
			Max. Vy	24	-0.18	0.34	-0.00	
			Diagonal	Max. Vx	15	0.16	0.16	0.29
				Max Tension	8	0.92	0.00	0.00
				Max. Compression	4	-1.57	0.00	0.00
				Max. Mx	22	-0.15	-0.03	0.00
				Max. My	23	-0.37	0.00	0.00
				Max. Vy	22	0.02	0.00	0.00
			Secondary Horizontal	Max. Vx	23	0.00	0.00	0.00
				Max Tension	15	1.65	0.00	0.00
				Max. Compression	15	-1.65	0.00	0.00
		Max. Mx		14	1.51	-0.02	0.00	
		Max. My		11	1.30	0.00	0.00	
		Max. Vy		14	0.02	0.00	0.00	
		Top Girt		Max. Vx	11	-0.00	0.00	0.00
				Max Tension	4	0.42	0.00	0.00
				Max. Compression	10	-0.19	0.00	0.00
Max. Mx	14			0.15	-0.02	0.00		
Max. My	11			0.38	0.00	0.00		
Max. Vy	14			0.02	0.00	0.00		
Leg	Max. Vx	11	-0.00	0.00	0.00			
	Max Tension	1	0.00	0.00	0.00			
	Max. Compression	15	-68.66	0.01	-0.01			
	Max. Mx	24	-66.98	0.34	-0.00			
	Max. My	26	-68.37	0.17	0.29			
	Max. Vy	24	0.18	0.34	-0.00			
	Diagonal	Max. Vx	15	-0.16	0.16	0.29		
		Max Tension	4	0.66	0.00	0.00		
		Max. Compression	9	-0.73	0.00	0.00		
		Max. Mx	24	-0.24	-0.03	0.00		
		Max. My	24	-0.57	0.00	0.00		
		Max. Vy	24	-0.02	0.00	0.00		
	Secondary Horizontal	Max. Vx	24	0.00	0.00	0.00		
		Max Tension	15	1.66	0.00	0.00		
		Max. Compression	15	-1.66	0.00	0.00		
Max. Mx		14	1.54	-0.02	0.00			
Max. My		11	1.31	0.00	0.00			
Max. Vy		14	0.02	0.00	0.00			
Top Girt		Max. Vx	11	-0.00	0.00	0.00		
		Max Tension	12	0.42	0.00	0.00		
		Max. Compression	6	-0.20	0.00	0.00		
		Max. Mx	14	0.14	-0.02	0.00		
		Max. My	11	-0.12	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
T26	94 - 90	Leg	Max. Vy	14	0.02	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	15	-68.87	0.00	-0.02
			Max. Mx	24	-68.11	0.34	-0.00
			Max. My	26	-68.73	0.17	0.29
		Diagonal	Max. Vy	24	-0.18	0.34	-0.00
			Max. Vx	15	0.16	0.16	0.29
			Max Tension	9	0.90	0.00	0.00
			Max. Compression	3	-1.35	0.00	0.00
			Max. Mx	22	0.20	-0.03	0.00
			Max. My	23	-0.36	0.00	0.00
		Secondary Horizontal	Max. Vy	22	0.02	0.00	0.00
			Max. Vx	23	0.00	0.00	0.00
			Max Tension	15	1.67	0.00	0.00
			Max. Compression	15	-1.67	0.00	0.00
			Max. Mx	14	1.55	-0.02	0.00
			Max. My	11	1.31	0.00	0.00
		Top Girt	Max. Vy	14	0.02	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
			Max Tension	4	0.41	0.00	0.00
Max. Compression	10		-0.19	0.00	0.00		
Max. Mx	14		0.15	-0.02	0.00		
Max. My	11		0.38	0.00	0.00		
T27	90 - 86	Leg	Max. Vy	14	0.02	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	15	-69.67	0.01	-0.01
			Max. Mx	24	-67.97	0.34	-0.00
			Max. My	26	-69.48	0.17	0.30
		Diagonal	Max. Vy	24	0.18	0.34	-0.00
			Max. Vx	15	-0.16	0.17	0.30
			Max Tension	3	1.72	0.00	0.00
			Max. Compression	9	-2.01	0.00	0.00
			Max. Mx	24	0.08	-0.03	0.00
			Max. My	24	-0.77	0.00	0.00
		Secondary Horizontal	Max. Vy	24	0.02	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
			Max Tension	15	1.69	0.00	0.00
			Max. Compression	15	-1.69	0.00	0.00
			Max. Mx	14	1.57	-0.02	0.00
			Max. My	11	1.29	0.00	0.00
		Top Girt	Max. Vy	14	0.02	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
			Max Tension	12	0.41	0.00	0.00
Max. Compression	6		-0.19	0.00	0.00		
Max. Mx	14		0.14	-0.02	0.00		
Max. My	5		0.38	0.00	0.00		
T28	86 - 82	Leg	Max. Vy	14	0.02	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-69.59	0.00	-0.01
			Max. Mx	24	-69.33	0.35	-0.01
			Max. My	26	-69.58	0.17	0.30
		Diagonal	Max. Vy	24	-0.18	0.35	-0.01
			Max. Vx	15	0.16	0.17	0.30
			Max Tension	9	2.35	0.00	0.00
			Max. Compression	3	-2.82	0.00	0.00
			Max. Mx	22	0.55	-0.03	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
T29	82 - 78	Secondary Horizontal	Max. My	23	-0.35	0.00	0.00
			Max. Vy	22	0.02	0.00	0.00
			Max. Vx	23	-0.00	0.00	0.00
			Max Tension	26	1.69	0.00	0.00
			Max. Compression	26	-1.69	0.00	0.00
			Max. Mx	19	1.68	-0.02	0.00
			Max. My	11	1.24	0.00	0.00
			Max. Vy	19	0.02	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
			Max Tension	4	0.41	0.00	0.00
			Max. Compression	10	-0.18	0.00	0.00
			Max. Mx	14	0.15	-0.02	0.00
		Max. My	11	0.37	0.00	0.00	
		Max. Vy	14	0.02	0.00	0.00	
		Max. Vx	11	-0.00	0.00	0.00	
		Max Tension	1	0.00	0.00	0.00	
		Leg	Max. Compression	26	-70.57	0.00	-0.00
			Max. Mx	24	-68.92	0.35	-0.01
			Max. My	26	-70.53	0.17	0.31
			Max. Vy	24	0.19	0.35	-0.01
			Max. Vx	15	-0.16	0.17	0.31
			Max Tension	3	3.16	0.00	0.00
			Max. Compression	9	-3.44	0.00	0.00
			Max. Mx	24	0.39	-0.03	0.00
			Max. My	24	-0.95	0.00	0.00
			Max. Vy	24	-0.02	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
			Max Tension	26	1.71	0.00	0.00
		Secondary Horizontal	Max. Compression	26	-1.71	0.00	0.00
			Max. Mx	19	1.68	-0.02	0.00
			Max. My	11	1.19	0.00	0.00
			Max. Vy	19	0.02	0.00	0.00
Max. Vx	11		-0.00	0.00	0.00		
Max Tension	12		0.40	0.00	0.00		
Max. Compression	6		-0.18	0.00	0.00		
Max. Mx	19		0.17	-0.02	0.00		
Max. My	5		0.37	0.00	0.00		
Max. Vy	19		0.02	0.00	0.00		
Max. Vx	5		-0.00	0.00	0.00		
Max Tension	1		0.00	0.00	0.00		
Leg	Max. Compression	25	-70.52	-0.00	-0.01		
	Max. Mx	24	-70.49	0.36	-0.01		
	Max. My	22	-69.78	-0.17	-0.31		
	Max. Vy	24	-0.18	0.36	-0.01		
	Max. Vx	15	0.16	0.17	0.31		
	Max Tension	9	3.73	0.00	0.00		
	Max. Compression	3	-4.23	0.00	0.00		
	Max. Mx	22	0.88	-0.03	0.00		
	Max. My	23	-0.35	0.00	0.00		
	Max. Vy	22	0.02	0.00	0.00		
	Max. Vx	23	0.00	0.00	0.00		
	Max Tension	25	1.71	0.00	0.00		
Secondary Horizontal	Max. Compression	25	-1.71	0.00	0.00		
	Max. Mx	19	1.69	-0.02	0.00		
	Max. My	11	1.10	0.00	0.00		
	Max. Vy	19	0.02	0.00	0.00		
	Max. Vx	11	-0.00	0.00	0.00		
	Max Tension	4	0.39	0.00	0.00		
	Top Girt	Max. Compression	25	-1.71	0.00	0.00	
		Max. Mx	19	1.69	-0.02	0.00	
		Max. My	11	1.10	0.00	0.00	
		Max. Vy	19	0.02	0.00	0.00	
		Max. Vx	11	-0.00	0.00	0.00	
		Max Tension	4	0.39	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	
T31	74 - 70	Leg	Max. Compression	10	-0.15	0.00	0.00	
			Max. Mx	19	0.18	-0.02	0.00	
			Max. My	11	0.36	0.00	0.00	
			Max. Vy	19	0.02	0.00	0.00	
			Max. Vx	11	-0.00	0.00	0.00	
			Max Tension	1	0.00	0.00	0.00	
			Max. Compression	25	-71.98	0.01	0.01	
			Max. Mx	24	-69.85	0.36	-0.01	
			Max. My	26	-71.51	0.17	0.32	
			Max. Vy	24	0.19	0.36	-0.01	
			Max. Vx	15	-0.16	0.17	0.31	
			Max Tension	3	4.52	0.00	0.00	
		Diagonal	Max. Compression	9	-4.77	0.00	0.00	
			Max. Mx	24	0.68	-0.04	0.00	
			Max. My	6	0.22	0.00	-0.00	
			Max. Vy	24	0.03	0.00	0.00	
			Max. Vx	6	0.00	0.00	0.00	
			Max Tension	25	1.75	0.00	0.00	
		Secondary Horizontal	Max. Compression	25	-1.75	0.00	0.00	
			Max. Mx	19	1.67	-0.02	0.00	
			Max. My	11	1.09	0.00	0.00	
			Max. Vy	19	0.02	0.00	0.00	
			Max. Vx	11	-0.00	0.00	0.00	
			Max Tension	12	0.38	0.00	0.00	
Top Girt	Max. Compression	6	-0.15	0.00	0.00			
	Max. Mx	19	0.17	-0.02	0.00			
	Max. My	5	0.35	0.00	0.00			
	Max. Vy	19	0.02	0.00	0.00			
	Max. Vx	5	-0.00	0.00	0.00			
	Max Tension	1	0.00	0.00	0.00			
T32	70 - 66	Leg	Max. Compression	23	-73.85	-0.00	-0.00	
			Max. Mx	25	-72.66	0.36	-0.01	
			Max. My	26	-71.15	0.17	0.32	
			Max. Vy	24	-0.19	0.36	-0.02	
			Max. Vx	15	0.17	0.17	0.31	
			Max Tension	9	5.06	0.00	0.00	
			Diagonal	Max. Compression	3	-5.56	0.00	0.00
				Max. Mx	23	1.25	-0.04	0.00
				Max. My	10	0.45	0.00	0.00
				Max. Vy	23	0.03	0.00	0.00
				Max. Vx	10	-0.00	0.00	0.00
				Max Tension	23	1.79	0.00	0.00
		Secondary Horizontal	Max. Compression	23	-1.79	0.00	0.00	
			Max. Mx	19	1.69	-0.02	0.00	
			Max. My	11	1.20	0.00	0.00	
			Max. Vy	19	0.02	0.00	0.00	
			Max. Vx	11	-0.00	0.00	0.00	
			Max Tension	4	0.38	0.00	0.00	
		Top Girt	Max. Compression	10	-0.14	0.00	0.00	
			Max. Mx	19	0.17	-0.02	0.00	
			Max. My	11	0.34	0.00	0.00	
			Max. Vy	19	0.02	0.00	0.00	
			Max. Vx	11	-0.00	0.00	0.00	
			Max Tension	1	0.00	0.00	0.00	
Leg	Max. Compression	23	-75.90	0.03	-0.01			
	Max. Mx	16	-74.15	-0.37	-0.01			
	Max. My	25	-74.52	0.16	0.34			
	Max. Vy	26	0.19	0.01	0.03			
	Max. Vx	22	-0.18	0.03	-0.02			
	Max Tension	1	0.00	0.00	0.00			
T33	66 - 62	Leg	Max. Compression	23	-75.90	0.03	-0.01	
			Max. Mx	16	-74.15	-0.37	-0.01	
			Max. My	25	-74.52	0.16	0.34	
			Max. Vy	26	0.19	0.01	0.03	
			Max. Vx	22	-0.18	0.03	-0.02	
			Max Tension	1	0.00	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	
T34	62 - 58	Diagonal	Max Tension	3	5.76	0.00	0.00	
			Max. Compression	9	-5.99	0.00	0.00	
			Max. Mx	23	0.92	-0.04	0.00	
			Max. My	6	0.29	0.00	-0.00	
			Max. Vy	23	0.03	0.00	0.00	
			Max. Vx	6	0.00	0.00	0.00	
		Secondary Horizontal	Max Tension	23	1.84	0.00	0.00	
			Max. Compression	23	-1.84	0.00	0.00	
			Max. Mx	19	1.66	-0.02	0.00	
			Max. My	11	1.36	0.00	0.00	
			Max. Vy	19	-0.02	0.00	0.00	
			Max. Vx	11	-0.00	0.00	0.00	
		Top Girt	Max Tension	12	0.30	0.00	0.00	
			Max. Compression	6	-0.09	0.00	0.00	
			Max. Mx	19	0.15	-0.02	0.00	
			Max. My	5	0.27	0.00	0.00	
			Max. Vy	19	-0.02	0.00	0.00	
			Max. Vx	5	-0.00	0.00	0.00	
		Leg	Max Tension	1	0.00	0.00	0.00	
			Max. Compression	23	-79.05	0.02	-0.04	
			Max. Mx	25	-76.35	0.37	-0.01	
			Max. My	25	-77.73	0.16	0.34	
			Max. Vy	26	-0.20	0.03	0.03	
			Max. Vx	22	0.19	0.02	-0.05	
			Diagonal	Max Tension	11	5.15	0.00	0.00
				Max. Compression	5	-5.33	0.00	0.00
				Max. Mx	23	-1.00	-0.04	0.00
				Max. My	10	0.27	0.00	0.00
				Max. Vy	23	0.03	0.00	0.00
				Max. Vx	10	-0.00	0.00	0.00
			Secondary Horizontal	Max Tension	23	1.92	0.00	0.00
				Max. Compression	23	-1.92	0.00	0.00
				Max. Mx	19	1.76	-0.02	0.00
				Max. My	11	1.40	0.00	0.00
				Max. Vy	19	0.02	0.00	0.00
				Max. Vx	11	-0.00	0.00	0.00
		Top Girt	Max Tension	11	7.92	0.00	0.00	
			Max. Compression	1	0.00	0.00	0.00	
			Max. Mx	19	4.20	-0.03	0.00	
			Max. My	11	0.57	0.00	0.00	
			Max. Vy	19	0.03	0.00	0.00	
			Max. Vx	11	-0.00	0.00	0.00	
Guy A	Bottom Tension	9	14.37					
	Top Tension	9	14.41					
	Top Cable Vert	9	5.24					
	Top Cable Norm	9	13.42					
	Top Cable Tan	9	0.02					
	Bot Cable Vert	9	-5.11					
	Bot Cable Norm	9	13.43					
	Bot Cable Tan	9	0.07					
Guy B	Bottom Tension	11	14.73					
	Top Tension	11	14.77					
	Top Cable Vert	11	5.82					
	Top Cable Norm	11	13.57					
	Top Cable Tan	11	0.02					
	Bot Cable Vert	11	-5.69					
	Bot Cable Norm	11	13.59					
	Bot Cable Tan	11	0.07					
Guy C	Bottom Tension	3	14.14					

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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			
T35	58 - 54	Leg	Top Tension	3	14.19					
			Top Cable Vert	3	5.39					
			Top Cable Norm	3	13.12					
			Top Cable Tan	3	0.01					
			Bot Cable Vert	3	-5.23					
			Bot Cable Norm	3	13.14					
			Bot Cable Tan	3	0.07					
			Max Tension	1	0.00	0.00	0.00			
			Max. Compression	23	-78.15	0.01	0.02			
			Max. Mx	17	-75.11	-0.38	0.00			
			Max. My	26	-75.75	0.19	0.34			
			Max. Vy	24	0.20	0.37	-0.02			
			Max. Vx	26	0.18	-0.17	0.32			
			Diagonal	Max Tension	5	4.46	0.00	0.00		
				Max. Compression	11	-5.05	0.00	0.00		
		Max. Mx		23	-1.16	-0.04	0.00			
		Max. My		6	0.42	0.00	-0.00			
		Max. Vy		23	0.02	0.00	0.00			
		Max. Vx		6	0.00	0.00	0.00			
		Secondary Horizontal	Max Tension	23	1.90	0.00	0.00			
			Max. Compression	23	-1.90	0.00	0.00			
			Max. Mx	19	1.81	-0.02	0.00			
			Max. My	11	1.23	0.00	0.00			
			Max. Vy	19	0.02	0.00	0.00			
			Max. Vx	11	-0.00	0.00	0.00			
			Top Girt	Max Tension	12	0.29	0.00	0.00		
				Max. Compression	6	-0.08	0.00	0.00		
				Max. Mx	19	0.14	-0.02	0.00		
				Max. My	5	0.27	0.00	0.00		
				Max. Vy	19	0.02	0.00	0.00		
Max. Vx	5			-0.00	0.00	0.00				
T36	54 - 50		Leg	Max Tension	1	0.00	0.00	0.00		
				Max. Compression	24	-77.99	-0.00	-0.01		
				Max. Mx	24	-76.40	0.39	-0.01		
		Max. My		26	-76.90	0.19	0.34			
		Max. Vy		18	-0.20	-0.38	-0.01			
		Max. Vx		15	0.18	0.18	0.34			
		Diagonal		Max Tension	11	4.09	0.00	0.00		
				Max. Compression	5	-4.26	0.00	0.00		
				Max. Mx	23	-0.76	-0.04	0.00		
				Max. My	10	0.33	0.00	0.00		
				Max. Vy	23	0.02	0.00	0.00		
				Max. Vx	10	-0.00	0.00	0.00		
		Secondary Horizontal		Max Tension	24	1.89	0.00	0.00		
				Max. Compression	24	-1.89	0.00	0.00		
				Max. Mx	19	1.82	-0.02	0.00		
			Max. My	11	1.19	0.00	0.00			
			Max. Vy	19	-0.02	0.00	0.00			
			Max. Vx	11	-0.00	0.00	0.00			
			Top Girt	Max Tension	4	0.37	0.00	0.00		
				Max. Compression	10	-0.13	0.00	0.00		
				Max. Mx	19	0.16	-0.02	0.00		
				Max. My	11	0.33	0.00	0.00		
				Max. Vy	19	-0.02	0.00	0.00		
				Max. Vx	11	-0.00	0.00	0.00		
			T37	50 - 46	Leg	Max Tension	1	0.00	0.00	0.00
						Max. Compression	24	-77.67	-0.38	-0.00
						Max. Mx	24	-77.26	0.39	-0.01
		Max. My				26	-77.13	0.20	0.35	

