August 28th, 2018

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

Re: **Notice of Exempt Modification – Antenna Swap**
Property Address: **723 Farmington Avenue, New Britain, CT 06503**
Applicant: **AT&T Mobility, LLC**

Dear Ms. Bachman:

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

AT&T currently maintains a wireless telecommunications facility consisting of nine (9) wireless telecommunication antennas at an antenna center line height of 98-feet on an existing 110 -foot monopole tower, owned by SBA Communications Corporation at 8051 Congress Avenue, Boca Raton, FL 33487. AT&T now intends to remove (3) Power wave 7770 panel antennas on position 2 all sectors, while retaining three (3) Power wave 7770 panel antennas on position 1 all sectors, and three (3) CCI OPA-65R-LCUU-H6 position 4 all sectors and install three (3) new Quintel QS66512-2 panel antennas on position 2 all sectors (for a total of (9) panel antennas), at the 98-foot level. AT&T also intends to install one (1) DC-6 surge suppressor, three (3) RRUS-32's, and three (3) RRUS--8843 on the existing antenna masts. Inside AT& T's shelter, AT&T proposes to swap the DUS with a 5216, add a second XMU as well as add an RBS 6630.

This facility was unanimously approved by the Connecticut Siting Council with stipulations in the request of Sprint Spectrum, L.P. for a Certificate of Environmental Compatibility and Public Need for the property located at 723 Farmington Ave. New Britain, Connecticut on June 28, 2005.

The following is a list of subsequent decisions by the Connecticut Siting Council:
EM-CING-089-060404, EM-AT&T-089-120727, EM-AT&T-089-140709, EM-CING-089-150921,

85 Rangeway Rd., Building 3 Suite 102, Billerica, MA 01862

Please accept this letter pursuant to Regulation of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-5I0j-72(b) (2). In accordance with R.C.S.A., a copy of this letter is being sent to Erin E. Stewart, Mayor of New Britain at 27 West Main Street, New Britain, CT 06051. A copy of this letter is also being sent to Nest 88 Polish Falcons Alliance of America at 201 Washington Street, New Britain, CT 06051, owner of the property where the tower is located and the tower owner, SBA Communications Corp. at 8051 Congress Ave. Boca Raton, FL 33487. A copy will also be sent to David Zajac, The Zoning Enforcement Officer/Building Inspector at 27 West Main Street, Room 404, New Britain, CT 06051.

The planned modifications to AT&T's facility fall squarely within those activities explicitly provided for in R.C.S.A. §16-50j-72(b) (2).

1. The proposed modifications will not result in an increase in the height of the existing tower. AT&T's replacement antennas will be installed at the 98-foot level of the 110-foot

monopole.

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

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

Sincerely,

Rodney Joujoute

Enclosures
CC w/enclosures:

Mayor of New Britain – Erin E. Stweart
Property Owner- 88 Polish Falcons Alliance of America
Structure Owner – SBA Communications
David Zajac – Zoning Enforcement Office/Building Inspector

SITESAFE
RF COMPLIANCE EXPERTS

8618 Westwood Center Drive, Suite 315, Vienna, VA 22182
703.276.1100 ● 703.276.1169 fax
info@sitesafe.com ● www.sitesafe.com

Smartlink on behalf of AT&T Mobility, LLC Site FA – 10065751 Site ID – CT1028 (MRCTB032052-MRCTB031563-MRCTB031093-MRCTB032077) USID – 86941 Site Name – NEW BRITAIN FARMINGTON AVE. STANLEY PARK

723 FARMINGTON AVENUE
NEW BRITAIN, CT 06053

Latitude: N41-41-53.97
Longitude: W72-47-10.29
Structure Type: Monopole

Report generated date: August 20, 2018
Report by: Scott Broyles
Customer Contact: Haleluya Haile

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

Table of Contents

1 General Site Summary

1.1 Report Summary

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

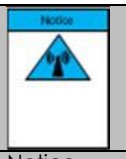
The following documents were provided by the client and were utilized to create this report:

RFDS: NEW-ENGLAND_CONNECTICUT_CT1028_2018-LTE-Next-Carrier_LTE_mr673a_2051A0GJ8B_10065751_86941_03-14-2018_Final-Approved_v2.00

CD's: 10065751_AE201_180710_CTL01028_REV0.JMRL_HHRL

RF Powers Used: RFDS

1.2 Signage Summary

AT&T Signage Locations	 Information 1	 Information 2	 Notice	 Notice 2	 Caution	 Caution 2	 Warning	 Warning 2	 Barriers
Access Point(s)	☐[#]	☐[#]	☐[#]	☐[#]	☐[#]	☐[#]	☐[#]	☐[#]	☐
Alpha	☐[#]	☐[#]	☐[#]	☐[#]	☐[#]	☐[#]	☐[#]	☐[#]	☐
Beta	☐[#]	☐[#]	☐[#]	☐[#]	☐[#]	☐[#]	☐[#]	☐[#]	☐
Gamma	☐[#]	☐[#]	☐[#]	☐[#]	☐[#]	☐[#]	☐[#]	☐[#]	☐

1.3 Fall Arrest Anchor Point Summary

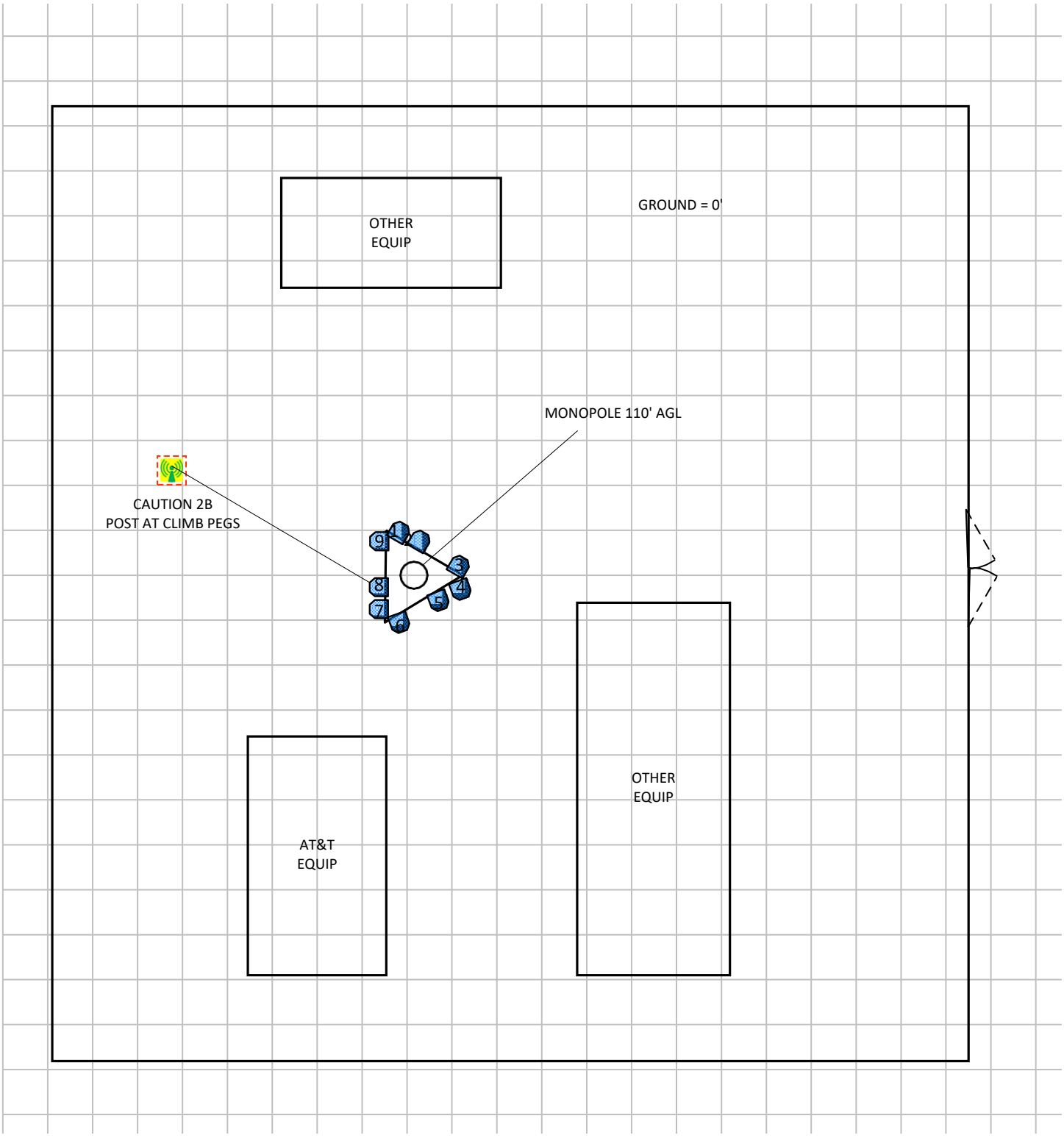
Fall Arrest Anchor & Parapet Info	Parapet Available (Y/N)	Parapet Height (inches)	Fall Arrest Anchor Available (Y/N)
Roof Safety Info	N	N/A	N

2 Scale Maps of Site

The following diagrams are included:

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

Site Scale Map For: NEW BRITAIN FARMINGTON AVE. STANLEY PARK



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

N

(Feet)

0 6.3 12.5

www.sitesafe.com
Site Name:NEW BRITAIN FARMINGTON AVE STANLEY PARK
8/20/2018 9:44:05 AM

Carrier Identification

AT&T MOBILITY LLC | VERIZON WIRELESS | T-MOBILE | SPRINT | UNKNOWN CARRIER

Sign Legend

Caution 1 | Caution 2 | Notice 2 | Notice 1 | Warning | Warning 2 | Info 1 | Info 2 | RSP (RF Safety Plan)

Barrier

Proposed Barriers/ Signs

3 Antenna Inventory

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

Ant ID	Operator	Antenna Make & Model	Type	TX Freq (MHz)	Az (Deg)	Hor BW (Deg)	Ant Len (ft)	Ant Gain (dBd)	3G UMTS Radio(s)	4G Radio(s)	Total ERP (Watts)	X	Y	Z
1	AT&T MOBILITY LLC	Powerwave 7770	Panel	850	30	82	4.6	11.51	1	0	279.3	48.9'	72.1'	95.7'
1	AT&T MOBILITY LLC	Powerwave 7770	Panel	1900	30	86	4.6	13.41	1	0	659.2	48.9'	72.1'	95.7'
2	AT&T MOBILITY LLC (Proposed)	Quintel QS66512-2	Panel	850	30	63	6	10.96	0	1	1000	50.6'	71.3'	95'
2	AT&T MOBILITY LLC (Proposed)	Quintel QS66512-2	Panel	1900	30	68	6	14.16	0	1	3664.4	50.6'	71.3'	95'
2	AT&T MOBILITY LLC (Proposed)	Quintel QS66512-2	Panel	2100	30	57	6	14.76	0	1	3837.1	50.6'	71.3'	95'
3	AT&T MOBILITY LLC	CCI Antennas OPA-65R-LCUU-H6	Panel	737	30	66	6	11.66	0	1	1475.7	53.9'	69.2'	95'
3	AT&T MOBILITY LLC	CCI Antennas OPA-65R-LCUU-H6	Panel	2300	30	60	6	15.46	0	1	1285.3	53.9'	69.2'	95'
4	AT&T MOBILITY LLC	Powerwave 7770	Panel	850	160	82	4.6	11.51	1	0	279.3	54'	67.2'	95.7'
4	AT&T MOBILITY LLC	Powerwave 7770	Panel	1900	160	86	4.6	13.41	1	0	659.2	54'	67.2'	95.7'
5	AT&T MOBILITY LLC (Proposed)	Quintel QS66512-2	Panel	850	160	63	6	10.96	0	1	1000	52.2'	66.3'	95'
5	AT&T MOBILITY LLC (Proposed)	Quintel QS66512-2	Panel	1900	160	68	6	14.16	0	1	3664.4	52.2'	66.3'	95'
5	AT&T MOBILITY LLC (Proposed)	Quintel QS66512-2	Panel	2100	160	57	6	14.76	0	1	3837.1	52.2'	66.3'	95'
6	AT&T MOBILITY LLC	CCI Antennas OPA-65R-LCUU-H6	Panel	737	160	66	6	11.66	0	1	1475.7	48.9'	64.5'	95'
6	AT&T MOBILITY LLC	CCI Antennas OPA-65R-LCUU-H6	Panel	2300	160	60	6	15.46	0	1	1285.3	48.9'	64.5'	95'
7	AT&T MOBILITY LLC	Powerwave 7770	Panel	850	270	82	4.6	11.51	1	0	279.3	47.2'	65.6'	95.7'
7	AT&T MOBILITY LLC	Powerwave 7770	Panel	1900	270	86	4.6	13.41	1	0	659.2	47.2'	65.6'	95.7'
8	AT&T MOBILITY LLC (Proposed)	Quintel QS66512-2	Panel	850	270	63	6	10.96	0	1	1000	47.2'	67.4'	95'
8	AT&T MOBILITY LLC (Proposed)	Quintel QS66512-2	Panel	1900	270	68	6	14.16	0	1	3664.4	47.2'	67.4'	95'
8	AT&T MOBILITY LLC (Proposed)	Quintel QS66512-2	Panel	2100	270	57	6	14.76	0	1	3837.1	47.2'	67.4'	95'
9	AT&T MOBILITY LLC	CCI Antennas OPA-65R-LCUU-H6	Panel	737	270	66	6	11.66	0	1	1475.7	47.2'	71.3'	95'
9	AT&T MOBILITY LLC	CCI Antennas OPA-65R-LCUU-H6	Panel	2300	270	60	6	15.46	0	1	1285.3	47.2'	71.3'	95'

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

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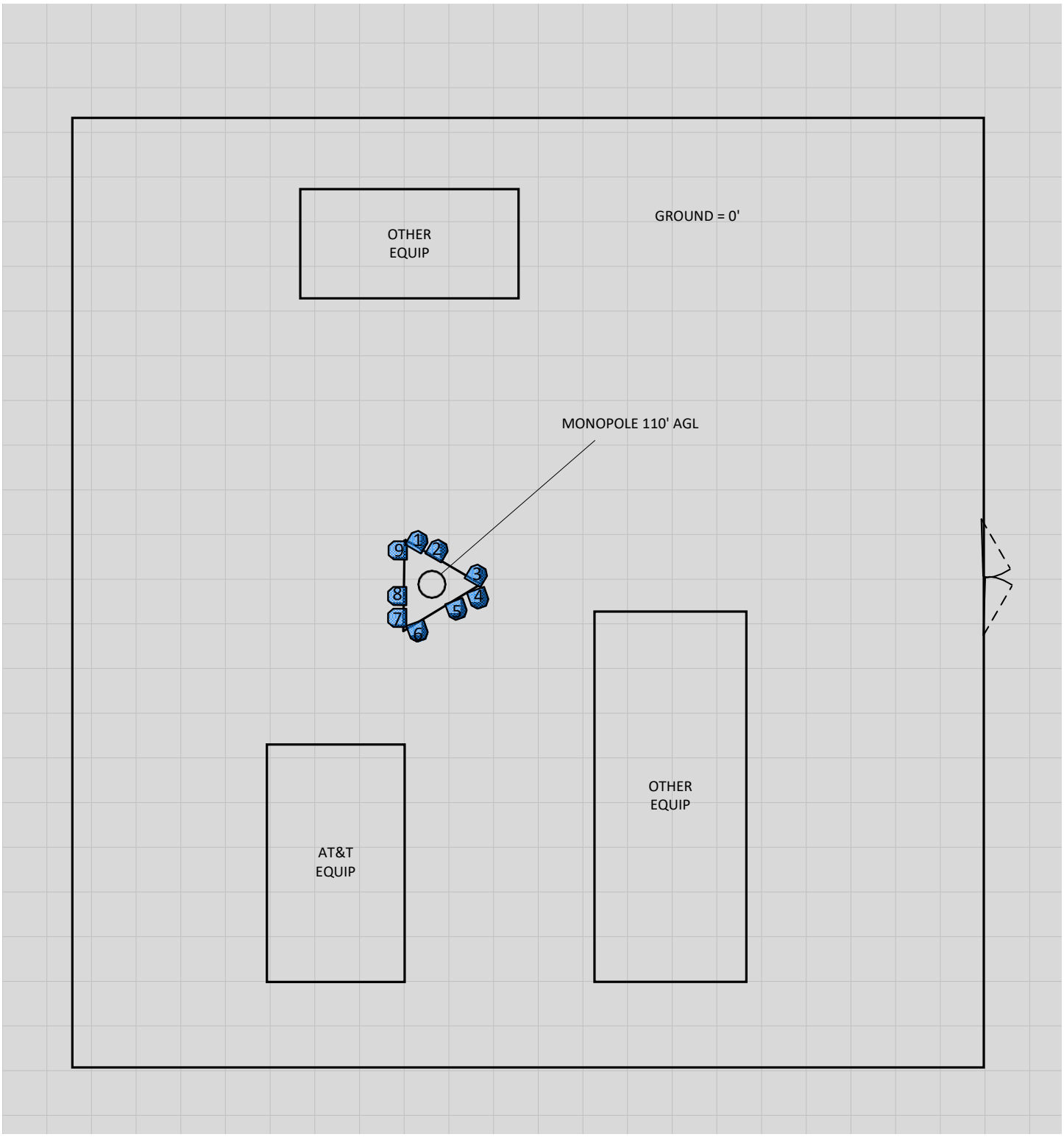
4 Emission Predictions

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

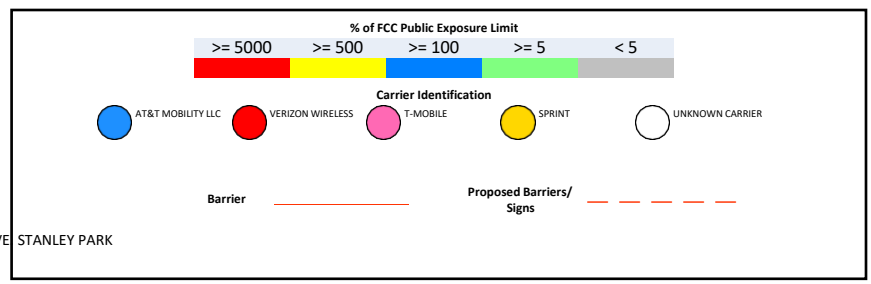
- Ground = 0'

The Antenna Inventory heights are referenced to the same level.

RF Exposure Simulation For: NEW BRITAIN FARMINGTON AVE. STANLEY PARK
Composite View



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



N

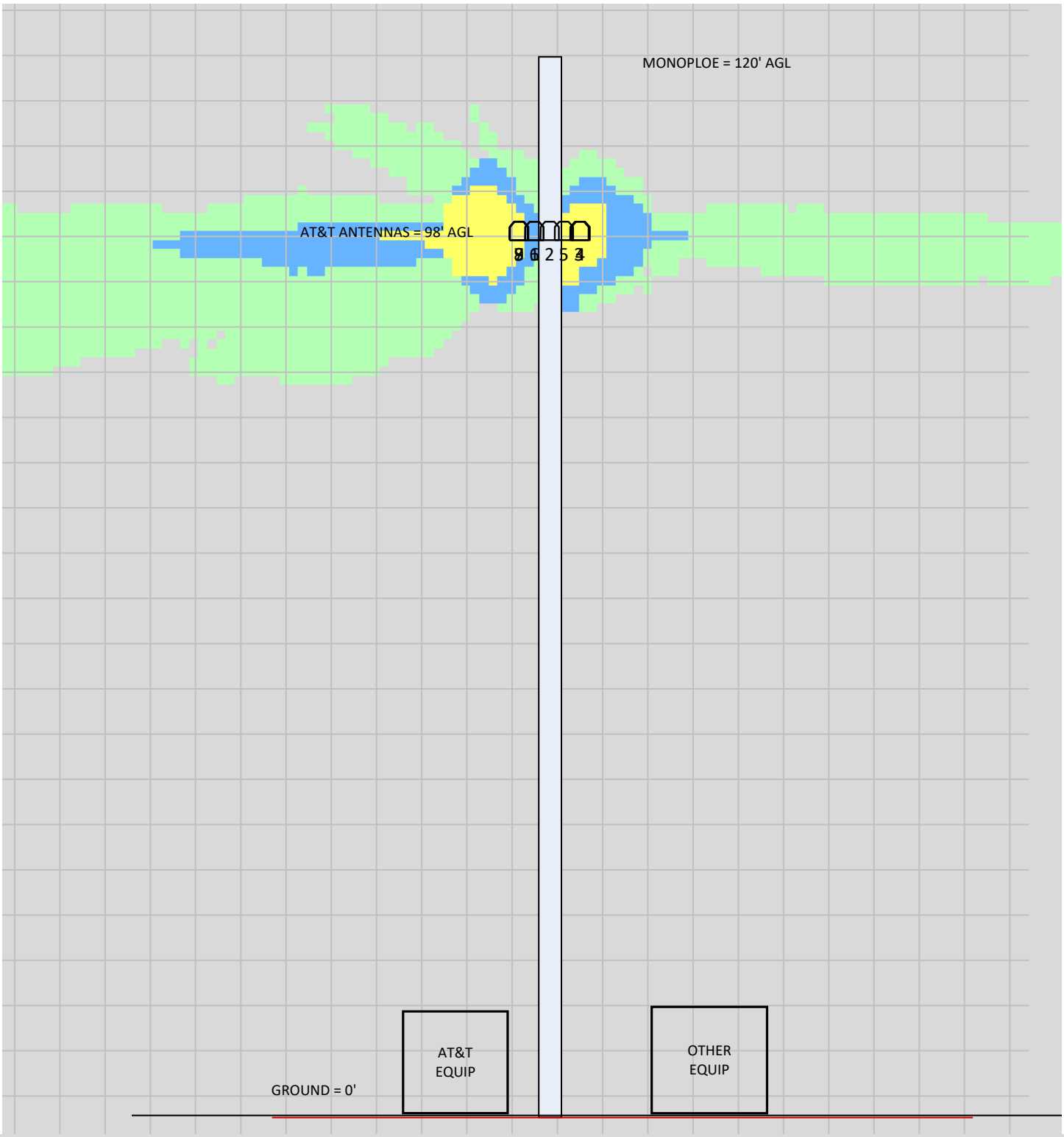
(Feet)

0 6.3 12.6

www.sitesafe.com
Site Name:NEW BRITAIN FARMINGTON AVE. STANLEY PARK
8/20/2018 9:35:28 AM

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

RF Exposure Simulation For: NEW BRITAIN FARMINGTON AVE. STANLEY PARK
Elevation View



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

(Feet)

0 8.3 16.6

www.sitesafe.com
Site Name:NEW BRITAIN FARMINGTON AVE. STANLEY PARK
8/20/2018 9:41:38 AM

% of FCC Public Exposure Limit
>= 5000 | >= 500 | >= 100 | >= 5 | < 5

Carrier Identification
AT&T MOBILITY LLC | VERIZON WIRELESS | T-MOBILE | SPRINT | UNKNOWN CARRIER

Barrier

Proposed Barriers/ Signs

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

5 Site Compliance

5.1 Site Compliance Statement

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

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

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

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

5.2 Actions for Site Compliance

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

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

Monopole Access Location

(1) Caution 2B sign(s) required at Climbing Pegs

Notes:

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

6 Reviewer Certification

The reviewer whose signature appears below hereby certifies and affirms:

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

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

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

August 20, 2018

Young Min Kim

Appendix A – Statement of Limiting Conditions

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

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

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

Appendix B – Regulatory Background Information

FCC Rules and Regulations

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

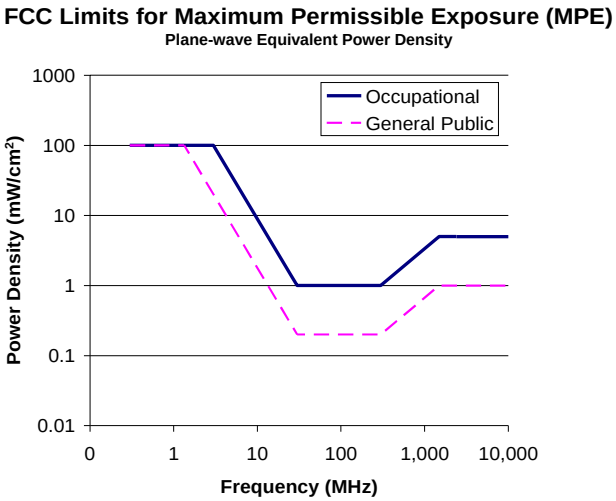
FCC regulations define two separate tiers of exposure limits: Occupational or "Controlled environment" and General Public or "Uncontrolled environment". The General Public limits are generally five times more conservative or restrictive than the Occupational limit. These limits apply to *accessible*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

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

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

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

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



Limits for Occupational/Controlled Exposure (MPE)

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

Limits for General Population/Uncontrolled Exposure (MPE)

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

f = frequency in MHz *Plane-wave equivalent power density

OSHA Statement

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

(a) Each employer –

(1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;

(2) shall comply with occupational safety and health standards promulgated under this Act.

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.

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

Appendix C – Safety Plan and Procedures

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

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

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

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

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

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

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

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

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

Appendix D – RF Emissions

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

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

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

Appendix E – Assumptions and Definitions

General Model Assumptions

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

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

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

Use of Generic Antennas

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

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

Definitions

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Appendix F – References

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

Sitesafe, LLC.
http://www.sitesafe.com
FCC Radio Frequency Safety
http://www.fcc.gov/encyclopedia/radio-frequency-safety
National Council on Radiation Protection and Measurements (NCRP)
http://www.ncrponline.org
Institute of Electrical and Electronics Engineers, Inc., (IEEE)
http://www.ieee.org
American National Standards Institute (ANSI)
http://www.ansi.org
Environmental Protection Agency (EPA)
http://www.epa.gov/radtown/wireless-tech.html
National Institutes of Health (NIH)
http://www.niehs.nih.gov/health/topics/agents/emf/
Occupational Safety and Health Agency (OSHA)
http://www.osha.gov/SLTC/radiofrequencyradiation/
International Commission on Non-Ionizing Radiation Protection (ICNIRP)
http://www.icnirp.org
World Health Organization (WHO)
http://www.who.int/peh-emf/en/
National Cancer Institute
http://www.cancer.gov/cancertopics/factsheet/Risk/cellphones
American Cancer Society (ACS)
http://www.cancer.org/docroot/PED/content/PED_1_3X_Cellular_Phone_Towers.asp?siteareа=PED
European Commission Scientific Committee on Emerging and Newly Identified Health Risks
http://ec.europa.eu/health/ph_risk/committees/04_scenihr/docs/scenihr_o_022.pdf
Fairfax County, Virginia Public School Survey
http://www.fcps.edu/fts/safety-security/RFEESurvey/
UK Health Protection Agency Advisory Group on Non-ionising Radiation
http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1317133826368
Norwegian Institute of Public Health
http://www.fhi.no/dokumenter/545eea7147.pdf

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

Structural Analysis Report

Existing 119 ft SABRE Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT08558-B

Customer Site Name: New Britain 3, CT

Carrier Name: AT&T

Carrier Site ID / Name: CT1028 / New Britain Farmington Avenue

Site Location: 723 Farmington Ave

New Britain, Connecticut

Hartford County

Latitude: 41.698414

Longitude: -72.785944

Analysis Result:

Max Structural Usage: 87.0% [Pass]

Max Foundation Usage: 84.0% [Pass]

Additional Usage Caused by New Mount/Mount Modification : N/A

Report Prepared By : Linfeng Chen

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Additional Usage Caused by New Mount/Mount Modification : N/A

Report Prepared By : Linfeng Chen

Introduction

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

Sources of Information

Tower Drawings	Original Tower drawings by Sabre, Job# 06-08008, dated 08/1/2005
Foundation Drawing	Original Foundation drawings by Sabre, Job# 06-08008, dated 08/1/2005
Geotechnical Report	Geotechnical Report prepared by DR. Clarence Welti, dated 07/7/2005
Modification Drawings	N/A

Analysis Criteria

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

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed V_{ult} = 125.0 mph (3-Sec. Gust)/ Nominal Design Wind Speed V_{asd} = 97.0 mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 1" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	ANSI/TIA/EIA 222-G / 2012 IBC / 2016 Connecticut State Building Code
Exposure Category:	C
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	S_S = 0.192, S_1 = 0.055

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

Existing Antennas, Mounts and Transmission Lines

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	118.0	3	Kathrein 800 10735V01 Panels	(3) T-Arms	(12) 1 5/8" (1) 1 5/8" Hybrid[1]	Verizon[1]
2		3	Antel BXA-171063-12BF Panels			
3		3	Antel BXA-171063-8BF Panels			
4		3	Antel BXA-70063-6BF Panels			
5		1	RFS DB-T1-6Z-8AB-0Z Dist. Box			
6		6	RFS FD9R6004/2C-3L Diplexers			
7		3	ALU RRH2x40-AWS RRU's			
8	108.0	3	ALU 1900MHz RRU's	(3) T-Arms	(4) 1-1/4" Hybrid (3) 1/2" (6) 5/16"	Clearwire/ Sprint
9		3	ALU 800 MHz Filters			
10		3	ALU 800 MHz RRU's			
11		3	Kathrein 840 10054 Panels			
12		4	RFS ACU-A20-N RET's			
13		2	RFS APXVSPP18-C-A20 Panels			
14		3	RFS APXVTM14-C-120 Panels			
15		2	DragonwaveHorizon ODU Radios			
16		1	Powerwave P40-16-XLPP-RR-A Panels			
17		3	ALU TD-RRH8x20-25 RRU's			
18		2	Andrew VHLP2.5 Dishes			
-	98.0	3	Cci Antennas OPA-65R-LCUU-H6 - Panel	(3) Commscope T-Arms	(12) 1 5/8" (3) 3/4" DC (1) 3/8" Fiber	AT&T
-		6	Powerwave 7770 - Panel			
-		9	Powerwave LGP 21401 TMA			
-		6	Ericsson RRUS11			
-		3	Ericsson RRUS A2			
-		3	Ericsson RRU-12			
-		6	Powerwave LGP 13519 Diplexer			
-		1	Raycap DC6-48-60-18-8F			
30	88.0	3	Ericsson AIR 21 B2A/B4P - Panel	(3) T-Arm	(11) 1 5/8" (3) 1-1/4" Hybrid	T-Mobile
31		3	Ericsson AIR32 KRD901146-1_B66A-Panel			
32		3	RFS APXVAARR24_43-U-NA20 - Panel			
33		3	Ericsson KRY 112 144/2			
34		3	Ericsson Radio 4449 B71 + B12			
35	78.0	3	RFS APXV18-206517S-C Panels	(3) T-Arms	(6) 1-5/8"	Metro PCS[2]

[1]Verizon (1)1-5/8" Hybrid cable of Verizon is installed outside the pole shaft.

