



STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: [siting.council@ct.gov](mailto:siting.council@ct.gov)

[www.ct.gov/csc](http://www.ct.gov/csc)

October 12, 2012

Stephanie Wenderoth  
Nexlink Global Services  
Suite A, Building 2  
800 Marshall Phelps Road  
Windsor, CT 06095

RE: **EM-AT&T-078-120926** – AT&T Mobility notice of intent to modify an existing telecommunications facility located at 1298 Storrs Road (2 No. Eagleville Drive), Mansfield, Connecticut.

Dear Ms. Wenderoth:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

- Any deviation from the proposed modification as specified in this notice and supporting materials with Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Not less than 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration;

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated September 6, 2012. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut



State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Very truly yours,

A handwritten signature in black ink that reads "L. Roberts". The signature is written in a cursive, flowing style.

Linda Roberts  
Executive Director

LR/CDM/cm

- c: The Honorable Elizabeth Patterson, Mayor, Town of Mansfield  
Matthew W. Hart, Town Manager, Town of Mansfield  
Linda M. Painter, Director of Planning and Development, Town of Mansfield

**CONNECTICUT SITING COUNCIL  
NOTICE OF INTENT TO MODIFY AN EXISTING TOWER FACILITY  
EXEMPT MODIFICATION FILING FORM**

Public Utility Environmental Standards Act, Connecticut General Statutes §§ 16-50g - 16-50aa  
Regulations of Connecticut State Agencies §§ 16-50j-72(b)(2) and 16-50j-73

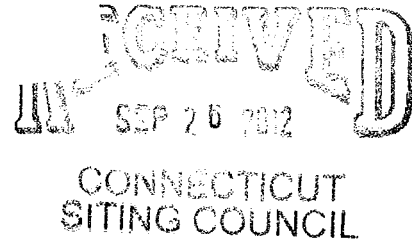
**TO BE COMPLETED BY FILER**

**EM-AT&T-078-120926**

Date: 09/06/13

Filer Name and Contact Information

Name: Stephanie Wendero...  
Address: Nexlink Global Services; Suite A Building 2  
800 Marshall Phelps Road, Windsor, CT 06095  
Phone Number: 401.477.2938



Wireless Carrier: AT&T

Tower Owner: AT&T

Tower Site Address: 1298 Storrs Road, Storrs, CT

Municipality and Name of Chief Elected Official Provided A Copy Of This Notice:  
Matthew Hart, Town Manager

Description of Exempt Modification (including antenna and equipment changes):  
Add 3 LTE Antennas, new conduit, RRUs and surge arrestor.

Attachments

- ☒ Plans
- ☒ Power density calculations if applicable
- ☒ Tower structural report if applicable
- ☒ \$625.00 Filing Fee

If required:

Municipality w/i 2,500' & Name of Chief Elected Official Provided A Copy Of This Notice:

Underlying Property Owner Provided A Copy Of This Notice:

**FOR STAFF USE ONLY**

- \_\_\_\_\_ Modification will not result in an increase in tower height
- \_\_\_\_\_ Modification is within existing site boundaries
- \_\_\_\_\_ Modification will not increase noise levels at the site boundary by 6 dbA or more, or to levels that exceed State & local criteria
- \_\_\_\_\_ Modification will meet FCC and DEEP MPE limits

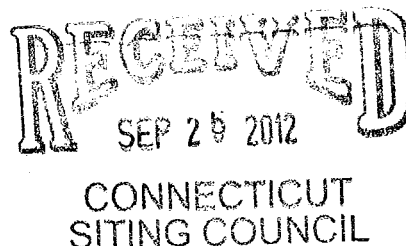
- ☐ Modification will not result in significant adverse change in physical or environmental characteristics of the site
- ☐ Modification will not impair the structural integrity of the facility as determined by PE
- ☐ If yes to all of the above, approval of acknowledgement letter



September 6, 2012

VIA UPS Overnight Delivery

Ms. Linda Roberts, Executive Director  
Connecticut Siting Council  
Ten Franklin Square  
New Britain, CT 06051



RE: AT&T Mobility - Notice of Exempt Modification  
1298 Storrs Road, Storrs, CT

Dear Ms. Roberts:

This letter and attachments are submitted on behalf of AT&T Mobility ("AT&T"). AT&T is enhancing the capabilities of its wireless system in Connecticut by implementing LTE technology. In order to do so, AT&T will modify antenna and equipment configurations at a number of existing sites. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter and attachments is being sent to the Town Manager of Mansfield.

AT&T plans to modify the existing facility at 1298 Storrs Road, owned by the Southern New England Telephone (coordinates 41.814, -72.2594 W). Attached are drawings depicting the planned changes, and documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration. Also included is a power density calculation reflecting the modification to AT&T's operations at the site.

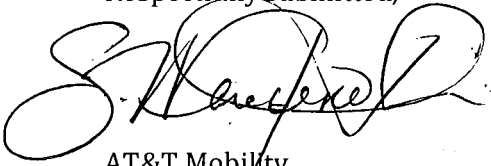
The changes to the facility do not constitute a modification as defined in Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facility will not be significantly changed. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for in R.C. S.A. Section 16-50j-1 2(b)(2).

1. The height of the overall structure will be unaffected. The existing antennas will remain and AT&T will add three (3) new antennas, six (6) RRU's and one (1) surge arrestor. Additionally, AT&T will install one (1) fiber cable and two (2) DC control cables within the existing pole.
2. The proposed changes will not extend the site boundaries. AT&T will install additional equipment in the existing equipment shelter. Thus, there will be no effect on the site compound.
3. The proposed changes will not increase the noise level at the existing facility by six decibels or more. The incremental effect of the proposed change will be negligible.
4. The changes to the facility will not increase the calculated "worst case" power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environment as calculated for a mixed frequency site. As indicated in the attached

power density calculations, AT&T's operations at the site will result in a power density of 60.19%; the combined site operations will result in a total power density of .94%.

Please feel free to call me with any questions or concerns regarding this matter.  
Thank you for your consideration.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Stephanie Wenderoth', written over a horizontal line.

AT&T Mobility  
Stephanie Wenderoth, Consultant  
wenderoths@nexlinkgs.com  
401.477.2938

Cc: Matthew Hart, Town Manager  
Beck Municipal Building  
4 So. Eagleville Road  
Mansfield, Ct 06268



C Squared Systems, LLC  
65 Dartmouth Drive, Unit A3  
Auburn, NH 03032  
(603) 644-2800  
support@csquaredsystems.com

---

## Calculated Radio Frequency Emissions



CT1077

(STORRS)

1298 Storrs Road, Mansfield, CT 06269

(a.k.a. No. Eagleville Road (WHUS))

---

September 6, 2012

## Table of Contents

1. Introduction.....	1
2. FCC Guidelines for Evaluating RF Radiation Exposure Limits.....	1
3. RF Exposure Prediction Methods.....	2
4. Calculation Results .....	3
5. Conclusion .....	4
6. Statement of Certification.....	4
Attachment A: References.....	5
Attachment B: FCC Limits for Maximum Permissible Exposure (MPE) .....	6
Attachment C: AT&T Antenna Data Sheets and Electrical Patterns.....	8

## List of Tables

Table 1: Carrier Information.....	3
Table 2: FCC Limits for Maximum Permissible Exposure (MPE) .....	6

## List of Figures

Figure 1: Graph of FCC Limits for Maximum Permissible Exposure (MPE).....	7
---	---

## 1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed modifications to the existing AT&T antenna arrays mounted on the guyed tower located at 1298 Storrs Road, Mansfield, CT. The coordinates of the tower are 41° 48' 50.57" N, 72° 15' 33.39" W.

AT&T is proposing the following modifications:

- 1) Install three 700 MHz LTE antennas (one per sector)

## 2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm<sup>2</sup>). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment B of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure, and they must be able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals. Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population/uncontrolled exposure and for occupational/controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

### 3. RF Exposure Prediction Methods

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{Power Density} = \left( \frac{1.6^2 \times EIRP}{4\pi \times R^2} \right) \times \text{Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power

$R = \text{Radial Distance} = \sqrt{H^2 + V^2}$

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

Ground reflection factor of 1.6

Off Beam Loss is determined by the selected antenna pattern

These calculations assume that the antennas are operating at 100 percent capacity and power, and that all channels are transmitting simultaneously. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. The calculations assume even terrain in the area of study and do not take into account actual terrain elevations which could attenuate the signal. As a result, the predicted signal levels reported below are much higher than the actual signal levels will be from the finished modifications.

#### 4. Calculation Results

Table 1 below outlines the power density information for the site. Because the proposed AT&T antennas are directional in nature, the majority of the RF power is focused out towards the horizon. As a result, there will be less RF power directed below the antennas relative to the horizon, and consequently lower power density levels around the base of the tower. Please refer to Attachment C for the vertical pattern of the proposed AT&T antennas. The calculated results for AT&T in Table 1 include a nominal 10 dB off-beam pattern loss to account for the lower relative gain below the antennas.

Carrier	Antenna Height (Feet)	Operating Frequency (MHz)	Number of Trans.	ERP Per Transmitter (Watts)	Power Density (mw/cm <sup>2</sup> )	Limit	%MPE
Cingular GSM	185	880	2	296	0.0062	0.5867	1.06%
Cingular GSM	185	1930	2	427	0.0090	1.0000	0.90%
Cingular UMTS	185	1935	1	500	0.0053	1.0000	0.53%
UCONN Police	180	866	3	197	0.0066	0.5773	1.14%
Existing	No Information Available				0.1530	N/A	14.12%
Nextel	240	851	9	100	0.0056	0.5673	0.99%
Pocket	230	2130	3	631	0.0129	1.0000	1.29%
Verizon	84	869	9	304	0.1394	0.5793	24.07%
Verizon	84	1970	3	648	0.0991	1.0000	9.91%
Verizon	84	757	1	767	0.0391	0.5047	7.74%
AT&T UMTS	186	880	2	565	0.0012	0.5867	0.20%
AT&T UMTS	186	1900	2	875	0.0018	1.0000	0.18%
AT&T LTE	187	734	1	1375	0.0014	0.4893	0.29%
AT&T GSM	186	880	1	283	0.0003	0.5867	0.05%
AT&T GSM	186	1900	4	525	0.0022	1.0000	0.22%
						<b>Total</b>	<b>60.19%</b>

**Table 1: Carrier Information<sup>1 2 3</sup>**

<sup>1</sup> The existing CSC filing for Cingular should be removed and replaced with the updated AT&T technologies and values provided in Table 1. The power density information for carriers other than AT&T was taken directly from the CSC database dated 7/26/2012. Please note that %MPE values listed are rounded to two decimal points. The total %MPE listed is a summation of each unrounded contribution. Therefore, summing each rounded value may not reflect the total value listed in the table.

<sup>2</sup> In the case where antenna models are not uniform across all 3 sectors for the same frequency band, the antenna model with the highest gain was used for the calculations to present a worse-case scenario.

<sup>3</sup> Antenna height listed for AT&T is in reference to the B&T Engineering, Inc. Structural Analysis Report dated 9/5/2012.

## 5. Conclusion

The above analysis verifies that emissions from the existing site will be below the maximum power density levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Even when using conservative methods, the cumulative power density from the proposed transmit antennas at the existing facility is well below the limits for the general public. The highest expected percent of Maximum Permissible Exposure at ground level is **60.19%** of the FCC limit.

As noted previously, obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are more conservative (higher) than the actual signal levels will be from the finished modifications.

## 6. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.



Daniel L. Goulet  
C Squared Systems, LLC

September 6, 2012

Date



### **Attachment A: References**

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

ANSI C95.1-1982, American National Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz. IEEE-SA Standards Board

IEEE Std C95.3-1991 (Reaff 1997), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave. IEEE-SA Standards Board

## Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

### (A) Limits for Occupational/Controlled Exposure<sup>4</sup>

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (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

### (B) Limits for General Population/Uncontrolled Exposure<sup>5</sup>

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (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

**Table 2: FCC Limits for Maximum Permissible Exposure (MPE)**

<sup>4</sup> Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

<sup>5</sup> General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

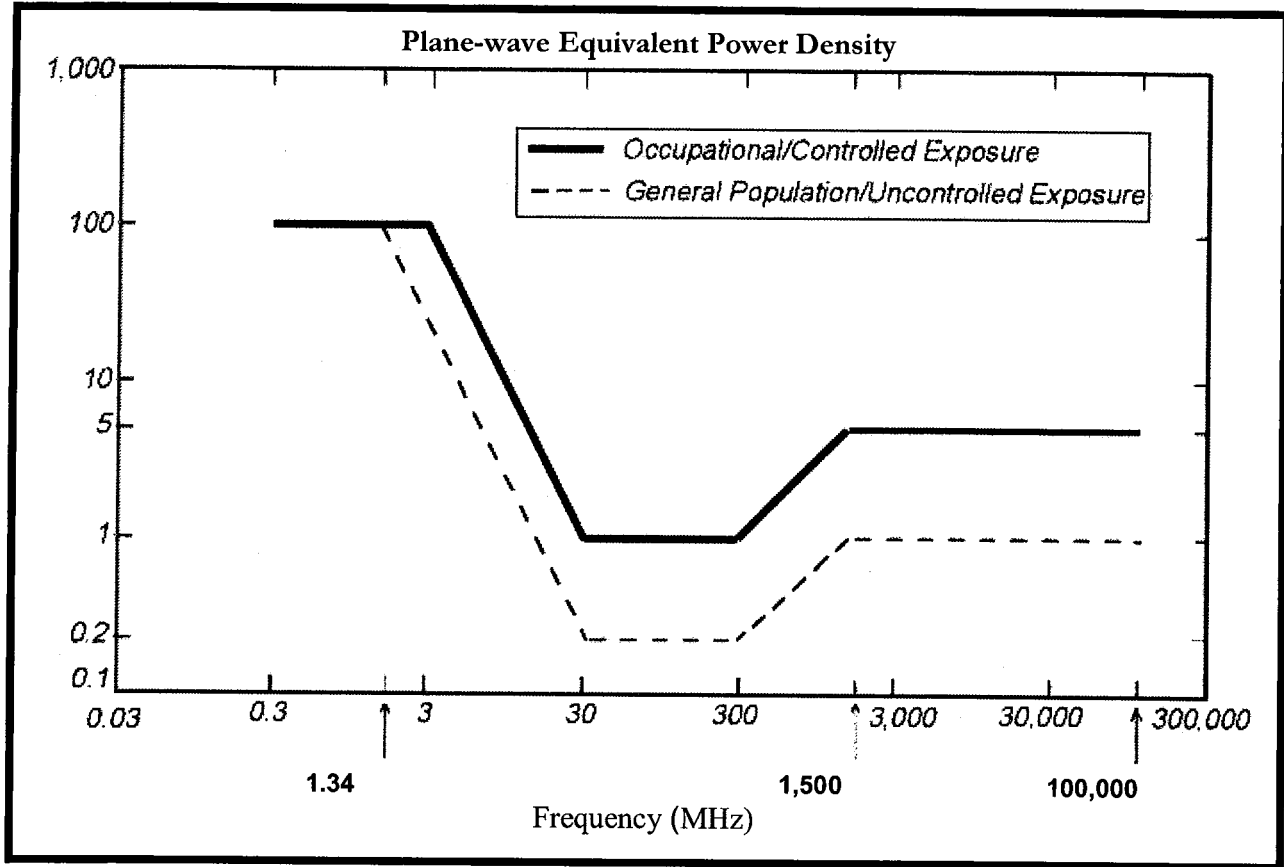
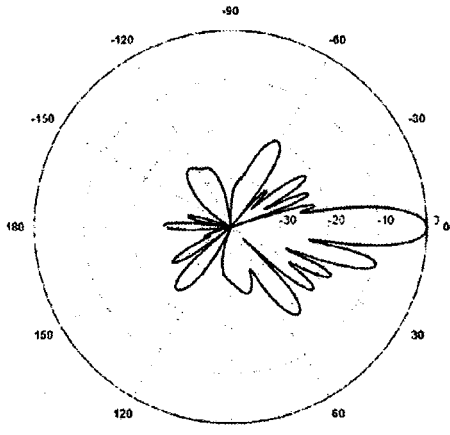
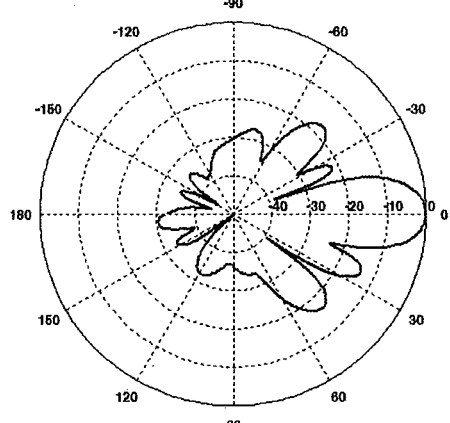
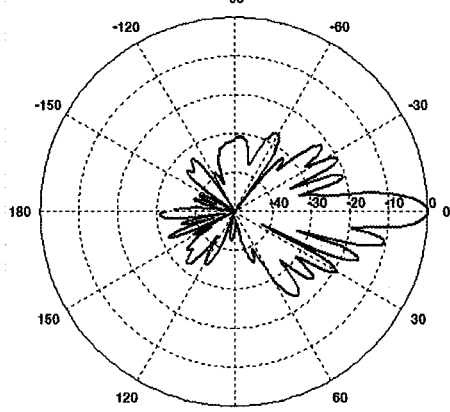


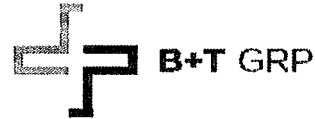
Figure 1: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

### Attachment C: AT&T Antenna Data Sheets and Electrical Patterns

<p><b>700 MHz</b></p> <p>Manufacturer: Commscope  Model #: SBNH-1D6565C  Frequency Band: 698–806 MHz  Gain: 13.6 dBd  Vertical Beamwidth: 8.6°  Horizontal Beamwidth: 71°  Polarization: <math>\pm 45^\circ</math>  Size L x W x D: 96.42"x11.85"x7.1"</p>	
<p><b>850 MHz</b></p> <p>Manufacturer: Powerwave  Model #: 7770  Frequency Band: 824-896 MHz  Gain: 11.5 dBd  Vertical Beamwidth: 15°  Horizontal Beamwidth: 82°  Polarization: Dual Linear <math>\pm 45^\circ</math>  Size L x W x D: 55.0"x11.0"x5.0"</p>	
<p><b>1900 MHz</b></p> <p>Manufacturer: Powerwave  Model #: 7770  Frequency Band: 1850-1990 MHz  Gain: 13.4 dBd  Vertical Beamwidth: 7°  Horizontal Beamwidth: 86°  Polarization: Dual Linear <math>\pm 45^\circ</math>  Size L x W x D: 55.0"x11.0"x5.0"</p>	

September 05, 2012

Ms. Stephanie Wenderoth  
Nexlink  
Suite A Building 2 800 Marshall Phelps Road  
Windsor, CT 06095  
(401) 477-2938



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

**Subject:** Structural Analysis Report

**Carrier Designation:** AT&T Mobility Co-Locate  
**Carrier Site Number:** CT1077  
**Carrier Site Name:** Storrs-UConn

**Nexlinks Designation:** **Site Number:** CT1077  
**Site Name:** Storrs-UConn

**Engineering Firm Designation:** B+T Group Project Number: 84514.001.0001

**Site Data:** 1298 Storrs Road, Storrs, Tolland County, CT  
Latitude 41.814°, Longitude -72.2594°  
317 Foot - Guyed Tower

Dear Ms. Wenderoth,

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

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

Existing + Proposed

Note: See Table 1 and Table 2 for the proposed and existing/reserved loading, respectively.

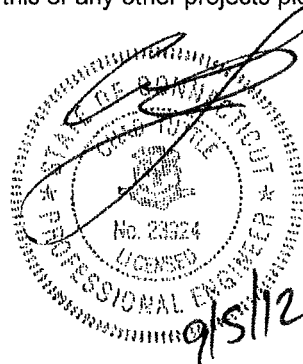
**Sufficient Capacity**

The analysis has been performed in accordance with the TIA/EIA-222-F standard and the 2005 CT State Building Code based upon a wind speed of 85 mph fastest mile.

All equipment proposed in this report shall be installed in accordance with the attached drawings for the determined available structural capacity to be effective.

We at B+T Group appreciate the opportunity of providing our continuing professional services to you and Nexlink. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted by:  
B+T Engineering, Inc.



Raul Ortiz Jr., E.I.T.  
Project Engineer

Chad E. Tuttle, P.E.  
President

## **TABLE OF CONTENTS**

### **1) INTRODUCTION**

### **2) ANALYSIS CRITERIA**

Table 1 - Proposed Antenna and Cable Information

Table 2 - Existing Antenna and Cable Information

Table 3 - Design Antenna and Cable Information

### **3) ANALYSIS PROCEDURE**

Table 4 - Documents Provided

3.1) Analysis Method

3.2) Assumptions

### **4) ANALYSIS RESULTS**

Table 5 - Section Capacity (Summary)

Table 6 - Tower Component Stresses vs. Capacity

4.1) Recommendations

### **5) APPENDIX A**

tnxTower Output

### **6) APPENDIX B**

Base Level Drawing

## 1) INTRODUCTION

This tower is a 317 ft. Guyed tower.

## 2) ANALYSIS CRITERIA

The structural analysis was performed for this tower in accordance with the requirements of TIA/EIA-222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures using a fastest mile wind speed of 85 mph with no ice, 37.6 mph with 1.00 inch ice thickness and 50 mph under service loads.

**Table 1 - Proposed Antenna and Cable Information**

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
186.0	187.0	2	Andrew	SBNH-1D6565C	3	1/2	--
		1	Kmw Communications	AM-X-CD-16-65-00T-RET			
	185.0	6	Ericsson	RBS 6601			
		1	Raycap	DC6-48-60-18-8F			

**Table 2 - Existing Antenna and Cable Information**

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
305.0	310.0	1	--	1 bay FM antenna	1	7/8	State Police
	305.0	1	--	4' Standoff			
		1	--	1 bay FM antenna			
		1	--	10' x 2" Pipe Mount			
274.0	278.0	1	--	8' Omni	2	1/2	State Police
	277.0	1	--	6' Omni			
	274.0	1	--	Side Arm			
257.0	265.0	2	--	15' Omni	4 4	1 5/8 1/4	State Police
	261.0	1	Kathreinscala	AP14-850/105N			
	257.0	3	--	Side Arm			
	253.0	1	Kathreinscala	AP14-850/105N			
	250.0	2	--	15' Omni			
235.0	235.0	12	Andrew	DB844H90E-XY	12	1 5/8	Nextel
		3	--	Sector Mount			
210.0	210.0	1		Flush Mount	1	7/8	State Police
		1	--	1 bay FM antenna			
197.0	197.0	1	--	1 bay FM antenna	1	1/2	State Police
		1	--	Side Arm			
186.0	186.0	6	--	14"x9"x3" TMA	-	-	AT&T To Be Removed
		6	Powerwave	7770.00	12	1 5/8	AT&T
		6	Powerwave	LGP21901			
		3	--	Sector Mount			

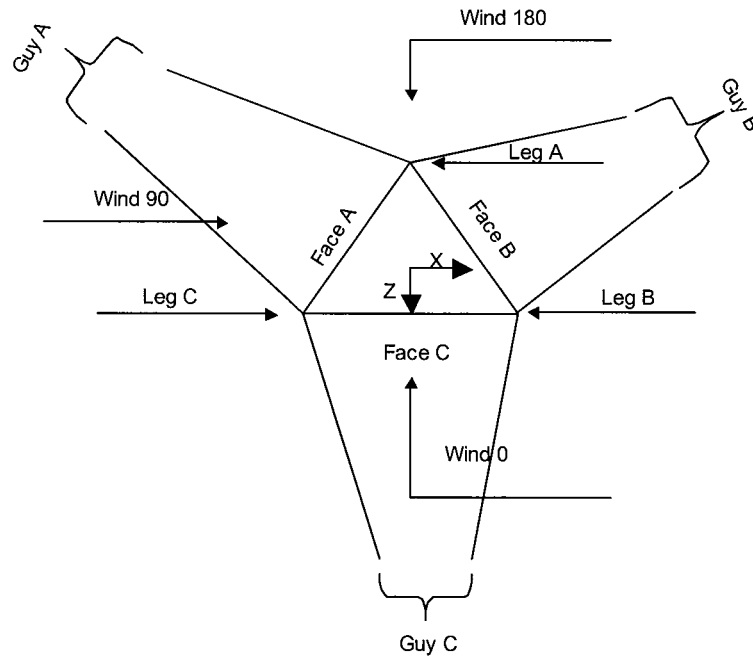
Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
172.0	172.0	1	Decibel	Flush Mount	1	7/8	--
		1		DB872H120-X			
171.0	171.0	1	--	Flush Mount	1	1/2 7/8	State Police
		1		3' Grid Dish			
		1		8' Omni			
		1		Side Arm			
158.0	158.0	1	--	Flush Mount	1	7/8	Verizon
		1		18" x 12" x 4"			
120.0	120.0	1	--	Side Arm	--	--	--
116.0	116.0	2	--	6 FT DISH	2	EW63	State Police
		2		Pipe Mount			
111.0	111.0	1	--	10' Omni	1	7/8	Verizon
		1		Side Arm			
104.0	104.0	1	--	6 FT DISH	1	EW63	State Police
		1		Pipe Mount			
95.0	95.0	1	--	Flush Mount	1	3/8	State Police
		1		5' Grid Dish			
92.0	92.0	1	--	2' Yagi	1	3/8	State Police
		1		Flush Mount			
83.0	83.0	6	Andrew	4'x8"x9.5" Panel	18	1 5/8	Verizon
		3	Antel	BXA-185063/12CF			
		3	Powerwave Technologies	P65-16-XL-2 B			
		1	--	Platform Mount			
71.0	71.0	1	Decibel	Flush Mount	1	7/8	State Police
		1		2' Dipole			
18.0	18.0	1	--	6' Yagi	1	1/4	State Police
		1		Side Arm			
13.0	13.0	1	--	4 FT DISH	1	1/4	--
		1		Side Arm			

Table 3 - Design Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
Information Unknown						



<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 84514.001.0001- Storrs-UConn, CT (Site # CT1077)	<b>Page</b> 2 of 60
	<b>Project</b> 317' GT / AT&T Co-Location	<b>Date</b> 12:59:13 08/24/12
	<b>Client</b> Nexlink	<b>Designed by</b> Rortiz



**Face Guyed**

## Pole Section Geometry

Section	Elevation ft	Section Length ft	Pole Size	Pole Grade	Socket Length ft
L1	317.000-287.000	30.000	P12x.5	A53-B-35 (35 ksi)	

Tower Elevation ft	Gusset Area (per face) ft <sup>2</sup>	Gusset Thickness in	Gusset Grade	Adjust. Factor $A_f$	Adjust. Factor $A_r$	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in
L1 317.000-287.000				1	1	1		

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 84514.001.0001- Storrs-UConn, CT (Site # CT1077)	<b>Page</b> 1 of 60
	<b>Project</b> 317' GT / AT&T Co-Location	<b>Date</b> 12:59:13 08/24/12
	<b>Client</b> Nexlink	<b>Designed by</b> Rortiz

## Tower Input Data

The main tower is a 3x guyed tower with an overall height of 317.000 ft above the ground line.

The base of the tower is set at an elevation of 0.000 ft above the ground line.

The face width of the tower is 3.667 ft at the top and tapered at the base.

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

There is a pole section.

This tower is designed using the TIA/EIA-222-F standard.

The following design criteria apply:

Tower is located in Tolland County, Connecticut.

Basic wind speed of 85 mph.

Nominal ice thickness of 1.000 in.

Ice thickness is considered to increase with height.

Ice density of 56.000 pcf.

A wind speed of 38 mph is used in combination with ice.

Temperature drop of 50.000 °F.

Deflections calculated using a wind speed of 50 mph.

Pressures are calculated at each section.

Stress ratio used in pole design is 1.0664.

Safety factor used in guy design is 2.

Stress ratio used in tower member design is 1.333.

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

## Options

Consider Moments - Legs	Distribute Leg Loads As Uniform	Treat Feedline Bundles As Cylinder
Consider Moments - Horizontals	Assume Legs Pinned	Use ASCE 10 X-Brace Ly Rules
Consider Moments - Diagonals	√ Assume Rigid Index Plate	√ Calculate Redundant Bracing Forces
Use Moment Magnification	√ Use Clear Spans For Wind Area	Ignore Redundant Members in FEA
√ Use Code Stress Ratios	√ Use Clear Spans For KL/r	√ SR Leg Bolts Resist Compression
√ Use Code Safety Factors - Guys	√ Retension Guys To Initial Tension	√ All Leg Panels Have Same Allowable
√ Escalate Ice	Bypass Mast Stability Checks	Offset Girt At Foundation
Always Use Max Kz	√ Use Azimuth Dish Coefficients	√ Consider Feedline Torque
Use Special Wind Profile	√ Project Wind Area of Appurt.	√ Include Angle Block Shear Check
√ Include Bolts In Member Capacity	√ Autocalc Torque Arm Areas	Poles
Leg Bolts Are At Top Of Section	√ SR Members Have Cut Ends	Include Shear-Torsion Interaction
√ Secondary Horizontal Braces Leg	√ Sort Capacity Reports By Component	Always Use Sub-Critical Flow
Use Diamond Inner Bracing (4 Sided)	Triangulate Diamond Inner Bracing	Use Top Mounted Sockets
Add IBC .6D+W Combination		

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b>	<b>Page</b>
	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	4 of 60
	<b>Project</b>	<b>Date</b>
	317' GT / AT&T Co-Location	12:59:13 08/24/12
	<b>Client</b>	<b>Designed by</b>
	Nexlink	Rortiz

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
260.000-240.000			(50 ksi)			(36 ksi)
T4	Solid Round	2 1/4	A572-50	Solid Round	1 3/8	A36
240.000-220.000			(50 ksi)			(36 ksi)
T5	Solid Round	2 1/2	A572-50	Solid Round	1 1/4	A36
220.000-200.000			(50 ksi)			(36 ksi)
T6	Solid Round	2 1/2	A572-50	Solid Round	1 1/4	A36
200.000-180.000			(50 ksi)			(36 ksi)
T7	Solid Round	2 3/4	A572-50	Solid Round	1 1/2	A36
180.000-160.000			(50 ksi)			(36 ksi)
T8	Solid Round	2 1/2	A572-50	Solid Round	1 3/8	A36
160.000-140.000			(50 ksi)			(36 ksi)
T9	Solid Round	2 3/4	A572-50	Solid Round	1 1/4	A36
140.000-120.000			(50 ksi)			(36 ksi)
T10	Solid Round	2 3/4	A572-50	Solid Round	1 1/2	A36
120.000-100.000			(50 ksi)			(36 ksi)
T11	Solid Round	3	A572-50	Solid Round	1 3/8	A36
100.000-80.000			(50 ksi)			(36 ksi)
T12	Solid Round	3	A572-50	Solid Round	1 1/4	A36
80.000-60.000			(50 ksi)			(36 ksi)
T13	Solid Round	3	A572-50	Solid Round	1 1/4	A36
60.000-40.000			(50 ksi)			(36 ksi)
T14	Solid Round	3	A572-50	Solid Round	1 1/4	A36
40.000-20.000			(50 ksi)			(36 ksi)
T15 20.000-6.500	Solid Round	3	A572-50	Solid Round	1 1/4	A36
			(50 ksi)			(36 ksi)
T16 6.500-0.000	Solid Round	3	A572-50	Solid Round		A36
			(50 ksi)			(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	Solid Round	1	A36	Solid Round	1	A36
287.000-280.000			(36 ksi)			(36 ksi)
T2	Solid Round	1	A36	Solid Round	1	A36
280.000-260.000			(36 ksi)			(36 ksi)
T3	Solid Round	1	A36	Solid Round	1	A36
260.000-240.000			(36 ksi)			(36 ksi)
T4	Solid Round	1	A36	Solid Round	1	A36
240.000-220.000			(36 ksi)			(36 ksi)
T5	Solid Round	1	A36	Solid Round	1	A36
220.000-200.000			(36 ksi)			(36 ksi)
T6	Solid Round	1	A36	Solid Round	1	A36
200.000-180.000			(36 ksi)			(36 ksi)
T7	Solid Round	1	A36	Solid Round	1	A36
180.000-160.000			(36 ksi)			(36 ksi)
T8	Solid Round	1	A36	Solid Round	1	A36
160.000-140.000			(36 ksi)			(36 ksi)
T9	Solid Round	1	A36	Solid Round	1	A36
140.000-120.000			(36 ksi)			(36 ksi)
T10	Solid Round	1	A36	Solid Round	1	A36
120.000-100.000			(36 ksi)			(36 ksi)
T11	Solid Round	1	A36	Solid Round	1	A36
100.000-80.000			(36 ksi)			(36 ksi)
T12	Solid Round	1	A36	Solid Round	1	A36
80.000-60.000			(36 ksi)			(36 ksi)
T13	Solid Round	1	A36	Solid Round	1	A36

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	Page
	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	3 of 60
	Project	Date
	317' GT / AT&T Co-Location	12:59:13 08/24/12
	Client	Designed by
	Nexlink	Rortiz

### Tower Section Geometry

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	ft			ft		ft
T1	287.000-280.000			3.667	1	7.000
T2	280.000-260.000			3.667	1	20.000
T3	260.000-240.000			3.667	1	20.000
T4	240.000-220.000			3.667	1	20.000
T5	220.000-200.000			3.667	1	20.000
T6	200.000-180.000			3.667	1	20.000
T7	180.000-160.000			3.667	1	20.000
T8	160.000-140.000			3.667	1	20.000
T9	140.000-120.000			3.667	1	20.000
T10	120.000-100.000			3.667	1	20.000
T11	100.000-80.000			3.667	1	20.000
T12	80.000-60.000			3.667	1	20.000
T13	60.000-40.000			3.667	1	20.000
T14	40.000-20.000			3.667	1	20.000
T15	20.000-6.500			3.667	1	13.500
T16	6.500-0.000			3.667	1	6.500

### Tower Section Geometry (cont'd)

Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset	Bottom Girt Offset
	ft	ft				in	in
T1	287.000-280.000	3.417	K Brace Left	No	Yes	1.000	1.000
T2	280.000-260.000	3.306	K Brace Left	No	Yes	1.000	1.000
T3	260.000-240.000	3.306	K Brace Left	No	Yes	1.000	1.000
T4	240.000-220.000	3.306	K Brace Left	No	Yes	1.000	1.000
T5	220.000-200.000	3.306	K Brace Left	No	Yes	1.000	1.000
T6	200.000-180.000	3.306	K Brace Left	No	Yes	1.000	1.000
T7	180.000-160.000	3.306	K Brace Left	No	Yes	1.000	1.000
T8	160.000-140.000	3.306	K Brace Left	No	Yes	1.000	1.000
T9	140.000-120.000	3.306	K Brace Left	No	Yes	1.000	1.000
T10	120.000-100.000	3.306	K Brace Left	No	Yes	1.000	1.000
T11	100.000-80.000	3.306	K Brace Left	No	Yes	1.000	1.000
T12	80.000-60.000	3.306	K Brace Left	No	Yes	1.000	1.000
T13	60.000-40.000	3.306	K Brace Left	No	Yes	1.000	1.000
T14	40.000-20.000	3.306	K Brace Left	No	Yes	1.000	1.000
T15	20.000-6.500	3.333	K Brace Left	No	Yes	1.000	1.000
T16	6.500-0.000	1.625	X Brace	No	Yes	0.000	0.000

### Tower Section Geometry (cont'd)

Tower Elevation	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
ft						
T1	Solid Round	2	A572-50 (50 ksi)	Solid Round	1 3/8	A36 (36 ksi)
287.000-280.000						
T2	Solid Round	2	A572-50 (50 ksi)	Solid Round	1 3/8	A36 (36 ksi)
280.000-260.000						
T3	Solid Round	2 1/4	A572-50	Solid Round	1 3/8	A36

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 84514.001.0001- Storrs-UConn, CT (Site # CT1077)	<b>Page</b> 6 of 60
	<b>Project</b> 317' GT / AT&T Co-Location	<b>Date</b> 12:59:13 08/24/12
	<b>Client</b> Nexlink	<b>Designed by</b> Rortiz

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor $A_f$	Adjust. Factor $A_r$	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in
ft	ft <sup>2</sup>	in						
280.000-260.000			(36 ksi)					
T3	0.000	0.000	A36	1	1	1.05	36.000	36.000
260.000-240.000			(36 ksi)					
T4	0.000	0.000	A36	1	1	1.05	36.000	36.000
240.000-220.000			(36 ksi)					
T5	0.000	0.000	A36	1	1	1.05	36.000	36.000
220.000-200.000			(36 ksi)					
T6	0.000	0.000	A36	1	1	1.05	36.000	36.000
200.000-180.000			(36 ksi)					
T7	0.000	0.000	A36	1	1	1.05	36.000	36.000
180.000-160.000			(36 ksi)					
T8	0.000	0.000	A36	1	1	1.05	36.000	36.000
160.000-140.000			(36 ksi)					
T9	0.000	0.000	A36	1	1	1.05	36.000	36.000
140.000-120.000			(36 ksi)					
T10	0.000	0.000	A36	1	1	1.05	36.000	36.000
120.000-100.000			(36 ksi)					
T11	0.000	0.000	A36	1	1	1.05	36.000	36.000
100.000-80.000			(36 ksi)					
T12	0.000	0.000	A36	1	1	1.05	36.000	36.000
80.000-60.000			(36 ksi)					
T13	0.000	0.000	A36	1	1	1.05	36.000	36.000
60.000-40.000			(36 ksi)					
T14	0.000	0.000	A36	1	1	1.05	36.000	36.000
40.000-20.000			(36 ksi)					
T15	0.000	0.000	A36	1	1	1.05	36.000	36.000
20.000-6.500			(36 ksi)					
T16	0.000	0.000	A36	1	1	1.05	36.000	36.000
6.500-0.000			(36 ksi)					

### Tower Section Geometry (cont'd)

Tower Elevation	Calc K Single Angles	Calc K Solid Rounds	K Factors <sup>1</sup>							
			Legs	X Brace Diags	K Brace Diags	Single Diags	Girts	Horiz.	Sec. Horiz.	Inner Brace
				X Y	X Y	X Y	X Y	X Y	X Y	X Y
T1	No	Yes	1	1	1	1	1	1	1	1
287.000-280.000				1	1	1	1	1	1	1
T2	No	Yes	1	1	1	1	1	1	1	1
280.000-260.000				1	1	1	1	1	1	1
T3	No	Yes	1	1	1	1	1	1	1	1
260.000-240.000				1	1	1	1	1	1	1

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	5 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
60.000-40.000			(36 ksi)			(36 ksi)
T14	Solid Round	1	A36	Solid Round	1	A36
40.000-20.000			(36 ksi)			(36 ksi)
T15 20.000-6.500	Solid Round	1	A36	Solid Round	1	A36
			(36 ksi)			(36 ksi)