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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
T38	46 - 42	Diagonal	Max. Vy	24	0.21	0.39	-0.01
			Max. Vx	26	0.18	-0.18	0.34
			Max Tension	5	3.33	0.00	0.00
			Max. Compression	11	-3.96	0.00	0.00
			Max. Mx	23	-0.95	-0.03	0.00
			Max. My	6	0.51	0.00	-0.00
			Max. Vy	23	0.02	0.00	0.00
			Max. Vx	6	0.00	0.00	0.00
			Max Tension	24	1.88	0.00	0.00
			Max. Compression	24	-1.88	0.00	0.00
			Max. Mx	19	1.86	-0.02	0.00
			Max. My	11	1.21	0.00	0.00
		Secondary Horizontal	Max. Vy	19	0.02	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
			Max Tension	12	0.36	0.00	0.00
			Max. Compression	6	-0.12	0.00	0.00
			Max. Mx	19	0.16	-0.02	0.00
			Max. My	5	0.33	0.00	0.00
			Max. Vy	19	0.02	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	23	-78.43	0.40	-0.01
			Max. Mx	23	-78.43	0.40	-0.01
			Max. My	25	-77.21	-0.19	0.35
		Top Girt	Max. Vy	18	-0.21	-0.39	-0.00
			Max. Vx	15	0.18	0.19	0.35
			Max Tension	11	3.02	0.00	0.00
			Max. Compression	5	-3.16	0.00	0.00
			Max. Mx	23	-0.52	-0.03	0.00
			Max. My	23	-0.28	0.00	0.00
			Max. Vy	23	0.02	0.00	0.00
			Max. Vx	23	-0.00	0.00	0.00
			Max Tension	23	1.90	0.00	0.00
			Max. Compression	23	-1.90	0.00	0.00
			Max. Mx	19	1.88	-0.02	0.00
			Max. My	11	1.34	0.00	0.00
		Secondary Horizontal	Max. Vy	19	0.02	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
			Max Tension	4	0.37	0.00	0.00
			Max. Compression	10	-0.12	0.00	0.00
Max. Mx	19		0.16	-0.02	0.00		
Max. My	11		0.34	0.00	0.00		
Max. Vy	19		0.02	0.00	0.00		
Max. Vx	11		-0.00	0.00	0.00		
Max Tension	1		0.00	0.00	0.00		
Max. Compression	22		-79.98	-0.40	-0.01		
Max. Mx	23		-79.42	0.40	-0.01		
Max. My	15		-78.99	0.20	0.35		
Leg	Max. Vy	24	0.21	0.40	-0.00		
	Max. Vx	26	0.18	-0.19	0.35		
	Max Tension	5	2.23	0.00	0.00		
	Max. Compression	11	-2.89	0.00	0.00		
	Max. Mx	23	-0.73	-0.03	0.00		
	Max. My	24	-0.17	0.00	0.00		
	Max. Vy	23	0.02	0.00	0.00		
	Max. Vx	24	0.00	0.00	0.00		
	Max Tension	22	1.94	0.00	0.00		
	Max. Compression	22	-1.94	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			
T40	38 - 34	Top Girt	Max. Mx	19	1.91	-0.03	0.00			
			Max. My	11	1.35	0.00	0.00			
			Max. Vy	19	0.03	0.00	0.00			
			Max. Vx	11	-0.00	0.00	0.00			
			Max Tension	12	0.36	0.00	0.00			
			Max. Compression	6	-0.12	0.00	0.00			
			Max. Mx	19	0.16	-0.02	0.00			
			Max. My	5	0.34	0.00	0.00			
			Max. Vy	19	0.02	0.00	0.00			
			Max. Vx	5	-0.00	0.00	0.00			
			Max Tension	1	0.00	0.00	0.00			
			Max. Compression	22	-81.02	0.41	-0.01			
			Leg	Max. Mx	23	-80.68	0.41	-0.00		
				Max. My	25	-80.01	-0.19	0.36		
		Max. Vy		19	-0.21	-0.40	-0.00			
		Max. Vx		15	0.19	0.20	0.35			
		Diagonal		Max Tension	11	1.95	0.00	0.00		
				Max. Compression	4	-2.11	0.00	0.00		
				Max. Mx	23	-0.27	-0.03	0.00		
				Max. My	23	-0.27	0.00	0.00		
				Max. Vy	23	0.02	0.00	0.00		
				Max. Vx	23	0.00	0.00	0.00		
		Secondary Horizontal		Max Tension	22	1.96	0.00	0.00		
				Max. Compression	22	-1.96	0.00	0.00		
		T41		34 - 30	Top Girt	Max. Mx	19	1.92	-0.03	0.00
						Max. My	11	1.44	0.00	0.00
			Max. Vy			19	0.03	0.00	0.00	
			Max. Vx			11	-0.00	0.00	0.00	
Max Tension	4		0.36			0.00	0.00			
Max. Compression	10		-0.12			0.00	0.00			
Max. Mx	19		0.16			-0.02	0.00			
Max. My	11		0.34			0.00	0.00			
Max. Vy	19		0.02			0.00	0.00			
Max. Vx	11		-0.00			0.00	0.00			
Leg	Max Tension		1			0.00	0.00	0.00		
	Max. Compression		22			-82.27	-0.41	-0.01		
	Max. Mx		23			-81.31	0.41	-0.00		
	Max. My		15			-80.77	0.20	0.36		
	Max. Vy		23		0.22	0.41	-0.00			
	Max. Vx		26		0.19	-0.20	0.35			
	Diagonal		Max Tension		4	1.31	0.00	0.00		
			Max. Compression		11	-1.83	0.00	0.00		
			Max. Mx		23	-0.50	-0.03	0.00		
			Max. My		6	0.68	0.00	-0.00		
			Max. Vy		23	0.02	0.00	0.00		
			Max. Vx		6	0.00	0.00	0.00		
	Secondary Horizontal		Max Tension		22	1.99	0.00	0.00		
			Max. Compression		22	-1.99	0.00	0.00		
T42	30 - 26		Top Girt		Max. Mx	19	1.95	-0.03	0.00	
					Max. My	11	1.43	0.00	0.00	
					Max. Vy	19	0.03	0.00	0.00	
					Max. Vx	11	-0.00	0.00	0.00	
		Max Tension		12	0.36	0.00	0.00			
		Max. Compression		6	-0.12	0.00	0.00			
		Max. Mx		19	0.15	-0.02	0.00			
		Max. My		5	0.34	0.00	0.00			
		Max. Vy		19	0.02	0.00	0.00			
		Max. Vx		5	-0.00	0.00	0.00			
		Leg		Max Tension	1	0.00	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
T43	26 - 22	Diagonal	Max. Compression	22	-83.11	0.42	-0.01
			Max. Mx	23	-82.55	0.42	-0.00
			Max. My	25	-82.15	-0.20	0.36
			Max. Vy	19	-0.21	-0.41	-0.00
			Max. Vx	15	0.19	0.20	0.36
			Max Tension	11	0.92	0.00	0.00
			Max. Compression	5	-1.38	0.00	0.00
			Max. Mx	23	-0.02	-0.03	0.00
			Max. My	23	-0.26	0.00	0.00
			Max. Vy	23	0.02	0.00	0.00
			Max. Vx	23	0.00	0.00	0.00
			Max Tension	22	2.02	0.00	0.00
		Secondary Horizontal	Max. Compression	22	-2.02	0.00	0.00
			Max. Mx	19	1.96	-0.03	0.00
			Max. My	11	1.48	0.00	0.00
			Max. Vy	19	-0.03	0.00	0.00
			Max. Vx	11	-0.00	0.00	0.00
			Max Tension	4	0.36	0.00	0.00
			Max. Compression	10	-0.11	0.00	0.00
			Max. Mx	19	0.16	-0.02	0.00
			Max. My	10	-0.11	0.00	-0.00
			Max. Vy	19	-0.02	0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
			Max Tension	1	0.00	0.00	0.00
		Leg	Max. Compression	22	-83.95	-0.42	-0.01
			Max. Mx	23	-82.82	0.42	-0.00
			Max. My	15	-82.18	0.21	0.36
			Max. Vy	23	0.22	0.42	-0.00
			Max. Vx	26	0.19	-0.20	0.36
			Max Tension	4	1.32	0.00	0.00
			Max. Compression	10	-1.47	0.00	0.00
			Max. Mx	23	-0.28	-0.03	0.00
			Max. My	6	0.75	0.00	-0.00
			Max. Vy	23	0.02	0.00	0.00
			Max. Vx	6	0.00	0.00	0.00
			Max Tension	22	2.04	0.00	0.00
Secondary Horizontal	Max. Compression	22	-2.04	0.00	0.00		
	Max. Mx	19	1.99	-0.03	0.00		
	Max. My	11	1.46	0.00	0.00		
	Max. Vy	19	0.03	0.00	0.00		
	Max. Vx	11	-0.00	0.00	0.00		
	Max Tension	12	0.36	0.00	0.00		
	Max. Compression	6	-0.11	0.00	0.00		
	Max. Mx	19	0.15	-0.02	0.00		
	Max. My	5	0.33	0.00	0.00		
	Max. Vy	19	0.02	0.00	0.00		
	Max. Vx	5	-0.00	0.00	0.00		
	Max Tension	1	0.00	0.00	0.00		
Leg	Max. Compression	22	-84.58	0.42	-0.01		
	Max. Mx	23	-84.05	0.43	-0.00		
	Max. My	25	-83.64	-0.20	0.37		
	Max. Vy	19	-0.22	-0.42	-0.00		
	Max. Vx	15	0.19	0.21	0.36		
	Max Tension	10	1.56	0.00	0.00		
	Max. Compression	3	-2.20	0.00	0.00		
	Max. Mx	23	0.23	-0.03	0.00		
	Max. My	10	0.57	0.00	0.00		
	Max. Vy	23	0.02	0.00	0.00		
	Max. Vx	10	-0.00	0.00	0.00		
	Diagonal	Max. Compression	22	-84.58	0.42	-0.01	
Max. Mx		23	-84.05	0.43	-0.00		
Max. My		25	-83.64	-0.20	0.37		
Max. Vy		19	-0.22	-0.42	-0.00		
Max. Vx		15	0.19	0.21	0.36		
Max Tension		10	1.56	0.00	0.00		
Max. Compression		3	-2.20	0.00	0.00		
Max. Mx		23	0.23	-0.03	0.00		
Max. My		10	0.57	0.00	0.00		
Max. Vy		23	0.02	0.00	0.00		
Max. Vx		10	-0.00	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	
T45	18 - 14	Secondary Horizontal	Max Tension	22	2.05	0.00	0.00	
			Max. Compression	22	-2.05	0.00	0.00	
			Max. Mx	19	1.99	-0.03	0.00	
			Max. My	11	1.47	0.00	0.00	
			Max. Vy	19	0.03	0.00	0.00	
			Max. Vx	11	-0.00	0.00	0.00	
			Top Girt	Max Tension	4	0.35	0.00	0.00
				Max. Compression	10	-0.10	0.00	0.00
				Max. Mx	19	0.15	-0.02	0.00
				Max. My	10	-0.10	0.00	-0.00
				Max. Vy	19	0.02	0.00	0.00
				Max. Vx	10	0.00	0.00	0.00
		Leg	Max Tension	1	0.00	0.00	0.00	
			Max. Compression	21	-85.02	-0.42	-0.01	
			Max. Mx	23	-83.97	0.43	-0.00	
			Max. My	25	-84.29	-0.20	0.37	
			Max. Vy	24	0.22	0.42	-0.00	
			Max. Vx	26	0.19	-0.20	0.37	
			Diagonal	Max Tension	3	2.36	0.00	0.00
				Max. Compression	10	-2.48	0.00	0.00
				Max. Mx	23	-0.05	-0.03	0.00
				Max. My	6	0.81	0.00	-0.00
				Max. Vy	23	0.02	0.00	0.00
				Max. Vx	6	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	21	2.06	0.00	0.00	
			Max. Compression	21	-2.06	0.00	0.00	
			Max. Mx	19	2.02	-0.03	0.00	
			Max. My	10	1.42	0.00	-0.00	
			Max. Vy	19	0.03	0.00	0.00	
			Max. Vx	10	0.00	0.00	0.00	
			Top Girt	Max Tension	12	0.36	0.00	0.00
				Max. Compression	6	-0.11	0.00	0.00
Max. Mx	23			0.15	-0.02	0.00		
Max. My	5			0.33	0.00	0.00		
Max. Vy	23			0.02	0.00	0.00		
Max. Vx	5			-0.00	0.00	0.00		
T46	14 - 10	Leg	Max Tension	1	0.00	0.00	0.00	
			Max. Compression	22	-85.45	0.43	-0.01	
			Max. Mx	23	-85.16	0.43	-0.01	
			Max. My	25	-84.50	-0.20	0.37	
			Max. Vy	24	-0.22	0.43	-0.00	
			Max. Vx	15	0.19	0.21	0.37	
			Diagonal	Max Tension	10	2.56	0.00	0.00
				Max. Compression	3	-3.31	0.00	0.00
				Max. Mx	23	0.47	-0.03	0.00
				Max. My	2	-0.30	0.00	0.00
				Max. Vy	23	0.02	0.00	0.00
				Max. Vx	2	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	22	2.07	0.00	0.00	
			Max. Compression	22	-2.07	0.00	0.00	
			Max. Mx	19	2.02	-0.03	0.00	
			Max. My	10	1.45	0.00	-0.00	
			Max. Vy	19	0.03	0.00	0.00	
			Max. Vx	10	0.00	0.00	0.00	
			Top Girt	Max Tension	4	0.35	0.00	0.00
				Max. Compression	10	-0.10	0.00	0.00
				Max. Mx	19	0.15	-0.02	0.00
				Max. My	10	-0.10	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	
T47	10 - 6	Leg	Max. Vy	19	0.02	0.00	0.00	
			Max. Vx	10	0.00	0.00	0.00	
			Max Tension	1	0.00	0.00	0.00	
			Max. Compression	22	-85.24	-0.42	-0.01	
			Max. Mx	23	-84.62	0.43	-0.01	
			Max. My	25	-84.70	-0.20	0.37	
			Max. Vy	24	0.21	0.43	-0.00	
			Max. Vx	15	-0.19	0.19	0.37	
			Max Tension	3	3.37	0.00	0.00	
			Max. Compression	10	-3.40	0.00	0.00	
		Diagonal	Max. Mx	23	0.17	-0.03	0.00	
			Max. My	6	0.88	0.00	-0.00	
			Max. Vy	23	0.02	0.00	0.00	
			Max. Vx	6	0.00	0.00	0.00	
			Max Tension	22	2.07	0.00	0.00	
			Max. Compression	22	-2.07	0.00	0.00	
			Max. Mx	23	2.06	-0.03	0.00	
			Max. My	10	1.36	0.00	-0.00	
			Max. Vy	23	0.03	0.00	0.00	
			Max. Vx	10	0.00	0.00	0.00	
Top Girt	Max Tension	12	0.32	0.00	0.00			
	Max. Compression	6	-0.07	0.00	0.00			
	Max. Mx	23	0.14	-0.02	0.00			
	Max. My	5	0.29	0.00	0.00			
	Max. Vy	23	0.02	0.00	0.00			
	Max. Vx	5	-0.00	0.00	0.00			
	T48	6 - 2	Leg	Max Tension	1	0.00	0.00	0.00
				Max. Compression	23	-85.05	0.43	-0.17
				Max. Mx	24	-84.71	0.43	-0.16
				Max. My	24	-84.54	-0.06	0.45
Max. Vy				24	-0.21	0.43	-0.16	
Max. Vx				25	-0.24	-0.06	0.45	
Max Tension				10	3.17	0.00	0.00	
Max. Compression				3	-3.97	0.00	0.00	
Max. Mx				23	0.63	-0.03	0.00	
Max. My				2	-0.30	0.00	0.00	
Diagonal			Max. Vy	23	0.02	0.00	0.00	
			Max. Vx	2	-0.00	0.00	0.00	
			Max Tension	23	2.06	0.00	0.00	
			Max. Compression	23	-2.06	0.00	0.00	
			Max. Mx	23	2.06	-0.02	0.00	
			Max. My	10	1.39	0.00	-0.00	
			Max. Vy	23	0.02	0.00	0.00	
			Max. Vx	10	0.00	0.00	0.00	
			Max Tension	11	0.21	0.00	0.00	
			Max. Compression	1	0.00	0.00	0.00	
Top Girt	Max. Mx	23	0.11	-0.02	0.00			
	Max. My	10	0.04	0.00	-0.00			
	Max. Vy	23	-0.02	0.00	0.00			
	Max. Vx	10	0.00	0.00	0.00			
	Max Tension	22	26.51	-69.31	0.25			
	Base Beam	Max. Compression	23	-75.78	-0.04	-0.02		
		Max. Mx	25	-27.49	-72.56	-0.10		
		Max. My	2	0.32	-0.47	-3.11		
		Max. Vy	23	-27.50	-72.33	0.02		
		Max. Vx	8	1.37	-0.16	1.28		

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### Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Guy C @ 170 ft Elev -6 ft Azimuth 240 deg	Max. Vert	10	-2.50	-1.26	0.73
	Max. H <sub>x</sub>	10	-2.50	-1.26	0.73
	Max. H <sub>z</sub>	3	-59.05	-53.15	31.73
	Min. Vert	3	-59.05	-53.15	31.73
	Min. H <sub>x</sub>	5	-59.02	-53.93	30.17
	Min. H <sub>z</sub>	10	-2.50	-1.26	0.73
Guy B @ 141 ft Elev 3 ft Azimuth 120 deg	Max. Vert	6	-3.08	1.22	0.70
	Max. H <sub>x</sub>	11	-67.71	54.42	30.38
	Max. H <sub>z</sub>	13	-67.62	53.40	31.87
	Min. Vert	11	-67.71	54.42	30.38
	Min. H <sub>x</sub>	6	-3.08	1.22	0.70
	Min. H <sub>z</sub>	6	-3.08	1.22	0.70
Guy A @ 147 ft Elev 6 ft Azimuth 0 deg  Mast	Max. Vert	2	-2.74	0.00	-1.36
	Max. H <sub>x</sub>	10	-55.27	1.51	-53.91
	Max. H <sub>z</sub>	2	-2.74	0.00	-1.36
	Min. Vert	9	-63.66	0.94	-62.26
	Min. H <sub>x</sub>	5	-33.87	-1.47	-32.14
	Min. H <sub>z</sub>	9	-63.66	0.94	-62.26
	Max. Vert	23	252.98	-0.18	-0.14
	Max. H <sub>x</sub>	12	129.40	1.37	0.82
	Max. H <sub>z</sub>	3	144.99	-1.07	0.99
	Max. M <sub>x</sub>	1	0.00	-0.03	-0.02
	Max. M <sub>z</sub>	1	0.00	-0.03	-0.02
	Max. Torsion	5	2.87	-1.49	0.32
	Min. Vert	1	88.36	-0.03	-0.02
	Min. H <sub>x</sub>	4	122.24	-1.64	0.90
	Min. H <sub>z</sub>	8	126.89	-0.06	-1.76
Min. M <sub>x</sub>	1	0.00	-0.03	-0.02	
Min. M <sub>z</sub>	1	0.00	-0.03	-0.02	
Min. Torsion	11	-2.59	1.12	0.32	

### Tower Mast Reaction Summary

Load Combination	Vertical K	Shear <sub>x</sub> K	Shear <sub>z</sub> K	Overturning Moment, M <sub>x</sub> kip-ft	Overturning Moment, M <sub>z</sub> kip-ft	Torque kip-ft
Dead Only	88.36	0.03	0.02	0.00	0.00	-0.11
1.2 Dead+1.6 Wind 0 deg - No Ice+1.0 Guy	159.08	0.12	-0.90	0.00	0.00	-0.79
1.2 Dead+1.6 Wind 30 deg - No Ice+1.0 Guy	144.99	1.07	-0.99	0.00	0.00	-1.85
1.2 Dead+1.6 Wind 60 deg - No Ice+1.0 Guy	122.24	1.64	-0.90	0.00	0.00	-2.82
1.2 Dead+1.6 Wind 90 deg - No Ice+1.0 Guy	143.05	1.49	-0.32	0.00	0.00	-2.87
1.2 Dead+1.6 Wind 120 deg - No Ice+1.0 Guy	155.81	0.98	0.51	0.00	0.00	-2.19

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Load Combination	Vertical K	Shear <sub>x</sub> K	Shear <sub>z</sub> K	Overturning Moment, M <sub>x</sub> kip-ft	Overturning Moment, M <sub>z</sub> kip-ft	Torque kip-ft
1.2 Dead+1.6 Wind 150 deg - No Ice+1.0 Guy	145.08	0.45	1.34	0.00	0.00	-0.90
1.2 Dead+1.6 Wind 180 deg - No Ice+1.0 Guy	126.89	0.06	1.76	0.00	0.00	0.46
1.2 Dead+1.6 Wind 210 deg - No Ice+1.0 Guy	149.40	-0.26	1.31	0.00	0.00	1.34
1.2 Dead+1.6 Wind 240 deg - No Ice+1.0 Guy	162.37	-0.67	0.49	0.00	0.00	2.18
1.2 Dead+1.6 Wind 270 deg - No Ice+1.0 Guy	151.07	-1.12	-0.32	0.00	0.00	2.59
1.2 Dead+1.6 Wind 300 deg - No Ice+1.0 Guy	129.40	-1.37	-0.82	0.00	0.00	2.05
1.2 Dead+1.6 Wind 330 deg - No Ice+1.0 Guy	148.68	-0.83	-0.86	0.00	0.00	0.48
1.2 Dead+1.0 Ice+1.0 Temp+Guy	246.48	0.11	0.18	0.00	0.00	-0.29
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp+1.0 Guy	250.24	0.09	0.20	0.00	0.00	-0.64
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp+1.0 Guy	249.17	0.15	0.18	0.00	0.00	-0.63
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp+1.0 Guy	248.62	0.17	0.15	0.00	0.00	-0.85
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp+1.0 Guy	248.47	0.15	0.16	0.00	0.00	-0.93
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp+1.0 Guy	248.98	0.11	0.20	0.00	0.00	-0.53
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp+1.0 Guy	250.15	0.12	0.27	0.00	0.00	-0.07
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp+1.0 Guy	251.36	0.15	0.28	0.00	0.00	0.00
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp+1.0 Guy	252.24	0.18	0.23	0.00	0.00	0.01
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp+1.0 Guy	252.98	0.18	0.14	0.00	0.00	0.26
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp+1.0 Guy	252.91	0.11	0.09	0.00	0.00	0.36
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp+1.0 Guy	252.49	0.05	0.10	0.00	0.00	-0.05
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp+1.0 Guy	251.49	0.04	0.16	0.00	0.00	-0.54
Dead+Wind 0 deg - Service+Guy	89.02	0.05	-0.53	0.00	0.00	-0.21
Dead+Wind 30 deg - Service+Guy	88.69	0.31	-0.45	0.00	0.00	-0.45
Dead+Wind 60 deg - Service+Guy	88.58	0.48	-0.25	0.00	0.00	-0.68
Dead+Wind 90 deg - Service+Guy	88.61	0.57	0.01	0.00	0.00	-0.79
Dead+Wind 120 deg - Service+Guy	88.84	0.51	0.29	0.00	0.00	-0.63
Dead+Wind 150 deg - Service+Guy	89.24	0.30	0.48	0.00	0.00	-0.30
Dead+Wind 180 deg - Service+Guy	89.61	0.02	0.53	0.00	0.00	-0.02
Dead+Wind 210 deg - Service+Guy	89.84	-0.25	0.49	0.00	0.00	0.22
Dead+Wind 240 deg - Service+Guy	89.99	-0.45	0.30	0.00	0.00	0.47
Dead+Wind 270 deg - Service+Guy	89.94	-0.50	0.03	0.00	0.00	0.57
Dead+Wind 300 deg -	89.78	-0.40	-0.22	0.00	0.00	0.38