[2]Metro PCS is leased but not installed.

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

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
19	98.0	3	Cci OPA-65R-LCUU-H6 - Panel	(3) Commscope T-Arms	(12) 1 5/8" (4) 3/4" DC (2) 3/8" Fiber	AT&T
20		3	Powerwave 7770 w/Mount Pipe - Panel			
21		9	Powerwave LGP21402 TMA			
22		6	Ericsson RRUS 11			
23		3	Ericsson RRUS A2			
24		3	Ericsson RRUS 12			
25		6	Powerwave LGP13519 Diplexer			
26		2	Raycap DC6-48-60-0-8F			
27		3	Quintel QS66512-2 - Panel			
28		3	Ericsson RRUS 8843 B25/B66A			
29		3	Ericsson RRUS 32			

All transmission lines are considered running inside of the pole shafts.

Analysis Results

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

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	**87.0%**	**75.5%**	**62.0%**
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	2515.2	28.1	33.8

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

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by ANSI/TIA/EIA 222-G for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.2107 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

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

Standard Conditions

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

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

3. All the existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion.

4. An initial tension of 10% of the break strength on all the existing guy wires was assumed in all the structural analyses of guyed towers unless different values were provided by the client. **TES** cannot take responsibility for the deviations in the analysis results because of differences in the initial tension forces of the existing guy wires.

5. Secondary component or connection secondary components, welds and bolts are assumed to be able to carry their intended original design loads. **TES** cannot take responsibility for verification of the adequacy on the connections, bolts and welds present in the structure.

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

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

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

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

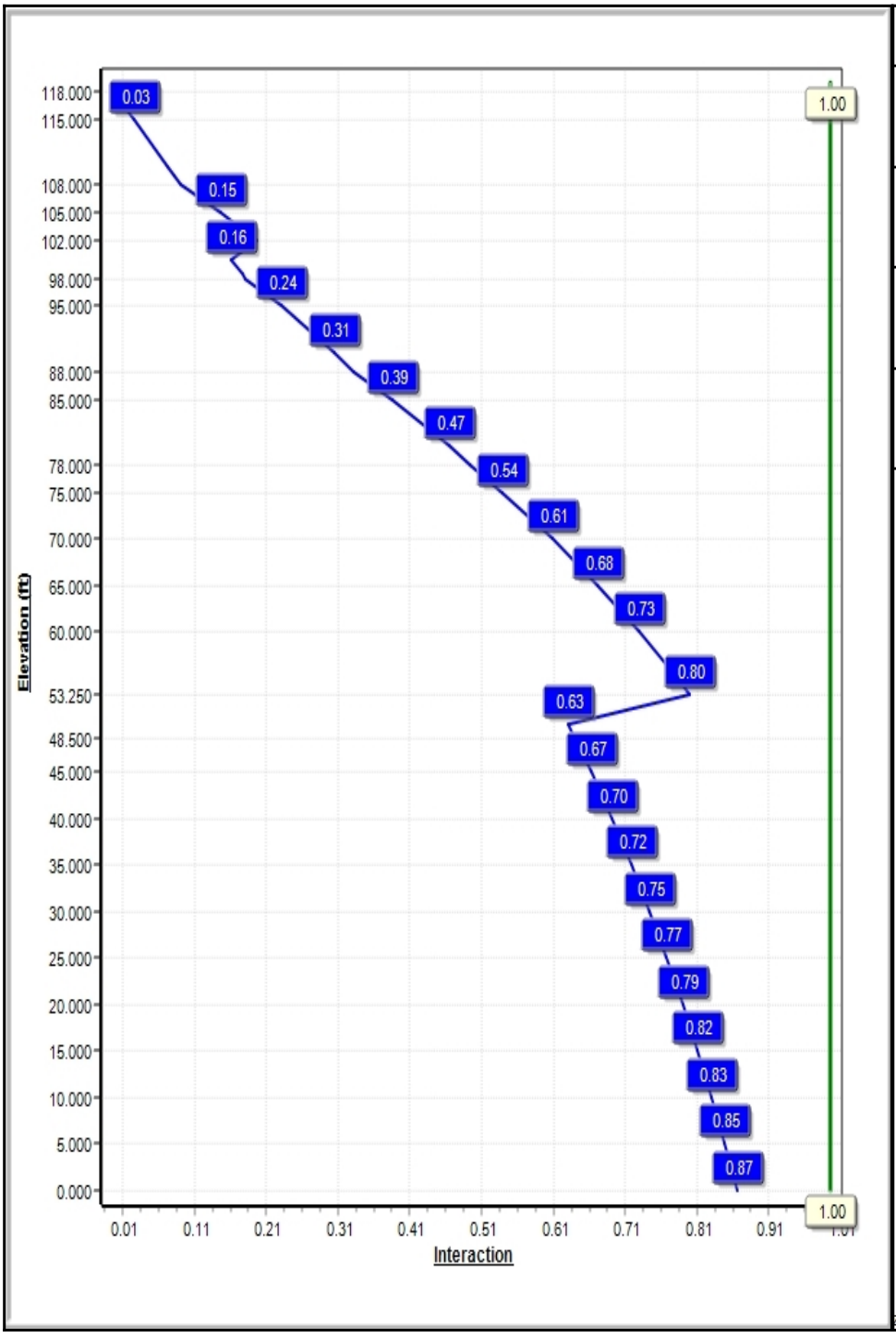
Usage Diagram - Max Ratio 87.03% at 0.0ft

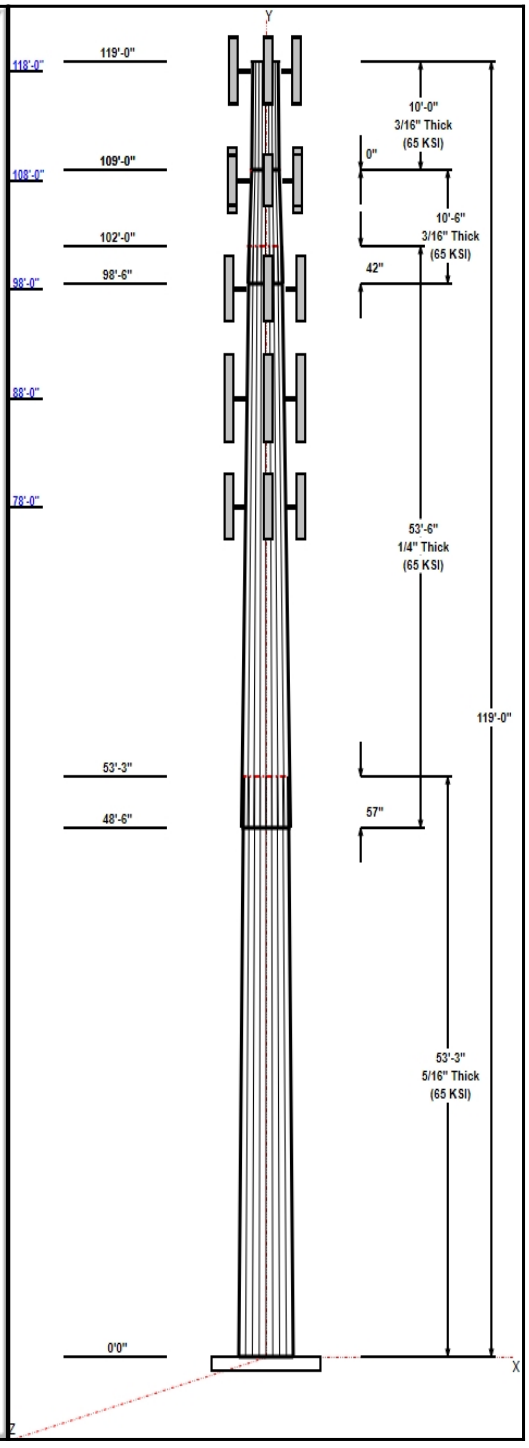
Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Gh:**	1.1		
Base Elev:	0.000 (ft)			Page: 1	

Tower Engineering Solutions

Dead Load Factor:	1.20	**Iterations:**	23
Wind Load Factor:	1.60		

Load Case : 1.2D + 1.6W 97 mph Wind





Structure: CT08558-B-SBA

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

Base Shape: 18 Sided
Taper: 0.22164

8/10/2018

Tower Engineering Solutions

Shaft Properties

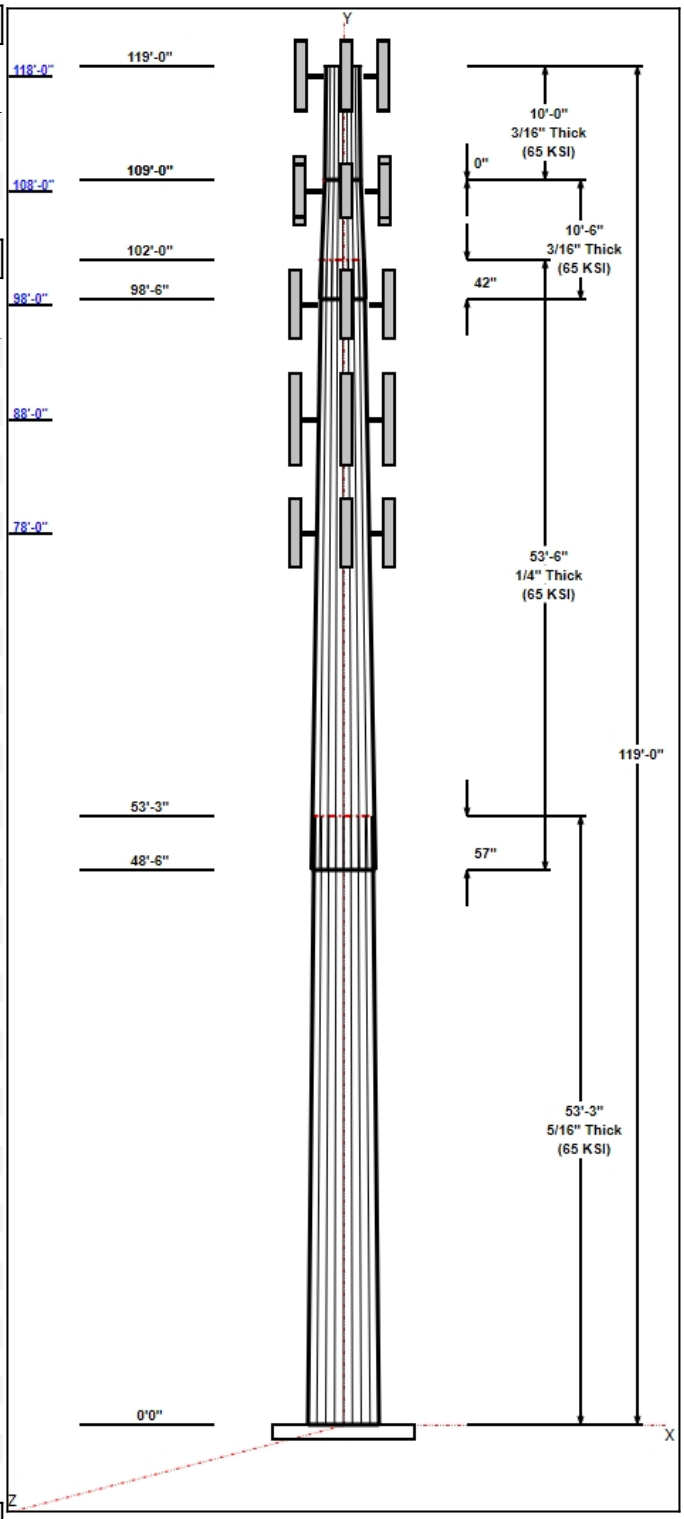
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	53.25	35.70	47.50	0.313		0.22164	65
2	53.50	25.39	37.25	0.250	Slip	0.22164	65
3	10.50	24.22	26.54	0.188	Slip	0.22164	65
4	10.00	22.00	24.22	0.188	Butt	0.22164	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
118.00	118.00	3	800 10735V01	Verizon
118.00	118.00	3	BXA-171063-12BF	Verizon
118.00	118.00	3	BXA-171063-8BF	Verizon
118.00	118.00	3	BXA-70063-6BF	Verizon
118.00	118.00	1	DB-T1-6Z-8AB-0Z	Verizon
118.00	118.00	6	RFS FD9R6004/2C-3L	Verizon
118.00	118.00	3	RRH2x40-AWS	Verizon
118.00	118.00	3	T-Arm	Verizon
108.00	108.00	3	1900MHz RRH	Clearwire
108.00	108.00	3	800 MHz Filters	Clearwire
108.00	108.00	3	800 MHz	Clearwire
108.00	108.00	3	840 10054	Clearwire
108.00	108.00	4	ACU-A20-N	Clearwire
108.00	108.00	2	APXVSPP18-C-A20	Clearwire
108.00	108.00	3	APXVTM14-C-120	Clearwire
108.00	108.00	2	Horizon	Clearwire
108.00	108.00	1	P40-16-XLPP-RR-A	Clearwire
108.00	108.00	3	TD-RRH8x20-25	Clearwire
108.00	108.00	2	VHLP2.5	Clearwire
108.00	108.00	3	T-Arm	Clearwire
98.00	98.00	3	Cci OPA-65R-LCUU-H6	AT&T
98.00	98.00	3	Powerwave 7770 w/Mount	AT&T
98.00	98.00	9	Powerwave LGP21402	AT&T
98.00	98.00	6	Ericsson RRUS 11	AT&T
98.00	98.00	3	Ericsson RRUS A2	AT&T
98.00	98.00	3	Ericsson RRUS 12	AT&T
98.00	98.00	6	Powerwave LGP13519	AT&T
98.00	98.00	2	Raycap DC6-48-60-0-8F	AT&T
98.00	98.00	3	Quintel QS66512-2	AT&T
98.00	98.00	3	Ericsson RRUS 8843	AT&T
98.00	98.00	3	Ericsson RRUS 32	AT&T
98.00	98.00	3	T-Arm	AT&T
88.00	88.00	3	AIR 21 B2A/B4P	T-Mobile
88.00	88.00	3	AIR32	T-Mobile
88.00	88.00	3	APXVAARR24_43-U-NA20	T-Mobile
88.00	88.00	3	KRY 112 144/2	T-Mobile
88.00	88.00	3	4449 B71 + B12	T-Mobile
88.00	88.00	3	T-Arm	T-Mobile
78.00	78.00	3	APXV18-206517S-C	Metro PCS
78.00	78.00	3	T-Arm	Metro PCS

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	118.00	Inside	1 5/8" Coax	Verizon
0.00	118.00	Outside	1 5/8" Hybrid	Verizon



0.00	108.00	Inside	1-1/4" Hybrid	Clearwire/Sprint
0.00	108.00	Inside	1/2" Coax	Clearwire/Sprint
0.00	108.00	Inside	5/16" Coax	Clearwire/Sprint
0.00	98.00	Inside	1 5/8" Coax	AT&T
0.00	98.00	Inside	3/4" DC	AT&T
0.00	98.00	Inside	3/8" Fiber	AT&T
0.00	88.00	Inside	1 5/8" Coax	T-Mobile
0.00	88.00	Inside	1-1/4" Hybrid	T-Mobile
0.00	78.00	Inside	1 5/8" Coax	Pocket

Anchor Bolts

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

Base Plate

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

Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 97 mph Wind	2515.2	28.1	33.8
0.9D + 1.6W 97 mph Wind	2490.9	28.1	25.4
1.2D + 1.0Di + 1.0Wi 50 mph Wind	733.1	8.1	62.6
1.2D + 1.0E	70.8	0.8	33.9
0.9D + 1.0E	70.1	0.8	25.4
1.0D + 1.0W 60 mph Wind	598.3	6.7	28.3

Structure: CT08558-B-SBA - Coax Line Placement

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

8/10/2018

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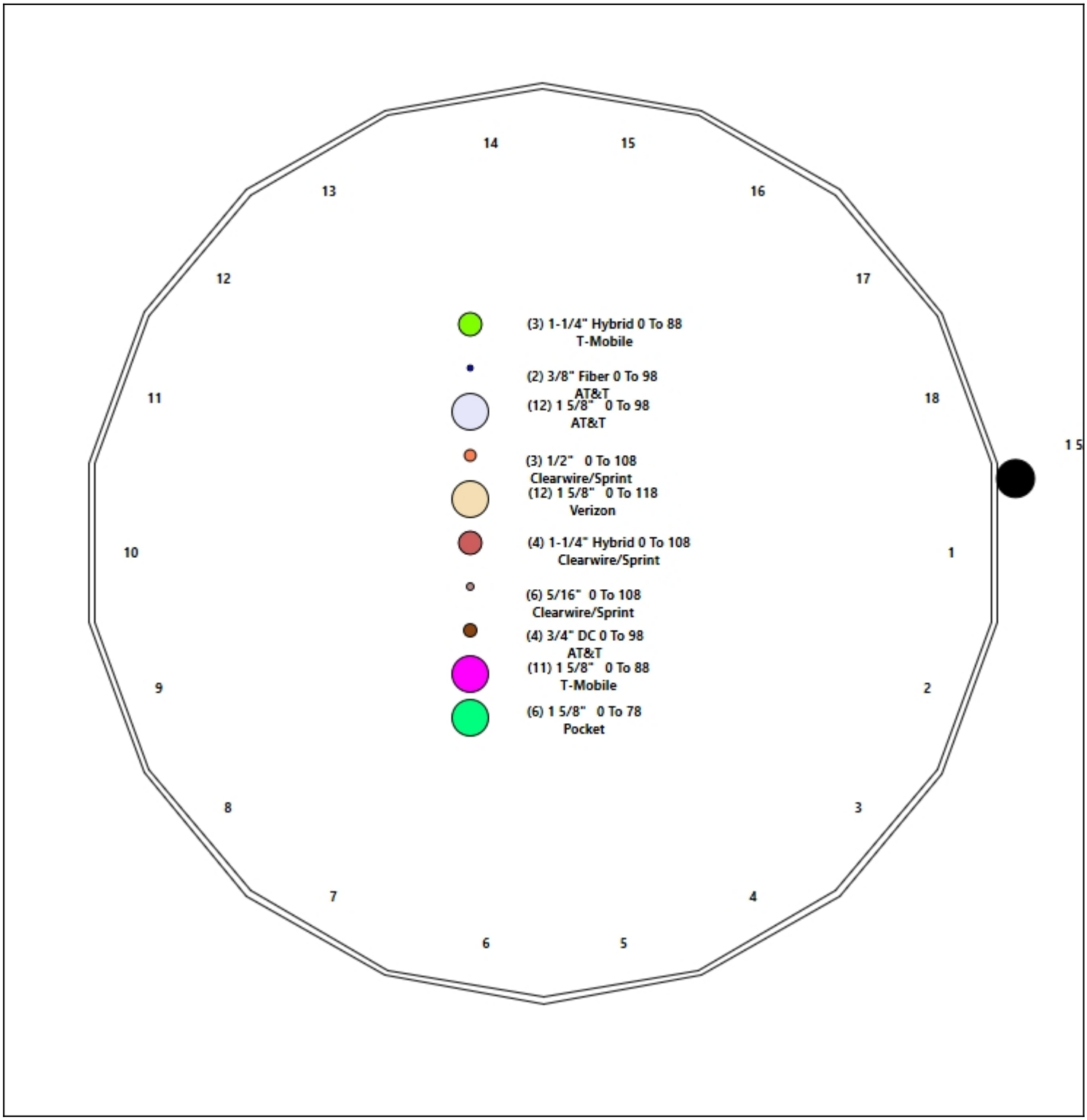

Shaft Properties

Structure:	CT08558-B-SBA		**Code:**	EIA/TIA-222-G	8/10/2018
Site Name:	New Britain 3, CT		**Exposure:**	C	
Height:	119.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 5

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

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

Load Summary

Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 6	

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Discrete Appurtenances

				No Ice			Ice				
No.	Elev (ft)	Description	Qty	Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
1	118.00	800 10735V01	3	28.70	8.62	0.66	228.34	12.466	0.66	0.00	0.00
2	118.00	BXA-171063-12BF	3	15.00	4.74	0.84	138.58	7.798	0.84	0.00	0.00
3	118.00	BXA-171063-8BF	3	10.50	2.94	0.84	95.82	5.099	0.84	0.00	0.00
4	118.00	BXA-70063-6BF	3	17.00	7.57	0.70	201.47	11.168	0.70	0.00	0.00
5	118.00	DB-T1-6Z-8AB-0Z	1	18.90	4.80	0.71	216.23	5.960	0.71	0.00	0.00
6	118.00	RFS FD9R6004/2C-3L	6	3.10	0.36	1.00	13.55	0.937	1.00	0.00	0.00
7	118.00	RRH2x40-AWS	3	44.00	2.16	0.67	123.05	3.524	0.67	0.00	0.00
8	118.00	T-Arm	3	400.00	10.00	0.75	763.49	21.359	0.75	0.00	0.00
9	108.00	1900MHz RRH	3	44.00	3.80	0.67	184.85	5.593	0.67	0.00	0.00
10	108.00	800 MHz Filters	3	64.00	2.40	0.67	163.61	3.844	0.67	0.00	0.00
11	108.00	800 MHz	3	53.00	2.49	0.67	148.43	3.966	0.67	0.00	0.00
12	108.00	840 10054	3	35.00	4.59	0.61	143.73	6.748	0.61	0.00	0.00
13	108.00	ACU-A20-N	4	1.00	0.14	0.67	6.54	0.523	0.67	0.00	0.00
14	108.00	APXVSPP18-C-A20	2	57.00	8.02	0.83	280.02	11.625	0.83	0.00	0.00
15	108.00	APXVTM14-C-120	3	56.00	6.34	0.79	275.27	7.803	0.79	0.00	0.00
16	108.00	Horizon	2	10.60	0.43	1.00	39.67	1.090	1.00	0.00	0.00
17	108.00	P40-16-XLPP-RR-A	1	53.00	9.08	1.00	336.69	10.719	1.00	0.00	0.00
18	108.00	TD-RRH8x20-25	3	70.00	4.05	0.67	221.31	5.123	0.67	0.00	0.00
19	108.00	VHLP2.5	2	47.60	8.43	1.00	270.41	10.632	1.00	0.00	0.00
20	108.00	T-Arm	3	350.00	8.00	0.75	665.25	17.007	0.75	0.00	0.00
21	98.00	Cci OPA-65R-LCUU-H6	3	80.00	9.66	0.79	390.45	11.434	0.79	0.00	0.00
22	98.00	Powerwave 7770 w/Mount Pipe	3	27.00	5.54	0.72	173.04	8.268	0.72	0.00	0.00
23	98.00	Powerwave LGP21402 TMA	9	14.10	1.29	1.00	46.05	2.358	1.00	0.00	0.00
24	98.00	Ericsson RRUS 11	6	44.00	2.52	0.67	123.67	3.329	0.67	0.00	0.00
25	98.00	Ericsson RRUS A2	3	22.00	1.54	0.67	83.47	2.232	0.67	0.00	0.00
26	98.00	Ericsson RRUS 12	3	50.70	2.52	0.67	171.95	3.373	0.67	0.00	0.00
27	98.00	Powerwave LGP13519 Diplexer	6	5.30	0.34	1.00	17.44	0.920	1.00	0.00	0.00
28	98.00	Raycap DC6-48-60-0-8F	2	31.80	0.92	1.00	110.80	1.480	1.00	0.00	0.00
29	98.00	Quintel QS66512-2	3	111.00	8.13	0.92	415.64	9.820	0.92	0.00	0.00
30	98.00	Ericsson RRUS 8843 B25/B66A	3	75.00	1.65	0.67	177.07	2.358	0.67	0.00	0.00
31	98.00	Ericsson RRUS 32	3	53.00	2.74	0.67	173.05	3.691	0.67	0.00	0.00
32	98.00	T-Arm	3	350.00	8.00	0.75	662.20	16.920	0.75	0.00	0.00
33	88.00	AIR 21 B2A/B4P	3	91.00	6.09	0.86	315.55	7.501	0.86	0.00	0.00
34	88.00	AIR32 KRD901146-1_B66A	3	132.20	6.51	0.87	376.67	8.012	0.87	0.00	0.00
35	88.00	APXVAARR24_43-U-NA20	3	128.00	20.24	0.70	674.18	22.666	0.75	0.00	0.00
36	88.00	KRY 112 144/2	3	11.00	0.41	0.70	24.63	1.011	0.75	0.00	0.00
37	88.00	4449 B71 + B12	3	50.00	2.57	0.67	132.07	3.386	0.67	0.00	0.00
38	88.00	T-Arm	3	350.00	8.00	0.75	658.86	16.824	0.75	0.00	0.00
39	78.00	APXV18-206517S-C	3	26.40	5.17	0.74	142.36	8.136	0.74	0.00	0.00
40	78.00	T-Arm	3	350.00	8.00	0.75	655.15	16.719	0.75	0.00	0.00
		Totals:	**128**	**10,094.70**			**29,061.80**				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	118.00	(12) 1 5/8" Coax	0.00	Inside

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
0.00	118.00	(1) 1 5/8" Hybrid			0.00	Outside					
0.00	108.00	(4) 1-1/4" Hybrid			0.00	Inside					
0.00	108.00	(3) 1/2" Coax			0.00	Inside					
0.00	108.00	(6) 5/16" Coax			0.00	Inside					
0.00	98.00	(12) 1 5/8" Coax			0.00	Inside					
0.00	98.00	(4) 3/4" DC			0.00	Inside					
0.00	98.00	(2) 3/8" Fiber			0.00	Inside					
0.00	88.00	(11) 1 5/8" Coax			0.00	Inside					
0.00	88.00	(3) 1-1/4" Hybrid			0.00	Inside					
0.00	78.00	(6) 1 5/8" Coax			0.00	Inside					

Shaft Section Properties

Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 8	

Tower Engineering Solutions

Increment Length: **5 (ft)**

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
0.00		0.3125	47.500	46.802	13166.7	25.39	152.00	71.5	546.0	0.0
5.00		0.3125	46.392	45.703	12260.6	24.77	148.45	72.3	520.5	786.9
10.00		0.3125	45.284	44.604	11397.1	24.14	144.91	73.0	495.7	768.2
15.00		0.3125	44.175	43.505	10575.2	23.52	141.36	73.7	471.5	749.5
20.00		0.3125	43.067	42.406	9793.7	22.89	137.82	74.5	447.9	730.8
25.00		0.3125	41.959	41.307	9051.7	22.26	134.27	75.2	424.9	712.1
30.00		0.3125	40.851	40.208	8348.2	21.64	130.72	75.9	402.5	693.4
35.00		0.3125	39.743	39.108	7682.1	21.01	127.18	76.7	380.7	674.7
40.00		0.3125	38.634	38.009	7052.4	20.39	123.63	77.4	359.5	656.0
45.00		0.3125	37.526	36.910	6458.1	19.76	120.08	78.2	339.0	637.3
48.50	Bot - Section 2	0.3125	36.751	36.141	6062.6	19.33	117.60	78.7	324.9	435.0
50.00		0.3125	36.418	35.811	5898.2	19.14	116.54	78.9	319.0	332.8
53.25	Top - Section 1	0.2500	36.198	28.524	4656.9	24.12	144.79	0.0	0.0	710.7
55.00		0.2500	35.810	28.216	4507.8	23.85	143.24	73.4	247.9	168.9
60.00		0.2500	34.702	27.336	4099.4	23.06	138.81	74.3	232.7	472.6
65.00		0.2500	33.593	26.457	3716.4	22.28	134.37	75.2	217.9	457.6
70.00		0.2500	32.485	25.578	3358.0	21.50	129.94	76.1	203.6	442.7
75.00		0.2500	31.377	24.698	3023.4	20.72	125.51	77.0	189.8	427.7
78.00		0.2500	30.712	24.171	2833.8	20.25	122.85	77.6	181.7	249.4
80.00		0.2500	30.269	23.819	2711.9	19.94	121.08	77.9	176.5	163.3
85.00		0.2500	29.161	22.940	2422.5	19.16	116.64	78.9	163.6	397.8
88.00		0.2500	28.496	22.412	2259.2	18.69	113.98	79.4	156.2	231.5
90.00		0.2500	28.053	22.061	2154.5	18.38	112.21	79.8	151.3	151.3
95.00		0.2500	26.944	21.181	1907.0	17.59	107.78	80.7	139.4	367.9
98.00		0.2500	26.279	20.654	1768.0	17.12	105.12	81.3	132.5	213.5
98.50	Bot - Section 3	0.2500	26.169	20.566	1745.5	17.05	104.67	81.4	131.4	35.1
100.00		0.2500	25.836	20.302	1679.2	16.81	103.34	81.6	128.0	183.8
102.00	Top - Section 2	0.1875	25.768	15.223	1258.5	22.82	137.43	0.0	0.0	241.5
105.00		0.1875	25.103	14.827	1162.9	22.20	133.88	75.3	91.2	153.4
108.00		0.1875	24.438	14.432	1072.3	21.57	130.34	76.0	86.4	149.3
109.00	Top - Section 3	0.1875	24.216	14.300	1043.1	21.36	129.15	76.3	84.8	48.9
109.00	Bot - Section 4	0.1875	24.216	14.300	1043.1	21.36	129.15	76.3	84.8	
110.00		0.1875	23.995	14.168	1014.5	21.15	127.97	76.5	83.3	48.4
115.00		0.1875	22.887	13.508	879.4	20.11	122.06	77.7	75.7	235.4
118.00		0.1875	22.222	13.113	804.3	19.49	118.52	78.5	71.3	135.9
119.00		0.1875	22.000	12.981	780.3	19.28	117.33	78.7	69.9	44.4
										12908.1