### Tower Section Geometry (cont'd)

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T1	None	Flat Bar		A36	Solid Round	1	A36
287.000-280.000				(36 ksi)			(36 ksi)
T2	None	Flat Bar		A36	Solid Round	1	A36
280.000-260.000				(36 ksi)			(36 ksi)
T3	None	Flat Bar		A36	Solid Round	1	A36
260.000-240.000				(36 ksi)			(36 ksi)
T4	None	Flat Bar		A36	Solid Round	1	A36
240.000-220.000				(36 ksi)			(36 ksi)
T5	None	Flat Bar		A36	Solid Round	1	A36
220.000-200.000				(36 ksi)			(36 ksi)
T6	None	Flat Bar		A36	Solid Round	1	A36
200.000-180.000				(36 ksi)			(36 ksi)
T7	None	Flat Bar		A36	Solid Round	1	A36
180.000-160.000				(36 ksi)			(36 ksi)
T8	None	Flat Bar		A36	Solid Round	1	A36
160.000-140.000				(36 ksi)			(36 ksi)
T9	None	Flat Bar		A36	Solid Round	1	A36
140.000-120.000				(36 ksi)			(36 ksi)
T10	None	Flat Bar		A36	Solid Round	1	A36
120.000-100.000				(36 ksi)			(36 ksi)
T11	None	Flat Bar		A36	Solid Round	1	A36
100.000-80.000				(36 ksi)			(36 ksi)
T12	None	Flat Bar		A36	Solid Round	1	A36
80.000-60.000				(36 ksi)			(36 ksi)
T13	None	Flat Bar		A36	Solid Round	1	A36
60.000-40.000				(36 ksi)			(36 ksi)
T14	None	Flat Bar		A36	Solid Round	1	A36
40.000-20.000				(36 ksi)			(36 ksi)
T15 20.000-6.500	None	Flat Bar		A36	Solid Round	1	A36
				(36 ksi)			(36 ksi)
T16 6.500-0.000	None	Flat Bar		A36	Flat Bar	3x3/8	A36
				(36 ksi)			(36 ksi)

### Tower Section Geometry (cont'd)

Tower Elevation ft	Gusset Area (per face) ft <sup>2</sup>	Gusset Thickness in	Gusset Grade	Adjust. Factor A <sub>f</sub>	Adjust. Factor A <sub>r</sub>	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in
T1	0.000	0.000	A36	1	1	1.05	36.000	36.000
287.000-280.000			(36 ksi)					
T2	0.000	0.000	A36	1	1	1.05	36.000	36.000

<b><i>tnxTower</i></b>  <b><i>B+T Group</i></b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 84514.001.0001- Storrs-UConn, CT (Site # CT1077)	<b>Page</b> 8 of 60
	<b>Project</b> 317' GT / AT&T Co-Location	<b>Date</b> 12:59:13 08/24/12
	<b>Client</b> Nexlink	<b>Designed by</b> Rortiz

Tower Elevation ft	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T3 260.000-240.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T4 240.000-220.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T5 220.000-200.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T6 200.000-180.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T7 180.000-160.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T8 160.000-140.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T9 140.000-120.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T10 120.000-100.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T11 100.000-80.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T12 80.000-60.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T13 60.000-40.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T14 40.000-20.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T15 20.000-6.500	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T16 6.500-0.000	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75

### Tower Section Geometry (cont'd)

[illegible]

<b><i>tnxTower</i></b>  <b><i>B+T Group</i></b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 84514.001.0001- Storrs-UConn, CT (Site # CT1077)	<b>Page</b> 7 of 60
	<b>Project</b> 317' GT / AT&T Co-Location	<b>Date</b> 12:59:13 08/24/12
	<b>Client</b> Nexlink	<b>Designed by</b> Rortiz

Tower Elevation	Calc K Single Angles	Calc K Solid Rounds	<i>K Factors<sup>1</sup></i>							
			Legs	X Brace Diags	K Brace Diags	Single Diags	Girts	Horiz.	Sec. Horiz.	Inner Brace
				X Y	X Y	X Y	X Y	X Y	X Y	X Y
00 T4 240.000-220.0	No	Yes	I	I	I	I	I	I	I	I
00 T5 220.000-200.0	No	Yes	I	I	I	I	I	I	I	I
00 T6 200.000-180.0	No	Yes	I	I	I	I	I	I	I	I
00 T7 180.000-160.0	No	Yes	I	I	I	I	I	I	I	I
00 T8 160.000-140.0	No	Yes	I	I	I	I	I	I	I	I
00 T9 140.000-120.0	No	Yes	I	I	I	I	I	I	I	I
00 T10 120.000-100.0	No	Yes	I	I	I	I	I	I	I	I
00 T11 100.000-80.0	No	Yes	I	I	I	I	I	I	I	I
0 T12 80.000-60.000	No	Yes	I	I	I	I	I	I	I	I
T13 60.000-40.000	No	Yes	I	I	I	I	I	I	I	I
T14 40.000-20.000	No	Yes	I	I	I	I	I	I	I	I
T15 20.000-6.500	No	Yes	I	I	I	I	I	I	I	I
T16 6.500-0.000	No	Yes	I	I	I	I	I	I	I	I

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

### Tower Section Geometry (cont'd)

[illegible]



<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	Page
	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	9 of 60
	Project	Date
	317' GT / AT&T Co-Location	12:59:13 08/24/12
	Client	Designed by
	Nexlink	Rortiz

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.
T3 260.000-240.0 00	Flange	1.000 A325N	4	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T4 240.000-220.0 00	Flange	1.000 A325N	4	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T5 220.000-200.0 00	Flange	1.000 A325N	4	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T6 200.000-180.0 00	Flange	1.000 A325N	4	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T7 180.000-160.0 00	Flange	1.000 A325N	4	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T8 160.000-140.0 00	Flange	1.000 A325N	4	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T9 140.000-120.0 00	Flange	1.000 A325N	4	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T10 120.000-100.0 00	Flange	1.250 A325N	4	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T11 100.000-80.00 0	Flange	1.250 A325N	4	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T12 80.000-60.000	Flange	1.250 A325N	4	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T13 60.000-40.000	Flange	1.250 A325N	4	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T14 40.000-20.000	Flange	1.250 A325N	4	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T15 20.000-6.500	Flange	1.250 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0
T16 6.500-0.000	Flange	1.250 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0	0.625 A325N	0

## Guy Data

Guy Elevation ft	Guy Grade	Guy Size	Initial Tension K	%	Guy Modulus ksi	Guy Weight plf	L <sub>n</sub> ft	Anchor Radius ft	Anchor Azimuth Adj. °	Anchor Elevation ft	End Fitting Efficiency %
56.6111	EHS	A 7/16	2.080	10%	21000.000	0.399	232.617	231.000	0.000	14.000	100%
		B 7/16	2.080	10%	21000.000	0.399	242.127	231.000	0.000	-23.000	100%
		C 7/16	2.080	10%	21000.000	0.399	241.478	231.000	0.000	-21.000	100%
106.694	EHS	A 5/8	4.240	10%	21000.000	0.813	246.731	231.000	0.000	14.000	100%
		B 5/8	4.240	10%	21000.000	0.813	262.852	231.000	0.000	-23.000	100%
		C 5/8	4.240	10%	21000.000	0.813	261.872	231.000	0.000	-21.000	100%
166.694	EHS	A 3/4	5.830	10%	19000.000	1.155	274.895	231.000	0.000	14.000	100%
		B 3/4	5.830	10%	19000.000	1.155	297.008	231.000	0.000	-23.000	100%
		C 3/4	5.830	10%	19000.000	1.155	295.737	231.000	0.000	-21.000	100%

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b>	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	<b>Page</b>	10 of 60
	<b>Project</b>	317' GT / AT&T Co-Location	<b>Date</b>	12:59:13 08/24/12
	<b>Client</b>	Nexlink	<b>Designed by</b>	Rortiz

216.611	EHS	A	3/4	5.830	10%	19000.000	1.155	305.405	231.000	0.000	14.000	100%
		B	3/4	5.830	10%	19000.000	1.155	331.068	231.000	0.000	-23.000	100%
		C	3/4	5.830	10%	19000.000	1.155	329.625	231.000	0.000	-21.000	100%
256.611	EHS	A	3/4	5.830	10%	19000.000	1.155	333.241	231.000	0.000	14.000	100%
		B	3/4	5.830	10%	19000.000	1.155	361.024	231.000	0.000	-23.000	100%
		C	3/4	5.830	10%	19000.000	1.155	359.480	231.000	0.000	-21.000	100%
283.5	EHS	A	3/4	5.830	10%	19000.000	1.155	353.264	231.000	0.000	14.000	100%
		B	3/4	5.830	10%	19000.000	1.155	382.191	231.000	0.000	-23.000	100%
		C	3/4	5.830	10%	19000.000	1.155	380.592	231.000	0.000	-21.000	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
56.611	Torque Arm	7.500	0.000	Channel	A36 (36 ksi)	Channel	C15x40
106.694	Torque Arm	7.500	0.000	Channel	A36 (36 ksi)	Channel	C15x40
166.694	Torque Arm	7.500	0.000	Channel	A36 (36 ksi)	Channel	C15x40
216.611	Torque Arm	7.500	0.000	Channel	A36 (36 ksi)	Channel	C15x40
256.611	Torque Arm	7.500	0.000	Channel	A36 (36 ksi)	Channel	C15x40
283.5	Torque Arm	7.500	0.000	Channel	A36 (36 ksi)	Channel	C15x40

### 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
56.611	A36 (36 ksi)	Solid Round				A36 (36 ksi)	Flat Bar	
106.694	A36 (36 ksi)	Solid Round				A36 (36 ksi)	Flat Bar	
166.694	A36 (36 ksi)	Solid Round				A36 (36 ksi)	Flat Bar	
216.611	A36 (36 ksi)	Solid Round				A36 (36 ksi)	Flat Bar	
256.611	A36 (36 ksi)	Solid Round				A36 (36 ksi)	Flat Bar	
283.500	A36 (36 ksi)	Solid Round				A36 (36 ksi)	Flat Bar	

### Guy Data (cont'd)

Guy Elevation ft	Cable Weight A K	Cable Weight B K	Cable Weight C K	Cable Weight D K	Tower Intercept A ft	Tower Intercept B ft	Tower Intercept C ft	Tower Intercept D ft
56.611	0.093	0.097	0.096		5.174	5.586	5.557	
106.694	0.201	0.214	0.213		3.9 sec/pulse 5.791	4.1 sec/pulse 6.549	4.1 sec/pulse 6.502	

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	Page
	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	11 of 60
	Project	Date
	317' GT / AT&T Co-Location	12:59:13 08/24/12
	Client	Designed by
	Nexlink	Rortiz

Guy Elevation	Cable Weight A	Cable Weight B	Cable Weight C	Cable Weight D	Tower Intercept A	Tower Intercept B	Tower Intercept C	Tower Intercept D
ft	K	K	K	K	ft	ft	ft	ft
166.694	0.318	0.343	0.342		4.2 sec/pulse 7.382	4.4 sec/pulse 8.587	4.4 sec/pulse 8.515	
216.611	0.353	0.382	0.381		4.7 sec/pulse 9.068	5.1 sec/pulse 10.617	5.0 sec/pulse 10.527	
256.611	0.385	0.417	0.415		5.2 sec/pulse 10.754	5.6 sec/pulse 12.577	5.6 sec/pulse 12.472	
283.5	0.408	0.441	0.440		5.7 sec/pulse 12.054	6.1 sec/pulse 14.059	6.1 sec/pulse 13.944	
					6.0 sec/pulse	6.5 sec/pulse	6.4 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>
56.6111	No	No	1	1	1	1	1	1
106.694	No	No	1	1	1	1	1	1
166.694	No	No	1	1	1	1	1	1
216.611	No	No	1	1	1	1	1	1
256.611	No	No	1	1	1	1	1	1
283.5	No	No	1	1	1	1	1	1

### Guy Data (cont'd)

Guy Elevation ft	Torque-Arm				Pull Off				Diagonal			
	Bolt Size in	Number	Net Width Deduct in	U	Bolt Size in	Number	Net Width Deduct in	U	Bolt Size in	Number	Net Width Deduct in	U
56.6111	0.000 A325N	0	0.000	1	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75
106.694	0.000 A325N	0	0.000	1	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75
166.694	0.000 A325N	0	0.000	1	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75
216.611	0.000 A325N	0	0.000	1	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75
256.611	0.000 A325N	0	0.000	1	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75
283.5	0.000 A325N	0	0.000	1	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75

### Guy Pressures

Guy Elevation ft	Guy Location	z ft	q <sub>z</sub> ksf	q <sub>z</sub> Ice ksf	Ice Thickness in
56.6111	A	35.306	0.019	0.004	1.008
	B	16.806	0.018	0.004	1.000
	C	17.806	0.018	0.004	1.000
106.694	A	60.347	0.022	0.004	1.075

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	12 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Guy Elevation ft	Guy Location	z ft	q: ksf	q: Ice ksf	Ice Thickness in
166.694	B	41.847	0.020	0.004	1.029
	C	42.847	0.020	0.004	1.032
	A	90.347	0.025	0.005	1.128
216.611	B	71.847	0.023	0.005	1.098
	C	72.847	0.023	0.005	1.100
	A	115.306	0.026	0.005	1.162
256.611	B	96.806	0.025	0.005	1.138
	C	97.806	0.025	0.005	1.139
	A	135.306	0.028	0.005	1.185
283.5	B	116.806	0.027	0.005	1.164
	C	117.806	0.027	0.005	1.165
	A	148.750	0.028	0.006	1.198
	B	130.250	0.027	0.005	1.179
	C	131.250	0.027	0.005	1.180

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

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 klf
7/8 (E) ****	B	Yes	Ar (CfAe)	287.000 - 10.000	0.000	-0.47	1	1	0.850 0.750	1.110		0.001
LDF4-50A(1/ 2") (E) ****	A	Yes	Ar (CfAe)	274.000 - 10.000	-1.000	0.4	2	1	0.630	0.630		0.000
1 5/8 (E) ****	A	Yes	Ar (CfAe)	257.000 - 10.000	0.000	0.1	4	4	0.850 0.750	1.980		0.001
LDF1-50A(1/ 4") (E) ****	A	Yes	Ar (CfAe)	257.000 - 10.000	0.000	0.45	2	1	0.850 0.750	0.345		0.000
LDF1-50A(1/ 4") (E) ****	B	Yes	Ar (CfAe)	257.000 - 10.000	0.000	-0.2	2	1	0.850 0.750	0.345		0.000
1 5/8 (E) ****	A	Yes	Ar (CfAe)	235.000 - 10.000	-3.000	0.15	12	6	0.850 0.750	1.980		0.001
7/8 (E) ****	A	Yes	Ar (CfAe)	210.000 - 10.000	0.000	0.42	1	1	0.850 0.750	1.110		0.001
1/2 (E) ****	C	Yes	Ar (CfAe)	197.000 - 10.000	0.000	0.45	1	1	0.850 0.750	0.580		0.000
1 5/8 (E) ****	C	Yes	Ar (CfAe)	186.000 - 10.000	-2.500	0.1	12	11	0.850 0.750	1.980		0.001
1/2 (P) ****	C	Yes	Ar (CfAe)	186.000 - 10.000	0.000	-0.4	3	3	0.850 0.750	0.580		0.000
7/8 (E) ****	B	Yes	Ar (CfAe)	172.000 - 10.000	0.000	-0.36	1	1	0.850 0.750	1.110		0.001
7/8 (E) ****	B	Yes	Ar (CfAe)	171.000 - 10.000	0.000	-0.31	1	1	0.850 0.750	1.110		0.001
1/2 (E) ****	B	Yes	Ar (CfAe)	171.000 - 10.000	1.000	-0.36	1	1	0.850 0.750	0.580		0.000

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 84514.001.0001- Storrs-UConn, CT (Site # CT1077)	<b>Page</b> 13 of 60
	<b>Project</b> 317' GT / AT&T Co-Location	<b>Date</b> 12:59:13 08/24/12
	<b>Client</b> Nexlink	<b>Designed by</b> Rortiz

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 klf
7/8 (E) ****	C	Yes	Ar (CfAe)	158.000 - 10.000	-0.500	-0.4	1	1	0.850 0.750	1.110		0.001
1" Conduit (E) ****	B	Yes	Ar (CfAe)	156.000 - 10.000	0.000	-0.15	1	1	0.850 0.750	1.250		0.001
EW63(ELLIP TICAL) (E) ****	A	Yes	Ar (CfAe)	116.000 - 10.000	0.000	-0.2	2	2	0.850 0.750	2.010		0.001
7/8 (E) ****	C	Yes	Ar (CfAe)	111.000 - 10.000	-0.500	-0.45	1	1	0.850 0.750	1.110		0.001
EW63(ELLIP TICAL) (E) ****	A	Yes	Ar (CfAe)	104.000 - 10.000	0.000	-0.1	1	1	0.850 0.750	2.010		0.001
FSJ2-50(3/8") (E)	B	Yes	Ar (CfAe)	92.000 - 10.000	0.000	-0.1	2	1	0.850 0.750	0.425		0.000
FSJ2-50(3/8") (E) ****	B	Yes	Ar (CfAe)	95.000 - 92.000	0.000	-0.1	1	1	0.850 0.750	0.425		0.000
1 5/8 (E) ****	C	Yes	Ar (CfAe)	83.000 - 10.000	0.000	0.05	18	12	0.850 0.750	1.980		0.001
7/8 (E) ****	A	Yes	Ar (CfAe)	71.000 - 10.000	0.000	-0.28	1	1	0.850 0.750	1.110		0.001
LDF1-50A(1/4") (E)	C	Yes	Ar (CfAe)	13.000 - 10.000	0.000	0.43	2	1	0.850 0.750	0.345		0.000
LDF1-50A(1/4") (E) ****	C	Yes	Ar (CfAe)	18.000 - 13.000	0.000	0.43	1	1	0.850 0.750	0.345		0.000
1 5/8 (AB)	A	Yes	Ar (CfAe)	257.000 - 10.000	0.000	0.3	2	2	0.850 0.750	1.980		0.001

## Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>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>	Weight K
L1	317.000-287.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000	0.000
T1	287.000-280.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.647	0.000	0.000	0.000	0.004
		C	0.000	0.000	0.000	0.000	0.000
T2	280.000-260.000	A	0.735	0.000	0.000	0.000	0.004
		B	1.850	0.000	0.000	0.000	0.011
		C	0.000	0.000	0.000	0.000	0.000
T3	260.000-240.000	A	18.369	0.000	0.000	0.000	0.114
		B	2.339	0.000	0.000	0.000	0.013
		C	0.000	0.000	0.000	0.000	0.000
T4	240.000-220.000	A	36.275	0.000	0.000	0.000	0.320
		B	2.425	0.000	0.000	0.000	0.013
		C	0.000	0.000	0.000	0.000	0.000

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	14 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Tower Section	Tower Elevation ft	Face	$A_R$ ft <sup>2</sup>	$A_F$ ft <sup>2</sup>	$C_A A_A$ In Face ft <sup>2</sup>	$C_A A_A$ Out Face ft <sup>2</sup>	Weight K
T5	220.000-200.000	A	42.150	0.000	0.000	0.000	0.388
		B	2.425	0.000	0.000	0.000	0.013
		C	0.000	0.000	0.000	0.000	0.000
T6	200.000-180.000	A	43.075	0.000	0.000	0.000	0.394
		B	2.425	0.000	0.000	0.000	0.013
		C	12.582	0.000	0.000	0.000	0.084
T7	180.000-160.000	A	43.075	0.000	0.000	0.000	0.394
		B	5.084	0.000	0.000	0.000	0.028
		C	40.167	0.000	0.000	0.000	0.270
T8	160.000-140.000	A	43.075	0.000	0.000	0.000	0.394
		B	8.758	0.000	0.000	0.000	0.049
		C	41.832	0.000	0.000	0.000	0.279
T9	140.000-120.000	A	43.075	0.000	0.000	0.000	0.394
		B	9.175	0.000	0.000	0.000	0.051
		C	42.017	0.000	0.000	0.000	0.280
T10	120.000-100.000	A	49.105	0.000	0.000	0.000	0.412
		B	9.175	0.000	0.000	0.000	0.051
		C	43.034	0.000	0.000	0.000	0.286
T11	100.000-80.000	A	53.125	0.000	0.000	0.000	0.424
		B	9.706	0.000	0.000	0.000	0.054
		C	49.807	0.000	0.000	0.000	0.347
T12	80.000-60.000	A	54.142	0.000	0.000	0.000	0.430
		B	9.883	0.000	0.000	0.000	0.055
		C	83.467	0.000	0.000	0.000	0.666
T13	60.000-40.000	A	54.975	0.000	0.000	0.000	0.435
		B	9.883	0.000	0.000	0.000	0.055
		C	83.467	0.000	0.000	0.000	0.666
T14	40.000-20.000	A	54.975	0.000	0.000	0.000	0.435
		B	9.883	0.000	0.000	0.000	0.055
		C	83.467	0.000	0.000	0.000	0.666
T15	20.000-6.500	A	27.487	0.000	0.000	0.000	0.218
		B	4.942	0.000	0.000	0.000	0.027
		C	41.963	0.000	0.000	0.000	0.333
T16	6.500-0.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000	0.000

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

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	$A_R$ ft <sup>2</sup>	$A_F$ ft <sup>2</sup>	$C_A A_A$ In Face ft <sup>2</sup>	$C_A A_A$ Out Face ft <sup>2</sup>	Weight K
L1	317.000-287.000	A	1.304	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	0.000	0.000
T1	287.000-280.000	A	1.294	0.000	0.000	0.000	0.000	0.000
		B		2.158	0.000	0.000	0.000	0.030
		C		0.000	0.000	0.000	0.000	0.000
T2	280.000-260.000	A	1.287	3.738	0.000	0.000	0.000	0.089
		B		6.140	0.000	0.000	0.000	0.086
		C		0.000	0.000	0.000	0.000	0.000
T3	260.000-240.000	A	1.275	22.237	16.037	0.000	0.000	0.749
		B		10.202	0.000	0.000	0.000	0.173
		C		0.000	0.000	0.000	0.000	0.000
T4	240.000-220.000	A	1.262	30.687	36.554	0.000	0.000	1.583
		B		10.841	0.000	0.000	0.000	0.186
		C		0.000	0.000	0.000	0.000	0.000
T5	220.000-200.000	A	1.249	35.342	42.450	0.000	0.000	1.855

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	Page
	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	17 of 60
	Project	Date
	317' GT / AT&T Co-Location	12:59:13 08/24/12
	Client	Designed by
	Nexlink	Rortiz

## Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C <sub>A/A</sub> Front ft <sup>2</sup>	C <sub>A/A</sub> Side ft <sup>2</sup>	Weight K
Lighting Rod 5/8" x 4' (E)	C	None		0.000	322.000	No Ice	0.250	0.250	0.031
						1/2" Ice	0.664	0.664	0.034
						1" Ice	0.973	0.973	0.039
						2" Ice	1.494	1.494	0.059
						4" Ice	2.683	2.683	0.137
Flash Beacon Lighting (E)	C	None		0.000	321.000	No Ice	2.700	2.700	0.050
						1/2" Ice	3.100	3.100	0.070
						1" Ice	3.500	3.500	0.090
						2" Ice	4.300	4.300	0.130
						4" Ice	5.900	5.900	0.210
Side Lights (E)	C	None		0.000	156.000	No Ice	1.500	1.500	0.200
						1/2" Ice	2.250	2.250	0.300
						1" Ice	3.000	3.000	0.400
						2" Ice	4.500	4.500	0.600
						4" Ice	7.500	7.500	1.000
7' Ice Shield (E)	A	From Leg	0.000 0.000 0.000	0.000	125.000	No Ice	5.969	2.587	0.461
						1/2" Ice	6.834	3.094	0.563
						1" Ice	7.710	3.613	0.676
						2" Ice	9.515	4.705	0.932
						4" Ice	13.371	7.152	1.589
7' Ice Shield (E)	C	From Leg	0.000 0.000 0.000	0.000	125.000	No Ice	5.969	2.587	0.461
						1/2" Ice	6.834	3.094	0.563
						1" Ice	7.710	3.613	0.676
						2" Ice	9.515	4.705	0.932
						4" Ice	13.371	7.152	1.589
5' Ice Shield (E)	C	From Face	0.000 0.000 0.000	0.000	117.000	No Ice	4.569	2.587	0.308
						1/2" Ice	5.278	3.094	0.385
						1" Ice	5.999	3.613	0.473
						2" Ice	7.492	4.705	0.673
						4" Ice	10.726	7.152	1.200
****									
1 bay FM antenna (E)	C	From Leg	2.000 0.000 0.000	0.000	305.000	No Ice	5.000	5.000	0.050
						1/2" Ice	8.000	8.000	0.090
						1" Ice	11.000	11.000	0.130
						2" Ice	17.000	17.000	0.210
						4" Ice	29.000	29.000	0.370
1 bay FM antenna (E)	C	From Leg	2.000 0.000 5.000	0.000	305.000	No Ice	5.000	5.000	0.050
						1/2" Ice	8.000	8.000	0.090
						1" Ice	11.000	11.000	0.130
						2" Ice	17.000	17.000	0.210
						4" Ice	29.000	29.000	0.370
4' Standoff (E)	C	From Leg	0.000 0.000 0.000	0.000	305.000	No Ice	4.000	4.000	0.200
						1/2" Ice	6.000	6.000	0.350
						1" Ice	8.000	8.000	0.500
						2" Ice	12.000	12.000	0.800
						4" Ice	20.000	20.000	1.400
10' x 2" Pipe Mount (E)	C	From Leg	0.000 0.000 0.000	0.000	305.000	No Ice	2.375	2.375	0.037
						1/2" Ice	3.403	3.403	0.054
						1" Ice	4.448	4.448	0.079
						2" Ice	5.911	5.911	0.148
						4" Ice	8.472	8.472	0.370
****									
6' Omni (E)	C	From Leg	4.000 0.000	0.000	274.000	No Ice	1.767	1.767	0.050
						1/2" Ice	2.129	2.129	0.063

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	18 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C <sub>AA</sub> Front ft <sup>2</sup>	C <sub>AA</sub> Side ft <sup>2</sup>	Weight K
			3.000			1" Ice	2.501	2.501	0.081
						2" Ice	3.272	3.272	0.128
						4" Ice	4.926	4.926	0.280
8' Omni (E)	C	From Leg	4.000	0.000	274.000	No Ice	2.400	2.400	0.090
			0.000			1/2" Ice	3.188	3.188	0.108
			4.000			1" Ice	3.675	3.675	0.130
						2" Ice	4.676	4.676	0.193
						4" Ice	6.789	6.789	0.388
Side Arm Mount [SO 602-1] (E)	C	From Leg	0.000	0.000	274.000	No Ice	2.720	12.930	0.146
			0.000			1/2" Ice	4.110	17.820	0.223
			0.000			1" Ice	5.500	22.710	0.301
						2" Ice	8.280	32.490	0.456
						4" Ice	13.840	52.050	0.766
****									
15' Omni (E)	C	From Leg	2.000	0.000	257.000	No Ice	4.500	4.500	0.150
			0.000			1/2" Ice	6.033	6.033	0.182
			8.000			1" Ice	7.583	7.583	0.225
						2" Ice	10.733	10.733	0.338
						4" Ice	14.709	14.709	0.688
15' Omni (E)	C	From Leg	2.000	0.000	257.000	No Ice	4.500	4.500	0.150
			0.000			1/2" Ice	6.033	6.033	0.182
			-7.000			1" Ice	7.583	7.583	0.225
						2" Ice	10.733	10.733	0.338
						4" Ice	14.709	14.709	0.688
Side Arm Mount [SO 601-1] (E)	C	From Leg	0.000	0.000	257.000	No Ice	1.220	6.300	0.159
			0.000			1/2" Ice	1.850	8.610	0.197
			0.000			1" Ice	2.480	10.920	0.234
						2" Ice	3.740	15.540	0.310
						4" Ice	6.260	24.780	0.461
AP14-850/105N w/ Mount Pipe (E)	B	From Leg	4.000	0.000	257.000	No Ice	10.608	7.064	0.049
			0.000			1/2" Ice	11.245	8.204	0.113
			4.000			1" Ice	11.890	9.185	0.191
						2" Ice	13.202	11.198	0.376
						4" Ice	15.926	15.423	0.900
AP14-850/105N w/ Mount Pipe (E)	B	From Leg	4.000	0.000	257.000	No Ice	10.608	7.064	0.049
			0.000			1/2" Ice	11.245	8.204	0.113
			-4.000			1" Ice	11.890	9.185	0.191
						2" Ice	13.202	11.198	0.376
						4" Ice	15.926	15.423	0.900
Side Arm Mount [SO 601-1] (E)	B	From Leg	0.000	0.000	257.000	No Ice	1.220	6.300	0.159
			0.000			1/2" Ice	1.850	8.610	0.197
			0.000			1" Ice	2.480	10.920	0.234
						2" Ice	3.740	15.540	0.310
						4" Ice	6.260	24.780	0.461
15' Omni (E)	A	From Leg	2.000	0.000	257.000	No Ice	4.500	4.500	0.150
			0.000			1/2" Ice	6.033	6.033	0.182
			8.000			1" Ice	7.583	7.583	0.225
						2" Ice	10.733	10.733	0.338
						4" Ice	14.709	14.709	0.688
15' Omni (E)	A	From Leg	2.000	0.000	257.000	No Ice	4.500	4.500	0.150
			0.000			1/2" Ice	6.033	6.033	0.182
			-7.000			1" Ice	7.583	7.583	0.225
						2" Ice	10.733	10.733	0.338
						4" Ice	14.709	14.709	0.688
Side Arm Mount [SO 601-1] (E)	A	From Leg	0.000	0.000	257.000	No Ice	1.220	6.300	0.159
			0.000			1/2" Ice	1.850	8.610	0.197
			0.000			1" Ice	2.480	10.920	0.234



<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	19 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C <sub>A</sub> A <sub>A</sub> Front ft <sup>2</sup>	C <sub>A</sub> A <sub>A</sub> Side ft <sup>2</sup>	Weight K
						2" Ice	3.740	15.540	0.310
						4" Ice	6.260	24.780	0.461
****									
(4) DB844H90E-XY w/ Mount Pipe (E)	C	From Leg	4.000 0.000 0.000	40.000	235.000	No Ice	3.536	5.158	0.036
						1/2" Ice	4.033	6.026	0.076
						1" Ice	4.522	6.770	0.125
						2" Ice	5.535	8.314	0.243
						4" Ice	7.703	11.616	0.593
(4) DB844H90E-XY w/ Mount Pipe (E)	B	From Leg	4.000 0.000 0.000	40.000	235.000	No Ice	3.536	5.158	0.036
						1/2" Ice	4.033	6.026	0.076
						1" Ice	4.522	6.770	0.125
						2" Ice	5.535	8.314	0.243
						4" Ice	7.703	11.616	0.593
(4) DB844H90E-XY w/ Mount Pipe (E)	A	From Leg	4.000 0.000 0.000	40.000	235.000	No Ice	3.536	5.158	0.036
						1/2" Ice	4.033	6.026	0.076
						1" Ice	4.522	6.770	0.125
						2" Ice	5.535	8.314	0.243
						4" Ice	7.703	11.616	0.593
Sector Mount [SM 602-3] (E)	C	None		0.000	235.000	No Ice	33.110	33.110	1.541
						1/2" Ice	44.900	44.900	2.159
						1" Ice	56.690	56.690	2.777
						2" Ice	80.270	80.270	4.014
						4" Ice	127.430	127.430	6.487
****									
1 bay FM antenna (E)	C	From Leg	2.000 0.000 0.000	0.000	210.000	No Ice	5.000	5.000	0.050
						1/2" Ice	8.000	8.000	0.090
						1" Ice	11.000	11.000	0.130
						2" Ice	17.000	17.000	0.210
						4" Ice	29.000	29.000	0.370
Flush Mount (E)	C	From Leg	2.000 0.000 0.000	0.000	210.000	No Ice	1.000	1.000	0.100
						1/2" Ice	2.000	2.000	0.150
						1" Ice	3.000	3.000	0.200
						2" Ice	5.000	5.000	0.300
						4" Ice	9.000	9.000	0.500
****									
1 bay FM antenna (E)	B	From Leg	2.000 0.000 0.000	0.000	197.000	No Ice	5.000	5.000	0.050
						1/2" Ice	8.000	8.000	0.090
						1" Ice	11.000	11.000	0.130
						2" Ice	17.000	17.000	0.210
						4" Ice	29.000	29.000	0.370
Side Arm Mount [SO 601-1] (E)	B	From Leg	0.000 0.000 0.000	0.000	197.000	No Ice	1.220	6.300	0.159
						1/2" Ice	1.850	8.610	0.197
						1" Ice	2.480	10.920	0.234
						2" Ice	3.740	15.540	0.310
						4" Ice	6.260	24.780	0.461
****									
(2) 7770.00 w/ Mount Pipe (E)	A	From Leg	2.000 0.000 0.000	40.000	186.000	No Ice	6.119	4.254	0.055
						1/2" Ice	6.626	5.014	0.101
						1" Ice	7.128	5.711	0.155
						2" Ice	8.164	7.155	0.287
						4" Ice	10.360	10.412	0.665
(2) 7770.00 w/ Mount Pipe (E)	B	From Leg	2.000 0.000 0.000	40.000	186.000	No Ice	6.119	4.254	0.055
						1/2" Ice	6.626	5.014	0.101
						1" Ice	7.128	5.711	0.155
						2" Ice	8.164	7.155	0.287
						4" Ice	10.360	10.412	0.665
(2) 7770.00 w/ Mount Pipe	C	From Leg	2.000	40.000	186.000	No Ice	6.119	4.254	0.055

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	20 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C <sub>A</sub> A <sub>1</sub> Front ft <sup>2</sup>	C <sub>A</sub> A <sub>1</sub> Side ft <sup>2</sup>	Weight K
(E)			0.000 0.000			1/2" Ice	6.626	5.014	0.101
						1" Ice	7.128	5.711	0.155
						2" Ice	8.164	7.155	0.287
						4" Ice	10.360	10.412	0.665
(2) LGP21901 (E)	A	From Leg	2.000 0.000 0.000	0.000	186.000	No Ice	0.270	0.184	0.006
						1/2" Ice	0.343	0.248	0.008
						1" Ice	0.425	0.322	0.011
						2" Ice	0.616	0.494	0.022
						4" Ice	1.101	0.943	0.066
(2) LGP21901 (E)	B	From Leg	2.000 0.000 0.000	0.000	186.000	No Ice	0.270	0.184	0.006
						1/2" Ice	0.343	0.248	0.008
						1" Ice	0.425	0.322	0.011
						2" Ice	0.616	0.494	0.022
						4" Ice	1.101	0.943	0.066
(2) LGP21901 (E)	C	From Leg	2.000 0.000 0.000	0.000	186.000	No Ice	0.270	0.184	0.006
						1/2" Ice	0.343	0.248	0.008
						1" Ice	0.425	0.322	0.011
						2" Ice	0.616	0.494	0.022
						4" Ice	1.101	0.943	0.066
SBNH-1D6565C w/ Mount Pipe (P)	A	From Leg	2.000 0.000 0.000	0.000	186.000	No Ice	11.644	9.842	0.094
						1/2" Ice	12.365	11.366	0.180
						1" Ice	13.095	12.914	0.281
						2" Ice	14.553	15.267	0.516
						4" Ice	17.825	20.139	1.160
SBNH-1D6565C w/ Mount Pipe (P)	C	From Leg	2.000 0.000 0.000	0.000	186.000	No Ice	11.644	9.842	0.094
						1/2" Ice	12.365	11.366	0.180
						1" Ice	13.095	12.914	0.281
						2" Ice	14.553	15.267	0.516
						4" Ice	17.825	20.139	1.160
AM-X-CD-16-65-00T-RET w/ Mount Pipe (P)	B	From Leg	2.000 0.000 0.000	0.000	186.000	No Ice	8.498	6.304	0.074
						1/2" Ice	9.149	7.479	0.136
						1" Ice	9.767	8.368	0.210
						2" Ice	11.031	10.179	0.385
						4" Ice	13.679	14.024	0.874
(2) RBS 6601 (P)	A	From Leg	2.000 0.000 0.000	0.000	186.000	No Ice	0.480	0.348	0.022
						1/2" Ice	0.625	0.459	0.034
						1" Ice	0.778	0.578	0.049
						2" Ice	1.110	0.842	0.087
						4" Ice	1.878	1.474	0.202
(2) RBS 6601 (P)	B	From Leg	2.000 0.000 0.000	0.000	186.000	No Ice	0.480	0.348	0.022
						1/2" Ice	0.625	0.459	0.034
						1" Ice	0.778	0.578	0.049
						2" Ice	1.110	0.842	0.087
						4" Ice	1.878	1.474	0.202
(2) RBS 6601 (P)	C	From Leg	2.000 0.000 0.000	0.000	186.000	No Ice	0.480	0.348	0.022
						1/2" Ice	0.625	0.459	0.034
						1" Ice	0.778	0.578	0.049
						2" Ice	1.110	0.842	0.087
						4" Ice	1.878	1.474	0.202
DC6-48-60-18-8F (P)	A	From Leg	2.000 0.000 0.000	0.000	186.000	No Ice	2.567	4.317	0.019
						1/2" Ice	2.798	4.596	0.050
						1" Ice	3.038	4.885	0.085
						2" Ice	3.543	5.488	0.167
						4" Ice	4.658	6.797	0.383
Sector Mount [SM 407-3] (E)	C	None		0.000	186.000	No Ice	20.490	20.490	0.956
						1/2" Ice	30.390	30.390	1.376
						1" Ice	40.290	40.290	1.797

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 84514.001.0001- Storrs-UConn, CT (Site # CT1077)	<b>Page</b> 21 of 60
	<b>Project</b> 317' GT / AT&T Co-Location	<b>Date</b> 12:59:13 08/24/12
	<b>Client</b> Nexlink	<b>Designed by</b> Rortiz

