



July 31, 2020

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

**RE:** Notice of Exempt Modification  
**1 Hartford Square, New Britain, CT 06052**  
Lat: 41.6663919  
Long: -72.8127989

Dear Ms. Bachman:

AT&T Wireless currently maintains equipment at the 166' level of an existing 176' Self-Support Tower located at 1 Hartford Square, in New Britain, CT. The tower is owned by SBA Towers and the property is owned by Hartford Square Associates.

AT&T desires to modify its existing telecommunications facility by swapping (3) OPA65RBU6DA antennas, (3) DMP65RBU6DA antennas, adding, (3) 4478 B14 remote radio units, (3) 8843 B2/B66A remote radio units, (3) 4449 B5/B12 remote radio units, (3) SDARS remote unit, (3) CBC23SR-43(1) combiners, (2) DC squids and ancillary equipment and cables as well as removing (3) RRUS-11 remote radio units and (3) 800-10121 antennas. The centerline height of the existing antennas and ancillary tower-mounted equipment is and will remain at 166 feet.

The facility was approved by the Department of Municipal Development for the City of New Britain on 7/17/00. Associated construction drawings state tenants are to have a maximum of four panel antennas per sector. This modification complies with the aforementioned condition.

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). In accordance with RCOSA section 16-SOj-73, a copy of this letter and attachments is being sent to the Honorable Erin Stewart, Mayor of New Britain; David Zajac, Zoning Enforcement Officer; as well as to Hartford Square Associates and SBA Communications Corp., the tower and property owners.

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). Specifically:

1. The planned modification will not result in an increase in the height of the existing structure.
2. The proposed modifications will not involve any changes to AT&T's ground-space footprint, and therefore and therefore will not require an extension of the site boundary.

3. The proposed modification will not increase the noise level 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 Federal Communications Commission (FCC) safety standard. An RF emissions calculation (enclosed) for AT&T's modified facility is herein provided.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support AT&T's proposed modifications. Please see enclosed structural analysis completed by completed by Tower Engineering Solutions dated and stamped June 29, 2020.

For the foregoing reasons, AT&T respectfully requests that the proposed installation be allowed within the exempt modifications under R.C.S.A. §16-50j-72 (b)(2).

Sincerely,

*Nicole Caplan-Mason*

**Nicole Caplan-Mason**  
**Site Acquisition Supervisor**  
**Empire Telecom USA LLC**  
16 Esquire Road | Billerica, MA 01862  
Mobile: 978-284-3906  
ncaplan@empiretelecomm.com

Enclosures: Exhibit 1 – Field Card and GIS Map  
Exhibit 2 – Construction Drawings  
Exhibit 3 – Structural Analysis  
Exhibit 4 – RF Emissions Analysis Report Evaluation

cc:

City of New Britain  
27 West Main St, Rm 204  
New Britain, CT 06051  
Attn: Erin Stewart - Mayor

Hartford Square Associates  
1 Hartford Sq., Door 19  
New Britain, CT 06052

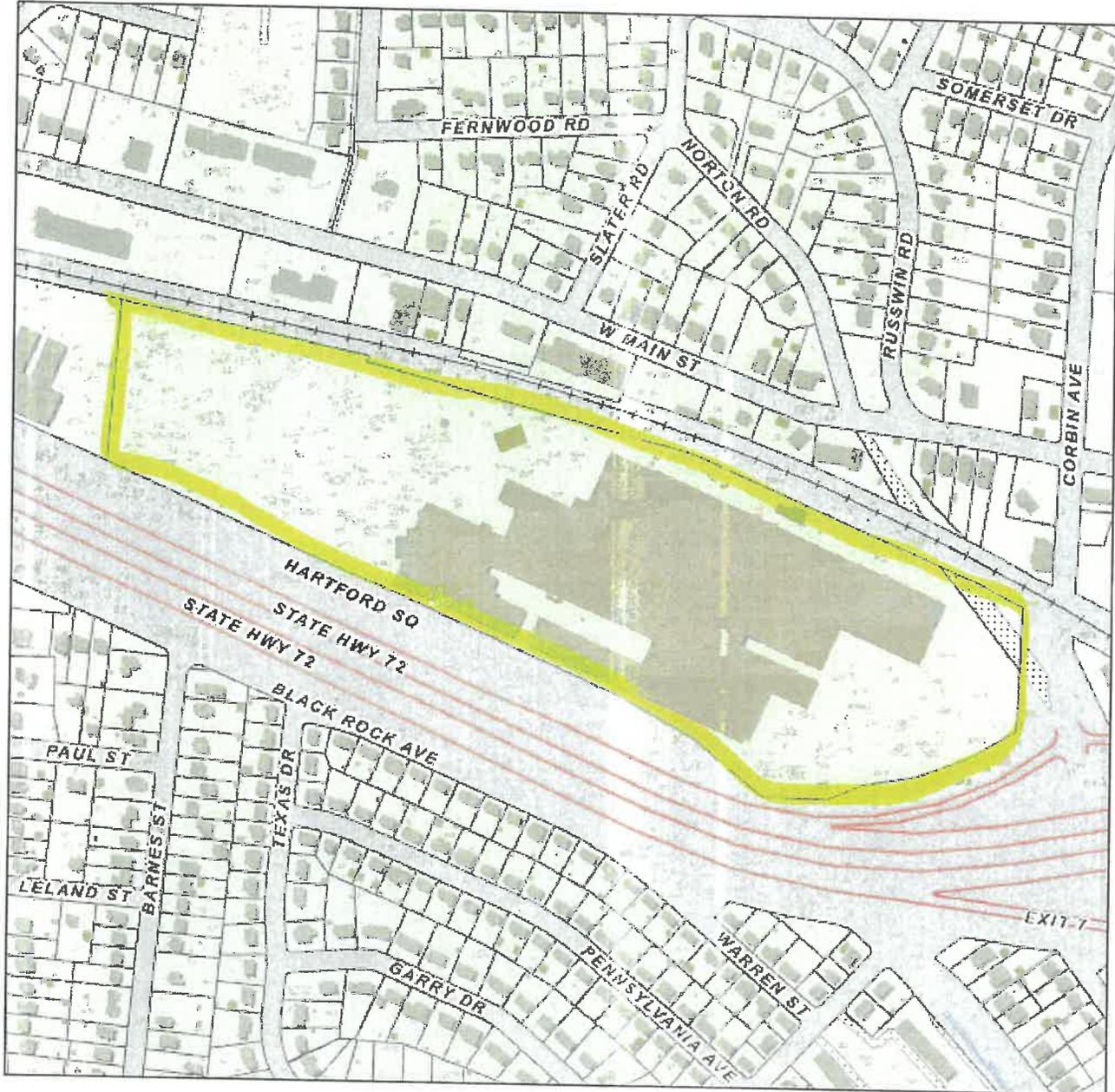
City of New Britain  
27 West Main St, Room 404  
New Britain, CT 06051  
Attn: David Zajac  
Zoning Enforcement Officer

SBA Communications Corp.  
8051 Congress Ave  
Boca Raton, FL 33487  
Attn: Carla Shorter

# City of New Britain Geographic Information System (GIS)



Date Printed: 7/17/2018



**MAP DISCLAIMER - NOTICE OF LIABILITY**

This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The City of New Britain and its mapping contractors assume no legal responsibility for the information contained herein.

Approximate Scale: 1 inch = 400 feet



# 1 HARTFORD SQ

**Location** 1 HARTFORD SQ

**Mblu** F4A/ 2/ / /

**Acct#** 44950001

**Owner** HARTFORD SQUARE ASSOCIATES LLC

**Assessment** \$4,333,350

**Appraisal** \$6,190,500

**PID** 764

**Building Count** 1

## Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2017	\$4,021,200	\$2,169,300	\$6,190,500
Assessment			
Valuation Year	Improvements	Land	Total
2017	\$2,814,840	\$1,518,510	\$4,333,350

## Owner of Record

**Owner** HARTFORD SQUARE ASSOCIATES LLC  
**Co-Owner**  
**Address** 1 HARTFORD SQ WEST BOX #15  
 NEW BRITAIN, CT 06052

**Sale Price** \$0  
**Certificate**  
**Book & Page** 1903/1103  
**Sale Date** 12/03/2014

## Ownership History

Ownership History				
Owner	Sale Price	Certificate	Book & Page	Sale Date
HARTFORD SQUARE ASSOCIATES LLC	\$0		1903/1103	12/03/2014
HARTFORD SQUARE ASSOCIATES LLC	\$0		1895/ 267	07/22/2014
HARTFORD SQUARE ASSOCIATES LLC	\$0		1895/ 157	07/22/2014
HARTFORD SQUARE ASSOCIATES LLC	\$0	1	1830/ 539	12/06/2011
HARTFORD SQUARE ASSOCIATES LLC	\$3,500,000		1813/ 22	02/14/2011

## Building Information

### Building 1 : Section 1

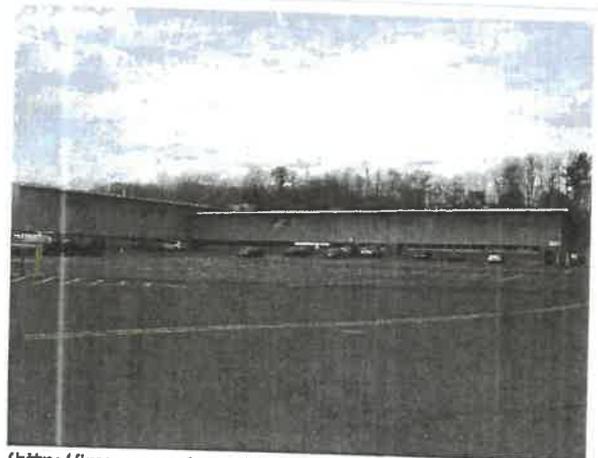
**Year Built:** 1940  
**Living Area:** 542,561  
**Replacement Cost:** \$18,387,603



### 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	
Bsmnt Garages	
Bldg Nbhd	

### Building Photo



(<http://images.vgsi.com/photos/NewBritainCTPhotos//00\03\49>,

### Building Layout

Building Layout

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

### Extra Features

Extra Features					Legend
Code	Description	Size	Value	Bldg #	
A/C	Central A/C	18000 S.F.	\$11,700	1	
LDL2	Load Lv Manual	8 Units	\$1,900	1	

### Land

### Land Use

### Land Line Valuation

**Use Code** 4010  
**Description** Ind Whse MDL-96  
**Zone** I2  
**Neighborhood** 101G  
**Alt Land Appr** No  
**Category**

**Size (Acres)** 31.10  
**Depth**  
**Assessed Value** \$1,518,510  
**Appraised Value** \$2,169,300

### Outbuildings

Outbuildings						Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
PAV5	Conc Pad			1836 S.F.	\$22,000	1
UST2	Utility Metal			3036 S.F.	\$21,900	1
CB4	PreCastConcCel			200 S.F.	\$33,000	1
UST3	Utility Masonr			484 S.F.	\$4,600	1
CB3	PreCastConcCel			240 S.F.	\$55,400	1
UST2	Utility Metal			320 S.F.	\$2,300	1
CB3	PreCastConcCel			360 S.F.	\$83,200	1
UST1	Utility Frame			320 S.F.	\$2,800	1
FN4	Fence-8' Chain			272 L.F.	\$3,500	1
UST2	Utility Metal			2000 S.F.	\$14,400	1
SCL1	Scales-Mech			60 Tons	\$37,800	1
TNK2	Tank Bulk			300000 Gal	\$1,200	1
PAV1	Paving Asphalt			50000 S.F.	\$48,000	1
BLB2	Billboard 2 Side			2 Units	\$0	1

### Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2017	\$4,021,200	\$2,169,300	\$6,190,500
2016	\$4,466,700	\$2,076,000	\$6,542,700
2015	\$4,466,700	\$2,076,000	\$6,542,700

Assessment			
Valuation Year	Improvements	Land	Total
2017	\$2,814,840	\$1,518,510	\$4,333,350
2016	\$3,126,690	\$1,453,200	\$4,579,890
2015	\$3,126,690	\$1,453,200	\$4,579,890

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at&t

**SITE NUMBER: CT5254 FA: 10071149**  
**SITE NAME: NEW BRITAIN WEST**  
**PROJECTS:**

**LTE6C 700b14 MRCTB045510 LTBWE MRCTB045491**  
**LTE7C 700de MRCTB045529 4TxRx MRCTB045509**  
**LTE5G NR MRCTB045547 LTEWCS SXM MRCTB037947**

**PROJECT INFORMATION**

UNMANNED COMMUNICATIONS FACILITY MODIFICATIONS, INCLUDING:  
 (A) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
 (B) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
 (C) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
 (D) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
 (E) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
 (F) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
 (G) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
 (H) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
 (I) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
 (J) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
 (K) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
 (L) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
 (M) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
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 (P) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
 (Q) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
 (R) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
 (S) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
 (T) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
 (U) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
 (V) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
 (W) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
 (X) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
 (Y) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)  
 (Z) AT&T LITENET 250/ANS CO DMP-6888888A PANEL IN POSEY (3 TOT)

CT5254 TEL 866-915-5800  
 NEW BRITAIN WEST  
 NEW BRITAIN, CT 06052  
 SBA PROPERTIES INC.  
 5800 BROOKEN SOUND PKWY  
 BOCA RATON, FL 33487  
 AT&T  
 550 COCHITUATE RD  
 SUITE 100  
 FRAMINGHAM, MA 01701

**DRAWING INDEX**

REV	TITLE SHEET
01	TITLE SHEET
02	NOTES
03	RF SCHEDULE/AANTENNA PLAN
04	ROOF PLAN & EQUIPMENT PLAN
05	ELEVATION VIEW & DETAILS
06	GROUNDING & RF DIAGRAM DETAILS

CONNECTICUT LAW REQUIRES  
 THAT ANY ELECTRICAL WORK BE PERFORMED  
 BY A LICENSED ELECTRICIAN  
 BY CALLING 800-922-4455 OR  
 DIAL 811

**CONTACT & UTILITY INFORMATION**

**CONTACT**  
 MIGUEL NOBRE  
 DAVID COOPER  
 GREG DORMAN

**WORK REQUEST GROUP**  
 NATIONAL GRID  
 VERIZON

**PHONE NO.**  
 (508) 881-9580  
 (617) 639-4908  
 (484) 663-1750  
 (800) 375-7405  
 (800) 941-8800

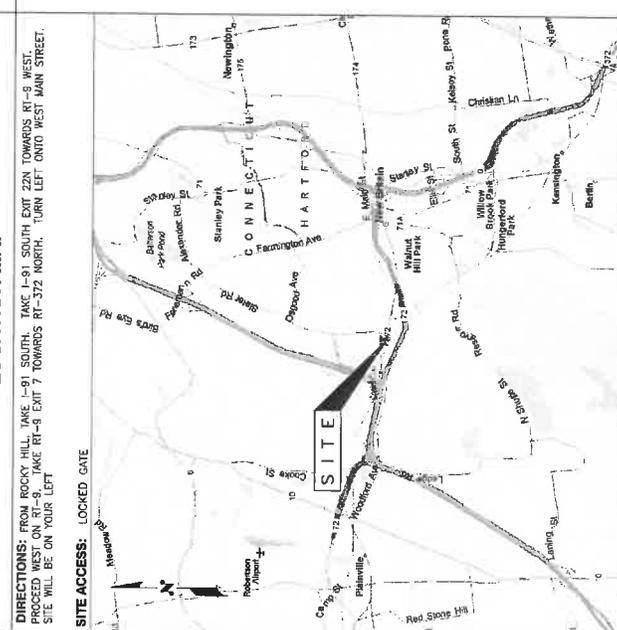
**VRG**

23 MIDSTATE DR., #210  
 AUBURN, MA 01501  
 Tel: (508) 519-8030  
 Fax: (508) 519-8039  
 mrob@vertrivresourcesgroup.com

**EMPIRE telecom**

EMPIRE TELECOM USA, LLC  
 BILLERICA, MA 01821

**LOCATION MAP**



**DIRECTIONS:** FROM ROCKY HILL, TAKE I-91 SOUTH, TAKE I-91 SOUTH EXIT 22N TOWARDS RT-9 WEST. PROCEED WEST ON RT-9 WEST TO RT-372 NORTH. TURN LEFT ONTO WEST MAIN STREET. SITE WILL BE ON YOUR LEFT.

**SITE ACCESS:** LOCKED GATE

**APPLICABLE BUILDING CODES AND STANDARDS**

SUBCONTRACTOR'S WORK SHALL COMPLY WITH PROJECT STANDARDS AND SPECIFICATIONS. SUBCONTRACTOR SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AND REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL JURISDICTION (S) FOR THE LOCATION OF THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL JURISDICTION (S) FOR THE LOCATION OF THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL JURISDICTION (S) FOR THE LOCATION OF THE PROJECT.