Wind Loading - Shaft

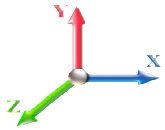
Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 9	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	19.450	21.40	359.45	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	19.450	21.40	351.07	0.650	0.000	5.00	19.863	12.91	442.0	0.0	944.3
10.00		1.00	0.85	19.450	21.40	342.68	0.650	0.000	5.00	19.394	12.61	431.5	0.0	921.9
15.00		1.00	0.85	19.450	21.40	334.29	0.650	0.000	5.00	18.925	12.30	421.1	0.0	899.4
20.00		1.00	0.90	20.638	22.70	335.71	0.650	0.000	5.00	18.456	12.00	435.7	0.0	877.0
25.00		1.00	0.95	21.630	23.79	334.84	0.650	0.000	5.00	17.987	11.69	445.1	0.0	854.6
30.00		1.00	0.98	22.477	24.72	332.32	0.650	0.000	5.00	17.518	11.39	450.4	0.0	832.1
35.00		1.00	1.01	23.218	25.54	328.59	0.650	0.000	5.00	17.049	11.08	452.9	0.0	809.7
40.00		1.00	1.04	23.880	26.27	323.95	0.650	0.000	5.00	16.580	10.78	453.0	0.0	787.2
45.00		1.00	1.07	24.479	26.93	318.58	0.650	0.000	5.00	16.112	10.47	451.2	0.0	764.8
48.50	Bot - Section 2	1.00	1.09	24.869	27.36	314.47	0.650	0.000	3.50	10.999	7.15	312.9	0.0	522.0
50.00		1.00	1.09	25.029	27.53	312.62	0.650	0.000	1.50	4.707	3.06	134.8	0.0	399.4
53.25	Top - Section 1	1.00	1.11	25.363	27.90	308.48	0.650	0.000	3.25	10.054	6.53	291.7	0.0	852.8
55.00		1.00	1.12	25.536	28.09	310.50	0.650	0.000	1.75	5.332	3.47	155.8	0.0	202.7
60.00		1.00	1.14	26.008	28.61	303.66	0.650	0.000	5.00	14.917	9.70	443.8	0.0	567.1
65.00		1.00	1.16	26.450	29.09	296.45	0.650	0.000	5.00	14.448	9.39	437.2	0.0	549.1
70.00		1.00	1.17	26.866	29.55	288.92	0.650	0.000	5.00	13.979	9.09	429.6	0.0	531.2
75.00		1.00	1.19	27.259	29.98	281.09	0.650	0.000	5.00	13.510	8.78	421.3	0.0	513.2
78.00	Appurtenance(s)	1.00	1.20	27.485	30.23	276.28	0.650	0.000	3.00	7.881	5.12	247.8	0.0	299.3
80.00		1.00	1.21	27.632	30.39	273.01	0.650	0.000	2.00	5.160	3.35	163.1	0.0	196.0
85.00		1.00	1.22	27.987	30.79	264.70	0.650	0.000	5.00	12.572	8.17	402.5	0.0	477.3
88.00	Appurtenance(s)	1.00	1.23	28.192	31.01	259.61	0.650	0.000	3.00	7.318	4.76	236.0	0.0	277.8
90.00		1.00	1.24	28.325	31.16	256.18	0.650	0.000	2.00	4.785	3.11	155.1	0.0	181.6
95.00		1.00	1.25	28.650	31.51	247.46	0.650	0.000	5.00	11.634	7.56	381.3	0.0	441.4
98.00	Appurtenance(s)	1.00	1.26	28.838	31.72	242.15	0.650	0.000	3.00	6.756	4.39	222.9	0.0	256.2
98.50	Bot - Section 3	1.00	1.26	28.869	31.76	241.26	0.650	0.000	0.50	1.110	0.72	36.6	0.0	42.1
100.00		1.00	1.27	28.961	31.86	238.57	0.650	0.000	1.50	3.348	2.18	110.9	0.0	220.6
102.00	Top - Section 2	1.00	1.27	29.082	31.99	234.97	0.650	0.000	2.00	4.398	2.86	146.3	0.0	289.8
105.00		1.00	1.28	29.260	32.19	232.99	0.650	0.000	3.00	6.457	4.20	216.1	0.0	184.1
108.00	Appurtenance(s)	1.00	1.29	29.434	32.38	227.50	0.650	0.000	3.00	6.288	4.09	211.7	0.0	179.2
109.00	Top - Section 3	1.00	1.29	29.491	32.44	225.65	0.650	0.000	1.00	2.059	1.34	69.5	0.0	58.7
110.00		1.00	1.29	29.548	32.50	223.80	0.650	0.000	1.00	2.040	1.33	69.0	0.0	58.1
115.00		1.00	1.30	29.826	32.81	214.47	0.650	0.000	5.00	9.918	6.45	338.4	0.0	282.5
118.00	Appurtenance(s)	1.00	1.31	29.988	32.99	208.80	0.650	0.000	3.00	5.726	3.72	196.4	0.0	163.1
119.00		1.00	1.31	30.041	33.05	206.90	0.650	0.000	1.00	1.871	1.22	64.3	0.0	53.3
								Totals:	**119.00**			**9,877.9**		**15,489.7**

Discrete Appurtenance Forces

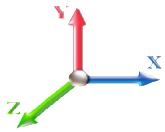
Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 10	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	118.00	T-Arm	3	29.988	32.986	0.56	0.75	16.88	1440.00	0.000	0.000	890.63	0.00	0.00
2	118.00	RRH2x40-AWS	3	29.988	32.986	0.60	0.90	3.91	158.40	0.000	0.000	206.23	0.00	0.00
3	118.00	RFS FD9R6004/2C-3L	6	29.988	32.986	0.90	0.90	1.94	22.32	0.000	0.000	102.60	0.00	0.00
4	118.00	DB-T1-6Z-8AB-0Z	1	29.988	32.986	0.64	0.90	3.07	22.68	0.000	0.000	161.88	0.00	0.00
5	118.00	BXA-70063-6BF	3	29.988	32.986	0.63	0.90	14.31	61.20	0.000	0.000	755.12	0.00	0.00
6	118.00	BXA-171063-8BF	3	29.988	32.986	0.76	0.90	6.67	37.80	0.000	0.000	351.92	0.00	0.00
7	118.00	BXA-171063-12BF	3	29.988	32.986	0.76	0.90	10.75	54.00	0.000	0.000	567.38	0.00	0.00
8	118.00	800 10735V01	3	29.988	32.986	0.59	0.90	15.36	103.32	0.000	0.000	810.72	0.00	0.00
9	108.00	840 10054	3	29.434	32.377	0.49	0.80	6.72	126.00	0.000	0.000	348.11	0.00	0.00
10	108.00	800 MHz	3	29.434	32.377	0.54	0.80	4.00	190.80	0.000	0.000	207.42	0.00	0.00
11	108.00	ACU-A20-N	4	29.434	32.377	0.54	0.80	0.30	4.80	0.000	0.000	15.55	0.00	0.00
12	108.00	APXVSPP18-C-A20	2	29.434	32.377	0.66	0.80	10.65	136.80	0.000	0.000	551.74	0.00	0.00
13	108.00	800 MHz Filters	3	29.434	32.377	0.54	0.80	3.86	230.40	0.000	0.000	199.92	0.00	0.00
14	108.00	1900MHz RRH	3	29.434	32.377	0.54	0.80	6.11	158.40	0.000	0.000	316.54	0.00	0.00
15	108.00	VHLP2.5	2	29.434	32.377	1.00	1.00	16.86	114.24	0.000	0.000	873.41	0.00	0.00
16	108.00	APXVTM14-C-120	3	29.434	32.377	0.63	0.80	12.02	201.60	0.000	0.000	622.71	0.00	0.00
17	108.00	Horizon	2	29.434	32.377	0.80	0.80	0.69	25.44	0.000	0.000	35.64	0.00	0.00
18	108.00	P40-16-XLPP-RR-A	1	29.434	32.377	0.80	0.80	7.26	63.60	0.000	0.000	376.30	0.00	0.00
19	108.00	TD-RRH8x20-25	3	29.434	32.377	0.54	0.80	6.51	252.00	0.000	0.000	337.37	0.00	0.00
20	108.00	T-Arm	3	29.434	32.377	0.56	0.75	13.50	1260.00	0.000	0.000	699.35	0.00	0.00
21	98.00	Ericsson RRUS 32	3	28.838	31.722	0.54	0.80	4.41	190.80	0.000	0.000	223.62	0.00	0.00
22	98.00	Ericsson RRUS A2	3	28.838	31.722	0.54	0.80	2.48	79.20	0.000	0.000	125.68	0.00	0.00
23	98.00	Cci OPA-65R-LCUU-H6	3	28.838	31.722	0.63	0.80	18.32	288.00	0.000	0.000	929.59	0.00	0.00
24	98.00	Powerwave 7770 w/Mount	3	28.838	31.722	0.58	0.80	9.57	97.20	0.000	0.000	485.88	0.00	0.00
25	98.00	Powerwave LGP21402	9	28.838	31.722	0.80	0.80	9.29	152.28	0.000	0.000	471.41	0.00	0.00
26	98.00	Ericsson RRUS 11	6	28.838	31.722	0.54	0.80	8.10	316.80	0.000	0.000	411.33	0.00	0.00
27	98.00	Ericsson RRUS 8843	3	28.838	31.722	0.54	0.80	2.65	270.00	0.000	0.000	134.66	0.00	0.00
28	98.00	Powerwave LGP13519	6	28.838	31.722	0.80	0.80	1.63	38.16	0.000	0.000	82.83	0.00	0.00
29	98.00	Raycap DC6-48-60-0-8F	2	28.838	31.722	0.80	0.80	1.47	76.32	0.000	0.000	74.71	0.00	0.00
30	98.00	T-Arm	3	28.838	31.722	0.56	0.75	13.50	1260.00	0.000	0.000	685.19	0.00	0.00
31	98.00	Quintel QS66512-2	3	28.838	31.722	0.74	0.80	17.95	399.60	0.000	0.000	911.10	0.00	0.00
32	98.00	Ericsson RRUS 12	3	28.838	31.722	0.54	0.80	4.05	182.52	0.000	0.000	205.67	0.00	0.00
33	88.00	APXVAARR24_43-U-NA2	3	28.192	31.011	0.56	0.80	34.00	460.80	0.000	0.000	1687.15	0.00	0.00
34	88.00	AIR 21 B2A/B4P	3	28.192	31.011	0.69	0.80	12.57	327.60	0.000	0.000	623.68	0.00	0.00
35	88.00	AIR32	3	28.192	31.011	0.70	0.80	13.59	475.92	0.000	0.000	674.44	0.00	0.00
36	88.00	4449 B71 + B12	3	28.192	31.011	0.54	0.80	4.13	180.00	0.000	0.000	205.05	0.00	0.00
37	88.00	KRY 112 144/2	3	28.192	31.011	0.56	0.80	0.69	39.60	0.000	0.000	34.18	0.00	0.00
38	88.00	T-Arm	3	28.192	31.011	0.56	0.75	13.50	1260.00	0.000	0.000	669.84	0.00	0.00
39	78.00	T-Arm	3	27.485	30.233	0.56	0.75	13.50	1260.00	0.000	0.000	653.04	0.00	0.00
40	78.00	APXV18-206517S-C	3	27.485	30.233	0.59	0.80	9.18	95.04	0.000	0.000	444.16	0.00	0.00
							Totals:		**12,113.64**			**18,163.74**		

Total Applied Force Summary

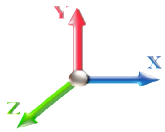
Structure:	CT08558-B-SBA		**Code:**	EIA/TIA-222-G	8/10/2018
Site Name:	New Britain 3, CT		**Exposure:**	C	
Height:	119.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 11

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		441.96	1262.92	0.00	0.00
10.00		431.53	1240.48	0.00	0.00
15.00		421.10	1218.03	0.00	0.00
20.00		435.73	1195.59	0.00	0.00
25.00		445.09	1173.15	0.00	0.00
30.00		450.45	1150.71	0.00	0.00
35.00		452.85	1128.27	0.00	0.00
40.00		452.96	1105.83	0.00	0.00
45.00		451.20	1083.39	0.00	0.00
48.50		312.92	745.02	0.00	0.00
50.00		134.78	494.94	0.00	0.00
53.25		291.71	1059.91	0.00	0.00
55.00		155.75	314.23	0.00	0.00
60.00		443.81	885.68	0.00	0.00
65.00		437.17	867.73	0.00	0.00
70.00		429.63	849.78	0.00	0.00
75.00		421.29	831.82	0.00	0.00
78.00	(6) attachments	1345.00	1845.52	0.00	0.00
80.00		163.12	308.42	0.00	0.00
85.00		402.52	758.48	0.00	0.00
88.00	(18) attachments	4130.36	3190.39	0.00	0.00
90.00		155.06	259.73	0.00	0.00
95.00		381.32	636.76	0.00	0.00
98.00	(47) attachments	4964.54	3724.32	0.00	0.00
98.50		36.64	53.09	0.00	0.00
100.00		110.92	253.66	0.00	0.00
102.00		146.33	333.81	0.00	0.00
105.00		216.13	250.14	0.00	0.00
108.00	(32) attachments	4795.78	3009.37	0.00	0.00
109.00		69.45	74.96	0.00	0.00
110.00		68.95	74.42	0.00	0.00
115.00		338.39	364.01	0.00	0.00
118.00	(25) attachments	4042.90	2111.66	0.00	0.00
119.00		64.30	53.27	0.00	0.00
	Totals:	**28,041.65**	**33,909.50**	**0.00**	**0.00**

Linear Appurtenance Segment Forces (Factored)

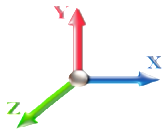
Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 12	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	19.450	0.00	6.60
10.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	19.450	0.00	6.60
15.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	19.450	0.00	6.60
20.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	20.638	0.00	6.60
25.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.630	0.00	6.60
30.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	22.477	0.00	6.60
35.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	23.218	0.00	6.60
40.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	23.880	0.00	6.60
45.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	24.479	0.00	6.60
48.50	1 5/8" Hybrid	Yes	3.50	0.000	0.00	0.00	0.00	0.000	0.000	24.869	0.00	4.62
50.00	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	25.029	0.00	1.98
53.25	1 5/8" Hybrid	Yes	3.25	0.000	0.00	0.00	0.00	0.000	0.000	25.363	0.00	4.29
55.00	1 5/8" Hybrid	Yes	1.75	0.000	0.00	0.00	0.00	0.000	0.000	25.536	0.00	2.31
60.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	26.008	0.00	6.60
65.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	26.450	0.00	6.60
70.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	26.866	0.00	6.60
75.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	27.259	0.00	6.60
78.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	27.485	0.00	3.96
80.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.632	0.00	2.64
85.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	27.987	0.00	6.60
88.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	28.192	0.00	3.96
90.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.325	0.00	2.64
95.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	28.650	0.00	6.60
98.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	28.838	0.00	3.96
98.50	1 5/8" Hybrid	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	28.869	0.00	0.66
100.00	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	28.961	0.00	1.98
102.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.082	0.00	2.64
105.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	29.260	0.00	3.96
108.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	29.434	0.00	3.96
109.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.491	0.00	1.32
110.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.548	0.00	1.32
115.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.826	0.00	6.60
118.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	29.988	0.00	3.96
									Totals:		**0.0**	**155.8**

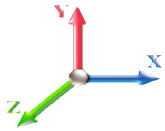
Calculated Forces

Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 13	

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-33.84	-28.12	0.00	-2515.2	0.00	2515.24	3013.27	1506.63	5849.73	2929.21	0.00	0.000	0.000	0.870
5.00	-32.45	-27.83	0.00	-2374.6	0.00	2374.64	2972.75	1486.38	5634.65	2821.52	0.14	-0.264	0.000	0.853
10.00	-31.09	-27.53	0.00	-2235.5	0.00	2235.51	2930.78	1465.39	5420.60	2714.33	0.56	-0.532	0.000	0.835
15.00	-29.74	-27.24	0.00	-2097.8	0.00	2097.85	2887.35	1443.68	5207.78	2607.76	1.26	-0.802	0.000	0.815
20.00	-28.43	-26.92	0.00	-1961.6	0.00	1961.66	2842.47	1421.24	4996.39	2501.91	2.25	-1.075	0.000	0.794
25.00	-27.14	-26.58	0.00	-1827.0	0.00	1827.06	2796.14	1398.07	4786.62	2396.87	3.53	-1.350	0.000	0.772
30.00	-25.87	-26.23	0.00	-1694.1	0.00	1694.16	2748.35	1374.17	4578.69	2292.75	5.09	-1.627	0.000	0.749
35.00	-24.63	-25.86	0.00	-1563.0	0.00	1563.03	2699.10	1349.55	4372.78	2189.64	6.94	-1.904	0.000	0.723
40.00	-23.42	-25.48	0.00	-1433.7	0.00	1433.75	2648.40	1324.20	4169.10	2087.65	9.09	-2.182	0.000	0.696
45.00	-22.25	-25.08	0.00	-1306.3	0.00	1306.35	2596.25	1298.12	3967.85	1986.88	11.52	-2.458	0.000	0.666
48.50	-21.46	-24.78	0.00	-1218.5	0.00	1218.58	2558.87	1279.44	3828.53	1917.11	13.40	-2.653	0.000	0.644
50.00	-20.92	-24.67	0.00	-1181.4	0.00	1181.41	2542.63	1271.32	3769.24	1887.42	14.24	-2.737	0.000	0.635
53.25	-19.82	-24.38	0.00	-1101.2	0.00	1101.23	1874.80	937.40	2771.76	1387.94	16.17	-2.916	0.000	0.805
55.00	-19.42	-24.28	0.00	-1058.5	0.00	1058.57	1862.74	931.37	2724.01	1364.03	17.26	-3.013	0.000	0.787
60.00	-18.43	-23.88	0.00	-937.19	0.00	937.19	1827.31	913.65	2588.34	1296.09	20.58	-3.328	0.000	0.734
65.00	-17.47	-23.49	0.00	-817.77	0.00	817.77	1790.42	895.21	2453.92	1228.78	24.23	-3.632	0.000	0.676
70.00	-16.54	-23.08	0.00	-700.35	0.00	700.35	1752.08	876.04	2320.96	1162.21	28.19	-3.923	0.000	0.613
75.00	-15.66	-22.66	0.00	-584.93	0.00	584.93	1712.28	856.14	2189.66	1096.46	32.45	-4.195	0.000	0.543
78.00	-13.87	-21.21	0.00	-516.95	0.00	516.95	1687.70	843.85	2111.76	1057.45	35.13	-4.351	0.000	0.498
80.00	-13.51	-21.07	0.00	-474.52	0.00	474.52	1671.02	835.51	2060.22	1031.64	36.98	-4.450	0.000	0.469
85.00	-12.73	-20.64	0.00	-369.20	0.00	369.20	1628.32	814.16	1932.84	967.86	41.75	-4.672	0.000	0.390
88.00	-9.86	-16.28	0.00	-307.27	0.00	307.27	1601.99	801.00	1857.49	930.12	44.73	-4.791	0.000	0.337
90.00	-9.58	-16.12	0.00	-274.72	0.00	274.72	1584.15	792.08	1807.72	905.20	46.75	-4.864	0.000	0.310
95.00	-8.95	-15.70	0.00	-194.11	0.00	194.11	1538.53	769.27	1685.06	843.78	51.92	-5.019	0.000	0.236
98.00	-5.67	-10.44	0.00	-147.00	0.00	147.00	1510.46	755.23	1612.73	807.56	55.10	-5.095	0.000	0.186
98.50	-5.62	-10.40	0.00	-141.78	0.00	141.78	1505.73	752.87	1600.77	801.57	55.63	-5.107	0.000	0.181
100.00	-5.37	-10.27	0.00	-126.19	0.00	126.19	1491.46	745.73	1565.06	783.69	57.24	-5.140	0.000	0.165
102.00	-5.04	-10.09	0.00	-105.65	0.00	105.65	1021.50	510.75	1074.26	537.93	59.40	-5.179	0.000	0.202
105.00	-4.80	-9.86	0.00	-75.37	0.00	75.37	1004.76	502.38	1028.99	515.26	62.67	-5.227	0.000	0.151
108.00	-2.25	-4.81	0.00	-45.79	0.00	45.79	987.50	493.75	984.13	492.79	65.96	-5.272	0.000	0.095
109.00	-2.18	-4.74	0.00	-40.98	0.00	40.98	981.63	490.81	969.27	485.35	67.07	-5.283	0.000	0.087
109.00	-2.18	-4.74	0.00	-40.98	0.00	40.98	981.63	490.81	969.27	485.35	67.07	-5.283	0.000	0.087
110.00	-2.11	-4.66	0.00	-36.24	0.00	36.24	975.70	487.85	954.46	477.94	68.18	-5.294	0.000	0.078
115.00	-1.77	-4.29	0.00	-12.94	0.00	12.94	945.18	472.59	881.23	441.27	73.73	-5.328	0.000	0.031
118.00	-0.05	-0.07	0.00	-0.07	0.00	0.07	926.18	463.09	838.01	419.63	77.08	-5.335	0.000	0.000
119.00	0.00	-0.06	0.00	0.00	0.00	0.00	919.72	459.86	823.73	412.48	78.20	-5.335	0.000	0.000

Wind Loading - Shaft

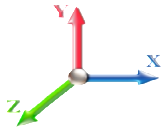
Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 14	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	19.450	21.40	359.45	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	19.450	21.40	351.07	0.650	0.000	5.00	19.863	12.91	442.0	0.0	708.2
10.00		1.00	0.85	19.450	21.40	342.68	0.650	0.000	5.00	19.394	12.61	431.5	0.0	691.4
15.00		1.00	0.85	19.450	21.40	334.29	0.650	0.000	5.00	18.925	12.30	421.1	0.0	674.6
20.00		1.00	0.90	20.638	22.70	335.71	0.650	0.000	5.00	18.456	12.00	435.7	0.0	657.8
25.00		1.00	0.95	21.630	23.79	334.84	0.650	0.000	5.00	17.987	11.69	445.1	0.0	640.9
30.00		1.00	0.98	22.477	24.72	332.32	0.650	0.000	5.00	17.518	11.39	450.4	0.0	624.1
35.00		1.00	1.01	23.218	25.54	328.59	0.650	0.000	5.00	17.049	11.08	452.9	0.0	607.3
40.00		1.00	1.04	23.880	26.27	323.95	0.650	0.000	5.00	16.580	10.78	453.0	0.0	590.4
45.00		1.00	1.07	24.479	26.93	318.58	0.650	0.000	5.00	16.112	10.47	451.2	0.0	573.6
48.50	Bot - Section 2	1.00	1.09	24.869	27.36	314.47	0.650	0.000	3.50	10.999	7.15	312.9	0.0	391.5
50.00		1.00	1.09	25.029	27.53	312.62	0.650	0.000	1.50	4.707	3.06	134.8	0.0	299.5
53.25	Top - Section 1	1.00	1.11	25.363	27.90	308.48	0.650	0.000	3.25	10.054	6.53	291.7	0.0	639.6
55.00		1.00	1.12	25.536	28.09	310.50	0.650	0.000	1.75	5.332	3.47	155.8	0.0	152.0
60.00		1.00	1.14	26.008	28.61	303.66	0.650	0.000	5.00	14.917	9.70	443.8	0.0	425.3
65.00		1.00	1.16	26.450	29.09	296.45	0.650	0.000	5.00	14.448	9.39	437.2	0.0	411.9
70.00		1.00	1.17	26.866	29.55	288.92	0.650	0.000	5.00	13.979	9.09	429.6	0.0	398.4
75.00		1.00	1.19	27.259	29.98	281.09	0.650	0.000	5.00	13.510	8.78	421.3	0.0	384.9
78.00	Appurtenance(s)	1.00	1.20	27.485	30.23	276.28	0.650	0.000	3.00	7.881	5.12	247.8	0.0	224.5
80.00		1.00	1.21	27.632	30.39	273.01	0.650	0.000	2.00	5.160	3.35	163.1	0.0	147.0
85.00		1.00	1.22	27.987	30.79	264.70	0.650	0.000	5.00	12.572	8.17	402.5	0.0	358.0
88.00	Appurtenance(s)	1.00	1.23	28.192	31.01	259.61	0.650	0.000	3.00	7.318	4.76	236.0	0.0	208.3
90.00		1.00	1.24	28.325	31.16	256.18	0.650	0.000	2.00	4.785	3.11	155.1	0.0	136.2
95.00		1.00	1.25	28.650	31.51	247.46	0.650	0.000	5.00	11.634	7.56	381.3	0.0	331.1
98.00	Appurtenance(s)	1.00	1.26	28.838	31.72	242.15	0.650	0.000	3.00	6.756	4.39	222.9	0.0	192.2
98.50	Bot - Section 3	1.00	1.26	28.869	31.76	241.26	0.650	0.000	0.50	1.110	0.72	36.6	0.0	31.6
100.00		1.00	1.27	28.961	31.86	238.57	0.650	0.000	1.50	3.348	2.18	110.9	0.0	165.5
102.00	Top - Section 2	1.00	1.27	29.082	31.99	234.97	0.650	0.000	2.00	4.398	2.86	146.3	0.0	217.3
105.00		1.00	1.28	29.260	32.19	232.99	0.650	0.000	3.00	6.457	4.20	216.1	0.0	138.0
108.00	Appurtenance(s)	1.00	1.29	29.434	32.38	227.50	0.650	0.000	3.00	6.288	4.09	211.7	0.0	134.4
109.00	Top - Section 3	1.00	1.29	29.491	32.44	225.65	0.650	0.000	1.00	2.059	1.34	69.5	0.0	44.0
110.00		1.00	1.29	29.548	32.50	223.80	0.650	0.000	1.00	2.040	1.33	69.0	0.0	43.6
115.00		1.00	1.30	29.826	32.81	214.47	0.650	0.000	5.00	9.918	6.45	338.4	0.0	211.9
118.00	Appurtenance(s)	1.00	1.31	29.988	32.99	208.80	0.650	0.000	3.00	5.726	3.72	196.4	0.0	122.3
119.00		1.00	1.31	30.041	33.05	206.90	0.650	0.000	1.00	1.871	1.22	64.3	0.0	40.0
								Totals:	**119.00**			**9,877.9**		**11,617.3**

Discrete Appurtenance Forces

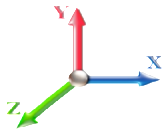
Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 15	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	118.00	T-Arm	3	29.988	32.986	0.56	0.75	16.88	1080.00	0.000	0.000	890.63	0.00	0.00
2	118.00	RRH2x40-AWS	3	29.988	32.986	0.60	0.90	3.91	118.80	0.000	0.000	206.23	0.00	0.00
3	118.00	RFS FD9R6004/2C-3L	6	29.988	32.986	0.90	0.90	1.94	16.74	0.000	0.000	102.60	0.00	0.00
4	118.00	DB-T1-6Z-8AB-0Z	1	29.988	32.986	0.64	0.90	3.07	17.01	0.000	0.000	161.88	0.00	0.00
5	118.00	BXA-70063-6BF	3	29.988	32.986	0.63	0.90	14.31	45.90	0.000	0.000	755.12	0.00	0.00
6	118.00	BXA-171063-8BF	3	29.988	32.986	0.76	0.90	6.67	28.35	0.000	0.000	351.92	0.00	0.00
7	118.00	BXA-171063-12BF	3	29.988	32.986	0.76	0.90	10.75	40.50	0.000	0.000	567.38	0.00	0.00
8	118.00	800 10735V01	3	29.988	32.986	0.59	0.90	15.36	77.49	0.000	0.000	810.72	0.00	0.00
9	108.00	840 10054	3	29.434	32.377	0.49	0.80	6.72	94.50	0.000	0.000	348.11	0.00	0.00
10	108.00	800 MHz	3	29.434	32.377	0.54	0.80	4.00	143.10	0.000	0.000	207.42	0.00	0.00
11	108.00	ACU-A20-N	4	29.434	32.377	0.54	0.80	0.30	3.60	0.000	0.000	15.55	0.00	0.00
12	108.00	APXVSPP18-C-A20	2	29.434	32.377	0.66	0.80	10.65	102.60	0.000	0.000	551.74	0.00	0.00
13	108.00	800 MHz Filters	3	29.434	32.377	0.54	0.80	3.86	172.80	0.000	0.000	199.92	0.00	0.00
14	108.00	1900MHz RRH	3	29.434	32.377	0.54	0.80	6.11	118.80	0.000	0.000	316.54	0.00	0.00
15	108.00	VHLP2.5	2	29.434	32.377	1.00	1.00	16.86	85.68	0.000	0.000	873.41	0.00	0.00
16	108.00	APXVTM14-C-120	3	29.434	32.377	0.63	0.80	12.02	151.20	0.000	0.000	622.71	0.00	0.00
17	108.00	Horizon	2	29.434	32.377	0.80	0.80	0.69	19.08	0.000	0.000	35.64	0.00	0.00
18	108.00	P40-16-XLPP-RR-A	1	29.434	32.377	0.80	0.80	7.26	47.70	0.000	0.000	376.30	0.00	0.00
19	108.00	TD-RRH8x20-25	3	29.434	32.377	0.54	0.80	6.51	189.00	0.000	0.000	337.37	0.00	0.00
20	108.00	T-Arm	3	29.434	32.377	0.56	0.75	13.50	945.00	0.000	0.000	699.35	0.00	0.00
21	98.00	Ericsson RRUS 32	3	28.838	31.722	0.54	0.80	4.41	143.10	0.000	0.000	223.62	0.00	0.00
22	98.00	Ericsson RRUS A2	3	28.838	31.722	0.54	0.80	2.48	59.40	0.000	0.000	125.68	0.00	0.00
23	98.00	Cci OPA-65R-LCUU-H6	3	28.838	31.722	0.63	0.80	18.32	216.00	0.000	0.000	929.59	0.00	0.00
24	98.00	Powerwave 7770 w/Mount	3	28.838	31.722	0.58	0.80	9.57	72.90	0.000	0.000	485.88	0.00	0.00
25	98.00	Powerwave LGP21402	9	28.838	31.722	0.80	0.80	9.29	114.21	0.000	0.000	471.41	0.00	0.00
26	98.00	Ericsson RRUS 11	6	28.838	31.722	0.54	0.80	8.10	237.60	0.000	0.000	411.33	0.00	0.00
27	98.00	Ericsson RRUS 8843	3	28.838	31.722	0.54	0.80	2.65	202.50	0.000	0.000	134.66	0.00	0.00
28	98.00	Powerwave LGP13519	6	28.838	31.722	0.80	0.80	1.63	28.62	0.000	0.000	82.83	0.00	0.00
29	98.00	Raycap DC6-48-60-0-8F	2	28.838	31.722	0.80	0.80	1.47	57.24	0.000	0.000	74.71	0.00	0.00
30	98.00	T-Arm	3	28.838	31.722	0.56	0.75	13.50	945.00	0.000	0.000	685.19	0.00	0.00
31	98.00	Quintel QS66512-2	3	28.838	31.722	0.74	0.80	17.95	299.70	0.000	0.000	911.10	0.00	0.00
32	98.00	Ericsson RRUS 12	3	28.838	31.722	0.54	0.80	4.05	136.89	0.000	0.000	205.67	0.00	0.00
33	88.00	APXVAARR24_43-U-NA2	3	28.192	31.011	0.56	0.80	34.00	345.60	0.000	0.000	1687.15	0.00	0.00
34	88.00	AIR 21 B2A/B4P	3	28.192	31.011	0.69	0.80	12.57	245.70	0.000	0.000	623.68	0.00	0.00
35	88.00	AIR32	3	28.192	31.011	0.70	0.80	13.59	356.94	0.000	0.000	674.44	0.00	0.00
36	88.00	4449 B71 + B12	3	28.192	31.011	0.54	0.80	4.13	135.00	0.000	0.000	205.05	0.00	0.00
37	88.00	KRY 112 144/2	3	28.192	31.011	0.56	0.80	0.69	29.70	0.000	0.000	34.18	0.00	0.00
38	88.00	T-Arm	3	28.192	31.011	0.56	0.75	13.50	945.00	0.000	0.000	669.84	0.00	0.00
39	78.00	T-Arm	3	27.485	30.233	0.56	0.75	13.50	945.00	0.000	0.000	653.04	0.00	0.00
40	78.00	APXV18-206517S-C	3	27.485	30.233	0.59	0.80	9.18	71.28	0.000	0.000	444.16	0.00	0.00
							Totals:		**9,085.23**			**18,163.74**		