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C <sub>A</sub> A <sub>A</sub> Front ft <sup>2</sup>	C <sub>A</sub> A <sub>A</sub> Side ft <sup>2</sup>	Weight K
						2" Ice	60.090	60.090	2.638
						4" Ice	99.690	99.690	4.321
****									
DB872H120-X w/Mount Pipe (E)	B	From Leg	2.000 0.000 0.000	60.000	172.000	No Ice	3.987	2.829	0.033
						1/2" Ice	4.745	3.750	0.065
						1" Ice	5.302	4.385	0.106
						2" Ice	6.449	5.693	0.205
						4" Ice	8.927	8.525	0.505
Flush Mount (E)	B	From Leg	2.000 0.000 0.000	0.000	172.000	No Ice	1.000	1.000	0.100
						1/2" Ice	2.000	2.000	0.150
						1" Ice	3.000	3.000	0.200
						2" Ice	5.000	5.000	0.300
						4" Ice	9.000	9.000	0.500
****									
8' Omni (E)	C	From Leg	2.000 0.000 0.000	0.000	171.000	No Ice	2.400	2.400	0.090
						1/2" Ice	3.188	3.188	0.108
						1" Ice	3.675	3.675	0.130
						2" Ice	4.676	4.676	0.193
						4" Ice	6.789	6.789	0.388
Side Arm Mount [SO 301-1] (E)	C	From Leg	0.000 0.000 0.000	0.000	171.000	No Ice	1.000	0.900	0.023
						1/2" Ice	1.390	1.420	0.033
						1" Ice	1.780	1.940	0.042
						2" Ice	2.560	2.980	0.061
						4" Ice	4.120	5.060	0.100
****									
Flush Mount (E)	A	From Leg	1.000 0.000 0.000	0.000	171.000	No Ice	1.000	1.000	0.100
						1/2" Ice	2.000	2.000	0.150
						1" Ice	3.000	3.000	0.200
						2" Ice	5.000	5.000	0.300
						4" Ice	9.000	9.000	0.500
****									
18" x 12" x 4" (E)	C	From Leg	2.000 0.000 0.000	-10.000	158.000	No Ice	3.169	2.125	0.042
						1/2" Ice	3.743	2.772	0.067
						1" Ice	4.227	3.296	0.100
						2" Ice	5.242	4.399	0.181
						4" Ice	7.459	6.819	0.433
Flush Mount (E)	C	From Leg	1.000 0.000 0.000	0.000	158.000	No Ice	1.000	1.000	0.100
						1/2" Ice	2.000	2.000	0.150
						1" Ice	3.000	3.000	0.200
						2" Ice	5.000	5.000	0.300
						4" Ice	9.000	9.000	0.500
****									
Side Arm Mount [SO 602-1] (E)	B	From Leg	2.000 0.000 0.000	0.000	120.000	No Ice	2.720	12.930	0.146
						1/2" Ice	4.110	17.820	0.223
						1" Ice	5.500	22.710	0.301
						2" Ice	8.280	32.490	0.456
						4" Ice	13.840	52.050	0.766
****									
Pipe Mount [PM 602-1] (E)	A	From Leg	1.000 0.000 0.000	0.000	116.000	No Ice	5.250	1.580	0.093
						1/2" Ice	6.500	1.950	0.118
						1" Ice	7.750	2.320	0.142
						2" Ice	10.250	3.060	0.192
						4" Ice	15.250	4.540	0.291
Pipe Mount [PM 602-1] (E)	C	From Leg	1.000 0.000 0.000	0.000	116.000	No Ice	5.250	1.580	0.093
						1/2" Ice	6.500	1.950	0.118
						1" Ice	7.750	2.320	0.142
						2" Ice	10.250	3.060	0.192

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	22 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C <sub>A</sub> A <sub>1</sub> Front ft <sup>2</sup>	C <sub>A</sub> A <sub>1</sub> Side ft <sup>2</sup>	Weight K
****						4" Ice	15.250	4.540	0.291
10' Omni (E)	B	From Leg	2.000 0.000 0.000	0.000	111.000	No Ice	3.000	3.000	0.090
						1/2" Ice	4.033	4.033	0.112
						1" Ice	5.027	5.027	0.140
						2" Ice	6.257	6.257	0.217
						4" Ice	8.830	8.830	0.457
Side Arm Mount [SO 301-1] (E)	B	From Leg	0.000 0.000 0.000	0.000	111.000	No Ice	1.000	0.900	0.023
						1/2" Ice	1.390	1.420	0.033
						1" Ice	1.780	1.940	0.042
						2" Ice	2.560	2.980	0.061
						4" Ice	4.120	5.060	0.100
****									
Pipe Mount [PM 602-1] (E)	C	From Leg	0.000 0.000 0.000	0.000	104.000	No Ice	5.250	1.580	0.093
						1/2" Ice	6.500	1.950	0.118
						1" Ice	7.750	2.320	0.142
						2" Ice	10.250	3.060	0.192
						4" Ice	15.250	4.540	0.291
****									
Flush Mount (E)	C	From Leg	1.000 0.000 0.000	0.000	95.000	No Ice	1.000	1.000	0.100
						1/2" Ice	2.000	2.000	0.150
						1" Ice	3.000	3.000	0.200
						2" Ice	5.000	5.000	0.300
						4" Ice	9.000	9.000	0.500
****									
2' Yagi (E)	B	From Leg	0.000 0.000 0.000	0.000	92.000	No Ice	0.500	0.500	0.041
						1/2" Ice	0.750	0.750	0.054
						1" Ice	1.000	1.000	0.071
						2" Ice	1.500	1.500	0.119
						4" Ice	2.500	2.500	0.270
Flush Mount (E)	B	From Leg	1.000 0.000 0.000	0.000	92.000	No Ice	1.000	1.000	0.100
						1/2" Ice	2.000	2.000	0.150
						1" Ice	3.000	3.000	0.200
						2" Ice	5.000	5.000	0.300
						4" Ice	9.000	9.000	0.500
****									
(2) 4'x8"x9.5" Panel (E)	A	From Leg	4.000 0.000 0.000	60.000	83.000	No Ice	4.208	5.858	0.042
						1/2" Ice	4.742	6.735	0.087
						1" Ice	5.241	7.490	0.142
						2" Ice	6.274	9.053	0.273
						4" Ice	8.481	12.394	0.648
(2) 4'x8"x9.5" Panel (E)	B	From Leg	4.000 0.000 0.000	60.000	83.000	No Ice	4.208	5.858	0.042
						1/2" Ice	4.742	6.735	0.087
						1" Ice	5.241	7.490	0.142
						2" Ice	6.274	9.053	0.273
						4" Ice	8.481	12.394	0.648
(2) 4'x8"x9.5" Panel (E)	C	From Leg	4.000 0.000 0.000	60.000	83.000	No Ice	4.208	5.858	0.042
						1/2" Ice	4.742	6.735	0.087
						1" Ice	5.241	7.490	0.142
						2" Ice	6.274	9.053	0.273
						4" Ice	8.481	12.394	0.648
(2) 6' x 2" Mount Pipe (E)	A	From Leg	4.000 0.000 0.000	0.000	83.000	No Ice	1.425	1.425	0.022
						1/2" Ice	1.925	1.925	0.033
						1" Ice	2.294	2.294	0.048
						2" Ice	3.060	3.060	0.090
						4" Ice	4.702	4.702	0.231
(2) 6' x 2" Mount Pipe	B	From Leg	4.000	0.000	83.000	No Ice	1.425	1.425	0.022

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	Page
	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	23 of 60
	Project	Date
	317' GT / AT&T Co-Location	12:59:13 08/24/12
	Client	Designed by
	Nexlink	Rortiz

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C <sub>A</sub> A <sub>A</sub> Front ft <sup>2</sup>	C <sub>A</sub> A <sub>A</sub> Side ft <sup>2</sup>	Weight K
(E)			0.000 0.000			1/2" Ice 1.925 1" Ice 2.294 2" Ice 3.060 4" Ice 4.702	1.925 2.294 3.060 4.702	0.033 0.048 0.090 0.231
(2) 6' x 2" Mount Pipe (E)	C	From Leg	4.000 0.000 0.000	0.000	83.000	No Ice 1.425 1/2" Ice 1.925 1" Ice 2.294 2" Ice 3.060 4" Ice 4.702	1.425 1.925 2.294 3.060 4.702	0.022 0.033 0.048 0.090 0.231
P65-16-XL-2 B w/Mount Pipe (E)	A	From Leg	4.000 0.000 0.000	60.000	83.000	No Ice 8.400 1/2" Ice 8.949 1" Ice 9.506 2" Ice 10.647 4" Ice 13.032	5.542 6.483 7.302 8.988 12.561	0.055 0.113 0.182 0.346 0.806
P65-16-XL-2 B w/Mount Pipe (E)	B	From Leg	4.000 0.000 0.000	60.000	83.000	No Ice 8.400 1/2" Ice 8.949 1" Ice 9.506 2" Ice 10.647 4" Ice 13.032	5.542 6.483 7.302 8.988 12.561	0.055 0.113 0.182 0.346 0.806
P65-16-XL-2 B w/Mount Pipe (E)	C	From Leg	4.000 0.000 0.000	60.000	83.000	No Ice 8.400 1/2" Ice 8.949 1" Ice 9.506 2" Ice 10.647 4" Ice 13.032	5.542 6.483 7.302 8.988 12.561	0.055 0.113 0.182 0.346 0.806
BXA-185063/12CF w/ Mount Pipe (E)	A	From Leg	4.000 0.000 0.000	60.000	83.000	No Ice 5.029 1/2" Ice 5.583 1" Ice 6.103 2" Ice 7.166 4" Ice 9.438	5.289 6.459 7.348 9.148 12.947	0.041 0.084 0.139 0.273 0.677
BXA-185063/12CF w/ Mount Pipe (E)	B	From Leg	4.000 0.000 0.000	60.000	83.000	No Ice 5.029 1/2" Ice 5.583 1" Ice 6.103 2" Ice 7.166 4" Ice 9.438	5.289 6.459 7.348 9.148 12.947	0.041 0.084 0.139 0.273 0.677
BXA-185063/12CF w/ Mount Pipe (E)	C	From Leg	4.000 0.000 0.000	60.000	83.000	No Ice 5.029 1/2" Ice 5.583 1" Ice 6.103 2" Ice 7.166 4" Ice 9.438	5.289 6.459 7.348 9.148 12.947	0.041 0.084 0.139 0.273 0.677
Platform Mount [LP 603-1] (E)	C	None		0.000	83.000	No Ice 42.100 1/2" Ice 52.900 1" Ice 63.700 2" Ice 85.300 4" Ice 128.500	42.100 52.900 63.700 85.300 128.500	2.060 2.680 3.300 4.540 7.020
****								
2' Dipole (E)	C	From Leg	2.000 0.000 0.000	0.000	71.000	No Ice 1.650 1/2" Ice 3.000 1" Ice 4.350 2" Ice 7.050 4" Ice 12.450	1.650 3.000 4.350 7.050 12.450	0.034 0.044 0.054 0.075 0.116
Flush Mount (E)	C	From Leg	1.000 0.000 0.000	0.000	71.000	No Ice 1.000 1/2" Ice 2.000 1" Ice 3.000 2" Ice 5.000 4" Ice 9.000	1.000 2.000 3.000 5.000 9.000	0.100 0.150 0.200 0.300 0.500
****								
6' Yagi	C	From Leg	0.000	0.000	18.000	No Ice 1.770	3.980	0.041

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	24 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C <sub>AA</sub> Front ft <sup>2</sup>	C <sub>AA</sub> Side ft <sup>2</sup>	Weight K
(E)			0.000 0.000		1/2" Ice 1" Ice 2" Ice 4" Ice	0.168 0.000 0.000 0.000	0.567 0.000 0.000 0.000	0.054 0.071 0.119 0.270
Side Arm Mount [SO 301-1] (E)	C	From Leg	0.000 0.000 0.000	0.000	18.000 No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.000 1.390 1.780 2.560 4.120	0.900 1.420 1.940 2.980 5.060	0.023 0.033 0.042 0.061 0.100
****								
Side Arm Mount [SO 301-1] (E)	C	From Leg	0.000 0.000 0.000	0.000	13.000 No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.000 1.390 1.780 2.560 4.120	0.900 1.420 1.940 2.980 5.060	0.023 0.033 0.042 0.061 0.100
****								

## Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft	Aperture Area ft <sup>2</sup>	Weight K
3' Grid Dish (E)	A	Grid	From Leg	2.000 0.000 0.000	-60.000		171.000	3.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.050 0.070 0.090 0.130 0.210
****										
6 FT DISH (E)	A	Paraboloid w/Radome	From Leg	2.000 0.000 0.000	-20.000		116.000	6.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.143 0.292 0.441 0.740 1.336
6 FT DISH (E)	C	Paraboloid w/Radome	From Leg	2.000 0.000 0.000	90.000		116.000	6.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.143 0.292 0.441 0.740 1.336
****										
6 FT DISH (E)	C	Paraboloid w/Shroud (HP)	From Leg	2.000 0.000 0.000	10.000		104.000	6.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.143 0.292 0.441 0.740 1.336
****										
5' Grid Dish (E)	C	Grid	From Leg	2.000 0.000 0.000	-30.000		95.000	5.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.170 0.319 0.468 0.766 1.362
****										
4 FT DISH	C	Paraboloid w/o	From	2.000	-10.000		13.000	4.000	No Ice	0.170

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 84514.001.0001- Storrs-UConn, CT (Site # CT1077)	<b>Page</b> 25 of 60
	<b>Project</b> 317' GT / AT&T Co-Location	<b>Date</b> 12:59:13 08/24/12
	<b>Client</b> Nexlink	<b>Designed by</b> Rortiz

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter	Aperture Area	Weight
				ft	°	°	ft	ft	ft <sup>2</sup>	K
(E)		Radome	Leg	0.000				1/2" Ice	13.089	0.237
				0.000				1" Ice	13.618	0.304
								2" Ice	14.675	0.439
								4" Ice	16.790	0.708

\*\*\*\*

## Load Combinations

Comb. No.	Description
1	Dead Only
2	Dead+Wind 0 deg - No Ice+Guy
3	Dead+Wind 30 deg - No Ice+Guy
4	Dead+Wind 60 deg - No Ice+Guy
5	Dead+Wind 90 deg - No Ice+Guy
6	Dead+Wind 120 deg - No Ice+Guy
7	Dead+Wind 150 deg - No Ice+Guy
8	Dead+Wind 180 deg - No Ice+Guy
9	Dead+Wind 210 deg - No Ice+Guy
10	Dead+Wind 240 deg - No Ice+Guy
11	Dead+Wind 270 deg - No Ice+Guy
12	Dead+Wind 300 deg - No Ice+Guy
13	Dead+Wind 330 deg - No Ice+Guy
14	Dead+Ice+Temp+Guy
15	Dead+Wind 0 deg+Ice+Temp+Guy
16	Dead+Wind 30 deg+Ice+Temp+Guy
17	Dead+Wind 60 deg+Ice+Temp+Guy
18	Dead+Wind 90 deg+Ice+Temp+Guy
19	Dead+Wind 120 deg+Ice+Temp+Guy
20	Dead+Wind 150 deg+Ice+Temp+Guy
21	Dead+Wind 180 deg+Ice+Temp+Guy
22	Dead+Wind 210 deg+Ice+Temp+Guy
23	Dead+Wind 240 deg+Ice+Temp+Guy
24	Dead+Wind 270 deg+Ice+Temp+Guy
25	Dead+Wind 300 deg+Ice+Temp+Guy
26	Dead+Wind 330 deg+Ice+Temp+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

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	26 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

## Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	317 - 287	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	15	-3.786	1.015	9.459
			Max. Mx	11	-2.384	27.159	-0.144
			Max. My	8	-2.382	0.405	-27.062
			Max. Vy	11	-1.450	27.159	-0.144
			Max. Vx	8	1.454	0.405	-27.062
			Max. Torque	7			-1.095
T1	287 - 280	Leg	Max Tension	8	8.804	-0.015	0.186
			Max. Compression	23	-19.396	-0.131	-0.020
			Max. Mx	19	-4.269	0.806	0.375
			Max. My	15	-4.283	-0.052	-0.922
			Max. Vy	25	-11.284	0.180	-0.051
			Max. Vx	15	-12.903	-0.069	0.154
			Max Torque				
		Diagonal	Max Tension	12	1.483	0.000	0.000
			Max. Compression	9	-1.514	0.000	0.000
			Max. Mx	15	0.173	0.022	0.000
			Max. My	20	-0.323	0.000	-0.000
			Max. Vy	15	-0.018	0.000	0.000
			Max. Vx	20	-0.000	0.000	0.000
			Max Torque				
		Horizontal	Max Tension	7	2.426	0.000	0.000
			Max. Compression	13	-2.118	0.000	0.000
			Max. Mx	17	0.645	0.011	0.000
			Max. My	20	0.329	0.000	0.000
			Max. Vy	17	-0.012	0.000	0.000
			Max. Vx	20	-0.000	0.000	0.000
			Max Torque				
		Top Girt	Max Tension	18	7.287	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	17	7.281	0.011	0.000
			Max. My	20	7.282	0.000	0.000
			Max. Vy	17	-0.012	0.000	0.000
			Max. Vx	20	-0.000	0.000	0.000
			Max Torque				
		Bottom Girt	Max Tension	1	0.000	0.000	0.000
			Max. Compression	20	-0.392	0.000	0.000
			Max. Mx	17	-0.320	0.011	0.000
			Max. My	26	-0.224	0.000	0.000
			Max. Vy	17	-0.012	0.000	0.000
			Max. Vx	26	-0.000	0.000	0.000
			Max Torque				
		Guy A	Bottom Tension	8	10.452		
			Top Tension	8	10.762		
			Top Cable Vert	8	8.434		
			Top Cable Norm	8	6.686		
			Top Cable Tan	8	0.005		
			Bot Cable Vert	8	-7.717		
			Bot Cable Norm	8	7.050		
		Guy B	Bot Cable Tan	8	0.005		
			Bottom Tension	25	10.997		
			Top Tension	12	11.416		
			Top Cable Vert	25	9.537		
			Top Cable Norm	25	6.274		
			Top Cable Tan	25	0.003		
			Bot Cable Vert	12	-8.556		
		Guy C	Bot Cable Norm	12	6.909		
			Bot Cable Tan	12	0.006		
			Bottom Tension	17	10.773		
			Top Tension	4	11.304		
			Top Cable Vert	17	9.427		
			Top Cable Norm	17	6.237		
			Top Cable Tan	17	0.006		



<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	27 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T2	280 - 260	Torque Arm Top	Bot Cable Vert	4	-8.357		
			Bot Cable Norm	4	6.799		
			Bot Cable Tan	4	0.006		
			Max Tension	9	5.094	-17.354	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	25	2.088	-35.689	-0.000
			Max. My	13	1.311	-32.453	-0.000
			Max. Vy	25	9.643	-35.689	-0.000
			Max. Vx	13	-0.000	-32.453	-0.000
			Max Tension	1	0.000	0.000	0.000
		Leg	Max. Compression	19	-20.268	0.010	-0.107
			Max. Mx	16	-17.828	-0.139	-0.023
			Max. My	13	-13.647	0.083	-0.198
			Max. Vy	5	-0.803	-0.116	-0.002
			Max. Vx	2	-0.962	0.074	0.074
			Max Tension	13	1.041	0.000	0.000
			Max. Compression	2	-1.418	0.000	0.000
			Max. Mx	19	0.230	0.022	0.000
			Max. My	26	-0.140	0.000	0.000
			Max. Vy	19	-0.017	0.000	0.000
		Diagonal	Max. Vx	26	-0.000	0.000	0.000
			Max Tension	7	0.582	0.000	0.000
			Max. Compression	13	-0.424	0.000	0.000
			Max. Mx	17	0.321	0.011	0.000
			Max. My	26	0.330	0.000	0.000
			Max. Vy	17	-0.012	0.000	0.000
			Max. Vx	26	-0.000	0.000	0.000
		Horizontal	Max Tension	20	0.360	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	17	0.312	0.011	0.000
			Max. My	26	0.262	0.000	0.000
			Max. Vy	17	-0.012	0.000	0.000
			Max. Vx	26	-0.000	0.000	0.000
		Top Girt	Max Tension	13	0.048	0.000	0.000
			Max. Compression	7	-0.314	0.000	0.000
			Max. Mx	23	-0.130	0.011	0.000
			Max. My	13	-0.017	0.000	0.000
			Max. Vy	23	-0.012	0.000	0.000
			Max. Vx	13	-0.000	0.000	0.000
T3	260 - 240	Leg	Max Tension	1	0.000	0.000	0.000
			Max. Compression	17	-43.704	-0.095	-0.212
			Max. Mx	11	-12.838	0.574	0.022
			Max. My	8	-10.979	-0.166	-0.492
			Max. Vy	12	-0.802	0.076	-0.121
			Max. Vx	2	-0.962	0.038	0.155
		Diagonal	Max Tension	9	2.436	0.000	0.000
			Max. Compression	9	-3.157	0.000	0.000
			Max. Mx	23	0.353	0.021	0.000
			Max. My	15	-0.410	0.000	0.000
			Max. Vy	23	-0.017	0.000	0.000
			Max. Vx	15	-0.000	0.000	0.000
		Horizontal	Max Tension	8	3.237	0.000	0.000
			Max. Compression	13	-2.817	0.000	0.000
			Max. Mx	17	1.145	0.011	0.000
			Max. My	26	0.741	0.000	0.000
			Max. Vy	17	0.012	0.000	0.000
			Max. Vx	26	-0.000	0.000	0.000
		Top Girt	Max Tension	7	0.475	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	23	0.332	0.011	0.000
			Max. My	13	0.223	0.000	0.000

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	28 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T4	240 - 220	Bottom Girt	Max. Vy	23	0.012	0.000	0.000
			Max. Vx	13	-0.000	0.000	0.000
			Max. Tension	9	0.273	0.000	0.000
			Max. Compression	5	-0.064	0.000	0.000
			Max. Mx	19	0.141	0.011	0.000
			Max. My	13	0.049	0.000	-0.000
			Max. Vy	19	0.012	0.000	0.000
		Guy A	Max. Vx	13	0.000	0.000	0.000
			Bottom Tension	8	10.836		
			Top Tension	8	11.115		
			Top Cable Vert	8	8.303		
			Top Cable Norm	8	7.389		
			Top Cable Tan	8	0.004		
			Bot Cable Vert	8	-7.644		
		Guy B	Bot Cable Norm	8	7.680		
			Bot Cable Tan	8	0.005		
			Bottom Tension	12	11.439		
			Top Tension	12	11.761		
			Top Cable Vert	12	9.322		
			Top Cable Norm	12	7.171		
			Top Cable Tan	12	0.004		
		Guy C	Bot Cable Vert	12	-8.608		
			Bot Cable Norm	12	7.534		
			Bot Cable Tan	12	0.005		
			Bottom Tension	4	11.277		
			Top Tension	4	11.596		
			Top Cable Vert	4	9.168		
			Top Cable Norm	4	7.100		
		Torque Arm Top	Top Cable Tan	4	0.005		
			Bot Cable Vert	4	-8.457		
			Bot Cable Norm	4	7.459		
			Bot Cable Tan	4	0.005		
			Max. Tension	9	6.046	-14.737	0.000
			Max. Compression	3	-0.688	-31.172	0.000
		Leg	Max. Mx	25	2.002	-34.527	0.000
			Max. My	13	4.592	-22.538	-0.000
			Max. Vy	25	9.332	-34.527	0.000
			Max. Vx	13	-0.000	-22.538	-0.000
			Max. Tension	1	0.000	0.000	0.000
			Max. Compression	17	-45.786	-0.190	-0.187
		Diagonal	Max. Mx	11	-26.657	-0.598	0.006
			Max. My	8	-23.585	-0.080	0.598
			Max. Vy	11	-2.890	-0.066	-0.209
			Max. Vx	2	-2.500	0.164	0.052
			Max. Tension	5	3.697	0.000	0.000
			Max. Compression	11	-4.337	0.000	0.000
		Horizontal	Max. Mx	23	0.522	0.021	0.000
			Max. My	13	-0.931	0.000	0.000
			Max. Vy	23	-0.017	0.000	0.000
			Max. Vx	13	-0.000	0.000	0.000
			Max. Tension	4	1.113	0.000	0.000
			Max. Compression	17	-0.793	0.000	0.000
		Top Girt	Max. Mx	24	0.776	0.011	0.000
			Max. My	13	0.581	0.000	-0.000
			Max. Vy	24	0.012	0.000	0.000
			Max. Vx	13	0.000	0.000	0.000
			Max. Tension	3	0.245	0.000	0.000
			Max. Compression	9	-0.092	0.000	0.000
			Max. Mx	19	0.107	0.011	0.000
			Max. My	13	0.138	0.000	-0.000
			Max. Vy	19	0.012	0.000	0.000

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	29 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T5	220 - 200	Bottom Girt	Max. Vx	13	0.000	0.000	0.000
			Max Tension	10	0.305	0.000	0.000
			Max. Compression	5	-0.302	0.000	0.000
			Max. Mx	24	-0.053	0.011	0.000
			Max. My	2	0.301	0.000	-0.000
		Leg	Max. Vy	24	0.012	0.000	0.000
			Max. Vx	2	0.000	0.000	0.000
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	17	-62.892	-0.196	-0.353
			Max. Mx	16	-57.923	0.565	0.139
		Diagonal	Max. My	2	-21.106	0.005	0.645
			Max. Vy	11	-2.891	0.175	-0.222
			Max. Vx	2	-2.500	0.075	0.261
			Max Tension	11	3.736	0.000	0.000
			Max. Compression	5	-4.198	0.000	0.000
		Horizontal	Max. Mx	23	0.616	0.019	0.000
			Max. My	2	-0.306	0.000	0.000
			Max. Vy	23	-0.015	0.000	0.000
			Max. Vx	2	-0.000	0.000	0.000
			Max Tension	7	5.792	0.000	0.000
		Top Girt	Max. Compression	2	-5.277	0.000	0.000
			Max. Mx	24	1.071	0.010	0.000
			Max. My	2	0.807	0.000	-0.000
			Max. Vy	24	-0.011	0.000	0.000
			Max. Vx	2	0.000	0.000	0.000
		Bottom Girt	Max Tension	9	0.538	0.000	0.000
			Max. Compression	2	-0.025	0.000	0.000
			Max. Mx	24	0.421	0.010	0.000
			Max. My	2	-0.025	0.000	-0.000
			Max. Vy	24	-0.011	0.000	0.000
		Guy A	Max. Vx	2	0.000	0.000	0.000
			Max Tension	8	0.314	0.000	0.000
			Max. Compression	2	-0.023	0.000	0.000
			Max. Mx	14	0.211	0.010	0.000
			Max. My	2	-0.023	0.000	-0.000
		Guy B	Max. Vy	14	-0.011	0.000	0.000
			Max. Vx	2	0.000	0.000	0.000
			Bottom Tension	8	11.685		
			Top Tension	8	11.918		
			Top Cable Vert	8	8.097		
		Guy C	Top Cable Norm	8	8.745		
			Top Cable Tan	8	0.004		
			Bot Cable Vert	8	-7.527		
			Bot Cable Norm	8	8.937		
			Bot Cable Tan	8	0.004		
		Guy B	Bottom Tension	12	12.221		
			Top Tension	12	12.496		
			Top Cable Vert	12	9.239		
			Top Cable Norm	12	8.415		
			Top Cable Tan	12	0.004		
		Guy C	Bot Cable Vert	12	-8.610		
			Bot Cable Norm	12	8.672		
			Bot Cable Tan	12	0.005		
			Bottom Tension	4	12.237		
			Top Tension	4	12.510		
		Guy C	Top Cable Vert	4	9.212		
			Top Cable Norm	4	8.464		
			Top Cable Tan	4	0.004		
			Bot Cable Vert	4	-8.587		
			Bot Cable Norm	4	8.718		
			Bot Cable Tan	4	0.004		

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	30 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T6	200 - 180	Torque Arm Top	Max Tension	9	7.891	0.000	0.000
			Max. Compression	2	-2.741	-24.888	0.000
			Max. Mx	12	-0.964	-34.167	0.000
			Max. My	2	3.253	-25.075	-0.000
			Max. Vy	12	9.190	-34.167	0.000
			Max. Vx	2	-0.000	-25.075	-0.000
		Leg	Max Tension	1	0.000	0.000	0.000
			Max. Compression	17	-63.106	0.182	0.409
			Max. Mx	5	-42.252	0.604	0.016
			Max. My	2	-40.956	0.145	-0.540
			Max. Vy	11	-2.944	-0.110	-0.267
			Max. Vx	7	2.951	-0.184	0.216
		Diagonal	Max Tension	13	4.209	0.000	0.000
			Max. Compression	7	-5.331	0.000	0.000
			Max. Mx	23	-0.157	0.018	0.000
			Max. My	2	-0.019	0.000	0.000
			Max. Vy	23	0.015	0.000	0.000
			Max. Vx	2	-0.000	0.000	0.000
		Horizontal	Max Tension	12	1.577	0.000	0.000
			Max. Compression	17	-1.093	0.000	0.000
			Max. Mx	17	1.093	0.010	0.000
			Max. My	2	0.749	0.000	-0.000
			Max. Vy	17	-0.011	0.000	0.000
			Max. Vx	2	0.000	0.000	0.000
		Top Girt	Max Tension	20	0.231	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	14	0.195	0.010	0.000
			Max. My	2	0.144	0.000	-0.000
			Max. Vy	14	-0.011	0.000	0.000
			Max. Vx	2	0.000	0.000	0.000
		Bottom Girt	Max Tension	6	0.399	0.000	0.000
			Max. Compression	12	-0.034	0.000	0.000
			Max. Mx	22	0.255	0.010	0.000
			Max. My	2	0.314	0.000	-0.000
			Max. Vy	21	-0.011	0.000	0.000
			Max. Vx	2	0.000	0.000	0.000
T7	180 - 160	Leg	Max Tension	1	0.000	0.000	0.000
			Max. Compression	15	-75.474	-0.304	0.493
			Max. Mx	11	-44.964	1.083	-0.095
			Max. My	3	-44.324	-0.406	0.955
			Max. Vy	6	-3.283	-0.550	-0.394
			Max. Vx	7	2.953	-0.322	-0.031
		Diagonal	Max Tension	7	5.554	0.000	0.000
			Max. Compression	7	-6.641	0.000	0.000
			Max. Mx	23	0.493	0.023	0.000
			Max. My	2	0.340	0.000	0.000
			Max. Vy	23	-0.019	0.000	0.000
			Max. Vx	2	-0.000	0.000	0.000
		Horizontal	Max Tension	13	8.733	0.000	0.000
			Max. Compression	7	-7.658	0.000	0.000
			Max. Mx	17	1.275	0.010	0.000
			Max. My	2	1.233	0.000	0.000
			Max. Vy	17	-0.011	0.000	0.000
			Max. Vx	2	-0.000	0.000	0.000
		Top Girt	Max Tension	12	0.505	0.000	0.000
			Max. Compression	6	-0.166	0.000	0.000
			Max. Mx	22	0.237	0.010	0.000
			Max. My	2	-0.096	0.000	-0.000
			Max. Vy	21	-0.011	0.000	0.000
			Max. Vx	2	0.000	0.000	0.000
		Bottom Girt	Max Tension	8	0.700	0.000	0.000

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	Page
	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	31 of 60
	Project	Date
	317' GT / AT&T Co-Location	12:59:13 08/24/12
	Client	Designed by
	Nexlink	Rortiz

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T8	160 - 140	Guy A	Max. Compression	2	-0.245	0.000	0.000
			Max. Mx	17	0.283	0.010	0.000
			Max. My	2	-0.245	0.000	-0.000
			Max. Vy	17	-0.011	0.000	0.000
			Max. Vx	2	0.000	0.000	0.000
			Bottom Tension	8	12.658		
			Top Tension	8	12.834		
			Top Cable Vert	8	7.293		
			Top Cable Norm	8	10.560		
			Top Cable Tan	8	0.003		
		Guy B	Bot Cable Vert	8	-6.834		
			Bot Cable Norm	8	10.655		
			Bot Cable Tan	8	0.002		
			Bottom Tension	12	13.106		
			Top Tension	12	13.324		
			Top Cable Vert	12	8.680		
			Top Cable Norm	12	10.109		
			Top Cable Tan	12	0.003		
			Bot Cable Vert	12	-8.161		
			Bot Cable Norm	12	10.255		
		Guy C	Bot Cable Tan	12	0.003		
			Bottom Tension	4	13.253		
			Top Tension	4	13.469		
			Top Cable Vert	4	8.718		
			Top Cable Norm	4	10.267		
			Top Cable Tan	4	0.003		
			Bot Cable Vert	4	-8.202		
			Bot Cable Norm	4	10.410		
			Bot Cable Tan	4	0.003		
			Max Tension	9	10.434	0.000	0.000
		Leg	Max. Compression	3	-4.194	-29.420	0.000
			Max. Mx	4	-2.085	-31.806	-0.000
			Max. My	2	4.101	-24.450	-0.000
			Max. Vy	4	8.560	-31.806	-0.000
			Max. Vx	2	-0.000	-24.450	-0.000
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-80.502	-0.294	0.499
			Max. Mx	23	-77.749	-0.590	-0.007
			Max. My	20	-74.584	-0.275	-0.522
			Max. Vy	6	-3.284	-0.277	-0.379
		Diagonal	Max. Vx	2	2.937	0.338	0.079
			Max Tension	6	4.126	0.000	0.000
			Max. Compression	2	-5.245	0.000	0.000
			Max. Mx	23	0.403	0.021	0.000
			Max. My	2	0.054	0.000	0.000
		Horizontal	Max. Vy	23	-0.017	0.000	0.000
			Max. Vx	2	-0.000	0.000	0.000
			Max Tension	26	1.394	0.000	0.000
			Max. Compression	26	-1.394	0.000	0.000
			Max. Mx	26	1.394	0.010	0.000
		Top Girt	Max. My	2	1.027	0.000	-0.000
			Max. Vy	26	-0.011	0.000	0.000
			Max. Vx	2	0.000	0.000	0.000
			Max Tension	2	0.382	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
		Bottom Girt	Max. Mx	17	0.291	0.010	0.000
			Max. My	2	0.382	0.000	-0.000
			Max. Vy	17	-0.011	0.000	0.000
			Max. Vx	2	0.000	0.000	0.000
			Max Tension	7	0.423	0.000	0.000
			Max. Compression	2	-0.040	0.000	0.000

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	32 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T9	140 - 120	Leg	Max. Mx	16	0.249	0.010	0.000
			Max. My	2	-0.040	0.000	-0.000
			Max. Vy	16	-0.011	0.000	0.000
			Max. Vx	2	0.000	0.000	0.000
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	15	-81.867	-0.320	-0.561
			Max. Mx	23	-79.674	-0.664	-0.006
			Max. My	20	-73.164	-0.283	0.593
			Max. Vy	6	-1.856	-0.148	-0.343
			Max. Vx	2	1.485	0.348	-0.037
		Diagonal	Max Tension	6	2.092	0.000	0.000
			Max. Compression	2	-2.943	0.000	0.000
			Max. Mx	25	-0.215	0.018	0.000
			Max. My	2	-0.202	0.000	0.000
			Max. Vy	25	0.014	0.000	0.000
		Horizontal	Max. Vx	2	-0.000	0.000	0.000
			Max Tension	15	1.418	0.000	0.000
			Max. Compression	15	-1.418	0.000	0.000
			Max. Mx	15	1.418	0.010	0.000
			Max. My	2	1.114	0.000	-0.000
		Top Girt	Max. Vy	15	-0.011	0.000	0.000
			Max. Vx	2	0.000	0.000	0.000
			Max Tension	24	0.333	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	16	0.284	0.010	0.000
		Bottom Girt	Max. My	2	0.275	0.000	-0.000
			Max. Vy	16	-0.011	0.000	0.000
			Max. Vx	2	0.000	0.000	0.000
			Max Tension	3	0.421	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
T10	120 - 100	Leg	Max. Mx	22	0.311	0.010	0.000
			Max. My	2	0.186	0.000	-0.000
			Max. Vy	22	-0.011	0.000	0.000
			Max. Vx	2	0.000	0.000	0.000
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	15	-94.319	-0.380	-0.679
			Max. Mx	11	-64.308	1.141	0.078
			Max. My	7	-70.528	-0.284	-1.222
			Max. Vy	11	5.577	0.140	-0.353
			Max. Vx	9	-4.686	0.749	-0.247
		Diagonal	Max Tension	5	8.048	0.000	0.000
			Max. Compression	11	-9.969	0.000	0.000
			Max. Mx	25	0.159	0.023	0.000
			Max. My	7	4.877	0.000	-0.000
			Max. Vy	25	-0.018	0.000	0.000
		Horizontal	Max. Vx	7	0.000	0.000	0.000
			Max Tension	13	10.047	0.000	0.000
			Max. Compression	7	-9.033	0.000	0.000
			Max. Mx	22	1.581	0.010	0.000
			Max. My	2	1.364	0.000	-0.000
		Top Girt	Max. Vy	22	-0.011	0.000	0.000
			Max. Vx	2	0.000	0.000	0.000
			Max Tension	3	0.585	0.000	0.000
			Max. Compression	9	-0.067	0.000	0.000
			Max. Mx	22	0.297	0.010	0.000
		Bottom Girt	Max. My	2	0.241	0.000	-0.000
			Max. Vy	22	-0.011	0.000	0.000
			Max. Vx	2	0.000	0.000	0.000
			Max Tension	8	0.816	0.000	0.000
			Max. Compression	2	-0.200	0.000	0.000
			Max. Mx	22	0.537	0.010	0.000

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b>	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	<b>Page</b>	33 of 60
	<b>Project</b>	317' GT / AT&T Co-Location	<b>Date</b>	12:59:13 08/24/12
	<b>Client</b>	Nexlink	<b>Designed by</b>	Rortiz

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T11	100 - 80	Guy A	Max. Vy	22	-0.011	0.000	0.000
			Bottom Tension	8	11.533		
			Top Tension	8	11.608		
			Top Cable Vert	8	4.459		
			Top Cable Norm	8	10.717		
			Top Cable Tan	8	0.002		
			Bot Cable Vert	8	-4.211		
			Bot Cable Norm	8	10.736		
		Guy B	Bot Cable Tan	8	0.000		
			Bottom Tension	12	11.588		
			Top Tension	12	11.693		
			Top Cable Vert	12	5.873		
			Top Cable Norm	12	10.112		
			Top Cable Tan	12	0.002		
			Bot Cable Vert	12	-5.584		
			Bot Cable Norm	12	10.154		
		Guy C	Bot Cable Tan	12	0.001		
			Bottom Tension	4	11.718		
			Top Tension	4	11.821		
			Top Cable Vert	4	5.867		
			Top Cable Norm	4	10.262		
			Top Cable Tan	4	0.001		
			Bot Cable Vert	4	-5.581		
			Bot Cable Norm	4	10.303		
		Torque Arm Top	Bot Cable Tan	4	0.001		
			Max Tension	9	11.222	-2.849	0.000
			Max. Compression	9	-5.169	-15.528	-0.000
			Max. Mx	4	-3.435	-21.762	-0.000
			Max. My	2	4.426	-17.716	-0.000
			Max. Vy	4	5.882	-21.762	-0.000
			Max. Vx	2	-0.000	-17.716	-0.000
		Leg	Max Tension	2	6.615	-0.361	-0.035
			Max. Compression	4	-113.416	-0.333	-0.627
			Max. Mx	21	-101.776	-0.899	-0.011
			Max. My	2	-93.302	0.452	-0.811
			Max. Vy	11	5.575	-0.325	-0.354
			Max. Vx	9	-4.685	0.521	0.143
		Diagonal	Max Tension	9	6.878	0.000	0.000
			Max. Compression	11	-8.685	0.000	0.000
			Max. Mx	26	-1.326	0.020	0.000
			Max. My	13	0.562	0.000	0.000
			Max. Vy	26	-0.016	0.000	0.000
			Max. Vx	13	-0.000	0.000	0.000
		Horizontal	Max Tension	4	1.964	0.000	0.000
			Max. Compression	4	-1.964	0.000	0.000
			Max. Mx	18	1.597	0.010	0.000
			Max. My	13	1.880	0.000	-0.000
			Max. Vy	18	0.011	0.000	0.000
			Max. Vx	13	0.000	0.000	0.000
		Top Girt	Max Tension	11	0.490	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	22	0.370	0.010	0.000
			Max. Vy	22	0.011	0.000	0.000
		Bottom Girt	Max Tension	7	0.616	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	22	0.468	0.010	0.000
			Max. My	13	0.412	0.000	-0.000
			Max. Vy	22	0.011	0.000	0.000
			Max. Vx	13	0.000	0.000	0.000
T12	80 - 60	Leg	Max Tension	2	6.884	0.374	-0.097
			Max. Compression	4	-113.979	0.442	0.589