**BUILDING CODES:**  
 CONNECTICUT STATE BUILDING CODE 2018

**ELECTRICAL CODE:**  
 NATIONAL ELECTRICAL CODE LATEST EDITION

**STRUCTURAL CODES:**  
 AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE

**STEEL CODES:**  
 AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ASD, 13TH EDITION

**TELECOMMUNICATIONS CODES:
 AMERICAN NATIONAL STANDARDS INSTITUTE/TELECOMMUNICATIONS INDUSTRY ASSOCIATION (ANSI/TIA) 222-F OR G AS APPLICABLE, STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES;  
 AMERICAN NATIONAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS**

**INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM EQUIPMENT**  
 IEEE 682.41, RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE")  
 TELCORDIA GR-1503, COAXIAL CABLE CONNECTIONS  
 ANSI T1.311, FOR TELECOM - DC POWER SYSTEMS - TELECOM ENVIRONMENTAL PROTECTION FOR CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN, WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

**at&t**

550 COCHITUATE RD  
 SUITES 13 & 14  
 FRAMINGHAM, MA 01701

**EMPIRE telecom**  
 EMPIRE TELECOM USA, LLC  
 BILLERICA, MA 01821

**VRG**  
 VERTICAL RESOURCES GROUP

**at&t**

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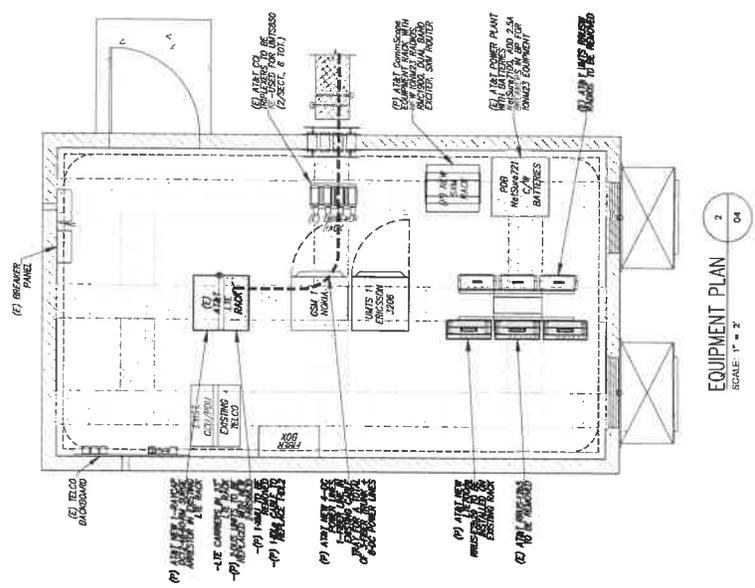
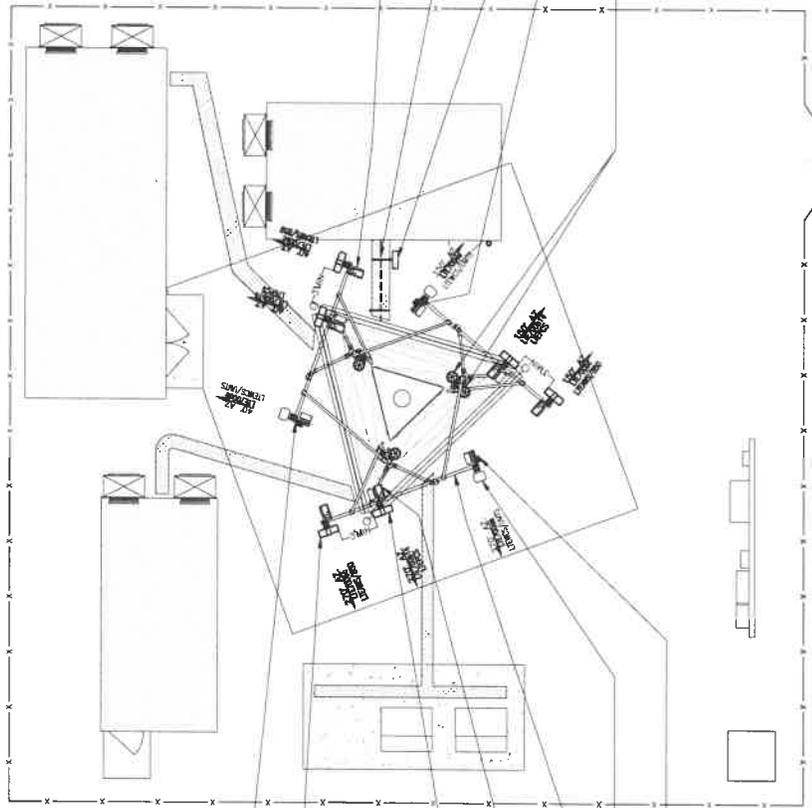
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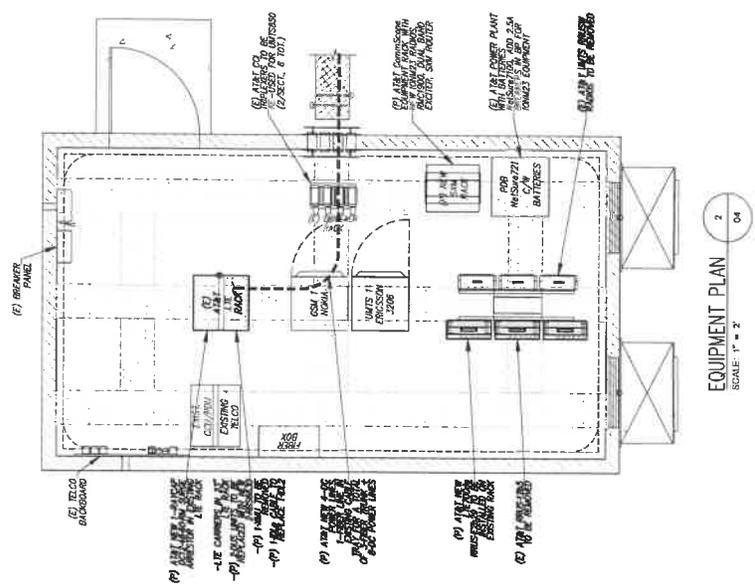
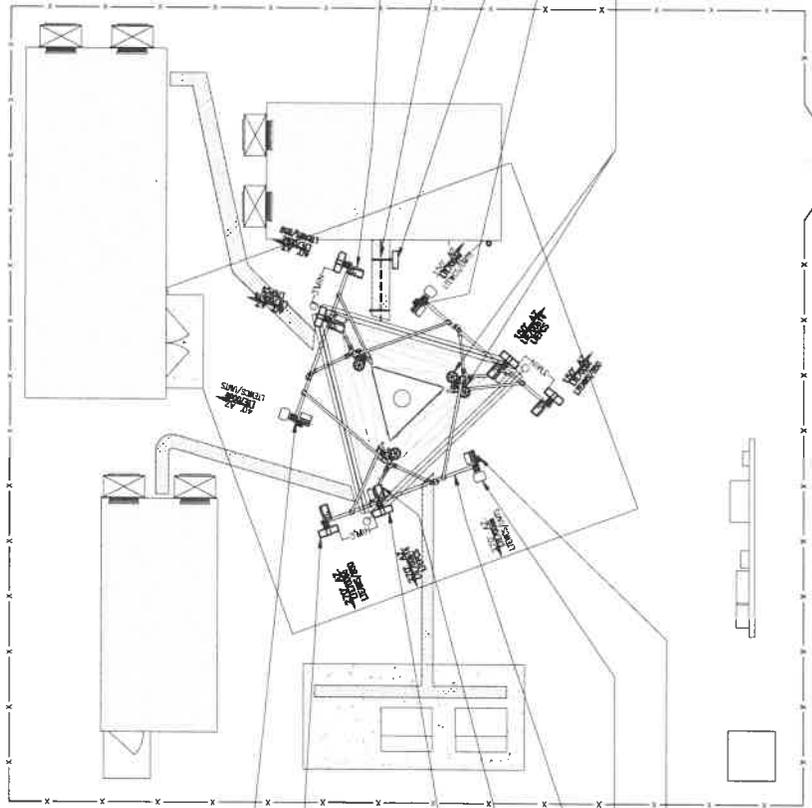
**GENERAL NOTES**

1. THIS PLAN IS AN UNBIDDED CONSTRUCTION, MAINTENANCE & OPERATION OF PROPOSED TOWER FACILITY. IT IS ONLY FOR INFORMATIONAL PURPOSES. ANY WORK PERFORMED MUST BE IN ACCORDANCE WITH ALL APPLICABLE STATE & FEDERAL REGULATIONS AND GUIDELINES.
2. CONSTRUCTION, MAINTENANCE & OPERATION OF PROPOSED TOWER FACILITY WILL BE HELD IN ACCORDANCE WITH ALL APPLICABLE STATE & FEDERAL REGULATIONS AND GUIDELINES.



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**VRG**  
VERTICAL RESOURCES GROUP

23 MIDSTATE DR., #210  
AUBURN, MA 01501  
Tel: (508) 519-8839  
Fax: (508) 519-8839  
mrc@verticalresourcesgrp.com

**EMPIRE telecom**  
EMPIRE TELECOM USA, LLC  
BELLERCA, MA 01821

**SITE NUMBER: CT3254**  
**SITE NAME: NEW BRITAIN**  
**PROJECT: 5C/6C/5G/BWE**  
1 HARTFORD SQUARE  
NEW BRITAIN, CT 06052  
HARTFORD COUNTY

**at&t**  
550 COCHITUATE RD  
SUITES 13 & 14  
FRAMINGHAM, MA 01701

NO.	DATE	REVISION	BY	CHK	APP'D
1	07/21/20	GENERAL REVISIONS	ELP: G.A.M.		
2	07/23/20	GENERAL REVISIONS	ELP: G.A.M.		
3	07/27/20	REVISED PER NEW RISKS	ELP: G.A.M.		
4	07/29/20	FOR CONSTRUCTION	ELP: G.A.M.		
DESIGNED BY: M.A.L.			DRAWN BY: G.A.M.		



AT&T  
**SITE PLAN & EQUIPMENT PLAN**  
JOB NUMBER: 04  
DRAWING NUMBER: 04  
REV: 3







**Tower Engineering Solutions**

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

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**Structural Analysis Report**

**Existing 176 ft Rohn Self Supporting Tower**

**Customer Name: SBA Communications Corp**

**Customer Site Number: CT04382-S**

**Customer Site Name: New Britain 2, CT**

**Carrier Name: AT&T (App#: 133186, v2)**

**Carrier Site ID / Name: CT5254 / New Britain West**

**Site Location: 1 Hartford Square**

**New Britain, Connecticut**

**Hartford County**

**Latitude: 41.666411**

**Longitude: -72.812803**

**Analysis Result:**

**Max Structural Usage: 69.0% [Pass]**

**Max Foundation Usage: 45.0% [Pass]**

**Additional Usage Caused by New Mount/Mount Modification: +0.2%**



**Report Prepared By: Cesar Rojas**



**Tower Engineering Solutions**

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

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## **Structural Analysis Report**

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### **Analysis Result:**

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**Max Foundation Usage: 45.0% [Pass]**

**Additional Usage Caused by New Mount/Mount Modification: +0.2%**

**Report Prepared By: Cesar Rojas**

## Introduction

The purpose of this report is to summarize the analysis results on the 176 ft Rohn Self Supporting Tower 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

<b>Tower Drawings</b>	Rohn Eng. File # 44545AE, Dwg. # C000882, dated 08/21/2000
<b>Foundation Drawing</b>	Rohn Eng. File # 44545AE, Dwg. # A001473, dated 07/26/2000
<b>Geotechnical Report</b>	Jaworski Geotech Project # 00309G, dated 07/05/2000
<b>Modification Drawings</b>	Allpro Consulting Group Job # 17-0378 rev.1, dated 02/21/2017

## Analysis Criteria

The rigorous analysis was performed in accordance with the requirements and stipulations of the TIA-222-G-2. In accordance with this standard, the structure was analyzed using **TESTowers**, 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.

<b>Wind Speed Used in the Analysis:</b>	Ultimate Design Wind Speed $V_{ult} = 125.0$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 97.0$ mph (3-Sec. Gust)
<b>Wind Speed with Ice:</b>	50 mph (3-Sec. Gust) with 1" radial ice concurrent
<b>Operational Wind Speed:</b>	60 mph + 0" Radial ice
<b>Standard/Codes:</b>	TIA-222-G-2 / 2015 IBC / 2018 Connecticut State Building Code
<b>Exposure Category:</b>	B
<b>Structure Class:</b>	II
<b>Topographic Category:</b>	1
<b>Crest Height:</b>	0 ft.
<b>Seismic Parameters:</b>	$S_S = 0.183$ , $S_1 = 0.064$

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	177.0	3	Kathrein 840 10054 Panel	(3) Sector Frames w/ (3) VBrace Kits (SitePro SFSV- L) & (6) 2-3/8"x6" Pipe Masts (BBPM-K1)	(4) 1/2" Fiber (6) 5/16" Fiber (1) 5/16" RET	Sprint Nextel
2		4	Andrew VHLP2.5 Dish			
3		3	Samsung U-RAS Flexible FRH			
4		3	Dragonwave Horizon Duo			
-	166.0	3	Kathrein 800-10121 Panel	(3) Sector Frames w/ V-Stablilizer Reinforcement Kit	(12) 1 5/8" (4) 3/4" DC (2) 1/2" Fiber	AT&T
-		3	Quintel QS66512-2 Panel			
-		3	CCI HPA-65\$-BUU-H-6			
-		6	Powerwave LGP 21401 TMA			
-		6	CCI TPX-070821			
-		6	Kathrein 860-10025 RET			
-		3	Ericsson RRUS-11 RRU			
-		6	Ericsson RRUS-32 B2s RRU			
-		3	Ericsson RRUS-32 B66 RRU			
-		3	Ericsson RRUS-32 RRU			
-		2	Raycap DC6-48-60-18-8F OVP			
18	155.0	3	Ericsson Air21 B2A/B4P Panel	(3) Sector Frames	(12) 1 5/8" (1) 1 5/8" Fiber	T-Mobile
19		3	Ericsson AIR 21 B4A/B2P Panel			
20		3	Commscope LNX-6515DS-A1M Panel			
21		3	Ericsson KRY 112 144/1 TMA			
22		3	Ericsson RRUS-11 (Band 12)			
23	140.0	3	Kathrein 800 10735v01 Panel	(3) T-Frames	(12) 1 5/8" (2) 1 5/8" Hybrid (1) 1/2"	Verizon
24		3	Antel BXA-80080/4CF Panel			
25		6	Andrew SBNHH-1D65B Panel			
26		3	ALU RRH-2x60-AWS			
27		3	ALU RRH-2x60-PCS			
28		3	ALU RRH-2X60W-700U			
29		1	RFS DB-T1-6Z-8AB-OZ Box			
30		1	GPS			
31	82.0	1	GPS	Pipe	(2) 1/2"	Sprint Nextel

## 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
5	166.0	3	Cci Antennas DMP65R-BU6DA Panel	(3) Commscope SFG22HDX Mount	(6) 1 5/8" (4) 3/4" DC (2) 1/2" Fiber (1) 3" Conduit [(4) existing DC & (2) existing fiber in (1) 3" conduit]	AT&T
6		3	Cci Antennas OPA65R-BU6DA Panel			
7		3	Quintel QS66512-2 Panel			
8		3	Ericsson 8843 B2/B66A RRU			
9		6	CCI TPX-070821 Diplexer			
10		3	Ericsson RRUS-32 RRU			
11		3	Ericsson 4449 B5/B12 RRU			
12		3	Ericsson 4478 B14 RRU			
13		3	Commscope ION23 SDARS RRU			
14		3	Commscope CBC23SR-43 Combiners			
15		2	Raycap DC6-48-60-18-8F OVP			
16		1	Raycap DC6-48-60-0-8C-EV OVP			
17		1	Raycap DC6-48-60-18-8C-EV OVP			

See the attached coax layout for the line placement considered in the analysis.

## **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:

Tower Component	Legs	Diagonals	Horizontals
Max. Usage:	<b>44.9%</b>	<b>69.0%</b>	<b>4.0%</b>
Pass/Fail	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>

## **Foundations**

	Compression (Kips)	Uplift (Kips)	Shear (Kips)
Analysis Reactions	239.8	202.2	23.7

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):**

The maximum twist and sway of the microwave dishes under the operational wind speed as specified in the Analysis Criteria are listed in the table below:

Elevation (ft)	Antenna / Dish	Carrier	Twist (deg)	Sway (deg)
176.0	Andrew - VHLP2.5 - Dish	Sprint Nextel	0.005	0.170

It is recommended that the carriers review the twist and sway values of the microwave dishes.

## **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 structural analysis was performance based upon the evidence available at the time of this report. All information provided by the client is considered to be accurate.
3. 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.
4. 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.
5. 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.
6. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

**Structure: CT04382-S-SBA**

**Site Name:** New Britain 2, CT

**Code:** EIA/TIA-222-G

6/29/2020

**Type:** Self Support      **Base Shape:** Triangle

**Basic WS:** 97.00

**Height:** 176.00 (ft)      **Base Width:** 21.00

**Basic Ice WS:** 50.00

**Base Elev:** 0.00 (ft)      **Top Width:** 4.69

**Operational WS:** 60.00

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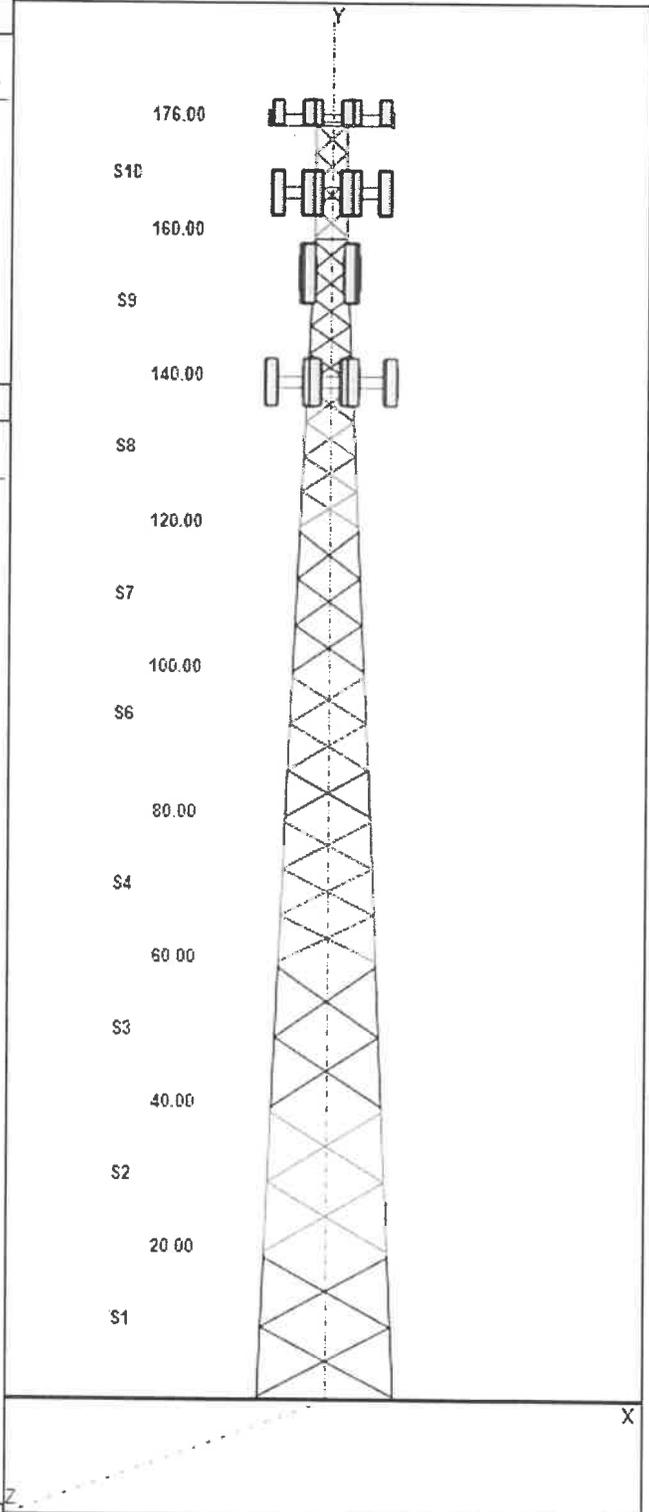
**Section Properties**

Sect	Leg Members	Diagonal Members	Horizontal Members
1	PX 8" DIA PIPE	SAE 4X4X0.25	
2	PX 8" DIA PIPE	SAE 3.5X3.5X0.25	
3	PSP ROHN 8 EHS	SAE 3.5X3.5X0.25	
4	PX 6" DIA PIPE	SAE 3X3X0.25	
5	PX 6" DIA PIPE	MOD 2L2.5x2.5x3/16_S	
6	PX 6" DIA PIPE	SAE 2.5X2.5X0.1875	
7	PSP ROHN 6 EHS	SAE 2.5X2.5X0.1875	
8	PX 5" DIA PIPE	SAE 2X2X0.1875	
9	PX 4" DIA PIPE	SAE 2X2X0.1875	SAE 2X2X0.1875
10	PX 3" DIA PIPE	SAE 2X2X0.25	SAE 2X2X0.25