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Load Combination	Vertical K	Shear <sub>x</sub> K	Shear <sub>z</sub> K	Overturning Moment, M <sub>x</sub> kip-ft	Overturning Moment, M <sub>z</sub> kip-ft	Torque kip-ft
Service+Guy Dead+Wind 330 deg - Service+Guy	89.42	-0.22	-0.44	0.00	0.00	0.07

## Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.00	-38.56	0.00	0.00	38.56	-0.00	0.004%
2	-0.03	-45.84	-56.00	0.03	45.84	55.99	0.005%
3	27.48	-45.69	-47.68	-27.48	45.69	47.68	0.008%
4	46.73	-45.53	-27.00	-46.73	45.53	27.00	0.003%
5	55.02	-45.70	0.01	-55.02	45.70	-0.01	0.007%
6	48.45	-45.85	28.03	-48.44	45.85	-28.03	0.010%
7	27.56	-45.64	47.78	-27.55	45.63	-47.78	0.006%
8	0.03	-45.41	54.09	-0.04	45.41	-54.09	0.003%
9	-27.48	-45.56	47.68	27.48	45.56	-47.68	0.002%
10	-48.38	-45.73	27.95	48.38	45.73	-27.95	0.003%
11	-55.02	-45.55	-0.01	55.02	45.55	0.02	0.002%
12	-46.80	-45.40	-27.08	46.80	45.40	27.08	0.003%
13	-27.56	-45.62	-47.78	27.56	45.62	47.78	0.003%
14	0.00	-174.87	0.00	-0.00	174.87	0.00	0.000%
15	-0.09	-175.10	-19.94	0.09	175.10	19.93	0.001%
16	9.82	-174.94	-17.10	-9.82	174.94	17.10	0.001%
17	17.09	-174.76	-9.84	-17.09	174.76	9.84	0.001%
18	19.78	-174.95	0.07	-19.78	174.95	-0.07	0.001%
19	17.28	-175.12	10.05	-17.28	175.12	-10.05	0.002%
20	9.99	-174.88	17.26	-9.99	174.88	-17.26	0.001%
21	0.09	-174.64	19.86	-0.09	174.64	-19.86	0.001%
22	-9.82	-174.80	17.10	9.82	174.80	-17.10	0.000%
23	-17.15	-174.98	9.88	17.15	174.98	-9.88	0.000%
24	-19.78	-174.79	-0.07	19.78	174.79	0.07	0.000%
25	-17.21	-174.62	-10.01	17.21	174.62	10.01	0.000%
26	-9.99	-174.86	-17.26	9.98	174.86	17.26	0.001%
27	-0.01	-38.61	-13.39	0.01	38.61	13.39	0.002%
28	6.57	-38.58	-11.40	-6.57	38.58	11.40	0.005%
29	11.18	-38.54	-6.46	-11.17	38.54	6.46	0.004%
30	13.16	-38.58	0.00	-13.16	38.58	-0.00	0.004%
31	11.59	-38.62	6.70	-11.58	38.62	-6.70	0.002%
32	6.59	-38.56	11.43	-6.59	38.56	-11.43	0.003%
33	0.01	-38.51	12.94	-0.01	38.51	-12.93	0.008%
34	-6.57	-38.55	11.40	6.57	38.54	-11.40	0.007%
35	-11.57	-38.59	6.68	11.57	38.58	-6.68	0.003%
36	-13.16	-38.54	-0.00	13.15	38.54	0.00	0.007%
37	-11.19	-38.51	-6.48	11.19	38.51	6.48	0.009%
38	-6.59	-38.56	-11.43	6.59	38.56	11.42	0.004%

## Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	9	0.0000001	0.00004726

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2	Yes	18	0.00004760	0.00005558
3	Yes	17	0.00008738	0.00008681
4	Yes	16	0.00000001	0.00003302
5	Yes	17	0.00006760	0.00006766
6	Yes	17	0.00008194	0.00009406
7	Yes	17	0.00007563	0.00007065
8	Yes	17	0.00006583	0.00002645
9	Yes	18	0.00004290	0.00004817
10	Yes	18	0.00005437	0.00007020
11	Yes	18	0.00004600	0.00005273
12	Yes	17	0.00006044	0.00002735
13	Yes	18	0.00004515	0.00004489
14	Yes	14	0.00000001	0.00002455
15	Yes	14	0.00000001	0.00003451
16	Yes	14	0.00000001	0.00001566
17	Yes	13	0.00010000	0.00003334
18	Yes	13	0.00000001	0.00003967
19	Yes	13	0.00010000	0.00008077
20	Yes	14	0.00000001	0.00004728
21	Yes	15	0.00000001	0.00002742
22	Yes	16	0.00000001	0.00001473
23	Yes	16	0.00000001	0.00001427
24	Yes	16	0.00000001	0.00001350
25	Yes	15	0.00000001	0.00002337
26	Yes	14	0.00000001	0.00004038
27	Yes	11	0.00000001	0.00004538
28	Yes	10	0.00000001	0.00007110
29	Yes	9	0.00000001	0.00004268
30	Yes	10	0.00000001	0.00005836
31	Yes	11	0.00000001	0.00003562
32	Yes	10	0.00000001	0.00005738
33	Yes	9	0.00000001	0.00006109
34	Yes	10	0.00000001	0.00008383
35	Yes	11	0.00000001	0.00005498
36	Yes	10	0.00000001	0.00008717
37	Yes	9	0.00000001	0.00007092
38	Yes	10	0.00000001	0.00006980

### Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	276 - 265.5	2.655	37	0.0690	0.1021
T2	265.5 - 261.75	2.698	37	0.0691	0.1019
T3	261.75 - 258	2.712	37	0.0695	0.0932
T4	258 - 254	2.735	37	0.0693	0.0928
T5	254 - 242	2.757	37	0.0654	0.1079
T6	242 - 222	2.798	37	0.0500	0.0722
T7	222 - 206	2.767	37	0.0258	0.0780
T8	206 - 202	2.701	37	0.0236	0.0719
T9	202 - 198	2.686	37	0.0262	0.0541
T10	198 - 194	2.682	37	0.0283	0.0542
T11	194 - 182	2.685	36	0.0264	0.0778
T12	182 - 162	2.682	36	0.0244	0.0710
T13	162 - 158	2.594	35	0.0592	0.1022
T14	158 - 154	2.558	35	0.0661	0.0961
T15	154 - 150	2.515	35	0.0726	0.1052
T16	150 - 146	2.463	35	0.0780	0.1026
T17	146 - 142	2.404	35	0.0816	0.1079



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Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T18	142 - 138	2.343	35	0.0827	0.1060
T19	138 - 134	2.281	35	0.0813	0.1083
T20	134 - 130	2.220	35	0.0771	0.1081
T21	130 - 126	2.161	35	0.0700	0.0958
T22	126 - 122	2.118	35	0.0651	0.1185
T23	122 - 102	2.076	35	0.0619	0.1072
T24	102 - 98	1.852	35	0.0637	0.1201
T25	98 - 94	1.799	35	0.0669	0.0991
T26	94 - 90	1.742	35	0.0704	0.1189
T27	90 - 86	1.680	35	0.0742	0.0942
T28	86 - 82	1.615	35	0.0777	0.1168
T29	82 - 78	1.547	35	0.0806	0.0884
T30	78 - 74	1.475	35	0.0829	0.1138
T31	74 - 70	1.402	35	0.0841	0.0817
T32	70 - 66	1.328	35	0.0842	0.1111
T33	66 - 62	1.254	35	0.0829	0.0760
T34	62 - 58	1.180	35	0.0801	0.1020
T35	58 - 54	1.119	35	0.0780	0.0724
T36	54 - 50	1.057	35	0.0772	0.1035
T37	50 - 46	0.995	35	0.0776	0.0651
T38	46 - 42	0.932	35	0.0791	0.0989
T39	42 - 38	0.867	35	0.0813	0.0555
T40	38 - 34	0.800	35	0.0842	0.0923
T41	34 - 30	0.730	35	0.0875	0.0447
T42	30 - 26	0.655	35	0.0911	0.0849
T43	26 - 22	0.578	35	0.0948	0.0331
T44	22 - 18	0.496	35	0.0984	0.0769
T45	18 - 14	0.411	35	0.1018	0.0230
T46	14 - 10	0.324	35	0.1049	0.0702
T47	10 - 6	0.233	35	0.1073	0.0131
T48	6 - 2	0.140	35	0.1090	0.0630

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

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
281.50	5/8" x 5'-0" Lightning Rod	37	2.655	0.0690	0.1021	88263
274.00	Ice Shield 6x5	37	2.664	0.0689	0.1046	88263
270.00	Ice Shield 6x5	37	2.682	0.0689	0.1074	73678
264.00	Andrew HP6	37	2.703	0.0692	0.0975	33843
261.75	Guy	37	2.712	0.0695	0.0932	22577
254.00	2'x4' Grid	37	2.757	0.0654	0.1079	44032
236.00	Pirod 10' PCS Frame (1)	37	2.800	0.0414	0.0741	34698
208.00	Pirod 12' T-Frame Sector Mount (1)	37	2.710	0.0228	0.0808	369692
202.00	Guy	37	2.686	0.0262	0.0541	19725
172.00	Ice Shield 6x5	35	2.652	0.0410	0.1042	27294
164.00	2'x4' Grid	35	2.610	0.0556	0.1195	25020
162.00	4' Dipole	35	2.594	0.0592	0.1022	26250
152.00	Pirod 12' T-Frame Sector Mount (1)	35	2.490	0.0755	0.0860	21102
130.00	Guy	35	2.161	0.0700	0.0958	12598
115.00	4' Dipole	35	2.002	0.0595	0.1078	186132
62.00	Guy	35	1.180	0.0801	0.1020	19175

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### Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	276 - 265.5	23.070	10	0.3509	0.5940
T2	265.5 - 261.75	23.344	10	0.3498	0.5920
T3	261.75 - 258	23.431	10	0.3484	0.5519
T4	258 - 254	23.556	10	0.3447	0.5502
T5	254 - 242	23.680	10	0.3332	0.5364
T6	242 - 222	23.932	10	0.2892	0.4487
T7	222 - 206	23.819	10	0.2059	0.3393
T8	206 - 202	23.405	10	0.1699	0.3032
T9	202 - 198	23.285	10	0.1649	0.3183
T10	198 - 194	23.202	10	0.1607	0.3186
T11	194 - 182	23.109	10	0.1495	0.3778
T12	182 - 162	22.708	10	0.2186	0.3592
T13	162 - 158	21.635	2	0.4178	0.4586
T14	158 - 154	21.309	2	0.4578	0.4115
T15	154 - 150	20.951	2	0.4959	0.4692
T16	150 - 146	20.548	2	0.5300	0.4163
T17	146 - 142	20.106	2	0.5558	0.4661
T18	142 - 138	19.652	2	0.5714	0.4070
T19	138 - 134	19.187	2	0.5756	0.4596
T20	134 - 130	18.718	2	0.5680	0.3988
T21	130 - 126	18.253	2	0.5469	0.4314
T22	126 - 122	17.854	2	0.5345	0.4214
T23	122 - 102	17.454	2	0.5293	0.4409
T24	102 - 98	15.314	2	0.5772	0.4153
T25	98 - 94	14.837	2	0.5949	0.3940
T26	94 - 90	14.337	2	0.6130	0.4047
T27	90 - 86	13.817	2	0.6305	0.3694
T28	86 - 82	13.275	2	0.6497	0.3901
T29	82 - 78	12.714	2	0.6670	0.3419
T30	78 - 74	12.136	2	0.6809	0.3716
T31	74 - 70	11.547	2	0.6905	0.3118
T32	70 - 66	10.951	2	0.6948	0.3530
T33	66 - 62	10.354	2	0.6930	0.2864
T34	62 - 58	9.755	2	0.6843	0.3216
T35	58 - 54	9.204	2	0.6786	0.2640
T36	54 - 50	8.650	2	0.6785	0.3131
T37	50 - 46	8.093	2	0.6836	0.2360
T38	46 - 42	7.526	2	0.6926	0.2904
T39	42 - 38	6.952	2	0.7052	0.2010
T40	38 - 34	6.363	2	0.7201	0.2579
T41	34 - 30	5.758	2	0.7369	0.1615
T42	30 - 26	5.136	2	0.7546	0.2224
T43	26 - 22	4.496	2	0.7726	0.1195
T44	22 - 18	3.839	2	0.7900	0.1839
T45	18 - 14	3.166	2	0.8062	0.0808
T46	14 - 10	2.479	2	0.8202	0.1775
T47	10 - 6	1.779	2	0.8316	0.0440
T48	6 - 2	1.069	2	0.8395	0.1741

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

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
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Elevation	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
281.50	5/8" x 5'-0" Lightning Rod	10	23.070	0.3509	0.5940	4416
274.00	Ice Shield 6x5	10	23.126	0.3509	0.6042	4416
270.00	Ice Shield 6x5	10	23.235	0.3507	0.6151	3681
264.00	Andrew HP6	10	23.376	0.3493	0.5733	2360
261.75	Guy	10	23.431	0.3484	0.5519	2631
254.00	2'x4' Grid	10	23.680	0.3332	0.5364	5083
236.00	Pirod 10' PCS Frame (1)	10	23.963	0.2634	0.4355	6879
208.00	Pirod 12' T-Frame Sector Mount (1)	10	23.468	0.1730	0.3143	23463
202.00	Guy	10	23.285	0.1649	0.3183	5052
172.00	Ice Shield 6x5	2	22.279	0.3138	0.4498	5124
164.00	2'x4' Grid	2	21.784	0.3972	0.4819	4773
162.00	4' Dipole	2	21.635	0.4178	0.4586	5042
152.00	Pirod 12' T-Frame Sector Mount (1)	2	20.756	0.5137	0.4424	4280
130.00	Guy	2	18.253	0.5469	0.4314	2937
115.00	4' Dipole	2	16.737	0.5344	0.4335	18029
62.00	Guy	2	9.755	0.6843	0.3216	4547

### Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load K	Ratio Load Allowable	Allowable Ratio	Criteria
T17	146	Diagonal	A325N	0.6250	1	8.26	12.43	0.664 ✓	1	Bolt Shear
T18	142	Diagonal	A325N	0.6250	1	9.00	12.43	0.724 ✓	1	Bolt Shear
T19	138	Diagonal	A325N	0.6250	1	9.83	12.43	0.791 ✓	1	Bolt Shear
T20	134	Diagonal	A325N	0.6250	1	10.34	12.43	0.832 ✓	1	Bolt Shear
T29	82	Leg	A325N	0.7500	4	5.88	29.82	0.197 ✓	1	Bolt Tension
T31	74	Diagonal	A325N	0.6250	1	4.52	10.44	0.433 ✓	1	Member Bearing
T32	70	Diagonal	A325N	0.6250	1	5.06	10.44	0.484 ✓	1	Member Bearing
T33	66	Diagonal	A325N	0.6250	1	5.76	10.44	0.552 ✓	1	Member Bearing
T34	62	Diagonal	A325N	0.6250	1	5.15	10.44	0.494 ✓	1	Member Bearing
T35	58	Diagonal	A325N	0.6250	1	4.46	10.44	0.428 ✓	1	Member Bearing
T36	54	Diagonal	A325N	0.6250	1	4.09	10.44	0.392 ✓	1	Member Bearing
T37	50	Diagonal	A325N	0.6250	1	3.96	12.43	0.319 ✓	1	Bolt Shear

### Guy Design Data

Section No.	Elevation ft	Size	Initial Tension K	Breaking Load K	Actual $T_u$ K	Allowable $\phi T_n$ K	Required S.F.	Actual S.F.
T3	261.75 (A) (655)	9/16 EHS	3.50	35.00	11.18	21.00	1.000	1.879 ✓
	261.75 (A) (656)	9/16 EHS	3.50	35.00	11.66	21.00	1.000	1.801 ✓

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Section No.	Elevation ft	Size	Initial Tension K	Breaking Load K	Actual $T_u$ K	Allowable $\phi T_n$ K	Required S.F.	Actual S.F.
	261.75 (B) (649)	9/16 EHS	3.50	35.00	11.64	21.00	1.000	1.804 ✓
	261.75 (B) (650)	9/16 EHS	3.50	35.00	11.63	21.00	1.000	1.805 ✓
	261.75 (C) (643)	9/16 EHS	3.50	35.00	10.94	21.00	1.000	1.920 ✓
	261.75 (C) (644)	9/16 EHS	3.50	35.00	10.46	21.00	1.000	2.008 ✓
T9	202.00 (A) (673)	9/16 EHS	3.50	35.00	14.70	21.00	1.000	1.429 ✓
	202.00 (A) (674)	9/16 EHS	3.50	35.00	15.00	21.00	1.000	1.400 ✓
	202.00 (B) (667)	9/16 EHS	3.50	35.00	15.00	21.00	1.000	1.400 ✓
	202.00 (B) (668)	9/16 EHS	3.50	35.00	15.22	21.00	1.000	1.379 ✓
	202.00 (C) (661)	9/16 EHS	3.50	35.00	14.26	21.00	1.000	1.472 ✓
	202.00 (C) (662)	9/16 EHS	3.50	35.00	13.81	21.00	1.000	1.521 ✓
T21	130.00 (A) (681)	3/4 EHS	5.83	58.30	27.33	34.98	1.000	1.280 ✓
	130.00 (B) (680)	3/4 EHS	5.83	58.30	28.01	34.98	1.000	1.249 ✓
	130.00 (C) (679)	3/4 EHS	5.83	58.30	26.47	34.98	1.000	1.322 ✓
T34	62.00 (A) (684)	9/16 EHS	3.50	35.00	14.41	21.00	1.000	1.458 ✓
	62.00 (B) (683)	9/16 EHS	3.50	35.00	14.77	21.00	1.000	1.422 ✓
	62.00 (C) (682)	9/16 EHS	3.50	35.00	14.19	21.00	1.000	1.480 ✓

### Compression Checks

### Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	$L_u$ ft	$Kl/r$	A $in^2$	$P_u$ K	$\phi P_n$ K	Ratio $\frac{P_u}{\phi P_n}$
T1	276 - 265.5	1 3/4	10.50	3.50	96.0 K=1.00	2.4053	-2.52	55.17	0.046 <sup>1</sup> ✓
T2	265.5 - 261.75	1 3/4	3.75	3.75	102.9 K=1.00	2.4053	-5.71	49.94	0.114 <sup>1</sup> ✓
T3	261.75 - 258	1 3/4	3.75	3.75	102.9 K=1.00	2.4053	-4.14	49.94	0.083 <sup>1</sup> ✓
T4	258 - 254	1 3/4	4.00	4.00	109.7 K=1.00	2.4053	-23.78	44.89	0.530 <sup>1</sup> ✓
T5	254 - 242	1 3/4	12.00	4.00	109.7 K=1.00	2.4053	-29.24	44.89	0.651 <sup>1</sup> ✓
T6	242 - 222	1 3/4	20.00	4.00	109.7 K=1.00	2.4053	-31.13	44.89	0.694 <sup>1</sup> ✓