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	34 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T13	60 - 40	Diagonal	Max. Mx	18	-94.940	0.913	-0.046
			Max. My	9	-67.735	-0.250	0.815
			Max. Vy	5	2.196	-0.072	-0.573
			Max. Vx	3	-2.092	0.554	-0.180
			Max Tension	10	2.363	0.000	0.000
			Max. Compression	3	-4.060	0.000	0.000
		Horizontal	Max. Mx	26	-0.359	0.017	0.000
			Max. My	13	-2.276	0.000	0.000
			Max. Vy	26	-0.014	0.000	0.000
			Max. Vx	13	-0.000	0.000	0.000
			Max Tension	4	1.974	0.000	0.000
			Max. Compression	4	-1.974	0.000	0.000
		Top Girt	Max. Mx	18	1.644	0.009	0.000
			Max. My	13	1.894	0.000	-0.000
			Max. Vy	18	-0.010	0.000	0.000
			Max. Vx	13	0.000	0.000	0.000
			Max Tension	11	0.553	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
		Bottom Girt	Max. Mx	22	0.473	0.009	0.000
			Max. My	13	0.441	0.000	-0.000
			Max. Vy	22	-0.010	0.000	0.000
			Max. Vx	13	0.000	0.000	0.000
			Max Tension	16	0.492	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
		Leg	Max. Mx	15	0.464	0.009	0.000
			Max. My	13	0.190	0.000	-0.000
			Max. Vy	15	-0.010	0.000	0.000
			Max. Vx	13	0.000	0.000	0.000
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	4	-116.638	-0.278	-0.675
		Diagonal	Max. Mx	19	-104.320	0.982	-0.045
			Max. My	23	-105.389	0.396	-0.941
			Max. Vy	5	2.195	-0.255	-0.567
			Max. Vx	3	-2.093	0.460	-0.006
			Max Tension	3	2.616	0.000	0.000
			Max. Compression	9	-4.185	0.000	0.000
		Horizontal	Max. Mx	26	-1.103	0.017	0.000
			Max. My	13	-0.056	0.000	0.000
			Max. Vy	26	-0.013	0.000	0.000
			Max. Vx	13	-0.000	0.000	0.000
			Max Tension	7	5.439	0.000	0.000
			Max. Compression	13	-4.022	0.000	0.000
		Top Girt	Max. Mx	14	1.760	0.009	0.000
			Max. My	13	1.930	0.000	-0.000
			Max. Vy	14	-0.010	0.000	0.000
			Max. Vx	13	0.000	0.000	0.000
			Max Tension	22	0.543	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
		Bottom Girt	Max. Mx	15	0.495	0.009	0.000
			Max. My	13	0.433	0.000	-0.000
			Max. Vy	15	-0.010	0.000	0.000
			Max. Vx	13	0.000	0.000	0.000
			Max Tension	7	0.539	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
		Guy A	Max. Mx	14	0.478	0.009	0.000
			Max. My	13	0.325	0.000	-0.000
			Max. Vy	14	-0.010	0.000	0.000
			Max. Vx	13	0.000	0.000	0.000
			Bottom Tension	8	5.730		
			Top Tension	8	5.747		
			Top Cable Vert	8	1.098		



<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b>	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	<b>Page</b>	35 of 60
	<b>Project</b>	317' GT / AT&T Co-Location	<b>Date</b>	12:59:13 08/24/12
	<b>Client</b>	Nexlink	<b>Designed by</b>	Rortiz

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T14	40 - 20	Guy B	Top Cable Norm	8	5.641		
			Top Cable Tan	8	0.001		
			Bot Cable Vert	8	-0.999		
			Bot Cable Norm	8	5.642		
			Bot Cable Tan	8	0.000		
			Bottom Tension	12	5.761		
			Top Tension	12	5.793		
			Top Cable Vert	12	1.954		
			Top Cable Norm	12	5.453		
			Top Cable Tan	12	0.001		
			Bot Cable Vert	12	-1.835		
			Bot Cable Norm	12	5.461		
		Guy C	Bot Cable Tan	12	0.000		
			Bottom Tension	4	5.726		
			Top Tension	4	5.757		
			Top Cable Vert	4	1.899		
			Top Cable Norm	4	5.434		
			Top Cable Tan	4	0.001		
			Bot Cable Vert	4	-1.782		
			Bot Cable Norm	4	5.441		
			Bot Cable Tan	4	0.001		
		Torque Arm Top	Max Tension	9	5.815	0.000	0.000
			Max. Compression	9	-2.626	0.000	0.000
			Max. Mx	25	1.370	-7.516	0.000
			Max. My	13	-1.123	-4.352	-0.000
			Max. Vy	25	2.121	-7.516	0.000
			Max. Vx	13	-0.000	-4.352	-0.000
		Leg	Max Tension	1	0.000	0.000	0.000
			Max. Compression	4	-116.640	-0.296	-0.674
			Max. Mx	23	-108.394	-0.986	-0.025
			Max. My	16	-113.452	-0.494	-0.867
			Max. Vy	5	2.682	-0.233	-0.617
			Max. Vx	13	-2.754	-0.538	0.273
		Diagonal	Max Tension	13	3.405	0.000	0.000
			Max. Compression	7	-4.955	0.000	0.000
			Max. Mx	26	-0.389	0.016	0.000
			Max. My	13	-0.500	0.000	0.000
			Max. Vy	26	0.013	0.000	0.000
			Max. Vx	13	-0.000	0.000	0.000
		Horizontal	Max Tension	4	2.020	0.000	0.000
			Max. Compression	4	-2.020	0.000	0.000
			Max. Mx	14	1.798	0.009	0.000
			Max. My	13	1.926	0.000	-0.000
			Max. Vy	14	-0.010	0.000	0.000
			Max. Vx	13	0.000	0.000	0.000
		Top Girt	Max Tension	16	0.535	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	14	0.487	0.009	0.000
			Max. My	13	0.446	0.000	-0.000
			Max. Vy	14	-0.010	0.000	0.000
			Max. Vx	13	0.000	0.000	0.000
		Bottom Girt	Max Tension	19	0.515	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	14	0.488	0.009	0.000
			Max. My	13	0.262	0.000	-0.000
			Max. Vy	14	-0.010	0.000	0.000
			Max. Vx	13	0.000	0.000	0.000
T15	20 - 6.5	Leg	Max Tension	1	0.000	0.000	0.000
			Max. Compression	17	-113.982	-0.502	-0.829
			Max. Mx	17	-110.488	-1.234	0.543
			Max. My	21	-108.962	0.146	-1.315

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	36 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T16	6.5 - 0	Diagonal	Max. Vy	18	12.778	-1.230	0.535
			Max. Vx	22	14.315	0.150	-1.312
			Max Tension	5	5.388	0.000	0.000
			Max. Compression	3	-6.306	0.000	0.000
			Max. Mx	26	0.784	0.016	0.000
			Max. My	2	-1.069	0.000	0.000
		Horizontal	Max. Vy	26	-0.013	0.000	0.000
			Max. Vx	2	-0.000	0.000	0.000
			Max Tension	17	1.974	0.000	0.000
			Max. Compression	17	-1.974	0.000	0.000
			Max. Mx	14	1.827	0.009	0.000
			Max. My	13	1.733	0.000	-0.000
		Top Girt	Max. Vy	14	-0.010	0.000	0.000
			Max. Vx	13	0.000	0.000	0.000
			Max Tension	12	0.579	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	14	0.491	0.009	0.000
			Max. My	13	0.526	0.000	-0.000
		Bottom Girt	Max. Vy	14	-0.010	0.000	0.000
			Max. Vx	13	0.000	0.000	0.000
			Max Tension	16	8.308	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	14	7.894	0.009	0.000
			Max. My	13	4.328	0.000	-0.000
		Leg	Max. Vy	14	-0.010	0.000	0.000
			Max. Vx	13	0.000	0.000	0.000
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	16	-116.707	0.100	0.123
			Max. Mx	16	-116.090	1.319	0.079
			Max. My	2	-79.504	-0.405	0.184
			Max. Vy	16	1.183	-0.690	0.142
			Max. Vx	2	0.087	-0.190	0.034
		Horizontal	Max Tension	16	11.994	-0.046	-0.006
			Max. Compression	26	-0.293	0.024	0.003
			Max. Mx	2	-0.055	-0.182	-0.002
			Max. My	26	11.391	-0.081	-0.006
			Max. Vy	2	-0.306	-0.182	-0.002
			Max. Vx	8	-0.007	-0.161	-0.003

### Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Mast	Max. Vert	15	325.267	-0.139	0.749
	Max. H <sub>x</sub>	11	208.139	4.740	-0.089
	Max. H <sub>z</sub>	2	206.102	-0.234	5.260
	Max. M <sub>x</sub>	1	0.000	-0.033	0.016
	Max. M <sub>z</sub>	1	0.000	-0.033	0.016
	Max. Torsion	1	0.000	-0.033	0.016
	Min. Vert	1	178.707	-0.033	0.016
	Min. H <sub>x</sub>	5	207.963	-4.878	0.055
	Min. H <sub>z</sub>	8	208.348	-0.052	-4.593
	Min. M <sub>x</sub>	1	0.000	-0.033	0.016
	Min. M <sub>z</sub>	1	0.000	-0.033	0.016
	Min. Torsion	1	0.000	-0.033	0.016
	Max. Vert	10	-17.244	-12.887	7.440
Guy C @ 231 ft					

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 84514.001.0001- Storrs-UConn, CT (Site # CT1077)	<b>Page</b> 37 of 60
	<b>Project</b> 317' GT / AT&T Co-Location	<b>Date</b> 12:59:13 08/24/12
	<b>Client</b> Nexlink	<b>Designed by</b> Rortiz

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Elev -21 ft					
Azimuth 240 deg					
	Max. H <sub>x</sub>	10	-17.244	-12.887	7.440
	Max. H <sub>z</sub>	4	-81.349	-84.406	48.751
	Min. Vert	4	-81.349	-84.406	48.751
	Min. H <sub>x</sub>	4	-81.349	-84.406	48.751
	Min. H <sub>z</sub>	10	-17.244	-12.887	7.440
Guy B @ 231 ft	Max. Vert	6	-17.165	12.713	7.348
Elev -23 ft					
Azimuth 120 deg					
	Max. H <sub>x</sub>	12	-82.139	84.049	48.507
	Max. H <sub>z</sub>	12	-82.139	84.049	48.507
	Min. Vert	12	-82.139	84.049	48.507
	Min. H <sub>x</sub>	6	-17.165	12.713	7.348
	Min. H <sub>z</sub>	6	-17.165	12.713	7.348
Guy A @ 231 ft	Max. Vert	2	-13.328	-0.007	-13.931
Elev 14 ft					
Azimuth 0 deg					
	Max. H <sub>x</sub>	11	-41.231	3.472	-56.398
	Max. H <sub>z</sub>	2	-13.328	-0.007	-13.931
	Min. Vert	8	-68.842	0.036	-99.508
	Min. H <sub>x</sub>	5	-41.429	-3.470	-56.192
	Min. H <sub>z</sub>	8	-68.842	0.036	-99.508

## 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	178.707	0.033	-0.016	0.000	0.000	0.000
Dead+Wind 0 deg - No Ice+Guy	206.102	0.234	-5.260	0.000	0.000	0.000
Dead+Wind 30 deg - No Ice+Guy	210.132	2.426	-4.309	0.000	0.000	0.000
Dead+Wind 60 deg - No Ice+Guy	212.250	4.083	-2.433	0.000	0.000	0.000
Dead+Wind 90 deg - No Ice+Guy	207.963	4.878	-0.055	0.000	0.000	0.000
Dead+Wind 120 deg - No Ice+Guy	201.117	4.630	2.419	0.000	0.000	0.000
Dead+Wind 150 deg - No Ice+Guy	205.408	2.447	4.064	0.000	0.000	0.000
Dead+Wind 180 deg - No Ice+Guy	208.348	0.052	4.593	0.000	0.000	0.000
Dead+Wind 210 deg - No Ice+Guy	205.774	-2.459	4.096	0.000	0.000	0.000
Dead+Wind 240 deg - No Ice+Guy	201.339	-4.473	2.570	0.000	0.000	0.000
Dead+Wind 270 deg - No Ice+Guy	208.139	-4.740	0.089	0.000	0.000	0.000
Dead+Wind 300 deg - No Ice+Guy	212.357	-3.942	-2.275	0.000	0.000	0.000
Dead+Wind 330 deg - No Ice+Guy	210.327	-2.095	-4.288	0.000	0.000	0.000
Dead+Ice+Temp+Guy	316.417	0.099	-0.004	0.000	0.000	0.000
Dead+Wind 0 deg+Ice+Temp+Guy	325.267	0.139	-0.749	0.000	0.000	0.000

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	38 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

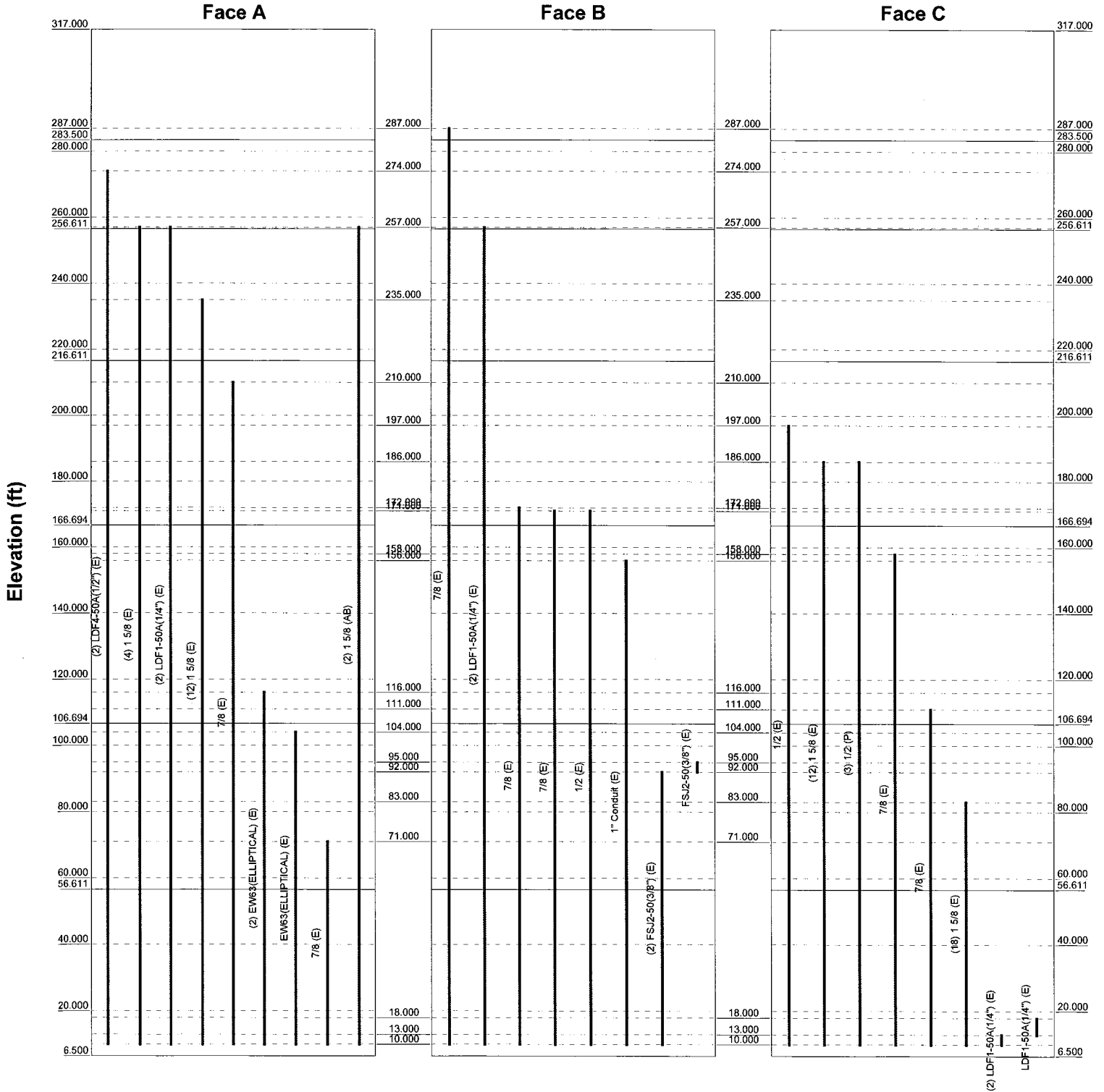
Load Combination	Vertical K	Shear <sub>x</sub> K	Shear <sub>y</sub> K	Overturing Moment, M <sub>x</sub> kip-ft	Overturing Moment, M <sub>y</sub> kip-ft	Torque kip-ft
Dead+Wind 30	323.532	0.492	-0.652	0.000	0.000	0.000
deg+Ice+Temp+Guy						
Dead+Wind 60	321.662	0.741	-0.408	0.000	0.000	0.000
deg+Ice+Temp+Guy						
Dead+Wind 90	321.823	0.834	-0.041	0.000	0.000	0.000
deg+Ice+Temp+Guy						
Dead+Wind 120	322.120	0.754	0.358	0.000	0.000	0.000
deg+Ice+Temp+Guy						
Dead+Wind 150	320.349	0.434	0.659	0.000	0.000	0.000
deg+Ice+Temp+Guy						
Dead+Wind 180	319.130	0.102	0.752	0.000	0.000	0.000
deg+Ice+Temp+Guy						
Dead+Wind 210	320.434	-0.250	0.665	0.000	0.000	0.000
deg+Ice+Temp+Guy						
Dead+Wind 240	322.258	-0.538	0.388	0.000	0.000	0.000
deg+Ice+Temp+Guy						
Dead+Wind 270	321.928	-0.624	-0.014	0.000	0.000	0.000
deg+Ice+Temp+Guy						
Dead+Wind 300	321.734	-0.532	-0.377	0.000	0.000	0.000
deg+Ice+Temp+Guy						
Dead+Wind 330	323.590	-0.242	-0.647	0.000	0.000	0.000
deg+Ice+Temp+Guy						
Dead+Wind 0 deg - Service+Guy	183.232	0.104	-1.730	0.000	0.000	0.000
Dead+Wind 30 deg - Service+Guy	182.677	0.897	-1.476	0.000	0.000	0.000
Dead+Wind 60 deg - Service+Guy	182.134	1.475	-0.881	0.000	0.000	0.000
Dead+Wind 90 deg - Service+Guy	181.922	1.705	-0.073	0.000	0.000	0.000
Dead+Wind 120 deg - Service+Guy	181.859	1.524	0.770	0.000	0.000	0.000
Dead+Wind 150 deg - Service+Guy	181.338	0.831	1.403	0.000	0.000	0.000
Dead+Wind 180 deg - Service+Guy	181.110	0.040	1.609	0.000	0.000	0.000
Dead+Wind 210 deg - Service+Guy	181.381	-0.789	1.413	0.000	0.000	0.000
Dead+Wind 240 deg - Service+Guy	181.903	-1.427	0.824	0.000	0.000	0.000
Dead+Wind 270 deg - Service+Guy	181.940	-1.614	-0.022	0.000	0.000	0.000
Dead+Wind 300 deg - Service+Guy	182.131	-1.383	-0.826	0.000	0.000	0.000
Dead+Wind 330 deg - Service+Guy	182.680	-0.739	-1.469	0.000	0.000	0.000


## Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.000	-66.862	0.000	-0.000	66.862	-0.001	0.002%
2	0.708	-67.912	-70.891	-0.708	67.912	70.890	0.001%
3	35.862	-67.071	-61.114	-35.862	67.071	61.113	0.002%
4	61.639	-66.193	-35.380	-61.640	66.193	35.377	0.003%
5	71.252	-66.852	-0.340	-71.250	66.852	0.341	0.002%
6	62.041	-67.513	34.989	-62.040	67.513	-34.989	0.001%

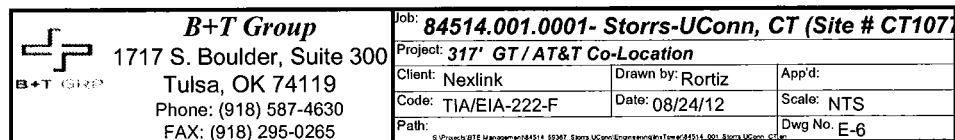
# Feedline Distribution Chart 6'6" - 317'

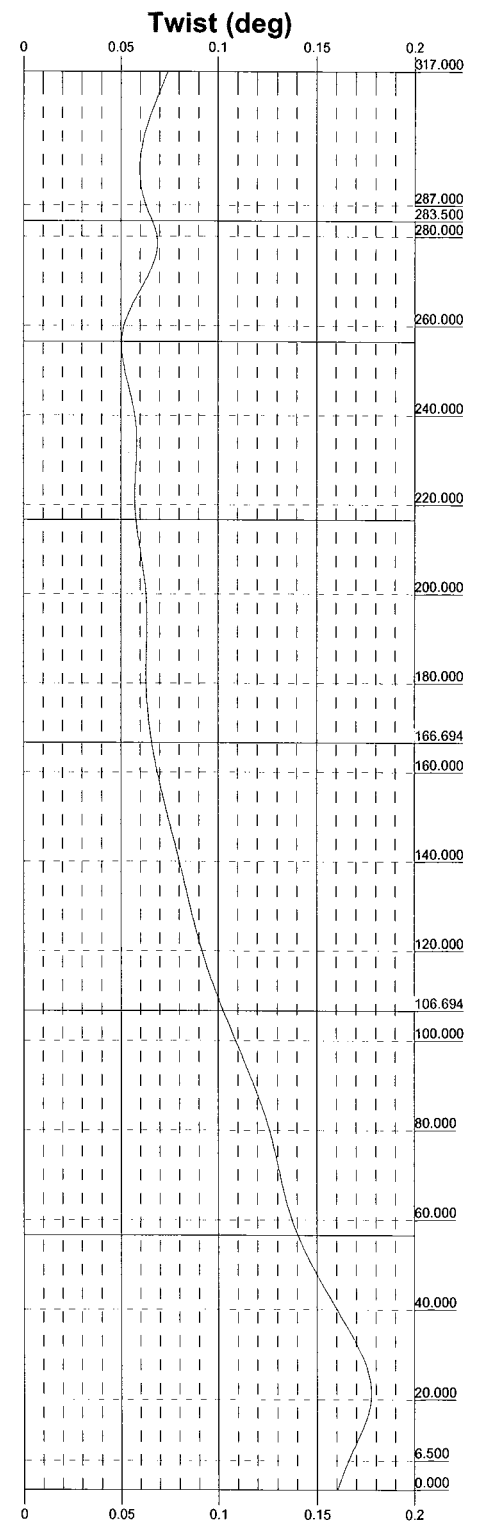
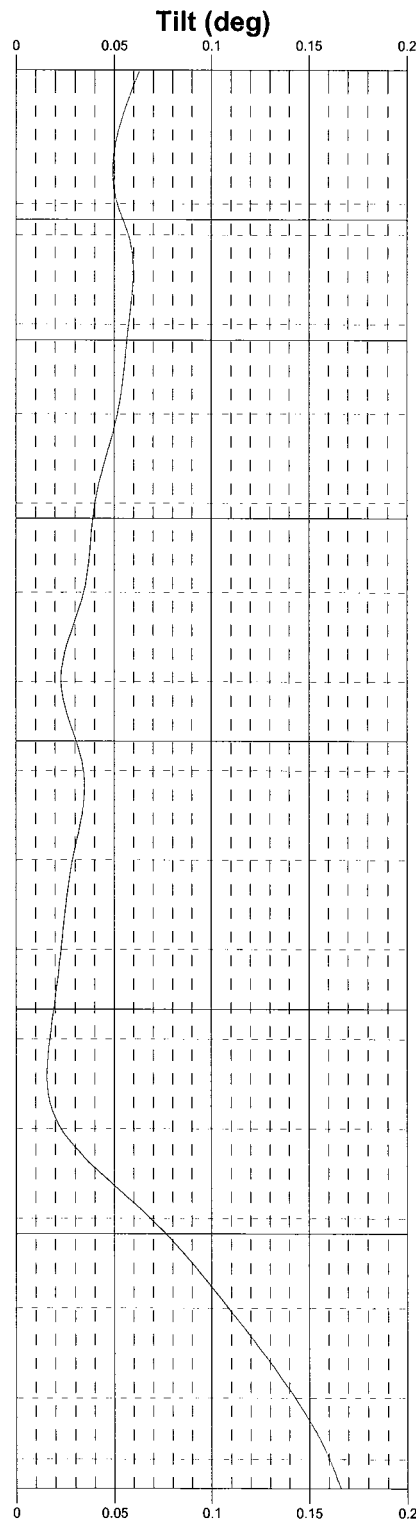
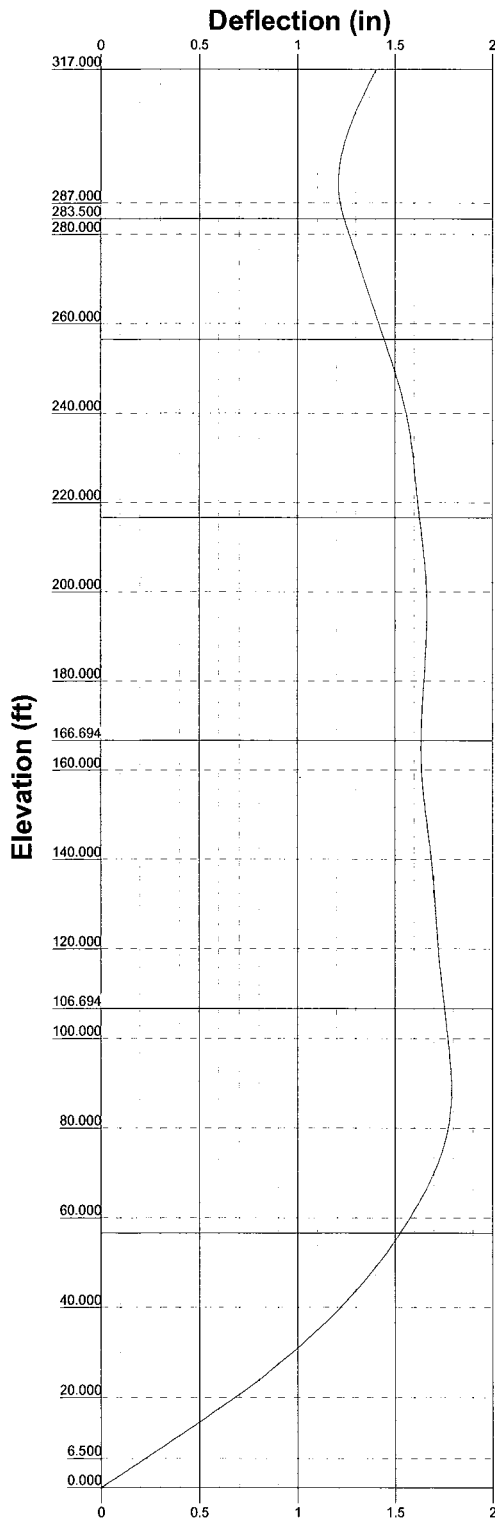
Round Flat App In Face App Out Face Truss Leg



 <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job: 84514.001.0001- Storrs-UConn, CT (Site # CT107)</b>		
	<b>Project: 317' GT/AT&amp;T Co-Location</b>		
	Client: Nexlink	Drawn by: Rortiz	App'd:
	Code: TIA/EIA-222-F	Date: 08/24/12	Scale: NTS
	Path:	Dwg No. E-7	

**Maximum Values**  
**Anchor 'C'@231 ft Azimuth 240 deg Elev -21 ft**  
**Plane through centroid of tower**





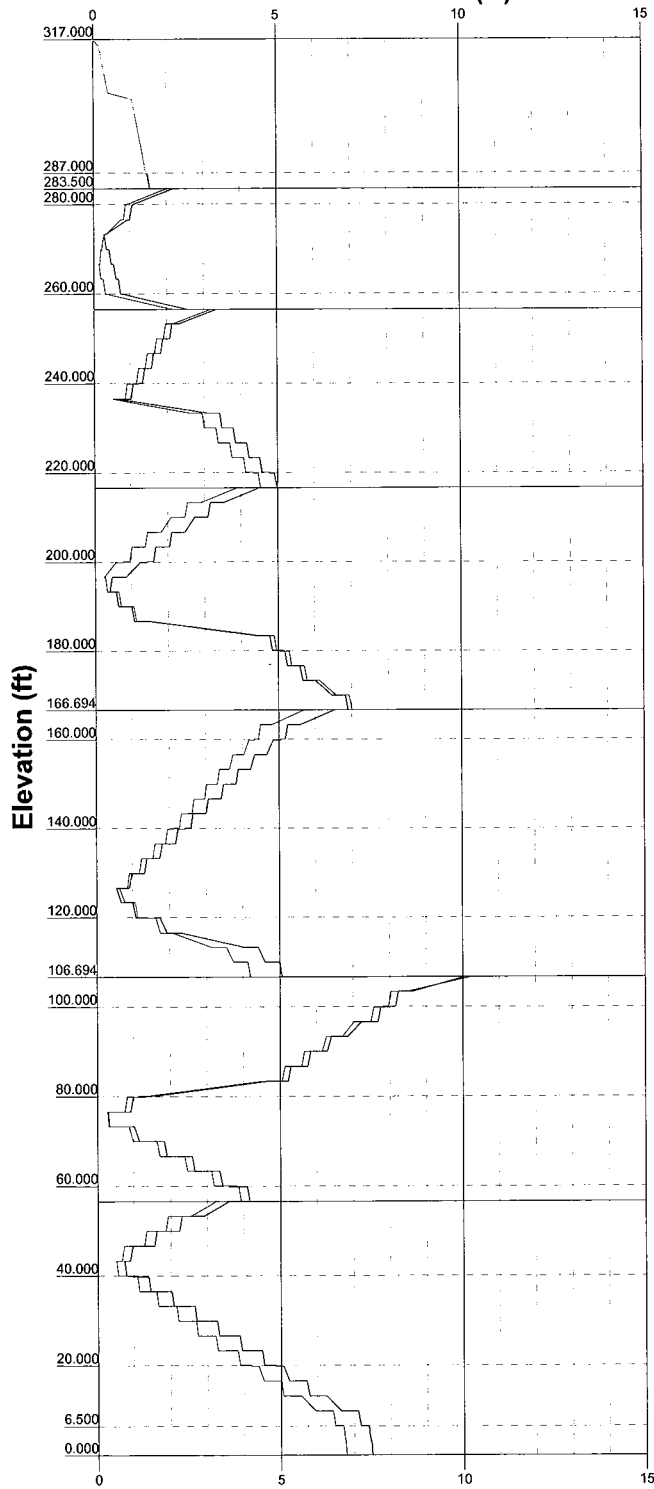
**B+T Group**  
 1717 S. Boulder, Suite 300  
 Tulsa, OK 74119  
 Phone: (918) 587-4630  
 FAX: (918) 295-0265

Job: **84514.001.0001- Storrs-UConn, CT (Site # CT107)**  
 Project: **317' GT/AT&T Co-Location**  
 Client: Nexlink Drawn by: Rortiz App'd:  
 Code: TIA/EIA-222-F Date: 08/24/12 Scale: NTS  
 Path: S:\Projects\84514.001.0001- Storrs-UConn\Drawings\TIA\317' GT/AT&T Co-Location.dwg Dwg No: E-5

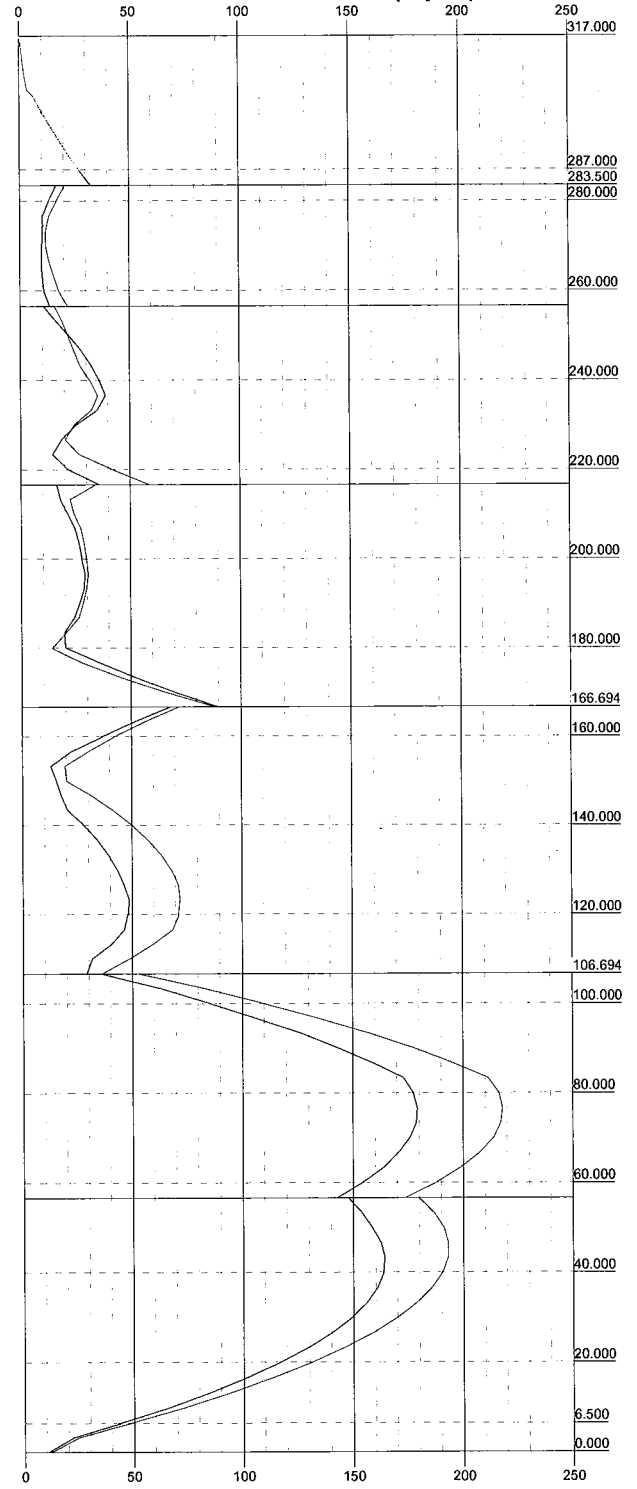
—— Vx      —— Vz

—— Mx      —— Mz

Global Mast Shear (K)



Global Mast Moment (kip-ft)



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

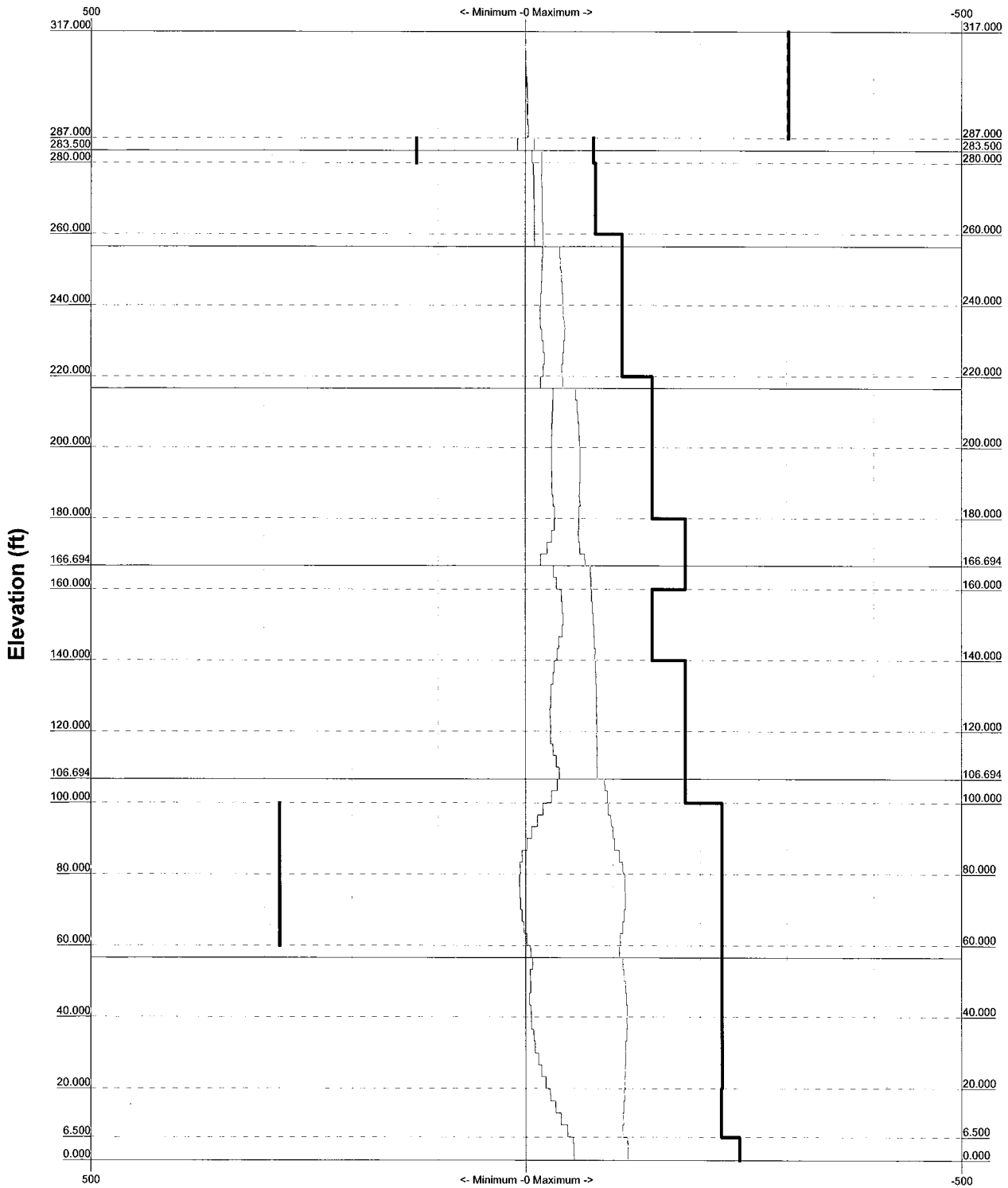
Job: <b>84514.001.0001- Storrs-UConn, CT (Site # CT107)</b>		
Project: <b>317' GT / AT&amp;T Co-Location</b>		
Client: Nexlink	Drawn by: Rortiz	App'd:
Code: TIA/EIA-222-F	Date: 08/24/12	Scale: NTS
Path:	Dwg No: E-4	