**Discrete Appurtenances**

Attach Elev (ft)	Force Elev (ft)	Qty	Description
176.00	179.00	1	Lightning Rod
176.00	176.00	1	Beacon
176.00	176.00	3	Light Sector Frame
176.00	176.00	1	(3) SFS-H-L (V-Braces)
176.00	177.00	4	VHLP2.5
176.00	177.00	3	Horizon Duo
176.00	177.00	3	840 10054
176.00	177.00	3	U-RAS Flexible FRH
166.00	166.00	6	CCI TPX-070821 Diplexer
166.00	166.00	3	Ericsson 4449 B5/B12
166.00	166.00	3	Ericsson 4478 B14
166.00	166.00	3	CBC23SR-43 Combiners
166.00	166.00	3	ION23 SDARS
166.00	166.00	1	DC6-48-60-0-8C-EV
166.00	166.00	1	DC6-48-60-18-8C-EV
166.00	166.00	3	DMP65R-BU6DA
166.00	166.00	3	OPA65R-BU6DA
166.00	166.00	3	SFG22HDX Mount
166.00	166.00	3	QS66512-2
166.00	166.00	3	Ericsson RRUS-32
166.00	166.00	2	Raycap DC6-48-60-18-8F
166.00	166.00	3	8843 B25/B66A
155.00	155.00	3	LNx-6515DS-A1M
155.00	155.00	3	AIR 21 B2A/B4P
155.00	155.00	3	KRY 112 144/1
155.00	155.00	3	AIR 21 B4A/B2P
155.00	155.00	3	RRUS-11
140.00	140.00	1	GPS
140.00	140.00	3	Sector Frame-Pipe
140.00	140.00	6	SBNHH-1D65B
140.00	140.00	3	800 10735
140.00	140.00	3	BXA-80080-4CF
140.00	140.00	3	RRH-2X60-AWS
140.00	140.00	3	RRH-2X60-PCS
140.00	140.00	3	RRH-2x60-700U
140.00	140.00	1	DB-T1-6Z-8AB-0Z Box
82.00	82.00	1	GPS

**Linear Appurtenances**



**Structure: CT04382-S-SBA**

**Site Name:** New Britain 2, CT

**Code:** EIA/TIA-222-G

6/29/2020

**Type:** Self Support      **Base Shape:** Triangle

**Basic WS:** 97.00

**Height:** 176.00 (ft)      **Base Width:** 21.00

**Basic Ice WS:** 50.00

**Base Elev:** 0.00 (ft)      **Top Width:** 4.69

**Operational WS:** 60.00

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Elev From (ft)	Elev To (ft)	Qty	Description
152.00	176.00	4	1/2" Fiber
152.00	176.00	6	5/16" Fiber
152.00	176.00	1	5/16" RET
152.00	176.00	1	W/G Ladder
0.00	166.00	6	1 5/8" Coax
0.00	166.00	2	1/2" Fiber
0.00	166.00	1	3" Conduit
0.00	166.00	4	3/4" DC
0.00	162.00	1	W/G Ladder
0.00	155.00	12	1 5/8" Coax
0.00	155.00	1	1 5/8" Fiber
0.00	152.00	1	W/G Ladder
0.00	140.00	12	1 5/8" Coax
0.00	140.00	2	1 5/8" Hybrid
0.00	140.00	1	1/2" Coax
0.00	82.00	1	1/2" Coax

**Base Reactions**

Leg	Overturning
Max Uplift: -202.17 (kips)	Moment: 4064.48 (ft-kips)
Max Down: 239.85 (kips)	Total Down: 49.09 (kips)
Max Shear: 23.69 (kips)	Total Shear: 38.07 (kips)

Structure: CT04382-S-SBA

Site Name: New Britain 2, CT

Type: Self Support

Height: 176.00 (ft)

Base Elev: 0.00 (ft)

Base Shape: Triangle

Base Width: 21.00

Top Width: 4.69

Code: EIA/TIA-222-G

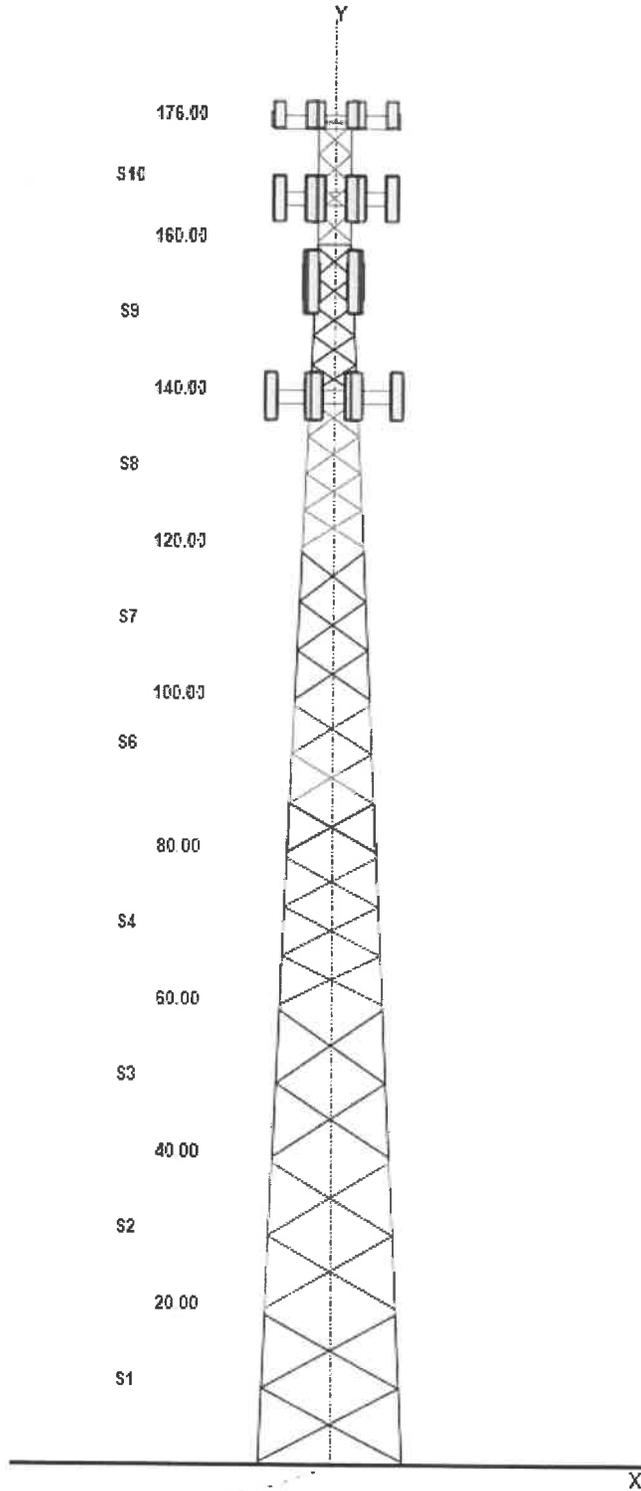
Basic WS: 97.00

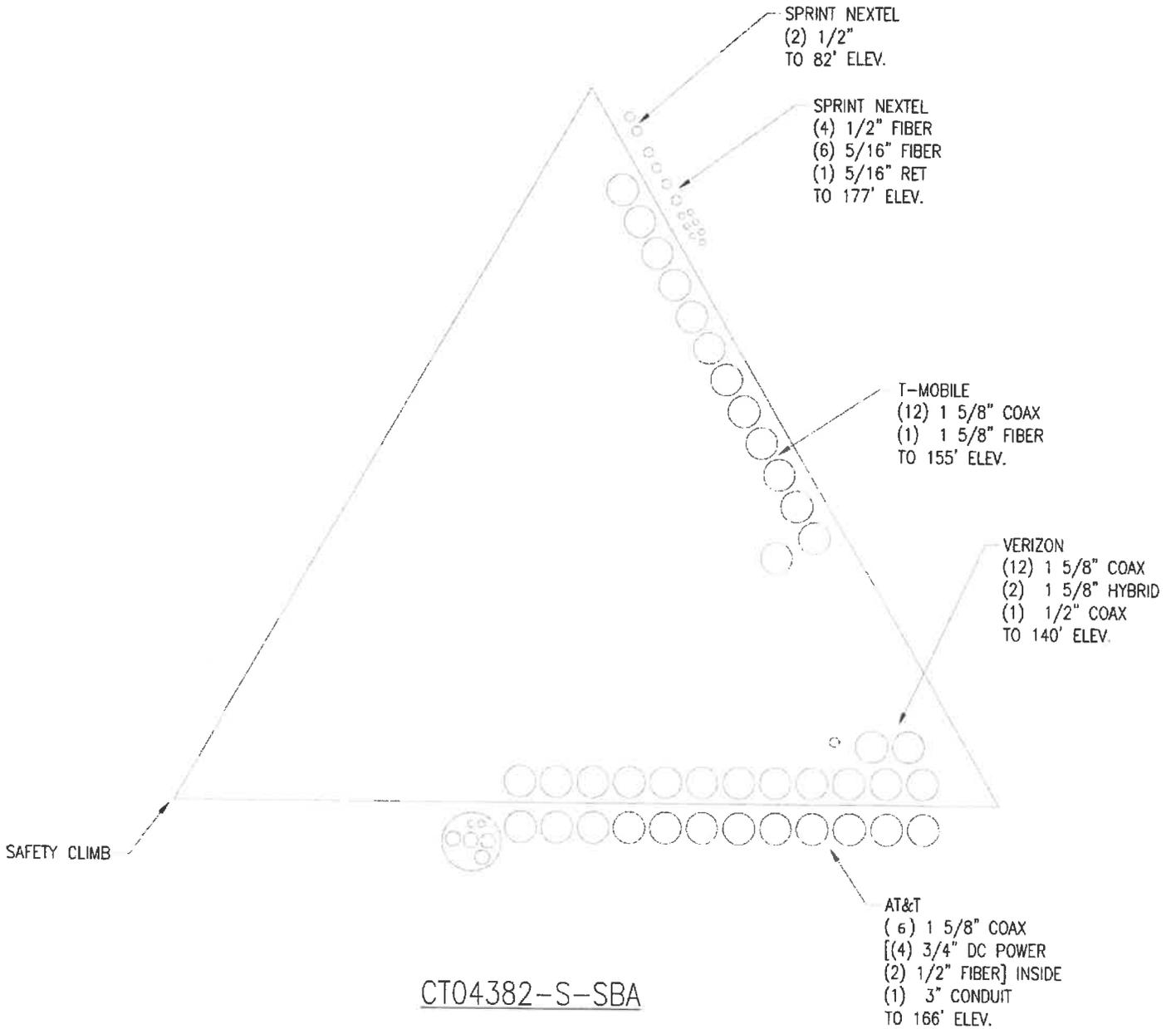
Basic Ice WS: 50.00

Operational WS: 60.00

6/29/2020

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## Loading Summary

<b>Structure:</b> CT04382-S-SBA	<b>Code:</b> EIA/TIA-222-G	6/29/2020
<b>Site Name:</b> New Britain 2, CT	<b>Exposure:</b> B	
<b>Height:</b> 176.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> C - Very Dense Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



### Discrete Appurtenances Properties

Attach Elev (ft)	Description	Qty	No Ice		Ice		Len (in)	Width (in)	Depth (in)	Ka	Orientation Factor	Vert Ecc (ft)
			Weight (lb)	CaAa (sf)	Weight (lb)	CaAa (sf)						
176.00	Lightning Rod	1	5.00	0.500	33.24	2.853	72.000	1.000	1.000	1.00	1.00	3.000
176.00	Beacon	1	36.00	2.720	215.62	4.000	28.000	17.500	17.500	1.00	1.00	0.000
176.00	Light Sector Frame	3	500.00	17.500	1441.39	36.281	0.000	0.000	0.000	0.75	0.75	0.000
176.00	(3) SFS-H-L (V-Braces)	1	230.00	6.700	663.04	16.161	0.000	0.000	0.000	0.75	1.00	0.000
176.00	VHLP2.5	4	27.00	4.680	158.97	6.398	26.100	26.100	13.200	1.00	1.00	1.000
176.00	Horizon Duo	3	10.60	0.430	40.99	1.119	4.700	7.500	7.500	0.80	0.67	1.000
176.00	840 10054	3	30.00	4.590	143.64	6.846	42.000	12.700	2.800	0.80	0.68	1.000
176.00	U-RAS Flexible FRH	3	33.00	1.820	89.17	3.134	16.000	11.600	5.000	0.80	0.67	1.000
166.00	CCI TPX-070821 Diplexer	6	7.50	0.720	31.18	1.550	9.650	5.830	2.050	0.80	0.50	0.000
166.00	Ericsson 4449 B5/B12	3	71.00	1.970	142.99	2.708	17.900	13.200	9.400	0.80	0.67	0.000
166.00	Ericsson 4478 B14	3	60.00	1.650	116.48	2.349	18.100	13.400	8.300	0.80	0.67	0.000
166.00	CBC23SR-43 Combiners	3	4.90	0.420	19.92	0.802	8.000	6.300	2.100	0.80	0.67	0.000
166.00	ION23 SDARS	3	48.00	1.730	116.82	2.466	32.700	6.100	5.800	0.80	0.67	0.000
166.00	DC6-48-60-0-8C-EV	1	26.20	4.780	299.43	5.973	31.400	10.240	10.240	1.00	1.00	0.000
166.00	DC6-48-60-18-8C-EV	1	26.20	4.780	299.43	5.973	31.400	18.300	10.240	1.00	1.00	0.000
166.00	DMP65R-BU6DA	3	79.40	12.710	476.60	14.684	71.200	20.700	7.700	0.80	0.72	0.000
166.00	OPA65R-BU6DA	3	60.20	12.810	473.16	14.918	71.200	21.000	7.800	0.80	0.73	0.000
166.00	SFG22HDX Mount	3	661.00	19.000	1532.16	51.196	0.000	0.000	0.000	0.75	0.75	0.000
166.00	QS66512-2	3	111.00	8.130	416.54	9.921	72.000	12.000	9.600	0.80	0.92	0.000
166.00	Ericsson RRUS-32	3	77.00	3.870	221.97	5.692	20.900	9.500	3.300	0.80	0.67	0.000
166.00	Raycap DC6-48-60-18-8F	2	32.80	0.920	118.79	1.511	24.000	11.000	18.500	0.90	0.75	0.000
166.00	8843 B25/B66A	3	72.00	1.640	135.17	2.310	14.900	13.200	10.900	0.80	0.67	0.000
155.00	LNX-6515DS-A1M	3	49.80	11.470	355.87	15.826	96.400	11.900	7.100	0.80	0.80	0.000
155.00	AIR 21 B2A/B4P	3	91.50	6.090	314.13	7.581	55.900	12.000	7.800	0.80	0.86	0.000
155.00	KRY 112 144/1	3	11.00	0.410	25.38	1.044	6.900	6.100	2.700	0.80	0.67	0.000
155.00	AIR 21 B4A/B2P	3	90.40	6.090	330.35	7.585	56.000	12.100	7.900	0.80	0.86	0.000
155.00	RRUS-11	3	51.00	2.520	147.36	3.364	17.800	17.000	7.200	0.80	0.67	0.000
140.00	GPS	1	10.00	1.000	48.54	1.936	12.000	9.000	6.000	1.00	1.00	0.000
140.00	Sector Frame-Pipe	3	450.00	14.000	912.45	23.249	0.000	0.000	0.000	0.75	0.75	0.000
140.00	SBNHH-1D65B	6	40.00	8.160	314.13	9.905	72.600	11.900	7.100	0.80	0.83	0.000
140.00	800 10735	3	28.70	8.620	230.29	12.504	76.100	11.900	3.900	0.80	0.66	0.000
140.00	BXA-80080-4CF	3	48.20	4.800	527.57	7.262	48.200	11.200	5.900	0.80	0.76	0.000
140.00	RRH-2X60-AWS	3	55.00	3.500	160.17	4.537	21.000	11.500	7.000	0.80	0.67	0.000
140.00	RRH-2X60-PCS	3	55.00	2.200	145.64	3.209	21.000	12.000	7.000	0.80	0.67	0.000
140.00	RRH-2x60-700U	3	19.50	1.510	78.90	2.203	21.600	12.000	9.000	0.80	0.67	0.000
140.00	DB-T1-6Z-8AB-0Z Box	1	18.90	4.800	178.05	7.002	24.000	24.000	10.000	1.00	1.00	0.000
82.00	GPS	1	10.00	1.000	46.86	1.895	12.000	9.000	6.000	1.00	1.00	0.000
<b>Totals:</b>		<b>101</b>	<b>9,125.50</b>		<b>30,514.83</b>						<b>Number of Appurtenances :</b>	<b>37</b>

## Loading Summary

<b>Structure:</b> CT04382-S-SBA	<b>Code:</b> EIA/TIA-222-G	6/29/2020
<b>Site Name:</b> New Britain 2, CT	<b>Exposure:</b> B	
<b>Height:</b> 176.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> C - Very Dense Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



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### Linear Appurtenances Properties

Elev. From (ft)	Elev. To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out of Zone	Spacing (in)	Orientation Factor	Ka Override
152.00	176.00	1/2" Fiber	4	0.50	0.16	50.00	3	Block		N	0.50	0.94	
152.00	176.00	5/16" Fiber	6	0.32	0.95	100.00	3	Individual IR		N	0.50	0.64	
152.00	176.00	5/16" RET	1	0.32	0.08	100.00	3	Individual NR		N	1.00	1.00	
152.00	176.00	W/G Ladder	1	2.00	6.00	100.00	3	Individual NR		N	0.50	1.00	
0.00	166.00	1 5/8" Coax	6	1.98	1.04	100.00	1	Individual IR		N	0.50	1.00	
0.00	166.00	1/2" Fiber	2	0.50	0.16	100.00	1	Individual IR		N	0.50	1.00	0
0.00	166.00	3" Conduit	1	3.02	1.78	100.00	1	Individual NR		N	0.50	1.00	0
0.00	166.00	3/4" DC	4	0.75	0.40	50.00	1	Block		N	0.50	1.00	0
0.00	162.00	W/G Ladder	1	0.25	6.00	100.00	1	Individual NR		N	0.50	1.00	
0.00	155.00	1 5/8" Coax	12	1.98	1.04	100.00	3	Individual IR		N	0.50	0.42	
0.00	155.00	1 5/8" Fiber	1	2.00	1.10	50.00	3	Block		N	0.50	0.96	
0.00	152.00	W/G Ladder	1	0.25	6.00	100.00	3	Individual NR		N	0.50	1.00	
0.00	140.00	1 5/8" Coax	12	1.98	1.04	100.00	1	Individual IR		N	0.50	1.00	0
0.00	140.00	1 5/8" Hybrid	2	2.00	1.10	100.00	1	Individual IR		N	0.50	1.00	0
0.00	140.00	1/2" Coax	1	0.65	0.16	100.00	1	Individual NR		N	1.00	1.00	
0.00	82.00	1/2" Coax	1	0.65	0.16	100.00	1	Individual NR		N	1.00	1.00	

## Section Forces

**Structure:** CT04382-S-SBA  
**Site Name:** New Britain 2, CT  
**Height:** 176.00 (ft)  
**Base Elev:** 0.000 (ft)  
**Gh:** 0.85

**Topography:** 1

**Code:** EIA/TIA-222-G  
**Exposure:** B  
**Crest Height:** 0.00  
**Site Class:** C - Very Dense Soil  
**Struct Class:** II

6/29/2020



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**Load Case:** 1.2D + 1.6W Normal Wind