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Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T7	222 - 206	2	16.00	4.00	96.0 K=1.00	3.1416	-29.76	72.06	0.413 <sup>1</sup>
T8	206 - 202	2	4.00	4.00	96.0 K=1.00	3.1416	-29.20	72.06	0.405 <sup>1</sup>
T9	202 - 198	2	4.00	4.00	96.0 K=1.00	3.1416	-23.72	72.06	0.329 <sup>1</sup>
T10	198 - 194	2	4.00	4.00	96.0 K=1.00	3.1416	-45.96	72.06	0.638 <sup>1</sup>
T11	194 - 182	2	12.00	4.00	96.0 K=1.00	3.1416	-51.65	72.06	0.717 <sup>1</sup>
T12	182 - 162	2	20.00	4.00	96.0 K=1.00	3.1416	-58.05	72.06	0.806 <sup>1</sup>
T13	162 - 158	2	4.00	4.00	96.0 K=1.00	3.1416	-57.26	72.06	0.795 <sup>1</sup>
T14	158 - 154	2	4.00	4.00	96.0 K=1.00	3.1416	-56.25	72.06	0.781 <sup>1</sup>
T15	154 - 150	2	4.00	4.00	96.0 K=1.00	3.1416	-57.54	72.06	0.798 <sup>1</sup>
T16	150 - 146	2	4.00	4.00	96.0 K=1.00	3.1416	-56.11	72.06	0.779 <sup>1</sup>
T17	146 - 142	2	4.00	4.00	96.0 K=1.00	3.1416	-56.31	72.06	0.781 <sup>1</sup>
T18	142 - 138	2	4.00	4.00	96.0 K=1.00	3.1416	-55.84	72.06	0.775 <sup>1</sup>
T19	138 - 134	2	4.00	4.00	96.0 K=1.00	3.1416	-57.57	72.06	0.799 <sup>1</sup>
T20	134 - 130	2	4.00	4.00	96.0 K=1.00	3.1416	-59.26	72.06	0.822 <sup>1</sup>
T21	130 - 126	2	4.00	2.00	48.0 K=1.00	3.1416	-64.50	119.45	0.540 <sup>1</sup>
T22	126 - 122	2	4.00	4.00	96.0 K=1.00	3.1416	-64.97	72.06	0.902 <sup>1</sup>
T23	122 - 102	2	20.00	4.00	96.0 K=1.00	3.1416	-67.28	72.06	0.934 <sup>1</sup>
T24	102 - 98	2	4.00	2.00	48.0 K=1.00	3.1416	-67.84	119.45	0.568 <sup>1</sup>
T25	98 - 94	2	4.00	2.00	48.0 K=1.00	3.1416	-68.66	119.45	0.575 <sup>1</sup>
T26	94 - 90	2	4.00	2.00	48.0 K=1.00	3.1416	-68.87	119.45	0.577 <sup>1</sup>
T27	90 - 86	2	4.00	2.00	48.0 K=1.00	3.1416	-69.67	119.45	0.583 <sup>1</sup>
T28	86 - 82	2	4.00	2.00	48.0 K=1.00	3.1416	-69.59	119.45	0.583 <sup>1</sup>
T29	82 - 78	2	4.00	2.00	48.0 K=1.00	3.1416	-70.57	119.45	0.591 <sup>1</sup>
T30	78 - 74	2	4.00	2.00	48.0 K=1.00	3.1416	-70.52	119.45	0.590 <sup>1</sup>
T31	74 - 70	2	4.00	2.00	48.0 K=1.00	3.1416	-71.98	119.45	0.603 <sup>1</sup>
T32	70 - 66	2	4.00	2.00	48.0 K=1.00	3.1416	-73.85	119.45	0.618 <sup>1</sup>

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Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T33	66 - 62	2	4.00	2.00	48.0 K=1.00	3.1416	-75.90	119.45	0.635 <sup>1</sup>
T34	62 - 58	2	4.00	2.00	48.0 K=1.00	3.1416	-79.05	119.45	0.662 <sup>1</sup>
T35	58 - 54	2	4.00	2.00	48.0 K=1.00	3.1416	-78.15	119.45	0.654 <sup>1</sup>
T36	54 - 50	2	4.00	2.00	48.0 K=1.00	3.1416	-77.99	119.45	0.653 <sup>1</sup>
T37	50 - 46	2	4.00	2.00	48.0 K=1.00	3.1416	-77.67	119.45	0.650 <sup>1</sup>
T38	46 - 42	2	4.00	2.00	48.0 K=1.00	3.1416	-78.43	119.45	0.657 <sup>1</sup>
T39	42 - 38	2	4.00	2.00	48.0 K=1.00	3.1416	-79.98	119.45	0.670 <sup>1</sup>
T40	38 - 34	2	4.00	2.00	48.0 K=1.00	3.1416	-81.02	119.45	0.678 <sup>1</sup>
T41	34 - 30	2	4.00	2.00	48.0 K=1.00	3.1416	-82.27	119.45	0.689 <sup>1</sup>
T42	30 - 26	2	4.00	2.00	48.0 K=1.00	3.1416	-83.11	119.45	0.696 <sup>1</sup>
T43	26 - 22	2	4.00	2.00	48.0 K=1.00	3.1416	-83.95	119.45	0.703 <sup>1</sup>
T44	22 - 18	2	4.00	2.00	48.0 K=1.00	3.1416	-84.58	119.45	0.708 <sup>1</sup>
T45	18 - 14	2	4.00	2.00	48.0 K=1.00	3.1416	-85.02	119.45	0.712 <sup>1</sup>
T46	14 - 10	2	4.00	2.00	48.0 K=1.00	3.1416	-85.45	119.45	0.715 <sup>1</sup>
T47	10 - 6	2	4.00	2.00	48.0 K=1.00	3.1416	-85.24	119.45	0.714 <sup>1</sup>
T48	6 - 2	2	4.00	2.00	48.0 K=1.00	3.1416	-85.05	119.45	0.712 <sup>1</sup>

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T1	276 - 265.5	L1 3/4x1 3/4x3/16	5.32	5.12	156.2 K=0.87	0.6211	-0.92	5.75	0.159 <sup>1</sup>
T2	265.5 - 261.75	L1 3/4x1 3/4x3/16	5.48	5.28	159.7 K=0.87	0.6211	-4.36	5.50	0.792 <sup>1</sup>
T3	261.75 - 258	L1 3/4x1 3/4x3/16	5.48	2.64	99.2 K=1.08	0.6211	-3.74	11.98	0.312 <sup>1</sup>
T4	258 - 254	L1 3/4x1 3/4x3/16	5.66	5.45	163.3 K=0.86	0.6211	-3.38	5.26	0.643 <sup>1</sup>
T5	254 - 242	L1 3/4x1 3/4x3/16	5.66	5.45	163.3 K=0.86	0.6211	-3.06	5.26	0.582 <sup>1</sup>

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	<p><b>Client</b></p> <p>AT&amp;T</p>	<p><b>Designed by</b></p>

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T6	242 - 222	L1 3/4x1 3/4x3/16	5.66	5.45	163.3 K=0.86	0.6211	-3.34	5.26	0.636 <sup>1</sup>
T7	222 - 206	L2 1/2x2 1/2x1/4	5.66	5.42	127.7 K=0.96	1.1900	-6.10	16.34	0.373 <sup>1</sup>
T8	206 - 202	L2 1/2x2 1/2x3/8	5.66	5.42	128.4 K=0.96	1.7300	-7.71	23.55	0.327 <sup>1</sup>
T9	202 - 198	L2 1/2x2 1/2x3/8	5.66	2.71	80.1 K=1.20	1.7300	-7.68	39.99	0.192 <sup>1</sup>
T10	198 - 194	L2 1/2x2 1/2x3/8	5.66	5.42	128.4 K=0.96	1.7300	-5.23	23.55	0.222 <sup>1</sup>
T11	194 - 182	L2 1/2x2 1/2x1/4	5.66	5.42	127.7 K=0.96	1.1900	-4.76	16.34	0.291 <sup>1</sup>
T12	182 - 162	L2x2x1/4	5.66	5.42	148.5 K=0.89	0.9380	-2.98	9.61	0.310 <sup>1</sup>
T13	162 - 158	L2x2x1/4	5.66	5.42	148.5 K=0.89	0.9380	-1.59	9.61	0.165 <sup>1</sup>
T14	158 - 154	L2x2x1/4	5.66	5.42	148.5 K=0.89	0.9380	-2.07	9.61	0.216 <sup>1</sup>
T15	154 - 150	L2x2x1/4	5.66	5.42	148.5 K=0.89	0.9380	-4.53	9.61	0.472 <sup>1</sup>
T16	150 - 146	L2x2x1/4	5.66	5.42	148.5 K=0.89	0.9380	-7.89	9.61	0.821 <sup>1</sup>
T17	146 - 142	L2x2x3/8	5.66	5.18	159.8 K=1.00	1.3600	-8.26	12.03	0.687 <sup>1</sup>
T18	142 - 138	L2x2x3/8	5.66	5.18	159.8 K=1.00	1.3600	-9.00	12.03	0.748 <sup>1</sup>
T19	138 - 134	L2x2x3/8	5.66	5.18	159.8 K=1.00	1.3600	-9.83	12.03	0.817 <sup>1</sup>
T20	134 - 130	L2x2x3/8	5.66	5.18	159.8 K=1.00	1.3600	-10.34	12.03	0.859 <sup>1</sup>
T21	130 - 126	L2x2x1/4	5.66	5.42	148.5 K=0.89	0.9380	-6.03	9.61	0.628 <sup>1</sup>
T22	126 - 122	L2x2x1/4	5.66	5.42	148.5 K=0.89	0.9380	-5.54	9.61	0.576 <sup>1</sup>
T23	122 - 102	L2x2x1/4	5.66	5.42	148.5 K=0.89	0.9380	-4.71	9.61	0.491 <sup>1</sup>
T24	102 - 98	L2x2x3/16	5.66	5.42	147.7 K=0.89	0.7150	-1.57	7.40	0.212 <sup>1</sup>
T25	98 - 94	L2x2x3/16	5.66	5.42	147.7 K=0.89	0.7150	-0.73	7.40	0.099 <sup>1</sup>
T26	94 - 90	L2x2x3/16	5.66	5.42	147.7 K=0.89	0.7150	-1.35	7.40	0.182 <sup>1</sup>
T27	90 - 86	L2x2x3/16	5.66	5.42	147.7 K=0.89	0.7150	-2.01	7.40	0.272 <sup>1</sup>
T28	86 - 82	L2x2x3/16	5.66	5.42	147.7 K=0.89	0.7150	-2.82	7.40	0.381 <sup>1</sup>
T29	82 - 78	L2x2x3/16	5.66	5.42	147.7 K=0.89	0.7150	-3.44	7.40	0.464 <sup>1</sup>
T30	78 - 74	L2x2x3/16	5.66	5.42	147.7 K=0.89	0.7150	-4.23	7.40	0.571 <sup>1</sup>
T31	74 - 70	L2x2x1/4	5.66	5.18	159.0	0.9380	-4.77	8.38	0.570 <sup>1</sup>

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Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T32	70 - 66	L2x2x1/4	5.66	5.18	K=1.00 159.0	0.9380	-5.56	8.38	0.664 <sup>1</sup>
T33	66 - 62	L2x2x1/4	5.66	5.18	K=1.00 159.0	0.9380	-5.99	8.38	0.715 <sup>1</sup>
T34	62 - 58	L2x2x1/4	5.66	5.18	K=1.00 159.0	0.9380	-5.33	8.38	0.636 <sup>1</sup>
T35	58 - 54	L2x2x1/4	5.66	5.18	K=1.00 159.0	0.9380	-5.05	8.38	0.603 <sup>1</sup>
T36	54 - 50	L2x2x1/4	5.66	5.18	K=1.00 159.0	0.9380	-4.26	8.38	0.508 <sup>1</sup>
T37	50 - 46	L2x2x1/4	5.66	5.18	K=1.00 159.0	0.9380	-3.96	8.38	0.473 <sup>1</sup>
T38	46 - 42	L2x2x3/16	5.66	5.42	K=0.89 147.7	0.7150	-3.16	7.40	0.427 <sup>1</sup>
T39	42 - 38	L2x2x3/16	5.66	5.42	K=0.89 147.7	0.7150	-2.89	7.40	0.391 <sup>1</sup>
T40	38 - 34	L2x2x3/16	5.66	5.42	K=0.89 147.7	0.7150	-2.11	7.40	0.285 <sup>1</sup>
T41	34 - 30	L2x2x3/16	5.66	5.42	K=0.89 147.7	0.7150	-1.83	7.40	0.248 <sup>1</sup>
T42	30 - 26	L2x2x3/16	5.66	5.42	K=0.89 147.7	0.7150	-1.38	7.40	0.187 <sup>1</sup>
T43	26 - 22	L2x2x3/16	5.66	5.42	K=0.89 147.7	0.7150	-1.47	7.40	0.199 <sup>1</sup>
T44	22 - 18	L2x2x1/4	5.66	5.42	K=0.89 148.5	0.9380	-2.20	9.61	0.229 <sup>1</sup>
T45	18 - 14	L2x2x1/4	5.66	5.42	K=0.89 148.5	0.9380	-2.48	9.61	0.258 <sup>1</sup>
T46	14 - 10	L2x2x1/4	5.66	5.42	K=0.89 148.5	0.9380	-3.31	9.61	0.344 <sup>1</sup>
T47	10 - 6	L2x2x1/4	5.66	5.42	K=0.89 148.5	0.9380	-3.40	9.61	0.354 <sup>1</sup>
T48	6 - 2	L2x2x1/4	5.66	5.42	K=0.89 148.5	0.9380	-3.97	9.61	0.413 <sup>1</sup>

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T1	276 - 265.5	L2x2x3/16	4.00	3.85	K=1.01 118.7	0.7150	-0.29	11.03	0.026 <sup>1</sup>
T5	254 - 242	L2x2x3/16	4.00	3.85	K=1.01 118.7	0.7150	-0.51	11.03	0.046 <sup>1</sup>
T6	242 - 222	L2x2x3/16	4.00	3.85	K=1.01 118.7	0.7150	-0.55	11.03	0.050 <sup>1</sup>



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Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T7	222 - 206	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.70	11.08	0.064 <sup>1</sup> ✓
T11	194 - 182	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.89	11.08	0.081 <sup>1</sup> ✓
T12	182 - 162	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-1.01	11.08	0.091 <sup>1</sup> ✓
T23	122 - 102	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-1.17	11.08	0.105 <sup>1</sup> ✓

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Secondary Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T21	130 - 126	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-1.56	11.08	0.141 <sup>1</sup> ✓
T24	102 - 98	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-1.65	11.08	0.148 <sup>1</sup> ✓
T25	98 - 94	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-1.66	11.08	0.150 <sup>1</sup> ✓
T26	94 - 90	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-1.67	11.08	0.151 <sup>1</sup> ✓
T27	90 - 86	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-1.69	11.08	0.152 <sup>1</sup> ✓
T28	86 - 82	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-1.69	11.08	0.152 <sup>1</sup> ✓
T29	82 - 78	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-1.71	11.08	0.154 <sup>1</sup> ✓
T30	78 - 74	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-1.71	11.08	0.154 <sup>1</sup> ✓
T31	74 - 70	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-1.75	11.08	0.158 <sup>1</sup> ✓
T32	70 - 66	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-1.79	11.08	0.162 <sup>1</sup> ✓
T33	66 - 62	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-1.84	11.08	0.166 <sup>1</sup> ✓
T34	62 - 58	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-1.92	11.08	0.173 <sup>1</sup> ✓
T35	58 - 54	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-1.90	11.08	0.171 <sup>1</sup> ✓
T36	54 - 50	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-1.89	11.08	0.171 <sup>1</sup> ✓
T37	50 - 46	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-1.88	11.08	0.170 <sup>1</sup> ✓
T38	46 - 42	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-1.90	11.08	0.172 <sup>1</sup> ✓
T39	42 - 38	L2 1/2x2 1/2x1/4	4.00	3.83	106.8 K=1.14	1.1900	-1.94	21.14	0.092 <sup>1</sup> ✓

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Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T40	38 - 34	L2 1/2x2 1/2x1/4	4.00	3.83	106.8 K=1.14	1.1900	-1.96	21.14	0.093 <sup>1</sup> ✓
T41	34 - 30	L2 1/2x2 1/2x1/4	4.00	3.83	106.8 K=1.14	1.1900	-1.99	21.14	0.094 <sup>1</sup> ✓
T42	30 - 26	L2 1/2x2 1/2x1/4	4.00	3.83	106.8 K=1.14	1.1900	-2.02	21.14	0.095 <sup>1</sup> ✓
T43	26 - 22	L2 1/2x2 1/2x1/4	4.00	3.83	106.8 K=1.14	1.1900	-2.04	21.14	0.096 <sup>1</sup> ✓
T44	22 - 18	L2 1/2x2 1/2x1/4	4.00	3.83	106.8 K=1.14	1.1900	-2.05	21.14	0.097 <sup>1</sup> ✓
T45	18 - 14	L2 1/2x2 1/2x1/4	4.00	3.83	106.8 K=1.14	1.1900	-2.06	21.14	0.098 <sup>1</sup> ✓
T46	14 - 10	L2 1/2x2 1/2x1/4	4.00	3.83	106.8 K=1.14	1.1900	-2.07	21.14	0.098 <sup>1</sup> ✓
T47	10 - 6	L2 1/2x2 1/2x1/4	4.00	3.83	106.8 K=1.14	1.1900	-2.07	21.14	0.098 <sup>1</sup> ✓
T48	6 - 2	L2 1/2x2 1/2x1/4	4.00	3.83	106.8 K=1.14	1.1900	-2.06	21.14	0.098 <sup>1</sup> ✓

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T1	276 - 265.5	L2x2x3/16	4.00	3.85	118.7 K=1.01	0.7150	-0.09	11.03	0.008 <sup>1</sup> ✓
T2	265.5 - 261.75	L2x2x3/16	4.00	3.85	118.7 K=1.01	0.7150	-1.39	11.03	0.126 <sup>1</sup> ✓
T4	258 - 254	L2x2x3/16	4.00	3.85	118.7 K=1.01	0.7150	-2.49	11.38	0.219 <sup>1</sup> ✓
T5	254 - 242	L2x2x3/16	4.00	3.85	118.7 K=1.01	0.7150	-0.27	11.03	0.025 <sup>1</sup> ✓
T6	242 - 222	L2x2x3/16	4.00	3.85	118.7 K=1.01	0.7150	-0.03	11.38	0.003 <sup>1</sup> ✓
T7	222 - 206	L2x2x3/16	4.00	3.85	118.7 K=1.01	0.7150	-0.12	11.38	0.011 <sup>1</sup> ✓
T8	206 - 202	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.70	11.43	0.061 <sup>1</sup> ✓
T10	198 - 194	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-1.90	11.43	0.166 <sup>1</sup> ✓
T11	194 - 182	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.20	11.08	0.018 <sup>1</sup> ✓
T12	182 - 162	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.19	11.08	0.017 <sup>1</sup> ✓
T13	162 - 158	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.32	11.08	0.029 <sup>1</sup> ✓

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	<p><b>Client</b></p> <p>AT&amp;T</p>	<p><b>Designed by</b></p>

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T14	158 - 154	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.00	11.08	0.000 <sup>1</sup> ✓
T15	154 - 150	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-1.30	11.08	0.117 <sup>1</sup> ✓
T16	150 - 146	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-1.29	11.08	0.117 <sup>1</sup> ✓
T17	146 - 142	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.04	11.08	0.004 <sup>1</sup> ✓
T18	142 - 138	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.25	11.08	0.023 <sup>1</sup> ✓
T19	138 - 134	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.21	11.08	0.019 <sup>1</sup> ✓
T20	134 - 130	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.16	11.08	0.014 <sup>1</sup> ✓
T22	126 - 122	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.12	11.08	0.011 <sup>1</sup> ✓
T23	122 - 102	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.19	11.08	0.017 <sup>1</sup> ✓
T24	102 - 98	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.19	11.08	0.017 <sup>1</sup> ✓
T25	98 - 94	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.20	11.08	0.018 <sup>1</sup> ✓
T26	94 - 90	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.19	11.08	0.017 <sup>1</sup> ✓
T27	90 - 86	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.19	11.08	0.018 <sup>1</sup> ✓
T28	86 - 82	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.18	11.08	0.016 <sup>1</sup> ✓
T29	82 - 78	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.18	11.08	0.016 <sup>1</sup> ✓
T30	78 - 74	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.15	11.08	0.014 <sup>1</sup> ✓
T31	74 - 70	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.15	11.08	0.013 <sup>1</sup> ✓
T32	70 - 66	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.14	11.08	0.013 <sup>1</sup> ✓
T33	66 - 62	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.09	11.08	0.008 <sup>1</sup> ✓
T35	58 - 54	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.08	11.08	0.008 <sup>1</sup> ✓
T36	54 - 50	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.13	11.08	0.011 <sup>1</sup> ✓
T37	50 - 46	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.12	11.08	0.011 <sup>1</sup> ✓
T38	46 - 42	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.12	11.08	0.010 <sup>1</sup> ✓
T39	42 - 38	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.12	11.08	0.011 <sup>1</sup> ✓
T40	38 - 34	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.12	11.08	0.011 <sup>1</sup> ✓
T41	34 - 30	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.12	11.08	0.011 <sup>1</sup> ✓

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Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T42	30 - 26	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.11	11.08	0.010 <sup>1</sup> ✓
T43	26 - 22	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.11	11.08	0.010 <sup>1</sup> ✓
T44	22 - 18	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.10	11.08	0.009 <sup>1</sup> ✓
T45	18 - 14	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.11	11.08	0.010 <sup>1</sup> ✓
T46	14 - 10	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.10	11.08	0.009 <sup>1</sup> ✓
T47	10 - 6	L2x2x3/16	4.00	3.83	118.4 K=1.01	0.7150	-0.07	11.08	0.006 <sup>1</sup> ✓

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Top Guy Pull-Off Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T3	261.75 - 258	L2 1/2x2 1/2x3/8	4.00	3.85	95.0 K=1.00	1.7300	-3.50	34.86	0.101 <sup>1</sup> ✓
T9	202 - 198	L2 1/2x2 1/2x3/8	4.00	3.83	94.5 K=1.00	1.7300	-5.64	35.04	0.161 <sup>1</sup> ✓