# TIA/EIA-222-F - 85 mph/38 mph 1.000 in Ice

Leg Capacity ———

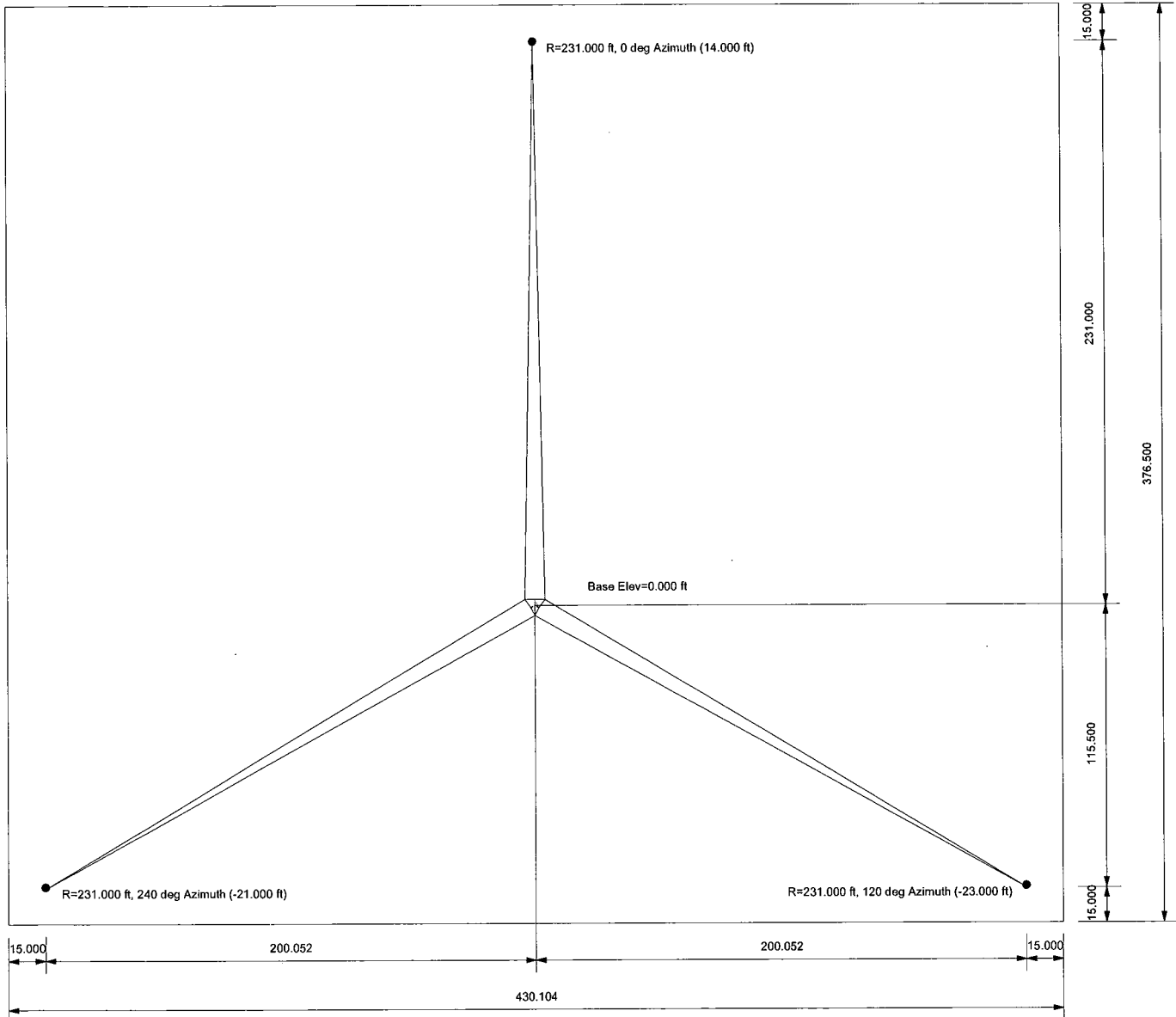
Leg Compression (K)




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

Job: <b>84514.001.0001- Storrs-UConn, CT (Site # CT107)</b>		
Project: <b>317' GT / AT&amp;T Co-Location</b>		
Client: Nexlink	Drawn by: Rortiz	App'd:
Code: TIA/EIA-222-F	Date: 08/24/12	Scale: NTS
Path:	Dwg No. E-3	

**Plot Plan**  
Total Area - 3.72 Acres



	<b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265		Job: <b>84514.001.0001- Storrs-UConn, CT (Site # CT107)</b>	
	Project: <b>317' GT / AT&amp;T Co-Location</b>			
	Client: Nexlink	Drawn by: Rortiz	App'd:	
	Code: TIA/EIA-222-F	Date: 08/24/12	Scale: NTS	
	Path:		Dwg No. E-2	

Section	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	1222	1223	1224	1225	1226	1227	1228	1229	1230	1231	1232	1233	1234	1235	1236	1237	1238	1239	1240	1241	1242	1243	1244	1245	1246	1247	1248	1249	1250	1251	1252	1253	1254	1255	1256	1257	1258	1259	1260	1261	1262	1263	1264	1265	1266	1267	1268	1269	1270	1271	1272	1273	1274	1275	1276	1277	1278	1279	1280	1281	1282	1283	1284	1285	1286	1287	1288	1289	1290	1291	1292	1293	1294	1295	1296	1297	1298	1299	1300	1301	1302	1303	1304	1305	1306	1307	1308	1309	1310	1311	1312	1313	1314	1315	1316	1317	1318	1319	1320	1321	1322	1323	1324	1325	1326	1327	1328	1329	1330	1331	1332	1333	1334	1335	1336	1337	1338	1339	1340	1341	1342	1343	1344	1345	1346	1347	1348	1349	1350	1351	1352	1353	1354	1355	1356	1357	1358	1359	1360	1361	1362	1363	1364	1365	1366	1367	1368	1369	1370	1371	1372	1373	1374	1375	1376	1377	1378	1379	1380	1381	1382	1383	1384	1385	1386	1387	1388	1389	1390	1391	1392	1393	1394	1395	1396	1397	1398	1399	1400	1401	1402	1403	1404	1405	1406	1407	1408	1409	1410	1411	1412	1413	1414	1415	1416	1417	1418	1419	1420	1421	1422	1423	1424	1425	1426	1427	1428	1429	1430	1431	1432	1433	1434	1435	1436	1437	1438	1439	1440	1441	1442	1443	1444	1445	1446	1447	1448	1449	1450	1451	1452	1453	1454	1455	1456	1457	1458	1459	1460	1461	1462	1463	1464	1465	1466	1467	1468	1469	1470	1471	1472	1473	1474	1475	1476	1477	1478	1479	1480	1481	1482	1483	1484	1485	1486	1487	1488	1489	1490	1491	1492	1493	1494	1495	1496	1497	1498	1499	1500	1501	1502	1503	1504	1505	1506	1507	1508	1509	1510	1511	1512	1513	1514	1515	1516	1517	1518	1519	1520	1521	1522	1523	1524	1525	1526	1527	1528	1529	1530	1531	1532	1533	1534	1535	1536	1537	1538	1539	1540	1541	1542	1543	1544	1545	1546	1547	1548	1549	1550	1551	1552	1553	1554	1555	1556	1557	1558	1559	1560	1561	1562	1563	1564	1565	1566	1567	1568	1569	1570	1571	1572	1573	1574	1575	1576	1577	1578	1579	1580	1581	1582	1583	
---------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	--

**APPENDIX A**  
**TNXTOWER OUTPUT**

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T7	180 - 160	Torque Arm Top@166.694	C15x40	645	-2.128	140.282	30.2	Pass
T10	120 - 100	Torque Arm Top@106.694	C15x40	625	-5.062	140.282	22.2	Pass
T13	60 - 40	Torque Arm Top@56.6111	C15x40	617	-2.499	140.922	8.7	Pass
Summary								
						Pole (L1)	24.2	Pass
						Leg (T8)	68.6	Pass
						Diagonal (T15)	39.8	Pass
						Horizontal (T10)	79.0	Pass
						Top Girt (T1)	42.9	Pass
						Bottom Girt (T15)	46.7	Pass
						Guy A (T13)	55.3	Pass
						Guy B (T13)	55.7	Pass
						Guy C (T10)	55.8	Pass
						Torque Arm Top (T1)	36.9	Pass
						Bolt Checks	2.1	Pass
						Rating =	79.0	Pass

**Table 6 - Tower Component Stresses vs. Capacity**

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Base Foundation	Base	--	--
1	Guy Anchor Foundation	Base	--	--

<b>Structure Rating (max from all components) =</b>	<b>79.0%</b>
---	--------------

Notes:

- 1) The base and guy anchor foundations could not be analyzed as part of this analysis, as foundation and geotechnical information was not available. It is assumed that the foundations were designed with capacities similar to the tower itself and are therefore considered sufficient for the purposes of this analysis.

#### 4.1) Recommendations

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

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T7	180 - 160	Top Girt	1	234	0.505	22.614	2.2	Pass
T8	160 - 140	Top Girt	1	277	0.382	22.614	1.7	Pass
T9	140 - 120	Top Girt	1	317	0.299	16.965	1.8	Pass
T10	120 - 100	Top Girt	1	359	0.585	22.614	2.6	Pass
T11	100 - 80	Top Girt	1	401	0.415	16.965	2.4	Pass
T12	80 - 60	Top Girt	1	443	0.456	16.965	2.7	Pass
T13	60 - 40	Top Girt	1	487	0.494	16.965	2.9	Pass
T14	40 - 20	Top Girt	1	527	0.487	16.965	2.9	Pass
T15	20 - 6.5	Top Girt	1	569	0.491	16.965	2.9	Pass
T1	287 - 280	Bottom Girt	1	8	-0.310	8.344	3.7	Pass
T2	280 - 260	Bottom Girt	1	26	-0.314	11.122	2.8	Pass
T3	260 - 240	Bottom Girt	1	70	0.273	22.614	1.2	Pass
T4	240 - 220	Bottom Girt	1	110	-0.302	11.226	2.7	Pass
T5	220 - 200	Bottom Girt	1	154	0.314	22.614	1.4	Pass
T6	200 - 180	Bottom Girt	1	195	0.399	22.614	1.8	Pass
T7	180 - 160	Bottom Girt	1	238	0.700	22.614	3.1	Pass
T8	160 - 140	Bottom Girt	1	280	0.423	22.614	1.9	Pass
T9	140 - 120	Bottom Girt	1	321	0.342	16.965	2.0	Pass
T10	120 - 100	Bottom Girt	1	364	0.816	22.614	3.6	Pass
T11	100 - 80	Bottom Girt	1	406	0.616	22.614	2.7	Pass
T12	80 - 60	Bottom Girt	1	448	0.447	16.965	2.6	Pass
T13	60 - 40	Bottom Girt	1	490	0.483	16.965	2.8	Pass
T14	40 - 20	Bottom Girt	1	532	0.494	16.965	2.9	Pass
T15	20 - 6.5	Bottom Girt	1	574	7.921	16.965	46.7	Pass
T1	287 - 280	Guy A@283.5	3/4	680	10.762	29.150	36.9	Pass
T3	260 - 240	Guy A@256.611	3/4	668	11.115	29.150	38.1	Pass
T5	220 - 200	Guy A@216.611	3/4	656	11.918	29.150	40.9	Pass
T7	180 - 160	Guy A@166.694	3/4	644	12.834	29.150	44.0	Pass
T10	120 - 100	Guy A@106.694	5/8	632	11.608	21.200	54.8	Pass
T13	60 - 40	Guy A@56.6111	7/16	620	5.747	10.400	55.3	Pass
T1	287 - 280	Guy B@283.5	3/4	675	11.416	29.150	39.2	Pass
T3	260 - 240	Guy B@256.611	3/4	663	11.761	29.150	40.3	Pass
T5	220 - 200	Guy B@216.611	3/4	651	12.496	29.150	42.9	Pass
T7	180 - 160	Guy B@166.694	3/4	639	13.324	29.150	45.7	Pass
T10	120 - 100	Guy B@106.694	5/8	627	11.694	21.200	55.2	Pass
T13	60 - 40	Guy B@56.6111	7/16	615	5.793	10.400	55.7	Pass
T1	287 - 280	Guy C@283.5	3/4	671	11.304	29.150	38.8	Pass
T3	260 - 240	Guy C@256.611	3/4	659	11.596	29.150	39.8	Pass
T5	220 - 200	Guy C@216.611	3/4	647	12.510	29.150	42.9	Pass
T7	180 - 160	Guy C@166.694	3/4	635	13.469	29.150	46.2	Pass
T10	120 - 100	Guy C@106.694	5/8	623	11.821	21.200	55.8	Pass
T13	60 - 40	Guy C@56.6111	7/16	611	5.757	10.400	55.4	Pass
T1	287 - 280	Torque Arm Top@283.5	C15x40	677	2.935	254.880	36.9	Pass
T3	260 - 240	Torque Arm Top@256.611	C15x40	665	3.123	254.880	35.7	Pass
T5	220 - 200	Torque Arm Top@216.611	C15x40	653	3.429	254.880	33.7	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T8	160 - 140	Leg	2 1/2	273	-74.503	108.567	68.6	Pass
T9	140 - 120	Leg	2 3/4	316	-77.140	137.244	56.2	Pass
T10	120 - 100	Leg	2 3/4	356	-87.990	137.244	64.1	Pass
T11	100 - 80	Leg	3	398	-92.838	168.898	55.0	Pass
T12	80 - 60	Leg	3	440	-95.639	168.898	56.6	Pass
T13	60 - 40	Leg	3	482	-101.603	168.898	60.2	Pass
T14	40 - 20	Leg	3	525	-103.823	168.898	61.5	Pass
T15	20 - 6.5	Leg	3	566	-105.505	168.393	62.7	Pass
T16	6.5 - 0	Leg	3	596	-111.250	183.810	60.5	Pass
T1	287 - 280	Diagonal	1 3/8	19	-1.514	21.223	7.1	Pass
T2	280 - 260	Diagonal	1 3/8	31	-1.418	21.707	6.5	Pass
T3	260 - 240	Diagonal	1 3/8	97	-3.157	21.895	14.4	Pass
T4	240 - 220	Diagonal	1 3/8	113	-4.337	21.895	19.8	Pass
T5	220 - 200	Diagonal	1 1/4	185	-4.198	15.591	26.9	Pass
T6	200 - 180	Diagonal	1 1/4	198	-5.331	15.591	34.2	Pass
T7	180 - 160	Diagonal	1 1/2	252	-6.641	29.463	22.5	Pass
T8	160 - 140	Diagonal	1 3/8	313	-5.245	22.083	23.8	Pass
T9	140 - 120	Diagonal	1 1/4	355	-2.943	15.773	18.7	Pass
T10	120 - 100	Diagonal	1 1/2	371	-9.969	29.463	33.8	Pass
T11	100 - 80	Diagonal	1 3/8	437	-8.685	22.455	38.7	Pass
T12	80 - 60	Diagonal	1 1/4	451	-4.060	15.954	25.4	Pass
T13	60 - 40	Diagonal	1 1/4	523	-4.185	15.954	26.2	Pass
T14	40 - 20	Diagonal	1 1/4	534	-4.955	15.954	31.1	Pass
T15	20 - 6.5	Diagonal	1 1/4	577	-6.306	15.842	39.8	Pass
T1	287 - 280	Horizontal	1	14	-2.118	11.122	19.0	Pass
T2	280 - 260	Horizontal	1	34	-0.331	8.344	4.0	Pass
T3	260 - 240	Horizontal	1	98	-2.817	11.226	25.1	Pass
T4	240 - 220	Horizontal	1	116	-0.661	8.421	7.8	Pass
T5	220 - 200	Horizontal	1	182	-5.277	11.328	46.6	Pass
T6	200 - 180	Horizontal	1	202	-0.996	8.498	11.7	Pass
T7	180 - 160	Horizontal	1	250	-7.658	11.431	67.0	Pass
T8	160 - 140	Horizontal	1	284	-1.290	8.498	15.2	Pass
T9	140 - 120	Horizontal	1	327	-1.336	8.575	15.6	Pass
T10	120 - 100	Horizontal	1	376	-9.033	11.431	79.0	Pass
T11	100 - 80	Horizontal	1	410	-1.608	8.652	18.6	Pass
T12	80 - 60	Horizontal	1	452	-1.657	8.652	19.1	Pass
T13	60 - 40	Horizontal	1	518	-4.022	11.533	34.9	Pass
T14	40 - 20	Horizontal	1	537	-1.798	8.652	20.8	Pass
T15	20 - 6.5	Horizontal	1	584	-1.827	8.652	21.1	Pass
T16	6.5 - 0	Horizontal	3x3/8	601	11.457	24.300	47.1	Pass
T1	287 - 280	Top Girt	1	5	7.282	16.965	42.9	Pass
T2	280 - 260	Top Girt	1	23	0.309	16.965	1.8	Pass
T3	260 - 240	Top Girt	1	65	0.475	22.614	2.1	Pass
T4	240 - 220	Top Girt	1	109	0.245	22.614	1.1	Pass
T5	220 - 200	Top Girt	1	151	0.538	22.614	2.4	Pass
T6	200 - 180	Top Girt	1	191	0.195	16.965	1.2	Pass

### 3) ANALYSIS PROCEDURE

**Table 4 - Documents Provided**

Document	Remarks	Reference	Source
Tower Data	Tower Mapping by BTE Management Group, LLC, Job Number-15266	Date:7/30/2012	On File
Foundation Data	<i>Information Unknown</i>		
Soil Properties	<i>Information Unknown</i>		
Existing Loading	Tower Mapping by BTE Management Group, LLC, Job Number-15266	Date:7/30/2012	On File
Proposed Loading	Equipment Mod Form	Date:03/19/2012	Siterra

#### 3.1) Analysis Method

tnxTower (version 6.0.4.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

#### 3.2) Assumptions

- 1) Tower and structures were built in accordance with the manufacturer's specifications.
- 2) The tower and structures have been maintained in accordance with the manufacturer's specification.
- 3) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
- 4) When applicable, transmission cables are considered as structural components for calculating wind loads as allowed by TIA/EIA-222-F.
- 5) Mount areas and weights are assumed based on photographs provided.
- 6) Existing loading was taken from the Tower Mapping
- 7) A total of (12) TMA's were reported at the 186 ft level in the mapping, (6) Powerwave-LGP21901 and (6) Unknown-14"x9"x3" TMA. The (6) unknown are called out to be removed because the AT&T Modifications Request for Information Form calls out for (6) Existing Powerwave TMA's to remain existing.

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

### 4) ANALYSIS RESULTS

**Table 5 - Section Capacity (Summary)**

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L1	317 - 287	Pole	P12x.5	1	-2.384	302.113	24.2	Pass
T1	287 - 280	Leg	2	2	-17.874	58.464	30.6	Pass
T2	280 - 260	Leg	2	20	-19.124	60.147	31.8	Pass
T3	260 - 240	Leg	2 1/4	62	-35.765	82.868	43.2	Pass
T4	240 - 220	Leg	2 1/4	104	-38.139	82.868	46.0	Pass
T5	220 - 200	Leg	2 1/2	146	-54.175	108.567	49.9	Pass
T6	200 - 180	Leg	2 1/2	190	-57.508	108.567	53.0	Pass
T7	180 - 160	Leg	2 3/4	231	-72.230	137.244	52.6	Pass



<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	16 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Section	Elevation	Face	$A_R$	$A_R$	$A_F$	$A_F$
	ft		ft <sup>2</sup>	Ice ft <sup>2</sup>	ft <sup>2</sup>	Ice ft <sup>2</sup>
T6	200.000-180.000	C	0.000	0.000	0.000	0.000
		A	3.069	18.214	0.000	0.000
		B	0.173	2.410	0.000	0.000
T7	180.000-160.000	C	0.896	5.350	0.000	0.000
		A	3.431	18.650	0.000	0.000
		B	0.405	4.675	0.000	0.000
T8	160.000-140.000	C	3.199	16.130	0.000	0.000
		A	3.250	18.048	0.000	0.000
		B	0.661	7.224	0.000	0.000
T9	140.000-120.000	C	3.156	16.829	0.000	0.000
		A	3.069	17.418	0.000	0.000
		B	0.654	7.184	0.000	0.000
T10	120.000-100.000	C	2.993	16.394	0.000	0.000
		A	3.911	20.224	0.000	0.000
		B	0.731	7.259	0.000	0.000
T11	100.000-80.000	C	3.428	17.438	0.000	0.000
		A	4.008	21.147	0.000	0.000
		B	0.732	7.620	0.000	0.000
T12	80.000-60.000	C	3.758	19.222	0.000	0.000
		A	3.857	20.772	0.000	0.000
		B	0.704	7.394	0.000	0.000
T13	60.000-40.000	C	5.946	28.796	0.000	0.000
		A	3.916	20.469	0.000	0.000
		B	0.704	6.996	0.000	0.000
T14	40.000-20.000	C	5.946	27.869	0.000	0.000
		A	3.916	19.520	0.000	0.000
		B	0.704	6.540	0.000	0.000
T15	20.000-6.500	C	5.946	26.787	0.000	0.000
		A	1.995	9.966	0.000	0.000
		B	0.359	3.339	0.000	0.000
T16	6.500-0.000	C	3.046	13.990	0.000	0.000
		A	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000

### Feed Line Center of Pressure

Section	Elevation	$CP_x$	$CP_z$	$CP_x$	$CP_z$
	ft	in	in	Ice in	Ice in
L1	317.000-287.000	0.000	0.000	0.000	0.000
T1	287.000-280.000	0.050	-1.081	0.050	-1.076
T2	280.000-260.000	0.022	-1.475	0.007	-1.703
T3	260.000-240.000	-2.170	-4.969	-0.494	-3.206
T4	240.000-220.000	-2.987	-6.378	-0.926	-3.846
T5	220.000-200.000	-3.067	-6.691	-1.057	-4.242
T6	200.000-180.000	-3.162	-4.644	-1.510	-3.183
T7	180.000-160.000	-2.845	-1.646	-1.448	-1.911
T8	160.000-140.000	-2.439	-1.923	-0.877	-2.284
T9	140.000-120.000	-2.355	-1.916	-0.819	-2.282
T10	120.000-100.000	-2.721	-1.702	-0.764	-2.036
T11	100.000-80.000	-2.822	-1.034	-0.806	-1.623
T12	80.000-60.000	-2.797	1.748	-1.074	0.245
T13	60.000-40.000	-2.860	1.758	-1.212	0.329
T14	40.000-20.000	-2.860	1.758	-1.253	0.403
T15	20.000-6.500	-2.663	1.640	-1.257	0.457
T16	6.500-0.000	0.000	0.000	0.000	0.000

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	15 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	$A_R$ ft <sup>2</sup>	$A_F$ ft <sup>2</sup>	$C_A A_A$ In Face ft <sup>2</sup>	$C_A A_A$ Out Face ft <sup>2</sup>	Weight K
T6	200.000-180.000	B	1.234	10.749	0.000	0.000	0.000	0.182
		C		0.000	0.000	0.000	0.000	0.000
		A		38.050	42.450	0.000	0.000	1.879
T7	180.000-160.000	B	1.217	10.650	0.000	0.000	0.000	0.179
		C		8.065	15.580	0.000	0.000	0.435
		A		37.723	42.450	0.000	0.000	1.861
T8	160.000-140.000	B	1.199	20.099	0.000	0.000	0.000	0.300
		C		17.407	51.933	0.000	0.000	1.329
		A		37.360	42.450	0.000	0.000	1.840
T9	140.000-120.000	B	1.179	31.944	0.000	0.000	0.000	0.452
		C		22.489	51.933	0.000	0.000	1.385
		A		36.952	42.450	0.000	0.000	1.817
T10	120.000-100.000	B	1.155	32.752	0.000	0.000	0.000	0.458
		C		22.801	51.933	0.000	0.000	1.375
		A		43.685	46.263	0.000	0.000	1.956
T11	100.000-80.000	B	1.128	32.284	0.000	0.000	0.000	0.445
		C		25.625	51.933	0.000	0.000	1.397
		A		50.153	47.217	0.000	0.000	2.034
T12	80.000-60.000	B	1.094	35.085	0.000	0.000	0.000	0.490
		C		28.791	59.716	0.000	0.000	1.622
		A		52.284	47.217	0.000	0.000	2.028
T13	60.000-40.000	B	1.051	35.420	0.000	0.000	0.000	0.497
		C		34.122	103.817	0.000	0.000	2.804
		A		53.459	47.217	0.000	0.000	1.998
T14	40.000-20.000	B	1.000	34.410	0.000	0.000	0.000	0.470
		C		33.256	103.817	0.000	0.000	2.737
		A		51.925	47.217	0.000	0.000	1.928
T15	20.000-6.500	B	1.000	33.217	0.000	0.000	0.000	0.438
		C		32.233	103.817	0.000	0.000	2.660
		A		25.962	23.608	0.000	0.000	0.964
T16	6.500-0.000	B	1.000	16.608	0.000	0.000	0.000	0.219
		C		17.680	51.908	0.000	0.000	1.349
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	0.000	0.000

## Feed Line Shielding

Section	Elevation ft	Face	$A_R$ ft <sup>2</sup>	$A_R$ Ice ft <sup>2</sup>	$A_F$ ft <sup>2</sup>	$A_F$ Ice ft <sup>2</sup>
L1	317.000-287.000		0.000	0.000	0.000	0.000
			0.000	0.000	0.000	0.000
			0.000	0.000	0.000	0.000
T1	287.000-280.000	A	0.000	0.000	0.000	0.000
		B	0.052	0.555	0.000	0.000
		C	0.000	0.000	0.000	0.000
T2	280.000-260.000	A	0.055	0.886	0.000	0.000
		B	0.140	1.456	0.000	0.000
		C	0.000	0.000	0.000	0.000
T3	260.000-240.000	A	1.386	9.020	0.000	0.000
		B	0.176	2.404	0.000	0.000
		C	0.000	0.000	0.000	0.000
T4	240.000-220.000	A	2.737	15.739	0.000	0.000
		B	0.183	2.537	0.000	0.000
		C	0.000	0.000	0.000	0.000
T5	220.000-200.000	A	3.003	17.747	0.000	0.000
		B	0.173	2.452	0.000	0.000

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	Page
	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	39 of 60
	Project	Date
	317' GT / AT&T Co-Location	12:59:13 08/24/12
	Client	Designed by
	Nexlink	Rortiz

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
7	35.359	-66.643	61.459	-35.358	66.643	-61.459	0.001%
8	-0.315	-65.812	71.169	0.314	65.812	-71.169	0.001%
9	-35.653	-66.653	61.483	35.652	66.653	-61.483	0.001%
10	-61.225	-67.531	35.592	61.224	67.531	-35.591	0.001%
11	-70.569	-66.872	0.324	70.569	66.872	-0.323	0.001%
12	-61.308	-66.211	-34.888	61.309	66.211	34.886	0.002%
13	-35.235	-67.081	-61.218	35.235	67.081	61.217	0.000%
14	0.000	-161.334	0.000	-0.000	161.334	-0.002	0.001%
15	0.246	-162.180	-29.098	-0.246	162.180	29.095	0.002%
16	14.669	-161.486	-25.112	-14.669	161.486	25.110	0.001%
17	25.390	-160.767	-14.546	-25.387	160.767	14.541	0.003%
18	29.380	-161.327	-0.190	-29.379	161.327	0.190	0.001%
19	25.466	-161.888	14.409	-25.464	161.888	-14.409	0.001%
20	14.538	-161.176	25.117	-14.537	161.176	-25.117	0.000%
21	-0.015	-160.488	29.070	0.015	160.488	-29.068	0.001%
22	-14.591	-161.182	25.137	14.590	161.182	-25.136	0.001%
23	-25.301	-161.901	14.554	25.300	161.900	-14.554	0.001%
24	-29.166	-161.340	0.094	29.165	161.340	-0.095	0.001%
25	-25.237	-160.780	-14.355	25.236	160.780	14.354	0.001%
26	-14.375	-161.492	-25.174	14.375	161.492	25.172	0.001%
27	0.245	-67.225	-24.530	-0.245	67.225	24.529	0.001%
28	12.409	-66.934	-21.147	-12.409	66.934	21.146	0.002%
29	21.328	-66.631	-12.242	-21.327	66.631	12.240	0.003%
30	24.655	-66.859	-0.118	-24.654	66.859	0.118	0.001%
31	21.467	-67.087	12.107	-21.466	67.087	-12.107	0.002%
32	12.235	-66.786	21.266	-12.234	66.786	-21.266	0.001%
33	-0.109	-66.499	24.626	0.109	66.499	-24.625	0.001%
34	-12.337	-66.790	21.274	12.336	66.790	-21.274	0.001%
35	-21.185	-67.094	12.315	21.184	67.093	-12.315	0.002%
36	-24.418	-66.865	0.112	24.418	66.865	-0.112	0.001%
37	-21.214	-66.637	-12.072	21.213	66.637	12.070	0.003%
38	-12.192	-66.938	-21.183	12.192	66.938	21.182	0.001%

## Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	9	0.00000001	0.00003814
2	Yes	15	0.00000001	0.00005943
3	Yes	14	0.00000001	0.00009476
4	Yes	11	0.00000001	0.00006763
5	Yes	13	0.00000001	0.00009871
6	Yes	14	0.00000001	0.00006228
7	Yes	14	0.00000001	0.00006395
8	Yes	11	0.00000001	0.00007469
9	Yes	14	0.00000001	0.00004356
10	Yes	14	0.00000001	0.00003862
11	Yes	14	0.00000001	0.00004429
12	Yes	11	0.00000001	0.00005243
13	Yes	15	0.00000001	0.00005680
14	Yes	10	0.00000001	0.00003578
15	Yes	11	0.00000001	0.00007987
16	Yes	11	0.00000001	0.00005876
17	Yes	10	0.00000001	0.00006187
18	Yes	11	0.00000001	0.00004767
19	Yes	11	0.00000001	0.00006505
20	Yes	11	0.00000001	0.00005648
21	Yes	10	0.00000001	0.00003648

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b>	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	<b>Page</b>	40 of 60
	<b>Project</b>	317' GT / AT&T Co-Location	<b>Date</b>	12:59:13 08/24/12
	<b>Client</b>	Nexlink	<b>Designed by</b>	Rortiz

22	Yes	11	0.00000001	0.00005213
23	Yes	11	0.00000001	0.00006471
24	Yes	11	0.00000001	0.00005307
25	Yes	11	0.00000001	0.00002464
26	Yes	11	0.00000001	0.00007423
27	Yes	11	0.00000001	0.00003143
28	Yes	10	0.00000001	0.00005578
29	Yes	9	0.00000001	0.00004913
30	Yes	10	0.00000001	0.00003656
31	Yes	10	0.00000001	0.00006099
32	Yes	10	0.00000001	0.00004018
33	Yes	9	0.00000001	0.00003214
34	Yes	10	0.00000001	0.00003837
35	Yes	10	0.00000001	0.00005865
36	Yes	10	0.00000001	0.00004219
37	Yes	9	0.00000001	0.00005829
38	Yes	10	0.00000001	0.00006953

### Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	317 - 287	1.403	37	0.061	0.072
T1	287 - 280	1.218	37	0.050	0.065
T2	280 - 260	1.266	37	0.055	0.066
T3	260 - 240	1.417	37	0.059	0.053
T4	240 - 220	1.559	37	0.051	0.058
T5	220 - 200	1.618	37	0.038	0.056
T6	200 - 180	1.664	37	0.033	0.066
T7	180 - 160	1.649	37	0.021	0.064
T8	160 - 140	1.637	37	0.032	0.067
T9	140 - 120	1.688	29	0.031	0.080
T10	120 - 100	1.723	27	0.021	0.093
T11	100 - 80	1.773	27	0.017	0.109
T12	80 - 60	1.774	27	0.025	0.126
T13	60 - 40	1.577	27	0.067	0.135
T14	40 - 20	1.219	27	0.107	0.158
T15	20 - 6.5	0.677	27	0.146	0.176
T16	6.5 - 0	0.225	27	0.161	0.166

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

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
322.000	Lighting Rod 5/8" x 4'	37	1.403	0.061	0.072	66397
321.000	Flash Beacon Lighting	37	1.403	0.061	0.072	66397
305.000	1 bay FM antenna	37	1.276	0.040	0.083	27665
283.500	Guy	37	1.239	0.052	0.058	21677
274.000	6' Omni	37	1.312	0.058	0.070	108257
257.000	15' Omni	37	1.440	0.059	0.051	121968
256.611	Guy	37	1.443	0.059	0.051	132706
235.000	(4) DB844H90E-XY w/ Mount Pipe	37	1.581	0.047	0.058	46149
216.611	Guy	37	1.627	0.037	0.057	211093
210.000	1 bay FM antenna	37	1.645	0.036	0.060	130836
197.000	1 bay FM antenna	37	1.665	0.031	0.066	52361

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 84514.001.0001- Storrs-UConn, CT (Site # CT1077)	<b>Page</b> 41 of 60
	<b>Project</b> 317' GT / AT&T Co-Location	<b>Date</b> 12:59:13 08/24/12
	<b>Client</b> Nexlink	<b>Designed by</b> Rortiz

Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
186.000	(2) 7770.00 w/ Mount Pipe	37	1.658	0.023	0.065	157739
172.000	DB872H120-X w/Mount Pipe	37	1.638	0.024	0.064	104949
171.000	3' Grid Dish	37	1.637	0.024	0.064	93559
166.694	Guy	37	1.635	0.028	0.064	63763
158.000	18" x 12" x 4"	37	1.640	0.033	0.068	51984
156.000	Side Lights	37	1.643	0.033	0.069	62176
125.000	7' Ice Shield	29	1.713	0.023	0.089	130661
120.000	Side Arm Mount [SO 602-1]	27	1.723	0.021	0.093	192323
117.000	5' Ice Shield	27	1.731	0.020	0.095	248808
116.000	6 FT DISH	27	1.734	0.020	0.096	262144
111.000	10' Omni	27	1.747	0.019	0.100	348105
106.694	Guy	27	1.757	0.018	0.103	345961
104.000	6 FT DISH	27	1.764	0.018	0.105	330500
95.000	5' Grid Dish	27	1.784	0.015	0.113	69478
92.000	2' Yagi	27	1.789	0.015	0.116	44362
83.000	(2) 4'x8"x9.5" Panel	27	1.784	0.020	0.124	21383
71.000	2' Dipole	27	1.710	0.042	0.130	23788
56.611	Guy	27	1.527	0.074	0.137	34648
18.000	6' Yagi	27	0.613	0.149	0.175	34168
13.000	4 FT DISH	27	0.448	0.154	0.172	54312

### Maximum Tower Deflections - Design Wind

Section No.	Elevation	Horz. Deflection	Gov. Load Comb.	Tilt	Twist
	ft	in		°	°
L1	317 - 287	6.187	12	0.219	0.247
T1	287 - 280	5.319	12	0.152	0.226
T2	280 - 260	5.380	12	0.155	0.242
T3	260 - 240	5.605	12	0.148	0.204
T4	240 - 220	5.821	12	0.134	0.203
T5	220 - 200	5.809	12	0.140	0.195
T6	200 - 180	5.778	12	0.159	0.207
T7	180 - 160	5.600	12	0.148	0.215
T8	160 - 140	5.498	13	0.191	0.237
T9	140 - 120	6.235	2	0.170	0.285
T10	120 - 100	6.830	2	0.106	0.332
T11	100 - 80	7.150	2	0.057	0.377
T12	80 - 60	7.101	2	0.104	0.421
T13	60 - 40	6.274	2	0.278	0.441
T14	40 - 20	4.785	2	0.434	0.505
T15	20 - 6.5	2.624	2	0.572	0.557
T16	6.5 - 0	0.871	2	0.624	0.553

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

Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
322.000	Lighting Rod 5/8" x 4'	12	6.187	0.219	0.247	23469
321.000	Flash Beacon Lighting	12	6.187	0.219	0.247	23469
305.000	1 bay FM antenna	12	5.685	0.124	0.255	9779
283.500	Guy	12	5.340	0.154	0.233	4868
274.000	6' Omni	12	5.447	0.155	0.240	3349

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	42 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Elevation	Appurtenance	Gov. Load	Deflection	Tilt	Twist	Radius of Curvature
ft		Comb.	in	°	°	ft
257.000	15' Omni	12	5.643	0.146	0.200	9940
256.611	Guy	12	5.648	0.146	0.200	9937
235.000	(4) DB844H90E-XY w/ Mount Pipe	12	5.835	0.133	0.202	15179
216.611	Guy	12	5.805	0.144	0.195	18614
210.000	1 bay FM antenna	12	5.801	0.152	0.199	38020
197.000	1 bay FM antenna	12	5.760	0.157	0.209	21020
186.000	(2) 7770.00 w/ Mount Pipe	12	5.663	0.147	0.213	50629
172.000	DB872H120-X w/Mount Pipe	12	5.525	0.164	0.221	21349
171.000	3' Grid Dish	12	5.516	0.166	0.222	20253
166.694	Guy	4	5.491	0.178	0.227	16588
158.000	18" x 12" x 4"	13	5.531	0.193	0.241	15930
156.000	Side Lights	2	5.574	0.194	0.245	19021
125.000	7' Ice Shield	2	6.709	0.124	0.321	16889
120.000	Side Arm Mount [SO 602-1]	2	6.830	0.106	0.332	17970
117.000	5' Ice Shield	2	6.894	0.098	0.338	18317
116.000	6 FT DISH	2	6.914	0.095	0.340	18389
111.000	10' Omni	2	7.006	0.082	0.351	18713
106.694	Guy	2	7.071	0.071	0.361	18999
104.000	6 FT DISH	2	7.106	0.065	0.367	19164
95.000	5' Grid Dish	2	7.189	0.051	0.389	11269
92.000	2' Yagi	2	7.200	0.049	0.397	8997
83.000	(2) 4'x8"x9.5" Panel	2	7.152	0.085	0.417	5625
71.000	2' Dipole	2	6.824	0.178	0.429	6105
56.611	Guy	2	6.066	0.307	0.449	8044
18.000	6' Yagi	2	2.375	0.582	0.558	10097
13.000	4 FT DISH	2	1.732	0.601	0.557	16225