1.2D + 1.6W 97 mph Wind at Normal To Face

**Wind Load Factor:** 1.60  
**Dead Load Factor:** 1.20  
**Ice Dead Load Factor:** 0.00

**Wind Importance Factor:** 1.00  
**Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	Wind qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
1	10.0	14.33	28.639	28.80	0.00	0.14	2.81	1.00	1.00	0.00	41.32	122.03	0.00	6,454.4	0.0	2265.98	1013.10	3,279.08	
2	30.0	14.34	22.974	28.80	0.00	0.14	2.81	1.00	1.00	0.00	35.64	122.03	0.00	6,049.4	0.0	1957.29	1013.96	2,971.24	
3	50.0	16.60	20.940	28.80	0.00	0.15	2.78	1.00	1.00	0.00	33.15	122.03	0.00	5,157.3	0.0	2076.81	1173.29	3,250.10	
4	70.0	18.27	22.213	22.12	0.00	0.15	2.76	1.00	1.00	0.00	32.88	122.03	0.00	4,899.0	0.0	2255.93	1291.68	3,547.61	
5	83.4	19.21	0.000	17.99	0.00	0.20	2.59	1.00	1.00	0.00	9.80	41.18	0.00	1,739.8	0.0	663.12	456.28	1,119.39	
6	93.4	19.84	10.586	14.61	0.00	0.16	2.74	1.00	1.00	0.00	17.51	79.88	0.00	2,744.9	0.0	1296.87	912.38	2,209.25	
7	110.0	20.79	14.081	22.12	0.00	0.17	2.69	1.00	1.00	0.00	24.58	120.95	0.00	3,639.5	0.0	1868.66	1447.68	3,316.34	
8	130.0	21.81	11.695	18.58	0.00	0.18	2.66	1.00	1.00	0.00	21.17	120.95	0.00	3,356.5	0.0	1669.70	1518.45	3,188.15	
9	150.0	22.72	11.717	15.03	0.00	0.22	2.54	1.00	1.00	0.00	20.03	66.53	0.00	2,567.1	0.0	1573.00	1404.41	2,977.42	
10	168.0	23.47	8.438	9.33	0.00	0.22	2.53	1.00	1.00	0.00	13.84	16.64	0.00	1,526.8	0.0	1115.49	398.20	1,513.68	
														<b>38,134.7</b>	<b>0.0</b>				<b>27,372.27</b>

**Load Case:** 1.2D + 1.6W 60° Wind

1.2D + 1.6W 97 mph Wind at 60° From Face

**Wind Load Factor:** 1.60  
**Dead Load Factor:** 1.20  
**Ice Dead Load Factor:** 0.00

**Wind Importance Factor:** 1.00  
**Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	Wind qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
1	10.0	14.33	28.639	28.80	0.00	0.14	2.81	0.80	1.00	0.00	35.59	122.03	0.00	6,454.4	0.0	1951.84	1013.10	2,964.93	
2	30.0	14.34	22.974	28.80	0.00	0.14	2.81	0.80	1.00	0.00	31.05	122.03	0.00	6,049.4	0.0	1704.98	1013.96	2,718.93	
3	50.0	16.60	20.940	28.80	0.00	0.15	2.78	0.80	1.00	0.00	28.96	122.03	0.00	5,157.3	0.0	1814.40	1173.29	2,987.69	
4	70.0	18.27	22.213	22.12	0.00	0.15	2.76	0.80	1.00	0.00	28.43	122.03	0.00	4,899.0	0.0	1951.08	1291.68	3,242.76	
5	83.4	19.21	0.000	17.99	0.00	0.20	2.59	0.80	1.00	0.00	9.80	41.18	0.00	1,739.8	0.0	663.12	456.28	1,119.39	
6	93.4	19.84	10.586	14.61	0.00	0.16	2.74	0.80	1.00	0.00	15.39	79.88	0.00	2,744.9	0.0	1140.05	912.38	2,052.43	
7	110.0	20.79	14.081	22.12	0.00	0.17	2.69	0.80	1.00	0.00	21.76	120.95	0.00	3,639.5	0.0	1654.53	1447.68	3,102.21	
8	130.0	21.81	11.695	18.58	0.00	0.18	2.66	0.80	1.00	0.00	18.83	120.95	0.00	3,356.5	0.0	1485.25	1518.45	3,003.70	
9	150.0	22.72	11.717	15.03	0.00	0.22	2.54	0.80	1.00	0.00	17.69	66.53	0.00	2,567.1	0.0	1389.01	1404.41	2,793.42	
10	168.0	23.47	8.438	9.33	0.00	0.22	2.53	0.80	1.00	0.00	12.15	16.64	0.00	1,526.8	0.0	979.45	398.20	1,377.64	
														<b>38,134.7</b>	<b>0.0</b>				<b>25,363.12</b>

## Section Forces

**Structure:** CT04382-S-SBA  
**Site Name:** New Britain 2, CT  
**Height:** 176.00 (ft)  
**Base Elev:** 0.000 (ft)  
**Gh:** 0.85

**Topography:** 1

**Code:** EIA/TIA-222-G  
**Exposure:** B  
**Crest Height:** 0.00  
**Site Class:** C - Very Dense Soil  
**Struct Class:** II

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**Load Case:** 1.2D + 1.6W 90° Wind

1.2D + 1.6W 97 mph Wind at 90° From Face

**Wind Load Factor:** 1.60  
**Dead Load Factor:** 1.20  
**Ice Dead Load Factor:** 0.00

**Wind Importance Factor:** 1.00  
**Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	Wind qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	14.33	28.639	28.80	0.00	0.14	2.81	0.85	1.00	0.00	37.02	122.03	0.00	6,454.4	0.0	2030.37	1013.10	3,043.47
2	30.0	14.34	22.974	28.80	0.00	0.14	2.81	0.85	1.00	0.00	32.20	122.03	0.00	6,049.4	0.0	1768.05	1013.96	2,782.01
3	50.0	16.60	20.940	28.80	0.00	0.15	2.78	0.85	1.00	0.00	30.00	122.03	0.00	5,157.3	0.0	1880.01	1173.29	3,053.29
4	70.0	18.27	22.213	22.12	0.00	0.15	2.76	0.85	1.00	0.00	29.55	122.03	0.00	4,899.0	0.0	2027.29	1291.68	3,318.97
5	83.4	19.21	0.000	17.99	0.00	0.20	2.59	0.85	1.00	0.00	9.80	41.18	0.00	1,739.8	0.0	663.12	456.28	1,119.39
6	93.4	19.84	10.586	14.61	0.00	0.16	2.74	0.85	1.00	0.00	15.92	79.88	0.00	2,744.9	0.0	1179.25	912.38	2,091.63
7	110.0	20.79	14.081	22.12	0.00	0.17	2.69	0.85	1.00	0.00	22.46	120.95	0.00	3,639.5	0.0	1708.07	1447.68	3,155.75
8	130.0	21.81	11.695	18.58	0.00	0.18	2.66	0.85	1.00	0.00	19.42	120.95	0.00	3,356.5	0.0	1531.36	1518.45	3,049.81
9	150.0	22.72	11.717	15.03	0.00	0.22	2.54	0.85	1.00	0.00	18.28	66.53	0.00	2,567.1	0.0	1435.01	1404.41	2,839.42
10	168.0	23.47	8.438	9.33	0.00	0.22	2.53	0.85	1.00	0.00	12.57	16.64	0.00	1,526.8	0.0	1013.46	398.20	1,411.65
														<b>38,134.7</b>	<b>0.0</b>			<b>25,865.41</b>

**Load Case:** 0.9D + 1.6W Normal Wind

0.9D + 1.6W 97 mph Wind at Normal To Face

**Wind Load Factor:** 1.60  
**Dead Load Factor:** 0.90  
**Ice Dead Load Factor:** 0.00

**Wind Importance Factor:** 1.00  
**Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	Wind qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	14.33	28.639	28.80	0.00	0.14	2.81	1.00	1.00	0.00	41.32	122.03	0.00	4,840.8	0.0	2265.98	1013.10	3,279.08
2	30.0	14.34	22.974	28.80	0.00	0.14	2.81	1.00	1.00	0.00	35.64	122.03	0.00	4,537.0	0.0	1957.29	1013.96	2,971.24
3	50.0	16.60	20.940	28.80	0.00	0.15	2.78	1.00	1.00	0.00	33.15	122.03	0.00	3,868.0	0.0	2076.81	1173.29	3,250.10
4	70.0	18.27	22.213	22.12	0.00	0.15	2.76	1.00	1.00	0.00	32.88	122.03	0.00	3,674.3	0.0	2255.93	1291.68	3,547.61
5	83.4	19.21	0.000	17.99	0.00	0.20	2.59	1.00	1.00	0.00	9.80	41.18	0.00	1,304.9	0.0	663.12	456.28	1,119.39
6	93.4	19.84	10.586	14.61	0.00	0.16	2.74	1.00	1.00	0.00	17.51	79.88	0.00	2,058.7	0.0	1296.87	912.38	2,209.25
7	110.0	20.79	14.081	22.12	0.00	0.17	2.69	1.00	1.00	0.00	24.58	120.95	0.00	2,729.6	0.0	1868.66	1447.68	3,316.34
8	130.0	21.81	11.695	18.58	0.00	0.18	2.66	1.00	1.00	0.00	21.17	120.95	0.00	2,517.3	0.0	1669.70	1518.45	3,188.15
9	150.0	22.72	11.717	15.03	0.00	0.22	2.54	1.00	1.00	0.00	20.03	66.53	0.00	1,925.3	0.0	1573.00	1404.41	2,977.42
10	168.0	23.47	8.438	9.33	0.00	0.22	2.53	1.00	1.00	0.00	13.84	16.64	0.00	1,145.1	0.0	1115.49	398.20	1,513.68
														<b>28,601.0</b>	<b>0.0</b>			<b>27,372.27</b>

## Section Forces

**Structure:** CT04382-S-SBA  
**Site Name:** New Britain 2, CT  
**Height:** 176.00 (ft)  
**Base Elev:** 0.000 (ft)  
**Gh:** 0.85

**Code:** EIA/TIA-222-G  
**Exposure:** B  
**Crest Height:** 0.00  
**Site Class:** C - Very Dense Soil  
**Struct Class:** II

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**Load Case:** 0.9D + 1.6W 60° Wind

0.9D + 1.6W 97 mph Wind at 60° From Face

**Wind Load Factor:** 1.60  
**Dead Load Factor:** 0.90  
**Ice Dead Load Factor:** 0.00

**Wind Importance Factor:** 1.00  
**Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	Wind qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	14.33	28.639	28.80	0.00	0.14	2.81	0.80	1.00	0.00	35.59	122.03	0.00	4,840.8	0.0	1951.84	1013.10	2,964.93
2	30.0	14.34	22.974	28.80	0.00	0.14	2.81	0.80	1.00	0.00	31.05	122.03	0.00	4,537.0	0.0	1704.98	1013.96	2,718.93
3	50.0	16.60	20.940	28.80	0.00	0.15	2.78	0.80	1.00	0.00	28.96	122.03	0.00	3,868.0	0.0	1814.40	1173.29	2,987.69
4	70.0	18.27	22.213	22.12	0.00	0.15	2.76	0.80	1.00	0.00	28.43	122.03	0.00	3,674.3	0.0	1951.08	1291.68	3,242.76
5	83.4	19.21	0.000	17.99	0.00	0.20	2.59	0.80	1.00	0.00	9.80	41.18	0.00	1,304.9	0.0	663.12	456.28	1,119.39
6	93.4	19.84	10.586	14.61	0.00	0.16	2.74	0.80	1.00	0.00	15.39	79.88	0.00	2,058.7	0.0	1140.05	912.38	2,052.43
7	110.0	20.79	14.081	22.12	0.00	0.17	2.69	0.80	1.00	0.00	21.76	120.95	0.00	2,729.6	0.0	1654.53	1447.68	3,102.21
8	130.0	21.81	11.695	18.58	0.00	0.18	2.66	0.80	1.00	0.00	18.83	120.95	0.00	2,517.3	0.0	1485.25	1518.45	3,003.70
9	150.0	22.72	11.717	15.03	0.00	0.22	2.54	0.80	1.00	0.00	17.69	66.53	0.00	1,925.3	0.0	1389.01	1404.41	2,793.42
10	168.0	23.47	8.438	9.33	0.00	0.22	2.53	0.80	1.00	0.00	12.15	16.64	0.00	1,145.1	0.0	979.45	398.20	1,377.64
														<b>28,601.0</b>	<b>0.0</b>			<b>25,363.12</b>

**Load Case:** 0.9D + 1.6W 90° Wind

0.9D + 1.6W 97 mph Wind at 90° From Face

**Wind Load Factor:** 1.60  
**Dead Load Factor:** 0.90  
**Ice Dead Load Factor:** 0.00

**Wind Importance Factor:** 1.00  
**Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	Wind qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	14.33	28.639	28.80	0.00	0.14	2.81	0.85	1.00	0.00	37.02	122.03	0.00	4,840.8	0.0	2030.37	1013.10	3,043.47
2	30.0	14.34	22.974	28.80	0.00	0.14	2.81	0.85	1.00	0.00	32.20	122.03	0.00	4,537.0	0.0	1768.05	1013.96	2,782.01
3	50.0	16.60	20.940	28.80	0.00	0.15	2.78	0.85	1.00	0.00	30.00	122.03	0.00	3,868.0	0.0	1880.01	1173.29	3,053.29
4	70.0	18.27	22.213	22.12	0.00	0.15	2.76	0.85	1.00	0.00	29.55	122.03	0.00	3,674.3	0.0	2027.29	1291.68	3,318.97
5	83.4	19.21	0.000	17.99	0.00	0.20	2.59	0.85	1.00	0.00	9.80	41.18	0.00	1,304.9	0.0	663.12	456.28	1,119.39
6	93.4	19.84	10.586	14.61	0.00	0.16	2.74	0.85	1.00	0.00	15.92	79.88	0.00	2,058.7	0.0	1179.25	912.38	2,091.63
7	110.0	20.79	14.081	22.12	0.00	0.17	2.69	0.85	1.00	0.00	22.46	120.95	0.00	2,729.6	0.0	1708.07	1447.68	3,155.75
8	130.0	21.81	11.695	18.58	0.00	0.18	2.66	0.85	1.00	0.00	19.42	120.95	0.00	2,517.3	0.0	1531.36	1518.45	3,049.81
9	150.0	22.72	11.717	15.03	0.00	0.22	2.54	0.85	1.00	0.00	18.28	66.53	0.00	1,925.3	0.0	1435.01	1404.41	2,839.42
10	168.0	23.47	8.438	9.33	0.00	0.22	2.53	0.85	1.00	0.00	12.57	16.64	0.00	1,145.1	0.0	1013.46	398.20	1,411.65
														<b>28,601.0</b>	<b>0.0</b>			<b>25,865.41</b>

## Section Forces

**Structure:** CT04382-S-SBA  
**Site Name:** New Britain 2, CT  
**Height:** 176.00 (ft)  
**Base Elev:** 0.000 (ft)  
**Gh:** 0.85

**Topography:** 1

**Code:** EIA/TIA-222-G  
**Exposure:** B  
**Crest Height:** 0.00  
**Site Class:** C - Very Dense Soil  
**Struct Class:** II

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**Load Case:** 1.2D + 1.0Di + 1.0Wi Normal Wind

1.2D + 1.0Di + 1.0Wi 50 mph Wind at Normal From Face

Wind Load Factor: 1.00

Wind Importance Factor: 1.00

Dead Load Factor: 1.20

Ice Dead Load Factor: 1.00

Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total	Total	Ice	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear	Linear	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
			Flat Area (sqft)	Round Area (sqft)	Round Area (sqft)							Area (sqft)	Area (sqft)					
1	10.0	3.81	28.639	66.92	38.12	0.23	2.51	1.00	1.00	1.77	67.44	199.45	17.75	15,747.	9292.8	547.27	308.06	855.34
2	30.0	3.81	22.974	68.98	40.18	0.24	2.46	1.00	1.00	1.98	63.19	205.63	19.81	15,915.	9866.5	504.26	323.28	827.54
3	50.0	4.41	20.940	68.67	39.87	0.26	2.40	1.00	1.00	2.08	61.33	201.80	27.80	15,340.	10182.8	551.76	381.71	933.47
4	70.0	4.86	22.213	69.64	47.52	0.31	2.27	1.00	1.00	2.16	64.12	203.70	28.75	15,531.	10632.3	601.34	418.36	1,019.70
5	83.4	5.10	0.000	33.28	15.29	0.36	2.14	1.00	1.00	2.19	20.93	69.26	8.18	5,629.8	3890.0	194.52	140.21	334.72
6	93.4	5.27	10.586	44.01	29.40	0.33	2.22	1.00	1.00	2.22	37.39	134.92	14.66	9,310.0	6565.1	371.55	281.15	652.71
7	110.0	5.52	14.081	63.84	41.72	0.36	2.15	1.00	1.00	2.26	53.64	205.27	22.56	13,426.	9787.0	541.57	444.47	986.05
8	130.0	5.79	11.695	62.14	43.57	0.42	2.02	1.00	1.00	2.29	51.88	206.29	22.94	12,891.	9534.8	516.06	444.47	960.53
9	150.0	6.04	11.717	59.43	44.41	0.54	1.85	1.00	1.00	2.33	53.84	130.87	16.68	9,955.8	7388.7	511.33	354.37	865.71
10	168.0	6.23	8.438	42.77	33.44	0.59	1.81	1.00	1.00	2.35	40.03	48.15	8.63	5,543.8	4017.0	383.85	151.67	535.52
														119,291.6	81156.9			7,971.28

**Load Case:** 1.2D + 1.0Di + 1.0Wi 60° Wind

1.2D + 1.0Di + 1.0Wi 50 mph Wind at 60° From Face

Wind Load Factor: 1.00

Wind Importance Factor: 1.00

Dead Load Factor: 1.20

Ice Dead Load Factor: 1.00

Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total	Total	Ice	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear	Linear	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
			Flat Area (sqft)	Round Area (sqft)	Round Area (sqft)							Area (sqft)	Area (sqft)					
1	10.0	3.81	28.639	66.92	38.12	0.23	2.51	0.80	1.00	1.77	61.71	199.45	17.75	15,747.	9292.8	500.79	308.06	808.85
2	30.0	3.81	22.974	68.98	40.18	0.24	2.46	0.80	1.00	1.98	58.59	205.63	19.81	15,915.	9866.5	467.60	323.28	790.87
3	50.0	4.41	20.940	68.67	39.87	0.26	2.40	0.80	1.00	2.08	57.14	201.80	27.80	15,340.	10182.8	514.09	381.71	895.80
4	70.0	4.86	22.213	69.64	47.52	0.31	2.27	0.80	1.00	2.16	59.68	203.70	28.75	15,531.	10632.3	559.67	418.36	978.04
5	83.4	5.10	0.000	33.28	15.29	0.36	2.14	0.80	1.00	2.19	20.93	69.26	8.18	5,629.8	3890.0	194.52	140.21	334.72
6	93.4	5.27	10.586	44.01	29.40	0.33	2.22	0.80	1.00	2.22	35.27	134.92	14.66	9,310.0	6565.1	350.51	281.15	631.67
7	110.0	5.52	14.081	63.84	41.72	0.36	2.15	0.80	1.00	2.26	50.82	205.27	22.56	13,426.	9787.0	513.14	444.47	957.61
8	130.0	5.79	11.695	62.14	43.57	0.42	2.02	0.80	1.00	2.29	49.54	206.29	22.94	12,891.	9534.8	492.79	444.47	937.26
9	150.0	6.04	11.717	59.43	44.41	0.54	1.85	0.80	1.00	2.33	51.50	130.87	16.68	9,955.8	7388.7	489.07	354.37	843.45
10	168.0	6.23	8.438	42.77	33.44	0.59	1.81	0.80	1.00	2.35	38.34	48.15	8.63	5,543.8	4017.0	367.67	151.67	519.34
														119,291.6	81156.9			7,697.61