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Torque-Arm Bottom Design Data

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T3	261.75 - 258 (647)	L3 1/2x3 1/2x3/8	7.17	7.08	123.7 K=1.00	2.4800	-15.73	35.89	0.438 <sup>1</sup> ✓
T3	261.75 - 258 (648)	L3 1/2x3 1/2x3/8	7.17	7.08	123.7 K=1.00	2.4800	-16.88	35.89	0.470 <sup>1</sup> ✓
T3	261.75 - 258 (653)	L3 1/2x3 1/2x3/8	7.17	7.08	123.7 K=1.00	2.4800	-16.43	35.89	0.458 <sup>1</sup> ✓
T3	261.75 - 258 (654)	L3 1/2x3 1/2x3/8	7.17	7.08	123.7 K=1.00	2.4800	-17.40	35.89	0.485 <sup>1</sup> ✓
T3	261.75 - 258 (659)	L3 1/2x3 1/2x3/8	7.17	7.08	123.7 K=1.00	2.4800	-17.87	35.89	0.498 <sup>1</sup> ✓
T3	261.75 - 258 (660)	L3 1/2x3 1/2x3/8	7.17	7.08	123.7 K=1.00	2.4800	-17.11	35.89	0.477 <sup>1</sup> ✓
T9	202 - 198 (665)	L3 1/2x3 1/2x3/8	7.30	7.20	125.8 K=1.00	2.4800	-19.21	34.92	0.550 <sup>1</sup> ✓
T9	202 - 198 (666)	L3 1/2x3 1/2x3/8	7.30	7.20	125.8	2.4800	-19.99	34.92	0.572 <sup>1</sup> ✓

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Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T9	202 - 198 (671)	L3 1/2x3 1/2x3/8	7.30	7.20	K=1.00 125.8	2.4800	-18.16	34.92	0.520 <sup>1</sup>
T9	202 - 198 (672)	L3 1/2x3 1/2x3/8	7.30	7.20	K=1.00 125.8	2.4800	-20.61	34.92	0.590 <sup>1</sup>
T9	202 - 198 (677)	L3 1/2x3 1/2x3/8	7.30	7.20	K=1.00 125.8	2.4800	-20.65	34.92	0.591 <sup>1</sup>
T9	202 - 198 (678)	L3 1/2x3 1/2x3/8	7.30	7.20	K=1.00 125.8	2.4800	-20.34	34.92	0.582 <sup>1</sup>

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Tension Checks

### Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T1	276 - 265.5	1 3/4	10.50	3.50	96.0	2.4053	1.21	108.24	0.011 <sup>1</sup>
T2	265.5 - 261.75	1 3/4	3.75	3.75	102.9	2.4053	3.93	108.24	0.036 <sup>1</sup>
T3	261.75 - 258	1 3/4	3.75	3.75	102.9	2.4053	1.28	108.24	0.012 <sup>1</sup>
T5	254 - 242	1 3/4	12.00	4.00	109.7	2.4053	6.45	108.24	0.060 <sup>1</sup>
T6	242 - 222	1 3/4	20.00	4.00	109.7	2.4053	9.06	108.24	0.084 <sup>1</sup>
T7	222 - 206	2	16.00	4.00	96.0	3.1416	0.72	141.37	0.005 <sup>1</sup>
T9	202 - 198	2	4.00	4.00	96.0	3.1416	0.06	141.37	0.000 <sup>1</sup>
T11	194 - 182	2	12.00	4.00	96.0	3.1416	1.61	141.37	0.011 <sup>1</sup>
T12	182 - 162	2	20.00	4.00	96.0	3.1416	8.97	141.37	0.063 <sup>1</sup>
T13	162 - 158	2	4.00	4.00	96.0	3.1416	7.65	141.37	0.054 <sup>1</sup>
T14	158 - 154	2	4.00	4.00	96.0	3.1416	5.59	141.37	0.040 <sup>1</sup>
T15	154 - 150	2	4.00	4.00	96.0	3.1416	2.07	141.37	0.015 <sup>1</sup>

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

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### Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T1	276 - 265.5	L1 3/4x1 3/4x3/16	5.32	5.12	114.5	0.6211	0.91	20.12	0.045 <sup>1</sup>
T2	265.5 - 261.75	L1 3/4x1 3/4x3/16	5.48	5.28	118.1	0.6211	4.35	20.12	0.216 <sup>1</sup>
T3	261.75 - 258	L1 3/4x1 3/4x3/16	5.48	2.64	59.0	0.6211	3.21	20.12	0.160 <sup>1</sup>
T4	258 - 254	L1 3/4x1 3/4x3/16	5.66	5.45	121.8	0.6211	3.35	20.12	0.167 <sup>1</sup>
T5	254 - 242	L1 3/4x1 3/4x3/16	5.66	5.45	121.8	0.6211	2.76	20.12	0.137 <sup>1</sup>
T6	242 - 222	L1 3/4x1 3/4x3/16	5.66	5.45	121.8	0.6211	2.97	20.12	0.148 <sup>1</sup>
T7	222 - 206	L2 1/2x2 1/2x1/4	5.66	5.42	84.6	1.1900	5.75	38.56	0.149 <sup>1</sup>
T8	206 - 202	L2 1/2x2 1/2x3/8	5.66	5.42	86.4	1.7300	7.79	56.05	0.139 <sup>1</sup>
T9	202 - 198	L2 1/2x2 1/2x3/8	5.66	2.71	43.2	1.7300	4.01	56.05	0.071 <sup>1</sup>
T10	198 - 194	L2 1/2x2 1/2x3/8	5.66	5.42	86.4	1.7300	5.11	56.05	0.091 <sup>1</sup>
T11	194 - 182	L2 1/2x2 1/2x1/4	5.66	5.42	84.6	1.1900	4.40	38.56	0.114 <sup>1</sup>
T12	182 - 162	L2x2x1/4	5.66	5.42	106.8	0.9380	2.70	30.39	0.089 <sup>1</sup>
T13	162 - 158	L2x2x1/4	5.66	5.42	106.8	0.9380	1.68	30.39	0.055 <sup>1</sup>
T14	158 - 154	L2x2x1/4	5.66	5.42	106.8	0.9380	1.41	30.39	0.047 <sup>1</sup>
T15	154 - 150	L2x2x1/4	5.66	5.42	106.8	0.9380	4.63	30.39	0.152 <sup>1</sup>
T16	150 - 146	L2x2x1/4	5.66	5.42	106.8	0.9380	7.73	30.39	0.254 <sup>1</sup>
T17	146 - 142	L2x2x3/8	5.66	5.18	109.5	0.8091	7.82	35.19	0.222 <sup>1</sup>
T18	142 - 138	L2x2x3/8	5.66	5.18	109.5	0.8091	8.82	35.19	0.251 <sup>1</sup>
T19	138 - 134	L2x2x3/8	5.66	5.18	109.5	0.8091	9.44	35.19	0.268 <sup>1</sup>
T20	134 - 130	L2x2x3/8	5.66	5.18	109.5	0.8091	10.17	35.19	0.289 <sup>1</sup>
T21	130 - 126	L2x2x1/4	5.66	5.42	106.8	0.9380	5.87	30.39	0.193 <sup>1</sup>
T22	126 - 122	L2x2x1/4	5.66	5.42	106.8	0.9380	5.13	30.39	0.169 <sup>1</sup>
T23	122 - 102	L2x2x1/4	5.66	5.42	106.8	0.9380	4.46	30.39	0.147 <sup>1</sup>
T24	102 - 98	L2x2x3/16	5.66	5.42	105.4	0.7150	0.92	23.17	0.040 <sup>1</sup>
T25	98 - 94	L2x2x3/16	5.66	5.42	105.4	0.7150	0.66	23.17	0.029 <sup>1</sup>

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Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T26	94 - 90	L2x2x3/16	5.66	5.42	105.4	0.7150	0.90	23.17	0.039 <sup>1</sup>
T27	90 - 86	L2x2x3/16	5.66	5.42	105.4	0.7150	1.72	23.17	0.074 <sup>1</sup>
T28	86 - 82	L2x2x3/16	5.66	5.42	105.4	0.7150	2.35	23.17	0.101 <sup>1</sup>
T29	82 - 78	L2x2x3/16	5.66	5.42	105.4	0.7150	3.16	23.17	0.137 <sup>1</sup>
T30	78 - 74	L2x2x3/16	5.66	5.42	105.4	0.7150	3.73	23.17	0.161 <sup>1</sup>
T31	74 - 70	L2x2x1/4	5.66	5.18	106.8	0.5629	4.52	24.49	0.185 <sup>1</sup>
T32	70 - 66	L2x2x1/4	5.66	5.18	106.8	0.5629	5.06	24.49	0.206 <sup>1</sup>
T33	66 - 62	L2x2x1/4	5.66	5.18	106.8	0.5629	5.76	24.49	0.235 <sup>1</sup>
T34	62 - 58	L2x2x1/4	5.66	5.18	106.8	0.5629	5.15	24.49	0.211 <sup>1</sup>
T35	58 - 54	L2x2x1/4	5.66	5.18	106.8	0.5629	4.46	24.49	0.182 <sup>1</sup>
T36	54 - 50	L2x2x1/4	5.66	5.18	106.8	0.5629	4.09	24.49	0.167 <sup>1</sup>
T37	50 - 46	L2x2x1/4	5.66	5.18	106.8	0.5629	3.33	24.49	0.136 <sup>1</sup>
T38	46 - 42	L2x2x3/16	5.66	5.42	105.4	0.7150	3.02	23.17	0.130 <sup>1</sup>
T39	42 - 38	L2x2x3/16	5.66	5.42	105.4	0.7150	2.23	23.17	0.096 <sup>1</sup>
T40	38 - 34	L2x2x3/16	5.66	5.42	105.4	0.7150	1.95	23.17	0.084 <sup>1</sup>
T41	34 - 30	L2x2x3/16	5.66	5.42	105.4	0.7150	1.31	23.17	0.057 <sup>1</sup>
T42	30 - 26	L2x2x3/16	5.66	5.42	105.4	0.7150	0.92	23.17	0.040 <sup>1</sup>
T43	26 - 22	L2x2x3/16	5.66	5.42	105.4	0.7150	1.32	23.17	0.057 <sup>1</sup>
T44	22 - 18	L2x2x1/4	5.66	5.42	106.8	0.9380	1.56	30.39	0.051 <sup>1</sup>
T45	18 - 14	L2x2x1/4	5.66	5.42	106.8	0.9380	2.36	30.39	0.078 <sup>1</sup>
T46	14 - 10	L2x2x1/4	5.66	5.42	106.8	0.9380	2.56	30.39	0.084 <sup>1</sup>
T47	10 - 6	L2x2x1/4	5.66	5.42	106.8	0.9380	3.37	30.39	0.111 <sup>1</sup>
T48	6 - 2	L2x2x1/4	5.66	5.42	106.8	0.9380	3.17	30.39	0.104 <sup>1</sup>

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

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**Horizontal Design Data (Tension)**

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T1	276 - 265.5	L2x2x3/16	4.00	3.85	75.0	0.7150	0.28	23.17	0.012 <sup>1</sup>
T5	254 - 242	L2x2x3/16	4.00	3.85	75.0	0.7150	0.51	23.17	0.022 <sup>1</sup>
T6	242 - 222	L2x2x3/16	4.00	3.85	75.0	0.7150	0.60	23.17	0.026 <sup>1</sup>
T7	222 - 206	L2x2x3/16	4.00	3.83	74.6	0.7150	0.80	23.17	0.034 <sup>1</sup>
T11	194 - 182	L2x2x3/16	4.00	3.83	74.6	0.7150	0.89	23.17	0.039 <sup>1</sup>
T12	182 - 162	L2x2x3/16	4.00	3.83	74.6	0.7150	1.01	23.17	0.043 <sup>1</sup>
T23	122 - 102	L2x2x3/16	4.00	3.83	74.6	0.7150	1.17	23.17	0.050 <sup>1</sup>

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

**Secondary Horizontal Design Data (Tension)**

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T21	130 - 126	L2x2x3/16	4.00	3.83	74.6	0.7150	1.56	23.17	0.068 <sup>1</sup>
T24	102 - 98	L2x2x3/16	4.00	3.83	74.6	0.7150	1.65	23.17	0.071 <sup>1</sup>
T25	98 - 94	L2x2x3/16	4.00	3.83	74.6	0.7150	1.66	23.17	0.072 <sup>1</sup>
T26	94 - 90	L2x2x3/16	4.00	3.83	74.6	0.7150	1.67	23.17	0.072 <sup>1</sup>
T27	90 - 86	L2x2x3/16	4.00	3.83	74.6	0.7150	1.69	23.17	0.073 <sup>1</sup>
T28	86 - 82	L2x2x3/16	4.00	3.83	74.6	0.7150	1.69	23.17	0.073 <sup>1</sup>
T29	82 - 78	L2x2x3/16	4.00	3.83	74.6	0.7150	1.71	23.17	0.074 <sup>1</sup>
T30	78 - 74	L2x2x3/16	4.00	3.83	74.6	0.7150	1.71	23.17	0.074 <sup>1</sup>
T31	74 - 70	L2x2x3/16	4.00	3.83	74.6	0.7150	1.75	23.17	0.075 <sup>1</sup>
T32	70 - 66	L2x2x3/16	4.00	3.83	74.6	0.7150	1.79	23.17	0.077 <sup>1</sup>
T33	66 - 62	L2x2x3/16	4.00	3.83	74.6	0.7150	1.84	23.17	0.079 <sup>1</sup>
T34	62 - 58	L2x2x3/16	4.00	3.83	74.6	0.7150	1.92	23.17	0.083 <sup>1</sup>
T35	58 - 54	L2x2x3/16	4.00	3.83	74.6	0.7150	1.90	23.17	0.082 <sup>1</sup>



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Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T36	54 - 50	L2x2x3/16	4.00	3.83	74.6	0.7150	1.89	23.17	0.082 <sup>1</sup> ✓
T37	50 - 46	L2x2x3/16	4.00	3.83	74.6	0.7150	1.88	23.17	0.081 <sup>1</sup> ✓
T38	46 - 42	L2x2x3/16	4.00	3.83	74.6	0.7150	1.90	23.17	0.082 <sup>1</sup> ✓
T39	42 - 38	L2 1/2x2 1/2x1/4	4.00	3.83	59.8	1.1900	1.94	38.56	0.050 <sup>1</sup> ✓
T40	38 - 34	L2 1/2x2 1/2x1/4	4.00	3.83	59.8	1.1900	1.96	38.56	0.051 <sup>1</sup> ✓
T41	34 - 30	L2 1/2x2 1/2x1/4	4.00	3.83	59.8	1.1900	1.99	38.56	0.052 <sup>1</sup> ✓
T42	30 - 26	L2 1/2x2 1/2x1/4	4.00	3.83	59.8	1.1900	2.02	38.56	0.052 <sup>1</sup> ✓
T43	26 - 22	L2 1/2x2 1/2x1/4	4.00	3.83	59.8	1.1900	2.04	38.56	0.053 <sup>1</sup> ✓
T44	22 - 18	L2 1/2x2 1/2x1/4	4.00	3.83	59.8	1.1900	2.05	38.56	0.053 <sup>1</sup> ✓
T45	18 - 14	L2 1/2x2 1/2x1/4	4.00	3.83	59.8	1.1900	2.06	38.56	0.053 <sup>1</sup> ✓
T46	14 - 10	L2 1/2x2 1/2x1/4	4.00	3.83	59.8	1.1900	2.07	38.56	0.054 <sup>1</sup> ✓
T47	10 - 6	L2 1/2x2 1/2x1/4	4.00	3.83	59.8	1.1900	2.07	38.56	0.054 <sup>1</sup> ✓
T48	6 - 2	L2 1/2x2 1/2x1/4	4.00	3.83	59.8	1.1900	2.06	38.56	0.053 <sup>1</sup> ✓

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T1	276 - 265.5	L2x2x3/16	4.00	3.85	75.0	0.7150	0.09	23.17	0.004 <sup>1</sup> ✓
T2	265.5 - 261.75	L2x2x3/16	4.00	3.85	75.0	0.7150	1.39	23.17	0.060 <sup>1</sup> ✓
T5	254 - 242	L2x2x3/16	4.00	3.85	75.0	0.7150	0.31	23.17	0.013 <sup>1</sup> ✓
T6	242 - 222	L2x2x3/16	4.00	3.85	75.0	0.5363	0.09	25.34	0.004 <sup>1</sup> ✓
T7	222 - 206	L2x2x3/16	4.00	3.85	75.0	0.5363	0.20	25.34	0.008 <sup>1</sup> ✓
T8	206 - 202	L2x2x3/16	4.00	3.83	74.6	0.5363	0.79	25.34	0.031 <sup>1</sup> ✓
T10	198 - 194	L2x2x3/16	4.00	3.83	74.6	0.5363	1.59	25.34	0.063 <sup>1</sup> ✓

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Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T11	194 - 182	L2x2x3/16	4.00	3.83	74.6	0.7150	0.34	23.17	0.014 <sup>1</sup>
T12	182 - 162	L2x2x3/16	4.00	3.83	74.6	0.7150	0.35	23.17	0.015 <sup>1</sup>
T13	162 - 158	L2x2x3/16	4.00	3.83	74.6	0.7150	0.48	23.17	0.021 <sup>1</sup>
T14	158 - 154	L2x2x3/16	4.00	3.83	74.6	0.7150	0.19	23.17	0.008 <sup>1</sup>
T15	154 - 150	L2x2x3/16	4.00	3.83	74.6	0.7150	1.45	23.17	0.062 <sup>1</sup>
T16	150 - 146	L2x2x3/16	4.00	3.83	74.6	0.7150	1.45	23.17	0.063 <sup>1</sup>
T17	146 - 142	L2x2x3/16	4.00	3.83	74.6	0.7150	0.24	23.17	0.010 <sup>1</sup>
T18	142 - 138	L2x2x3/16	4.00	3.83	74.6	0.7150	0.45	23.17	0.019 <sup>1</sup>
T19	138 - 134	L2x2x3/16	4.00	3.83	74.6	0.7150	0.38	23.17	0.017 <sup>1</sup>
T20	134 - 130	L2x2x3/16	4.00	3.83	74.6	0.7150	0.37	23.17	0.016 <sup>1</sup>
T21	130 - 126	L2x2x3/16	4.00	3.83	74.6	0.7150	11.87	23.17	0.512 <sup>1</sup>
T22	126 - 122	L2x2x3/16	4.00	3.83	74.6	0.7150	0.27	23.17	0.012 <sup>1</sup>
T23	122 - 102	L2x2x3/16	4.00	3.83	74.6	0.7150	0.40	23.17	0.017 <sup>1</sup>
T24	102 - 98	L2x2x3/16	4.00	3.83	74.6	0.7150	0.42	23.17	0.018 <sup>1</sup>
T25	98 - 94	L2x2x3/16	4.00	3.83	74.6	0.7150	0.42	23.17	0.018 <sup>1</sup>
T26	94 - 90	L2x2x3/16	4.00	3.83	74.6	0.7150	0.41	23.17	0.018 <sup>1</sup>
T27	90 - 86	L2x2x3/16	4.00	3.83	74.6	0.7150	0.41	23.17	0.018 <sup>1</sup>
T28	86 - 82	L2x2x3/16	4.00	3.83	74.6	0.7150	0.41	23.17	0.017 <sup>1</sup>
T29	82 - 78	L2x2x3/16	4.00	3.83	74.6	0.7150	0.40	23.17	0.017 <sup>1</sup>
T30	78 - 74	L2x2x3/16	4.00	3.83	74.6	0.7150	0.39	23.17	0.017 <sup>1</sup>
T31	74 - 70	L2x2x3/16	4.00	3.83	74.6	0.7150	0.38	23.17	0.016 <sup>1</sup>
T32	70 - 66	L2x2x3/16	4.00	3.83	74.6	0.7150	0.38	23.17	0.016 <sup>1</sup>
T33	66 - 62	L2x2x3/16	4.00	3.83	74.6	0.7150	0.30	23.17	0.013 <sup>1</sup>
T34	62 - 58	L2 1/2x2 1/2x1/4	4.00	3.83	59.8	1.1900	7.92	38.56	0.205 <sup>1</sup>
T35	58 - 54	L2x2x3/16	4.00	3.83	74.6	0.7150	0.29	23.17	0.013 <sup>1</sup>
T36	54 - 50	L2x2x3/16	4.00	3.83	74.6	0.7150	0.37	23.17	0.016 <sup>1</sup>