## Bolt Design Data

Section No.	Elevation	Component Type	Bolt Grade	Bolt Size	Number Of Bolts	Maximum Load per Bolt	Allowable Load	Ratio Load Allowable	Allowable Ratio	Criteria
	ft			in		K	K			
T1	287	Leg	A325N	1.000	4	0.000	34.554	0.000 ✓	1.333	Bolt Tension
T2	280	Leg	A325N	1.000	4	0.000	34.553	0.000 ✓	1.333	Bolt Tension
T3	260	Leg	A325N	1.000	4	0.000	34.553	0.000 ✓	1.333	Bolt Tension
T4	240	Leg	A325N	1.000	4	0.000	34.524	0.000 ✓	1.333	Bolt Tension
T5	220	Leg	A325N	1.000	4	0.000	34.555	0.000 ✓	1.333	Bolt Tension
T6	200	Leg	A325N	1.000	4	0.000	34.512	0.000 ✓	1.333	Bolt Tension
T7	180	Leg	A325N	1.000	4	0.000	34.513	0.000 ✓	1.333	Bolt Tension
T8	160	Leg	A325N	1.000	4	0.000	34.544	0.000 ✓	1.333	Bolt Tension
T9	140	Leg	A325N	1.000	4	0.000	34.550	0.000 ✓	1.333	Bolt Tension
T10	120	Leg	A325N	1.250	4	0.000	53.917	0.000 ✓	1.333	Bolt Tension
T11	100	Leg	A325N	1.250	4	1.523	53.995	0.028 ✓	1.333	Bolt Tension
T12	80	Leg	A325N	1.250	4	0.000	53.982	0.000 ✓	1.333	Bolt Tension
T13	60	Leg	A325N	1.250	4	0.000	53.993	0.000 ✓	1.333	Bolt Tension
T14	40	Leg	A325N	1.250	4	0.000	53.971	0.000 ✓	1.333	Bolt Tension

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	Page
	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	43 of 60
	Project	Date
	317' GT / AT&T Co-Location	12:59:13 08/24/12
	Client	Designed by
	Nexlink	Rortiz

## Guy Design Data

Section No.	Elevation ft	Size	Initial Tension K	Breaking Load K	Actual T K	Allowable T <sub>a</sub> K	Required S.F.	Actual S.F.
T1	283.500 (A) (679)	3/4 EHS	5.830	58.300	10.588	29.150	2.000	5.506 ✓
	283.500 (A) (680)	3/4 EHS	5.830	58.300	10.762	29.150	2.000	5.417 ✓
	283.500 (B) (675)	3/4 EHS	5.830	58.300	11.416	29.150	2.000	5.107 ✓
	283.500 (B) (676)	3/4 EHS	5.830	58.300	11.408	29.150	2.000	5.110 ✓
	283.500 (C) (671)	3/4 EHS	5.830	58.300	11.304	29.150	2.000	5.158 ✓
	283.500 (C) (672)	3/4 EHS	5.830	58.300	11.298	29.150	2.000	5.160 ✓
T3	256.611 (A) (667)	3/4 EHS	5.830	58.300	10.935	29.150	2.000	5.332 ✓
	256.611 (A) (668)	3/4 EHS	5.830	58.300	11.115	29.150	2.000	5.245 ✓
	256.611 (B) (663)	3/4 EHS	5.830	58.300	11.761	29.150	2.000	4.957 ✓
	256.611 (B) (664)	3/4 EHS	5.830	58.300	11.681	29.150	2.000	4.991 ✓
	256.611 (C) (659)	3/4 EHS	5.830	58.300	11.596	29.150	2.000	5.028 ✓
	256.611 (C) (660)	3/4 EHS	5.830	58.300	11.535	29.150	2.000	5.054 ✓
T5	216.611 (A) (655)	3/4 EHS	5.830	58.300	11.638	29.150	2.000	5.010 ✓
	216.611 (A) (656)	3/4 EHS	5.830	58.300	11.918	29.150	2.000	4.892 ✓
	216.611 (B) (651)	3/4 EHS	5.830	58.300	12.496	29.150	2.000	4.665 ✓
	216.611 (B) (652)	3/4 EHS	5.830	58.300	12.462	29.150	2.000	4.678 ✓
	216.611 (C) (647)	3/4 EHS	5.830	58.300	12.510	29.150	2.000	4.660 ✓
	216.611 (C) (648)	3/4 EHS	5.830	58.300	12.315	29.150	2.000	4.734 ✓
T7	166.694 (A) (643)	3/4 EHS	5.830	58.300	12.438	29.150	2.000	4.687 ✓
	166.694 (A) (644)	3/4 EHS	5.830	58.300	12.834	29.150	2.000	4.543 ✓
	166.694 (B) (639)	3/4 EHS	5.830	58.300	13.324	29.150	2.000	4.376 ✓
	166.694 (B) (640)	3/4 EHS	5.830	58.300	13.182	29.150	2.000	4.423 ✓
	166.694 (C) (635)	3/4 EHS	5.830	58.300	13.469	29.150	2.000	4.329 ✓
	166.694 (C) (636)	3/4 EHS	5.830	58.300	13.144	29.150	2.000	4.435 ✓
T10	106.694 (A) (631)	5/8 EHS	4.240	42.400	10.954	21.200	2.000	3.871 ✓
	106.694 (A) (632)	5/8 EHS	4.240	42.400	11.608	21.200	2.000	3.653 ✓
	106.694 (B) (627)	5/8 EHS	4.240	42.400	11.694	21.200	2.000	3.626 ✓
	106.694 (B) (628)	5/8 EHS	4.240	42.400	11.283	21.200	2.000	3.758 ✓
	106.694 (C) (623)	5/8 EHS	4.240	42.400	11.821	21.200	2.000	3.587 ✓

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	44 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Section No.	Elevation ft	Size	Initial Tension K	Breaking Load K	Actual T K	Allowable T <sub>a</sub> K	Required S.F.	Actual S.F.
T13	106.694 (C) (624)	5/8 EHS	4.240	42.400	11.543	21.200	2.000	3.673 ✓
	56.611 (A) (619)	7/16 EHS	2.080	20.800	5.260	10.400	2.000	3.954 ✓
	56.611 (A) (620)	7/16 EHS	2.080	20.800	5.747	10.400	2.000	3.619 ✓
	56.611 (B) (615)	7/16 EHS	2.080	20.800	5.793	10.400	2.000	3.591 ✓
	56.611 (B) (616)	7/16 EHS	2.080	20.800	5.467	10.400	2.000	3.805 ✓
	56.611 (C) (611)	7/16 EHS	2.080	20.800	5.757	10.400	2.000	3.613 ✓
	56.611 (C) (612)	7/16 EHS	2.080	20.800	5.663	10.400	2.000	3.673 ✓

### Compression Checks

### Pole Design Data

Section No.	Elevation ft	Size	L ft	L <sub>n</sub> ft	Kl/r	F <sub>a</sub> ksi	A in <sup>2</sup>	Actual P K	Allow. P <sub>a</sub> K	Ratio P P <sub>a</sub>
L1	317 - 287 (1)	P12x.5	30.000	30.000	83.1	14.723	19.242	-2.384	283.302	0.008

### Pole Bending Design Data

Section No.	Elevation ft	Size	Actual M <sub>x</sub> kip-ft	Actual f <sub>bx</sub> ksi	Allow. F <sub>bx</sub> ksi	Ratio f <sub>bx</sub> F <sub>bx</sub>	Actual M <sub>y</sub> kip-ft	Actual f <sub>by</sub> ksi	Allow. F <sub>by</sub> ksi	Ratio f <sub>by</sub> F <sub>by</sub>
L1	317 - 287 (1)	P12x.5	27.205	-5.756	23.100	0.249	0.000	0.000	23.100	0.000

### Pole Interaction Design Data

Section No.	Elevation ft	Size	Ratio P P <sub>a</sub>	Ratio f <sub>bx</sub> F <sub>bx</sub>	Ratio f <sub>by</sub> F <sub>by</sub>	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	317 - 287 (1)	P12x.5	0.008	0.249	0.000	0.258 ✓	1.066	H1-3 ✓



<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	45 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

### Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	Mast Stability Index	F <sub>a</sub> ksi	A in <sup>2</sup>	Actual P K	Allow. P <sub>a</sub> K	Ratio P P <sub>a</sub>
T1	287 - 280	2	7.000	3.417	82.0 K=1.00	1.00	18.610	3.142	-17.874	58.464	0.306*
T2	280 - 260	2	20.000	3.306	79.3 K=1.00	1.00	19.145	3.142	-19.124	60.147	0.318*
T3	260 - 240	2 1/4	20.000	3.306	70.5 K=1.00	1.00	20.842	3.976	-35.765	82.868	0.432*
T4	240 - 220	2 1/4	20.000	3.306	70.5 K=1.00	1.00	20.842	3.976	-38.139	82.868	0.460*
T5	220 - 200	2 1/2	20.000	3.306	63.5 K=1.00	1.00	22.117	4.909	-54.175	108.567	0.499*
T6	200 - 180	2 1/2	20.000	3.306	63.5 K=1.00	1.00	22.117	4.909	-57.508	108.567	0.530*
T7	180 - 160	2 3/4	20.000	3.306	57.7 K=1.00	1.00	23.107	5.940	-72.230	137.244	0.526*
T8	160 - 140	2 1/2	20.000	3.306	63.5 K=1.00	1.00	22.117	4.909	-74.503	108.567	0.686*
T9	140 - 120	2 3/4	20.000	3.306	57.7 K=1.00	1.00	23.107	5.940	-77.140	137.244	0.562*
T10	120 - 100	2 3/4	20.000	3.306	57.7 K=1.00	1.00	23.107	5.940	-87.990	137.244	0.641*
T11	100 - 80	3	20.000	3.306	52.9 K=1.00	1.00	23.894	7.069	-92.838	168.898	0.550*
T12	80 - 60	3	20.000	3.306	52.9 K=1.00	1.00	23.894	7.069	-95.639	168.898	0.566*
T13	60 - 40	3	20.000	3.306	52.9 K=1.00	1.00	23.894	7.069	-101.603	168.898	0.602*
T14	40 - 20	3	20.000	3.306	52.9 K=1.00	1.00	23.894	7.069	-103.823	168.898	0.615*
T15	20 - 6.5	3	13.500	3.333	53.3 K=1.00	1.00	23.823	7.069	-105.505	168.393	0.627*
T16	6.5 - 0	3	6.836	1.709	27.3 K=1.00	0.95	26.004	7.069	-111.250	183.810	0.605*

\* DL controls

### Leg Bending Design Data (Compression)

Section No.	Elevation ft	Size	Actual M <sub>x</sub> kip-ft	Actual f <sub>bx</sub> ksi	Allow. F <sub>bx</sub> ksi	Ratio f <sub>bx</sub> F <sub>bx</sub>	Actual M <sub>y</sub> kip-ft	Actual f <sub>by</sub> ksi	Allow. F <sub>by</sub> ksi	Ratio f <sub>by</sub> F <sub>by</sub>
T1	287 - 280	2	0.000	0.000	37.500	0.000	0.000	0.000	37.500	0.000
T2	280 - 260	2	0.000	0.000	37.500	0.000	0.000	0.000	37.500	0.000
T3	260 - 240	2 1/4	0.000	0.000	37.500	0.000	0.000	0.000	37.500	0.000
T4	240 - 220	2 1/4	0.000	0.000	37.500	0.000	0.000	0.000	37.500	0.000
T5	220 - 200	2 1/2	0.000	0.000	37.500	0.000	0.000	0.000	37.500	0.000
T6	200 - 180	2 1/2	0.000	0.000	37.500	0.000	0.000	0.000	37.500	0.000
T7	180 - 160	2 3/4	0.000	0.000	37.500	0.000	0.000	0.000	37.500	0.000
T8	160 - 140	2 1/2	0.000	0.000	37.500	0.000	0.000	0.000	37.500	0.000
T9	140 - 120	2 3/4	0.000	0.000	37.500	0.000	0.000	0.000	37.500	0.000
T10	120 - 100	2 3/4	0.000	0.000	37.500	0.000	0.000	0.000	37.500	0.000
T11	100 - 80	3	0.000	0.000	37.500	0.000	0.000	0.000	37.500	0.000
T12	80 - 60	3	0.000	0.000	37.500	0.000	0.000	0.000	37.500	0.000
T13	60 - 40	3	0.000	0.000	37.500	0.000	0.000	0.000	37.500	0.000

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	46 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Section No.	Elevation ft	Size	Actual $M_x$ kip-ft	Actual $f_{bx}$ ksi	Allow. $F_{bx}$ ksi	Ratio $\frac{f_{bx}}{F_{bx}}$	Actual $M_y$ kip-ft	Actual $f_{by}$ ksi	Allow. $F_{by}$ ksi	Ratio $\frac{f_{by}}{F_{by}}$
T14	40 - 20	3	0.000	0.000	37.500	0.000	0.000	0.000	37.500	0.000
T15	20 - 6.5	3	0.000	0.000	37.500	0.000	0.000	0.000	37.500	0.000
T16	6.5 - 0	3	0.000	0.000	37.500	0.000	0.000	0.000	37.500	0.000

### Leg Interaction Design Data (Compression)

Section No.	Elevation ft	Size	Ratio $\frac{P}{P_u}$	Ratio $\frac{f_{bx}}{F_{bx}}$	Ratio $\frac{f_{by}}{F_{by}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
T1	287 - 280	2	0.306	0.000	0.000	0.306* ✓	1.000	H1-3 ✓
T2	280 - 260	2	0.318	0.000	0.000	0.318* ✓	1.000	H1-3 ✓
T3	260 - 240	2 1/4	0.432	0.000	0.000	0.432* ✓	1.000	H1-3 ✓
T4	240 - 220	2 1/4	0.460	0.000	0.000	0.460* ✓	1.000	H1-3 ✓
T5	220 - 200	2 1/2	0.499	0.000	0.000	0.499* ✓	1.000	H1-3 ✓
T6	200 - 180	2 1/2	0.530	0.000	0.000	0.530* ✓	1.000	H1-3 ✓
T7	180 - 160	2 3/4	0.526	0.000	0.000	0.526* ✓	1.000	H1-3 ✓
T8	160 - 140	2 1/2	0.686	0.000	0.000	0.686* ✓	1.000	H1-3 ✓
T9	140 - 120	2 3/4	0.562	0.000	0.000	0.562* ✓	1.000	H1-3 ✓
T10	120 - 100	2 3/4	0.641	0.000	0.000	0.641* ✓	1.000	H1-3 ✓
T11	100 - 80	3	0.550	0.000	0.000	0.550* ✓	1.000	H1-3 ✓
T12	80 - 60	3	0.566	0.000	0.000	0.566* ✓	1.000	H1-3 ✓
T13	60 - 40	3	0.602	0.000	0.000	0.602* ✓	1.000	H1-3 ✓
T14	40 - 20	3	0.615	0.000	0.000	0.615* ✓	1.000	H1-3 ✓
T15	20 - 6.5	3	0.627	0.000	0.000	0.627* ✓	1.000	H1-3 ✓
T16	6.5 - 0	3	0.605	0.000	0.000	0.605* ✓	1.000	H1-3 ✓

\*DL controls

### Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	$L$ ft	$L_u$ ft	$Kl/r$	$F_a$ ksi	$A$ in <sup>2</sup>	Actual $P$ K	Allow. $P_u$ K	Ratio $\frac{P}{P_u}$
T1	287 - 280	1 3/8	5.012	4.784	116.9 K=0.70	10.722	1.485	-1.514	15.921	0.095 ✓
T2	280 - 260	1 3/8	4.937	4.712	115.2 K=0.70	10.967	1.485	-1.418	16.285	0.087 ✓
T3	260 - 240	1 3/8	4.937	4.684	114.5 K=0.70	11.062	1.485	-3.157	16.426	0.192 ✓
T4	240 - 220	1 3/8	4.937	4.684	114.5 K=0.70	11.062	1.485	-4.337	16.426	0.264 ✓
T5	220 - 200	1 1/4	4.937	4.656	125.2 K=0.70	9.531	1.227	-4.198	11.696	0.359 ✓
T6	200 - 180	1 1/4	4.937	4.656	125.2	9.531	1.227	-5.331	11.696	0.456 ✓

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	Page
	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	47 of 60
	Project	Date
	317' GT / AT&T Co-Location	12:59:13 08/24/12
	Client	Designed by
	Nexlink	Rortiz

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	F <sub>a</sub> ksi	A in <sup>2</sup>	Actual P K	Allow. P <sub>a</sub> K	Ratio $\frac{P}{P_a}$
					K=0.70					✓
T7	180 - 160	1 1/2	4.937	4.628	103.7	12.508	1.767	-6.641	22.103	0.300
					K=0.70					✓
T8	160 - 140	1 3/8	4.937	4.656	113.8	11.157	1.485	-5.245	16.566	0.317
					K=0.70					✓
T9	140 - 120	1 1/4	4.937	4.628	124.4	9.642	1.227	-2.943	11.833	0.249
					K=0.70					✓
T10	120 - 100	1 1/2	4.937	4.628	103.7	12.508	1.767	-9.969	22.103	0.451
					K=0.70					✓
T11	100 - 80	1 3/8	4.937	4.600	112.4	11.345	1.485	-8.685	16.846	0.516
					K=0.70					✓
T12	80 - 60	1 1/4	4.937	4.600	123.7	9.753	1.227	-4.060	11.969	0.339
					K=0.70					✓
T13	60 - 40	1 1/4	4.937	4.600	123.7	9.753	1.227	-4.185	11.969	0.350
					K=0.70					✓
T14	40 - 20	1 1/4	4.937	4.600	123.7	9.753	1.227	-4.955	11.969	0.414
					K=0.70					✓
T15	20 - 6.5	1 1/4	4.955	4.618	124.1	9.684	1.227	-6.306	11.885	0.531
					K=0.70					✓

### Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	F <sub>a</sub> ksi	A in <sup>2</sup>	Actual P K	Allow. P <sub>a</sub> K	Ratio $\frac{P}{P_a}$
T1	287 - 280	1	3.667	3.500	117.6	10.624	0.785	-2.118	8.344	0.254
					K=0.70					✓
T2	280 - 260	1	3.667	3.500	117.6	10.624	0.785	-0.331	8.344	0.040*
					K=0.70					✓
T3	260 - 240	1	3.667	3.479	116.9	10.722	0.785	-2.817	8.421	0.335
					K=0.70					✓
T4	240 - 220	1	3.667	3.479	116.9	10.722	0.785	-0.661	8.421	0.078*
					K=0.70					✓
T5	220 - 200	1	3.667	3.458	116.2	10.820	0.785	-5.277	8.498	0.621
					K=0.70					✓
T6	200 - 180	1	3.667	3.458	116.2	10.820	0.785	-0.996	8.498	0.117*
					K=0.70					✓
T7	180 - 160	1	3.667	3.438	115.5	10.918	0.785	-7.658	8.575	0.893
					K=0.70					✓
T8	160 - 140	1	3.667	3.458	116.2	10.820	0.785	-1.290	8.498	0.152*
					K=0.70					✓
T9	140 - 120	1	3.667	3.438	115.5	10.918	0.785	-1.336	8.575	0.156*
					K=0.70					✓
T10	120 - 100	1	3.667	3.438	115.5	10.918	0.785	-9.033	8.575	1.053
					K=0.70					✓
T11	100 - 80	1	3.667	3.417	114.8	11.016	0.785	-1.608	8.652	0.186*
					K=0.70					✓
T12	80 - 60	1	3.667	3.417	114.8	11.016	0.785	-1.657	8.652	0.191*
					K=0.70					✓
T13	60 - 40	1	3.667	3.417	114.8	11.016	0.785	-4.022	8.652	0.465

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 84514.001.0001- Storrs-UConn, CT (Site # CT1077)	<b>Page</b> 48 of 60
	<b>Project</b> 317' GT / AT&T Co-Location	<b>Date</b> 12:59:13 08/24/12
	<b>Client</b> Nexlink	<b>Designed by</b> Rortiz

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	F <sub>a</sub> ksi	A in <sup>2</sup>	Actual P K	Allow. P <sub>a</sub> K	Ratio P P <sub>a</sub>
T14	40 - 20	1	3.667	3.417	K=0.70 114.8	11.016	0.785	-1.798	8.652	0.208*
T15	20 - 6.5	1	3.667	3.417	K=0.70 114.8	11.016	0.785	-1.827	8.652	0.211*
T16	6.5 - 0	3x3/8	1.833	1.583	K=0.70 175.5 K=1.00	4.847	1.125	-0.277	5.453	0.051*

\* DL controls

### Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	F <sub>a</sub> ksi	A in <sup>2</sup>	Actual P K	Allow. P <sub>a</sub> K	Ratio P P <sub>a</sub>
T4	240 - 220	1	3.667	3.479	116.9 K=0.70	10.722	0.785	-0.092	8.421	0.011
T5	220 - 200	1	3.667	3.458	116.2 K=0.70	10.820	0.785	-0.025	8.498	0.003
T7	180 - 160	1	3.667	3.438	115.5 K=0.70	10.918	0.785	-0.166	8.575	0.019
T10	120 - 100	1	3.667	3.438	115.5 K=0.70	10.918	0.785	-0.067	8.575	0.008

### Bottom Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	F <sub>a</sub> ksi	A in <sup>2</sup>	Actual P K	Allow. P <sub>a</sub> K	Ratio P P <sub>a</sub>
T1	287 - 280	1	3.667	3.500	117.6 K=0.70	10.624	0.785	-0.310	8.344	0.037*
T2	280 - 260	1	3.667	3.500	117.6 K=0.70	10.624	0.785	-0.314	8.344	0.038
T3	260 - 240	1	3.667	3.479	116.9 K=0.70	10.722	0.785	-0.064	8.421	0.008
T4	240 - 220	1	3.667	3.479	116.9 K=0.70	10.722	0.785	-0.302	8.421	0.036
T5	220 - 200	1	3.667	3.458	116.2 K=0.70	10.820	0.785	-0.023	8.498	0.003
T6	200 - 180	1	3.667	3.458	116.2 K=0.70	10.820	0.785	-0.034	8.498	0.004
T7	180 - 160	1	3.667	3.438	115.5 K=0.70	10.918	0.785	-0.245	8.575	0.029
T8	160 - 140	1	3.667	3.458	116.2 K=0.70	10.820	0.785	-0.040	8.498	0.005
T10	120 - 100	1	3.667	3.438	115.5 K=0.70	10.918	0.785	-0.200	8.575	0.023

\* DL controls

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 84514.001.0001- Storrs-UConn, CT (Site # CT1077)	<b>Page</b> 49 of 60
	<b>Project</b> 317' GT / AT&T Co-Location	<b>Date</b> 12:59:13 08/24/12
	<b>Client</b> Nexlink	<b>Designed by</b> Rortiz

## Torque-Arm Top Design Data

Section No.	Elevation <i>ft</i>	Size	<i>L</i> <i>ft</i>	<i>L<sub>u</sub></i> <i>ft</i>	<i>Kl/r</i>	<i>F<sub>a</sub></i> <i>ksi</i>	<i>A</i> <i>in<sup>2</sup></i>	Actual <i>P</i> <i>K</i>	Allow. <i>P<sub>a</sub></i> <i>K</i>	Ratio <i>P</i> <i>P<sub>a</sub></i>
T1	287 - 280 (673)	C15x40	3.750	3.667	49.7 K=1.00	21.600	11.800	0.000	103.824	0.000
T1	287 - 280 (674)	C15x40	3.750	3.667	49.7 K=1.00	21.600	11.800	0.000	103.824	0.000
T1	287 - 280 (677)	C15x40	3.750	3.667	49.7 K=1.00	21.600	11.800	0.000	103.824	0.000
T1	287 - 280 (678)	C15x40	3.750	3.667	49.7 K=1.00	21.600	11.800	0.000	103.824	0.000
T1	287 - 280 (681)	C15x40	3.750	3.667	49.7 K=1.00	21.600	11.800	0.000	103.824	0.000
T1	287 - 280 (682)	C15x40	3.750	3.667	49.7 K=1.00	21.600	11.800	0.000	103.824	0.000
T3	260 - 240 (661)	C15x40	3.750	3.657	49.5 K=1.00	21.600	11.800	0.000	104.292	0.000
T3	260 - 240 (662)	C15x40	3.750	3.657	49.5 K=1.00	21.600	11.800	0.000	104.292	0.000
T3	260 - 240 (665)	C15x40	3.750	3.657	49.5 K=1.00	21.600	11.800	0.000	104.292	0.000
T3	260 - 240 (666)	C15x40	3.750	3.657	49.5 K=1.00	21.600	11.800	0.000	104.292	0.000
T3	260 - 240 (669)	C15x40	3.750	3.657	49.5 K=1.00	21.600	11.800	0.000	104.292	0.000
T3	260 - 240 (670)	C15x40	3.750	3.657	49.5 K=1.00	21.600	11.800	0.000	104.292	0.000
T5	220 - 200 (649)	C15x40	3.750	3.646	49.4 K=1.00	21.600	11.800	0.000	104.763	0.000
T5	220 - 200 (650)	C15x40	3.750	3.646	49.4 K=1.00	21.600	11.800	0.000	104.763	0.000
T5	220 - 200 (653)	C15x40	3.750	3.646	49.4 K=1.00	21.600	11.800	0.000	104.763	0.000
T5	220 - 200 (654)	C15x40	3.750	3.646	49.4 K=1.00	21.600	11.800	0.000	104.763	0.000
T5	220 - 200 (657)	C15x40	3.750	3.646	49.4 K=1.00	21.600	11.800	0.000	104.763	0.000
T5	220 - 200 (658)	C15x40	3.750	3.646	49.4 K=1.00	21.600	11.800	0.000	104.763	0.000
T7	180 - 160 (637)	C15x40	3.750	3.636	129.4 K=1.00	8.918	11.800	-2.481	105.238	0.024
T7	180 - 160 (638)	C15x40	3.750	3.636	129.4 K=1.00	8.918	11.800	-2.373	105.238	0.023
T7	180 - 160 (641)	C15x40	3.750	3.636	129.4 K=1.00	8.918	11.800	-2.086	105.238	0.020
T7	180 - 160 (642)	C15x40	3.750	3.636	129.4 K=1.00	8.918	11.800	-2.310	105.238	0.022
T7	180 - 160 (645)	C15x40	3.750	3.636	129.4 K=1.00	8.918	11.800	-2.128	105.238	0.020
T7	180 - 160 (646)	C15x40	3.750	3.636	129.4 K=1.00	8.918	11.800	-1.841	105.238	0.017
T10	120 - 100 (625)	C15x40	3.750	3.636	129.4 K=1.00	8.918	11.800	-5.062	105.238	0.048
T10	120 - 100 (626)	C15x40	3.750	3.636	129.4 K=1.00	8.918	11.800	-5.169	105.238	0.049
T10	120 - 100 (629)	C15x40	3.750	3.636	129.4 K=1.00	8.918	11.800	-4.916	105.238	0.047
T10	120 - 100 (630)	C15x40	3.750	3.636	129.4 K=1.00	8.918	11.800	-3.696	105.238	0.035
T10	120 - 100 (633)	C15x40	3.750	3.636	129.4 K=1.00	8.918	11.800	-3.103	105.238	0.029

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	50 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	F <sub>a</sub> ksi	A in <sup>2</sup>	Actual P K	Allow. P <sub>a</sub> K	Ratio P P <sub>a</sub>
T10	120 - 100 (634)	C15x40	3.750	3.636	129.4 K=1.00	8.918	11.800	-3.086	105.238	0.029
T13	60 - 40 (613)	C15x40	3.750	3.625	129.1 K=1.00	8.959	11.800	-2.626	105.718	0.025
T13	60 - 40 (614)	C15x40	3.750	3.625	129.1 K=1.00	8.959	11.800	-2.594	105.718	0.025
T13	60 - 40 (617)	C15x40	3.750	3.625	129.1 K=1.00	8.959	11.800	-2.499	105.718	0.024
T13	60 - 40 (618)	C15x40	3.750	3.625	129.1 K=1.00	8.959	11.800	-2.554	105.718	0.024
T13	60 - 40 (621)	C15x40	3.750	3.625	49.1 K=1.00	21.600	11.800	0.000	105.718	0.000*
T13	60 - 40 (622)	C15x40	3.750	3.625	49.1 K=1.00	21.600	11.800	0.000	105.718	0.000*

\* DL controls

### Torque-Arm Top Bending Design Data

Section No.	Elevation ft	Size	Actual M <sub>x</sub> kip-ft	Actual f <sub>bx</sub> ksi	Allow. F <sub>bx</sub> ksi	Ratio f <sub>bx</sub> F <sub>bx</sub>	Actual M <sub>y</sub> kip-ft	Actual f <sub>by</sub> ksi	Allow. F <sub>by</sub> ksi	Ratio f <sub>by</sub> F <sub>by</sub>
T1	287 - 280 (673)	C15x40	-26.645	-6.876	21.600	0.318	0.000	-0.000	21.600	0.000
T1	287 - 280 (674)	C15x40	-29.627	-7.646	21.600	0.354	0.000	-0.000	21.600	0.000
T1	287 - 280 (677)	C15x40	-29.926	-7.723	21.600	0.358	0.000	-0.000	21.600	0.000
T1	287 - 280 (678)	C15x40	-29.476	-7.607	21.600	0.352	0.000	-0.000	21.600	0.000
T1	287 - 280 (681)	C15x40	-29.737	-7.674	21.600	0.355	0.000	-0.000	21.600	0.000
T1	287 - 280 (682)	C15x40	-26.817	-6.920	21.600	0.320	0.000	-0.000	21.600	0.000
T3	260 - 240 (661)	C15x40	-25.278	-6.523	21.600	0.302	0.000	-0.000	21.600	0.000
T3	260 - 240 (662)	C15x40	-28.595	-7.379	21.600	0.342	0.000	-0.000	21.600	0.000
T3	260 - 240 (665)	C15x40	-28.852	-7.446	21.600	0.345	0.000	-0.000	21.600	0.000
T3	260 - 240 (666)	C15x40	-28.512	-7.358	21.600	0.341	0.000	-0.000	21.600	0.000
T3	260 - 240 (669)	C15x40	-28.703	-7.407	21.600	0.343	0.000	-0.000	21.600	0.000
T3	260 - 240 (670)	C15x40	-25.395	-6.554	21.600	0.303	0.000	-0.000	21.600	0.000
T5	220 - 200 (649)	C15x40	-23.045	-5.947	21.600	0.275	0.000	-0.000	21.600	0.000
T5	220 - 200 (650)	C15x40	-26.751	-6.903	21.600	0.320	0.000	-0.000	21.600	0.000
T5	220 - 200 (653)	C15x40	-27.044	-6.979	21.600	0.323	0.000	-0.000	21.600	0.000
T5	220 - 200 (654)	C15x40	-26.684	-6.886	21.600	0.319	0.000	-0.000	21.600	0.000
T5	220 - 200 (657)	C15x40	-26.867	-6.933	21.600	0.321	0.000	-0.000	21.600	0.000
T5	220 - 200 (658)	C15x40	-23.168	-5.979	21.600	0.277	0.000	-0.000	21.600	0.000
T7	180 - 160 (637)	C15x40	-31.643	-8.166	21.600	0.378	-0.000	-0.000	21.600	0.000
T7	180 - 160 (638)	C15x40	-26.570	-6.857	21.600	0.317	0.000	-0.000	21.600	0.000
T7	180 - 160 (641)	C15x40	-31.806	-8.208	21.600	0.380	-0.000	-0.000	21.600	0.000
T7	180 - 160 (642)	C15x40	-31.785	-8.203	21.600	0.380	-0.000	-0.000	21.600	0.000
T7	180 - 160 (645)	C15x40	-31.797	-8.206	21.600	0.380	-0.000	-0.000	21.600	0.000
T7	180 - 160 (646)	C15x40	-26.406	-6.814	21.600	0.315	0.000	-0.000	21.600	0.000
T10	120 - 100 (625)	C15x40	-20.691	-5.340	21.600	0.247	0.000	-0.000	21.600	0.000
T10	120 - 100 (626)	C15x40	-15.528	-4.007	21.600	0.186	-0.000	-0.000	21.600	0.000
T10	120 - 100 (629)	C15x40	-20.675	-5.335	21.600	0.247	0.000	-0.000	21.600	0.000
T10	120 - 100 (630)	C15x40	-21.573	-5.567	21.600	0.258	-0.000	-0.000	21.600	0.000
T10	120 - 100 (633)	C15x40	-21.395	-5.521	21.600	0.256	-0.000	-0.000	21.600	0.000
T10	120 - 100 (634)	C15x40	-16.053	-4.143	21.600	0.192	0.000	-0.000	21.600	0.000
T13	60 - 40 (613)	C15x40	-4.104	-1.059	21.600	0.049	0.000	-0.000	21.600	0.000
T13	60 - 40 (614)	C15x40	-7.030	-1.814	21.600	0.084	-0.000	-0.000	21.600	0.000
T13	60 - 40 (617)	C15x40	-7.035	-1.816	21.600	0.084	-0.000	-0.000	21.600	0.000
T13	60 - 40 (618)	C15x40	-6.907	-1.783	21.600	0.083	0.000	-0.000	21.600	0.000

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 84514.001.0001- Storrs-UConn, CT (Site # CT1077)	<b>Page</b> 51 of 60
	<b>Project</b> 317' GT / AT&T Co-Location	<b>Date</b> 12:59:13 08/24/12
	<b>Client</b> Nexlink	<b>Designed by</b> Rortiz

Section No.	Elevation ft	Size	Actual $M_x$ kip-ft	Actual $f_{bx}$ ksi	Allow. $F_{bx}$ ksi	Ratio $\frac{f_{bx}}{F_{bx}}$	Actual $M_y$ kip-ft	Actual $f_{by}$ ksi	Allow. $F_{by}$ ksi	Ratio $\frac{f_{by}}{F_{by}}$
T13	60 - 40 (621)	C15x40	-6.430	-1.659	21.600	0.077	0.000	-0.000	21.600	0.000
T13	60 - 40 (622)	C15x40	-4.215	-1.088	21.600	0.050	0.000	0.000	21.600	0.000

### Torque-Arm Top Interaction Design Data

Section No.	Elevation ft	Size	Ratio $\frac{P}{P_a}$	Ratio $\frac{f_{bx}}{F_{bx}}$	Ratio $\frac{f_{by}}{F_{by}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
T1	287 - 280 (673)	C15x40	0.000	0.318	0.000	0.318*	1.000	H1-3 ✓
T1	287 - 280 (674)	C15x40	0.000	0.354	0.000	0.354*	1.000	H1-3 ✓
T1	287 - 280 (677)	C15x40	0.000	0.358	0.000	0.358*	1.000	H1-3 ✓
T1	287 - 280 (678)	C15x40	0.000	0.352	0.000	0.352*	1.000	H1-3 ✓
T1	287 - 280 (681)	C15x40	0.000	0.355	0.000	0.355*	1.000	H1-3 ✓
T1	287 - 280 (682)	C15x40	0.000	0.320	0.000	0.320*	1.000	H1-3 ✓
T3	260 - 240 (661)	C15x40	0.000	0.302	0.000	0.302*	1.000	H1-3 ✓
T3	260 - 240 (662)	C15x40	0.000	0.342	0.000	0.342*	1.000	H1-3 ✓
T3	260 - 240 (665)	C15x40	0.000	0.345	0.000	0.345*	1.000	H1-3 ✓
T3	260 - 240 (666)	C15x40	0.000	0.341	0.000	0.341*	1.000	H1-3 ✓
T3	260 - 240 (669)	C15x40	0.000	0.343	0.000	0.343*	1.000	H1-3 ✓
T3	260 - 240 (670)	C15x40	0.000	0.303	0.000	0.303*	1.000	H1-3 ✓
T5	220 - 200 (649)	C15x40	0.000	0.275	0.000	0.275*	1.000	H1-3 ✓
T5	220 - 200 (650)	C15x40	0.000	0.320	0.000	0.320*	1.000	H1-3 ✓
T5	220 - 200 (653)	C15x40	0.000	0.323	0.000	0.323*	1.000	H1-3 ✓
T5	220 - 200 (654)	C15x40	0.000	0.319	0.000	0.319*	1.000	H1-3 ✓
T5	220 - 200 (657)	C15x40	0.000	0.321	0.000	0.321*	1.000	H1-3 ✓
T5	220 - 200 (658)	C15x40	0.000	0.277	0.000	0.277*	1.000	H1-3 ✓
T7	180 - 160 (637)	C15x40	0.024	0.378	0.000	0.402	1.333	H1-3 ✓
T7	180 - 160 (638)	C15x40	0.023	0.317	0.000	0.340	1.333	H1-3 ✓
T7	180 - 160 (641)	C15x40	0.020	0.380	0.000	0.400	1.333	H1-3 ✓
T7	180 - 160 (642)	C15x40	0.022	0.380	0.000	0.402	1.333	H1-3 ✓
T7	180 - 160 (645)	C15x40	0.020	0.380	0.000	0.400	1.333	H1-3 ✓
T7	180 - 160 (646)	C15x40	0.017	0.315	0.000	0.333	1.333	H1-3 ✓
T10	120 - 100 (625)	C15x40	0.048	0.247	0.000	0.295	1.333	H1-3 ✓
T10	120 - 100 (626)	C15x40	0.049	0.186	0.000	0.235	1.333	H1-3 ✓
T10	120 - 100 (629)	C15x40	0.047	0.247	0.000	0.294	1.333	H1-3 ✓

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	52 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Section No.	Elevation ft	Size	Ratio $\frac{P}{P_a}$	Ratio $\frac{f_{bx}}{F_{bx}}$	Ratio $\frac{f_{by}}{F_{by}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
T10	120 - 100 (630)	C15x40	0.035	0.258	0.000	0.293 ✓	1.333	H1-3 ✓
T10	120 - 100 (633)	C15x40	0.029	0.256	0.000	0.285 ✓	1.333	H1-3 ✓
T10	120 - 100 (634)	C15x40	0.029	0.192	0.000	0.221 ✓	1.333	H1-3 ✓
T13	60 - 40 (613)	C15x40	0.025	0.049	0.000	0.074 ✓	1.333	H1-3 ✓
T13	60 - 40 (614)	C15x40	0.025	0.084	0.000	0.109 ✓	1.333	H1-3 ✓
T13	60 - 40 (617)	C15x40	0.024	0.084	0.000	0.108 ✓	1.333	H1-3 ✓
T13	60 - 40 (618)	C15x40	0.024	0.083	0.000	0.107 ✓	1.333	H1-3 ✓
T13	60 - 40 (621)	C15x40	0.000	0.077	0.000	0.077* ✓	1.000	H1-3 ✓
T13	60 - 40 (622)	C15x40	0.000	0.050	0.000	0.050* ✓	1.000	H1-3 ✓

DL controls

### Tension Checks

### Leg Design Data (Tension)

Section No.	Elevation ft	Size	$L$ ft	$L_u$ ft	$Kl/r$	$F_a$ ksi	$A$ in <sup>2</sup>	Actual $P$ K	Allow. $P_a$ K	Ratio $\frac{P}{P_a}$
T1	287 - 280	2	7.000	3.417	82.0	30.000	3.142	8.804	94.248	0.093
T11	100 - 80	3	20.000	3.306	52.9	30.000	7.069	6.615	212.058	0.031
T12	80 - 60	3	20.000	3.306	52.9	30.000	7.069	6.884	212.058	0.032