## Section Forces

<b>Structure:</b> CT04382-S-SBA	<b>Code:</b> EIA/TIA-222-G	<b>6/29/2020</b>
<b>Site Name:</b> New Britain 2, CT	<b>Exposure:</b> B	
<b>Height:</b> 176.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> C - Very Dense Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 1.2D + 1.0Di + 1.0Wi 90° Wind	1.2D + 1.0Di + 1.0Wi 50 mph Wind at 90° From Face
<b>Wind Load Factor:</b> 1.00	<b>Wind Importance Factor:</b> 1.00
<b>Dead Load Factor:</b> 1.20	<b>Ice Importance Factor:</b> 1.00
<b>Ice Dead Load Factor:</b> 1.00	

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
1	10.0	3.81	28.639	66.92	38.12	0.23	2.51	0.85	1.00	1.77	63.14	199.45	17.75	15,747.	9292.8	512.41	308.06	820.47	
2	30.0	3.81	22.974	68.98	40.18	0.24	2.46	0.85	1.00	1.98	59.74	205.63	19.81	15,915.	9866.5	476.76	323.28	800.04	
3	50.0	4.41	20.940	68.67	39.87	0.26	2.40	0.85	1.00	2.08	58.19	201.80	27.80	15,340.	10182.8	523.51	381.71	905.22	
4	70.0	4.86	22.213	69.64	47.52	0.31	2.27	0.85	1.00	2.16	60.79	203.70	28.75	15,531.	10632.3	570.09	418.36	988.45	
5	83.4	5.10	0.000	33.28	15.29	0.36	2.14	0.85	1.00	2.19	20.93	69.26	8.18	5,629.8	3890.0	194.52	140.21	334.72	
6	93.4	5.27	10.586	44.01	29.40	0.33	2.22	0.85	1.00	2.22	35.80	134.92	14.66	9,310.0	6565.1	355.77	281.15	636.93	
7	110.0	5.52	14.081	63.84	41.72	0.36	2.15	0.85	1.00	2.26	51.52	205.27	22.56	13,426.	9787.0	520.25	444.47	964.72	
8	130.0	5.79	11.695	62.14	43.57	0.42	2.02	0.85	1.00	2.29	50.12	206.29	22.94	12,891.	9534.8	498.61	444.47	943.08	
9	150.0	6.04	11.717	59.43	44.41	0.54	1.85	0.85	1.00	2.33	52.08	130.87	16.68	9,955.8	7388.7	494.64	354.37	849.01	
10	168.0	6.23	8.438	42.77	33.44	0.59	1.81	0.85	1.00	2.35	38.77	48.15	8.63	5,543.8	4017.0	371.71	151.67	523.39	
														<b>119,291.6</b>	<b>81156.9</b>				<b>7,766.03</b>

<b>Load Case:</b> 1.0D + 1.0W Normal Wind	1.0D + 1.0W 60 mph Wind at Normal To Face
<b>Wind Load Factor:</b> 1.00	<b>Wind Importance Factor:</b> 1.00
<b>Dead Load Factor:</b> 1.00	<b>Ice Importance Factor:</b> 1.00
<b>Ice Dead Load Factor:</b> 0.00	

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
1	10.0	5.48	28.639	28.80	0.00	0.14	2.81	1.00	1.00	0.00	44.39	122.03	0.00	5,378.6	0.0	582.18	242.27	824.44	
2	30.0	5.49	22.974	28.80	0.00	0.14	2.81	1.00	1.00	0.00	38.72	122.03	0.00	5,041.2	0.0	508.45	242.47	750.92	
3	50.0	6.35	20.940	28.80	0.00	0.15	2.78	1.00	1.00	0.00	36.36	122.03	0.00	4,297.7	0.0	544.84	280.57	825.41	
4	70.0	6.99	22.213	22.12	0.00	0.15	2.76	1.00	1.00	0.00	34.78	122.03	0.00	4,082.5	0.0	570.61	308.88	879.50	
5	83.4	7.35	0.000	17.99	0.00	0.20	2.59	1.00	1.00	0.00	10.58	41.18	0.00	1,449.9	0.0	171.24	109.11	280.35	
6	93.4	7.59	10.586	14.61	0.00	0.16	2.74	1.00	1.00	0.00	18.85	79.88	0.00	2,287.4	0.0	333.85	218.18	552.03	
7	110.0	7.96	14.081	22.12	0.00	0.17	2.69	1.00	1.00	0.00	26.56	120.95	0.00	3,032.9	0.0	482.97	346.19	829.16	
8	130.0	8.34	11.695	18.58	0.00	0.18	2.66	1.00	1.00	0.00	22.31	120.95	0.00	2,797.0	0.0	420.75	363.11	783.86	
9	150.0	8.69	11.717	15.03	0.00	0.22	2.54	1.00	1.00	0.00	20.40	66.53	0.00	2,139.3	0.0	382.96	335.84	718.80	
10	168.0	8.98	8.438	9.33	0.00	0.22	2.53	1.00	1.00	0.00	13.84	16.64	0.00	1,272.4	0.0	266.75	95.22	361.97	
														<b>31,778.9</b>	<b>0.0</b>				<b>6,806.45</b>

## Section Forces

**Structure:** CT04382-S-SBA  
**Site Name:** New Britain 2, CT  
**Height:** 176.00 (ft)  
**Base Elev:** 0.000 (ft)  
**Gh:** 0.85

**Topography:** 1

**Code:** EIA/TIA-222-G  
**Exposure:** B  
**Crest Height:** 0.00  
**Site Class:** C - Very Dense Soil  
**Struct Class:** II

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**Load Case:** 1.0D + 1.0W 60° Wind

1.0D + 1.0W 60 mph Wind at 60° From Face

**Wind Load Factor:** 1.00  
**Dead Load Factor:** 1.00  
**Ice Dead Load Factor:** 0.00

**Wind Importance Factor:** 1.00  
**Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total	Total	Ice	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
			Flat Area (sqft)	Round Area (sqft)	Round Area (sqft)													
1	10.0	5.48	28.639	28.80	0.00	0.14	2.81	0.80	1.00	0.00	38.66	122.03	0.00	5,378.6	0.0	507.05	242.27	749.32
2	30.0	5.49	22.974	28.80	0.00	0.14	2.81	0.80	1.00	0.00	34.13	122.03	0.00	5,041.2	0.0	448.12	242.47	690.59
3	50.0	6.35	20.940	28.80	0.00	0.15	2.78	0.80	1.00	0.00	32.17	122.03	0.00	4,297.7	0.0	482.09	280.57	762.66
4	70.0	6.99	22.213	22.12	0.00	0.15	2.76	0.80	1.00	0.00	30.33	122.03	0.00	4,082.5	0.0	497.72	308.88	806.60
5	83.4	7.35	0.000	17.99	0.00	0.20	2.59	0.80	1.00	0.00	10.58	41.18	0.00	1,449.9	0.0	171.24	109.11	280.35
6	93.4	7.59	10.586	14.61	0.00	0.16	2.74	0.80	1.00	0.00	16.73	79.88	0.00	2,287.4	0.0	296.35	218.18	514.53
7	110.0	7.96	14.081	22.12	0.00	0.17	2.69	0.80	1.00	0.00	23.75	120.95	0.00	3,032.9	0.0	431.76	346.19	777.95
8	130.0	8.34	11.695	18.58	0.00	0.18	2.66	0.80	1.00	0.00	19.97	120.95	0.00	2,797.0	0.0	376.64	363.11	739.75
9	150.0	8.69	11.717	15.03	0.00	0.22	2.54	0.80	1.00	0.00	18.05	66.53	0.00	2,139.3	0.0	338.96	335.84	674.80
10	168.0	8.98	8.438	9.33	0.00	0.22	2.53	0.80	1.00	0.00	12.15	16.64	0.00	1,272.4	0.0	234.22	95.22	329.44
														<b>31,778.9</b>	<b>0.0</b>	<b>6,326.00</b>		

**Load Case:** 1.0D + 1.0W 90° Wind

1.0D + 1.0W 60 mph Wind at 90° From Face

**Wind Load Factor:** 1.00  
**Dead Load Factor:** 1.00  
**Ice Dead Load Factor:** 0.00

**Wind Importance Factor:** 1.00  
**Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total	Total	Ice	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
			Flat Area (sqft)	Round Area (sqft)	Round Area (sqft)													
1	10.0	5.48	28.639	28.80	0.00	0.14	2.81	0.85	1.00	0.00	40.09	122.03	0.00	5,378.6	0.0	525.83	242.27	768.10
2	30.0	5.49	22.974	28.80	0.00	0.14	2.81	0.85	1.00	0.00	35.27	122.03	0.00	5,041.2	0.0	463.20	242.47	705.67
3	50.0	6.35	20.940	28.80	0.00	0.15	2.78	0.85	1.00	0.00	33.22	122.03	0.00	4,297.7	0.0	497.78	280.57	778.35
4	70.0	6.99	22.213	22.12	0.00	0.15	2.76	0.85	1.00	0.00	31.44	122.03	0.00	4,082.5	0.0	515.94	308.88	824.82
5	83.4	7.35	0.000	17.99	0.00	0.20	2.59	0.85	1.00	0.00	10.58	41.18	0.00	1,449.9	0.0	171.24	109.11	280.35
6	93.4	7.59	10.586	14.61	0.00	0.16	2.74	0.85	1.00	0.00	17.26	79.88	0.00	2,287.4	0.0	305.72	218.18	523.90
7	110.0	7.96	14.081	22.12	0.00	0.17	2.69	0.85	1.00	0.00	24.45	120.95	0.00	3,032.9	0.0	444.57	346.19	790.75
8	130.0	8.34	11.695	18.58	0.00	0.18	2.66	0.85	1.00	0.00	20.56	120.95	0.00	2,797.0	0.0	387.67	363.11	750.78
9	150.0	8.69	11.717	15.03	0.00	0.22	2.54	0.85	1.00	0.00	18.64	66.53	0.00	2,139.3	0.0	349.96	335.84	685.80
10	168.0	8.98	8.438	9.33	0.00	0.22	2.53	0.85	1.00	0.00	12.57	16.64	0.00	1,272.4	0.0	242.35	95.22	337.57
														<b>31,778.9</b>	<b>0.0</b>	<b>6,446.11</b>		

## Force/Stress Compression Summary

<b>Structure:</b> CT04382-S-SBA	<b>Code:</b> EIA/TIA-222-G	<b>6/29/2020</b>
<b>Site Name:</b> New Britain 2, CT	<b>Exposure:</b> B	
<b>Height:</b> 176.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> C - Very Dense Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



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### LEG MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing %			KL/R	Fy (ksi)	Mem Cap (kips)	Leg Use %	Controls
						X	Y	Z					
1	20	PX - 8" DIA PIPE	-234.33	1.2D + 1.6W Normal Wind	9.64	49	49	49	19.70	50.00	558.14	42.0	Member X
2	40	PX - 8" DIA PIPE	-218.42	1.2D + 1.6W Normal Wind	0.38	49	49	49	0.77	50.00	574.18	38.0	Member X
3	60	PSP - ROHN 8 EHS	-194.50	1.2D + 1.6W Normal Wind	0.38	48	48	48	0.74	50.00	437.38	44.5	Member X
4	80	PX - 6" DIA PIPE	-169.65	1.2D + 1.6W Normal Wind	0.38	48	48	48	0.99	50.00	377.97	44.9	Member X
5	86.79	PX - 6" DIA PIPE	-144.77	1.2D + 1.6W Normal Wind	0.38	48	48	48	0.99	50.00	377.97	38.3	Member X
6	100	PX - 6" DIA PIPE	-131.22	1.2D + 1.6W Normal Wind	6.43	48	48	48	16.90	50.00	370.18	35.4	Member X
7	120	PSP - ROHN 6 EHS	-117.24	1.2D + 1.6W Normal Wind	0.38	48	48	48	0.97	50.00	302.06	38.8	Member X
8	140	PX - 5" DIA PIPE	-87.41	1.2D + 1.6W Normal Wind	0.38	47	47	47	1.15	50.00	274.92	31.8	Member X
9	160	PX - 4" DIA PIPE	-52.13	1.2D + 1.6W Normal Wind	0.38	47	47	47	1.43	50.00	198.42	26.3	Member X
10	176	PX - 3" DIA PIPE	-18.94	1.2D + 1.6W Normal Wind	0.38	44	44	44	1.74	50.00	135.87	13.9	Member X

### Splices

Sect	Top Elev	Load Case	Top Splice				Load Case	Bottom Splice					
			Force (kips)	Cap (kips)	Use %	Bolt Type		Num Bolts	Force (kips)	Cap (kips)	Use %	Bolt Type	Num Bolts
1	20	1.2D + 1.6W Normal Wind	218.85	0.00	0.0		1.2D + 1.6W Normal Wind	240.38	0.00				
2	40	1.2D + 1.6W Normal Wind	195.01	0.00	0.0		1.2D + 1.6W Normal Wind	218.85	0.00		1 A325	8	
3	60	1.2D + 1.6W Normal Wind	170.07	0.00	0.0		1.2D + 1.6W Normal Wind	195.01	0.00		1 A325	8	
4	80	1.2D + 1.6W Normal Wind	145.13	0.00	0.0		1.2D + 1.6W Normal Wind	170.07	0.00		1 A325	8	
5	86.79	1.2D + 1.6W Normal Wind	135.06	0.00	0.0		1.2D + 1.6W Normal Wind	145.13	0.00		1 A325	6	
6	100	1.2D + 1.6W Normal Wind	117.56	0.00	0.0		1.2D + 1.6W Normal Wind	135.06	0.00		1 A325	6	
7	120	1.2D + 1.6W Normal Wind	87.65	0.00	0.0		1.2D + 1.6W Normal Wind	117.56	0.00		1 A325	6	
8	140	1.2D + 1.6W Normal Wind	53.27	0.00	0.0		1.2D + 1.6W Normal Wind	87.65	0.00		1 A325	6	
9	160	1.2D + 1.6W Normal Wind	19.25	0.00	0.0		1.2D + 1.6W Normal Wind	53.27	0.00		1 A325	4	
10	176	1.2D + 1.0Di + 1.0Wi Normal Wi	2.46	0.00	0.0		1.2D + 1.6W Normal Wind	19.25	0.00		7/8 A325	4	

### HORIZONTAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing %			KL/R	Fy (ksi)	Mem Cap (kips)	Num Bolts	Shear Bear			Controls
						X	Y	Z					Num Cap (kips)	Cap (kips)	Use %	
1	20									0.00	0	0				
2	40									0.00	0	0				
3	60									0.00	0	0				
4	80									0.00	0	0				
5	86.7									0.00	0	0				
6	100									0.00	0	0				
7	120									0.00	0	0				
8	140									0.00	0	0				
9	160	SAE - 2X2X0.1875	-0.28	0.9D + 1.6W Normal Wind	4.76	100	100	100	144.97	36.00	7.63	1	1	12.43	7.84	4 Member Z
10	176	SAE - 2X2X0.25	-0.28	1.2D + 1.6W 60° Wind	4.69	100	100	100	143.88	36.00	10.26	1	1	12.43	10.45	3 Member Z

### DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing %			KL/R	Fy (ksi)	Mem Cap (kips)	Num Bolts	Shear Bear			Controls
						X	Y	Z					Num Cap (kips)	Cap (kips)	Use %	
1	20	SAE - 4X4X0.25	-6.76	0.9D + 1.6W 90° Wind	21.76	50	50	50	164.26	36.00	16.24	1	1	17.89	12.6	54 Bolt Bear
2	40	SAE - 3.5X3.5X0.25	-6.39	1.2D + 1.6W 90° Wind	20.84	50	50	50	180.15	36.00	11.76	1	1	17.89	12.6	54 Member Z
3	60	SAE - 3.5X3.5X0.25	-6.34	1.2D + 1.6W 90° Wind	18.25	50	50	50	157.82	36.00	15.33	1	1	17.89	12.6	50 Bolt Bear
4	80	SAE - 3X3X0.25	-5.39	1.2D + 1.6W 90° Wind	14.76	50	50	50	149.57	36.00	14.54	1	1	17.89	12.6	43 Bolt Bear
5	86.7	MOD - 2L2.5x2.5x3/16	-5.35	1.2D + 1.6W 90° Wind	14.10	50	50	50	113.59	36.00	29.91	1	1	12.43		43 Bolt Shear
6	100	SAE - 2.5X2.5X0.1875	-5.41	1.2D + 1.6W 90° Wind	12.97	50	50	50	157.27	36.00	8.24	1	1	12.43	7.84	69 Bolt Bear

## Force/Stress Compression Summary

<b>Structure:</b> CT04382-S-SBA	<b>Code:</b> EIA/TIA-222-G	<b>6/29/2020</b>
<b>Site Name:</b> New Britain 2, CT	<b>Exposure:</b> B	
<b>Height:</b> 176.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> C - Very Dense Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



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### DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing %			Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	Use %	Controls
						X	Y	Z								
7	120	SAE - 2.5X2.5X0.1875	-5.32	1.2D + 1.6W 90° Wnd	11.28	50	50	50	136.73	36.00	10.90	1	1	12.43	7.84	68 Bolt Bear
8	140	SAE - 2X2X0.1875	-5.02	1.2D + 1.6W 90° Wnd	8.60	50	50	50	130.93	36.00	9.33	1	1	12.43	7.84	64 Bolt Bear
9	160	SAE - 2X2X0.1875	-3.44	1.2D + 1.6W 90° Wnd	7.64	50	50	50	117.23	36.00	11.16	1	1	12.43	7.84	44 Bolt Bear
10	176	SAE - 2X2X0.25	-3.44	1.2D + 1.6W 90° Wnd	6.09	50	50	50	100.10	36.00	17.97	1	1	12.43	10.4	33 Bolt Bear

## Force/Stress Tension Summary

<b>Structure:</b> CT04382-S-SBA	<b>Code:</b> EIA/TIA-222-G	<b>6/29/2020</b>
<b>Site Name:</b> New Britain 2, CT	<b>Exposure:</b> B	
<b>Height:</b> 176.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> C - Very Dense Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



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### LEG MEMBERS

Sect	Top Elev	Member	Force (kips)		Load Case	Mem			Controls
						Fy (ksi)	Cap (kips)	Leg Use %	
1	20	PX - 8" DIA PIPE	203.35	0.9D + 1.6W 60° Wind	50	574.20	35.4	Member	
2	40	PX - 8" DIA PIPE	185.72	0.9D + 1.6W 60° Wind	50	574.20	32.3	Member	
3	60	PSP - ROHN 8 EHS	166.62	0.9D + 1.6W 60° Wind	50	437.40	38.1	Member	
4	80	PX - 6" DIA PIPE	146.00	0.9D + 1.6W 60° Wind	50	378.00	38.6	Member	
5	86.792	PX - 6" DIA PIPE	125.07	0.9D + 1.6W 60° Wind	50	378.00	33.1	Member	
6	100	PX - 6" DIA PIPE	113.10	0.9D + 1.6W 60° Wind	50	378.00	29.9	Member	
7	120	PSP - ROHN 6 EHS	101.25	0.9D + 1.6W 60° Wind	50	302.09	33.5	Member	
8	140	PX - 5" DIA PIPE	74.53	0.9D + 1.6W 60° Wind	50	274.95	27.1	Member	
9	160	PX - 4" DIA PIPE	43.61	0.9D + 1.6W 60° Wind	50	198.45	22.0	Member	
10	176	PX - 3" DIA PIPE	13.20	0.9D + 1.6W 60° Wind	50	135.90	9.7	Member	