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Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T37	50 - 46	L2x2x3/16	4.00	3.83	74.6	0.7150	0.36	23.17	0.015 <sup>1</sup>
T38	46 - 42	L2x2x3/16	4.00	3.83	74.6	0.7150	0.37	23.17	0.016 <sup>1</sup>
T39	42 - 38	L2x2x3/16	4.00	3.83	74.6	0.7150	0.36	23.17	0.016 <sup>1</sup>
T40	38 - 34	L2x2x3/16	4.00	3.83	74.6	0.7150	0.36	23.17	0.016 <sup>1</sup>
T41	34 - 30	L2x2x3/16	4.00	3.83	74.6	0.7150	0.36	23.17	0.016 <sup>1</sup>
T42	30 - 26	L2x2x3/16	4.00	3.83	74.6	0.7150	0.36	23.17	0.015 <sup>1</sup>
T43	26 - 22	L2x2x3/16	4.00	3.83	74.6	0.7150	0.36	23.17	0.015 <sup>1</sup>
T44	22 - 18	L2x2x3/16	4.00	3.83	74.6	0.7150	0.35	23.17	0.015 <sup>1</sup>
T45	18 - 14	L2x2x3/16	4.00	3.83	74.6	0.7150	0.36	23.17	0.015 <sup>1</sup>
T46	14 - 10	L2x2x3/16	4.00	3.83	74.6	0.7150	0.35	23.17	0.015 <sup>1</sup>
T47	10 - 6	L2x2x3/16	4.00	3.83	74.6	0.7150	0.32	23.17	0.014 <sup>1</sup>
T48	6 - 2	L2x2x3/16	4.00	3.83	74.6	0.7150	0.21	23.17	0.009 <sup>1</sup>

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Top Guy Pull-Off Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T3	261.75 - 258	L2 1/2x2 1/2x3/8	4.00	3.85	61.4	1.7300	8.14	56.05	0.145 <sup>1</sup>
T9	202 - 198	L2 1/2x2 1/2x3/8	4.00	3.83	61.1	1.7300	15.00	56.05	0.268 <sup>1</sup>

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Torque-Arm Top Design Data

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T3	261.75 - 258 (645)	L3 1/2x3 1/2x3/8	6.11	6.04	67.7	2.4800	13.96	80.35	0.174 <sup>1</sup>
T3	261.75 - 258	L3 1/2x3 1/2x3/8	6.11	6.04	67.7	2.4800	15.09	80.35	0.188 <sup>1</sup>

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Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T3	261.75 - 258 (646)	L3 1/2x3 1/2x3/8	6.11	6.04	67.7	2.4800	15.39	80.35	0.192 <sup>1</sup> ✓
T3	261.75 - 258 (651)	L3 1/2x3 1/2x3/8	6.11	6.04	67.7	2.4800	14.30	80.35	0.178 <sup>1</sup> ✓
T3	261.75 - 258 (652)	L3 1/2x3 1/2x3/8	6.11	6.04	67.7	2.4800	15.11	80.35	0.188 <sup>1</sup> ✓
T3	261.75 - 258 (657)	L3 1/2x3 1/2x3/8	6.11	6.04	67.7	2.4800	15.53	80.35	0.193 <sup>1</sup> ✓
T3	261.75 - 258 (658)	L3 1/2x3 1/2x3/8	6.11	6.04	67.7	2.4800	15.53	80.35	0.193 <sup>1</sup> ✓
T9	202 - 198 (663)	L3 1/2x3 1/2x3/8	6.11	6.03	67.6	2.4800	18.09	80.35	0.225 <sup>1</sup> ✓
T9	202 - 198 (664)	L3 1/2x3 1/2x3/8	6.11	6.03	67.6	2.4800	17.16	80.35	0.214 <sup>1</sup> ✓
T9	202 - 198 (669)	L3 1/2x3 1/2x3/8	6.11	6.03	67.6	2.4800	17.20	80.35	0.214 <sup>1</sup> ✓
T9	202 - 198 (670)	L3 1/2x3 1/2x3/8	6.11	6.03	67.6	2.4800	18.63	80.35	0.232 <sup>1</sup> ✓
T9	202 - 198 (675)	L3 1/2x3 1/2x3/8	6.11	6.03	67.6	2.4800	17.46	80.35	0.217 <sup>1</sup> ✓
T9	202 - 198 (676)	L3 1/2x3 1/2x3/8	6.11	6.03	67.6	2.4800	19.11	80.35	0.238 <sup>1</sup> ✓

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	φP <sub>allow</sub> K	% Capacity	Pass Fail	
T1	276 - 265.5	Leg	1 3/4	1	-2.52	55.17	4.6	Pass	
		Diagonal	L1 3/4x1 3/4x3/16	15	-0.92	5.75	15.9	Pass	
		Horizontal	L2x2x3/16	18	-0.29	11.03	2.6	Pass	
		Top Girt	L2x2x3/16	6	-0.09	11.03	0.8	Pass	
T2	265.5 - 261.75	Leg	1 3/4	24	-5.71	49.94	11.4	Pass	
		Diagonal	L1 3/4x1 3/4x3/16	30	-4.36	5.50	79.2	Pass	
		Top Girt	L2x2x3/16	27	-1.39	11.03	12.6	Pass	
T3	261.75 - 258	Leg	1 3/4	31	-4.14	49.94	8.3	Pass	
		Diagonal	L1 3/4x1 3/4x3/16	39	-3.74	11.98	31.2	Pass	
		Guy A@261.75	9/16	656	11.66	21.00	55.5	Pass	
		Guy B@261.75	9/16	649	11.64	21.00	55.4	Pass	
		Guy C@261.75	9/16	643	10.94	21.00	52.1	Pass	
		Top Guy	L2 1/2x2 1/2x3/8	34	8.14	56.05	14.5	Pass	
		Pull-Off@261.75							
		Torque Arm	L3 1/2x3 1/2x3/8	658	15.53	80.35	19.3	Pass	
		Top@261.75							
		Torque Arm	L3 1/2x3 1/2x3/8	659	-17.87	35.89	49.8	Pass	
T4	258 - 254	Leg	1 3/4	44	-23.78	44.89	53.0	Pass	
		Diagonal	L1 3/4x1 3/4x3/16	50	-3.38	5.26	64.3	Pass	
		Top Girt	L2x2x3/16	47	-2.49	11.38	21.9	Pass	
T5	254 - 242	Leg	1 3/4	54	-29.24	44.89	65.1	Pass	
		Diagonal	L1 3/4x1 3/4x3/16	71	-3.06	5.26	58.2	Pass	
		Horizontal	L2x2x3/16	63	-0.51	11.03	4.6	Pass	

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Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$\phi P_{allow}$ K	% Capacity	Pass Fail	
T6	242 - 222	Top Girt	L2x2x3/16	57	-0.27	11.03	2.5	Pass	
		Leg	1 3/4	75	-31.13	44.89	69.4	Pass	
		Diagonal	L1 3/4x1 3/4x3/16	81	-3.34	5.26	63.6	Pass	
		Horizontal	L2x2x3/16	95	-0.55	11.03	5.0	Pass	
T7	222 - 206	Top Girt	L2x2x3/16	77	0.09	25.34	0.4	Pass	
		Leg	2	106	-29.76	72.06	41.3	Pass	
		Diagonal	L2 1/2x2 1/2x1/4	114	-6.10	16.34	37.3	Pass	
		Horizontal	L2x2x3/16	116	-0.70	11.08	6.4	Pass	
T8	206 - 202	Top Girt	L2x2x3/16	110	-0.12	11.38	1.1	Pass	
		Leg	2	133	-29.20	72.06	40.5	Pass	
		Diagonal	L2 1/2x2 1/2x3/8	141	-7.71	23.55	32.7	Pass	
T9	202 - 198	Top Girt	L2x2x3/16	137	-0.70	11.43	6.1	Pass	
		Leg	2	142	-23.72	72.06	32.9	Pass	
		Diagonal	L2 1/2x2 1/2x3/8	150	-7.68	39.99	19.2	Pass	
		Guy A@202	9/16	674	15.00	21.00	71.4	Pass	
		Guy B@202	9/16	668	15.22	21.00	72.5	Pass	
		Guy C@202	9/16	661	14.26	21.00	67.9	Pass	
		Top Guy	L2 1/2x2 1/2x3/8	147	15.00	56.05	26.8	Pass	
		Pull-Off@202							
		Torque Arm Top@202	L3 1/2x3 1/2x3/8	676	19.11	80.35	23.8	Pass	
		Torque Arm Bottom@202	L3 1/2x3 1/2x3/8	677	-20.65	34.92	59.1	Pass	
T10	198 - 194	Leg	2	154	-45.96	72.06	63.8	Pass	
		Diagonal	L2 1/2x2 1/2x3/8	161	-5.23	23.55	22.2	Pass	
T11	194 - 182	Top Girt	L2x2x3/16	159	-1.90	11.43	16.6	Pass	
		Leg	2	164	-51.65	72.06	71.7	Pass	
T12	182 - 162	Diagonal	L2 1/2x2 1/2x1/4	183	-4.76	16.34	29.1	Pass	
		Horizontal	L2x2x3/16	172	-0.89	11.08	8.1	Pass	
		Top Girt	L2x2x3/16	167	-0.20	11.08	1.8	Pass	
		Leg	2	185	-58.05	72.06	80.6	Pass	
		Diagonal	L2x2x1/4	216	-2.98	9.61	31.0	Pass	
T13	162 - 158	Horizontal	L2x2x3/16	194	-1.01	11.08	9.1	Pass	
		Top Girt	L2x2x3/16	188	-0.19	11.08	1.7	Pass	
		Leg	2	217	-57.26	72.06	79.5	Pass	
		Diagonal	L2x2x1/4	223	-1.59	9.61	16.5	Pass	
T14	158 - 154	Top Girt	L2x2x3/16	221	-0.32	11.08	2.9	Pass	
		Leg	2	226	-56.25	72.06	78.1	Pass	
		Diagonal	L2x2x1/4	232	-2.07	9.61	21.6	Pass	
T15	154 - 150	Top Girt	L2x2x3/16	230	0.19	23.17	0.8	Pass	
		Leg	2	235	-57.54	72.06	79.8	Pass	
		Diagonal	L2x2x1/4	241	-4.53	9.61	47.2	Pass	
T16	150 - 146	Top Girt	L2x2x3/16	240	-1.30	11.08	11.7	Pass	
		Leg	2	244	-56.11	72.06	77.9	Pass	
		Diagonal	L2x2x1/4	252	-7.89	9.61	82.1	Pass	
		Top Girt	L2x2x3/16	249	-1.29	11.08	11.7	Pass	
T17	146 - 142	Leg	2	253	-56.31	72.06	78.1	Pass	
		Diagonal	L2x2x3/8	261	-8.26	12.03	68.7	Pass	
		Top Girt	L2x2x3/16	257	0.24	23.17	1.0	Pass	
T18	142 - 138	Leg	2	262	-55.84	72.06	77.5	Pass	
		Diagonal	L2x2x3/8	270	-9.00	12.03	74.8	Pass	
		Top Girt	L2x2x3/16	267	-0.25	11.08	2.3	Pass	
		Leg	2	271	-57.57	72.06	79.9	Pass	
T19	138 - 134	Diagonal	L2x2x3/8	279	-9.83	12.03	81.7	Pass	
		Top Girt	L2x2x3/16	275	-0.21	11.08	1.9	Pass	
		Leg	2	280	-59.26	72.06	82.2	Pass	
T20	134 - 130	Diagonal	L2x2x3/8	288	-10.34	12.03	85.9	Pass	
		Top Girt	L2x2x3/16	285	0.37	23.17	1.6	Pass	
		Leg	2	289	-64.50	119.45	54.0	Pass	
T21	130 - 126	Diagonal	L2x2x1/4	296	-6.03	9.61	62.8	Pass	
		Secondary Horizontal	L2x2x3/16	298	-1.56	11.08	14.1	Pass	

<b>tnxTower</b>  <b>Maser Consulting</b> 2000 Midlantic Drive, Suite 100 Mt. Laurel, NJ Phone: 856 797-0412 FAX: 856 722-1120	<b>Job</b>	18946008A	<b>Page</b>	131 of 133
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	<b>Client</b>	AT&T	<b>Designed by</b>	

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$\phi P_{allow}$ K	% Capacity	Pass Fail
		Top Girt	L2x2x3/16	294	11.87	23.17	51.2	Pass
		Guy A@130	3/4	681	27.33	34.98	78.1	Pass
		Guy B@130	3/4	680	28.01	34.98	80.1	Pass
		Guy C@130	3/4	679	26.47	34.98	75.7	Pass
T22	126 - 122	Leg	2	301	-64.97	72.06	90.2	Pass
		Diagonal	L2x2x1/4	308	-5.54	9.61	57.6	Pass
		Top Girt	L2x2x3/16	306	0.27	23.17	1.2	Pass
T23	122 - 102	Leg	2	310	-67.28	72.06	93.4	Pass
		Diagonal	L2x2x1/4	341	-4.71	9.61	49.1	Pass
		Horizontal	L2x2x3/16	319	-1.17	11.08	10.5	Pass
		Top Girt	L2x2x3/16	314	0.40	23.17	1.7	Pass
T24	102 - 98	Leg	2	343	-67.84	119.45	56.8	Pass
		Diagonal	L2x2x3/16	349	-1.57	7.40	21.2	Pass
		Secondary Horizontal	L2x2x3/16	354	-1.65	11.08	14.8	Pass
		Top Girt	L2x2x3/16	348	0.42	23.17	1.8	Pass
T25	98 - 94	Leg	2	355	-68.66	119.45	57.5	Pass
		Diagonal	L2x2x3/16	362	-0.73	7.40	9.9	Pass
		Secondary Horizontal	L2x2x3/16	364	-1.66	11.08	15.0	Pass
		Top Girt	L2x2x3/16	359	-0.20	11.08	1.8	Pass
T26	94 - 90	Leg	2	367	-68.87	119.45	57.7	Pass
		Diagonal	L2x2x3/16	375	-1.35	7.40	18.2	Pass
		Secondary Horizontal	L2x2x3/16	376	-1.67	11.08	15.1	Pass
		Top Girt	L2x2x3/16	372	0.41	23.17	1.8	Pass
T27	90 - 86	Leg	2	379	-69.67	119.45	58.3	Pass
		Diagonal	L2x2x3/16	387	-2.01	7.40	27.2	Pass
		Secondary Horizontal	L2x2x3/16	388	-1.69	11.08	15.2	Pass
		Top Girt	L2x2x3/16	383	0.41	23.17	1.8	Pass
T28	86 - 82	Leg	2	391	-69.59	119.45	58.3	Pass
		Diagonal	L2x2x3/16	399	-2.82	7.40	38.1	Pass
		Secondary Horizontal	L2x2x3/16	402	-1.69	11.08	15.2	Pass
		Top Girt	L2x2x3/16	396	0.41	23.17	1.7	Pass
T29	82 - 78	Leg	2	403	-70.57	119.45	59.1	Pass
		Diagonal	L2x2x3/16	411	-3.44	7.40	46.4	Pass
		Secondary Horizontal	L2x2x3/16	414	-1.71	11.08	15.4	Pass
		Top Girt	L2x2x3/16	407	0.40	23.17	1.7	Pass
T30	78 - 74	Leg	2	415	-70.52	119.45	59.0	Pass
		Diagonal	L2x2x3/16	423	-4.23	7.40	57.1	Pass
		Secondary Horizontal	L2x2x3/16	426	-1.71	11.08	15.4	Pass
		Top Girt	L2x2x3/16	420	0.39	23.17	1.7	Pass
T31	74 - 70	Leg	2	427	-71.98	119.45	60.3	Pass
		Diagonal	L2x2x1/4	435	-4.77	8.38	57.0	Pass
		Secondary Horizontal	L2x2x3/16	436	-1.75	11.08	15.8	Pass
		Top Girt	L2x2x3/16	431	0.38	23.17	1.6	Pass
T32	70 - 66	Leg	2	439	-73.85	119.45	61.8	Pass
		Diagonal	L2x2x1/4	447	-5.56	8.38	66.4	Pass
		Secondary Horizontal	L2x2x3/16	448	-1.79	11.08	16.2	Pass
		Top Girt	L2x2x3/16	444	0.38	23.17	1.6	Pass
T33	66 - 62	Leg	2	451	-75.90	119.45	63.5	Pass
		Diagonal	L2x2x1/4	459	-5.99	8.38	71.5	Pass
		Secondary Horizontal	L2x2x3/16	460	-1.84	11.08	16.6	Pass
		Top Girt	L2x2x3/16	455	0.30	23.17	1.3	Pass
T34	62 - 58	Leg	2	463	-79.05	119.45	66.2	Pass
		Diagonal	L2x2x1/4	469	-5.33	8.38	63.6	Pass
		Secondary Horizontal	L2x2x3/16	472	-1.92	11.08	17.3	Pass
		Top Girt	L2 1/2x2 1/2x1/4	467	7.92	38.56	20.5	Pass
		Guy A@62	9/16	684	14.41	21.00	68.6	Pass
		Guy B@62	9/16	683	14.77	21.00	70.3	Pass
		Guy C@62	9/16	682	14.19	21.00	67.5	Pass
T35	58 - 54	Leg	2	475	-78.15	119.45	65.4	Pass
		Diagonal	L2x2x1/4	481	-5.05	8.38	60.3	Pass
		Secondary Horizontal	L2x2x3/16	484	-1.90	11.08	17.1	Pass

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	<b>Client</b>	AT&T	<b>Designed by</b>	

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$\phi P_{allow}$ K	% Capacity	Pass Fail	
T36	54 - 50	Top Girt	L2x2x3/16	479	0.29	23.17	1.3	Pass	
		Leg	2	487	-77.99	119.45	65.3	Pass	
		Diagonal	L2x2x1/4	493	-4.26	8.38	50.8	Pass	
T37	50 - 46	Secondary Horizontal	L2x2x3/16	496	-1.89	11.08	17.1	Pass	
		Top Girt	L2x2x3/16	492	0.37	23.17	1.6	Pass	
		Leg	2	501	-77.67	119.45	65.0	Pass	
T38	46 - 42	Diagonal	L2x2x1/4	505	-3.96	8.38	47.3	Pass	
		Secondary Horizontal	L2x2x3/16	509	-1.88	11.08	17.0	Pass	
		Top Girt	L2x2x3/16	503	0.36	23.17	1.5	Pass	
T39	42 - 38	Leg	2	513	-78.43	119.45	65.7	Pass	
		Diagonal	L2x2x3/16	517	-3.16	7.40	42.7	Pass	
		Secondary Horizontal	L2x2x3/16	521	-1.90	11.08	17.2	Pass	
T40	38 - 34	Top Girt	L2x2x3/16	516	0.37	23.17	1.6	Pass	
		Leg	2	525	-79.98	119.45	67.0	Pass	
		Diagonal	L2x2x3/16	529	-2.89	7.40	39.1	Pass	
T41	34 - 30	Secondary Horizontal	L2 1/2x2 1/2x1/4	533	-1.94	21.14	9.2	Pass	
		Top Girt	L2x2x3/16	527	0.36	23.17	1.6	Pass	
		Leg	2	537	-81.02	119.45	67.8	Pass	
T42	30 - 26	Diagonal	L2x2x3/16	541	-2.11	7.40	28.5	Pass	
		Secondary Horizontal	L2 1/2x2 1/2x1/4	545	-1.96	21.14	9.3	Pass	
		Top Girt	L2x2x3/16	540	0.36	23.17	1.6	Pass	
T43	26 - 22	Leg	2	549	-82.27	119.45	68.9	Pass	
		Diagonal	L2x2x3/16	553	-1.83	7.40	24.8	Pass	
		Secondary Horizontal	L2 1/2x2 1/2x1/4	557	-1.99	21.14	9.4	Pass	
T44	22 - 18	Top Girt	L2x2x3/16	551	0.36	23.17	1.6	Pass	
		Leg	2	561	-83.11	119.45	69.6	Pass	
		Diagonal	L2x2x3/16	566	-1.38	7.40	18.7	Pass	
T45	18 - 14	Secondary Horizontal	L2 1/2x2 1/2x1/4	569	-2.02	21.14	9.5	Pass	
		Top Girt	L2x2x3/16	564	0.36	23.17	1.5	Pass	
		Leg	2	573	-83.95	119.45	70.3	Pass	
T46	14 - 10	Diagonal	L2x2x3/16	579	-1.47	7.40	19.9	Pass	
		Secondary Horizontal	L2 1/2x2 1/2x1/4	581	-2.04	21.14	9.6	Pass	
		Top Girt	L2x2x3/16	575	0.36	23.17	1.5	Pass	
T47	10 - 6	Leg	2	585	-84.58	119.45	70.8	Pass	
		Diagonal	L2x2x1/4	591	-2.20	9.61	22.9	Pass	
		Secondary Horizontal	L2 1/2x2 1/2x1/4	593	-2.05	21.14	9.7	Pass	
T48	6 - 2	Top Girt	L2x2x3/16	588	0.35	23.17	1.5	Pass	
		Leg	2	597	-85.02	119.45	71.2	Pass	
		Diagonal	L2x2x1/4	603	-2.48	9.61	25.8	Pass	
		Secondary Horizontal	L2 1/2x2 1/2x1/4	605	-2.06	21.14	9.8	Pass	
		Top Girt	L2x2x3/16	599	0.36	23.17	1.5	Pass	
		Leg	2	609	-85.45	119.45	71.5	Pass	
		Diagonal	L2x2x1/4	615	-3.31	9.61	34.4	Pass	
		Secondary Horizontal	L2 1/2x2 1/2x1/4	618	-2.07	21.14	9.8	Pass	
		Top Girt	L2x2x3/16	612	0.35	23.17	1.5	Pass	
		Leg	2	621	-85.24	119.45	71.4	Pass	
		Diagonal	L2x2x1/4	627	-3.40	9.61	35.4	Pass	
		Secondary Horizontal	L2 1/2x2 1/2x1/4	629	-2.07	21.14	9.8	Pass	
		Top Girt	L2x2x3/16	623	0.32	23.17	1.4	Pass	
		Leg	2	633	-85.05	119.45	71.2	Pass	
		Diagonal	L2x2x1/4	639	-3.97	9.61	41.3	Pass	
		Secondary Horizontal	L2 1/2x2 1/2x1/4	641	-2.06	21.14	9.8	Pass	
		Top Girt	L2x2x3/16	634	0.21	23.17	0.9	Pass	
							Summary		
							Leg (T23)	93.4	Pass
							Diagonal (T20)	85.9	Pass
							Horizontal (T23)	10.5	Pass
							Secondary Horizontal	17.3	Pass