Total Applied Force Summary

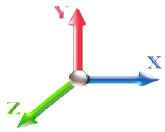
Structure:	CT08558-B-SBA		**Code:**	EIA/TIA-222-G	8/10/2018
Site Name:	New Britain 3, CT		**Exposure:**	C	
Height:	119.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 16

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		441.96	947.19	0.00	0.00
10.00		431.53	930.36	0.00	0.00
15.00		421.10	913.53	0.00	0.00
20.00		435.73	896.70	0.00	0.00
25.00		445.09	879.86	0.00	0.00
30.00		450.45	863.03	0.00	0.00
35.00		452.85	846.20	0.00	0.00
40.00		452.96	829.37	0.00	0.00
45.00		451.20	812.54	0.00	0.00
48.50		312.92	558.76	0.00	0.00
50.00		134.78	371.21	0.00	0.00
53.25		291.71	794.93	0.00	0.00
55.00		155.75	235.67	0.00	0.00
60.00		443.81	664.26	0.00	0.00
65.00		437.17	650.80	0.00	0.00
70.00		429.63	637.33	0.00	0.00
75.00		421.29	623.87	0.00	0.00
78.00	(6) attachments	1345.00	1384.14	0.00	0.00
80.00		163.12	231.31	0.00	0.00
85.00		402.52	568.86	0.00	0.00
88.00	(18) attachments	4130.36	2392.79	0.00	0.00
90.00		155.06	194.80	0.00	0.00
95.00		381.32	477.57	0.00	0.00
98.00	(47) attachments	4964.54	2793.24	0.00	0.00
98.50		36.64	39.82	0.00	0.00
100.00		110.92	190.24	0.00	0.00
102.00		146.33	250.36	0.00	0.00
105.00		216.13	187.60	0.00	0.00
108.00	(32) attachments	4795.78	2257.03	0.00	0.00
109.00		69.45	56.22	0.00	0.00
110.00		68.95	55.81	0.00	0.00
115.00		338.39	273.00	0.00	0.00
118.00	(25) attachments	4042.90	1583.75	0.00	0.00
119.00		64.30	39.96	0.00	0.00
	Totals:	**28,041.65**	**25,432.13**	**0.00**	**0.00**

Linear Appurtenance Segment Forces (Factored)

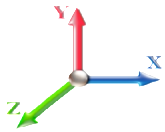
Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 17	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	19.450	0.00	4.95
10.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	19.450	0.00	4.95
15.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	19.450	0.00	4.95
20.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	20.638	0.00	4.95
25.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.630	0.00	4.95
30.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	22.477	0.00	4.95
35.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	23.218	0.00	4.95
40.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	23.880	0.00	4.95
45.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	24.479	0.00	4.95
48.50	1 5/8" Hybrid	Yes	3.50	0.000	0.00	0.00	0.00	0.000	0.000	24.869	0.00	3.47
50.00	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	25.029	0.00	1.49
53.25	1 5/8" Hybrid	Yes	3.25	0.000	0.00	0.00	0.00	0.000	0.000	25.363	0.00	3.22
55.00	1 5/8" Hybrid	Yes	1.75	0.000	0.00	0.00	0.00	0.000	0.000	25.536	0.00	1.73
60.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	26.008	0.00	4.95
65.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	26.450	0.00	4.95
70.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	26.866	0.00	4.95
75.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	27.259	0.00	4.95
78.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	27.485	0.00	2.97
80.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.632	0.00	1.98
85.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	27.987	0.00	4.95
88.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	28.192	0.00	2.97
90.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.325	0.00	1.98
95.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	28.650	0.00	4.95
98.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	28.838	0.00	2.97
98.50	1 5/8" Hybrid	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	28.869	0.00	0.50
100.00	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	28.961	0.00	1.49
102.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.082	0.00	1.98
105.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	29.260	0.00	2.97
108.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	29.434	0.00	2.97
109.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.491	0.00	0.99
110.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.548	0.00	0.99
115.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.826	0.00	4.95
118.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	29.988	0.00	2.97
									Totals:		**0.0**	**116.8**

Calculated Forces

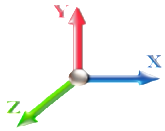
Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 18	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-25.37	-28.10	0.00	-2490.9	0.00	2490.91	3013.27	1506.63	5849.73	2929.21	0.00	0.000	0.000	0.859
5.00	-24.29	-27.77	0.00	-2350.4	0.00	2350.41	2972.75	1486.38	5634.65	2821.52	0.14	-0.262	0.000	0.842
10.00	-23.24	-27.44	0.00	-2211.5	0.00	2211.58	2930.78	1465.39	5420.60	2714.33	0.56	-0.526	0.000	0.823
15.00	-22.20	-27.11	0.00	-2074.3	0.00	2074.39	2887.35	1443.68	5207.78	2607.76	1.25	-0.794	0.000	0.804
20.00	-21.19	-26.76	0.00	-1938.8	0.00	1938.84	2842.47	1421.24	4996.39	2501.91	2.23	-1.064	0.000	0.783
25.00	-20.19	-26.39	0.00	-1805.0	0.00	1805.04	2796.14	1398.07	4786.62	2396.87	3.49	-1.335	0.000	0.761
30.00	-19.22	-26.01	0.00	-1673.0	0.00	1673.07	2748.35	1374.17	4578.69	2292.75	5.03	-1.609	0.000	0.737
35.00	-18.26	-25.62	0.00	-1543.0	0.00	1543.00	2699.10	1349.55	4372.78	2189.64	6.87	-1.883	0.000	0.712
40.00	-17.33	-25.22	0.00	-1414.8	0.00	1414.89	2648.40	1324.20	4169.10	2087.65	8.99	-2.157	0.000	0.685
45.00	-16.43	-24.81	0.00	-1288.7	0.00	1288.77	2596.25	1298.12	3967.85	1986.88	11.39	-2.429	0.000	0.655
48.50	-15.83	-24.51	0.00	-1201.9	0.00	1201.95	2558.87	1279.44	3828.53	1917.11	13.25	-2.621	0.000	0.634
50.00	-15.41	-24.39	0.00	-1165.1	0.00	1165.19	2542.63	1271.32	3769.24	1887.42	14.08	-2.705	0.000	0.624
53.25	-14.58	-24.10	0.00	-1085.9	0.00	1085.92	1874.80	937.40	2771.76	1387.94	15.99	-2.881	0.000	0.791
55.00	-14.26	-23.98	0.00	-1043.7	0.00	1043.75	1862.74	931.37	2724.01	1364.03	17.06	-2.977	0.000	0.774
60.00	-13.50	-23.57	0.00	-923.86	0.00	923.86	1827.31	913.65	2588.34	1296.09	20.34	-3.287	0.000	0.721
65.00	-12.76	-23.16	0.00	-806.00	0.00	806.00	1790.42	895.21	2453.92	1228.78	23.95	-3.587	0.000	0.664
70.00	-12.04	-22.75	0.00	-690.19	0.00	690.19	1752.08	876.04	2320.96	1162.21	27.86	-3.874	0.000	0.601
75.00	-11.36	-22.33	0.00	-576.44	0.00	576.44	1712.28	856.14	2189.66	1096.46	32.06	-4.142	0.000	0.533
78.00	-10.04	-20.91	0.00	-509.46	0.00	509.46	1687.70	843.85	2111.76	1057.45	34.71	-4.295	0.000	0.488
80.00	-9.76	-20.75	0.00	-467.65	0.00	467.65	1671.02	835.51	2060.22	1031.64	36.53	-4.393	0.000	0.460
85.00	-9.17	-20.33	0.00	-363.87	0.00	363.87	1628.32	814.16	1932.84	967.86	41.25	-4.611	0.000	0.382
88.00	-7.09	-16.03	0.00	-302.87	0.00	302.87	1601.99	801.00	1857.49	930.12	44.18	-4.729	0.000	0.330
90.00	-6.88	-15.88	0.00	-270.80	0.00	270.80	1584.15	792.08	1807.72	905.20	46.18	-4.801	0.000	0.304
95.00	-6.40	-15.47	0.00	-191.41	0.00	191.41	1538.53	769.27	1685.06	843.78	51.29	-4.954	0.000	0.231
98.00	-4.05	-10.28	0.00	-145.00	0.00	145.00	1510.46	755.23	1612.73	807.56	54.42	-5.029	0.000	0.182
98.50	-4.01	-10.25	0.00	-139.86	0.00	139.86	1505.73	752.87	1600.77	801.57	54.95	-5.040	0.000	0.177
100.00	-3.82	-10.12	0.00	-124.49	0.00	124.49	1491.46	745.73	1565.06	783.69	56.54	-5.073	0.000	0.162
102.00	-3.58	-9.96	0.00	-104.25	0.00	104.25	1021.50	510.75	1074.26	537.93	58.67	-5.111	0.000	0.198
105.00	-3.40	-9.73	0.00	-74.38	0.00	74.38	1004.76	502.38	1028.99	515.26	61.89	-5.159	0.000	0.148
108.00	-1.58	-4.75	0.00	-45.20	0.00	45.20	987.50	493.75	984.13	492.79	65.15	-5.203	0.000	0.093
109.00	-1.53	-4.67	0.00	-40.46	0.00	40.46	981.63	490.81	969.27	485.35	66.24	-5.214	0.000	0.085
109.00	-1.53	-4.67	0.00	-40.46	0.00	40.46	981.63	490.81	969.27	485.35	66.24	-5.214	0.000	0.085
110.00	-1.48	-4.60	0.00	-35.78	0.00	35.78	975.70	487.85	954.46	477.94	67.33	-5.225	0.000	0.076
115.00	-1.24	-4.24	0.00	-12.78	0.00	12.78	945.18	472.59	881.23	441.27	72.81	-5.259	0.000	0.030
118.00	-0.03	-0.07	0.00	-0.07	0.00	0.07	926.18	463.09	838.01	419.63	76.12	-5.265	0.000	0.000
119.00	0.00	-0.06	0.00	0.00	0.00	0.00	919.72	459.86	823.73	412.48	77.22	-5.265	0.000	0.000

Wind Loading - Shaft

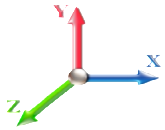
Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 19	

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	5.168	5.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	5.168	5.68	0.00	1.200	1.656	5.00	21.243	25.49	144.9	498.4	1442.7
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.775	5.00	20.873	25.05	142.4	523.1	1445.0
15.00		1.00	0.85	5.168	5.68	0.00	1.200	1.848	5.00	20.465	24.56	139.6	532.8	1432.2
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.902	5.00	20.041	24.05	145.1	535.7	1412.7
25.00		1.00	0.95	5.747	6.32	0.00	1.200	1.945	5.00	19.608	23.53	148.8	534.8	1389.4
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.981	5.00	19.169	23.00	151.1	531.4	1363.5
35.00		1.00	1.01	6.169	6.79	0.00	1.200	2.012	5.00	18.726	22.47	152.5	526.0	1335.7
40.00		1.00	1.04	6.345	6.98	0.00	1.200	2.039	5.00	18.279	21.94	153.1	519.3	1306.5
45.00		1.00	1.07	6.504	7.15	0.00	1.200	2.063	5.00	17.831	21.40	153.1	511.4	1276.2
48.50	Bot - Section 2	1.00	1.09	6.608	7.27	0.00	1.200	2.079	3.50	12.212	14.65	106.5	353.7	875.8
50.00		1.00	1.09	6.650	7.32	0.00	1.200	2.085	1.50	5.228	6.27	45.9	152.7	552.1
53.25	Top - Section 1	1.00	1.11	6.739	7.41	0.00	1.200	2.098	3.25	11.190	13.43	99.5	327.0	1179.8
55.00		1.00	1.12	6.785	7.46	0.00	1.200	2.105	1.75	5.945	7.13	53.2	174.9	377.6
60.00		1.00	1.14	6.910	7.60	0.00	1.200	2.123	5.00	16.686	20.02	152.2	489.5	1056.6
65.00		1.00	1.16	7.028	7.73	0.00	1.200	2.140	5.00	16.231	19.48	150.6	478.8	1028.0
70.00		1.00	1.17	7.138	7.85	0.00	1.200	2.156	5.00	15.776	18.93	148.6	467.6	998.8
75.00		1.00	1.19	7.243	7.97	0.00	1.200	2.171	5.00	15.319	18.38	146.5	456.0	969.2
78.00	Appurtenance(s)	1.00	1.20	7.303	8.03	0.00	1.200	2.180	3.00	8.971	10.76	86.5	269.3	568.6
80.00		1.00	1.21	7.342	8.08	0.00	1.200	2.185	2.00	5.889	7.07	57.1	177.6	373.5
85.00		1.00	1.22	7.436	8.18	0.00	1.200	2.198	5.00	14.404	17.29	141.4	431.6	908.9
88.00	Appurtenance(s)	1.00	1.23	7.491	8.24	0.00	1.200	2.206	3.00	8.421	10.11	83.3	254.4	532.2
90.00		1.00	1.24	7.526	8.28	0.00	1.200	2.211	2.00	5.522	6.63	54.9	167.5	349.1
95.00		1.00	1.25	7.612	8.37	0.00	1.200	2.223	5.00	13.487	16.18	135.5	405.9	847.3
98.00	Appurtenance(s)	1.00	1.26	7.662	8.43	0.00	1.200	2.230	3.00	7.871	9.44	79.6	238.8	495.0
98.50	Bot - Section 3	1.00	1.26	7.671	8.44	0.00	1.200	2.231	0.50	1.295	1.55	13.1	39.7	81.7
100.00		1.00	1.27	7.695	8.46	0.00	1.200	2.234	1.50	3.907	4.69	39.7	119.4	340.0
102.00	Top - Section 2	1.00	1.27	7.727	8.50	0.00	1.200	2.239	2.00	5.145	6.17	52.5	157.0	446.7
105.00		1.00	1.28	7.774	8.55	0.00	1.200	2.245	3.00	7.580	9.10	77.8	230.6	414.7
108.00	Appurtenance(s)	1.00	1.29	7.821	8.60	0.00	1.200	2.252	3.00	7.414	8.90	76.5	225.7	404.9
109.00	Top - Section 3	1.00	1.29	7.836	8.62	0.00	1.200	2.254	1.00	2.434	2.92	25.2	74.7	133.3
110.00		1.00	1.29	7.851	8.64	0.00	1.200	2.256	1.00	2.416	2.90	25.0	74.1	132.2
115.00		1.00	1.30	7.925	8.72	0.00	1.200	2.266	5.00	11.806	14.17	123.5	356.7	639.2
118.00	Appurtenance(s)	1.00	1.31	7.968	8.76	0.00	1.200	2.272	3.00	6.861	8.23	72.2	208.9	372.0
119.00		1.00	1.31	7.982	8.78	0.00	1.200	2.274	1.00	2.250	2.70	23.7	69.1	122.3
								Totals:	**119.00**			**3,400.9**		**26,603.8**

Discrete Appurtenance Forces

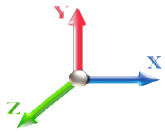
Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 20	

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	118.00	T-Arm	3	7.968	8.765	0.56	0.75	36.04	2290.46	0.000	0.000	315.90	0.00	0.00
2	118.00	RRH2x40-AWS	3	7.968	8.765	0.60	0.90	6.38	343.34	0.000	0.000	55.88	0.00	0.00
3	118.00	RFS FD9R6004/2C-3L	6	7.968	8.765	0.90	0.90	5.06	71.21	0.000	0.000	44.35	0.00	0.00
4	118.00	DB-T1-6Z-8AB-0Z	1	7.968	8.765	0.64	0.90	3.81	220.01	0.000	0.000	33.38	0.00	0.00
5	118.00	BXA-70063-6BF	3	7.968	8.765	0.63	0.90	21.11	492.80	0.000	0.000	184.99	0.00	0.00
6	118.00	BXA-171063-8BF	3	7.968	8.765	0.76	0.90	11.56	237.36	0.000	0.000	101.35	0.00	0.00
7	118.00	BXA-171063-12BF	3	7.968	8.765	0.76	0.90	17.69	343.13	0.000	0.000	155.01	0.00	0.00
8	118.00	800 10735V01	3	7.968	8.765	0.59	0.90	22.21	572.95	0.000	0.000	194.70	0.00	0.00
9	108.00	840 10054	3	7.821	8.603	0.49	0.80	9.88	379.88	0.000	0.000	84.99	0.00	0.00
10	108.00	800 MHz	3	7.821	8.603	0.54	0.80	6.38	413.78	0.000	0.000	54.86	0.00	0.00
11	108.00	ACU-A20-N	4	7.821	8.603	0.54	0.80	1.12	21.77	0.000	0.000	9.64	0.00	0.00
12	108.00	APXVSPP18-C-A20	2	7.821	8.603	0.66	0.80	15.44	483.84	0.000	0.000	132.80	0.00	0.00
13	108.00	800 MHz Filters	3	7.821	8.603	0.54	0.80	6.18	462.93	0.000	0.000	53.17	0.00	0.00
14	108.00	1900MHz RRH	3	7.821	8.603	0.54	0.80	8.99	487.34	0.000	0.000	77.38	0.00	0.00
15	108.00	VHLP2.5	2	7.821	8.603	1.00	1.00	21.26	461.07	0.000	0.000	182.93	0.00	0.00
16	108.00	APXVTM14-C-120	3	7.821	8.603	0.63	0.80	14.79	859.41	0.000	0.000	127.28	0.00	0.00
17	108.00	Horizon	2	7.821	8.603	0.80	0.80	1.74	70.78	0.000	0.000	15.00	0.00	0.00
18	108.00	P40-16-XLPP-RR-A	1	7.821	8.603	0.80	0.80	8.57	347.29	0.000	0.000	73.77	0.00	0.00
19	108.00	TD-RRH8x20-25	3	7.821	8.603	0.54	0.80	8.24	705.92	0.000	0.000	70.86	0.00	0.00
20	108.00	T-Arm	3	7.821	8.603	0.56	0.75	28.70	1995.74	0.000	0.000	246.89	0.00	0.00
21	98.00	Ericsson RRUS 32	3	7.662	8.429	0.54	0.80	5.94	550.96	0.000	0.000	50.03	0.00	0.00
22	98.00	Ericsson RRUS A2	3	7.662	8.429	0.54	0.80	3.59	263.62	0.000	0.000	30.25	0.00	0.00
23	98.00	Cci OPA-65R-LCUU-H6	3	7.662	8.429	0.63	0.80	21.68	1219.36	0.000	0.000	182.73	0.00	0.00
24	98.00	Powerwave 7770 w/Mount	3	7.662	8.429	0.58	0.80	14.29	437.23	0.000	0.000	120.42	0.00	0.00
25	98.00	Powerwave LGP21402	9	7.662	8.429	0.80	0.80	16.98	375.89	0.000	0.000	143.09	0.00	0.00
26	98.00	Ericsson RRUS 11	6	7.662	8.429	0.54	0.80	10.71	708.44	0.000	0.000	90.24	0.00	0.00
27	98.00	Ericsson RRUS 8843	3	7.662	8.429	0.54	0.80	3.79	576.21	0.000	0.000	31.96	0.00	0.00
28	98.00	Powerwave LGP13519	6	7.662	8.429	0.80	0.80	4.42	94.77	0.000	0.000	37.23	0.00	0.00
29	98.00	Raycap DC6-48-60-0-8F	2	7.662	8.429	0.80	0.80	2.37	198.92	0.000	0.000	19.95	0.00	0.00
30	98.00	T-Arm	3	7.662	8.429	0.56	0.75	28.55	1986.59	0.000	0.000	240.65	0.00	0.00
31	98.00	Quintel QS66512-2	3	7.662	8.429	0.74	0.80	21.68	1313.53	0.000	0.000	182.76	0.00	0.00
32	98.00	Ericsson RRUS 12	3	7.662	8.429	0.54	0.80	5.42	546.27	0.000	0.000	45.71	0.00	0.00
33	88.00	APXVAARR24_43-U-NA2	3	7.491	8.240	0.60	0.80	40.80	2099.33	0.000	0.000	336.16	0.00	0.00
34	88.00	AIR 21 B2A/B4P	3	7.491	8.240	0.69	0.80	15.48	1001.24	0.000	0.000	127.58	0.00	0.00
35	88.00	AIR32	3	7.491	8.240	0.70	0.80	16.73	1209.32	0.000	0.000	137.84	0.00	0.00
36	88.00	4449 B71 + B12	3	7.491	8.240	0.54	0.80	5.45	382.70	0.000	0.000	44.87	0.00	0.00
37	88.00	KRY 112 144/2	3	7.491	8.240	0.60	0.80	1.82	71.19	0.000	0.000	14.99	0.00	0.00
38	88.00	T-Arm	3	7.491	8.240	0.56	0.75	28.39	1976.57	0.000	0.000	233.94	0.00	0.00
39	78.00	T-Arm	3	7.303	8.033	0.56	0.75	28.21	1965.46	0.000	0.000	226.63	0.00	0.00
40	78.00	APXV18-206517S-C	3	7.303	8.033	0.59	0.80	14.45	363.12	0.000	0.000	116.07	0.00	0.00
							Totals:		**28,601.74**			**4,628.25**		

Total Applied Force Summary

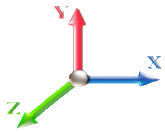
Structure:	CT08558-B-SBA		**Code:**	EIA/TIA-222-G	8/10/2018
Site Name:	New Britain 3, CT		**Exposure:**	C	
Height:	119.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 21

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		144.91	1792.60	0.00	0.00
10.00		142.39	1798.32	0.00	0.00
15.00		139.61	1787.72	0.00	0.00
20.00		145.06	1769.91	0.00	0.00
25.00		148.75	1747.90	0.00	0.00
30.00		151.11	1723.12	0.00	0.00
35.00		152.49	1696.34	0.00	0.00
40.00		153.10	1668.03	0.00	0.00
45.00		153.09	1638.51	0.00	0.00
48.50		106.51	1129.72	0.00	0.00
50.00		45.89	661.02	0.00	0.00
53.25		99.54	1416.08	0.00	0.00
55.00		53.25	504.90	0.00	0.00
60.00		152.20	1420.95	0.00	0.00
65.00		150.57	1392.87	0.00	0.00
70.00		148.65	1364.25	0.00	0.00
75.00		146.46	1335.17	0.00	0.00
78.00	(6) attachments	429.18	3116.93	0.00	0.00
80.00		57.07	505.14	0.00	0.00
85.00		141.39	1238.35	0.00	0.00
88.00	(18) attachments	978.64	7470.34	0.00	0.00
90.00		54.86	446.77	0.00	0.00
95.00		135.52	1091.77	0.00	0.00
98.00	(47) attachments	1254.63	8913.63	0.00	0.00
98.50		13.12	97.69	0.00	0.00
100.00		39.68	387.88	0.00	0.00
102.00		52.47	510.69	0.00	0.00
105.00		77.78	510.71	0.00	0.00
108.00	(32) attachments	1206.11	7190.83	0.00	0.00
109.00		25.18	159.68	0.00	0.00
110.00		25.04	158.60	0.00	0.00
115.00		123.50	771.34	0.00	0.00
118.00	(25) attachments	1157.74	5022.64	0.00	0.00
119.00		23.71	122.35	0.00	0.00
	Totals:	**8,029.19**	**62,562.74**	**0.00**	**0.00**

Linear Appurtenance Segment Forces (Factored)

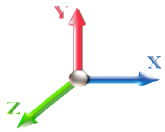
Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 22	

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	37.90
10.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	41.32
15.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	43.52
20.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.483	0.00	45.17
25.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.747	0.00	46.51
30.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.972	0.00	47.65
35.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.169	0.00	48.64
40.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.345	0.00	49.52
45.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.504	0.00	50.31
48.50	1 5/8" Hybrid	Yes	3.50	0.000	0.00	0.00	0.00	0.000	0.000	6.608	0.00	35.58
50.00	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	6.650	0.00	15.31
53.25	1 5/8" Hybrid	Yes	3.25	0.000	0.00	0.00	0.00	0.000	0.000	6.739	0.00	33.46
55.00	1 5/8" Hybrid	Yes	1.75	0.000	0.00	0.00	0.00	0.000	0.000	6.785	0.00	18.10
60.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.910	0.00	52.32
65.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.028	0.00	52.90
70.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.138	0.00	53.44
75.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.243	0.00	53.95
78.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	7.303	0.00	32.55
80.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.342	0.00	21.77
85.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.436	0.00	54.89
88.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	7.491	0.00	33.09
90.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.526	0.00	22.13
95.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.612	0.00	55.75
98.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	7.662	0.00	33.59
98.50	1 5/8" Hybrid	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	7.671	0.00	5.60
100.00	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	7.695	0.00	16.84
102.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.727	0.00	22.52
105.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	7.774	0.00	33.92
108.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	7.821	0.00	34.05
109.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.836	0.00	11.37
110.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.851	0.00	11.38
115.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.925	0.00	57.26
118.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	7.968	0.00	34.48
										Totals:	**0.0**	**1,206.8**

Calculated Forces

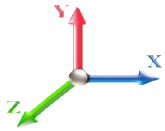
Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 23	