### Splices

Sect	Top Elev	Load Case	Top Splice					Bottom Splice					
			Force (kips)	Cap (kips)	Use %	Bolt Type	Num Bolts	Force (kips)	Cap (kips)	Use %	Bolt Type	Num Bolts	
1	20	0.9D + 1.6W 60° Wind	185.41	0.00	0.0			0.9D + 1.6W 60° Wind	203.3	0.00			
2	40	0.9D + 1.6W 60° Wind	166.25	0.00	0.0			0.9D + 1.6W 60° Wind	185.4	424.08	43.7	1 A325	8
3	60	0.9D + 1.6W 60° Wind	145.68	0.00	0.0			0.9D + 1.6W 60° Wind	166.2	424.08	39.2	1 A325	8
4	80	0.9D + 1.6W 60° Wind	124.85	0.00	0.0			0.9D + 1.6W 60° Wind	145.6	424.08	34.4	1 A325	8
5	86.792	0.9D + 1.6W 60° Wind	116.23	0.00	0.0			0.9D + 1.6W 60° Wind	124.8	318.06	39.3	1 A325	6
6	100	0.9D + 1.6W 60° Wind	101.04	0.00	0.0			0.9D + 1.6W 60° Wind	116.2	318.06	36.5	1 A325	6
7	120	0.9D + 1.6W 60° Wind	74.35	0.00	0.0			0.9D + 1.6W 60° Wind	101.0	318.06	31.8	1 A325	6
8	140	0.9D + 1.6W 60° Wind	42.88	0.00	0.0			0.9D + 1.6W 60° Wind	74.35	318.06	23.4	1 A325	6
9	160	0.9D + 1.6W 60° Wind	13.29	0.00	0.0			0.9D + 1.6W 60° Wind	42.88	212.04	20.2	1 A325	4
10	176		0.00	0.00	0.0			0.9D + 1.6W 60° Wind	13.29	166.24	8.0	7/8 A325	4

### HORIZONTAL MEMBERS

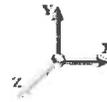
Sect	Top Elev	Member	Force (kips)		Load Case	Mem		Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
						Fy (ksi)	Cap (kips)							
1	20	-				36	0.00	0	0					
2	40	-				36	0.00	0	0					
3	60	-				36	0.00	0	0					
4	80	-				36	0.00	0	0					
5	86.792	-				36	0.00	0	0					
6	100	-				36	0.00	0	0					
7	120	-				36	0.00	0	0					
8	140	-				36	0.00	0	0					
9	160	SAE - 2X2X0.1875	0.30	1.2D + 1.6W 60° Wind		36	23.00	1	1	12.43	7.84	7.85	3.9	Bolt Bear
10	176	SAE - 2X2X0.25	0.42	0.9D + 1.6W Normal W		36	30.46	1	1	12.43	10.45	10.47	4.0	Bolt Bear

### DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)		Load Case	Mem		Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
						Fy (ksi)	Cap (kips)							
1	20	SAE - 4X4X0.25	6.66	0.9D + 1.6W 90° Wind		36	62.86	1	1	17.89	12.62	26.92	52.8	Bolt Bear
2	40	SAE - 3.5X3.5X0.25	6.39	0.9D + 1.6W 90° Wind		36	54.76	1	1	17.89	12.62	21.48	50.7	Bolt Bear
3	60	SAE - 3.5X3.5X0.25	6.18	0.9D + 1.6W 90° Wind		36	54.76	1	1	17.89	12.62	21.48	49.0	Bolt Bear
4	80	SAE - 3X3X0.25	5.29	0.9D + 1.6W 90° Wind		36	46.66	1	1	17.89	12.62	16.04	41.9	Bolt Bear
5	86.792	MOD - 2L2.5x2.5x3/16_Spec	5.25	0.9D + 1.6W 90° Wind		36	59.00	1	1	12.43			42.2	Bolt Shear
6	100	SAE - 2.5X2.5X0.1875	5.32	1.2D + 1.6W 90° Wind		36	29.22	1	1	12.43	7.84	9.89	67.9	Bolt Bear
7	120	SAE - 2.5X2.5X0.1875	5.22	1.2D + 1.6W 90° Wind		36	29.22	1	1	12.43	7.84	9.89	66.6	Bolt Bear

## Force/Stress Tension Summary

<b>Structure:</b> CT04382-S-SBA	<b>Code:</b> EIA/TIA-222-G	6/29/2020
<b>Site Name:</b> New Britain 2, CT	<b>Exposure:</b> B	
<b>Height:</b> 176.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> C - Very Dense Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



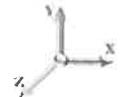
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### DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use	
												%	Controls
8	140	SAE - 2X2X0.1875	4.93	1.2D + 1.6W 90° Wind	36	23.00	1	1	12.43	7.84	7.85	63.0	Bolt Bear
9	160	SAE - 2X2X0.1875	3.40	1.2D + 1.6W 90° Wind	36	23.00	1	1	12.43	7.84	7.85	43.4	Bolt Bear
10	176	SAE - 2X2X0.25	3.32	0.9D + 1.6W 90° Wind	36	30.46	1	1	12.43	10.45	10.47	31.8	Bolt Bear

## Seismic Section Forces

<b>Structure:</b> CT04382-S-SBA	<b>Code:</b> EIA/TIA-222-G	6/29/2020
<b>Site Name:</b> New Britain 2, CT	<b>Exposure:</b> B	
<b>Height:</b> 176.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> C - Very Dense Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case: 1.2D + 1.0E**

<b>Dead Load Factor</b>	1.20	<b>Sds</b> 0.146	<b>Ss</b> 0.1830	<b>Fa</b> 1.2000	<b>Ke</b> 0.0000
<b>Seismic Load Factor</b>	1.00	<b>Sd1</b> 0.072	<b>S1</b> 0.0640	<b>Fv</b> 1.7000	<b>Kg</b> 0.0000
<b>Seismic Importance Factor</b>	1.00	<b>SA</b> 0.121	<b>R</b> 3.0000	<b>Vs</b> 1.9886	<b>f1</b> 1.6748

Sect #	Elev (ft)	Wz (lb)	a	b	c	Lateral Fsz (lb)
1	10.00	5378.6	0.01	0.05	0.03	16.06
2	30.00	5041.1	0.05	0.07	0.04	31.46
3	50.00	4297.7	0.15	0.07	0.03	42.76
4	70.00	4082.5	0.30	0.05	0.01	59.85
5	83.40	1459.8	0.42	0.01	0.01	25.87
6	93.40	2287.4	0.53	-0.03	0.01	45.27
7	110.00	3032.8	0.74	-0.10	0.04	71.31
8	130.00	5035.1	1.03	-0.10	0.15	163.81
9	150.00	3020.3	1.37	0.23	0.40	166.41
10	168.00	7268.6	1.72	1.21	0.85	685.04

**Load Case: 0.9D + 1.0E**

<b>Dead Load Factor</b>	0.90	<b>Sds</b> 0.146	<b>Ss</b> 0.1830	<b>Fa</b> 1.2000	<b>Ke</b> 0.0000
<b>Seismic Load Factor</b>	1.00	<b>Sd1</b> 0.072	<b>S1</b> 0.0640	<b>Fv</b> 1.7000	<b>Kg</b> 0.0000
<b>Seismic Importance Factor</b>	1.00	<b>SA</b> 0.121	<b>R</b> 3.0000	<b>Vs</b> 1.9886	<b>f1</b> 1.6748

Sect #	Elev (ft)	Wz (lb)	a	b	c	Lateral Fsz (lb)
1	10.00	5378.6	0.01	0.05	0.03	16.06
2	30.00	5041.1	0.05	0.07	0.04	31.46
3	50.00	4297.7	0.15	0.07	0.03	42.76
4	70.00	4082.5	0.30	0.05	0.01	59.85
5	83.40	1459.8	0.42	0.01	0.01	25.87
6	93.40	2287.4	0.53	-0.03	0.01	45.27
7	110.00	3032.8	0.74	-0.10	0.04	71.31
8	130.00	5035.1	1.03	-0.10	0.15	163.81
9	150.00	3020.3	1.37	0.23	0.40	166.41
10	168.00	7268.6	1.72	1.21	0.85	685.04

## Support Forces Summary

**Structure:** CT04382-S-SBA  
**Site Name:** New Britain 2, CT  
**Height:** 176.00 (ft)  
**Base Elev:** 0.000 (ft)  
**Gh:** 0.85

**Topography:** 1

**Code:** EIA/TIA-222-G  
**Exposure:** B  
**Crest Height:** 0.00  
**Site Class:** C - Very Dense Soil  
**Struct Class:** II

6/29/2020



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Load Case	Node	FX (kips)	FY (kips)	FZ (kips)	(-) = Uplift (+) = Down
1.2D + 1.6W Normal Wind	1	-0.01	239.85	-23.69	
	1a	7.81	-95.39	-7.18	
	1b	-7.81	-95.38	-7.19	
1.2D + 1.6W 60° Wind	1	-2.11	123.75	-11.80	
	1a	-11.27	123.67	4.08	
	1b	-17.86	-198.33	-10.31	
1.2D + 1.6W 90° Wind	1	-2.50	16.36	-1.01	
	1a	-17.88	204.15	8.89	
	1b	-16.19	-171.42	-7.88	
0.9D + 1.6W Normal Wind	1	-0.01	235.50	-23.42	
	1a	8.04	-99.35	-7.32	
	1b	-8.03	-99.34	-7.33	
0.9D + 1.6W 60° Wind	1	-2.11	119.54	-11.54	
	1a	-11.05	119.45	3.94	
	1b	-18.08	-202.17	-10.44	
0.9D + 1.6W 90° Wind	1	-2.51	12.27	-0.75	
	1a	-17.65	199.84	8.76	
	1b	-16.42	-175.30	-8.01	
1.2D + 1.0Di + 1.0Wi Normal Wind	1	0.00	113.24	-6.31	
	1a	2.58	17.40	-2.21	
	1b	-2.58	17.44	-2.21	
1.2D + 1.0Di + 1.0Wi 60° Wind	1	-0.60	80.72	-3.02	
	1a	-2.91	80.68	0.99	
	1b	-5.55	-13.32	-3.20	
1.2D + 1.0Di + 1.0Wi 90° Wind	1	-0.70	49.35	0.12	
	1a	-4.80	103.89	2.37	
	1b	-5.02	-5.16	-2.50	
1.2D + 1.0E	1	0.00	26.36	5.25	
	1a	5.60	11.36	-3.26	
	1b	-5.60	11.36	-3.26	
0.9D + 1.0E	1	0.00	22.26	5.51	
	1a	5.83	7.28	-3.40	
	1b	-5.83	7.28	-3.40	
1.0D + 1.0W Normal Wind	1	0.00	67.82	-6.42	
	1a	1.37	-13.46	-1.46	
	1b	-1.37	-13.45	-1.46	
1.0D + 1.0W 60° Wind	1	-0.53	39.67	-3.51	
	1a	-3.31	39.65	1.29	
	1b	-3.83	-38.42	-2.21	
1.0D + 1.0W 90° Wind	1	-0.63	13.63	-0.87	
	1a	-4.92	59.17	2.48	
	1b	-3.43	-31.89	-1.61	

### Max Reactions

Leg

Overturing

Max Uplift: -202.17 (kips)  
Max Down: 239.85 (kips)  
Max Shear: 23.69 (kips)

Moment: 4064.48 (ft-kips)  
Total Down: 49.09 (kips)  
Total Shear: 38.07 (kips)

## Analysis Summary

<b>Structure:</b> CT04382-S-SBA	<b>Code:</b> EIATIA-222-G	<b>6/29/2020</b>	
<b>Site Name:</b> New Britain 2, CT	<b>Exposure:</b> B		
<b>Height:</b> 176.00 (ft)	<b>Crest Height:</b> 0.00		
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> C - Very Dense Soil		
<b>Gh:</b> 0.85 <b>Topography:</b> 1	<b>Struct Class:</b> II	<b>Page:</b> 20	

### Max Reactions

	Leg	Overturning
Max Uplift:	-202.17 (kips)	Moment: 4064.48 (ft-kips)
Max Down:	239.85 (kips)	Total Down: 49.09 (kips)
Max Shear:	23.69 (kips)	Total Shear: 38.07 (kips)

### Anchor Bolts

Bolt Size (in.): 1.00	Number Bolts: 10
Yield Strength (Ksi): 109.00	Tensile Strength (Ksi): 125.00
Detail Type: A	

Interaction Ratio: 0.38

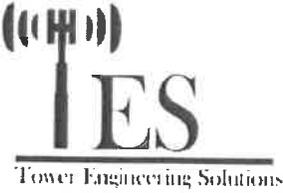
### Max Usages

Max Leg: 44.9% (1.2D + 1.6W Normal Wind - Sect 4)  
 Max Diag: 69.0% (1.2D + 1.6W 90° Wind - Sect 6)  
 Max Horiz: 4.0% (0.9D + 1.6W Normal Wind - Sect 10)

### Max Deflection, Twist and Sway

	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)
0.9D + 1.0E - Normal To Face	80.38	0.0108	-0.0005	0.0151
	140.00	0.0333	-0.0010	0.0337
	155.78	0.0425	-0.0008	0.0366
	164.19	0.0482	-0.0009	0.0379
	176.00	0.0563	-0.0009	0.0411
0.9D + 1.6W 97 mph Wind at 60° From Face	80.38	0.1903	0.0127	0.3027
	140.00	0.6162	0.0224	0.5822
	155.78	0.7718	0.0202	0.5862
	164.19	0.8609	0.0227	0.5961
	176.00	0.9865	0.0259	0.6336
0.9D + 1.6W 97 mph Wind at 90° From Face	80.38	0.1918	-0.0137	0.3017
	140.00	0.6211	-0.0231	0.5799
	155.78	0.7776	-0.0194	0.5927
	164.19	0.8673	-0.0208	0.6025
	176.00	0.9934	-0.0219	0.6136
0.9D + 1.6W 97 mph Wind at Normal To Face	80.38	0.1976	0.0113	0.3139
	140.00	0.6373	0.0184	0.5993
	155.78	0.7973	0.0146	0.6041
	164.19	0.8895	0.0149	0.6147
	176.00	1.0194	0.0140	0.7123
1.0D + 1.0W 60 mph Wind at 60° From Face	80.38	0.0461	0.0028	0.0733
	140.00	0.1486	0.0047	0.1401
	155.78	0.1859	0.0039	0.1404
	164.19	0.2073	0.0042	0.1428
	176.00	0.2374	0.0044	0.1521

1.0D + 1.0W 60 mph Wind at 90° From Face	80.38	0.0465	-0.0033	0.0729
	140.00	0.1498	-0.0055	0.1395
	155.78	0.1874	-0.0046	0.1422
	164.19	0.2089	-0.0050	0.1445
	176.00	0.2391	-0.0052	0.1474
-----				
1.0D + 1.0W 60 mph Wind at Normal To Face	80.38	0.0479	0.0028	0.0758
	140.00	0.1538	0.0045	0.1436
	155.78	0.1923	0.0035	0.1452
	164.19	0.2143	0.0036	0.1477
	176.00	0.2455	0.0034	0.1705
-----				
1.2D + 1.0Di + 1.0Wi 50 mph Wind at 60° From Face	80.38	0.0568	0.0034	0.0890
	140.00	0.1806	0.0058	0.1711
	155.78	0.2259	0.0049	0.1714
	164.19	0.2520	0.0053	0.1750
	176.00	0.2892	0.0055	0.1896
-----				
1.2D + 1.0Di + 1.0Wi 50 mph Wind at 90° From Face	80.38	0.0568	-0.0040	0.0881
	140.00	0.1811	-0.0067	0.1697
	155.78	0.2266	-0.0057	0.1734
	164.19	0.2528	-0.0062	0.1768
	176.00	0.2900	-0.0065	0.1837
-----				
1.2D + 1.0Di + 1.0Wi 50 mph Wind at Normal From Face	80.38	0.0570	0.0033	0.0897
	140.00	0.1832	0.0053	0.1708
	155.78	0.2293	0.0043	0.1756
	164.19	0.2560	0.0044	0.1789
	176.00	0.2939	0.0042	0.2080
-----				
1.2D + 1.0E - Normal To Face	80.38	0.0108	-0.0005	0.0151
	140.00	0.0334	-0.0010	0.0337
	155.78	0.0426	0.0008	0.0367
	164.19	0.0482	-0.0009	0.0380
	176.00	0.0564	-0.0009	0.0410
-----				
1.2D + 1.6W 97 mph Wind at 60° From Face	80.38	0.1905	0.0127	0.3032
	140.00	0.6172	0.0224	0.5835
	155.78	0.7731	0.0203	0.5873
	164.19	0.8624	0.0227	0.5973
	176.00	0.9882	0.0260	0.6352
-----				
1.2D + 1.6W 97 mph Wind at 90° From Face	80.38	0.1920	-0.0137	0.3021
	140.00	0.6222	-0.0231	0.5812
	155.78	0.7789	-0.0194	0.5940
	164.19	0.8688	-0.0208	0.6038
	176.00	0.9952	-0.0219	0.6151
-----				
1.2D + 1.6W 97 mph Wind at Normal To Face	80.38	0.1978	0.0113	0.3143
	140.00	0.6384	0.0184	0.6004
	155.78	0.7987	0.0146	0.6054
	164.19	0.8910	0.0149	0.6160
	176.00	1.0213	0.0140	0.7136

	<b>Mat Foundation Design for Self Supporting Tower</b>			Date
				6/29/2020
	<b>Customer Name:</b>	SBA Communications Corp	<b>EIA/TIA Standard:</b>	EIA-222-G
	<b>Site Name:</b>		<b>Structure Height (Ft.):</b>	176
	<b>Site Number:</b>	CT04382-S-SBA	<b>Engineer Name:</b>	J. Tibbetts
<b>Engr. Number:</b>	94967	<b>Engineer Login ID:</b>		

**Foundation Info Obtained from:**

Drawings/Calculations

**Analysis or Design?**

Analysis

**Number of Tower Legs:**

3 Legs

**Base Reactions (Factored):**

(1). Individual Leg:

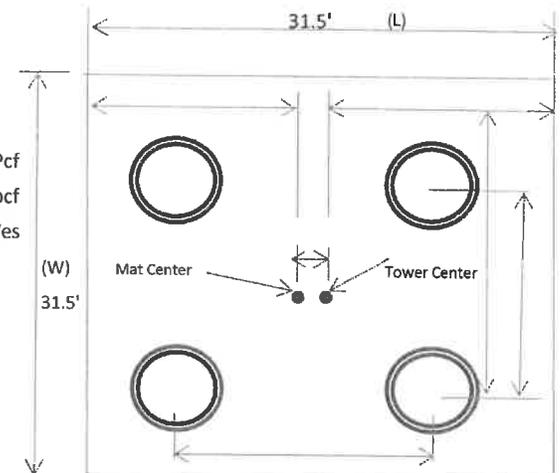
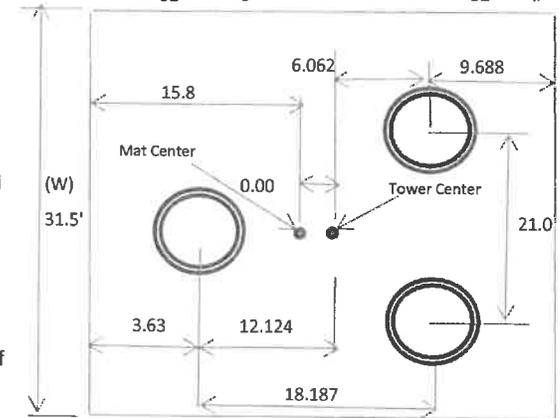
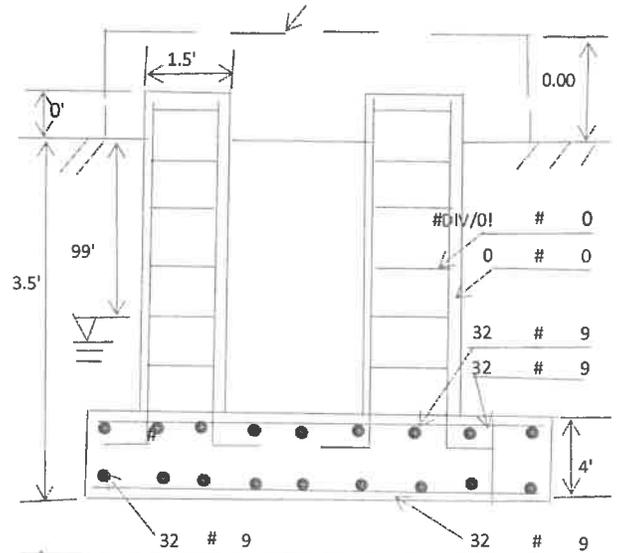
Axial Load (Kips):	239.8	Uplift Force (Kips):	202.2
Shear Force (Kips):	23.7		