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	<b>Client</b>	AT&T	<b>Designed by</b>	

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$\phi P_{allow}$ K	% Capacity	Pass Fail
						(T34)		
						Top Girt (T21)	51.2	Pass
						Guy A (T21)	78.1	Pass
						Guy B (T21)	80.1	Pass
						Guy C (T21)	75.7	Pass
						Top Guy Pull-Off (T9)	26.8	Pass
						Torque Arm Top (T9)	23.8	Pass
						Torque Arm Bottom (T9)	59.1	Pass
						Bolt Checks	83.2	Pass
						<b>RATING =</b>	<b>93.4</b>	<b>Pass</b>





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**Smartlink on behalf of  
AT&T Mobility, LLC  
Site FA – 10050930  
Site ID – CT2056  
(MRCTB032149-RCTB031326-  
MRCTB031574)  
USID – 82711  
Site Name – Naugatuck Eastside  
Blvd Road**

**130 Eastside Boulevard  
Naugatuck, CT 06770**

Latitude: N41-31-04.00  
Longitude: W73-1-07.00  
Structure Type: Guyed

Report generated date: October 19, 2018  
Report by: Scott Broyles  
Customer Contact: David Barbagallo

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**AT&T Mobility, LLC will be compliant when the  
remediation recommended in Section 5.2 or  
other appropriate remediation is implemented.**

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# 1 General Site Summary

## 1.1 Report Summary

AT&T Mobility, LLC	Summary
Access to Antennas Locked?	Yes
Max Cumulative Simulated RFE Level on the Ground	<1% General Public Limit
FCC & AT&T Compliant?	Will Be Compliant
Optional AT&T Mitigation Items?	No










The following documents were provided by the client and were utilized to create this report:

RFDS: NEW-ENGLAND\_CONNECTICUT\_CTV2056\_2019-LTE-Next-Carrier\_LTE\_sp656b\_2051A0GKKR\_10050930\_82711\_04-01-2018\_Final-Approved\_v3.00

CD's: 10050930\_AE201\_180925\_CTL02056\_REV 2\_5G NR UPGRADE\_6C-7C

RF Powers Used: RFDS

## 1.2 Signage Summary

AT&T Signage Locations									
	Information 1	Information 2	Notice	Notice 2	Caution	Caution 2	Warning	Warning 2	Barriers
Access Point(s)									
Alpha									
Beta									
Gamma									
Delta									
Epsilon									

## 1.3 Fall Arrest Anchor Point Summary

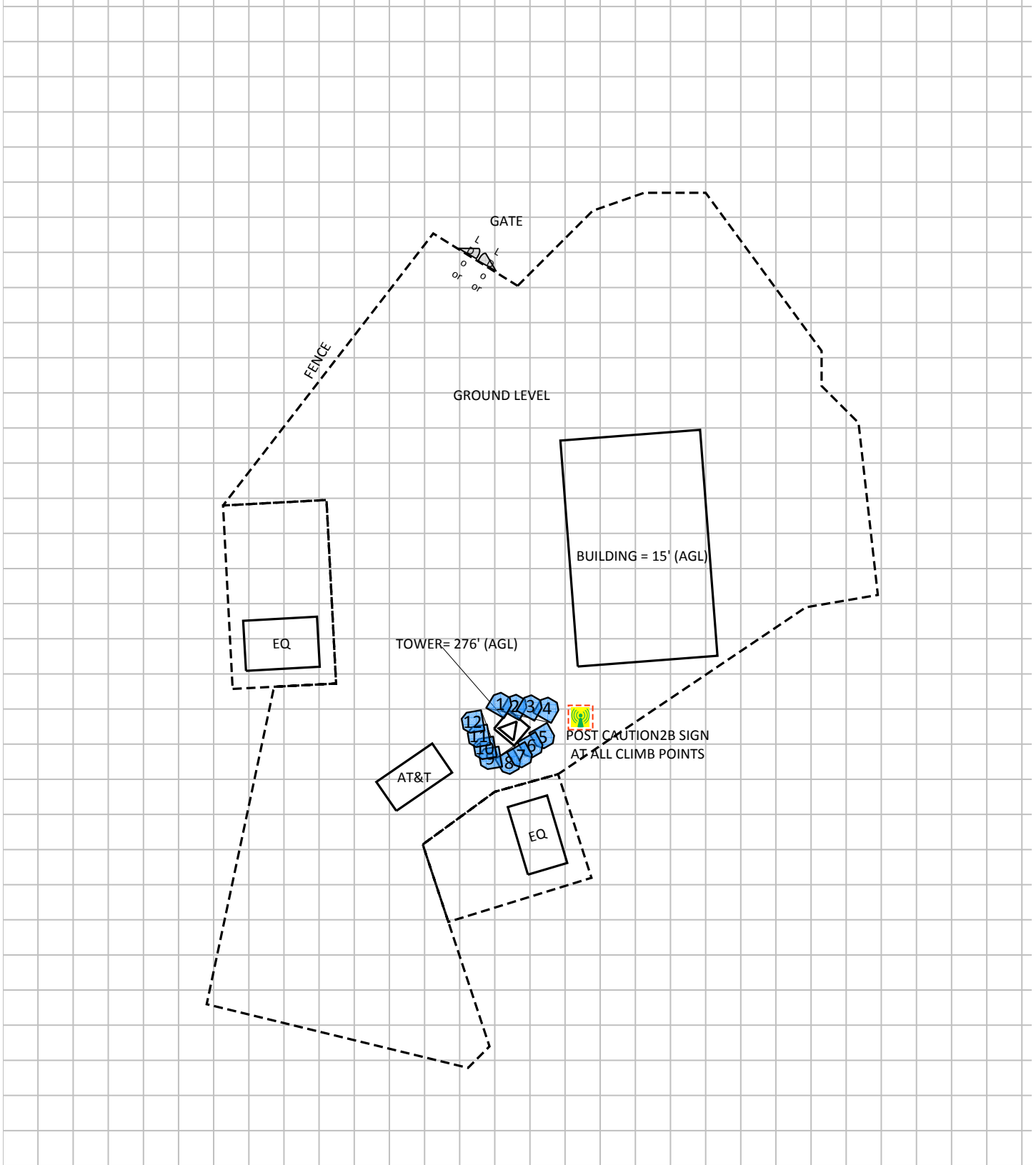
Fall Arrest Anchor & Parapet Info	Parapet Available (Y/N)	Parapet Height (inches)	Fall Arrest Anchor Available (Y/N)
Roof Safety Info	N	N/A	N

## 2 Scale Maps of Site

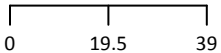
The following diagrams are included:

- Site Scale Map
- RF Exposure Diagram
- RF Exposure Diagram – Elevation View

# Site Scale Map For: Naugatuck Eastside Blvd Road



(Feet)



www.sitesafe.com  
 Site Name: Naugatuck Eastside Blvd Road  
 10/19/2018 7:07:01 PM

**Carrier Identification**

- AT&T MOBILITY LLC (Blue circle)
- VERIZON WIRELESS (Red circle)
- T-MOBILE (Pink circle)
- SPRINT (Yellow circle)
- UNKNOWN CARRIER (White circle)

**Sign Legend**

- Caution 1 (Yellow sign with antenna)
- Caution 2 (Yellow sign with antenna)
- Notice 2 (Blue sign with antenna)
- Notice 1 (Blue sign with antenna)
- Warning (Orange sign with antenna)
- Warning 2 (Orange sign with antenna)
- Info 1 (Green sign with 'i')
- Info 2 (Green sign with 'i')

**Barrier** (Red dashed line)

**Proposed Barriers/ Signs** (Red dashed line)

**RSP** (RF Safety Plan)

### 3 Antenna Inventory

The following antenna inventory was obtained by the customer and was utilized to create the site model diagrams:

Ant ID	Operator	Antenna Make & Model	Type	TX Freq (MHz)	Technology	Az (Deg)	Hor BW (Deg)	Ant Len (ft)	Power	Power Type	Power Unit	Radio Count	Total ERP (Watts)	Ant Gain (dBd)	Z AGL	MDT	EDT
1	AT&T MOBILITY LLC	Powerwave 7770	Panel	850	UMTS	30	82	4.6	231.21	ERP	Watt	1	231.2	11.51	153.7'	0'	0'
2	AT&T MOBILITY LLC	CCI Antennas TPA-65R-LCUUUU-H8	Panel	2300	LTE	30	65	8	1285.287	ERP	Watt	1	1285.3	14.36	152'	0'	3'
3	AT&T MOBILITY LLC (Proposed)	Kathrein-Scala 800-10966	Panel	763	LTE	30	67.9	8	1475.707	ERP	Watt	1	1475.7	13.55	152'	0'	9'
3	AT&T MOBILITY LLC (Proposed)	Kathrein-Scala 800-10966	Panel	850	LTE	30	66	8	500	ERP	Watt	1	500	14.25	152'	0'	9'
3	AT&T MOBILITY LLC (Proposed)	Kathrein-Scala 800-10966	Panel	5G 850	LTE	30	66	8	500	ERP	Watt	1	500	14.25	152'	0'	9'
3	AT&T MOBILITY LLC (Proposed)	Kathrein-Scala 800-10966	Panel	1900	LTE	30	66	8	3664.376	ERP	Watt	1	3664.4	15.85	152'	0'	6'
4	AT&T MOBILITY LLC	CCI Antennas HPA-65R-BUUU-H8	Panel	737	LTE	30	64.9	7.7	1475.707	ERP	Watt	1	1475.7	13.26	152.2'	0'	9'
4	AT&T MOBILITY LLC	CCI Antennas HPA-65R-BUUU-H8	Panel	2100	LTE	30	65.5	7.7	3837.072	ERP	Watt	1	3837.1	15.26	152.2'	0'	6'
5	AT&T MOBILITY LLC	Powerwave 7770	Panel	850	UMTS	150	82	4.6	231.21	ERP	Watt	1	231.2	11.51	153.7'	0'	4'
6	AT&T MOBILITY LLC	Quintel QS66512-2	Panel	2300	LTE	150	64	6	1285.287	ERP	Watt	1	1285.3	14.56	153'	0'	2'
7	AT&T MOBILITY LLC (Proposed)	Kathrein-Scala 800-10965	Panel	763	LTE	150	63.9	6.6	1475.707	ERP	Watt	1	1475.7	12.5	152.7'	0'	6'
7	AT&T MOBILITY LLC (Proposed)	Kathrein-Scala 800-10965	Panel	850	LTE	150	61.7	6.6	500	ERP	Watt	1	500	13.62	152.7'	0'	6'
7	AT&T MOBILITY LLC (Proposed)	Kathrein-Scala 800-10965	Panel	5G 850	LTE	150	61.7	6.6	500	ERP	Watt	1	500	13.62	152.7'	0'	6'
7	AT&T MOBILITY LLC (Proposed)	Kathrein-Scala 800-10965	Panel	1900	LTE	150	65.1	6.6	3664.376	ERP	Watt	1	3664.4	15.88	152.7'	0'	3'
8	AT&T MOBILITY LLC	CCI Antennas HPA-65R-BUUU-H6	Panel	737	LTE	150	66.2	6	1475.707	ERP	Watt	1	1475.7	11.68	153'	0'	6'
8	AT&T MOBILITY LLC	CCI Antennas HPA-65R-BUUU-H6	Panel	2100	LTE	150	61.1	6	3837.072	ERP	Watt	1	3837.1	14.53	153'	0'	3'
9	AT&T MOBILITY LLC	Powerwave 7770	Panel	850	UMTS	260	82	4.6	231.21	ERP	Watt	1	231.2	11.51	153.7'	0'	0'
10	AT&T MOBILITY LLC	Quintel QS66512-2	Panel	2300	LTE	260	64	6	1285.287	ERP	Watt	1	1285.3	14.56	153'	0'	2'
11	AT&T MOBILITY LLC (Proposed)	Kathrein-Scala 800-10965	Panel	763	LTE	260	63.9	6.6	1475.707	ERP	Watt	1	1475.7	12.5	152.7'	0'	10'
11	AT&T MOBILITY LLC (Proposed)	Kathrein-Scala 800-10965	Panel	850	LTE	260	61.7	6.6	500	ERP	Watt	1	500	13.62	152.7'	0'	10'

Ant ID	Operator	Antenna Make & Model	Type	TX Freq (MHz)	Technology	Az (Deg)	Hor BW (Deg)	Ant Len (ft)	Power	Power Type	Power Unit	Radio Count	Total ERP (Watts)	Ant Gain (dBd)	Z AGL	MDT	EDT
11	AT&T MOBILITY LLC (Proposed)	Kathrein-Scala 800-10965	Panel	5G 850	LTE	260	61.7	6.6	500	ERP	Watt	1	500	13.62	152.7'	0'	10'
11	AT&T MOBILITY LLC (Proposed)	Kathrein-Scala 800-10965	Panel	1900	LTE	260	65.1	6.6	3664.376	ERP	Watt	1	3664.4	15.88	152.7'	0'	6'
12	AT&T MOBILITY LLC	CCI Antennas HPA-65R-BUU-H6	Panel	2100	LTE	260	61.1	6	3837.072	ERP	Watt	1	3837.1	14.53	153'	0'	6'
12	AT&T MOBILITY LLC	CCI Antennas HPA-65R-BUU-H6	Panel	737	LTE	260	66.2	6	1475.707	ERP	Watt	1	1475.7	11.68	153'	0'	10'

NOTE: X, Y and Z indicate relative position of the bottom of the antenna to the origin location on the site, displayed in the model results diagram. Specifically, the Z reference indicates the bottom of the antenna height above the main site level unless otherwise indicated. The distance to the bottom of the antenna is calculated by subtracting half of the length of the antenna from the antenna centerline. Effective Radiated Power (ERP) is provided by the operator or based on Sitesafe experience. The values used in the modeling may be greater than are currently deployed.

## 4 Emission Predictions

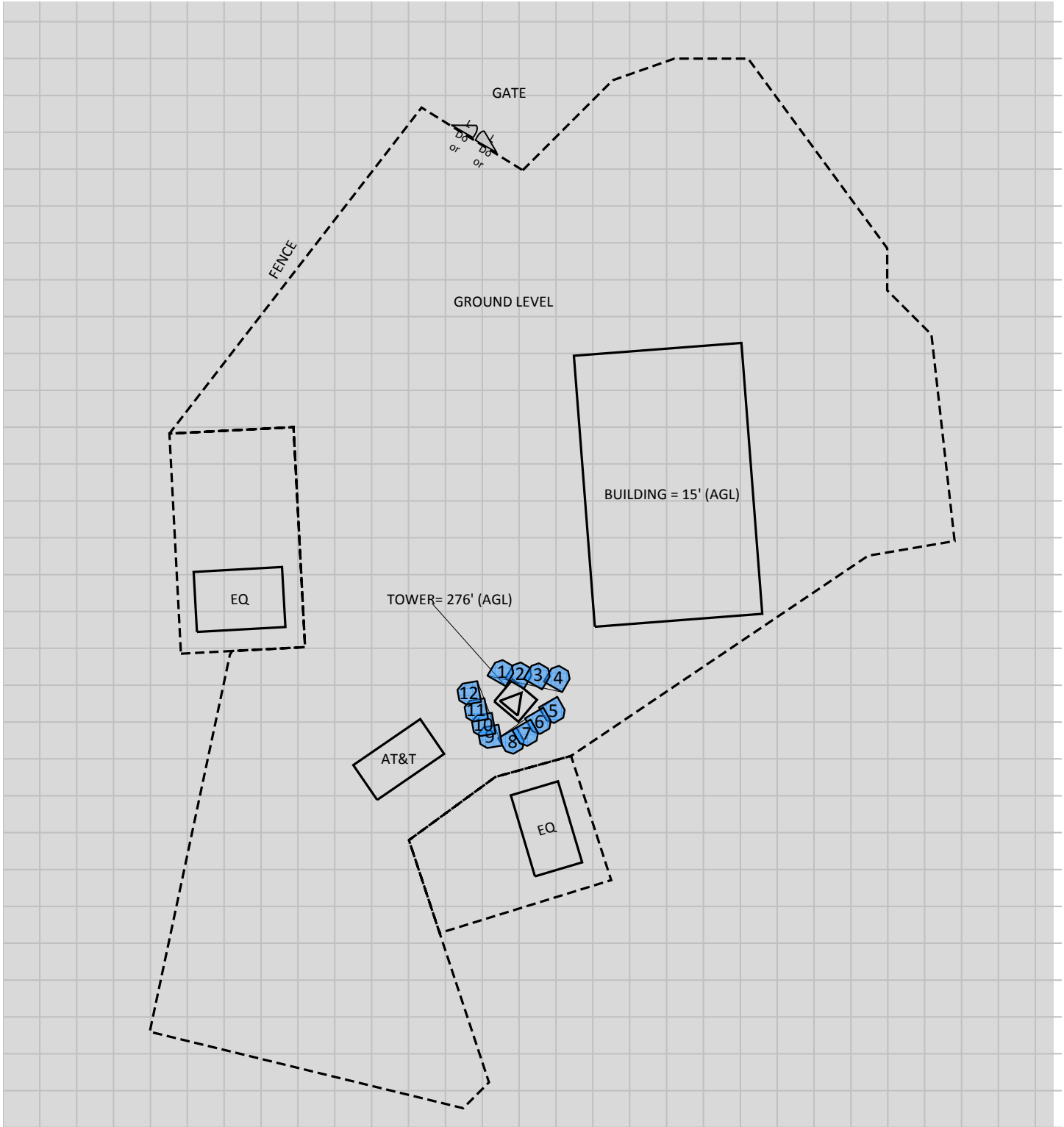
In the RF Exposure Simulations below all heights are reflected with respect to main site level. In most rooftop cases this is the height of the main rooftop and in other cases this can be ground level. Each different height area, rooftop, or platform level is labeled with its height relative to the main site level. Emissions are calculated appropriately based on the relative height and location of that area to all antennas. The total analyzed elevations in the below RF Exposure Simulations are listed below.

- Ground = 0'

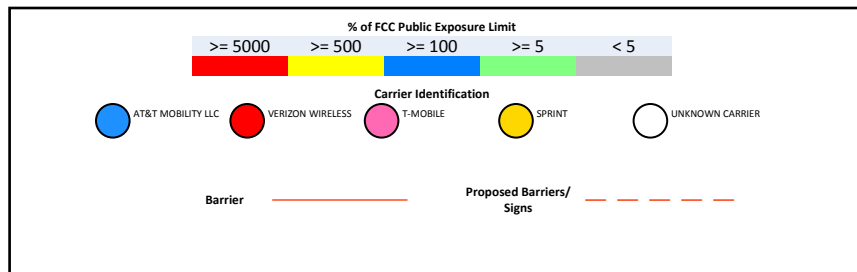
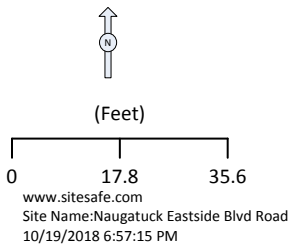
The Antenna Inventory heights are referenced to the same level.