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-62.56	-8.07	0.00	-733.11	0.00	733.11	3013.27	1506.63	5849.73	2929.21	0.00	0.000	0.000	0.271
5.00	-60.75	-8.01	0.00	-692.75	0.00	692.75	2972.75	1486.38	5634.65	2821.52	0.04	-0.077	0.000	0.266
10.00	-58.95	-7.94	0.00	-652.72	0.00	652.72	2930.78	1465.39	5420.60	2714.33	0.16	-0.155	0.000	0.261
15.00	-57.15	-7.88	0.00	-613.00	0.00	613.00	2887.35	1443.68	5207.78	2607.76	0.37	-0.234	0.000	0.255
20.00	-55.37	-7.80	0.00	-573.62	0.00	573.62	2842.47	1421.24	4996.39	2501.91	0.66	-0.314	0.000	0.249
25.00	-53.61	-7.72	0.00	-534.63	0.00	534.63	2796.14	1398.07	4786.62	2396.87	1.03	-0.394	0.000	0.242
30.00	-51.88	-7.63	0.00	-496.05	0.00	496.05	2748.35	1374.17	4578.69	2292.75	1.49	-0.475	0.000	0.235
35.00	-50.17	-7.53	0.00	-457.92	0.00	457.92	2699.10	1349.55	4372.78	2189.64	2.03	-0.557	0.000	0.228
40.00	-48.49	-7.43	0.00	-420.28	0.00	420.28	2648.40	1324.20	4169.10	2087.65	2.65	-0.638	0.000	0.220
45.00	-46.85	-7.31	0.00	-383.14	0.00	383.14	2596.25	1298.12	3967.85	1986.88	3.37	-0.719	0.000	0.211
48.50	-45.72	-7.22	0.00	-357.56	0.00	357.56	2558.87	1279.44	3828.53	1917.11	3.91	-0.776	0.000	0.204
50.00	-45.05	-7.20	0.00	-346.72	0.00	346.72	2542.63	1271.32	3769.24	1887.42	4.16	-0.801	0.000	0.201
53.25	-43.63	-7.11	0.00	-323.33	0.00	323.33	1874.80	937.40	2771.76	1387.94	4.73	-0.853	0.000	0.256
55.00	-43.12	-7.09	0.00	-310.89	0.00	310.89	1862.74	931.37	2724.01	1364.03	5.04	-0.882	0.000	0.251
60.00	-41.69	-6.98	0.00	-275.42	0.00	275.42	1827.31	913.65	2588.34	1296.09	6.02	-0.974	0.000	0.235
65.00	-40.29	-6.87	0.00	-240.50	0.00	240.50	1790.42	895.21	2453.92	1228.78	7.09	-1.064	0.000	0.218
70.00	-38.92	-6.75	0.00	-206.15	0.00	206.15	1752.08	876.04	2320.96	1162.21	8.25	-1.149	0.000	0.200
75.00	-37.58	-6.62	0.00	-172.39	0.00	172.39	1712.28	856.14	2189.66	1096.46	9.50	-1.230	0.000	0.179
78.00	-34.47	-6.14	0.00	-152.53	0.00	152.53	1687.70	843.85	2111.76	1057.45	10.28	-1.275	0.000	0.165
80.00	-33.96	-6.10	0.00	-140.24	0.00	140.24	1671.02	835.51	2060.22	1031.64	10.83	-1.305	0.000	0.156
85.00	-32.72	-5.96	0.00	-109.72	0.00	109.72	1628.32	814.16	1932.84	967.86	12.23	-1.370	0.000	0.134
88.00	-25.27	-4.82	0.00	-91.83	0.00	91.83	1601.99	801.00	1857.49	930.12	13.10	-1.406	0.000	0.115
90.00	-24.82	-4.77	0.00	-82.20	0.00	82.20	1584.15	792.08	1807.72	905.20	13.69	-1.428	0.000	0.107
95.00	-23.73	-4.62	0.00	-58.38	0.00	58.38	1538.53	769.27	1685.06	843.78	15.22	-1.474	0.000	0.085
98.00	-14.86	-3.13	0.00	-44.53	0.00	44.53	1510.46	755.23	1612.73	807.56	16.15	-1.497	0.000	0.065
98.50	-14.76	-3.12	0.00	-42.96	0.00	42.96	1505.73	752.87	1600.77	801.57	16.31	-1.501	0.000	0.063
100.00	-14.37	-3.07	0.00	-38.28	0.00	38.28	1491.46	745.73	1565.06	783.69	16.78	-1.511	0.000	0.059
102.00	-13.86	-3.01	0.00	-32.14	0.00	32.14	1021.50	510.75	1074.26	537.93	17.42	-1.523	0.000	0.073
105.00	-13.35	-2.92	0.00	-23.11	0.00	23.11	1004.76	502.38	1028.99	515.26	18.38	-1.537	0.000	0.058
108.00	-6.20	-1.52	0.00	-14.34	0.00	14.34	987.50	493.75	984.13	492.79	19.35	-1.551	0.000	0.035
109.00	-6.04	-1.49	0.00	-12.82	0.00	12.82	981.63	490.81	969.27	485.35	19.67	-1.555	0.000	0.033
109.00	-6.04	-1.49	0.00	-12.82	0.00	12.82	981.63	490.81	969.27	485.35	19.67	-1.555	0.000	0.033
110.00	-5.88	-1.47	0.00	-11.32	0.00	11.32	975.70	487.85	954.46	477.94	20.00	-1.558	0.000	0.030
115.00	-5.11	-1.32	0.00	-3.99	0.00	3.99	945.18	472.59	881.23	441.27	21.64	-1.569	0.000	0.014
118.00	-0.12	-0.03	0.00	-0.03	0.00	0.03	926.18	463.09	838.01	419.63	22.63	-1.571	0.000	0.000
119.00	0.00	-0.02	0.00	0.00	0.00	0.00	919.72	459.86	823.73	412.48	22.95	-1.571	0.000	0.000

Seismic Segment Forces (Factored)

Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 24	

Tower Engineering Solutions

Load Case:	1.2D + 1.0E							**Iterations**	20
Gust Response Factor	1.10				**Sds**	0.13		**Ss**	0.19
Dead Load Factor	1.20	**Seismic Load Factor**	1.00		**Sd1**	0.04		**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency**	0.41		**SA**	0.01	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		786.94	0.00	0.04	0.02	13.89	
10.00		768.24	0.01	0.06	0.03	17.70	
15.00		749.54	0.03	0.07	0.04	18.85	
20.00		730.84	0.05	0.07	0.04	19.13	
25.00		712.14	0.08	0.07	0.04	19.22	
30.00		693.44	0.12	0.07	0.03	19.35	
35.00		674.74	0.16	0.07	0.03	19.43	
40.00		656.04	0.21	0.06	0.02	19.12	
45.00		637.33	0.27	0.05	0.01	17.78	
48.50	Bot - Section 2	435.01	0.31	0.04	0.01	10.95	
50.00		332.81	0.33	0.04	0.01	7.76	
53.25	Top - Section 1	710.69	0.38	0.02	0.01	12.53	
55.00		168.94	0.40	0.02	0.01	2.28	
60.00		472.58	0.48	-0.01	0.01	-0.74	
65.00		457.62	0.56	-0.04	0.01	-7.99	
70.00		442.66	0.65	-0.07	0.02	-12.69	
75.00		427.70	0.75	-0.10	0.04	-14.23	
78.00	Appurtenance(s)	1378.6	0.81	-0.11	0.06	-45.54	
80.00		163.30	0.85	-0.12	0.07	-5.18	
85.00		397.78	0.96	-0.12	0.11	-9.87	
88.00	Appurtenance(s)	2518.0	1.03	-0.10	0.15	-45.86	
90.00		151.33	1.08	-0.08	0.18	-1.94	
95.00		367.85	1.20	0.01	0.26	1.53	
98.00	Appurtenance(s)	3005.9	1.28	0.10	0.32	50.37	
98.50	Bot - Section 3	35.06	1.29	0.11	0.33	0.67	
100.00		183.85	1.33	0.17	0.37	4.82	
102.00	Top - Section 2	241.47	1.39	0.26	0.42	8.80	
105.00		153.38	1.47	0.43	0.51	8.20	
108.00	Appurtenance(s)	2452.7	1.56	0.65	0.61	177.64	
109.00	Top - Section 3	48.88	1.59	0.73	0.65	3.87	
110.00		48.43	1.61	0.83	0.69	4.17	
115.00		235.44	1.77	1.38	0.92	29.31	
118.00	Appurtenance(s)	1718.9	1.86	1.82	1.08	258.33	
119.00		44.39	1.89	1.98	1.14	7.07	
	Totals:	**23,002.8**				**608.7**	**Total Wind:** **28,041.7**

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 25	

Tower Engineering Solutions

Load Case: 1.2D + 1.0E

Iterations 20

Gust Response Factor	1.10			**Sds**	0.13			**Ss**	0.19
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.04			**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency**	0.41	**SA**	0.01	**Seismic Importance Factor**			1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-33.91	-0.75	0.00	-70.79	0.00	70.79	3013.27	1506.63	5849.73	2929.21		0.00	0.00	0.035
5.00	-32.65	-0.74	0.00	-67.02	0.00	67.02	2972.75	1486.38	5634.65	2821.52		0.00	-0.01	0.035
10.00	-31.41	-0.73	0.00	-63.30	0.00	63.30	2930.78	1465.39	5420.60	2714.33		0.02	-0.02	0.034
15.00	-30.19	-0.72	0.00	-59.65	0.00	59.65	2887.35	1443.68	5207.78	2607.76		0.04	-0.02	0.033
20.00	-28.99	-0.70	0.00	-56.07	0.00	56.07	2842.47	1421.24	4996.39	2501.91		0.06	-0.03	0.033
25.00	-27.82	-0.68	0.00	-52.58	0.00	52.58	2796.14	1398.07	4786.62	2396.87		0.10	-0.04	0.032
30.00	-26.67	-0.67	0.00	-49.16	0.00	49.16	2748.35	1374.17	4578.69	2292.75		0.14	-0.05	0.031
35.00	-25.54	-0.65	0.00	-45.83	0.00	45.83	2699.10	1349.55	4372.78	2189.64		0.20	-0.05	0.030
40.00	-24.43	-0.63	0.00	-42.58	0.00	42.58	2648.40	1324.20	4169.10	2087.65		0.26	-0.06	0.030
45.00	-23.35	-0.62	0.00	-39.41	0.00	39.41	2596.25	1298.12	3967.85	1986.88		0.33	-0.07	0.029
48.50	-22.61	-0.61	0.00	-37.25	0.00	37.25	2558.87	1279.44	3828.53	1917.11		0.38	-0.08	0.028
50.00	-22.11	-0.60	0.00	-36.34	0.00	36.34	2542.63	1271.32	3769.24	1887.42		0.41	-0.08	0.028
53.25	-21.05	-0.59	0.00	-34.39	0.00	34.39	1874.80	937.40	2771.76	1387.94		0.46	-0.08	0.036
55.00	-20.74	-0.59	0.00	-33.36	0.00	33.36	1862.74	931.37	2724.01	1364.03		0.50	-0.09	0.036
60.00	-19.85	-0.59	0.00	-30.42	0.00	30.42	1827.31	913.65	2588.34	1296.09		0.59	-0.10	0.034
65.00	-18.98	-0.59	0.00	-27.48	0.00	27.48	1790.42	895.21	2453.92	1228.78		0.70	-0.11	0.033
70.00	-18.13	-0.59	0.00	-24.52	0.00	24.52	1752.08	876.04	2320.96	1162.21		0.82	-0.12	0.031
75.00	-17.30	-0.59	0.00	-21.56	0.00	21.56	1712.28	856.14	2189.66	1096.46		0.95	-0.13	0.030
78.00	-15.46	-0.59	0.00	-19.78	0.00	19.78	1687.70	843.85	2111.76	1057.45		1.03	-0.13	0.028
80.00	-15.15	-0.59	0.00	-18.60	0.00	18.60	1671.02	835.51	2060.22	1031.64		1.09	-0.14	0.027
85.00	-14.39	-0.59	0.00	-15.64	0.00	15.64	1628.32	814.16	1932.84	967.86		1.24	-0.15	0.025
88.00	-11.20	-0.58	0.00	-13.87	0.00	13.87	1601.99	801.00	1857.49	930.12		1.33	-0.15	0.022
90.00	-10.94	-0.58	0.00	-12.70	0.00	12.70	1584.15	792.08	1807.72	905.20		1.39	-0.16	0.021
95.00	-10.30	-0.58	0.00	-9.78	0.00	9.78	1538.53	769.27	1685.06	843.78		1.56	-0.16	0.018
98.00	-6.58	-0.52	0.00	-8.03	0.00	8.03	1510.46	755.23	1612.73	807.56		1.66	-0.17	0.014
98.50	-6.52	-0.52	0.00	-7.77	0.00	7.77	1505.73	752.87	1600.77	801.57		1.68	-0.17	0.014
100.00	-6.27	-0.52	0.00	-6.99	0.00	6.99	1491.46	745.73	1565.06	783.69		1.73	-0.17	0.013
102.00	-5.94	-0.51	0.00	-5.96	0.00	5.96	1021.50	510.75	1074.26	537.93		1.81	-0.17	0.017
105.00	-5.69	-0.50	0.00	-4.44	0.00	4.44	1004.76	502.38	1028.99	515.26		1.91	-0.17	0.014
108.00	-2.68	-0.31	0.00	-2.95	0.00	2.95	987.50	493.75	984.13	492.79		2.02	-0.18	0.009
109.00	-2.60	-0.31	0.00	-2.64	0.00	2.64	981.63	490.81	969.27	485.35		2.06	-0.18	0.008
109.00	-2.60	-0.31	0.00	-2.64	0.00	2.64	981.63	490.81	969.27	485.35		2.06	-0.18	0.008
110.00	-2.53	-0.30	0.00	-2.34	0.00	2.34	975.70	487.85	954.46	477.94		2.10	-0.18	0.007
115.00	-2.16	-0.27	0.00	-0.82	0.00	0.82	945.18	472.59	881.23	441.27		2.29	-0.18	0.004
118.00	-0.05	-0.01	0.00	-0.01	0.00	0.01	926.18	463.09	838.01	419.63		2.40	-0.18	0.000
119.00	0.00	-0.01	0.00	0.00	0.00	0.00	919.72	459.86	823.73	412.48		2.44	-0.18	0.000

Seismic Segment Forces (Factored)

Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 26	

Tower Engineering Solutions

Load Case:	0.9D + 1.0E							**Iterations**	20
Gust Response Factor	1.10			**Sds**	0.13			**Ss**	0.19
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.04			**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency**	0.41	**SA**	0.01			**Seismic Importance Factor**	1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		786.94	0.00	0.04	0.02	13.89	
10.00		768.24	0.01	0.06	0.03	17.70	
15.00		749.54	0.03	0.07	0.04	18.85	
20.00		730.84	0.05	0.07	0.04	19.13	
25.00		712.14	0.08	0.07	0.04	19.22	
30.00		693.44	0.12	0.07	0.03	19.35	
35.00		674.74	0.16	0.07	0.03	19.43	
40.00		656.04	0.21	0.06	0.02	19.12	
45.00		637.33	0.27	0.05	0.01	17.78	
48.50	Bot - Section 2	435.01	0.31	0.04	0.01	10.95	
50.00		332.81	0.33	0.04	0.01	7.76	
53.25	Top - Section 1	710.69	0.38	0.02	0.01	12.53	
55.00		168.94	0.40	0.02	0.01	2.28	
60.00		472.58	0.48	-0.01	0.01	-0.74	
65.00		457.62	0.56	-0.04	0.01	-7.99	
70.00		442.66	0.65	-0.07	0.02	-12.69	
75.00		427.70	0.75	-0.10	0.04	-14.23	
78.00	Appurtenance(s)	1378.6	0.81	-0.11	0.06	-45.54	
80.00		163.30	0.85	-0.12	0.07	-5.18	
85.00		397.78	0.96	-0.12	0.11	-9.87	
88.00	Appurtenance(s)	2518.0	1.03	-0.10	0.15	-45.86	
90.00		151.33	1.08	-0.08	0.18	-1.94	
95.00		367.85	1.20	0.01	0.26	1.53	
98.00	Appurtenance(s)	3005.9	1.28	0.10	0.32	50.37	
98.50	Bot - Section 3	35.06	1.29	0.11	0.33	0.67	
100.00		183.85	1.33	0.17	0.37	4.82	
102.00	Top - Section 2	241.47	1.39	0.26	0.42	8.80	
105.00		153.38	1.47	0.43	0.51	8.20	
108.00	Appurtenance(s)	2452.7	1.56	0.65	0.61	177.64	
109.00	Top - Section 3	48.88	1.59	0.73	0.65	3.87	
110.00		48.43	1.61	0.83	0.69	4.17	
115.00		235.44	1.77	1.38	0.92	29.31	
118.00	Appurtenance(s)	1718.9	1.86	1.82	1.08	258.33	
119.00		44.39	1.89	1.98	1.14	7.07	
	Totals:	**23,002.8**				**608.7**	**Total Wind:** **28,041.7**

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 27	

Tower Engineering Solutions

Load Case: 0.9D + 1.0E

Gust Response Factor	1.10			**Sds**	0.13			**Iterations**	20
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.04			**Ss**	0.19
Wind Load Factor	0.00	**Structure Frequency**	0.41	**SA**	0.01			**S1**	0.06
								Seismic Importance Factor	1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-25.43	-0.75	0.00	-70.06	0.00	70.06	3013.27	1506.63	5849.73	2929.21		0.00	0.00	0.032
5.00	-24.48	-0.74	0.00	-66.29	0.00	66.29	2972.75	1486.38	5634.65	2821.52		0.00	-0.01	0.032
10.00	-23.55	-0.73	0.00	-62.58	0.00	62.58	2930.78	1465.39	5420.60	2714.33		0.02	-0.01	0.031
15.00	-22.64	-0.71	0.00	-58.94	0.00	58.94	2887.35	1443.68	5207.78	2607.76		0.04	-0.02	0.030
20.00	-21.74	-0.69	0.00	-55.38	0.00	55.38	2842.47	1421.24	4996.39	2501.91		0.06	-0.03	0.030
25.00	-20.86	-0.68	0.00	-51.91	0.00	51.91	2796.14	1398.07	4786.62	2396.87		0.10	-0.04	0.029
30.00	-20.00	-0.66	0.00	-48.52	0.00	48.52	2748.35	1374.17	4578.69	2292.75		0.14	-0.05	0.028
35.00	-19.15	-0.64	0.00	-45.22	0.00	45.22	2699.10	1349.55	4372.78	2189.64		0.19	-0.05	0.028
40.00	-18.33	-0.63	0.00	-42.00	0.00	42.00	2648.40	1324.20	4169.10	2087.65		0.26	-0.06	0.027
45.00	-17.51	-0.61	0.00	-38.87	0.00	38.87	2596.25	1298.12	3967.85	1986.88		0.32	-0.07	0.026
48.50	-16.95	-0.60	0.00	-36.74	0.00	36.74	2558.87	1279.44	3828.53	1917.11		0.38	-0.08	0.026
50.00	-16.58	-0.59	0.00	-35.84	0.00	35.84	2542.63	1271.32	3769.24	1887.42		0.40	-0.08	0.026
53.25	-15.79	-0.58	0.00	-33.92	0.00	33.92	1874.80	937.40	2771.76	1387.94		0.46	-0.08	0.033
55.00	-15.55	-0.58	0.00	-32.90	0.00	32.90	1862.74	931.37	2724.01	1364.03		0.49	-0.09	0.032
60.00	-14.89	-0.58	0.00	-30.01	0.00	30.01	1827.31	913.65	2588.34	1296.09		0.59	-0.10	0.031
65.00	-14.24	-0.58	0.00	-27.11	0.00	27.11	1790.42	895.21	2453.92	1228.78		0.69	-0.11	0.030
70.00	-13.60	-0.58	0.00	-24.20	0.00	24.20	1752.08	876.04	2320.96	1162.21		0.81	-0.12	0.029
75.00	-12.98	-0.58	0.00	-21.29	0.00	21.29	1712.28	856.14	2189.66	1096.46		0.94	-0.13	0.027
78.00	-11.59	-0.58	0.00	-19.54	0.00	19.54	1687.70	843.85	2111.76	1057.45		1.02	-0.13	0.025
80.00	-11.36	-0.58	0.00	-18.38	0.00	18.38	1671.02	835.51	2060.22	1031.64		1.07	-0.14	0.025
85.00	-10.79	-0.58	0.00	-15.47	0.00	15.47	1628.32	814.16	1932.84	967.86		1.22	-0.14	0.023
88.00	-8.40	-0.58	0.00	-13.73	0.00	13.73	1601.99	801.00	1857.49	930.12		1.31	-0.15	0.020
90.00	-8.20	-0.58	0.00	-12.57	0.00	12.57	1584.15	792.08	1807.72	905.20		1.38	-0.15	0.019
95.00	-7.73	-0.57	0.00	-9.69	0.00	9.69	1538.53	769.27	1685.06	843.78		1.54	-0.16	0.017
98.00	-4.93	-0.52	0.00	-7.97	0.00	7.97	1510.46	755.23	1612.73	807.56		1.64	-0.16	0.013
98.50	-4.89	-0.52	0.00	-7.71	0.00	7.71	1505.73	752.87	1600.77	801.57		1.66	-0.16	0.013
100.00	-4.70	-0.51	0.00	-6.94	0.00	6.94	1491.46	745.73	1565.06	783.69		1.71	-0.17	0.012
102.00	-4.45	-0.50	0.00	-5.91	0.00	5.91	1021.50	510.75	1074.26	537.93		1.78	-0.17	0.015
105.00	-4.26	-0.49	0.00	-4.41	0.00	4.41	1004.76	502.38	1028.99	515.26		1.89	-0.17	0.013
108.00	-2.01	-0.31	0.00	-2.93	0.00	2.93	987.50	493.75	984.13	492.79		2.00	-0.17	0.008
109.00	-1.95	-0.30	0.00	-2.62	0.00	2.62	981.63	490.81	969.27	485.35		2.04	-0.18	0.007
109.00	-1.95	-0.30	0.00	-2.62	0.00	2.62	981.63	490.81	969.27	485.35		2.04	-0.18	0.007
110.00	-1.90	-0.30	0.00	-2.32	0.00	2.32	975.70	487.85	954.46	477.94		2.07	-0.18	0.007
115.00	-1.62	-0.27	0.00	-0.82	0.00	0.82	945.18	472.59	881.23	441.27		2.26	-0.18	0.004
118.00	-0.04	-0.01	0.00	-0.01	0.00	0.01	926.18	463.09	838.01	419.63		2.37	-0.18	0.000
119.00	0.00	-0.01	0.00	0.00	0.00	0.00	919.72	459.86	823.73	412.48		2.41	-0.18	0.000

Wind Loading - Shaft

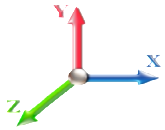
Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 28	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	7.442	8.19	222.34	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	217.15	0.650	0.000	5.00	19.863	12.91	105.7	0.0	786.9
10.00		1.00	0.85	7.442	8.19	211.97	0.650	0.000	5.00	19.394	12.61	103.2	0.0	768.2
15.00		1.00	0.85	7.442	8.19	206.78	0.650	0.000	5.00	18.925	12.30	100.7	0.0	749.5
20.00		1.00	0.90	7.896	8.69	207.65	0.650	0.000	5.00	18.456	12.00	104.2	0.0	730.8
25.00		1.00	0.95	8.276	9.10	207.12	0.650	0.000	5.00	17.987	11.69	106.4	0.0	712.1
30.00		1.00	0.98	8.600	9.46	205.56	0.650	0.000	5.00	17.518	11.39	107.7	0.0	693.4
35.00		1.00	1.01	8.883	9.77	203.25	0.650	0.000	5.00	17.049	11.08	108.3	0.0	674.7
40.00		1.00	1.04	9.137	10.05	200.38	0.650	0.000	5.00	16.580	10.78	108.3	0.0	656.0
45.00		1.00	1.07	9.366	10.30	197.06	0.650	0.000	5.00	16.112	10.47	107.9	0.0	637.3
48.50	Bot - Section 2	1.00	1.09	9.515	10.47	194.52	0.650	0.000	3.50	10.999	7.15	74.8	0.0	435.0
50.00		1.00	1.09	9.576	10.53	193.37	0.650	0.000	1.50	4.707	3.06	32.2	0.0	332.8
53.25	Top - Section 1	1.00	1.11	9.704	10.67	190.81	0.650	0.000	3.25	10.054	6.53	69.8	0.0	710.7
55.00		1.00	1.12	9.770	10.75	192.06	0.650	0.000	1.75	5.332	3.47	37.2	0.0	168.9
60.00		1.00	1.14	9.951	10.95	187.83	0.650	0.000	5.00	14.917	9.70	106.1	0.0	472.6
65.00		1.00	1.16	10.120	11.13	183.37	0.650	0.000	5.00	14.448	9.39	104.5	0.0	457.6
70.00		1.00	1.17	10.279	11.31	178.71	0.650	0.000	5.00	13.979	9.09	102.7	0.0	442.7
75.00		1.00	1.19	10.430	11.47	173.87	0.650	0.000	5.00	13.510	8.78	100.7	0.0	427.7
78.00	Appurtenance(s)	1.00	1.20	10.516	11.57	170.89	0.650	0.000	3.00	7.881	5.12	59.3	0.0	249.4
80.00		1.00	1.21	10.572	11.63	168.88	0.650	0.000	2.00	5.160	3.35	39.0	0.0	163.3
85.00		1.00	1.22	10.708	11.78	163.73	0.650	0.000	5.00	12.572	8.17	96.3	0.0	397.8
88.00	Appurtenance(s)	1.00	1.23	10.787	11.87	160.59	0.650	0.000	3.00	7.318	4.76	56.4	0.0	231.5
90.00		1.00	1.24	10.838	11.92	158.46	0.650	0.000	2.00	4.785	3.11	37.1	0.0	151.3
95.00		1.00	1.25	10.962	12.06	153.07	0.650	0.000	5.00	11.634	7.56	91.2	0.0	367.9
98.00	Appurtenance(s)	1.00	1.26	11.034	12.14	149.78	0.650	0.000	3.00	6.756	4.39	53.3	0.0	213.5
98.50	Bot - Section 3	1.00	1.26	11.046	12.15	149.23	0.650	0.000	0.50	1.110	0.72	8.8	0.0	35.1
100.00		1.00	1.27	11.081	12.19	147.57	0.650	0.000	1.50	3.348	2.18	26.5	0.0	183.8
102.00	Top - Section 2	1.00	1.27	11.127	12.24	145.34	0.650	0.000	2.00	4.398	2.86	35.0	0.0	241.5
105.00		1.00	1.28	11.195	12.31	144.12	0.650	0.000	3.00	6.457	4.20	51.7	0.0	153.4
108.00	Appurtenance(s)	1.00	1.29	11.262	12.39	140.72	0.650	0.000	3.00	6.288	4.09	50.6	0.0	149.3
109.00	Top - Section 3	1.00	1.29	11.284	12.41	139.58	0.650	0.000	1.00	2.059	1.34	16.6	0.0	48.9
110.00		1.00	1.29	11.305	12.44	138.43	0.650	0.000	1.00	2.040	1.33	16.5	0.0	48.4
115.00		1.00	1.30	11.412	12.55	132.66	0.650	0.000	5.00	9.918	6.45	80.9	0.0	235.4
118.00	Appurtenance(s)	1.00	1.31	11.474	12.62	129.16	0.650	0.000	3.00	5.726	3.72	47.0	0.0	135.9
119.00		1.00	1.31	11.494	12.64	127.98	0.650	0.000	1.00	1.871	1.22	15.4	0.0	44.4
								Totals:	**119.00**			**2,362.1**		**12,908.1**

Discrete Appurtenance Forces

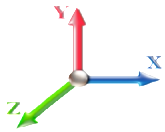
Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 29	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	118.00	T-Arm	3	11.474	12.621	0.56	0.75	16.88	1200.00	0.000	0.000	212.98	0.00	0.00
2	118.00	RRH2x40-AWS	3	11.474	12.621	0.60	0.90	3.91	132.00	0.000	0.000	49.32	0.00	0.00
3	118.00	RFS FD9R6004/2C-3L	6	11.474	12.621	0.90	0.90	1.94	18.60	0.000	0.000	24.54	0.00	0.00
4	118.00	DB-T1-6Z-8AB-0Z	1	11.474	12.621	0.64	0.90	3.07	18.90	0.000	0.000	38.71	0.00	0.00
5	118.00	BXA-70063-6BF	3	11.474	12.621	0.63	0.90	14.31	51.00	0.000	0.000	180.57	0.00	0.00
6	118.00	BXA-171063-8BF	3	11.474	12.621	0.76	0.90	6.67	31.50	0.000	0.000	84.16	0.00	0.00
7	118.00	BXA-171063-12BF	3	11.474	12.621	0.76	0.90	10.75	45.00	0.000	0.000	135.68	0.00	0.00
8	118.00	800 10735V01	3	11.474	12.621	0.59	0.90	15.36	86.10	0.000	0.000	193.87	0.00	0.00
9	108.00	840 10054	3	11.262	12.388	0.49	0.80	6.72	105.00	0.000	0.000	83.24	0.00	0.00
10	108.00	800 MHz	3	11.262	12.388	0.54	0.80	4.00	159.00	0.000	0.000	49.60	0.00	0.00
11	108.00	ACU-A20-N	4	11.262	12.388	0.54	0.80	0.30	4.00	0.000	0.000	3.72	0.00	0.00
12	108.00	APXVSPP18-C-A20	2	11.262	12.388	0.66	0.80	10.65	114.00	0.000	0.000	131.94	0.00	0.00
13	108.00	800 MHz Filters	3	11.262	12.388	0.54	0.80	3.86	192.00	0.000	0.000	47.81	0.00	0.00
14	108.00	1900MHz RRH	3	11.262	12.388	0.54	0.80	6.11	132.00	0.000	0.000	75.70	0.00	0.00
15	108.00	VHLP2.5	2	11.262	12.388	1.00	1.00	16.86	95.20	0.000	0.000	208.86	0.00	0.00
16	108.00	APXVTM14-C-120	3	11.262	12.388	0.63	0.80	12.02	168.00	0.000	0.000	148.91	0.00	0.00
17	108.00	Horizon	2	11.262	12.388	0.80	0.80	0.69	21.20	0.000	0.000	8.52	0.00	0.00
18	108.00	P40-16-XLPP-RR-A	1	11.262	12.388	0.80	0.80	7.26	53.00	0.000	0.000	89.99	0.00	0.00
19	108.00	TD-RRH8x20-25	3	11.262	12.388	0.54	0.80	6.51	210.00	0.000	0.000	80.68	0.00	0.00
20	108.00	T-Arm	3	11.262	12.388	0.56	0.75	13.50	1050.00	0.000	0.000	167.24	0.00	0.00
21	98.00	Ericsson RRUS 32	3	11.034	12.137	0.54	0.80	4.41	159.00	0.000	0.000	53.48	0.00	0.00
22	98.00	Ericsson RRUS A2	3	11.034	12.137	0.54	0.80	2.48	66.00	0.000	0.000	30.06	0.00	0.00
23	98.00	Cci OPA-65R-LCUU-H6	3	11.034	12.137	0.63	0.80	18.32	240.00	0.000	0.000	222.30	0.00	0.00
24	98.00	Powerwave 7770 w/Mount	3	11.034	12.137	0.58	0.80	9.57	81.00	0.000	0.000	116.19	0.00	0.00
25	98.00	Powerwave LGP21402	9	11.034	12.137	0.80	0.80	9.29	126.90	0.000	0.000	112.73	0.00	0.00
26	98.00	Ericsson RRUS 11	6	11.034	12.137	0.54	0.80	8.10	264.00	0.000	0.000	98.36	0.00	0.00
27	98.00	Ericsson RRUS 8843	3	11.034	12.137	0.54	0.80	2.65	225.00	0.000	0.000	32.20	0.00	0.00
28	98.00	Powerwave LGP13519	6	11.034	12.137	0.80	0.80	1.63	31.80	0.000	0.000	19.81	0.00	0.00
29	98.00	Raycap DC6-48-60-0-8F	2	11.034	12.137	0.80	0.80	1.47	63.60	0.000	0.000	17.87	0.00	0.00
30	98.00	T-Arm	3	11.034	12.137	0.56	0.75	13.50	1050.00	0.000	0.000	163.85	0.00	0.00
31	98.00	Quintel QS66512-2	3	11.034	12.137	0.74	0.80	17.95	333.00	0.000	0.000	217.87	0.00	0.00
32	98.00	Ericsson RRUS 12	3	11.034	12.137	0.54	0.80	4.05	152.10	0.000	0.000	49.18	0.00	0.00
33	88.00	APXVAARR24_43-U-NA2	3	10.787	11.865	0.56	0.80	34.00	384.00	0.000	0.000	403.45	0.00	0.00
34	88.00	AIR 21 B2A/B4P	3	10.787	11.865	0.69	0.80	12.57	273.00	0.000	0.000	149.14	0.00	0.00
35	88.00	AIR32	3	10.787	11.865	0.70	0.80	13.59	396.60	0.000	0.000	161.28	0.00	0.00
36	88.00	4449 B71 + B12	3	10.787	11.865	0.54	0.80	4.13	150.00	0.000	0.000	49.03	0.00	0.00
37	88.00	KRY 112 144/2	3	10.787	11.865	0.56	0.80	0.69	33.00	0.000	0.000	8.17	0.00	0.00
38	88.00	T-Arm	3	10.787	11.865	0.56	0.75	13.50	1050.00	0.000	0.000	160.18	0.00	0.00
39	78.00	T-Arm	3	10.516	11.568	0.56	0.75	13.50	1050.00	0.000	0.000	156.16	0.00	0.00
40	78.00	APXV18-206517S-C	3	10.516	11.568	0.59	0.80	9.18	79.20	0.000	0.000	106.21	0.00	0.00
							Totals:		**10,094.70**			**4,343.54**		