### Leg Bending Design Data (Tension)

Section No.	Elevation ft	Size	Actual $M_x$ kip-ft	Actual $f_{bx}$ ksi	Allow. $F_{bx}$ ksi	Ratio $\frac{f_{bx}}{F_{bx}}$	Actual $M_y$ kip-ft	Actual $f_{by}$ ksi	Allow. $F_{by}$ ksi	Ratio $\frac{f_{by}}{F_{by}}$
T1	287 - 280	2	0.000	0.000	37.500	0.000	0.000	0.000	37.500	0.000
T11	100 - 80	3	0.000	0.000	37.500	0.000	0.000	0.000	37.500	0.000
T12	80 - 60	3	0.000	0.000	37.500	0.000	0.000	0.000	37.500	0.000



<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	Page
	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	53 of 60
	Project	Date
	317' GT / AT&T Co-Location	12:59:13 08/24/12
	Client	Designed by
	Nexlink	Rortiz

### Leg Interaction Design Data (Tension)

Section No.	Elevation ft	Size	Ratio $\frac{P}{P_u}$	Ratio $\frac{f_{bx}}{F_{bx}}$	Ratio $\frac{f_{by}}{F_{by}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
T1	287 - 280	2	0.093	0.000	0.000	0.093	1.333	H2-1 ✓
T11	100 - 80	3	0.031	0.000	0.000	0.031	1.333	H2-1 ✓
T12	80 - 60	3	0.032	0.000	0.000	0.032	1.333	H2-1 ✓

### Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	F <sub>a</sub> ksi	A in <sup>2</sup>	Actual P K	Allow. P <sub>u</sub> K	Ratio $\frac{P}{P_u}$
T1	287 - 280	1 3/8	5.012	4.784	167.0	21.600	1.485	1.483	32.074	0.046
T2	280 - 260	1 3/8	4.937	4.712	164.5	21.600	1.485	1.041	32.074	0.032
T3	260 - 240	1 3/8	4.937	4.684	163.5	21.600	1.485	2.436	32.074	0.076
T4	240 - 220	1 3/8	4.937	4.684	163.5	21.600	1.485	3.697	32.074	0.115
T5	220 - 200	1 1/4	4.937	4.656	178.8	21.600	1.227	3.736	26.507	0.141
T6	200 - 180	1 1/4	4.937	4.656	178.8	21.600	1.227	4.209	26.507	0.159
T7	180 - 160	1 1/2	4.937	4.628	148.1	21.600	1.767	5.554	38.170	0.146
T8	160 - 140	1 3/8	4.937	4.656	162.5	21.600	1.485	4.126	32.074	0.129
T9	140 - 120	1 1/4	4.937	4.628	177.7	21.600	1.227	2.092	26.507	0.079
T10	120 - 100	1 1/2	4.937	4.628	148.1	21.600	1.767	8.048	38.170	0.211
T11	100 - 80	1 3/8	4.937	4.600	160.6	21.600	1.485	6.878	32.074	0.214
T12	80 - 60	1 1/4	4.937	4.600	176.6	21.600	1.227	2.363	26.507	0.089
T13	60 - 40	1 1/4	4.937	4.600	176.6	21.600	1.227	2.616	26.507	0.099
T14	40 - 20	1 1/4	4.937	4.600	176.6	21.600	1.227	3.405	26.507	0.128
T15	20 - 6.5	1 1/4	4.955	4.618	177.3	21.600	1.227	5.388	26.507	0.203

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 84514.001.0001- Storrs-UConn, CT (Site # CT1077)	<b>Page</b> 54 of 60
	<b>Project</b> 317' GT / AT&T Co-Location	<b>Date</b> 12:59:13 08/24/12
	<b>Client</b> Nexlink	<b>Designed by</b> Rortiz

### Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	F <sub>a</sub> ksi	A in <sup>2</sup>	Actual P K	Allow. P <sub>a</sub> K	Ratio P P <sub>a</sub>
T1	287 - 280	1	3.667	3.500	168.0	21.600	0.785	2.426	16.965	0.143
T2	280 - 260	1	3.667	3.500	168.0	21.600	0.785	0.582	16.965	0.034
T3	260 - 240	1	3.667	3.479	167.0	21.600	0.785	3.237	16.965	0.191
T4	240 - 220	1	3.667	3.479	167.0	21.600	0.785	1.113	16.965	0.066
T5	220 - 200	1	3.667	3.458	166.0	21.600	0.785	5.792	16.965	0.341
T6	200 - 180	1	3.667	3.458	166.0	21.600	0.785	1.577	16.965	0.093
T7	180 - 160	1	3.667	3.438	165.0	21.600	0.785	8.733	16.965	0.515
T8	160 - 140	1	3.667	3.458	166.0	21.600	0.785	1.290	16.965	0.076'
T9	140 - 120	1	3.667	3.438	165.0	21.600	0.785	1.336	16.965	0.079'
T10	120 - 100	1	3.667	3.438	165.0	21.600	0.785	10.047	16.965	0.592
T11	100 - 80	1	3.667	3.417	164.0	21.600	0.785	1.608	16.965	0.095'
T12	80 - 60	1	3.667	3.417	164.0	21.600	0.785	1.657	16.965	0.098'
T13	60 - 40	1	3.667	3.417	164.0	21.600	0.785	5.439	16.965	0.321
T14	40 - 20	1	3.667	3.417	164.0	21.600	0.785	1.798	16.965	0.106'
T15	20 - 6.5	1	3.667	3.417	164.0	21.600	0.785	1.827	16.965	0.108'
T16	6.5 - 0	3x3/8	3.667	3.417	378.7	21.600	1.125	11.457	24.300	0.471'

DL controls

### Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	F <sub>a</sub> ksi	A in <sup>2</sup>	Actual P K	Allow. P <sub>a</sub> K	Ratio P P <sub>a</sub>
T1	287 - 280	1	3.667	3.500	168.0	21.600	0.785	7.282	16.965	0.429'
T2	280 - 260	1	3.667	3.500	168.0	21.600	0.785	0.309	16.965	0.018'
T3	260 - 240	1	3.667	3.479	167.0	21.600	0.785	0.475	16.965	0.028
T4	240 - 220	1	3.667	3.479	167.0	21.600	0.785	0.245	16.965	0.014

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	Page
	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	55 of 60
	Project	Date
	317' GT / AT&T Co-Location	12:59:13 08/24/12
	Client	Designed by
	Nexlink	Rortiz

Section No.	Elevation ft	Size	L ft	L <sub>a</sub> ft	Kl/r	F <sub>a</sub> ksi	A in <sup>2</sup>	Actual P K	Allow. P <sub>a</sub> K	Ratio $\frac{P}{P_a}$
T5	220 - 200	1	3.667	3.458	166.0	21.600	0.785	0.538	16.965	0.032
T6	200 - 180	1	3.667	3.458	166.0	21.600	0.785	0.195	16.965	0.012*
T7	180 - 160	1	3.667	3.438	165.0	21.600	0.785	0.505	16.965	0.030
T8	160 - 140	1	3.667	3.458	166.0	21.600	0.785	0.382	16.965	0.023
T9	140 - 120	1	3.667	3.438	165.0	21.600	0.785	0.299	16.965	0.018*
T10	120 - 100	1	3.667	3.438	165.0	21.600	0.785	0.585	16.965	0.034
T11	100 - 80	1	3.667	3.417	164.0	21.600	0.785	0.415	16.965	0.024*
T12	80 - 60	1	3.667	3.417	164.0	21.600	0.785	0.456	16.965	0.027*
T13	60 - 40	1	3.667	3.417	164.0	21.600	0.785	0.494	16.965	0.029*
T14	40 - 20	1	3.667	3.417	164.0	21.600	0.785	0.487	16.965	0.029*
T15	20 - 6.5	1	3.667	3.417	164.0	21.600	0.785	0.491	16.965	0.029*

\* DL controls

### Bottom Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L <sub>a</sub> ft	Kl/r	F <sub>a</sub> ksi	A in <sup>2</sup>	Actual P K	Allow. P <sub>a</sub> K	Ratio $\frac{P}{P_a}$
T2	280 - 260	1	3.667	3.500	168.0	21.600	0.785	0.048	16.965	0.003
T3	260 - 240	1	3.667	3.479	167.0	21.600	0.785	0.273	16.965	0.016
T4	240 - 220	1	3.667	3.479	167.0	21.600	0.785	0.305	16.965	0.018
T5	220 - 200	1	3.667	3.458	166.0	21.600	0.785	0.314	16.965	0.019
T6	200 - 180	1	3.667	3.458	166.0	21.600	0.785	0.399	16.965	0.024
T7	180 - 160	1	3.667	3.438	165.0	21.600	0.785	0.700	16.965	0.041
T8	160 - 140	1	3.667	3.458	166.0	21.600	0.785	0.423	16.965	0.025
T9	140 - 120	1	3.667	3.438	165.0	21.600	0.785	0.342	16.965	0.020*
T10	120 - 100	1	3.667	3.438	165.0	21.600	0.785	0.816	16.965	0.048
T11	100 - 80	1	3.667	3.417	164.0	21.600	0.785	0.616	16.965	0.036
T12	80 - 60	1	3.667	3.417	164.0	21.600	0.785	0.447	16.965	0.026*

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	Page	56 of 60
	Project	317' GT / AT&T Co-Location	Date	12:59:13 08/24/12
	Client	Nexlink	Designed by	Rortiz

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	F <sub>a</sub> ksi	A in <sup>2</sup>	Actual P K	Allow. P <sub>a</sub> K	Ratio $\frac{P}{P_a}$
T13	60 - 40	1	3.667	3.417	164.0	21.600	0.785	0.483	16.965	0.028*
T14	40 - 20	1	3.667	3.417	164.0	21.600	0.785	0.494	16.965	0.029*
T15	20 - 6.5	1	3.667	3.417	164.0	21.600	0.785	7.921	16.965	0.467*

\* DL controls

### Torque-Arm Top Design Data

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	F <sub>a</sub> ksi	A in <sup>2</sup>	Actual P K	Allow. P <sub>a</sub> K	Ratio $\frac{P}{P_a}$
T1	287 - 280 (673)	C15x40	3.750	3.667	49.7	21.600	11.800	2.897	254.880	0.011*
T1	287 - 280 (674)	C15x40	3.750	3.667	49.7	21.600	11.800	3.006	254.880	0.012*
T1	287 - 280 (677)	C15x40	3.750	3.667	49.7	21.600	11.800	2.935	254.880	0.012*
T1	287 - 280 (678)	C15x40	3.750	3.667	49.7	21.600	11.800	2.947	254.880	0.012*
T1	287 - 280 (681)	C15x40	3.750	3.667	49.7	21.600	11.800	2.973	254.880	0.012*
T1	287 - 280 (682)	C15x40	3.750	3.667	49.7	21.600	11.800	2.938	254.880	0.012*
T3	260 - 240 (661)	C15x40	3.750	3.657	49.5	21.600	11.800	3.117	254.880	0.012*
T3	260 - 240 (662)	C15x40	3.750	3.657	49.5	21.600	11.800	3.132	254.880	0.012*
T3	260 - 240 (665)	C15x40	3.750	3.657	49.5	21.600	11.800	3.123	254.880	0.012*
T3	260 - 240 (666)	C15x40	3.750	3.657	49.5	21.600	11.800	3.125	254.880	0.012*
T3	260 - 240 (669)	C15x40	3.750	3.657	49.5	21.600	11.800	3.113	254.880	0.012*
T3	260 - 240 (670)	C15x40	3.750	3.657	49.5	21.600	11.800	3.139	254.880	0.012*
T5	220 - 200 (649)	C15x40	3.750	3.646	49.4	21.600	11.800	3.437	254.880	0.013*
T5	220 - 200 (650)	C15x40	3.750	3.646	49.4	21.600	11.800	3.402	254.880	0.013*
T5	220 - 200 (653)	C15x40	3.750	3.646	49.4	21.600	11.800	3.429	254.880	0.013*
T5	220 - 200 (654)	C15x40	3.750	3.646	49.4	21.600	11.800	3.427	254.880	0.013*
T5	220 - 200 (657)	C15x40	3.750	3.646	49.4	21.600	11.800	3.379	254.880	0.013*
T5	220 - 200 (658)	C15x40	3.750	3.646	49.4	21.600	11.800	3.465	254.880	0.014*
T7	180 - 160 (637)	C15x40	3.750	3.636	49.2	21.600	11.800	3.797	254.880	0.015*
T7	180 - 160 (638)	C15x40	3.750	3.636	49.2	21.600	11.800	3.893	254.880	0.015*
T7	180 - 160 (641)	C15x40	3.750	3.636	49.2	21.600	11.800	3.897	254.880	0.015*
T7	180 - 160 (642)	C15x40	3.750	3.636	49.2	21.600	11.800	3.816	254.880	0.015*
T7	180 - 160 (645)	C15x40	3.750	3.636	49.2	21.600	11.800	3.826	254.880	0.015*
T7	180 - 160 (646)	C15x40	3.750	3.636	49.2	21.600	11.800	3.877	254.880	0.015*
T10	120 - 100 (625)	C15x40	3.750	3.636	49.2	21.600	11.800	3.442	254.880	0.014*
T10	120 - 100 (626)	C15x40	3.750	3.636	49.2	21.600	11.800	3.445	254.880	0.014*
T10	120 - 100 (629)	C15x40	3.750	3.636	49.2	21.600	11.800	3.463	254.880	0.014*
T10	120 - 100 (630)	C15x40	3.750	3.636	49.2	21.600	11.800	3.411	254.880	0.013*
T10	120 - 100 (633)	C15x40	3.750	3.636	49.2	21.600	11.800	3.480	254.880	0.014*
T10	120 - 100 (634)	C15x40	3.750	3.636	49.2	21.600	11.800	3.413	254.880	0.013*
T13	60 - 40 (613)	C15x40	3.750	3.625	49.1	21.600	11.800	2.159	254.880	0.008*
T13	60 - 40 (614)	C15x40	3.750	3.625	49.1	21.600	11.800	2.205	254.880	0.009*
T13	60 - 40 (617)	C15x40	3.750	3.625	49.1	21.600	11.800	2.199	254.880	0.009*
T13	60 - 40 (618)	C15x40	3.750	3.625	49.1	21.600	11.800	2.155	254.880	0.008*
T13	60 - 40 (621)	C15x40	3.750	3.625	49.1	21.600	11.800	2.179	254.880	0.009*
T13	60 - 40 (622)	C15x40	3.750	3.625	49.1	21.600	11.800	2.181	254.880	0.009*

\* DL controls

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	Page
	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	57 of 60
	Project	Date
	317' GT / AT&T Co-Location	12:59:13 08/24/12
	Client	Designed by
	Nexlink	Rortiz

### Torque-Arm Top Bending Design Data

Section No.	Elevation ft	Size	Actual $M_x$ kip-ft	Actual $f_{bx}$ ksi	Allow. $F_{bx}$ ksi	Ratio $\frac{f_{bx}}{F_{bx}}$	Actual $M_y$ kip-ft	Actual $f_{by}$ ksi	Allow. $F_{by}$ ksi	Ratio $\frac{f_{by}}{F_{by}}$
T1	287 - 280 (673)	C15x40	-26.645	6.876	21.600	0.318	0.000	0.000	27.000	0.000
T1	287 - 280 (674)	C15x40	-29.627	7.646	21.600	0.354	0.000	0.000	27.000	0.000
T1	287 - 280 (677)	C15x40	-29.926	7.723	21.600	0.358	0.000	0.000	27.000	0.000
T1	287 - 280 (678)	C15x40	-29.476	7.607	21.600	0.352	0.000	0.000	27.000	0.000
T1	287 - 280 (681)	C15x40	-29.737	7.674	21.600	0.355	0.000	0.000	27.000	0.000
T1	287 - 280 (682)	C15x40	-26.817	6.920	21.600	0.320	0.000	0.000	27.000	0.000
T3	260 - 240 (661)	C15x40	-25.278	6.523	21.600	0.302	0.000	0.000	27.000	0.000
T3	260 - 240 (662)	C15x40	-28.595	7.379	21.600	0.342	0.000	0.000	27.000	0.000
T3	260 - 240 (665)	C15x40	-28.852	7.446	21.600	0.345	0.000	0.000	27.000	0.000
T3	260 - 240 (666)	C15x40	-28.512	7.358	21.600	0.341	0.000	0.000	27.000	0.000
T3	260 - 240 (669)	C15x40	-28.703	7.407	21.600	0.343	0.000	0.000	27.000	0.000
T3	260 - 240 (670)	C15x40	-25.395	6.554	21.600	0.303	0.000	0.000	27.000	0.000
T5	220 - 200 (649)	C15x40	-23.045	5.947	21.600	0.275	0.000	0.000	27.000	0.000
T5	220 - 200 (650)	C15x40	-26.751	6.903	21.600	0.320	0.000	0.000	27.000	0.000
T5	220 - 200 (653)	C15x40	-27.044	6.979	21.600	0.323	0.000	0.000	27.000	0.000
T5	220 - 200 (654)	C15x40	-26.684	6.886	21.600	0.319	0.000	0.000	27.000	0.000
T5	220 - 200 (657)	C15x40	-26.867	6.933	21.600	0.321	0.000	0.000	27.000	0.000
T5	220 - 200 (658)	C15x40	-23.168	5.979	21.600	0.277	0.000	0.000	27.000	0.000
T7	180 - 160 (637)	C15x40	-23.594	6.089	21.600	0.282	0.000	0.000	27.000	0.000
T7	180 - 160 (638)	C15x40	-19.797	5.109	21.600	0.237	0.000	0.000	27.000	0.000
T7	180 - 160 (641)	C15x40	-23.807	6.144	21.600	0.284	0.000	0.000	27.000	0.000
T7	180 - 160 (642)	C15x40	-23.956	6.182	21.600	0.286	0.000	0.000	27.000	0.000
T7	180 - 160 (645)	C15x40	-24.000	6.194	21.600	0.287	0.000	0.000	27.000	0.000
T7	180 - 160 (646)	C15x40	-19.678	5.078	21.600	0.235	0.000	0.000	27.000	0.000
T10	120 - 100 (625)	C15x40	-14.676	3.787	21.600	0.175	0.000	0.000	27.000	0.000
T10	120 - 100 (626)	C15x40	-11.389	2.939	21.600	0.136	0.000	0.000	27.000	0.000
T10	120 - 100 (629)	C15x40	-14.828	3.827	21.600	0.177	0.000	0.000	27.000	0.000
T10	120 - 100 (630)	C15x40	-14.954	3.859	21.600	0.179	0.000	0.000	27.000	0.000
T10	120 - 100 (633)	C15x40	-14.961	3.861	21.600	0.179	0.000	0.000	27.000	0.000
T10	120 - 100 (634)	C15x40	-11.317	2.920	21.600	0.135	0.000	0.000	27.000	0.000
T13	60 - 40 (613)	C15x40	-4.174	1.077	21.600	0.050	0.000	0.000	27.000	0.000
T13	60 - 40 (614)	C15x40	-6.342	1.637	21.600	0.076	0.000	0.000	27.000	0.000
T13	60 - 40 (617)	C15x40	-6.548	1.690	21.600	0.078	0.000	0.000	27.000	0.000
T13	60 - 40 (618)	C15x40	-6.363	1.642	21.600	0.076	0.000	0.000	27.000	0.000
T13	60 - 40 (621)	C15x40	-6.430	1.659	21.600	0.077	0.000	0.000	27.000	0.000
T13	60 - 40 (622)	C15x40	-4.215	1.088	21.600	0.050	0.000	0.000	27.000	0.000

### Torque-Arm Top Interaction Design Data

Section No.	Elevation ft	Size	Ratio $P$ $P_u$	Ratio $f_{bx}$ $F_{bx}$	Ratio $f_{by}$ $F_{by}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
T1	287 - 280 (673)	C15x40	0.011	0.318	0.000	0.330* ✓	1.000	H2-1 ✓
T1	287 - 280 (674)	C15x40	0.012	0.354	0.000	0.366* ✓	1.000	H2-1 ✓
T1	287 - 280 (677)	C15x40	0.012	0.358	0.000	0.369* ✓	1.000	H2-1 ✓
T1	287 - 280 (678)	C15x40	0.012	0.352	0.000	0.364* ✓	1.000	H2-1 ✓
T1	287 - 280 (681)	C15x40	0.012	0.355	0.000	0.367* ✓	1.000	H2-1 ✓
T1	287 - 280 (682)	C15x40	0.012	0.320	0.000	0.332* ✓	1.000	H2-1 ✓
T3	260 - 240 (661)	C15x40	0.012	0.302	0.000	0.314* ✓	1.000	H2-1 ✓
T3	260 - 240 (662)	C15x40	0.012	0.342	0.000	0.354* ✓	1.000	H2-1 ✓

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b>	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	<b>Page</b>	58 of 60
	<b>Project</b>	317' GT / AT&T Co-Location	<b>Date</b>	12:59:13 08/24/12
	<b>Client</b>	Nexlink	<b>Designed by</b>	Rortiz

Section No.	Elevation ft	Size	Ratio $P$ $P_a$	Ratio $f_{bx}$ $F_{bx}$	Ratio $f_{by}$ $F_{by}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
T3	260 - 240 (665)	C15x40	0.012	0.345	0.000	0.357* ✓	1.000	H2-1 ✓
T3	260 - 240 (666)	C15x40	0.012	0.341	0.000	0.353* ✓	1.000	H2-1 ✓
T3	260 - 240 (669)	C15x40	0.012	0.343	0.000	0.355* ✓	1.000	H2-1 ✓
T3	260 - 240 (670)	C15x40	0.012	0.303	0.000	0.316* ✓	1.000	H2-1 ✓
T5	220 - 200 (649)	C15x40	0.013	0.275	0.000	0.289* ✓	1.000	H2-1 ✓
T5	220 - 200 (650)	C15x40	0.013	0.320	0.000	0.333* ✓	1.000	H2-1 ✓
T5	220 - 200 (653)	C15x40	0.013	0.323	0.000	0.337* ✓	1.000	H2-1 ✓
T5	220 - 200 (654)	C15x40	0.013	0.319	0.000	0.332* ✓	1.000	H2-1 ✓
T5	220 - 200 (657)	C15x40	0.013	0.321	0.000	0.334* ✓	1.000	H2-1 ✓
T5	220 - 200 (658)	C15x40	0.014	0.277	0.000	0.290* ✓	1.000	H2-1 ✓
T7	180 - 160 (637)	C15x40	0.015	0.282	0.000	0.297* ✓	1.000	H2-1 ✓
T7	180 - 160 (638)	C15x40	0.015	0.237	0.000	0.252* ✓	1.000	H2-1 ✓
T7	180 - 160 (641)	C15x40	0.015	0.284	0.000	0.300* ✓	1.000	H2-1 ✓
T7	180 - 160 (642)	C15x40	0.015	0.286	0.000	0.301* ✓	1.000	H2-1 ✓
T7	180 - 160 (645)	C15x40	0.015	0.287	0.000	0.302* ✓	1.000	H2-1 ✓
T7	180 - 160 (646)	C15x40	0.015	0.235	0.000	0.250* ✓	1.000	H2-1 ✓
T10	120 - 100 (625)	C15x40	0.014	0.175	0.000	0.189* ✓	1.000	H2-1 ✓
T10	120 - 100 (626)	C15x40	0.014	0.136	0.000	0.150* ✓	1.000	H2-1 ✓
T10	120 - 100 (629)	C15x40	0.014	0.177	0.000	0.191* ✓	1.000	H2-1 ✓
T10	120 - 100 (630)	C15x40	0.013	0.179	0.000	0.192* ✓	1.000	H2-1 ✓
T10	120 - 100 (633)	C15x40	0.014	0.179	0.000	0.192* ✓	1.000	H2-1 ✓
T10	120 - 100 (634)	C15x40	0.013	0.135	0.000	0.149* ✓	1.000	H2-1 ✓
T13	60 - 40 (613)	C15x40	0.008	0.050	0.000	0.058* ✓	1.000	H2-1 ✓
T13	60 - 40 (614)	C15x40	0.009	0.076	0.000	0.084* ✓	1.000	H2-1 ✓
T13	60 - 40 (617)	C15x40	0.009	0.078	0.000	0.087* ✓	1.000	H2-1 ✓
T13	60 - 40 (618)	C15x40	0.008	0.076	0.000	0.084* ✓	1.000	H2-1 ✓
T13	60 - 40 (621)	C15x40	0.009	0.077	0.000	0.085* ✓	1.000	H2-1 ✓
T13	60 - 40 (622)	C15x40	0.009	0.050	0.000	0.059* ✓	1.000	H2-1 ✓

DL controls

## Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	SF*P <sub>allow</sub> K	% Capacity	Pass Fail
L1	317 - 287	Pole	P12x.5	1	-2.384	302.113	24.2	Pass
T1	287 - 280	Leg	2	2	-17.874	58.464	30.6	Pass
T2	280 - 260	Leg	2	20	-19.124	60.147	31.8	Pass
T3	260 - 240	Leg	2 1/4	62	-35.765	82.868	43.2	Pass
T4	240 - 220	Leg	2 1/4	104	-38.139	82.868	46.0	Pass
T5	220 - 200	Leg	2 1/2	146	-54.175	108.567	49.9	Pass
T6	200 - 180	Leg	2 1/2	190	-57.508	108.567	53.0	Pass
T7	180 - 160	Leg	2 3/4	231	-72.230	137.244	52.6	Pass

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	Job	Page
	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	59 of 60
	Project	Date
	317' GT / AT&T Co-Location	12:59:13 08/24/12
	Client	Designed by
	Nexlink	Rortiz

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	SF*P <sub>allow</sub> K	% Capacity	Pass Fail
T8	160 - 140	Leg	2 1/2	273	-74.503	108.567	68.6	Pass
T9	140 - 120	Leg	2 3/4	316	-77.140	137.244	56.2	Pass
T10	120 - 100	Leg	2 3/4	356	-87.990	137.244	64.1	Pass
T11	100 - 80	Leg	3	398	-92.838	168.898	55.0	Pass
T12	80 - 60	Leg	3	440	-95.639	168.898	56.6	Pass
T13	60 - 40	Leg	3	482	-101.603	168.898	60.2	Pass
T14	40 - 20	Leg	3	525	-103.823	168.898	61.5	Pass
T15	20 - 6.5	Leg	3	566	-105.505	168.393	62.7	Pass
T16	6.5 - 0	Leg	3	596	-111.250	183.810	60.5	Pass
T1	287 - 280	Diagonal	1 3/8	19	-1.514	21.223	7.1	Pass
T2	280 - 260	Diagonal	1 3/8	31	-1.418	21.707	6.5	Pass
T3	260 - 240	Diagonal	1 3/8	97	-3.157	21.895	14.4	Pass
T4	240 - 220	Diagonal	1 3/8	113	-4.337	21.895	19.8	Pass
T5	220 - 200	Diagonal	1 1/4	185	-4.198	15.591	26.9	Pass
T6	200 - 180	Diagonal	1 1/4	198	-5.331	15.591	34.2	Pass
T7	180 - 160	Diagonal	1 1/2	252	-6.641	29.463	22.5	Pass
T8	160 - 140	Diagonal	1 3/8	313	-5.245	22.083	23.8	Pass
T9	140 - 120	Diagonal	1 1/4	355	-2.943	15.773	18.7	Pass
T10	120 - 100	Diagonal	1 1/2	371	-9.969	29.463	33.8	Pass
T11	100 - 80	Diagonal	1 3/8	437	-8.685	22.455	38.7	Pass
T12	80 - 60	Diagonal	1 1/4	451	-4.060	15.954	25.4	Pass
T13	60 - 40	Diagonal	1 1/4	523	-4.185	15.954	26.2	Pass
T14	40 - 20	Diagonal	1 1/4	534	-4.955	15.954	31.1	Pass
T15	20 - 6.5	Diagonal	1 1/4	577	-6.306	15.842	39.8	Pass
T1	287 - 280	Horizontal	1	14	-2.118	11.122	19.0	Pass
T2	280 - 260	Horizontal	1	34	-0.331	8.344	4.0	Pass
T3	260 - 240	Horizontal	1	98	-2.817	11.226	25.1	Pass
T4	240 - 220	Horizontal	1	116	-0.661	8.421	7.8	Pass
T5	220 - 200	Horizontal	1	182	-5.277	11.328	46.6	Pass
T6	200 - 180	Horizontal	1	202	-0.996	8.498	11.7	Pass
T7	180 - 160	Horizontal	1	250	-7.658	11.431	67.0	Pass
T8	160 - 140	Horizontal	1	284	-1.290	8.498	15.2	Pass
T9	140 - 120	Horizontal	1	327	-1.336	8.575	15.6	Pass
T10	120 - 100	Horizontal	1	376	-9.033	11.431	79.0	Pass
T11	100 - 80	Horizontal	1	410	-1.608	8.652	18.6	Pass
T12	80 - 60	Horizontal	1	452	-1.657	8.652	19.1	Pass
T13	60 - 40	Horizontal	1	518	-4.022	11.533	34.9	Pass
T14	40 - 20	Horizontal	1	537	-1.798	8.652	20.8	Pass
T15	20 - 6.5	Horizontal	1	584	-1.827	8.652	21.1	Pass
T16	6.5 - 0	Horizontal	3x3/8	601	11.457	24.300	47.1	Pass
T1	287 - 280	Top Girt	1	5	7.282	16.965	42.9	Pass
T2	280 - 260	Top Girt	1	23	0.309	16.965	1.8	Pass
T3	260 - 240	Top Girt	1	65	0.475	22.614	2.1	Pass
T4	240 - 220	Top Girt	1	109	0.245	22.614	1.1	Pass
T5	220 - 200	Top Girt	1	151	0.538	22.614	2.4	Pass
T6	200 - 180	Top Girt	1	191	0.195	16.965	1.2	Pass
T7	180 - 160	Top Girt	1	234	0.505	22.614	2.2	Pass
T8	160 - 140	Top Girt	1	277	0.382	22.614	1.7	Pass
T9	140 - 120	Top Girt	1	317	0.299	16.965	1.8	Pass
T10	120 - 100	Top Girt	1	359	0.585	22.614	2.6	Pass
T11	100 - 80	Top Girt	1	401	0.415	16.965	2.4	Pass
T12	80 - 60	Top Girt	1	443	0.456	16.965	2.7	Pass
T13	60 - 40	Top Girt	1	487	0.494	16.965	2.9	Pass
T14	40 - 20	Top Girt	1	527	0.487	16.965	2.9	Pass
T15	20 - 6.5	Top Girt	1	569	0.491	16.965	2.9	Pass
T1	287 - 280	Bottom Girt	1	8	-0.310	8.344	3.7	Pass
T2	280 - 260	Bottom Girt	1	26	-0.314	11.122	2.8	Pass
T3	260 - 240	Bottom Girt	1	70	0.273	22.614	1.2	Pass
T4	240 - 220	Bottom Girt	1	110	-0.302	11.226	2.7	Pass
T5	220 - 200	Bottom Girt	1	154	0.314	22.614	1.4	Pass
T6	200 - 180	Bottom Girt	1	195	0.399	22.614	1.8	Pass

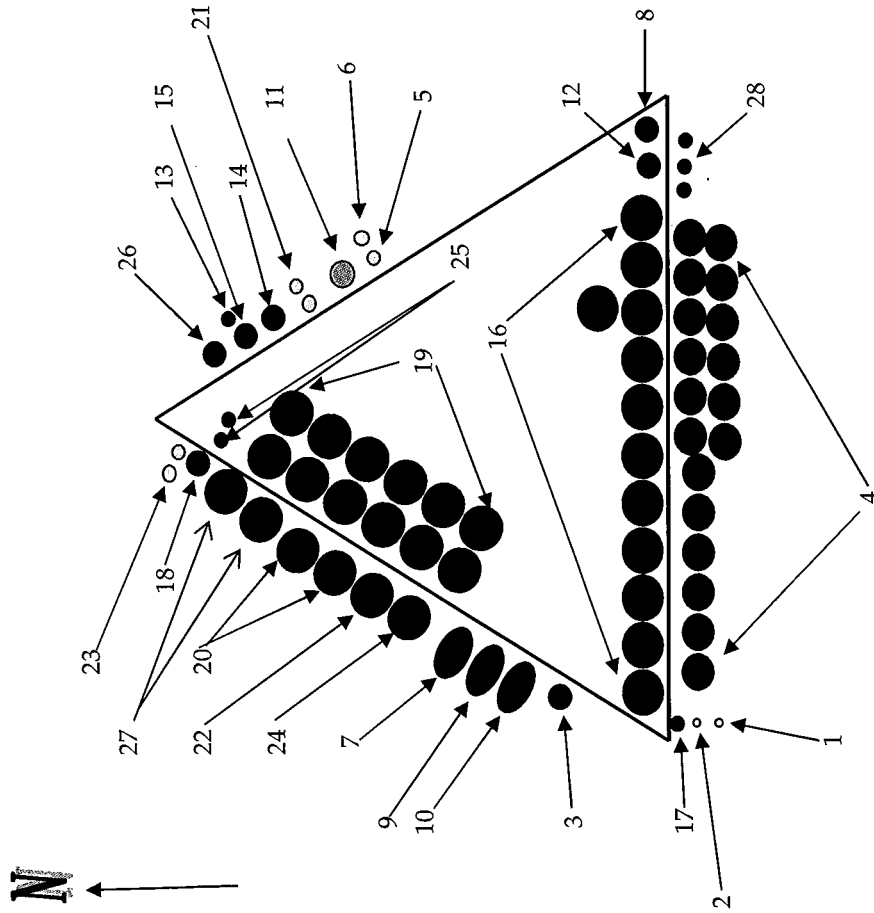
<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b>	84514.001.0001- Storrs-UConn, CT (Site # CT1077)	<b>Page</b>	60 of 60
	<b>Project</b>	317' GT / AT&T Co-Location	<b>Date</b>	12:59:13 08/24/12
	<b>Client</b>	Nexlink	<b>Designed by</b>	Rortiz

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	SF*P <sub>allow</sub> K	% Capacity	Pass Fail
T7	180 - 160	Bottom Girt	1	238	0.700	22.614	3.1	Pass
T8	160 - 140	Bottom Girt	1	280	0.423	22.614	1.9	Pass
T9	140 - 120	Bottom Girt	1	321	0.342	16.965	2.0	Pass
T10	120 - 100	Bottom Girt	1	364	0.816	22.614	3.6	Pass
T11	100 - 80	Bottom Girt	1	406	0.616	22.614	2.7	Pass
T12	80 - 60	Bottom Girt	1	448	0.447	16.965	2.6	Pass
T13	60 - 40	Bottom Girt	1	490	0.483	16.965	2.8	Pass
T14	40 - 20	Bottom Girt	1	532	0.494	16.965	2.9	Pass
T15	20 - 6.5	Bottom Girt	1	574	7.921	16.965	46.7	Pass
T1	287 - 280	Guy A@283.5	3/4	680	10.762	29.150	36.9	Pass
T3	260 - 240	Guy A@256.611	3/4	668	11.115	29.150	38.1	Pass
T5	220 - 200	Guy A@216.611	3/4	656	11.918	29.150	40.9	Pass
T7	180 - 160	Guy A@166.694	3/4	644	12.834	29.150	44.0	Pass
T10	120 - 100	Guy A@106.694	5/8	632	11.608	21.200	54.8	Pass
T13	60 - 40	Guy A@56.6111	7/16	620	5.747	10.400	55.3	Pass
T1	287 - 280	Guy B@283.5	3/4	675	11.416	29.150	39.2	Pass
T3	260 - 240	Guy B@256.611	3/4	663	11.761	29.150	40.3	Pass
T5	220 - 200	Guy B@216.611	3/4	651	12.496	29.150	42.9	Pass
T7	180 - 160	Guy B@166.694	3/4	639	13.324	29.150	45.7	Pass
T10	120 - 100	Guy B@106.694	5/8	627	11.694	21.200	55.2	Pass
T13	60 - 40	Guy B@56.6111	7/16	615	5.793	10.400	55.7	Pass
T1	287 - 280	Guy C@283.5	3/4	671	11.304	29.150	38.8	Pass
T3	260 - 240	Guy C@256.611	3/4	659	11.596	29.150	39.8	Pass
T5	220 - 200	Guy C@216.611	3/4	647	12.510	29.150	42.9	Pass
T7	180 - 160	Guy C@166.694	3/4	635	13.469	29.150	46.2	Pass
T10	120 - 100	Guy C@106.694	5/8	623	11.821	21.200	55.8	Pass
T13	60 - 40	Guy C@56.6111	7/16	611	5.757	10.400	55.4	Pass
T1	287 - 280	Torque Arm Top@283.5	C15x40	677	2.935	254.880	36.9	Pass
T3	260 - 240	Torque Arm Top@256.611	C15x40	665	3.123	254.880	35.7	Pass
T5	220 - 200	Torque Arm Top@216.611	C15x40	653	3.429	254.880	33.7	Pass
T7	180 - 160	Torque Arm Top@166.694	C15x40	645	-2.128	140.282	30.2	Pass
T10	120 - 100	Torque Arm Top@106.694	C15x40	625	-5.062	140.282	22.2	Pass
T13	60 - 40	Torque Arm Top@56.6111	C15x40	617	-2.499	140.922	8.7	Pass
							<b>Summary</b>	
							Pole (L1)	24.2 Pass
							Leg (T8)	68.6 Pass
							Diagonal (T15)	39.8 Pass
							Horizontal (T10)	79.0 Pass
							Top Girt (T1)	42.9 Pass
							Bottom Girt (T15)	46.7 Pass
							Guy A (T13)	55.3 Pass
							Guy B (T13)	55.7 Pass
							Guy C (T10)	55.8 Pass
							Torque Arm Top (T1)	36.9 Pass
							Bolt Checks	2.1 Pass
							<b>RATING =</b>	<b>79.0 Pass</b>



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

# Base Level Drawing



Feedline Schedule		
Line Number	Size/Type	Elevation (top) (ft)
1 (E)	1/4"	13'
2 (E)	1/4"	18'
3 (E)	7/8" Coax	71'
4 (E)	(18) 1-5/8"	83'
5 (E)	3/8" Coax	92'
6 (E)	3/8" Coax	95'
7 (E)	EW63	104'
8 (E)	7/8" Coax	111'
9 (E)	EW63	116'
10 (E)	EW63	116'
11 (E)	Conduit	156'
12 (E)	7/8" Coax	158'
13 (E)	1/2" Coax	171'
14 (E)	7/8" Coax	171'
15 (E)	7/8" Coax	172'
16 (E)	(12) 1-5/8"	186'
17 (E)	1/2" Coax	197'
18 (E)	7/8" Coax	210'
19 (E)	(12) 1-5/8"	235'
20 (E)	(2) 1-5/8"	257'
21 (E)	(2) 1/4" Coax	257'
22 (E)	1-5/8" Coax	257'
23 (E)	(2) 1/4" Coax	257'
24 (E)	1-5/8" Coax	257'
25 (E)	(2) 1/4" Coax	274'
26 (E)	7/8" Coax	305'
27 (E)	(2) 1-5/8"	Unused @ 257'
28 (P)	(3) 1/2" Coax	186

PROJECT INFORMATION

SCOPE OF WORK: UNMANNED TELECOMMUNICATIONS FACILITY MODIFICATIONS  
SITE ADDRESS: 60 NORTH EAGLESVILLE ROAD  
MANSFIELD, CT 06269  
LATITUDE: 41.814048 N 41° 48' 50.57" N  
LONGITUDE: 72.259443 W 72° 15' 33.99" W  
JURISDICTION: NATIONAL, STATE & LOCAL CODES OR ORDINANCES  
CURRENT USE: TELECOMMUNICATIONS FACILITY  
PROPOSED USE: TELECOMMUNICATIONS FACILITY



SITE NUMBER: CT1077  
SITE NAME: STORRS

DRAWING INDEX

REV

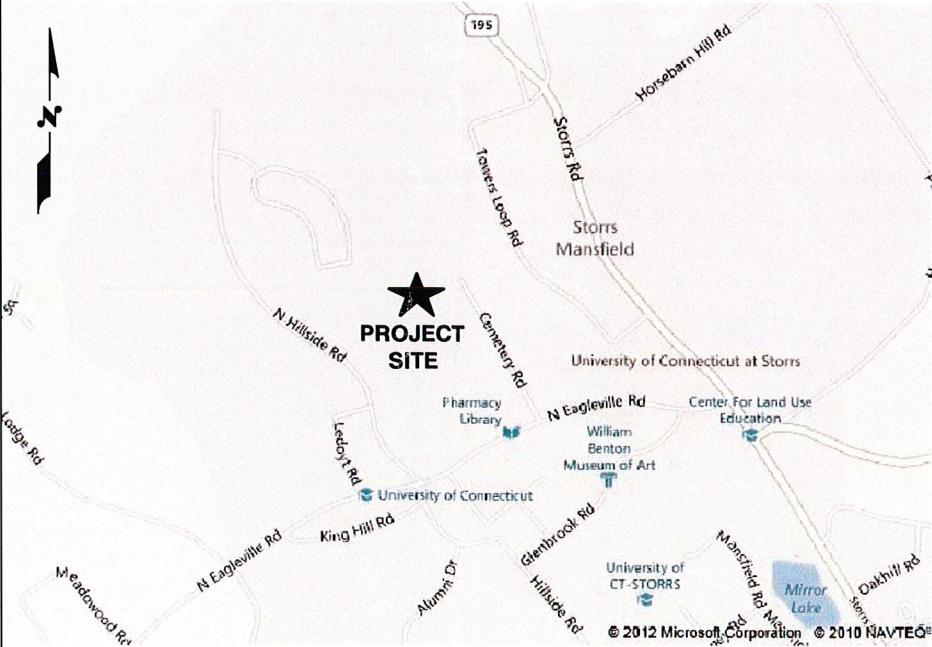
VICINITY MAP

GENERAL NOTES

- T-1 TITLE SHEET
- GN-1 GENERAL NOTES
- A-1 COMPOUND & EQUIPMENT PLAN
- A-2 ANTENNA LAYOUT & ELEVATION
- A-3 DETAILS
- G-1 PLUMBING DIAGRAM & GROUNDING DETAILS

- 2
- 2
- 2
- 2
- 2
- 2

DIRECTIONS TO SITE:  
START OUT GOING NORTHEAST ON ENTERPRISE DR TOWARD CAPITOL BLVD. TURN LEFT ONTO CAPITOL BLVD. TURN LEFT ONTO WEST ST. MERGE ONTO I-91 N VIA THE RAMP ON THE LEFT TOWARD HARTFORD. MERGE ONTO CT-15 N VIA EXIT 29 TOWARD I-84 E/E. HARTFORD/BOSTON. CT-15 N BECOMES I-84 E. TAKE THE CT-195 EXIT, EXIT 68, TOWARD TOLLAND/MANSFIELD. TURN RIGHT ONTO MERROW RD/CT-195. CONTINUE TO FOLLOW CT-195. TURN RIGHT ON NORTH EAGLEVILLE ROAD - END AT 60 NORTH EAGLEVILLE ROAD, MANSFIELD, CT 06269.