# RF Exposure Simulation For: Naugatuck Eastside Blvd Road Composite View

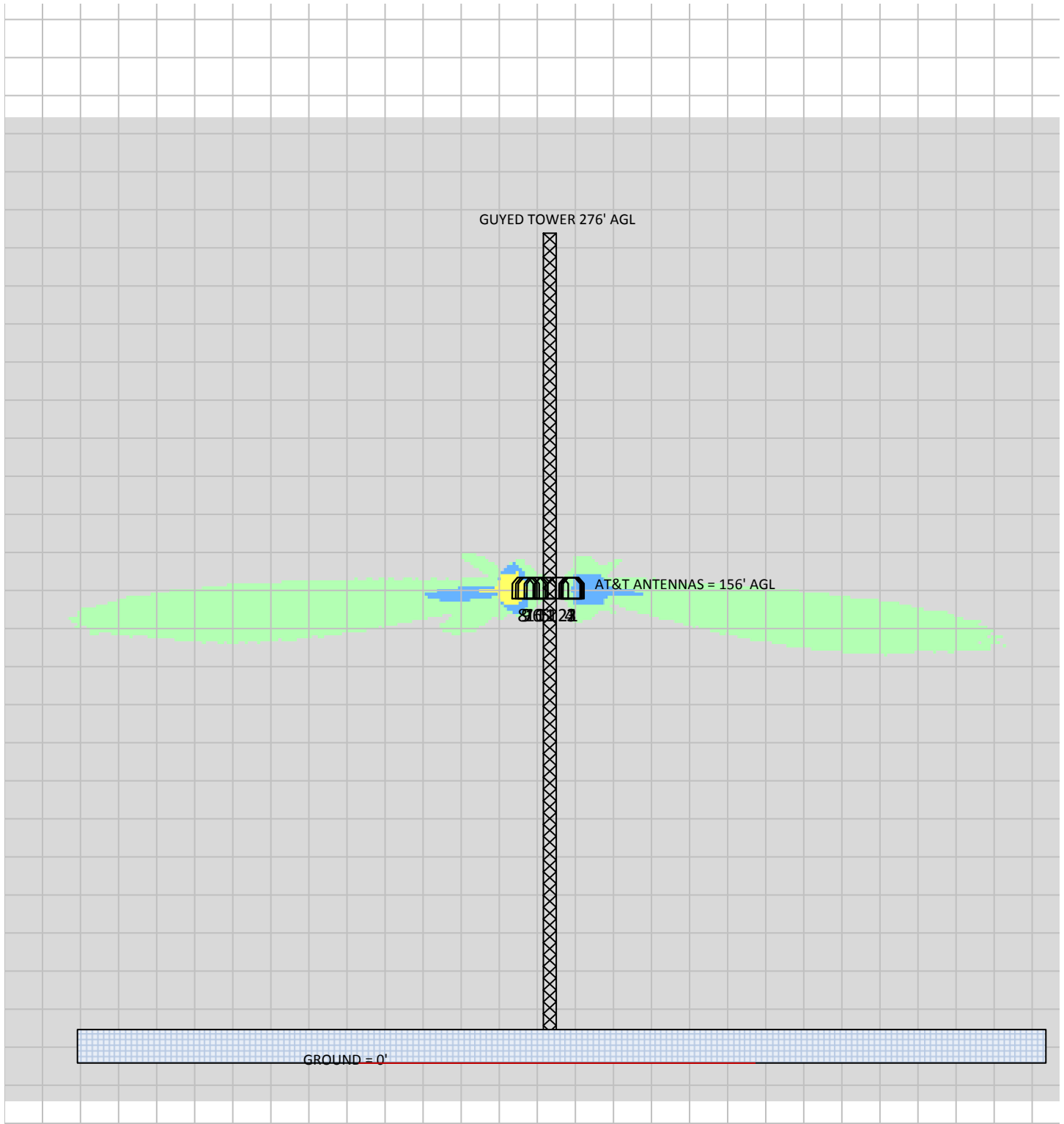


% of FCC Public Exposure Limit  
Spatial average 0' - 6'

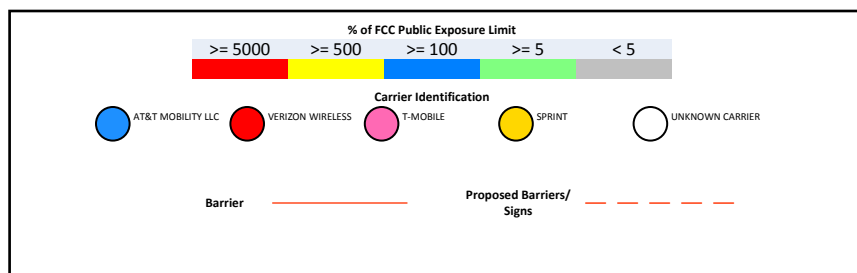
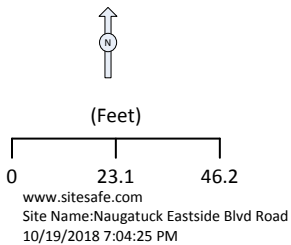


Sitesafe OET-65 Model  
Near Field Boundary:  
1.5 \* Aperture  
Reflection Factor: 1  
Spatially Averaged

# RF Exposure Simulation For: Naugatuck Eastside Blvd Road Elevation View



% of FCC Public Exposure Limit  
Spatial average 0' - 6'



Sitesafe OET-65 Model  
Near Field Boundary:  
1.5 \* Aperture  
Reflection Factor: 1  
Single Level (0)

## 5 Site Compliance

### 5.1 Site Compliance Statement

Upon evaluation of the cumulative RF emission levels from all operators at this site, RF hazard signage and antenna locations, Sitesafe has determined that:

AT&T Mobility, LLC will be compliant when the remediation recommended in Section 5.2 or other appropriate remediation is implemented.

The compliance determination is based on General Public RFE levels derived from theoretical modeling, RF signage placement, proposed antenna inventory and the level of restricted access to the antennas at the site. Any deviation from the AT&T Mobility, LLC's proposed deployment plan could result in the site being rendered non-compliant.

Modeling is used for determining compliance and the percentage of MPE contribution.

### 5.2 Actions for Site Compliance

Based on FCC regulations, common industry practice, and our understanding of AT&T Mobility, LLC RF Safety Policy requirements, this section provides a statement of recommendations for site compliance. Recommendations have been proposed based on our understanding of existing access restrictions, signage, and an analysis of predicted RFE levels.

AT&T Mobility, LLC will be made compliant if the following changes are implemented:

#### Self-Support Tower Location

(1) Yellow Caution 2B sign(s) required at all climb points.

#### Notes:

- Data concerning all other carriers on site was unavailable and therefore not included in this report.
- Signage may already be in place. Sitesafe does not have record of any existing signage because there were no previous visits or data supplied regarding them. All remediation is based on a worst-case scenario.

## 6 Reviewer Certification

The reviewer whose signature appears below hereby certifies and affirms:

That I am an employee of Sitesafe, LLC., in Vienna, Virginia, at which place the staff and I provide RF compliance services to clients in the wireless communications industry; and

That I am thoroughly familiar with the Rules and Regulations of the Federal Communications Commission (FCC) as well as the regulations of the Occupational Safety and Health Administration (OSHA), both in general and specifically as they apply to the FCC Guidelines for Human Exposure to Radio-frequency Radiation; and

That I have thoroughly reviewed this Site Compliance Report and believe it to be true and accurate to the best of my knowledge as assembled by and attested to by Scott Broyles.

October 19, 2018

## Appendix A – Statement of Limiting Conditions

Sitesafe has provided computer generated model(s) in this Site Compliance Report to show approximate dimensions of the site, and the model is included to assist the reader of the compliance report to visualize the site area, and to provide supporting documentation for Sitesafe's recommendations.

Sitesafe may note in the Site Compliance Report any adverse physical conditions, such as needed repairs, that Sitesafe became aware of during the normal research involved in creating this report. Sitesafe will not be responsible for any such conditions that do exist or for any engineering or testing that might be required to discover whether such conditions exist. Because Sitesafe is not an expert in the field of mechanical engineering or building maintenance, the Site Compliance Report must not be considered a structural or physical engineering report.

Sitesafe obtained information used in this Site Compliance Report from sources that Sitesafe considers reliable and believes them to be true and correct. Sitesafe does not assume any responsibility for the accuracy of such items that were furnished by other parties. When conflicts in information occur between data collected by Sitesafe provided by a second party and data collected by Sitesafe, the data will be used.

## Appendix B – Regulatory Background Information

### FCC Rules and Regulations

In 1996, the Federal Communications Commission (FCC) adopted regulations for the evaluating of the effects of RF emissions in 47 CFR § 1.1307 and 1.1310. The guideline from the FCC Office of Engineering and Technology is Bulletin 65 (“OET Bulletin 65”), *Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields*, Edition 97-01, published August 1997. Since 1996 the FCC periodically reviews these rules and regulations as per their congressional mandate.

FCC regulations define two separate tiers of exposure limits: Occupational or “Controlled environment” and General Public or “Uncontrolled environment”. The General Public limits are generally five times more conservative or restrictive than the Occupational limit. These limits apply to *accessible* areas where workers or the general public may be exposed to Radio Frequency (RF) electromagnetic fields.

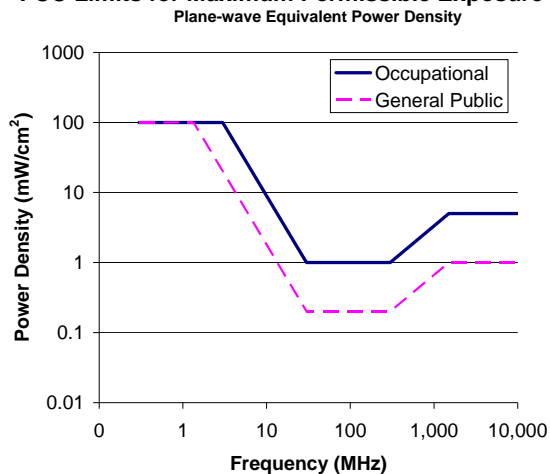
Occupational or Controlled limits apply in situations in which persons are exposed as a consequence of their employment and where those persons exposed have been made fully aware of the potential for exposure and can exercise control over their exposure.

An area is considered a Controlled environment when access is limited to these aware personnel. Typical criteria are restricted access (i.e. locked or alarmed doors, barriers, etc.) to the areas where antennas are located coupled with proper RF warning signage. A site with Controlled environments is evaluated with Occupational limits.

All other areas are considered Uncontrolled environments. If a site has no access controls or no RF warning signage it is evaluated with General Public limits.

The theoretical modeling of the RF electromagnetic fields has been performed in accordance with OET Bulletin 65. The Maximum Permissible Exposure (MPE) limits utilized in this analysis are outlined in the following diagram:

#### FCC Limits for Maximum Permissible Exposure (MPE)



### Limits for Occupational/Controlled Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f <sup>2</sup> )*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

### Limits for General Population/Uncontrolled Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz

\*Plane-wave equivalent power density

### OSHA Statement

The General Duty clause of the OSHA Act (Section 5) outlines the occupational safety and health responsibilities of the employer and employee. The General Duty clause in Section 5 states:

- (a) Each employer –
  - (1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;
  - (2) shall comply with occupational safety and health standards promulgated under this Act.
- (b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.

OSHA has defined Radiofrequency and Microwave Radiation safety standards for workers who may enter hazardous RF areas. Regulation Standards 29 CFR § 1910.147 identify a generic Lock Out Tag Out procedure aimed to control the unexpected energization or start up of machines when maintenance or service is being performed.

## Appendix C – Safety Plan and Procedures

The following items are general safety recommendations that should be administered on a site by site basis as needed by the carrier.

**General Maintenance Work:** Any maintenance personnel required to work immediately in front of antennas and / or in areas indicated as above 100% of the Occupational MPE limits should coordinate with the wireless operators to disable transmitters during their work activities.

**Training and Qualification Verification:** All personnel accessing areas indicated as exceeding the General Population MPE limits should have a basic understanding of EME awareness and RF Safety procedures when working around transmitting antennas. Awareness training increases a workers understanding to potential RF exposure scenarios. Awareness can be achieved in a number of ways (e.g. videos, formal classroom lecture or internet based courses).

**Physical Access Control:** Access restrictions to transmitting antennas locations is the primary element in a site safety plan. Examples of access restrictions are as follows:

- Locked door or gate
- Alarmed door
- Locked ladder access
- Restrictive Barrier at antenna (e.g. Chain link with posted RF Sign)

**RF Signage:** Everyone should obey all posted signs at all times. RF signs play an important role in properly warning a worker prior to entering into a potential RF Exposure area.

**Assume all antennas are active:** Due to the nature of telecommunications transmissions, an antenna transmits intermittently. Always assume an antenna is transmitting. Never stop in front of an antenna. If you have to pass by an antenna, move through as quickly and safely as possible thereby reducing any exposure to a minimum.

**Maintain a 3 foot clearance from all antennas:** There is a direct correlation between the strength of an EME field and the distance from the transmitting antenna. The further away from an antenna, the lower the corresponding EME field is.

**Site RF Emissions Diagram:** Section 4 of this report contains an RF Diagram that outlines various theoretical Maximum Permissible Exposure (MPE) areas at the site. The modeling is a worst case scenario assuming a duty cycle of 100% for each transmitting antenna at full power. This analysis is based on one of two access control criteria: General Public criteria means the access to the site is uncontrolled and anyone can gain access. Occupational criteria means the access is restricted and only properly trained individuals can gain access to the antenna locations.



## Appendix D – RF Emissions

The RF Emissions Simulation(s) in this report display theoretical spatially averaged percentage of the Maximum Permissible Exposure for all systems at the site unless otherwise noted. These diagrams use modeling as prescribed in OET Bulletin 65 and assumptions detailed in Appendix E.

The key at the bottom of each RF Emissions Simulation indicates percentages displayed referenced to FCC General Public Maximum Permissible Exposure (MPE) limits. Color coding on the diagram is as follows:

- Areas indicated as Gray are predicted to be below 5% of the MPE limits. Gray represents areas more than 20 times below the most conservative exposure limit.
- Green represents areas are predicted to be between 5% and 100% of the MPE limits. **Green areas are accessible to anyone.**
- Blue represents areas predicted to exceed the General Public MPE limits but are less than Occupational limits. **Blue areas should be accessible only to RF trained workers.**
- Yellow represents areas predicted to exceed Occupational MPE limits. Yellow areas should be accessible only to RF trained workers able to assess current exposure levels.
- Red represents areas predicted to have exposure more than 10 times the Occupational MPE limits. **Red indicates that the RF levels must be reduced prior to access.** An RF Safety Plan is required which outlines how to reduce the RF energy in these areas prior to access.

## Appendix E – Assumptions and Definitions

### General Model Assumptions

In this site compliance report, it is assumed that all antennas are operating at **full power at all times**. Software modeling was performed for all transmitting antennas located on the site. Sitesafe has further assumed a 100% duty cycle and maximum radiated power.

The modeling is based on recommendations from the FCC's OET-65 bulletin with the following variances per AT&T guidance. Reflection has not been considered in the modeling, i.e. the reflection factor is 1.0. The near / far field boundary has been set to 1.5 times the aperture height of the antenna and modeling beyond that point is the lesser of the near field cylindrical model and the far field model taking into account the gain of the antenna.

The site has been modeled with these assumptions to show the maximum RF energy density. Areas modeled with exposure greater than 100% of the General Public MPE level may not actually occur, but are shown as a prediction that could be realized. Sitesafe believes these areas to be safe for entry by occupationally trained personnel utilizing appropriate personal protective equipment (in most cases, a personal monitor).

### Use of Generic Antennas

For the purposes of this report, the use of "Generic" as an antenna model, or "Unknown" for an operator means the information about a carrier, their FCC license and/or antenna information was not provided and could not be obtained while on site. In the event of unknown information, Sitesafe will use our industry specific knowledge of equipment, antenna models, and transmit power to model the site. If more specific information can be obtained for the unknown measurement criteria, Sitesafe recommends remodeling of the site utilizing the more complete and accurate data. Information about similar facilities is used when the service is identified and associated with a particular antenna. If no information is available regarding the transmitting service associated with an unidentified antenna, using the antenna manufacturer's published data regarding the antenna's physical characteristics makes more conservative assumptions.

Where the frequency is unknown, Sitesafe uses the closest frequency in the antenna's range that corresponds to the highest Maximum Permissible Exposure (MPE), resulting in a conservative analysis.

## Definitions

**5% Rule** – The rules adopted by the FCC specify that, in general, at multiple transmitter sites actions necessary to bring the area into compliance with the guidelines are the shared responsibility of all licensees whose transmitters produce field strengths or power density levels at the area in question in excess of 5% of the exposure limits. In other words, any wireless operator that contributes 5% or greater of the MPE limit in an area that is identified to be greater than 100% of the MPE limit is responsible taking corrective actions to bring the site into compliance.

**Compliance** – The determination of whether a site is safe or not with regards to Human Exposure to Radio Frequency Radiation from transmitting antennas.

**Decibel (dB)** – A unit for measuring power or strength of a signal.

**Duty Cycle** – The percent of pulse duration to the pulse period of a periodic pulse train. Also, may be a measure of the temporal transmission characteristic of an intermittently transmitting RF source such as a paging antenna by dividing average transmission duration by the average period for transmission. A duty cycle of 100% corresponds to continuous operation.

**Effective (or Equivalent) Isotropic Radiated Power (EIRP)** – The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna.

**Effective Radiated Power (ERP)** – In a given direction, the relative gain of a transmitting antenna with respect to the maximum directivity of a half wave dipole multiplied by the net power accepted by the antenna from the connecting transmitter.

**Gain (of an antenna)** – The ratio of the maximum intensity in a given direction to the maximum radiation in the same direction from an isotropic radiator. Gain is a measure of the relative efficiency of a directional antennas as compared to an omni directional antenna.

**General Population/Uncontrolled Environment** – Defined by the FCC, as an area where exposure to RF energy may occur to persons who are **unaware** of the potential for exposure and who have no control of their exposure. General Population is also referenced as General Public.

**Generic Antenna** – For the purposes of this report, the use of "Generic" as an antenna model means the antenna information was not provided and could not be obtained while on site. In the event of unknown information, Sitesafe will use our industry specific knowledge of antenna models to select a worst case scenario antenna to model the site.

**Isotropic Antenna** – An antenna that is completely non-directional. In other words, an antenna that radiates energy equally in all directions.

**Maximum Measurement** – This measurement represents the single largest measurement recorded when performing a spatial average measurement.

**Maximum Permissible Exposure (MPE)** – The maximum levels of RF exposure a person may be exposed to without harmful effect and with acceptable safety factor.

**Occupational/Controlled Environment** – Defined by the FCC, as an area where Radio Frequency Radiation (RFR) exposure may occur to persons who are **aware** of the

potential for exposure as a condition of employment or specific activity and can exercise control over their exposure.

***OET Bulletin 65*** – Technical guideline developed by the FCC's Office of Engineering and Technology to determine the impact of Radio Frequency radiation on Humans. The guideline was published in August 1997.

***OSHA (Occupational Safety and Health Administration)*** – Under the Occupational Safety and Health Act of 1970, employers are responsible for providing a safe and healthy workplace for their employees. OSHA's role is to promote the safety and health of America's working men and women by setting and enforcing standards; providing training, outreach and education; establishing partnerships; and encouraging continual process improvement in workplace safety and health. For more information, visit [www.osha.gov](http://www.osha.gov).

***Radio Frequency (RF)*** – The frequencies of electromagnetic waves which are used for radio communications. Approximately 3 kHz to 300 GHz.

***Radio Frequency Exposure (RFE)*** – The amount of RF power density that a person is or might be exposed to.

***Spatial Average Measurement*** – A technique used to average a minimum of ten (10) measurements taken in a ten (10) second interval from zero (0) to six (6) feet. This measurement is intended to model the average power density an average sized human will be exposed to at a location.

***Transmitter Power Output (TPO)*** – The radio frequency output power of a transmitter's final radio frequency stage as measured at the output terminal while connected to a load.

## Appendix F – References

The following references can be followed for further information about RF Health and Safety.

Sitesafe, LLC.

<http://www.sitesafe.com>

FCC Radio Frequency Safety

<http://www.fcc.gov/encyclopedia/radio-frequency-safety>

National Council on Radiation Protection and Measurements (NCRP)

<http://www.ncrponline.org>

Institute of Electrical and Electronics Engineers, Inc., (IEEE)

<http://www.ieee.org>

American National Standards Institute (ANSI)

<http://www.ansi.org>

Environmental Protection Agency (EPA)

<http://www.epa.gov/radtown/wireless-tech.html>

National Institutes of Health (NIH)

<http://www.niehs.nih.gov/health/topics/agents/emf/>

Occupational Safety and Health Agency (OSHA)

<http://www.osha.gov/SLTC/radiofrequencyradiation/>

International Commission on Non-Ionizing Radiation Protection (ICNIRP)

<http://www.icnirp.org>

World Health Organization (WHO)

<http://www.who.int/peh-emf/en/>

National Cancer Institute

<http://www.cancer.gov/cancertopics/factsheet/Risk/cellphones>

American Cancer Society (ACS)

[http://www.cancer.org/docroot/PED/content/PED\\_1\\_3X\\_Cellular\\_Phone\\_Towers.asp?sitearea=PED](http://www.cancer.org/docroot/PED/content/PED_1_3X_Cellular_Phone_Towers.asp?sitearea=PED)

European Commission Scientific Committee on Emerging and Newly Identified Health Risks

[http://ec.europa.eu/health/ph\\_risk/committees/04\\_scenihp/docs/scenihp\\_o\\_022.pdf](http://ec.europa.eu/health/ph_risk/committees/04_scenihp/docs/scenihp_o_022.pdf)

Fairfax County, Virginia Public School Survey

<http://www.fcps.edu/fts/safety-security/RFEESurvey/>

UK Health Protection Agency Advisory Group on Non-ionising Radiation

[http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb\\_C/1317133826368](http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1317133826368)

Norwegian Institute of Public Health

<http://www.fhi.no/dokumenter/545eea7147.pdf>