Total Applied Force Summary

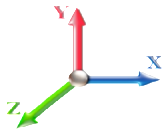
Structure:	CT08558-B-SBA		**Code:**	EIA/TIA-222-G	8/10/2018
Site Name:	New Britain 3, CT		**Exposure:**	C	
Height:	119.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	B - Competent Rock	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 30

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		105.69	1052.43	0.00	0.00
10.00		103.19	1033.73	0.00	0.00
15.00		100.70	1015.03	0.00	0.00
20.00		104.20	996.33	0.00	0.00
25.00		106.44	977.63	0.00	0.00
30.00		107.72	958.93	0.00	0.00
35.00		108.29	940.23	0.00	0.00
40.00		108.32	921.53	0.00	0.00
45.00		107.90	902.82	0.00	0.00
48.50		74.83	620.85	0.00	0.00
50.00		32.23	412.45	0.00	0.00
53.25		69.76	883.25	0.00	0.00
55.00		37.25	261.86	0.00	0.00
60.00		106.13	738.07	0.00	0.00
65.00		104.54	723.11	0.00	0.00
70.00		102.74	708.15	0.00	0.00
75.00		100.75	693.19	0.00	0.00
78.00	(6) attachments	321.63	1537.93	0.00	0.00
80.00		39.01	257.02	0.00	0.00
85.00		96.26	632.07	0.00	0.00
88.00	(18) attachments	987.70	2658.66	0.00	0.00
90.00		37.08	216.44	0.00	0.00
95.00		91.19	530.63	0.00	0.00
98.00	(47) attachments	1187.18	3103.60	0.00	0.00
98.50		8.76	44.24	0.00	0.00
100.00		26.53	211.38	0.00	0.00
102.00		34.99	278.18	0.00	0.00
105.00		51.68	208.45	0.00	0.00
108.00	(32) attachments	1146.83	2507.81	0.00	0.00
109.00		16.61	62.46	0.00	0.00
110.00		16.49	62.01	0.00	0.00
115.00		80.92	303.34	0.00	0.00
118.00	(25) attachments	966.79	1759.72	0.00	0.00
119.00		15.38	44.39	0.00	0.00
	Totals:	**6,705.68**	**28,257.92**	**0.00**	**0.00**

Linear Appurtenance Segment Forces (Factored)

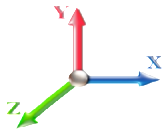
Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 31	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	5.50
10.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	5.50
15.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	5.50
20.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.896	0.00	5.50
25.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.276	0.00	5.50
30.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.600	0.00	5.50
35.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.883	0.00	5.50
40.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	9.137	0.00	5.50
45.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	9.366	0.00	5.50
48.50	1 5/8" Hybrid	Yes	3.50	0.000	0.00	0.00	0.00	0.000	0.000	9.515	0.00	3.85
50.00	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	9.576	0.00	1.65
53.25	1 5/8" Hybrid	Yes	3.25	0.000	0.00	0.00	0.00	0.000	0.000	9.704	0.00	3.58
55.00	1 5/8" Hybrid	Yes	1.75	0.000	0.00	0.00	0.00	0.000	0.000	9.770	0.00	1.93
60.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	9.951	0.00	5.50
65.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.120	0.00	5.50
70.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.279	0.00	5.50
75.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.430	0.00	5.50
78.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	10.516	0.00	3.30
80.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.572	0.00	2.20
85.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.708	0.00	5.50
88.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	10.787	0.00	3.30
90.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.838	0.00	2.20
95.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.962	0.00	5.50
98.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	11.034	0.00	3.30
98.50	1 5/8" Hybrid	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	11.046	0.00	0.55
100.00	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	11.081	0.00	1.65
102.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.127	0.00	2.20
105.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	11.195	0.00	3.30
108.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	11.262	0.00	3.30
109.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.284	0.00	1.10
110.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.305	0.00	1.10
115.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.412	0.00	5.50
118.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	11.474	0.00	3.30
										Totals:	**0.0**	**129.8**

Calculated Forces

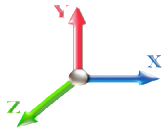
Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 32	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-28.25	-6.72	0.00	-598.33	0.00	598.33	3013.27	1506.63	5849.73	2929.21	0.00	0.000	0.000	0.214
5.00	-27.19	-6.64	0.00	-564.73	0.00	564.73	2972.75	1486.38	5634.65	2821.52	0.03	-0.063	0.000	0.209
10.00	-26.15	-6.57	0.00	-531.51	0.00	531.51	2930.78	1465.39	5420.60	2714.33	0.13	-0.126	0.000	0.205
15.00	-25.13	-6.49	0.00	-498.67	0.00	498.67	2887.35	1443.68	5207.78	2607.76	0.30	-0.191	0.000	0.200
20.00	-24.13	-6.41	0.00	-466.20	0.00	466.20	2842.47	1421.24	4996.39	2501.91	0.54	-0.256	0.000	0.195
25.00	-23.14	-6.33	0.00	-434.14	0.00	434.14	2796.14	1398.07	4786.62	2396.87	0.84	-0.321	0.000	0.189
30.00	-22.18	-6.24	0.00	-402.50	0.00	402.50	2748.35	1374.17	4578.69	2292.75	1.21	-0.387	0.000	0.184
35.00	-21.23	-6.15	0.00	-371.30	0.00	371.30	2699.10	1349.55	4372.78	2189.64	1.65	-0.453	0.000	0.177
40.00	-20.30	-6.06	0.00	-340.56	0.00	340.56	2648.40	1324.20	4169.10	2087.65	2.16	-0.519	0.000	0.171
45.00	-19.40	-5.96	0.00	-310.28	0.00	310.28	2596.25	1298.12	3967.85	1986.88	2.74	-0.584	0.000	0.164
48.50	-18.77	-5.89	0.00	-289.42	0.00	289.42	2558.87	1279.44	3828.53	1917.11	3.18	-0.630	0.000	0.158
50.00	-18.36	-5.86	0.00	-280.59	0.00	280.59	2542.63	1271.32	3769.24	1887.42	3.39	-0.651	0.000	0.156
53.25	-17.47	-5.79	0.00	-261.54	0.00	261.54	1874.80	937.40	2771.76	1387.94	3.84	-0.693	0.000	0.198
55.00	-17.21	-5.77	0.00	-251.41	0.00	251.41	1862.74	931.37	2724.01	1364.03	4.10	-0.716	0.000	0.194
60.00	-16.46	-5.67	0.00	-222.58	0.00	222.58	1827.31	913.65	2588.34	1296.09	4.89	-0.791	0.000	0.181
65.00	-15.73	-5.58	0.00	-194.23	0.00	194.23	1790.42	895.21	2453.92	1228.78	5.76	-0.863	0.000	0.167
70.00	-15.02	-5.48	0.00	-166.35	0.00	166.35	1752.08	876.04	2320.96	1162.21	6.70	-0.932	0.000	0.152
75.00	-14.33	-5.38	0.00	-138.96	0.00	138.96	1712.28	856.14	2189.66	1096.46	7.71	-0.997	0.000	0.135
78.00	-12.79	-5.04	0.00	-122.82	0.00	122.82	1687.70	843.85	2111.76	1057.45	8.35	-1.034	0.000	0.124
80.00	-12.53	-5.00	0.00	-112.75	0.00	112.75	1671.02	835.51	2060.22	1031.64	8.79	-1.057	0.000	0.117
85.00	-11.90	-4.90	0.00	-87.74	0.00	87.74	1628.32	814.16	1932.84	967.86	9.93	-1.110	0.000	0.098
88.00	-9.26	-3.87	0.00	-73.03	0.00	73.03	1601.99	801.00	1857.49	930.12	10.64	-1.138	0.000	0.084
90.00	-9.04	-3.83	0.00	-65.30	0.00	65.30	1584.15	792.08	1807.72	905.20	11.12	-1.156	0.000	0.078
95.00	-8.51	-3.73	0.00	-46.16	0.00	46.16	1538.53	769.27	1685.06	843.78	12.35	-1.192	0.000	0.060
98.00	-5.43	-2.48	0.00	-34.96	0.00	34.96	1510.46	755.23	1612.73	807.56	13.10	-1.211	0.000	0.047
98.50	-5.39	-2.47	0.00	-33.72	0.00	33.72	1505.73	752.87	1600.77	801.57	13.23	-1.213	0.000	0.046
100.00	-5.18	-2.44	0.00	-30.02	0.00	30.02	1491.46	745.73	1565.06	783.69	13.61	-1.221	0.000	0.042
102.00	-4.90	-2.40	0.00	-25.14	0.00	25.14	1021.50	510.75	1074.26	537.93	14.13	-1.231	0.000	0.052
105.00	-4.69	-2.35	0.00	-17.93	0.00	17.93	1004.76	502.38	1028.99	515.26	14.90	-1.242	0.000	0.039
108.00	-2.21	-1.14	0.00	-10.90	0.00	10.90	987.50	493.75	984.13	492.79	15.69	-1.253	0.000	0.024
109.00	-2.15	-1.13	0.00	-9.75	0.00	9.75	981.63	490.81	969.27	485.35	15.95	-1.255	0.000	0.022
109.00	-2.15	-1.13	0.00	-9.75	0.00	9.75	981.63	490.81	969.27	485.35	15.95	-1.255	0.000	0.022
110.00	-2.08	-1.11	0.00	-8.63	0.00	8.63	975.70	487.85	954.46	477.94	16.21	-1.258	0.000	0.020
115.00	-1.78	-1.02	0.00	-3.08	0.00	3.08	945.18	472.59	881.23	441.27	17.54	-1.266	0.000	0.009
118.00	-0.04	-0.02	0.00	-0.02	0.00	0.02	926.18	463.09	838.01	419.63	18.33	-1.268	0.000	0.000
119.00	0.00	-0.02	0.00	0.00	0.00	0.00	919.72	459.86	823.73	412.48	18.60	-1.268	0.000	0.000

Final Analysis Summary

Structure:	CT08558-B-SBA	**Code:**	EIA/TIA-222-G	8/10/2018	
Site Name:	New Britain 3, CT	**Exposure:**	C		
Height:	119.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	B - Competent Rock		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 33	

Tower Engineering Solutions

Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 97 mph Wind	28.1	0.00	33.84	0.00	0.00	2515.24
0.9D + 1.6W 97 mph Wind	28.1	0.00	25.37	0.00	0.00	2490.91
1.2D + 1.0Di + 1.0Wi 50 mph Wind	8.1	0.00	62.56	0.00	0.00	733.11
1.2D + 1.0E	0.8	0.00	33.91	0.00	0.00	70.79
0.9D + 1.0E	0.8	0.00	25.43	0.00	0.00	70.06
1.0D + 1.0W 60 mph Wind	6.7	0.00	28.25	0.00	0.00	598.33

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 97 mph Wind	-33.84	-28.12	0.00	-2515.2	0.00	-2515.2	3013.27	1506.6	5849.73	2929.21	0.00	0.870
0.9D + 1.6W 97 mph Wind	-25.37	-28.10	0.00	-2490.9	0.00	-2490.9	3013.27	1506.6	5849.73	2929.21	0.00	0.859
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-62.56	-8.07	0.00	-733.11	0.00	-733.11	3013.27	1506.6	5849.73	2929.21	0.00	0.271
1.2D + 1.0E	-21.05	-0.59	0.00	-34.39	0.00	-34.39	1874.80	937.40	2771.76	1387.94	53.25	0.036
0.9D + 1.0E	-15.79	-0.58	0.00	-33.92	0.00	-33.92	1874.80	937.40	2771.76	1387.94	53.25	0.033
1.0D + 1.0W 60 mph Wind	-28.25	-6.72	0.00	-598.33	0.00	-598.33	3013.27	1506.6	5849.73	2929.21	0.00	0.214

Pier Foundation Design For Monopole

				Date
				8/10/2018
	Customer Name:	AT&T	**EIA/TIA Standard:**	EIA-222-G
	Site Name:		**Structure Height (Ft.):**	119
	Site Number:	CT08558-B-SBA	**Engineer Name:**	H. You
	Engr. Number:	58612	**Engineer Login ID:**	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

Analysis or Design? Analysis

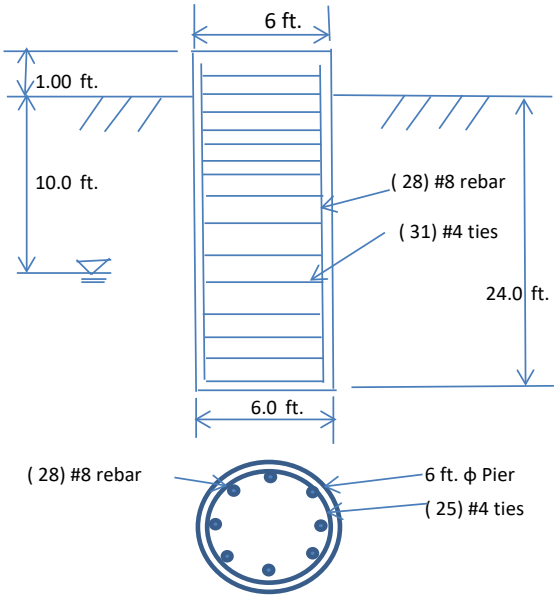
Acceptable overstress (5.0%

Base Reactions (Factored):

Axial Load (Kips):	33.8	Shear Force (Kips):	28.1	
Uplift Force (Kips):	0.0	Moment (Kips-ft):	2515.2	

Foundation Geometries:

Mods required -Yes/No ?:	No			ft.
Diameter of Pier (ft.):	6.0	Depth of Base B. G. S. :	24.0	ft.
Pier Height A. G. (ft.):	1.00			



Monopole Pier Foundation

Material Properties and Reabr Info:

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

Soil Design Parameters:

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

Skin Frictions are to be obtained from: Soil Report

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

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

Foundation Analysis and Design:

	Uplift Strength Reduction Factor:	0.75	Soil Bearing Strength Reduction Factor:	0.75	
Total Dry Soil Volume from Conical Failure (cu. Ft.):		5907	Dry Soil Weight from Conical Failure:	797	Kips
Total Buoyant Soil Volume from Conical Failure (cu. Ft.):		2024	Buoyant Soil Weight from Conical Failure (Ki	194	Kips
Total Dry Concrete Volume (cu. Ft.):		311	Total Dry Concrete Weight:	46.7	Kips
Total Buoyant Concrete Volume (cu. Ft.):		395.8	Total Buoyant Concrete Weight:	34.68	Kips
Total Effective Concrete Weight (Kips):		81.3	Total Effective Soil Weight:	991.0	Kips
Total Effective Vertical Load on Base (Kips):		39.2			

Check Soil Capacities:

					Usage	
Allowable Foundation Overturning Resistance (kips-ft.):	6319.9	>	Design Factored Momont (kips-ft):	2982	0.47	OK!
Factor of Safety of Passive Soil Resistance against Moment:	2.12	OK!				

Check the capacities of Reinforceing Concrete:

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

Reinforcing Concrete Pier:

					Usage	
Vertical Steel Rebar Area (sq. in./each):	0.79		Tie / Stirrup Area (sq. in./each):	0.20		
Calculated Moment Capacity (Mn,Kips-Ft):	3165	>	Design Factored Moment (Mu, K-Ft):	2635.1	0.83	OK!
Calculated Shear Capacity (Kips):	740.5	>	Design Factored Shear (Kips):	241.9	0.33	OK!
Calculated Tension Capacity (Tn, Kips):	1194.5	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	7159	>	Design Factored Axial Load (Pu Kips):	33.8	0.00	OK!
Moment & Axial Strength Combination(Tu/Tn+Mu/Mn):	0.84	OK!	Max. Allowable Tie/Stirrup Spacing:	12.00	in.	
Pier Reinforcement Ratio:	0.005	Reinforcement Ratio is satisfied per ACI				

SHEET INDEX

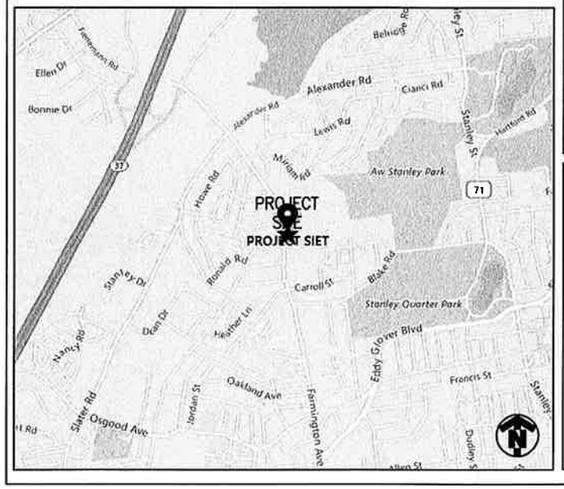
NO.	DESCRIPTION
T1	TITLE SHEET
C1	GENERAL NOTES
C2	OVERALL & ENLARGED SITE PLAN
C3	ELEVATION VIEW
C4	ANTENNA ORIENTATION PLAN
C5	EQUIPMENT DETAILS
C6	PLUMBING DIAGRAM
C7	GROUNDING DETAILS

DRIVING DIRECTIONS

FROM 550 COCHITUATE RD.:

GET ON I-90 WEST/MASSACHUSETTS TURNPIKE. HEAD SOUTHWEST. TURN LEFT TOWARD MCCALL CONN. TURN LEFT ONTO MCCALL CONN. CONTINUE ONTO BURR STREET. TURN LEFT ONTO COCHITUATE ROAD. USE THE RIGHT LANE TO TAKE THE RAMP TO I-90 EAST/MASSPIKE WEST/SPRINGFIELD/BOSTON. KEEP LEFT AT THE FORK, FOLLOW SIGNS FOR I-90 WEST/MASSACHUSETTS TURNPIKE/WORCESTER/SPRINGFIELD AND MERGE ONTO I-90 WEST/MASSACHUSETTS TURNPIKE. FOLLOW I-90 WEST/MASSACHUSETTS TURNPIKE AND I-84 TO FIENEMANN ROAD IN FARMINGTON. TAKE EXIT 37 FROM I-84. MERGE ONTO I-90 WEST/MASSACHUSETTS TURNPIKE. USE THE RIGHT 2 LANES TO TAKE EXIT 9 FOR I-84 TOWARD US-20/HARTFORD/NEW YORK CITY. CONTINUE I-84. KEEP RIGHT TO STAY ON I-84. TAKE EXIT TO STAY ON I-84. TAKE EXIT 37 FOR FIENEMANN ROAD. KEEP RIGHT AT THE FORK, FOLLOW SIGNS FOR CENTRAL CONN STATE UNIVERSITY AND MERGE ONTO FIENEMANN ROAD. CONTINUE ON FIENEMANN ROAD TO YOUR DESTINATION IN NEW BRITAIN. MERGE ONTO FIENEMANN ROAD. CONTINUE ONTO FARMINGTON AVE. TURN LEFT.

LOCATION MAP



at&t

PROJECT

LTE 3C/4C/5C/RETROFIT

SITE NAME

NEW BRITAIN FARMINGTON AVE.

CELL SITE ID

CTL01028

FA SITE NUMBER

10065751

PACE ID

MRCTB031093/MRCTB032077/
MRCTB031563/MRCTB032052

SITE ADDRESS

723 FARMINGTON AVENUE
NEW BRITAIN, CT 06503

STRUCTURE TYPE

MONOPOLE

PROJECT TEAM

smartlink

PROJECT MANAGER

INFINIGY

1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

ENGINEER

SCOPE OF WORK (PER LTE RFDS, DATED: 6/13/2018, V2.00):

- HANDICAP ACCESS REQUIREMENTS ARE NOT REQUIRED.
- FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.
- FACILITY HAS NO PLUMBING OR REFRIGERANTS.
- THIS FACILITY SHALL MEET OR EXCEED ALL FAA AND FCC REGULATORY REQUIREMENTS.
- ALL NEW MATERIAL SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR UNLESS NOTED OTHERWISE. EQUIPMENT, ANTENNAS/RRU AND CABLES FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR.

TOWER SCOPE
- REMOVE (3) PANEL ANTENNAS
- INSTALL (3) PANEL ANTENNAS
- REMOVE (3) RRUS-12 W/A2
- INSTALL (3) B25/B66A 8843
- INSTALL (3) RRUS-32
- INSTALL (1) DC6 SQUID W/(1) FIBER CABLE AND (2) DC CABLES

GROUND SCOPE
- SWAP DUS W/ 5216
- ADD 2ND XMU
- ADD RBS 6630
- INSTALL (3) 4478 B5
- INSTALL (1) DC12-48-60-RM

PROJECT SUMMARY

SITE NAME:	NEW BRITAIN FARMINGTON AVE.	
CELL SITE ID:	CTL01028	
FA SITE #:	10065751	
SITE ADDRESS:	723 FARMINGTON AVENUE NEW BRITAIN, CT 06503	
COUNTY:	HARTFORD	
SITE COORDINATES: LATITUDE:	41.6983250° N	(NAD 83)
LONGITUDE:	72.7861931° W	(NAD 83)
ELEVATION:	±315'	(AMSL)
RAD CENTER	±98'	(AGL)
LANDLORD:	SBA COMMUNICATIONS CORP. 8051 CONGRESS AVE. BOCA RATON, FL 33487 SITE ID#: CT08558-S	
APPLICANT:	AT&T MOBILITY 550 COCHITUATE RD. FRAMINGHAM, MA 01701	
CLIENT REPRESENTATIVE:	SMARTLINK, LLC 85 RANGEWAY RD. SUITE 102 NORTH BILLERICA, MA 01862	
CONTACT:	ED WEISSMAN (917) 528-1857	
ENGINEER:	INFINIGY 1033 WATERVLIET SHAKER ROAD ALBANY, NY 12205	
CONTACT:	ALEX WELLER (518) 690-0790	
BUILDING CODE:	CT BUILDING CODE UNIFORM BUILDING CODE BUILDING OFFICIALS & CODE ADMINISTRATORS UNIFORM MECHANICAL CODE UNIFORM PLUMBING CODE LOCAL BUILDING CODE CITY/COUNTY ORDINANCES	
ELECTRICAL CODE:	NATIONAL ELECTRICAL CODE (LATEST EDITION)	

811 Know what's below. Call before you dig.

TO OBTAIN LOCATION OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN CONNECTICUT, CONTACT CALL BEFORE YOU DIG
TOLL FREE: 1-800-922-4455 OR www.cbyd.com
CONNECTICUT STATUTE REQUIRES MIN OF 2 WORKING DAYS NOTICE BEFORE YOU EXCAVATE

INFINIGY
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

at&t

STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER
AUG 24 2018

No.	Submittal / Revision	App'd	Date
2	REVISED FOR PERMIT	BMM	08/23/18
1	ISSUED FOR PERMIT	BMM	07/25/18
0	ISSUED FOR REVIEW	BMM	07/10/18

Drawn: BMM Date: 07/10/18
Designed: ASW Date: 07/10/18
Checked: AJD Date: 07/10/18

Project Number: 499-006

Project Title:
NEW BRITAIN FARMINGTON AVE.
CTL01028
FA# 10065751
723 FARMINGTON AVENUE
NEW BRITAIN, CT 06503

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 08/23/18

CD

Drawing Title
TITLE PAGE

Drawing Number
T1

GENERAL NOTES

PART 1 – GENERAL REQUIREMENTS

1.1 THE WORK SHALL COMPLY WITH APPLICABLE NATIONAL CODES AND STANDARDS, LATEST EDITION, AND PORTIONS THEREOF, INCLUDED BUT NOT LIMITED TO THE FOLLOWING:
- A. GR-63-CORE NEBS REQUIREMENTS: PHYSICAL PROTECTION
- B. GR-78-CORE GENERIC REQUIREMENTS FOR THE PHYSICAL DESIGN AND MANUFACTURE OF TELECOMMUNICATIONS EQUIPMENT.
- C. NATIONAL FIRE PROTECTION ASSOCIATION CODES AND STANDARDS (NFPA) INCLUDING NFPA 70 (NATIONAL ELECTRICAL CODE – "NEC").
- D. AND NFPA 101 (LIFE SAFETY CODE).
- E. AMERICAN SOCIETY FOR TESTING OF MATERIALS (ASTM).
- F. INSTITUTE OF ELECTRONIC AND ELECTRICAL ENGINEERS (IEEE).

1.2 DEFINITIONS:
A: WORK: THE SUM OF TASKS AND RESPONSIBILITIES IDENTIFIED IN THE CONTRACT DOCUMENTS.
B: COMPANY: AT&T CORPORATION
C. ENGINEER: SYNONYMOUS WITH ARCHITECT & ENGINEER AND "A&E". THE DESIGN PROFESSIONAL HAVING PROFESSIONAL RESPONSIBILITY FOR DESIGN OF THE PROJECT.
D: CONTRACTOR: CONSTRUCTION CONTRACTOR; CONSTRUCTION VENDOR; INDIVIDUAL OR ENTITY WHO AFTER EXECUTION OF A CONTRACT IS BOUND TO ACCOMPLISH THE WORK.
E: THIRD PARTY VENDOR OR AGENCY: A VENDOR OR AGENCY ENGAGED SEPARATELY BY THE COMPANY, A&E, OR CONTRACTOR TO PROVIDE MATERIALS OR TO ACCOMPLISH SPECIFIC TASKS RELATED TO BUT NOT INCLUDED IN THE WORK.

1.3 POINT OF CONTACT: COMMUNICATION BETWEEN THE COMPANY AND THE CONTRACTOR SHALL FLOW THROUGH THE SINGLE COMPANY SITE DEVELOPMENT SPECIALIST OR OTHER PROJECT COORDINATOR APPOINTED TO MANAGE THE PROJECT FOR THE COMPANY.

1.4 ON-SITE SUPERVISION: THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL EMPLOY A COMPETENT SUPERINTENDENT WHO SHALL BE IN ATTENDANCE AT THE SITE AT ALL TIMES DURING PERFORMANCE OF THE WORK.

1.5 DRAWINGS, SPECIFICATIONS AND DETAILS REQUIRED AT JOBSITE: THE CONSTRUCTION CONTRACTOR SHALL MAINTAIN A FULL SET OF THE CONSTRUCTION DRAWINGS, STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES, AND THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES AT THE JOBSITE FROM MOBILIZATION THROUGH CONSTRUCTION COMPLETION.
A. THE JOBSITE DRAWINGS, SPECIFICATIONS AND DETAILS SHALL BE CLEARLY MARKED DAILY IN PENCIL WITH ANY CHANGES IN CONSTRUCTION OVER WHAT IS DEPICTED IN THE DOCUMENTS. AT CONSTRUCTION COMPLETION, THIS JOBSITE MARKUP SET SHALL BE DELIVERED TO THE COMPANY OR COMPANY'S DESIGNATED REPRESENTATIVE TO BE FORWARDED TO THE COMPANY'S A&E VENDOR FOR PRODUCTION OF "AS-BUILT" DRAWINGS.

1.6 USE OF JOB SITE: THE CONTRACTOR SHALL CONFINE ALL CONSTRUCTION AND RELATED OPERATIONS INCLUDING STAGING AND STORAGE OF MATERIALS AND EQUIPMENT, PARKING, TEMPORARY FACILITIES, AND WASTE STORAGE TO THE LEASE PARCEL UNLESS OTHERWISE PERMITTED BY THE CONTRACT DOCUMENTS.

1.7 NOTICE TO PROCEED:
A. NO WORK SHALL COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED.
B. UPON RECEIVING NOTICE TO PROCEED, CONTRACTOR SHALL FULLY PERFORM ALL WORK NECESSARY TO PROVIDE AT&T WITH AN OPERATIONAL WIRELESS FACILITY.

PART 2 – EXECUTION

2.1 TEMPORARY UTILITIES AND FACILITIES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITIES AND FACILITIES NECESSARY EXCEPT AS OTHERWISE INDICATED IN THE CONSTRUCTION DOCUMENTS. TEMPORARY UTILITIES AND FACILITIES INCLUDE, POTABLE WATER, HEAT, HVAC, ELECTRICITY, SANITARY FACILITIES, WASTE DISPOSAL FACILITIES, AND TELEPHONE/COMMUNICATION SERVICES. PROVIDE TEMPORARY UTILITIES AND FACILITIES IN ACCORDANCE WITH OSHA AND THE AUTHORITY HAVING JURISDICTION. CONTRACTOR MAY UTILIZE THE COMPANY ELECTRICAL SERVICE IN THE COMPLETION OF THE WORK WHEN IT BECOMES AVAILABLE. USE OF THE LESSORS OR SITE OWNER'S UTILITIES OR FACILITIES IS EXPRESSLY FORBIDDEN EXCEPT AS OTHERWISE ALLOWED IN THE CONTRACT DOCUMENTS.

2.2 ACCESS TO WORK: THE CONTRACTOR SHALL PROVIDE ACCESS TO THE JOB SITE FOR AUTHORIZED COMPANY PERSONNEL AND AUTHORIZED REPRESENTATIVES OF THE ARCHITECT/ENGINEER DURING ALL PHASES OF THE WORK.