(2). Tower Base:

Total Vertical Load (Kips):	49.1	Total Shear Force (Kips):	38.1
Moment (Kips-ft):	4064.5		

**Foundation Geometries:**

Leg distance (Center-to-Center ft.):	21.0	Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	Round 1.5	Pier Height A. G. (ft.):	0.00
Tower center to mat center (ft):	0.00	Depth of Base BG (ft.):	3.5
Length of Pad (ft.):	31.5	Width of Pad (ft.):	31.5
Thickness of Pad (ft):	4.00		



**Material Properties and Rebar Info:**

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)		Tie steel yield (ksi):	60	
Vertical Rebar Size #:		Tie / Stirrup Size #:		
Qty. of Vertical Rebars:		Tie Spacing (in):		
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	9	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	32	Qty. of Rebar in Pad (W):	32	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	32	Qty. of Rebar in Pad (W):	32	

**Soil Design Parameters:**

Soil Unit Weight (pcf):	115.0	Soil Buoyant Weight:	50.0	Pcf
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf
Ultimate Bearing Pressure (psf):	10000	Consider ties in concrete shear strength:	Yes	

**Foundation Analysis and Design:**

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):	1.97	Total Dry Soil Weight (Kips):	0.23
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	0.23	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	3969.04	Total Dry Concrete Weight (Kips):	595.36
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	595.36	Total Vertical Load on Base (Kips):	644.67

**Check Soil Capacities:**

Calculated Maxium Net Soil Pressure under the base (psf):	1414.16	<	Allowable Factored Soil Bearing (psf):	7500	Load/ Capacity Ratio	0.19	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	9215.5	>	Design Factored Momont (kips-ft):	4188		0.45	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	2.20		OK!				

**Check the capacities of Reinforcing Concrete:**

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

**(2).Concrete Pad:**

One-Way Design Shear Capacity (L or W Direction, Kips):	1380.0	>	One-Way Factored Shear (L/W-Dir Kips	298.5	0.22	OK!
One-Way Design Shear Capacity (Diagonal Dir., Kips):	1143.0	>	One-Way Factored Shear (Dia. Dir, Kips	273.0	0.24	OK!
Lower Steel Pad Reinforcement Ratio (L or W-Direct. ):	0.0019		Lower Steel Reinf. Ratio (Dia. Dir.):	0.0017		
Lower Steel Pad Moment Capacity (L or W-Dir. Kips-ft):	6255.6	>	Moment at Bottom ( L-Direct. K-Ft):	1562.8	0.25	OK!
Lower Steel Pad Moment Capacity (Dia. Direction,K-ft):	6122.4	>	Moment at Bottom ( Dia. Dir. K-Ft):	1273.4	0.21	OK!
Upper Steel Pad Reinforcement Ratio (L or W -Direction):	0.0019		Upper Steel Reinf. Ratio (Dia. Dir.):	0.0017		
Upper Steel Pad Moment Capacity (L or W-Dir., Kips-ft):	6255.6	>	Moment at the top ( L-Dir Kips-Ft):	883.4	0.14	OK!
Upper Steel Pad Moment Capacity (Dia. Direction, K-ft):	6122.4	>	Moment at the top (Dia. Dir., K-Ft):	532.6	0.09	OK!
Punching Failure Capacity (Kips):	1351.5	>	Punch. Failure Factored Shear (K):	239.8	0.18	OK!



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info@sitesafe.com • www.sitesafe.com



**Empire Telecom on behalf of  
AT&T Mobility, LLC  
Site FA – 10071149  
Site ID – CTL05254  
USID – 15210  
Site Name – NEW BRITIAN WEST  
(MRCTB045529)**

**1 Hartford Square  
New Britain, CT 06052**

Latitude: N41-39-59.01  
Longitude: W72-48-46.08  
Structure Type: Self-Support

Report generated date: July 29, 2020  
Report by: Nick Kutzke  
Customer Contact: Nicole Caplan-Mason

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

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# 1 General Site Summary

## 1.1 Report Summary

<b>AT&amp;T Mobility, LLC</b>	<b>Summary</b>
<b>Max Cumulative Simulated RFE Level on the Ground</b>	<1% General Public Limit
<b>Compliant per FCC Rules and Regulations?</b>	Will Be Compliant
<b>Compliant per AT&amp;T Mobility, LLC's Policy?</b>	No

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

**RFDS:** 10071149.PM201.\_15210\_11-23-2019\_As-Built-In-Progress\_v3.00

**CD's:** 10071149.CT5254.CD.LTE6C7C5G.Rev2.07.23.2020

**RF Powers Used:** Max RRH Powers

## 1.2 Fall Arrest Anchor Point Summary

<b>Fall Arrest Anchor &amp; Parapet Info</b>	<b>Parapet Available (Y/N)</b>	<b>Parapet Height (inches)</b>	<b>Fall Arrest Anchor Available (Y/N)</b>
<b>Roof Safety Info</b>	N	N/A	N

### 1.3 Signage Summary

#### a. Pre-Site Visit AT&T Signage (Existing Signage)

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

#### b. Proposed AT&T Signage

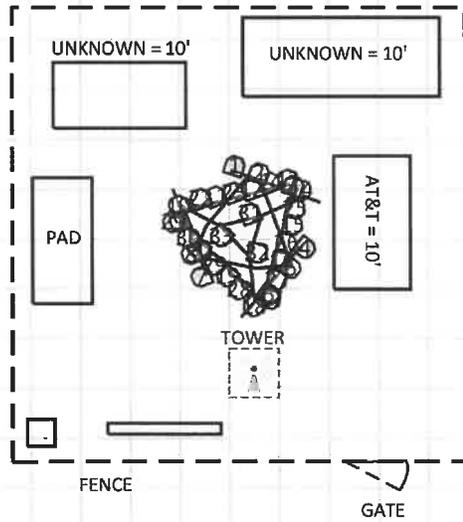
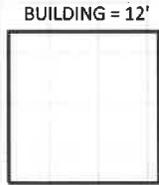
AT&T Signage Locations									
	Information 1	Information 2	Notice	Notice 2	Caution	Caution 2B	Warning	Warning 2	Barriers
Access Point(s)						1			
Alpha									
Beta									
Gamma									
Delta									
Epsilon									

## 2 Scale Maps of Site

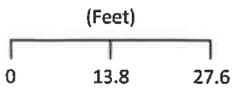
The following diagrams are included:

- Site Scale Map
- RF Exposure Diagram
- RF Exposure Diagram – Elevation View
- AT&T Mobility, LLC Contribution

# Site Scale Map For: NEW BRITIAN WEST



GROUND LEVEL = 0'



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7/29/2020 7:49:24 AM

Carrier Identification				
Sign Legend				

### 3 Antenna Inventory

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

Ant ID	Operator	Antenna Make & Model	Type	TX Freq (MHz)	Technology	Az (Deg)	Hor BW (Deg)	Ant Len (ft)	Power	Power Type	Power Unit	Misc Loss	Tx Count	Total ERP (Watts)	Ant Gain (dBD)	Z	MDT	EDT
1	AT&T MOBILITY LLC	Quintel QS66512-2	Panel	850	UMTS	40	63.0	6	40	TPO	Watt	0	1	499	10.96	163'	0°	10°
1	AT&T MOBILITY LLC (Proposed)	Quintel QS66512-2	Panel	722	LTE	40	69.0	6	80	TPO	Watt	0	1	1119.7	11.46	163'	0°	3°
1	AT&T MOBILITY LLC	Quintel QS66512-2	Panel	2300	LTE	40	64.0	6	100	TPO	Watt	0	1	2857.6	14.56	163'	0°	3°
2	AT&T MOBILITY LLC (Proposed)	CCI Antennas OPA65R-BU6D	Panel	763	LTE	40	61.1	5.9	160	TPO	Watt	0	1	2455.4	11.86	163'	0°	3°
2	AT&T MOBILITY LLC (Proposed)	CCI Antennas OPA65R-BU6D	Panel	1900	LTE	40	66.3	5.9	160	TPO	Watt	0	1	4468.1	14.46	163'	0°	3°
3	AT&T MOBILITY LLC (Proposed)	CCI DMP65R-BU6D	Panel	737	LTE	40	65.7	5.9	160	TPO	Watt	0	1	2399.5	11.76	163'	0°	3°
3	AT&T MOBILITY LLC (Proposed)	CCI DMP65R-BU6D	Panel	850	LTE	40	70.9	5.9	80	TPO	Watt	0	1	1119.7	11.46	163'	0°	3°
3	AT&T MOBILITY LLC (Proposed)	CCI DMP65R-BU6D	Panel	2100	LTE	40	68.0	5.9	160	TPO	Watt	0	1	4787.6	14.76	163'	0°	3°
3	AT&T MOBILITY LLC (Proposed)	CCI DMP65R-BU6D	Panel	850	5G	40	70.9	5.9	80	TPO	Watt	0	1	1119.7	11.46	163'	0°	3°
4	AT&T MOBILITY LLC (Proposed)	Quintel QS66512-2	Panel	722	LTE	150	69.0	6	80	TPO	Watt	0	1	1119.7	11.46	163'	0°	3°
4	AT&T MOBILITY LLC	Quintel QS66512-2	Panel	2300	LTE	150	64.0	6	100	TPO	Watt	0	1	2857.6	14.56	163'	0°	3°
4	AT&T MOBILITY LLC	Quintel QS66512-2	Panel	850	UMTS	150	63.0	6	40	TPO	Watt	0	1	499	10.96	163'	0°	8°
5	AT&T MOBILITY LLC (Proposed)	CCI Antennas OPA65R-BU6D	Panel	763	LTE	150	61.1	5.9	160	TPO	Watt	0	1	2455.4	11.86	163'	0°	7°
5	AT&T MOBILITY LLC (Proposed)	CCI Antennas OPA65R-BU6D	Panel	1900	LTE	150	66.3	5.9	160	TPO	Watt	0	1	4468.1	14.46	163'	0°	7°
6	AT&T MOBILITY LLC (Proposed)	CCI DMP65R-BU6D	Panel	2100	LTE	150	68.0	5.9	160	TPO	Watt	0	1	4787.6	14.76	163'	0°	3°
6	AT&T MOBILITY LLC (Proposed)	CCI DMP65R-BU6D	Panel	850	LTE	150	70.9	5.9	80	TPO	Watt	0	1	1119.7	11.46	163'	0°	7°
6	AT&T MOBILITY LLC (Proposed)	CCI DMP65R-BU6D	Panel	737	LTE	150	65.7	5.9	160	TPO	Watt	0	1	2399.5	11.76	163'	0°	7°
6	AT&T MOBILITY LLC (Proposed)	CCI DMP65R-BU6D	Panel	850	5G	150	70.9	5.9	80	TPO	Watt	0	1	1119.7	11.46	163'	0°	7°
7	AT&T MOBILITY LLC (Proposed)	Quintel QS66512-2	Panel	722	LTE	270	69.0	6	80	TPO	Watt	0	1	1119.7	11.46	163'	0°	3°
7	AT&T MOBILITY LLC (Proposed)	Quintel QS66512-2	Panel	2300	LTE	270	64.0	6	100	TPO	Watt	0	1	2857.6	14.56	163'	0°	3°
7	AT&T MOBILITY LLC	Quintel QS66512-2	Panel	850	UMTS	270	63.0	6	40	TPO	Watt	0	1	499	10.96	163'	0°	8°

Ant ID	Operator	Antenna Make & Model	Type	TX Freq (MHz)	Technology	Az (Deg)	Hor BW (Deg)	Ant Len (ft)	Power	Power Type	Power Unit	Misc Loss	TX Count	Total ERP (Watts)	Ant Gain (dBd)	Z	MDT	EDT
8	AT&T MOBILITY LLC (Proposed)	CCI Antennas OPA65R-BU6D	Panel	763	LTE	270	61.1	5.9	160	TPO	Watt	0	1	2455.4	11.86	163'	0°	10°
8	AT&T MOBILITY LLC (Proposed)	CCI Antennas OPA65R-BU6D	Panel	1900	LTE	270	66.3	5.9	160	TPO	Watt	0	1	4468.1	14.46	163'	0°	7°
9	AT&T MOBILITY LLC (Proposed)	Cci DMP65R-BU6D	Panel	2100	LTE	270	68.0	5.9	160	TPO	Watt	0	1	4787.6	14.76	163'	0°	3°
9	AT&T MOBILITY LLC (Proposed)	Cci DMP65R-BU6D	Panel	850	LTE	270	70.9	5.9	80	TPO	Watt	0	1	1119.7	11.46	163'	0°	10°
9	AT&T MOBILITY LLC (Proposed)	Cci DMP65R-BU6D	Panel	737	LTE	270	65.7	5.9	160	TPO	Watt	0	1	2399.5	11.76	163'	0°	11°
9	AT&T MOBILITY LLC (Proposed)	Cci DMP65R-BU6D	Panel	850	5G	270	70.9	5.9	80	TPO	Watt	0	1	1119.7	11.46	163'	0°	10°
10	UNKNOWN CARRIER	Generic	Panel	700		0	65.0	6.3	160	TPO	Watt	0	1	2884.8	12.56	136.9'	0°	0°
11	UNKNOWN CARRIER	Generic	Panel	1900		0	65.0	6.3	160	TPO	Watt	0	1	6762.7	16.26	136.9'	0°	0°
12	UNKNOWN CARRIER	Generic	Panel	2100		0	65.0	6.3	160	TPO	Watt	0	1	5716.4	15.53	136.9'	0°	0°
13	UNKNOWN CARRIER	Generic	Panel	850		0	65.0	6.3	160	TPO	Watt	0	1	3524.7	13.43	136.9'	0°	0°
14	UNKNOWN CARRIER	Generic	Panel	700		120	65.0	6.3	160	TPO	Watt	0	1	2884.8	12.56	136.9'	0°	0°
15	UNKNOWN CARRIER	Generic	Panel	1900		120	65.0	6.3	160	TPO	Watt	0	1	6762.7	16.26	136.9'	0°	0°
16	UNKNOWN CARRIER	Generic	Panel	2100		120	65.0	6.3	160	TPO	Watt	0	1	5716.4	15.53	136.9'	0°	0°
17	UNKNOWN CARRIER	Generic	Panel	850		120	65.0	6.3	160	TPO	Watt	0	1	3524.7	13.43	136.9'	0°	0°
18	UNKNOWN CARRIER	Generic	Panel	700		240	65.0	6.3	160	TPO	Watt	0	1	2884.8	12.56	136.9'	0°	0°
19	UNKNOWN CARRIER	Generic	Panel	1900		240	65.0	6.3	160	TPO	Watt	0	1	6762.7	16.26	136.9'	0°	0°
20	UNKNOWN CARRIER	Generic	Panel	2100		240	65.0	6.3	160	TPO	Watt	0	1	5716.4	15.53	136.9'	0°	0°
21	UNKNOWN CARRIER	Generic	Panel	850		240	65.0	6.3	160	TPO	Watt	0	1	3524.7	13.43	136.9'	0°	0°
22	UNKNOWN CARRIER	Generic	Panel	1900		0	65.0	6.3	160	TPO	Watt	0	1	6762.7	16.26	147.9'	0°	0°
23	UNKNOWN CARRIER	Generic	Panel	2100		0	65.0	8	160	TPO	Watt	0	1	6027.3	15.76	147'	0°	0°

Ant ID	Operator	Antenna Make & Model	Type	TX Freq (MHz)	Technology	Az (Deg)	Hor BW (Deg)	Ant Len (ft)	Power	Power Type	Power Unit	Misc Loss	TX Count	Total ERP (Watts)	Ant Gain (dBd)	Z	MDT	EDT
24	UNKNOWN CARRIER	Generic	Panel	1900		0	65.0	6.3	160	TPO	Watt	0	1	6762.7	16.26	147.9'	0°	0°
25	UNKNOWN CARRIER	Generic	Panel	1900		120	65.0	6.3	160	TPO	Watt	0	1	6762.7	16.26	147.9'	0°	0°
26	UNKNOWN CARRIER	Generic	Panel	2100		120	65.0	8	160	TPO	Watt	0	1	6027.3	15.76	147'	0°	0°
27	UNKNOWN CARRIER	Generic	Panel	1900		120	65.0	6.3	160	TPO	Watt	0	1	6762.7	16.26	147.9'	0°	0°
28	UNKNOWN CARRIER	Generic	Panel	1900		240	65.0	6.3	160	TPO	Watt	0	1	6762.7	16.26	147.9'	0°	0°
29	UNKNOWN CARRIER	Generic	Panel	2100		240	65.0	8	160	TPO	Watt	0	1	6027.3	15.76	147'	0°	0°
30	UNKNOWN CARRIER	Generic	Panel	1900		240	65.0	6.3	160	TPO	Watt	0	1	6762.7	16.26	147.9'	0°	0°
31	UNKNOWN CARRIER	Generic	Panel	1900		0	65.0	6.3	160	TPO	Watt	0	1	6762.7	16.26	169.9'	0°	0°
32	UNKNOWN CARRIER	Generic	Panel	1900		120	65.0	6.3	160	TPO	Watt	0	1	6762.7	16.26	169.9'	0°	0°
33	UNKNOWN CARRIER	Generic	Panel	1900		240	65.0	6.3	160	TPO	Watt	0	1	6762.7	16.26	169.9'	0°	0°

Note: The Z reference indicates the bottom of the antenna height **above ground level (AGL)**. 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. For other operators at this site the use of "Generic" as an antenna model or "Unknown" for a wireless operator means the information with regard to operator, their FCC license and/or antenna information was not available nor could it be secured while on site. Other operator's equipment, antenna models and powers used for modeling are based on obtained information or Sitesafe experience. Proposed equipment is tagged as (Proposed) under Operator or Antenna Make & Model.