- 1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF AT&T. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.
- 2. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
- 3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE AT&T REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

CALL



BEFORE YOU DIG



CALL TOLL FREE 800-922-4455

UNDERGROUND SERVICE ALERT

Hudson Design Group, Inc. logo and address: 1400 OSGOOD STREET, BUILDING 20 NORTH, SUITE 2-101, N. ANDOVER, MA 01845. TEL: (978) 557-5553, FAX: (978) 336-5586.

NEXLINK logo and address: 800 MARSHALL PHELPS ROAD UNIT#: 2A, WINDSOR, CT 06095. a UniTek GLOBAL SERVICES company.

SITE NUMBER: CT1077  
SITE NAME: STORRS  
60 NORTH EAGLESVILLE ROAD  
MANSFIELD, CT 06269  
TOLLAND COUNTY

AT&T logo and address: 500 ENTERPRISE DRIVE, SUITE 3A, ROCKY HILL, CT 06095.

								AT&T	
								TITLE SHEET (LTE)	
								DRAWING NUMBER	
								T-1	
								REV	
								2	



## GENERAL NOTES

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTNING 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.
2. 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.
3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
4. 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.
5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS 2 AWG STRANDED COPPER FOR OUTDOOR BTS.
6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWS COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2 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

1. FOR THE PURPOSE OF THE SUBCONTRACTOR CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:  
CONTRACTOR - NEXLINK  
SUBCONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)  
OWNER - AT&T MOBILITY
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
9. 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.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.
14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.

15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 ( $F_y = 36$  ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E ( $F_y = 36$  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.
16. CONSTRUCTION SHALL COMPLY WITH UMTS SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T MOBILITY SITES."
17. 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.
18. 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.
19. 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 TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.
20. APPLICABLE BUILDING CODES:  
SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.  
BUILDING CODE: 2003 IBC WITH 2005 CT SUPPLEMENT & 2009 CT AMENDMENTS  
ELECTRICAL CODE: REFER TO ELECTRICAL DRAWINGS  
LIGHTENING CODE: REFER TO ELECTRICAL DRAWINGS
- SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:
- AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)
- MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION;
- TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-F, STRUCTURAL STANDARDS FOR STEEL
- ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

## ABBREVIATIONS

AGL	ABOVE GRADE LEVEL	G.C.	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
AWG	AMERICAN WIRE GAUGE	MGB	MASTER GROUND BUS		
BCW	BARE COPPER WIRE	MIN	MINIMUM	TBD	TO BE DETERMINED
BTS	BASE TRANSCEIVER STATION	PROPOSED	NEW	TBR	TO BE REMOVED
EXISTING	EXISTING	N.T.S.	NOT TO SCALE	TBRR	TO BE REMOVED AND REPLACED
EG	EQUIPMENT GROUND	REF	REFERENCE		
EGR	EQUIPMENT GROUND RING	REF	REFERENCE	TYP	TYPICAL



1600 OSGOOD STREET  
BUILDING 20 NORTH, SUITE 2-101  
N. ANDOVER, MA 01845

TEL: (978) 557-5553  
FAX: (978) 336-5586



a UniTek GLOBAL SERVICES company  
800 MARSHALL PHELPS ROAD UNIT#: 2A  
WINDSOR, CT 06095

**SITE NUMBER: CT1077**  
**SITE NAME: STORRS**

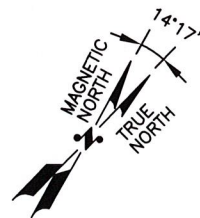
60 NORTH EAGLESVILLE ROAD  
MANSFIELD, CT 06269  
TOLLAND COUNTY



500 ENTERPRISE DRIVE, SUITE 3A  
ROCKY HILL, CT 06095

										AT&T	
2	09/10/12	CONSTRUCTION REVISED	DD	DC	DPH						
1	04/18/12	CONSTRUCTION REVISED	SF	DC	DPH						
0	04/04/12	ISSUED FOR REVIEW	MJS	DC	DPH						
NO.	DATE	REVISIONS	BY	CHK	APP						
SCALE: AS SHOWN		DESIGNED BY: MJS	DRAWN BY: MJS		SHEET NUMBER: 1 OF 7.01		DRAWING NUMBER: GN-1		REV: 2		



**NOTE:**

REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

**STRUCTURAL NOTE:**

STRUCTURAL INFORMATION TAKEN FROM STRUCTURAL ANALYSIS PERFORMED BY: B+T GROUP DATED: SEPTEMBER 5, 2012

PROPOSED LTE GPS ANTENNA MOUNTED TO EXISTING ICE BRIDGE (10' MIN. FROM EXISTING GPS ANTENNA)

PROPOSED 3" FLEX CONDUIT FOR DC POWER & FIBER & 1/2" COAX FOR LTE GPS ANTENNA (TO FOLLOW EXISTING COAX) (ON ICE BRIDGE ONLY)

EXISTING AT&T GPS ANTENNA

EXISTING AT&T ICE BRIDGE WITH (12) 1-5/8" COAX TO REMAIN

LTE 263°

LTE 23°

LTE 143°

**COMPOUND PLAN**

SCALE: 3/32"=1'-0"

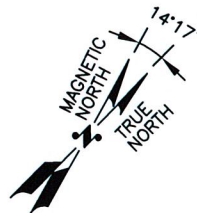
0 5'-4" 10'-8" 21'-4" 32'-0"

PROPOSED DC POWER, FIBER & 1/2" COAX FOR LTE GPS ANTENNA (TO FOLLOW EXISTING COAX)

PROPOSED RBS 6601 IN 23" EQUIPMENT RACK WITH DC TO DC CONVERTER FOR LTE EQUIPMENT

EXISTING CABLE TRAY ABOVE

EXISTING TELCO BACKBOARD



EXISTING DEHUMIDIFIER

EXISTING HVAC (TYP.)

PROPOSED 3" FLEX CONDUIT FOR DC POWER & FIBER & 1/2" COAX FOR LTE GPS ANTENNA (TO FOLLOW EXISTING COAX) (ON ICE BRIDGE ONLY)

EXISTING AT&T ICE BRIDGE WITH (12) 1-5/8" COAX TO REMAIN

PROPOSED 4" COAX PORT (AS NECESSARY)

EXISTING COAX PORT

EXISTING RRU RACK

EXISTING UMTS CABINET

EXISTING AIR DRYER

EXISTING DIPLEXER RACK ABOVE

**EQUIPMENT PLAN**

SCALE: 1/2"=1'-0"

0 1'-0" 2'-0" 4'-0" 6'-0"

Hudson  
Design Group, LLC

1600 OSGOOD STREET  
BUILDING 20 NORTH, SUITE 2-101  
N. ANDOVER, MA 01845  
TEL: (978) 557-5553  
FAX: (978) 336-5586



a UniTek GLOBAL SERVICES company  
800 MARSHALL PHELPS ROAD UNIT#: 2A  
WINDSOR, CT 06095

**SITE NUMBER: CT1077**  
**SITE NAME: STORRS**

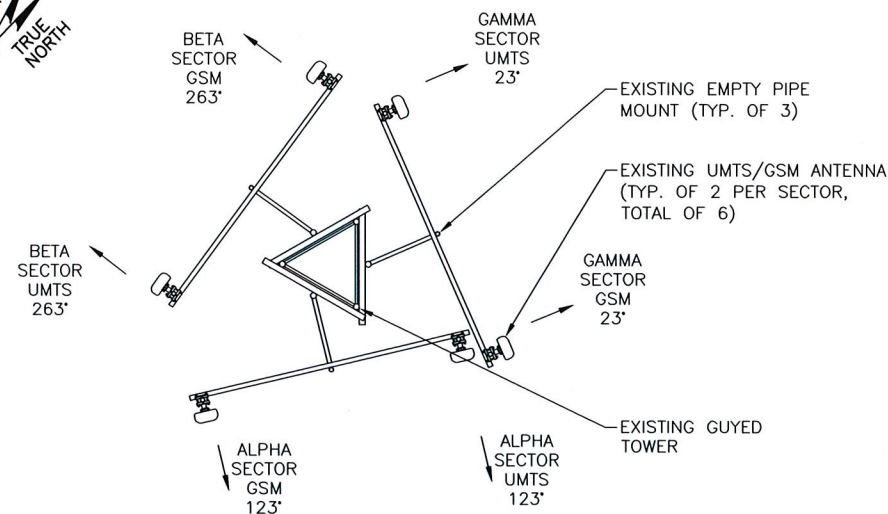
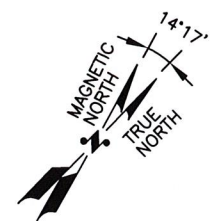
60 NORTH EAGLESVILLE ROAD  
MANSFIELD, CT 06269  
TOLLAND COUNTY



500 ENTERPRISE DRIVE, SUITE 3A  
ROCKY HILL, CT 06095

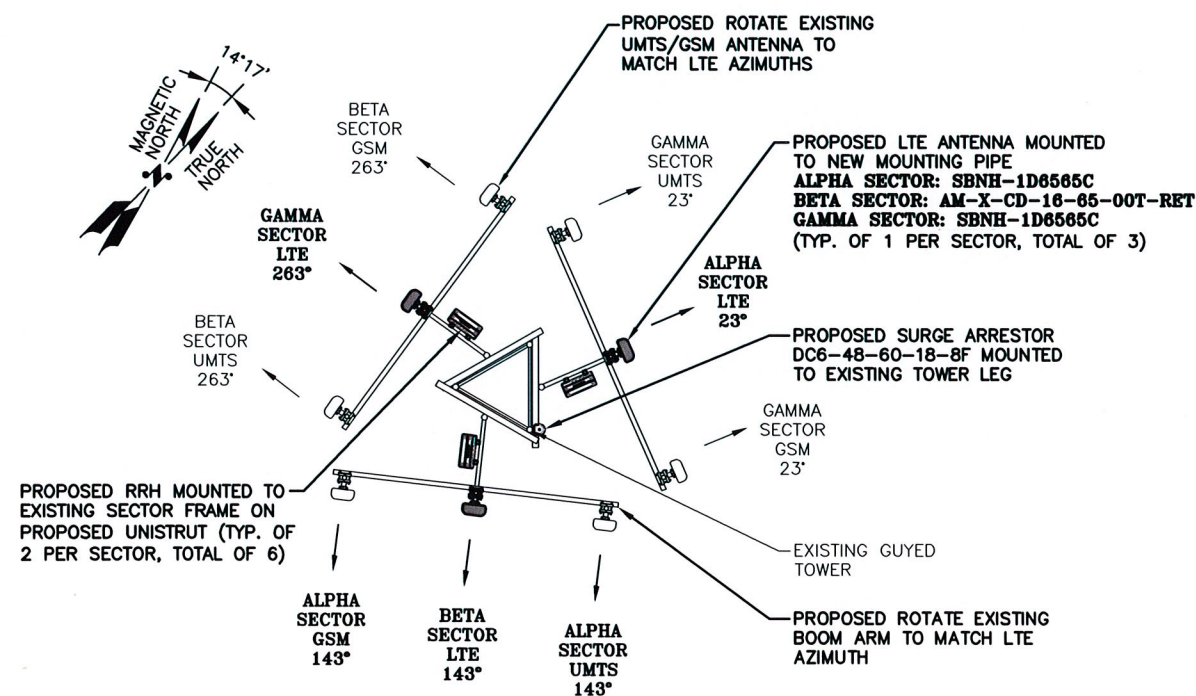
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--





**EXISTING UMTS/GSM ANTENNA PLAN**

SCALE: N.T.S.



**PROPOSED LTE ANTENNA PLAN**

SCALE: N.T.S.

TOP OF EXISTING GUYED TOWER  
317'-0"± AGL

EXISTING LATTICE TOWER

PROPOSED RRH MOUNTED TO EXISTING SECTOR FRAME ON PROPOSED UNISTRUT (TYP. OF 2 PER SECTOR, TOTAL OF 6)

PROPOSED SURGE ARRESTOR DC6-48-60-18-8F MOUNTED TO EXISTING TOWER LEG

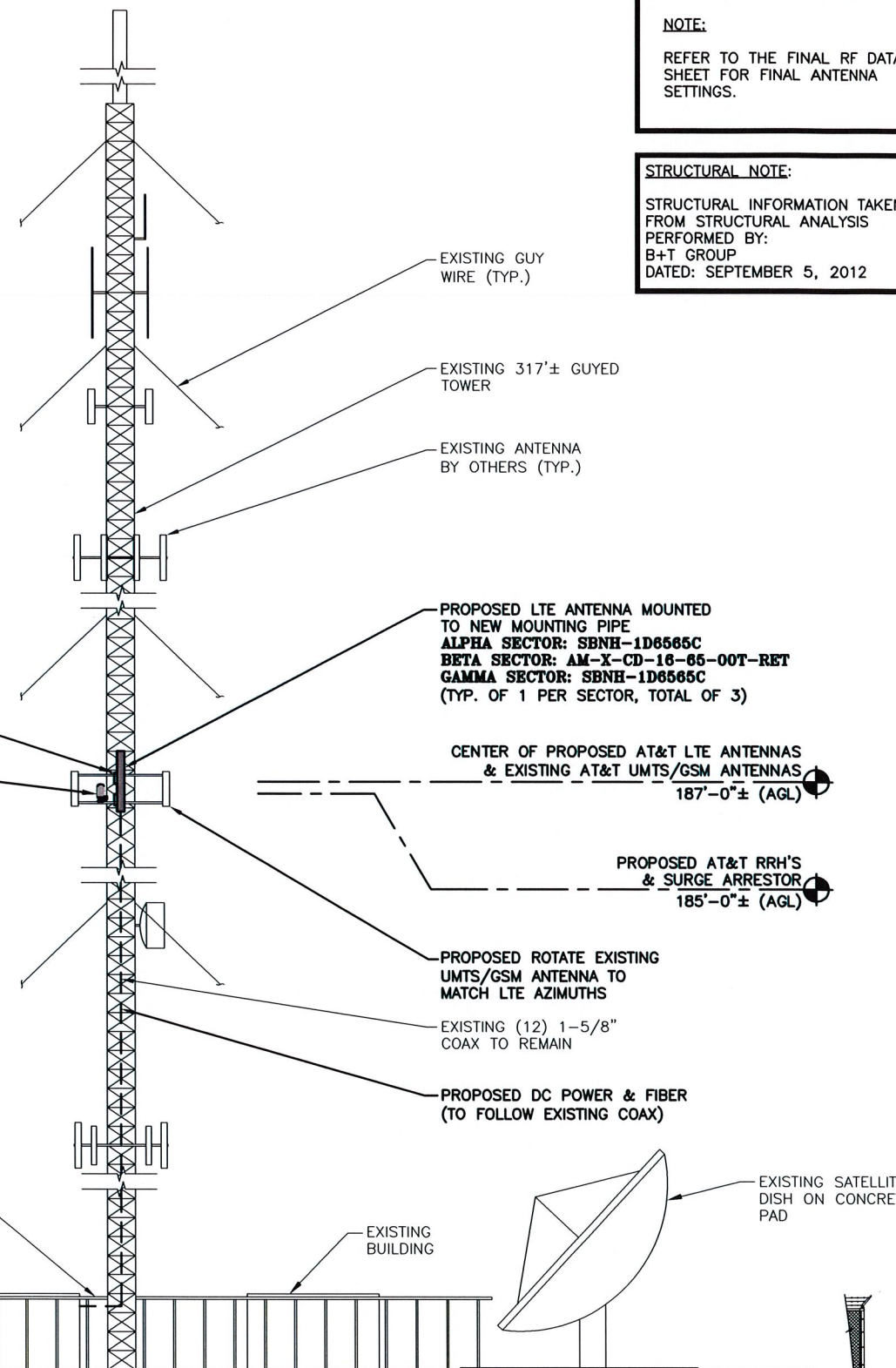
EXISTING AT&T ICE BRIDGE WITH (12) 1-5/8" COAX TO REMAIN

EXISTING AT&T EQUIPMENT SHELTER

EXISTING EQUIPMENT SHELTER

EXISTING CHAIN LINK FENCE (TYP.)

GROUND LEVEL  
ELEV. 0'-0"± (AGL)



**NORTHEAST ELEVATION**

SCALE: 3/32"=1'-0"

0 5'-4" 10'-8"

**NOTE:**

REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

**STRUCTURAL NOTE:**

STRUCTURAL INFORMATION TAKEN FROM STRUCTURAL ANALYSIS PERFORMED BY: B+T GROUP DATED: SEPTEMBER 5, 2012

**Hudson**  
Design Group  
1400 OSGOOD STREET  
BUILDING 20 NORTH, SUITE 2-101  
N. ANDOVER, MA 01845  
TEL: (978) 557-5553  
FAX: (978) 336-5586

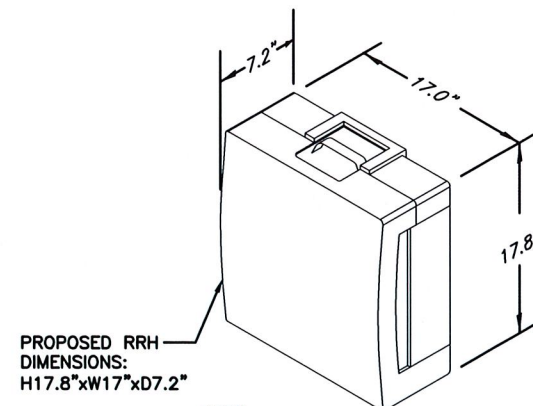
**NEXLINK**  
GLOBAL SERVICES  
a UniTek GLOBAL SERVICES company  
800 MARSHALL PHELPS ROAD UNIT#: 2A  
WINDSOR, CT 06095

**SITE NUMBER: CT1077**  
**SITE NAME: STORRS**  
60 NORTH EAGLESVILLE ROAD  
MANSFIELD, CT 06269  
TOLLAND COUNTY

**at&t**  
500 ENTERPRISE DRIVE, SUITE 3A  
ROCKY HILL, CT 06095

REVISIONS				AT&T		
2	09/10/12	CONSTRUCTION REVISED	DD	DC	DPH	
1	04/18/12	CONSTRUCTION REVISED	SF	DC	DPH	
0	04/04/12	ISSUED FOR REVIEW	MJS	DC	DPH	
NO.	DATE	REVISIONS	BY	CHK	APP	
SCALE: AS SHOWN			DESIGNED BY: MJS	DRAWN BY: MJS	PROJECT NUMBER: 077.01	DRAWING NUMBER: A-2
						REV: 2



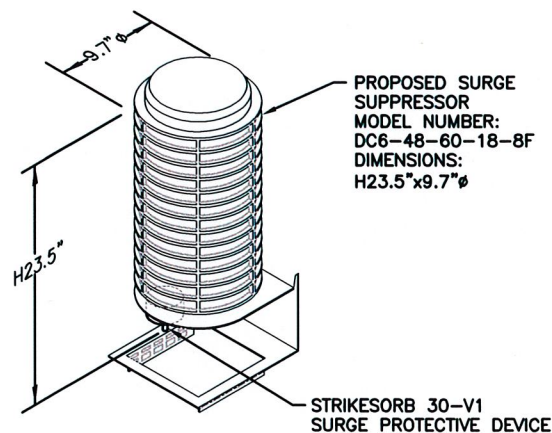


PROPOSED RRH  
DIMENSIONS:  
H17.8"xW17"xD7.2"

NOTE:  
MOUNT PER MANUFACTURER'S  
SPECIFICATIONS.

### RRH DETAIL

SCALE: N.T.S.



PROPOSED SURGE  
SUPPRESSOR  
MODEL NUMBER:  
DC6-48-60-18-8F  
DIMENSIONS:  
H23.5"xW9.7"

NOTE:  
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

### DC SURGE SUPPRESSOR DETAIL

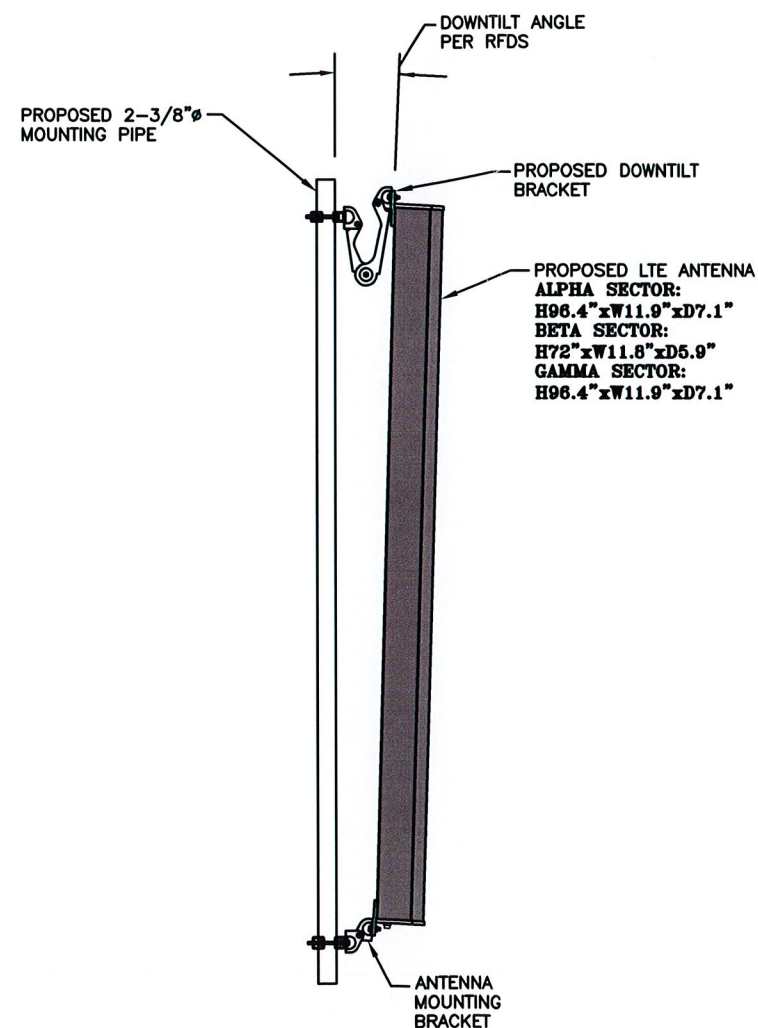
SCALE: N.T.S.

#### NOTE:

REFER TO THE FINAL RF DATA  
SHEET FOR FINAL ANTENNA  
SETTINGS.

#### STRUCTURAL NOTE:

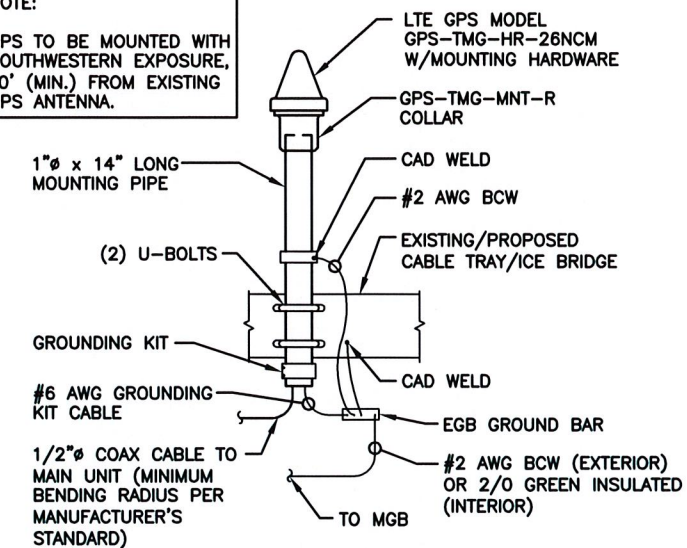
STRUCTURAL INFORMATION TAKEN  
FROM STRUCTURAL ANALYSIS  
PERFORMED BY:  
B+T GROUP  
DATED: SEPTEMBER 5, 2012



### PROPOSED LTE ANTENNA DETAIL

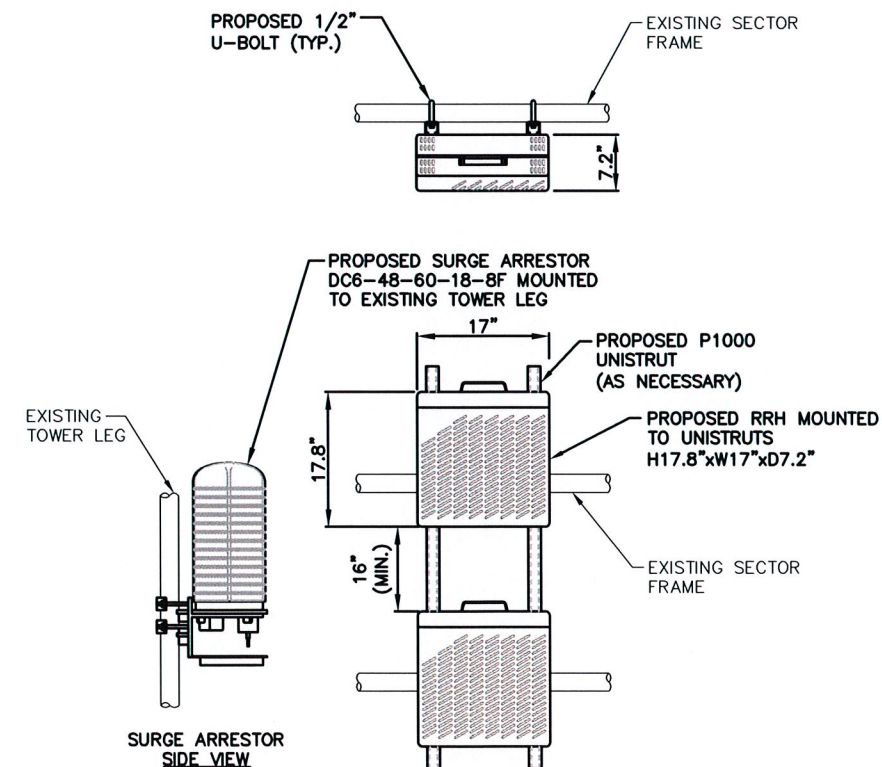
SCALE: N.T.S.

NOTE:  
GPS TO BE MOUNTED WITH  
SOUTHWESTERN EXPOSURE,  
10' (MIN.) FROM EXISTING  
GPS ANTENNA.



### GPS MOUNTING DETAIL

SCALE: N.T.S.



### PROPOSED RRH & SURGE ARRESTOR MOUNTING DETAIL

SCALE: N.T.S.

Hudson  
Design Group LLC



1600 OSGOOD STREET  
BUILDING 20 NORTH, SUITE 2-101  
N. ANDOVER, MA 01845  
TEL: (978) 557-5553  
FAX: (978) 336-5586



800 MARSHALL PHELPS ROAD UNIT#: 2A  
WINDSOR, CT 06095

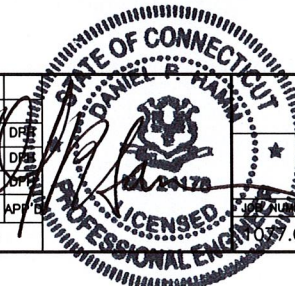
SITE NUMBER: CT1077  
SITE NAME: STORRS

60 NORTH EAGLESVILLE ROAD  
MANSFIELD, CT 06269  
TOLLAND COUNTY

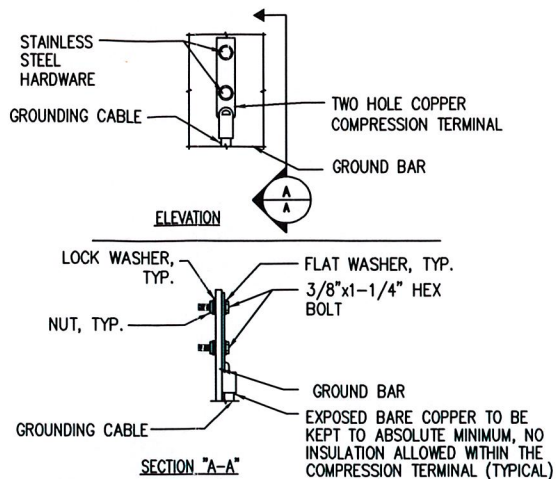
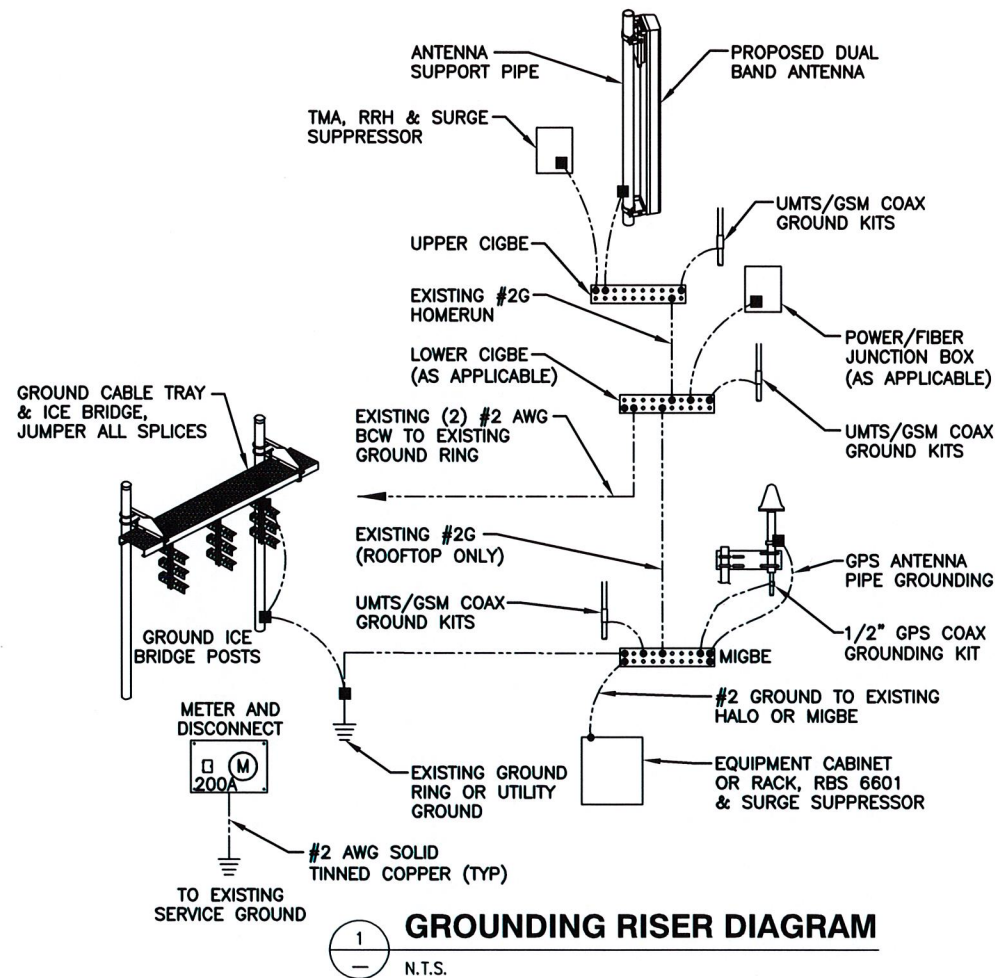


500 ENTERPRISE DRIVE, SUITE 3A  
ROCKY HILL, CT 06095

2	09/10/12	CONSTRUCTION REVISED	DD	DC	DR	AT&T
1	04/18/12	CONSTRUCTION REVISED	SF	DE	DR	DETAILS
0	04/04/12	ISSUED FOR REVIEW	MJS	DC	DR	(LTE)
NO.	DATE	REVISIONS	BY	CHK	APP	DRAWING NUMBER
SCALE:	AS SHOWN	DESIGNED BY: MJS	DRAWN BY: MJS	DATE: 09/10/12	REVISION: 01	A-3
						REV 2

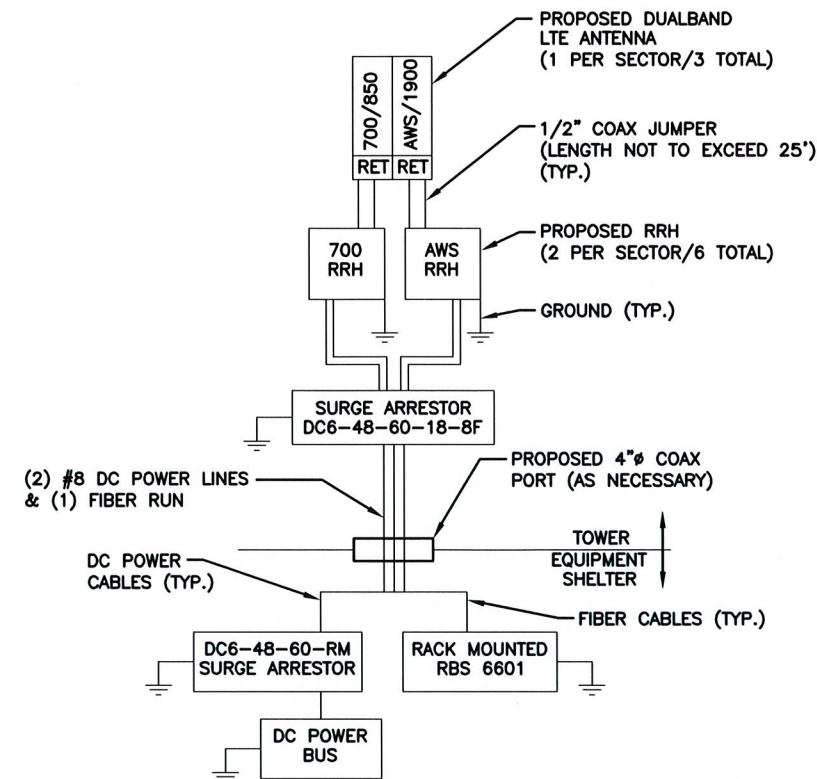






- NOTE:
1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
  2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
  3. CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB.

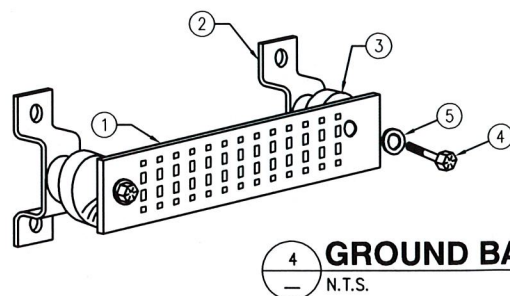
**TYPICAL GROUND BAR CONNECTION DETAIL**  
2  
N.T.S.



- NOTES:
1. CONTRACTOR TO CONFIRM ALL PARTS.
  2. INSTALL ALL EQUIPMENT TO MANUFACTURER'S RECOMMENDATIONS.

**PLUMBING DIAGRAM**  
3  
N.T.S.

WIRELESS SOLUTIONS INC.			
NO.	REQ.	PART NO.	DESCRIPTION
①	1	HLGB-0420-IS	SOLID GND. BAR (20"x4"x1/4")
②	2	—	WALL MTG. BRKT.
③	2	—	INSULATORS
④	4	—	5/8"-11x1" H.H.C.S.
⑤	4	—	5/8 LOCKWASHER



**GROUND BAR - DETAIL**  
4  
N.T.S.

EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL 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)