2.3 TESTING: REQUIREMENTS FOR TESTING BY THIS CONTRACTOR SHALL BE AS INDICATED HEREWITH, ON THE CONSTRUCTION DRAWINGS, AND IN THE INDIVIDUAL SECTIONS OF THESE SPECIFICATIONS. SHOULD COMPANY CHOOSE TO ENGAGE ANY THIRD-PARTY TO CONDUCT ADDITIONAL TESTING, THE CONTRACTOR SHALL COOPERATE WITH AND PROVIDE A WORK AREA FOR COMPANY'S TEST AGENCY.

2.4 COMPANY FURNISHED MATERIAL AND EQUIPMENT: ALL HANDLING, STORAGE AND INSTALLATION OF COMPANY FURNISHED MATERIAL AND EQUIPMENT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
A. CONTRACTOR SHALL PROCURE ALL OTHER REQUIRED WORK RELATED MATERIALS NOT PROVIDED BY AT&T TO SUCCESSFULLY CONSTRUCT A WIRELESS FACILITY.

2.5 DIMENSIONS: VERIFY DIMENSIONS INDICATED ON DRAWINGS WITH FIELD DIMENSIONS BEFORE FABRICATION OR ORDERING OF MATERIALS. DO NOT SCALE DRAWINGS.

2.6 EXISTING CONDITIONS: NOTIFY THE COMPANY REPRESENTATIVE OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED ON THE DRAWINGS. DO NOT REMOVE OR ALTER STRUCTURAL COMPONENTS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ARCHITECT AND ENGINEER.

PART 3 – RECEIPT OF MATERIAL & EQUIPMENT

3.1 RECEIPT OF MATERIAL AND EQUIPMENT: CONTRACTOR IS RESPONSIBLE FOR AT&T PROVIDED MATERIAL AND EQUIPMENT AND UPON RECEIPT SHALL:
- A. ACCEPT DELIVERIES AS SHIPPED AND TAKE RECEIPT.
- B. VERIFY COMPLETENESS AND CONDITION OF ALL DELIVERIES.
- C. TAKE RESPONSIBILITY FOR EQUIPMENT AND PROVIDE INSURANCE PROTECTION AS REQUIRED IN AGREEMENT.
- D. RECORD ANY DEFECTS OR DAMAGES AND WITHIN TWENTY-FOUR HOURS AFTER RECEIPT, REPORT TO AT&T OR ITS DESIGNATED PROJECT REPRESENTATIVE OF SUCH.
- E. PROVIDE SECURE AND NECESSARY WEATHER PROTECTED WAREHOUSING.
- F. COORDINATE SAFE AND SECURE TRANSPORTATION OF MATERIAL AND EQUIPMENT, DELIVERING AND OFF-LOADING FROM CONTRACTOR'S WAREHOUSE TO SITE.

PART 4 – GENERAL REQUIREMENTS FOR CONSTRUCTION

4.1 CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH. AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL REMAINING RUBBISH, IMPLEMENTS, TEMPORARY FACILITIES, AND SURPLUS MATERIALS.

4.2 EQUIPMENT ROOMS SHALL AT ALL TIMES BE MAINTAINED "BROOM CLEAN" AND CLEAR OF DEBRIS.

4.3 CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO DISCOVER AND LOCATE ANY HAZARDOUS CONDITION.
A. IN THE EVENT CONTRACTOR ENCOUNTERS ANY HAZARDOUS CONDITION WHICH HAS NOT BEEN ABATED OR OTHERWISE MITIGATED, CONTRACTOR AND ALL OTHER PERSONS SHALL IMMEDIATELY STOP WORK IN THE AFFECTED AREA AND NOTIFY COMPANY IN WRITING. THE WORK IN THE AFFECTED AREA SHALL NOT BE RESUMED EXCEPT BY WRITTEN NOTIFICATION BY COMPANY.
B. CONTRACTOR AGREES TO USE CARE WHILE ON THE SITE AND SHALL NOT TAKE ANY ACTION THAT WILL OR MAY RESULT IN OR CAUSE THE HAZARDOUS CONDITION TO BE FURTHER RELEASED IN THE ENVIRONMENT, OR TO FURTHER EXPOSE INDIVIDUALS TO THE HAZARD.

4.4 CONTRACTOR'S ACTIVITIES SHALL BE RESTRICTED TO THE PROJECT LIMITS. SHOULD AREAS OUTSIDE THE PROJECT LIMITS BE AFFECTED BY CONTRACTOR'S ACTIVITIES, CONTRACTOR SHALL IMMEDIATELY RETURN THEM TO ORIGINAL CONDITION.

4.5 CONDUCT TESTING AS REQUIRED HEREIN.

PART 5 – TESTS AND INSPECTIONS

5.1 TESTS AND INSPECTIONS:
- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTS, INSPECTIONS AND PROJECT DOCUMENTATION.
- B. CONTRACTOR SHALL COORDINATE TEST AND INSPECTION SCHEDULES WITH COMPANY'S REPRESENTATIVE WHO MUST BE ON SITE TO WITNESS SUCH TESTS AND INSPECTIONS.
- C. WHEN THE USE OF A THIRD PARTY INDEPENDENT TESTING AGENCY IS REQUIRED, THE AGENCY THAT IS SELECTED MUST PERFORM SUCH WORK ON A REGULAR BASIS IN THE STATE WHERE THE PROJECT IS LOCATED AND HAVE A THOROUGH UNDERSTANDING OF LOCAL AVAILABLE MATERIALS, INCLUDING THE SOIL, ROCK, AND GROUNDWATER CONDITIONS.
- D. THE THIRD PARTY TESTING AGENCY IS TO BE FAMILIAR WITH THE APPLICABLE REQUIREMENTS FOR THE TESTS TO BE DONE, EQUIPMENT TO BE USED, AND ASSOCIATED HEALTH AND SAFETY ISSUES.
- E. SITE RESISTANCE TO EARTH TESTING PER EXHIBIT: CELL SITE GROUNDING SYSTEM DESIGN.
- F. ANTENNA AND COAX SWEEP TESTS PER EXHIBIT: ANTENNA TRANSMISSION LINE ACCEPTANCE STANDARDS.
- G. ALL OTHER TESTS REQUIRED BY COMPANY OR JURISDICTION.

PART 6 – TRENCHING AND BACKFILLING

6.1 TRENCHING AND BACKFILLING: THE CONTRACTOR SHALL PERFORM ALL EXCAVATION OF EVERY DESCRIPTION AND OF WHATEVER SUBSTANCES ENCOUNTERED, TO THE DEPTHS INDICATED ON THE CONSTRUCTION DRAWINGS OR AS OTHERWISE SPECIFIED.

A. PROTECTION OF EXISTING UTILITIES: THE CONTRACTOR SHALL CHECK WITH THE LOCAL UTILITIES AND THE RESPECTIVE UTILITY LOCATOR COMPANIES PRIOR TO STARTING EXCAVATION OPERATIONS IN EACH RESPECTIVE AREA TO ASCERTAIN THE LOCATIONS OF KNOWN UTILITY LINES. THE LOCATIONS, NUMBER AND TYPES OF EXISTING UTILITY LINES DETAILED ON THE CONSTRUCTION DRAWINGS ARE APPROXIMATE AND DO NOT REPRESENT EXACT INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL LINES DAMAGED DURING EXCAVATION AND ALL ASSOCIATED OPERATIONS. ALL UTILITY LINES UNCOVERED DURING THE EXCAVATION OPERATIONS, SHALL BE PROTECTED FROM DAMAGE DURING EXCAVATION AND ASSOCIATED OPERATIONS. ALL REPAIRS SHALL BE APPROVED BY THE UTILITY COMPANY.

B. HAND DIGGING: UNLESS APPROVED IN WRITING OTHERWISE, ALL DIGGING WITHIN AN EXISTING CELL SITE COMPOUND IS TO BE DONE BY HAND.

C. DURING EXCAVATION, MATERIAL SUITABLE FOR BACKFILLING SHALL BE STOCKPILED IN AN ORDERLY MANNER A SUFFICIENT DISTANCE FROM THE BANKS OF THE TRENCH TO AVOID OVERLOADING AND TO PREVENT SLIDES OR CAVE-INS. ALL EXCAVATED MATERIALS NOT REQUIRED OR SUITABLE FOR BACKFILL SHALL BE REMOVED AND DISPOSED OF AT THE CONTRACTOR'S EXPENSE.

D. GRADING SHALL BE DONE AS MAY BE NECESSARY TO PREVENT SURFACE WATER FROM FLOWING INTO TRENCHES OR OTHER EXCAVATIONS, AND ANY WATER ACCUMULATING THEREIN SHALL BE REMOVED BY PUMPING OR BY OTHER APPROVED METHOD.

E. SHEETING AND SHORING SHALL BE DONE AS NECESSARY FOR THE PROTECTION OF THE WORK AND FOR THE SAFETY OF PERSONNEL. UNLESS OTHERWISE INDICATED, EXCAVATION SHALL BE BY OPEN CUT, EXCEPT THAT SHORT SECTIONS OF A TRENCH MAY BE TUNNELED IF, THE CONDUIT CAN BE SAFELY AND PROPERLY INSTALLED AND BACKFILL CAN BE PROPERLY TAMPED IN SUCH TUNNEL SECTIONS. EARTH EXCAVATION SHALL COMPRISE ALL MATERIALS AND SHALL INCLUDE CLAY, SILT, SAND, MUCK, GRAVEL, HARDPAN, LOOSE SHALE, AND LOOSE STONE.

F. TRENCHES SHALL BE OF NECESSARY WIDTH FOR THE PROPER LAYING OF THE CONDUIT OR CABLE, AND THE BANKS SHALL BE AS NEARLY VERTICAL AS PRACTICABLE. THE BOTTOM OF THE TRENCHES SHALL BE ACCURATELY GRADED TO PROVIDE UNIFORM BEARING AND SUPPORT FOR EACH SECTION OF THE CONDUIT OR CABLE ON UNDISTURBED SOIL AT EVERY POINT ALONG ITS ENTIRE LENGTH. EXCEPT WHERE ROCK IS ENCOUNTERED, CARE SHALL BE TAKEN NOT TO EXCAVATE BELOW THE DEPTHS INDICATED. WHERE ROCK EXCAVATIONS ARE NECESSARY, THE ROCK SHALL BE EXCAVATED TO A MINIMUM OVER DEPTH OF 6 INCHES BELOW THE TRENCH DEPTHS INDICATED ON THE CONSTRUCTION DRAWINGS OR SPECIFIED. OVER DEPTHS IN THE ROCK EXCAVATION AND UNAUTHORIZED OVER DEPTHS SHALL BE THOROUGHLY BACK FILLED AND TAMPED TO THE APPROPRIATE GRADE. WHENEVER WET OR OTHERWISE UNSTABLE SOIL THAT IS INCAPABLE OF PROPERLY SUPPORTING THE CONDUIT OR CABLE IS ENCOUNTERED IN THE BOTTOM OF THE TRENCH, SUCH SOLID SHALL BE REMOVED TO A MINIMUM OVER DEPTH OF 6 INCHES AND THE TRENCH BACKFILLED TO THE PROPER GRADE WITH EARTH OF OTHER SUITABLE MATERIAL, AS HEREINAFTER SPECIFIED.

G. BACKFILLING OF TRENCHES. TRENCHES SHALL NOT BE BACKFILLED UNTIL ALL SPECIFIED TESTS HAVE BEEN PERFORMED AND ACCEPTED. WHERE COMPACTED BACKFILL IS NOT INDICATED THE TRENCHES SHALL BE CAREFULLY BACKFILLED WITH SELECT MATERIAL SUCH AS EXCAVATED SOILS THAT ARE FREE OF ROOTS, SOD, RUBBISH OR STONES, DEPOSITED IN 6 INCH LAYERS AND THOROUGHLY AND CAREFULLY RAMMED UNTIL THE CONDUIT OR CABLE HAS A COVER OF NOT LESS THAN 1 FOOT. THE REMAINDER OF THE BACKFILL MATERIAL SHALL BE GRANULAR IN NATURE AND SHALL NOT CONTAIN ROOTS, SOD, RUBBING, OR STONES OF 2-1/2 INCH MAXIMUM DIMENSION. BACKFILL SHALL BE CAREFULLY PLACED IN THE TRENCH AND IN 1 FOOT LAYERS AND EACH LAYER TAMPED. SETTLING THE BACKFILL WITH WATER WILL BE PERMITTED. THE SURFACE SHALL BE GRADED TO A REASONABLE UNIFORMITY AND THE MOUNDING OVER THE TRENCHES LEFT IN A UNIFORM AND NEAT CONDITION.

SYMBOL	DESCRIPTION
	CIRCUIT BREAKER
	NON-FUSIBLE DISCONNECT SWITCH
F	FUSIBLE DISCONNECT SWITCH
	SURFACE MOUNTED PANEL BOARD
T	TRANSFORMER
M	KILOWATT HOUR METER
JB	JUNCTION BOX
PB	PULL BOX TO NEC/TELCO STANDARDS
	UNDERGROUND UTILITIES
	EXOTHERMIC WELD CONNECTION
	MECHANICAL CONNECTION
OR	GROUND ROD
OR	GROUND ROD WITH INSPECTION SLEEVE
	GROUND BAR
	120AC DUPLEX RECEPTACLE
G	GROUND CONDUCTOR
	DC POWER AND FIBER OPTIC TRUNK CABLES
	DC POWER CABLES
# / #	REPRESENTS DETAIL NUMBER / REF. DRAWING NUMBER

ABBREVIATIONS

CIGBE	COAX ISOLATED GROUND BAR EXTERNAL
MIGB	MASTER ISOLATED GROUND BAR
SST	SELF SUPPORTING TOWER
GPS	GLOBAL POSITIONING SYSTEM
TYP.	TYPICAL
DWG	DRAWING
BCW	BARE COPPER WIRE
BFG	BELOW FINISH GRADE
PVC	POLYVINYL CHLORIDE
CAB	CABINET
C	CONDUIT
SS	STAINLESS STEEL
G	GROUND
AWG	AMERICAN WIRE GAUGE
RGS	RIGID GALVANIZED STEEL
AHJ	AUTHORITY HAVING JURISDICTION
TTLNA	TOWER TOP LOW NOISE AMPLIFIER
UNO	UNLESS NOTED OTHERWISE
EMT	ELECTRICAL METALLIC TUBING
AGL	ABOVE GROUND LEVEL

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STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
REGISTERED PROFESSIONAL ENGINEER
07/10/2018

No.	Submittal / Revision	App'd	Date
2	REVISED FOR PERMIT	BMM	08/23/18
1	ISSUED FOR PERMIT	BMM	07/25/18
0	ISSUED FOR REVIEW	BMM	07/10/18

Drawn: BMM Date: 07/10/18
Designed: ASW Date: 07/10/18
Checked: AJD Date: 07/10/18

Project Number: 499-006

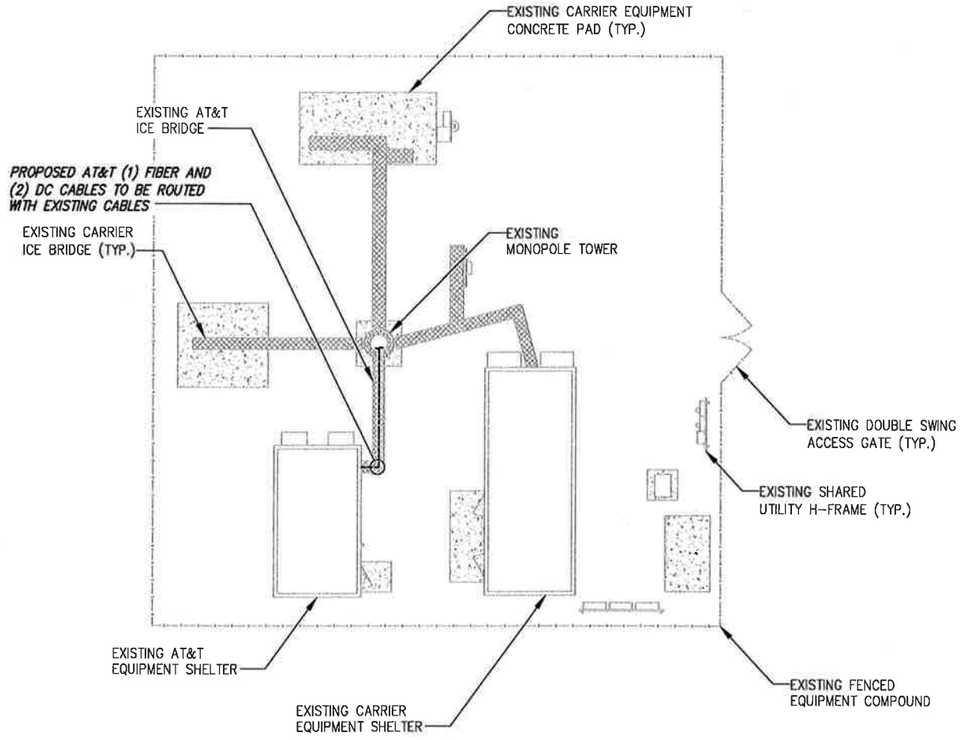
Project Title:
NEW BRITAIN FARMINGTON AVE.
CTL01028
FA# 10065751
723 FARMINGTON AVENUE
NEW BRITAIN, CT 06503

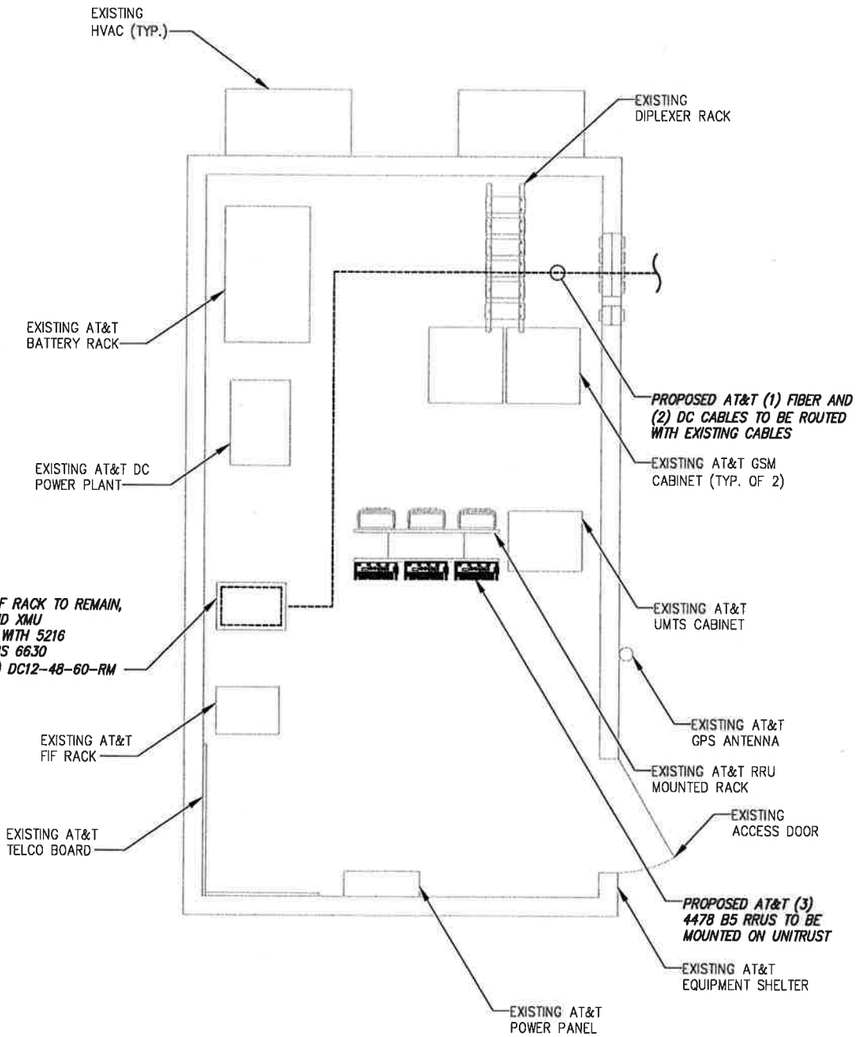
Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 08/23/18
CD

Drawing Title
GENERAL NOTES

Drawing Number
C1





TRUE NORTH

1 OVERALL COMPOUND PLAN
SCALE: AS NOTED

GRAPHIC SCALE:
20' 10' 0 10' 20'
SCALE (11x17): 1" = 20'-0"
SCALE (22x34): 1" = 10'-0"

TRUE NORTH

2 ENLARGED EQUIPMENT PLAN
SCALE: AS NOTED

GRAPHIC SCALE:
4' 2' 0 2' 4'
SCALE (11x17): 1" = 4'-0"
SCALE (22x34): 1" = 2'-0"

BASEMAPPING PREPARED FROM A SITE WALK PERFORMED BY INFINIGY ENGINEERING ON 05/22/18 AND PROVIDED INFORMATION, AND DOES NOT REPRESENT AN ACTUAL FIELD SURVEY.

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STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER
AUG 24 2018

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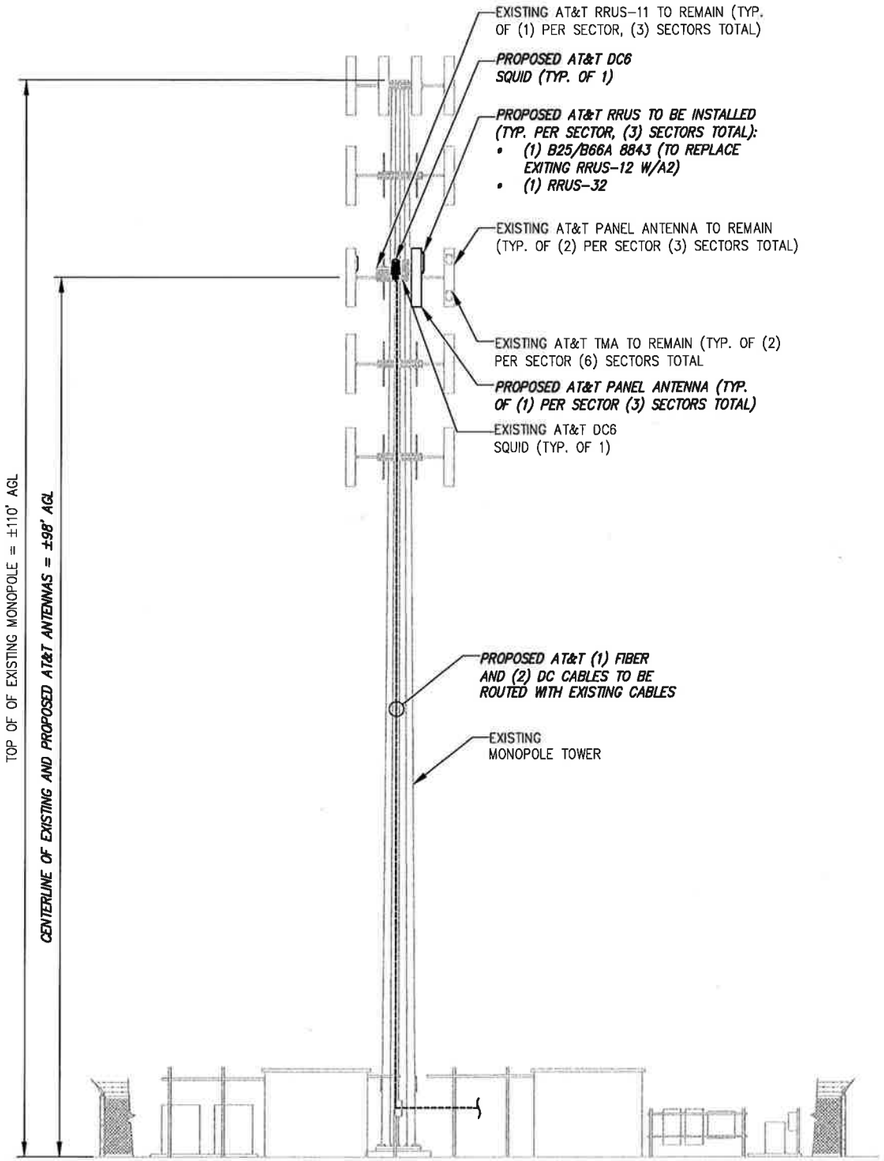
Drawing Title
OVERALL & ENLARGED SITE PLAN

Drawing Number
C2



1 ELEVATION VIEW
NOT TO SCALE

NOTE:
- INFINIGY ENGINEERING HAS NOT EVALUATED THE TOWER LOADING FOR THIS SITE, AND ASSUMES NO RESPONSIBILITY FOR ITS STRUCTURAL INTEGRITY REGARDING ITS EXISTING OR PROPOSED LOADING. FINAL INSTALLATION TO COMPLY WITH RESULTS OF PASSING STRUCTURAL ANALYSIS.
- FOR ADDITIONAL INFORMATION PERTAINING TO THE ANTENNA MOUNT, SEE MOUNT ANALYSIS, COMPLETED BY INFINIGY, DATED 07/17/18.

SEPARATION NOTE:
- 3 FEET MINIMUM SEPARATION BETWEEN LTE ANTENNA
- 6 FEET MINIMUM SEPARATION BETWEEN 700BC & 700 DE

FINAL ANTENNA CONFIGURATION & CABLE SCHEDULE BASED ON LTE RFDS DATED 6/13/18, V 2.00

SECTOR	ANTENNA POSITION	ANTENNA STATUS & TECHNOLOGY	ANTENNA MANF/MODEL	TMA/ DIPLEXER	RRUS	AZIMUTH	ANTENNA ℄ HEIGHT	CABLE FEEDER TYPE	CABLE FEEDER LENGTH	RAYCAP UNIT
ALPHA	A-1	(E) UMTS 850/1900	POWERWAVE 7770	(2) (E) LGP21401	--	30°	±98'	(2) (E) 1-5/8" COAX CABLES	±120'	(E) DC6 'SQUID' *(1) (P) DC6 'SQUID'*
	A-2	*(P) LTE 850/1900 /AWS/5G*	*QUINTEL QS66512-2*	*(2) (P) DBCT108F1V92-1*	*(1) (P) 4478 B5 (GROUND) (1) (P) B25/B66A 8843*	*30°*	*±98'*	(2) (E) 1-5/8" COAX CABLES *(1) (P) FIBER CABLE (2) (P) DC CABLES*	±120'	
	A-3	--	--	--	--	--	--	--	--	
	A-4	(E) LTE 700/WCS	CCI OPA-65R-LCUU-H6	--	(1) (E) RRUS-11 *(1) (P) RRUS-32*	30°	±98'	(1) (E) FIBER CABLE (2) (E) DC CABLES	--	
BETA	B-1	(E) UMTS 850/1900	POWERWAVE 7770	(2) (E) LGP21401	--	160°	±98'	(2) (E) 1-5/8" COAX CABLES	±120'	
	B-2	*(P) LTE 850/1900 /AWS/5G*	*QUINTEL QS66512-2*	*(2) (P) DBCT108F1V92-1*	*(1) (P) 4478 B5 (GROUND) (1) (P) B25/B66A 8843*	*160°*	*±98'*	(2) (E) 1-5/8" COAX CABLES SEE A-2 FOR FIBER/DC INFORMATION	±120'	
	B-3	--	--	--	--	--	--	--	--	
	B-4	(E) LTE 700/WCS	CCI OPA-65R-LCUU-H6	--	(1) (E) RRUS-11 *(1) (P) RRUS-32*	160°	±98'	SEE A-2 FOR FIBER/DC INFORMATION	--	
GAMMA	G-1	(E) UMTS 850/1900	POWERWAVE 7770	(2) (E) LGP21401	--	270°	±98'	(2) (E) 1-5/8" COAX CABLES	±120'	
	G-2	*(P) LTE 850/1900 /AWS/5G*	*QUINTEL QS66512-2*	*(2) (P) DBCT108F1V92-1*	*(1) (P) 4478 B5 (GROUND) (1) (P) B25/B66A 8843*	*270°*	*±98'*	(2) (E) 1-5/8" COAX CABLES SEE A-2 FOR FIBER/DC INFORMATION	±120'	
	G-3	--	--	--	--	--	--	--	--	
	G-4	(E) LTE 700/WCS	CCI OPA-65R-LCUU-H6	--	(1) (E) RRUS-11 *(1) (P) RRUS-32*	270°	±98'	SEE A-2 FOR FIBER/DC INFORMATION	--	

2 AT&T ANTENNA SCHEDULE
NOT TO SCALE

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STATE OF CONNECTICUT
JOHN S. STEVENS
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LICENSED PROFESSIONAL ENGINEER
08/24/2018

No	Submittal / Revision	Appr'd	Date
2	REVISED FOR PERMIT	BMM	08/23/18
1	ISSUED FOR PERMIT	BMM	07/25/18
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NEW BRITAIN, CT 06503

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 08/23/18
CD

Drawing Title
ELEVATION VIEW

Drawing Number
C3

NOTE:
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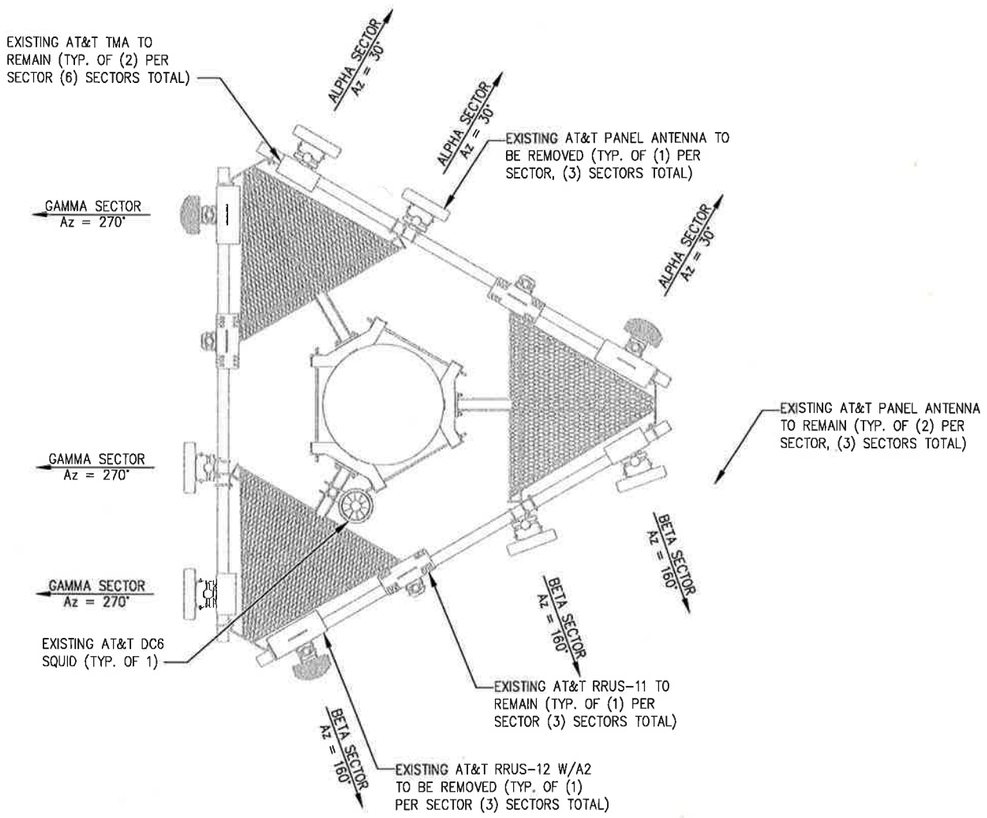
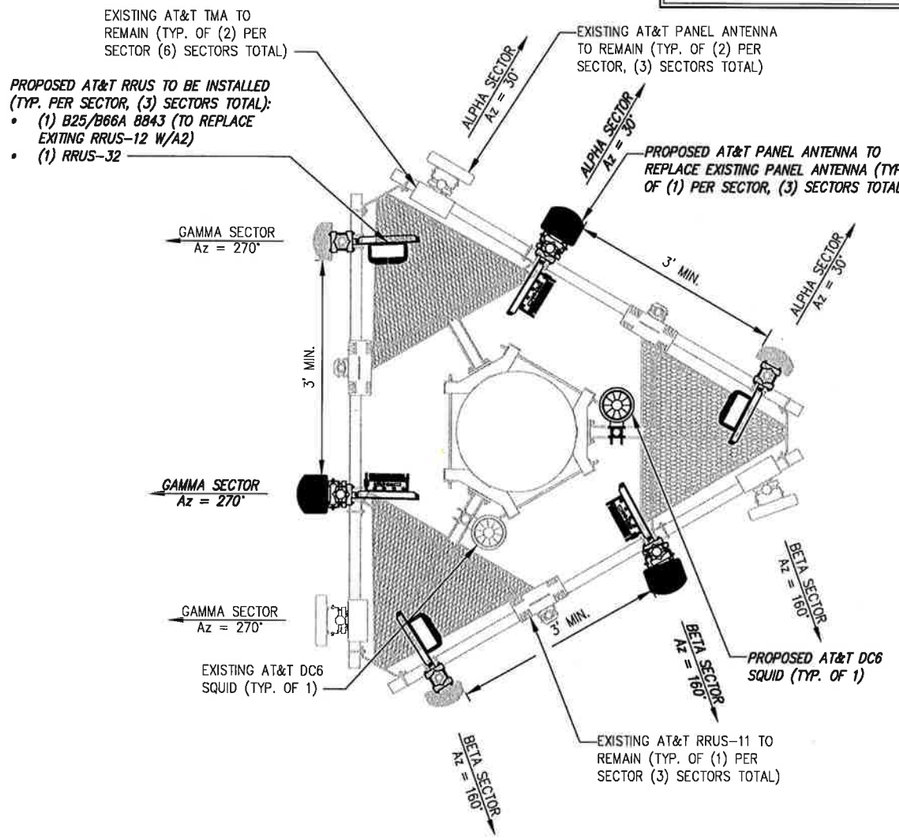
- FOR ADDITIONAL INFORMATION PERTAINING TO THE ANTENNA MOUNT, SEE MOUNT ANALYSIS, COMPLETED BY INFINIGY, DATED 07/17/18.