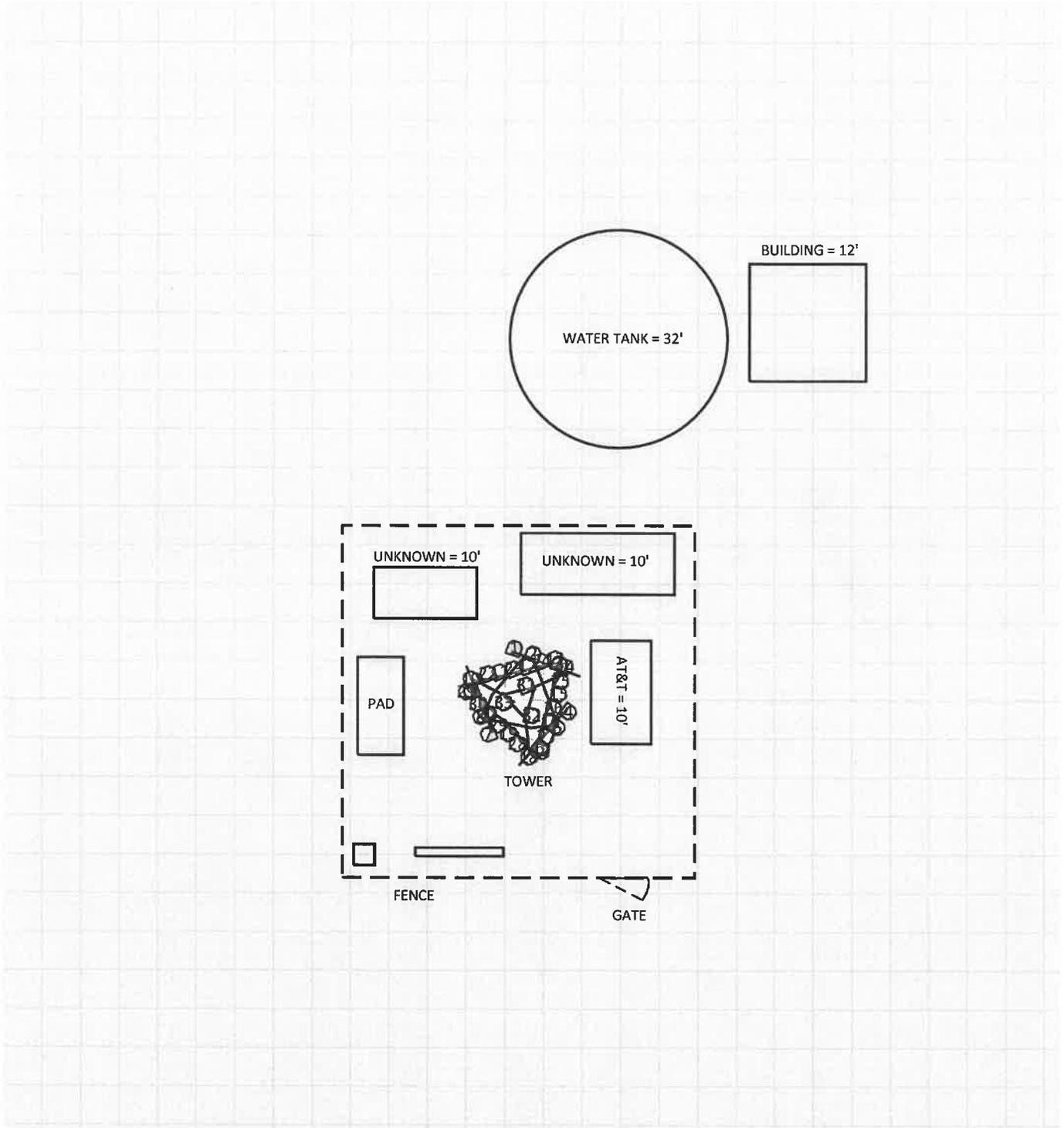
## 4 Emission Predictions

In the RF Exposure Simulations below, all heights are reflected with respect to 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.

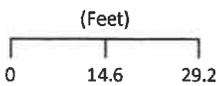
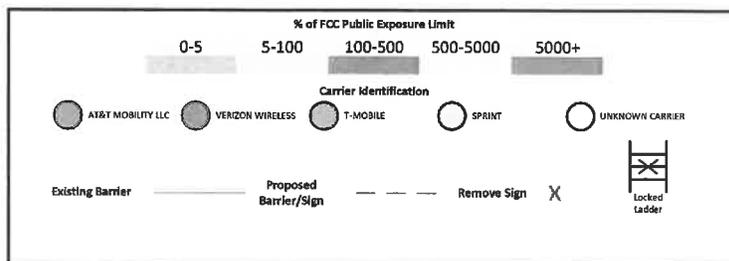
- GROUND= 0'
- AT&T = 10'
- UNKNOWN = 10'
- BUILDING= 12'
- WATER TANK = 32'

The Antenna Inventory heights are referenced to the same level.

# RF Exposure Simulation For: NEW BRITIAN WEST Composite Diagram



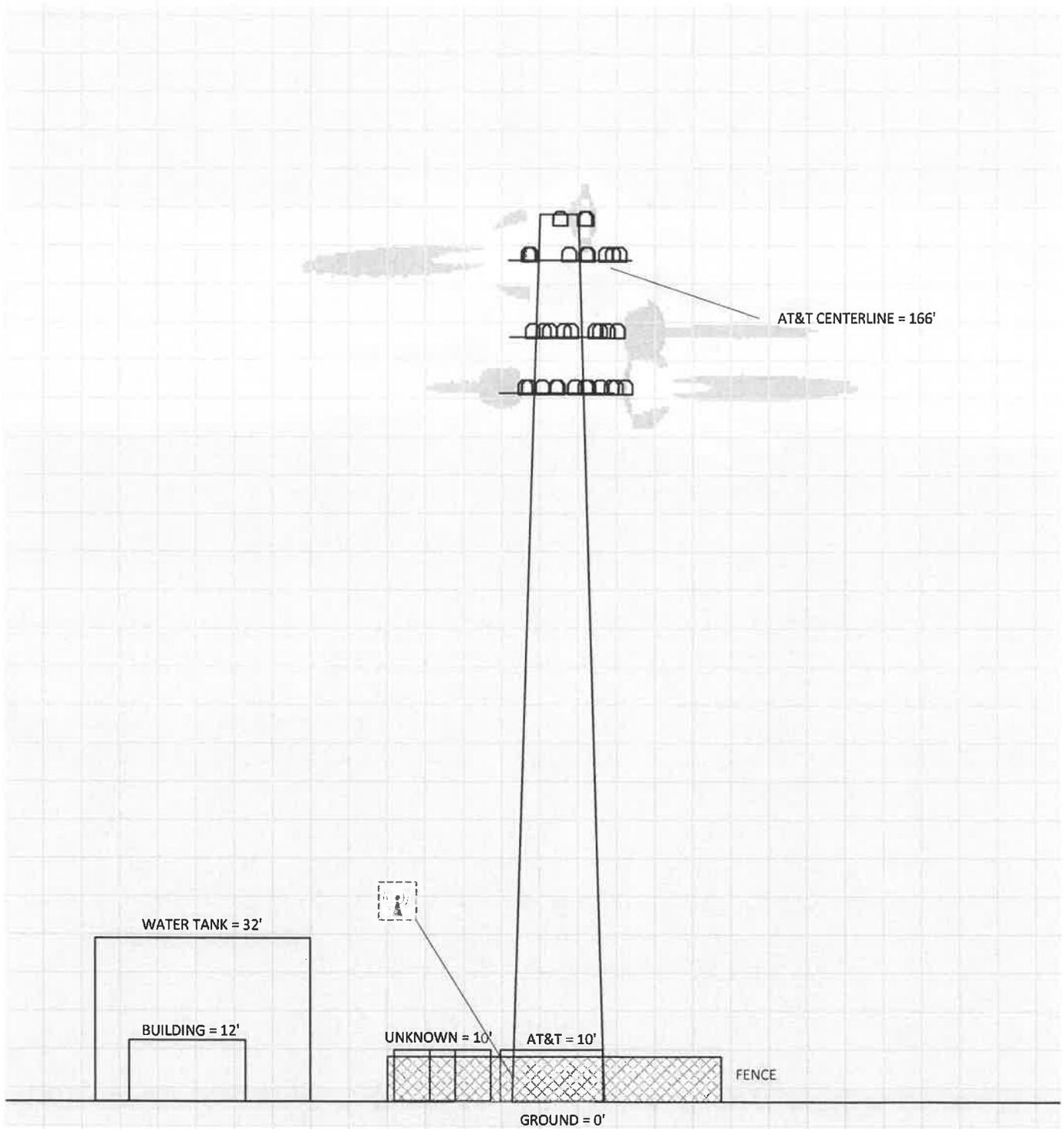
% of FCC Public Exposure Limit  
Spatially Averaged



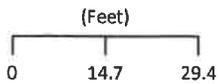
www.sitesafe.com  
7/29/2020 7:57:34 AM

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

# RF Exposure Simulation For: NEW BRITIAN WEST Elevation View



% of FCC Public Exposure Limit  
Single Level (0)

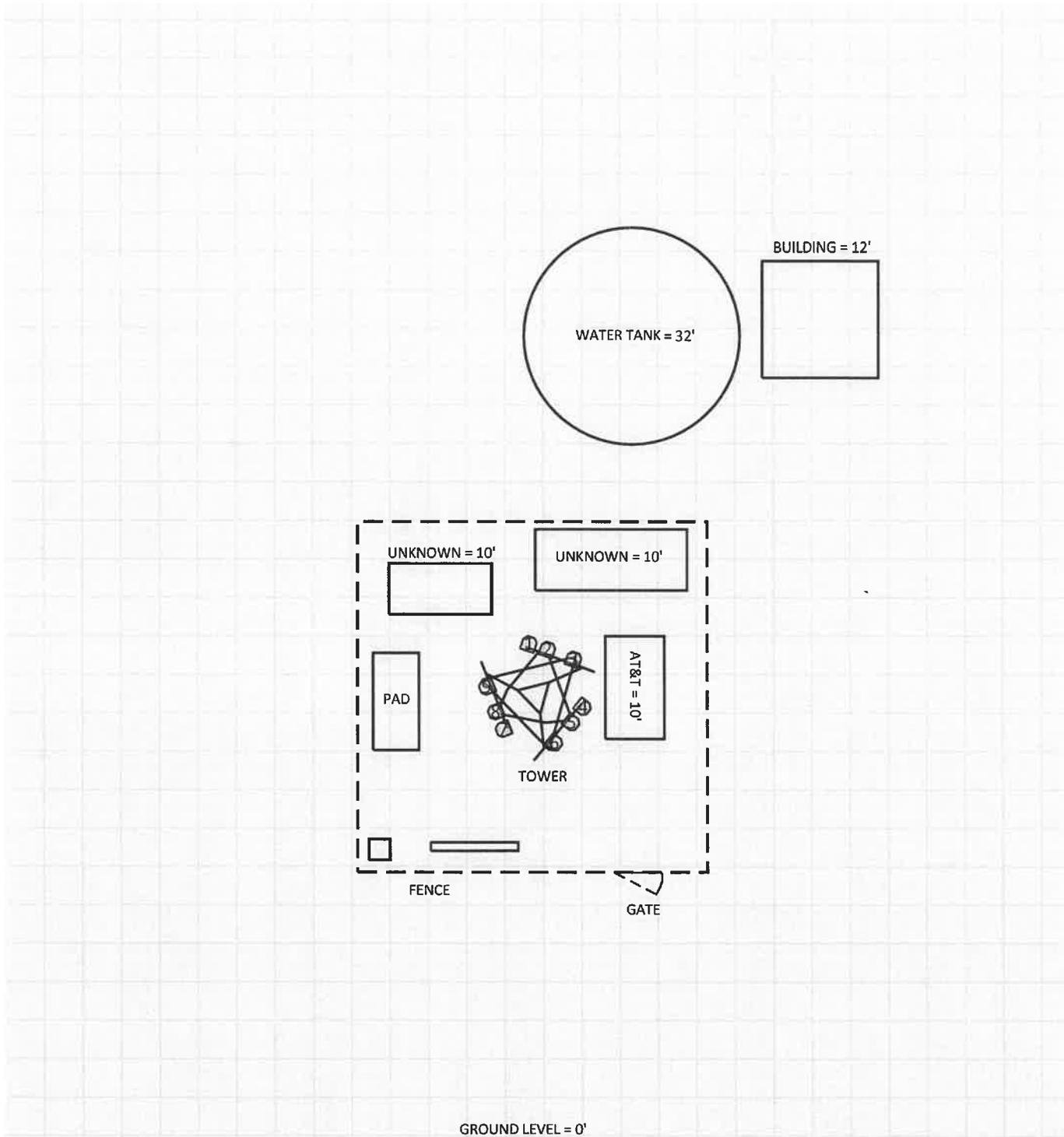


www.sitesafe.com  
7/29/2020 8:04:57 AM

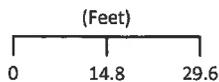
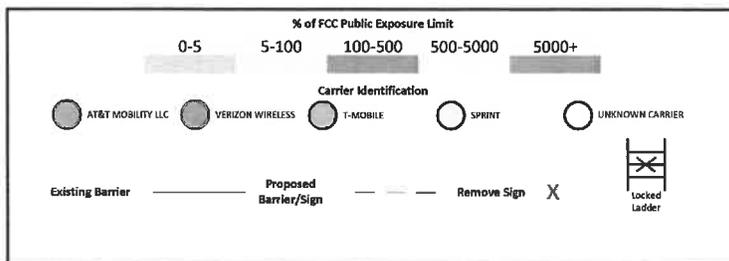
% of FCC Public Exposure Limit				
0-5	5-100	100-500	500-5000	5000+
Carrier Identification				
● AT&T MOBILITY LLC	● VERIZON WIRELESS	● T-MOBILE	● SPRINT	● UNKNOWN CARRIER
Sign Legend				
Existing Barrier	Proposed Barrier/Sign	Remove Sign		

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

RF Exposure Simulation For: NEW BRITIAN WEST  
AT&T Mobility, LLC Contribution



% of FCC Public Exposure Limit  
Spatially Averaged



www.sitesafe.com  
7/29/2020 7:58:26 AM

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

## 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 proposed AT&T Mobility, LLC 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's 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:

#### Site Access Location

(1) Yellow Caution 2B sign(s) required.

#### Notes:

- If additional sets of climbing pegs are present, (1) Yellow Caution 2B sign will be required at each set of pegs for the site to be in compliance.
- Signage may already be in place. Sitesafe does not have record of any existing signage because there were no previous visits or data supplied regarding them. All remediation is based on a worst-case scenario.

## 6 Reviewer Certification

The reviewer whose signature appears below hereby certifies and affirms:

That I am an employee of Site Safe, 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 Electromagnetic Fields; 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 Nick Kutzke.

July 29, 2020



Anthony Handley

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

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

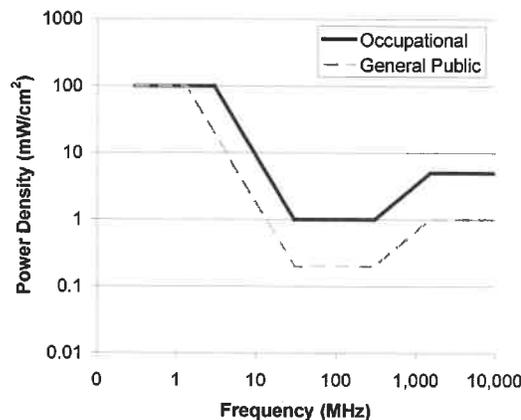
Occupational or Controlled limits apply in situations in which persons are exposed as a consequence of their employment and where those persons exposed have been made fully aware of the potential for exposure and can exercise control over their exposure.

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

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

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

**FCC Limits for Maximum Permissible Exposure (MPE)**  
Plane-wave Equivalent Power Density



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

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

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

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

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

**OSHA Statement**

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

(a) Each employer –

- (1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;
- (2) shall comply with occupational safety and health standards promulgated under this Act.

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

OSHA has defined Radiofrequency and Microwave Radiation safety standards for workers who may enter hazardous RF areas. Regulation Standards 29 CFR § 1910.147 identify a generic Lockout/Tagout procedure aimed to control the unexpected energization or startup 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 worker's 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(s):** Section 4 of this report contains RF Diagram(s) that outline 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. **Gray areas are accessible to anyone.**
- Green represents areas are predicted to be between 5% and 100% of the MPE limits. **Green areas are accessible to anyone.**
- Blue represents areas predicted to exceed the General Public MPE limits but are less than Occupational limits. **Blue areas should be accessible only to RF trained workers.**
- Yellow represents areas predicted to exceed Occupational MPE limits. **Yellow areas should be accessible only to RF trained workers able to assess current exposure levels.**
- Red represents areas predicted to have exposure more than 10 times the Occupational MPE limits. **Red indicates that the RF levels must be reduced prior to access.** An RF Safety Plan is required which outlines how to reduce the RF energy in these areas prior to access.

If trained occupational personnel require access to areas that are delineated as above 100% of the limit, Sitesafe recommends that they utilize the proper personal protection equipment (RF monitors), coordinate with the carriers to reduce or shutdown power, or make real-time power density measurements with the appropriate power density meter to determine real-time MPE levels. This will allow the personnel to ensure that their work area is within exposure limits.

## 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.

## Appendix F – 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 for taking corrective actions to bring the site into compliance.

**Compliance** – The determination of whether a site complies with FCC standards with regards to Human Exposure to Radio Frequency Electromagnetic Fields 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)** – The product of the power supplied to the antenna and the antenna gain in a given direction relative to a half-wave dipole antenna.

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

**General Population/Uncontrolled Environment** – Defined by the FCC as an area where RF exposure may occur to persons who are **unaware** of the potential for exposure and who have no control over 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 its 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 rms and peak electric and magnetic field strength, their squares, or the plane-wave equivalent power densities associated with these fields to which a person may be exposed without harmful effect and with acceptable safety factor.

**Occupational/Controlled Environment** – Defined by the FCC as an area where RF 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 RF exposure on humans. The guideline was published in August 1997.

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

**Radio Frequency Exposure or Electromagnetic Fields** – Electromagnetic waves that are propagated from antennas through space.

**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 energy a 6-foot tall human body will absorb while present in an electromagnetic field of energy.

**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 G – References

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

Site Safe, LLC

<http://www.sitesafe.com>

FCC Radio Frequency Safety

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

National Council on Radiation Protection and Measurements (NCRP)

<http://www.ncrponline.org>

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

<http://www.ieee.org>

American National Standards Institute (ANSI)

<http://www.ansi.org>

Environmental Protection Agency (EPA)

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

National Institutes of Health (NIH)

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

Occupational Safety and Health Agency (OSHA)

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

International Commission on Non-Ionizing Radiation Protection (ICNIRP)

<http://www.icnirp.org>

World Health Organization (WHO)

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

National Cancer Institute

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

American Cancer Society (ACS)

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

European Commission Scientific Committee on Emerging and Newly Identified Health Risks

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

Fairfax County, Virginia Public School Survey

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

UK Health Protection Agency Advisory Group on Non-Ionizing Radiation

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

Norwegian Institute of Public Health

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

# Nicole Caplan

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**From:** auto-reply@usps.com  
**Sent:** Monday, August 10, 2020 1:32 PM  
**To:** ne\_sa\_deliverable  
**Subject:** USPS® Item Delivered, Front Desk/Reception/Mail Room 9405503699300476266435

[EXTERNAL SENDER] - Watch for Phishing Attack



Hello **NICOLE CAPLAN MASON**,

Your item was delivered to the front desk, reception area, or mail room at 1:28 pm on August 10, 2020 in BOCA RATON, FL 33487.

Tracking Number:

**9405503699300476266435**



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