SEPARATION NOTE:
- 3 FEET MINIMUM SEPARATION BETWEEN LTE ANTENNA
- 6 FEET MINIMUM SEPARATION BETWEEN 700BC & 700 DE



TRUE NORTH

1 ANTENNA ORIENTATION PLAN (EXISTING)
NOT TO SCALE



TRUE NORTH

2 ANTENNA ORIENTATION PLAN (PROPOSED)
NOT TO SCALE

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STATE OF CONNECTICUT
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08.24.2018

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Drawing Scale: AS NOTED
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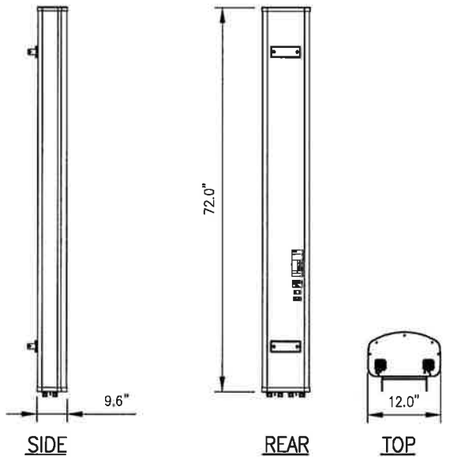
CD

Drawing Title
ANTENNA ORIENTATION PLAN

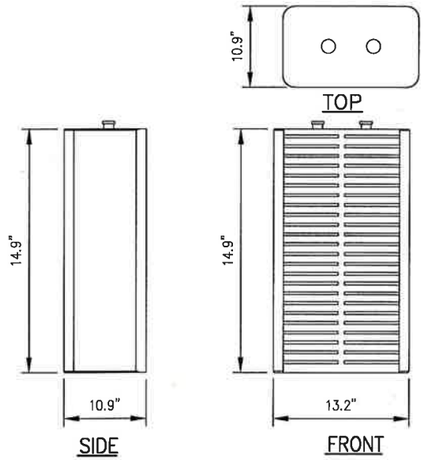
Drawing Number
C4



SIDE REAR TOP

QUINTEL MODEL NO.:	QS66512-2
RADOME MATERIAL:	FIBERGLASS
RADOME COLOR:	LIGHT GRAY
DIMENSIONS, HxWxD:	(72.0"x12.0"x9.6")
WEIGHT, W/ PRE-MOUNTED BRACKETS:	111.0 LBS
CONNECTOR:	7-16 DIN FEMALE

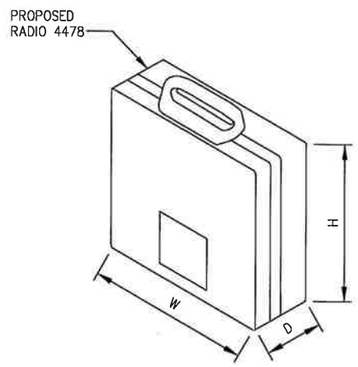
1 ANTENNA DETAIL
NOT TO SCALE



TOP SIDE FRONT

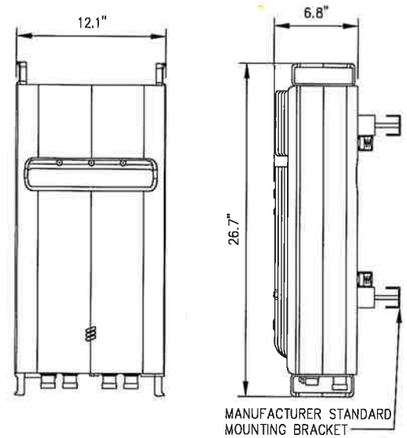
RADIO B25/B66A 8834 SPECIFICATIONS
- HXWXD, (INCHES) : 14.9"x13.2"x10.9"
- WEIGHT (LBS) : 72.0
- COLOR : GRAY

2 ERICSSON RADIO B25/B66A 8843 DETAIL
NOT TO SCALE



RADIO 4478 SPECIFICATIONS
- HxWxD, (INCHES) : 18.1"x13.4"x8.26"
- WEIGHT (LBS) : 59.5
- COLOR : GRAY

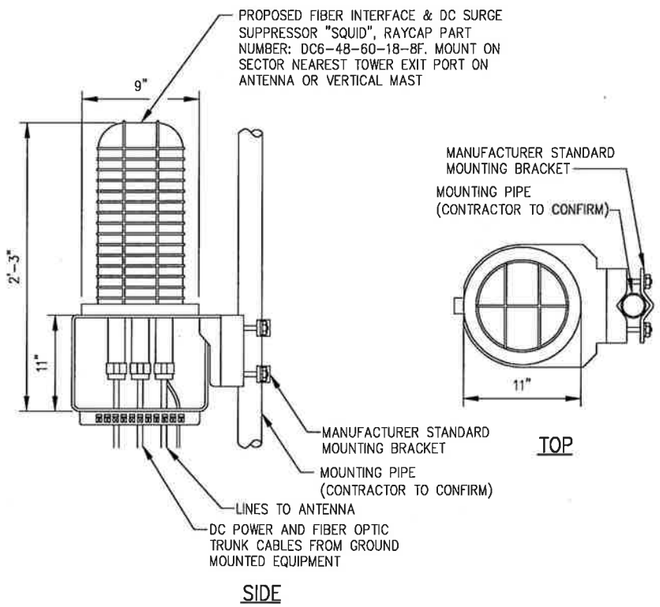
3 ERICSSON RADIO 4478 DETAIL
NOT TO SCALE



FRONT SIDE

RRUS-32 SPECIFICATIONS
- HxWxD, (INCHES) : 26.7"x12.1"x6.8"
- WEIGHT (LBS) : 50.8
- COLOR : GRAY

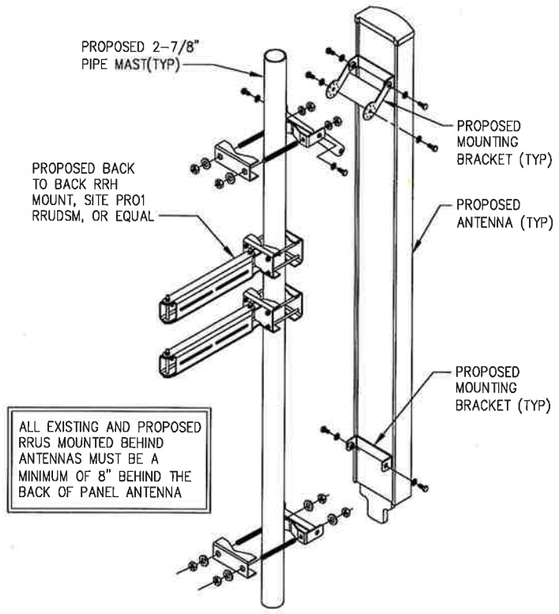
4 ERICSSON RRUS-32 DETAIL
NOT TO SCALE



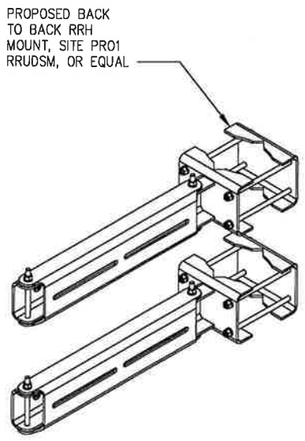
TOP

SIDE

5 SQUID DETAIL
NOT TO SCALE



6 MOUNTING DETAIL
NOT TO SCALE



5 BACK TO BACK RRH MOUNT DETAIL
NOT TO SCALE

INFINIGY
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

at&t

STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER
10-24-2018

No	Submittal / Revision	App'd	Date
2	REVISED FOR PERMIT	BMM	08/23/18
1	ISSUED FOR PERMIT	BMM	07/25/18
0	ISSUED FOR REVIEW	BMM	07/10/18

Drawn: BMM Date: 07/10/18
Designed: ASW Date: 07/10/18
Checked: AJD Date: 07/10/18

Project Number: 499-006

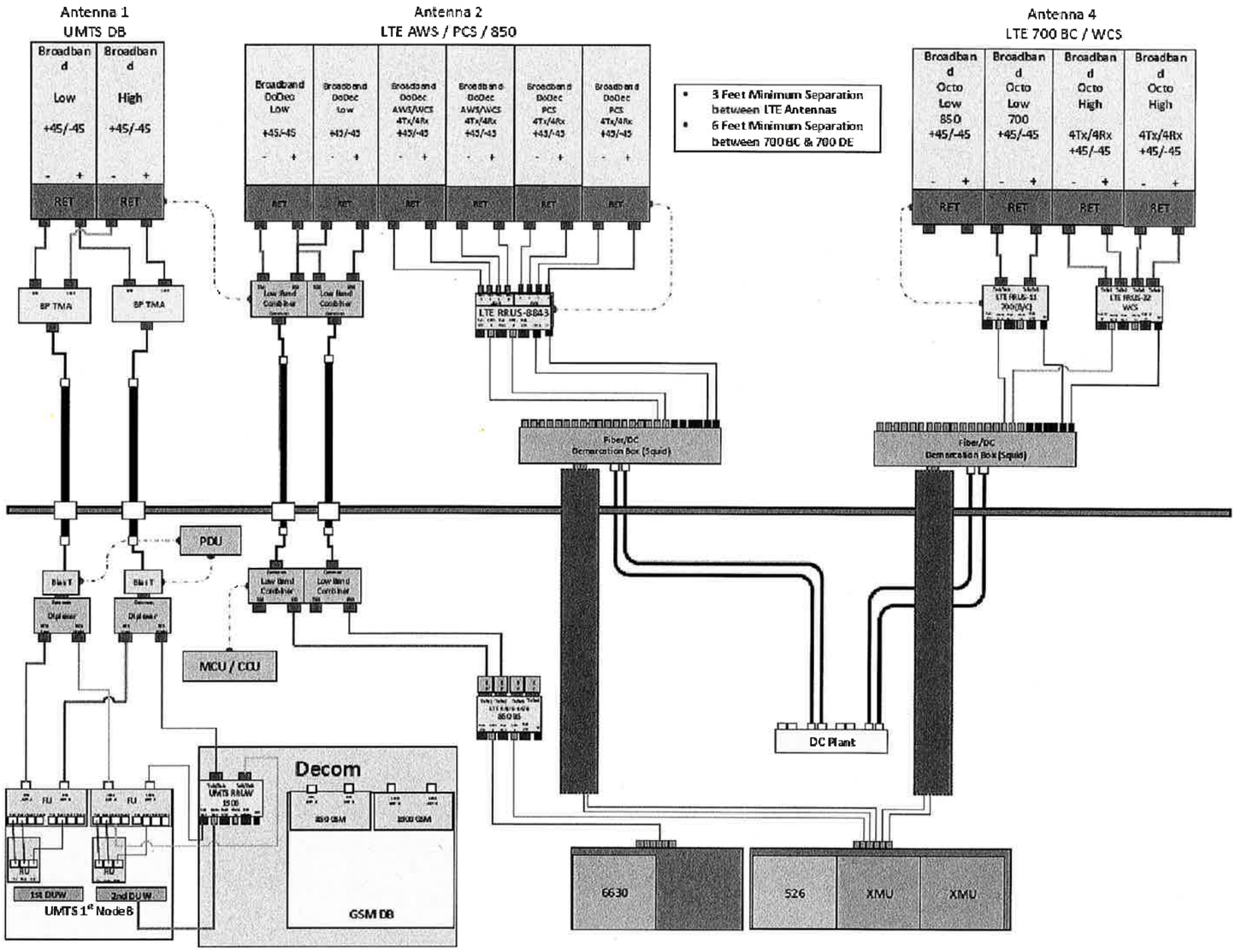
Project Title:
NEW BRITAIN FARMINGTON AVE.
CTL01028
FA# 10065751
723 FARMINGTON AVENUE
NEW BRITAIN, CT 06503

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 08/23/18
CD

Drawing Title
EQUIPMENT DETAILS

Drawing Number
C5



ALPHA/BETA/GAMMA

1 PLUMBING DIAGRAM (FINAL CONFIGURATION)
NOT TO SCALE

*BASED ON LTE RFDS, V. 2.0, DATED 6/13/18

INFINIGY
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

at&t

STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER
AUG 24 2018

No.	Submittal / Revision	App'd	Date
2	REVISED FOR PERMIT	BMW	08/23/18
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Drawn: BMW Date: 07/10/18
Designed: ASW Date: 07/10/18
Checked: AJD Date: 07/10/18

Project Number: 499-006

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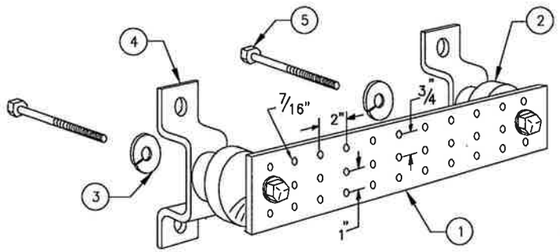
NEW BRITAIN FARMINGTON AVE.
CTL01028
FA# 10065751
723 FARMINGTON AVENUE
NEW BRITAIN, CT 06503

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 08/23/18
CD

Drawing Title
PLUMBING DIAGRAM

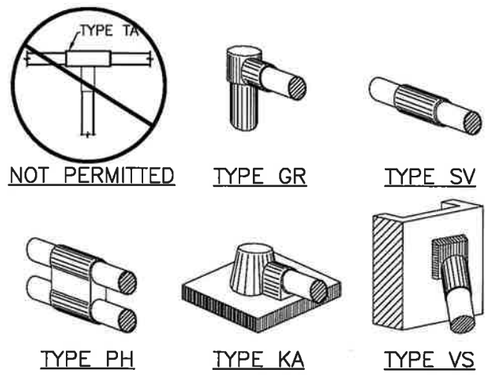
Drawing Number
C6



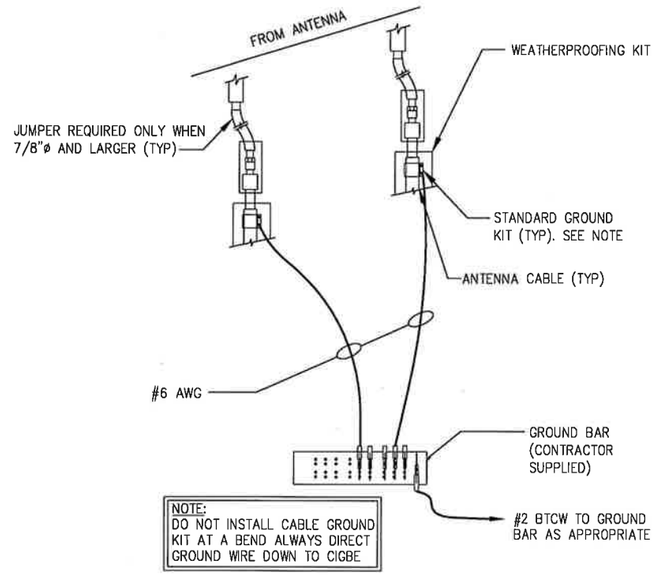
LEGEND

1 – SOLID TINNED COPPER GROUND BAR, 1/4"x 4"x 20" MIN., NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION
2 – INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061–4
3 – 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015–8
4 – WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A–6056
5 – 5/8–11 X 1" H.H.C.S. BOLTS, NEWTON INSTRUMENT CO. CAT NO. 3012–1
6 – GROUND BAR SHALL BE SIZED TO ACCOMODATE ALL GROUNDING CONNECTIONS REQUIRED PLUS PROVIDE 50% SPARE CAPACITY
7 – GROUND BARS SHALL NEITHER BE FIELD FABRICATED NOR NEW HOLES DRILLED
8 – GROUND LUGS SHALL MATCH THE HOLE SPACING ON THE BAR
9 – HARDWARE DIAMETER SHALL BE MINIMUM 3/8"

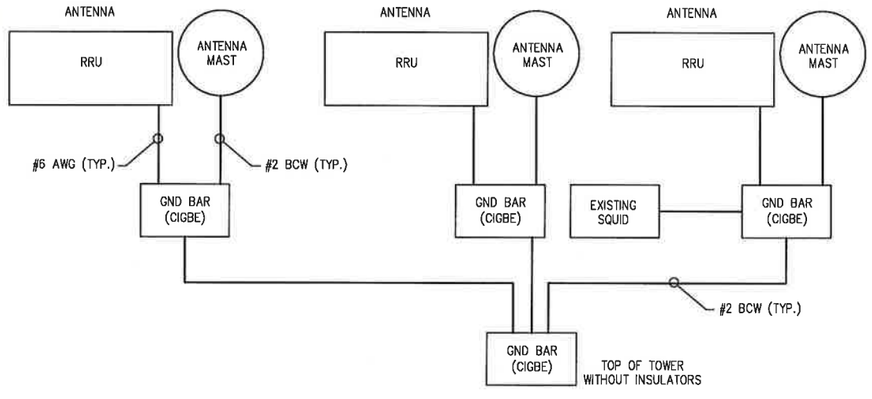
1 / -- GROUND BAR
NOT TO SCALE



2 / -- CADWELDS (TYPICAL)
NOT TO SCALE



3 / -- CONNECTION OF GROUND WIRES TO GROUNDING BARS @ ANTENNAS
NOT TO SCALE



4 / -- SCHEMATIC DIAGRAM GROUNDING SYSTEM
NOT TO SCALE

INFINIGY
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

at&t

STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER
AUG 24 2018

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF APPLICABLE STATE AND LOCAL LAWS

No.	Submittal / Revision	App'd	Date
2	REVISED FOR PERMIT	BMW	08/23/18
1	ISSUED FOR PERMIT	BMW	07/25/18
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Drawn: BMW Date: 07/10/18
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NEW BRITAIN FARMINGTON AVE.
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FA# 10065751
723 FARMINGTON AVENUE
NEW BRITAIN, CT 06503

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 08/23/18
CD

Drawing Title
GROUNDING DETAILS

Drawing Number
C7

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

Decision and Order

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The parties and intervenors to this proceeding are:

Applicant	**Its Representative**
Sprint Spectrum, L.P. d/b/a Sprint PCS	Thomas J. Regan, Esq. Brown Rudnick Berlack Israels LLP CityPlace I, 38th Floor 185 Asylum Street Hartford, CT 06103-3402
Intervenor	**Its Representative**
New Cingular Wireless, PCS, LLC	Wendell G. Davis Blackwell, Davis & Spadaccini, LLC 158 East Center Street Manchester, CT 06040

723 FARMINGTON AVE

Location	723 FARMINGTON AVE	**Mblu**	C3A/ 1/ / /
Acct#	37500723	**Owner**	NEST 88 POLISH FALCONS ALLIANCE
Assessment	$540,260	**Appraisal**	$771,800
PID	597	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$208,000	$563,800	$771,800
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$145,600	$394,660	$540,260

Owner of Record

Owner	NEST 88 POLISH FALCONS ALLIANCE	**Sale Price**	$0
Co-Owner	OF AMERICA INC	**Certificate**	
Address	201 WASHINGTON ST NEW BRITAIN, CT 06051	**Book & Page**	1412/ 329
		Sale Date	05/30/2002

Ownership History

Ownership History				
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Sale Date**
NEST 88 POLISH FALCONS ALLIANCE	$0		1412/ 329	05/30/2002
NEST 88 POLISH FALCONS ALLIANC	$0		474/ 342	12/22/1958
NEST 88 POLISH FALCONS	$0		327/ 77	06/14/1948
EDWARD SZCZEPANIK	$0		324/ 597	05/21/1948
SEBASTIANO & VINCENZA FORMICA	$0		305/ 273	10/09/1945

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0
Replacement Cost: $0

Building Percent Good:

Replacement Cost Less Depreciation: $0

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

Building Photo

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

Building Layout


Building Layout

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

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

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

Land Line Valuation

Size (Acres)	32.08
Depth	
Assessed Value	$394,660
Appraised Value	$563,800

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
FN3	Fence-6' Chain			300 L.F.	$3,000	1
CB3	PreCastConcCel			100 S.F.	$23,100	1
CB3	PreCastConcCel			360 S.F.	$181,900	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$208,000	$563,800	$771,800
2016	$208,000	$506,000	$714,000
2015	$208,000	$506,000	$714,000

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$145,600	$394,660	$540,260
2016	$145,600	$354,200	$499,800
2015	$145,600	$354,200	$499,800

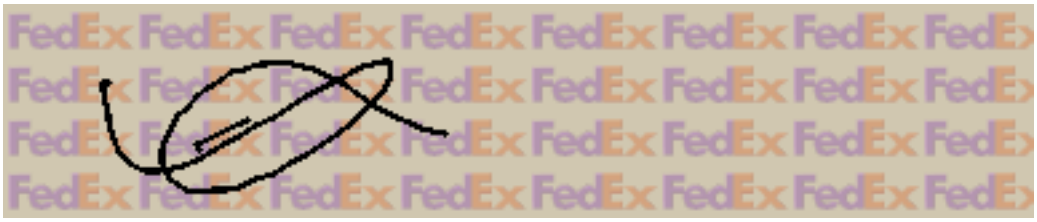
November 19,2018

Dear Customer:

The following is the proof-of-delivery for tracking number **773355773725**.

Delivery Information:

Status:	Delivered	**Delivered to:**	Shipping/Receiving
Signed for by:	A.RODRIGUEZ	**Delivery location:**	27 W MAIN ST NEW BRITAIN, CT 06051
Service type:	FedEx Standard Overnight	**Delivery date:**	Oct 1, 2018 10:22
Special Handling:	Deliver Weekday		



Shipping Information:

Tracking number:	773355773725	**Ship date:**	Sep 28, 2018
		Weight:	1.0 lbs/0.5 kg

Recipient:
David Zajac
New Britain City Hall
27 West Main St
Room 404
NEW BRITAIN, CT 06051 US

Shipper:
Rodney Joujoute
Smartlink LLC
85 Rangeway Road
Bldg. 3 - Suite 102
North Billerica, MA 01862 US

Thank you for choosing FedEx.

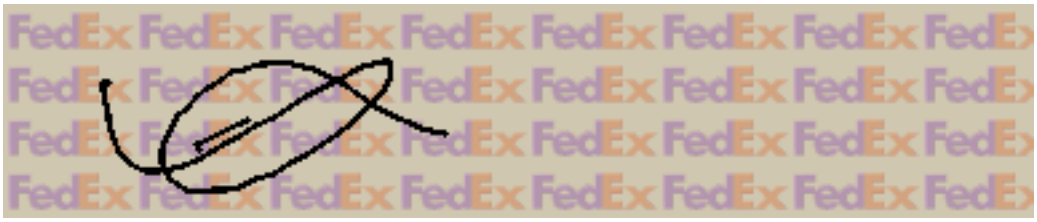
November 19,2018

Dear Customer:

The following is the proof-of-delivery for tracking number 773355850337.

Delivery Information:

Status:	Delivered	**Delivered to:**	Shipping/Receiving
Signed for by:	A.RODRIGUEZ	**Delivery location:**	27 W MAIN ST NEW BRITAIN, CT 06051
Service type:	FedEx Standard Overnight	**Delivery date:**	Oct 1, 2018 10:22
Special Handling:	Deliver Weekday		



Shipping Information:

Tracking number:	773355850337	**Ship date:**	Sep 28, 2018
		Weight:	1.0 lbs/0.5 kg

Recipient:
Erin Stewart
New Britain City Hall
27 West Main Street
NEW BRITAIN, CT 06051 US

Shipper:
Rodney Joujoute
Smartlink LLC
85 Rangeway Road
Bldg. 3 - Suite 102
North Billerica, MA 01862 US

Thank you for choosing FedEx.

November 19,2018

Dear Customer:

The following is the proof-of-delivery for tracking number **773355677636**.

Delivery Information:

Status:	Delivered	**Delivered to:**	Receptionist/Front Desk
Signed for by:	H.HAMPTON	**Delivery location:**	8051 CONGRESS AVE BOCA RATON, FL 33487
Service type:	FedEx Standard Overnight	**Delivery date:**	Oct 1, 2018 09:44
Special Handling:	Deliver Weekday		

Shipping Information:

Tracking number:	773355677636	**Ship date:**	Sep 28, 2018
		Weight:	1.0 lbs/0.5 kg

Recipient:
Carla Shorter
SBA Communications Corp.
8051 Congress Avenue
BOCA RATON, FL 33487 US

Shipper:
Rodney Joujoute
Smartlink LLC
85 Rangeway Road
Bldg. 3 - Suite 102
North Billerica, MA 01862 US

Reference
MAL05057/10072394

Thank you for choosing FedEx.

November 19,2018

Dear Customer:

The following is the proof-of-delivery for tracking number 773524192558.

Delivery Information:

Status:	Delivered	**Delivered to:**	Residence
Signed for by:	Signature not required	**Delivery location:**	201 WASHINGTON ST NEW BRITAIN, CT 06051
Service type:	FedEx Priority Overnight	**Delivery date:**	Oct 22, 2018 15:52
Special Handling:	Deliver Weekday Residential Delivery No Signature Required		

NO SIGNATURE REQUIRED
Proof-of-delivery details appear below; however, no signature is available for this FedEx Express shipment because a signature was not required.

Shipping Information:

Tracking number:	773524192558	**Ship date:**	Oct 19, 2018
		Weight:	1.0 lbs/0.5 kg

Recipient:
John Rogalewski
Polish Falcons Nest 88
201 Washington St
NEW BRITAIN, CT 06051 US

Shipper:
Rodney Joujoute
Smartlink LLC
85 Rangeway Road
Bldg. 3 - Suite 102
North Billerica, MA 01862 US

Thank you for choosing FedEx.

November 28,2018

Dear Customer:

The following is the proof-of-delivery for tracking number **773775426172**.

Delivery Information:

Status:	Delivered	**Delivered to:**	Receptionist/Front Desk
Signed for by:	L.MATTHEWS	**Delivery location:**	10 FRANKLIN SQ NEW BRITAIN, CT 06051
Service type:	FedEx First Overnight	**Delivery date:**	Nov 27, 2018 13:56
Special Handling:	Deliver Weekday		

Shipping Information:

Tracking number:	773775426172	**Ship date:**	Nov 26, 2018
		Weight:	2.0 lbs/0.9 kg

Recipient:
Melanie A. Bachman
Connecticut Siting Council
10 Franklin Square
NEW BRITAIN, CT 06051 US

Shipper:
Rodney Joujoute
Smartlink LLC
85 Rangeway Road
Bldg. 3 - Suite 102
North Billerica, MA 01862 US

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