October 6, 2015

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

RE: Notice of Exempt Modification
2895 State Street
Hamden, CT 06517
N 41.36004
W 72.88569
T-Mobile Site #: CT11611B_L700

Members of the Siting Council:

On behalf of T-Mobile, SBA Communications is submitting an exempt modification application to the Connecticut Siting council for modification of existing equipment at a tower facility located at 2895 State Street, Hamden, CT.

The 2895 State Street facility consists of a 136' Monopole Tower owned and operated by SBA 2015 TC Assets, LLC. In order to accommodate technological changes and enhance system performance in the State of Connecticut, T-Mobile plans to modify the equipment configurations at many of its existing cell sites. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter and attachments is being sent to the chief elected official of the municipality in which the affected cell site is located, Mayor Curt B. Leng, as well as the property owner, Wireless Capital Partners, LLC, ("WCP").

As part of T-Mobile's L700 project, T-Mobile desires to upgrade their equipment to meet the new standards of 4G technology. The new equipment will allow customers to download files and browse the internet at a high rate of speed while also allowing their phones to be compatible with the latest 4G technology.

Attached is a summary of the planned modifications, including power density calculations reflecting the change in T-Mobile's operations at the site along with the required fee of $625.

The changes to the facility do not constitute modifications as defined in Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facility will not be significantly changed or altered. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for in R.C.S.A. Section 16-50j-72(b)(2).

1. The overall height of the structure will be unaffected.

2. The proposed changes will not extend the site boundaries. There will be no effect on the site compound other than the new equipment cabinets.

3. The proposed changes will not increase the noise level at the existing facility by six decibels or more.

4. The changes in radio frequency power density will not increase the calculated "worst case" power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environments as calculated for a mixed frequency site.

For the foregoing reasons, SBA Communications on behalf of T-Mobile, respectfully submits that he proposed changes at the referenced site constitute exempt modifications under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at 508.251.0720 x 3804 with any questions you may have concerning this matter.

Thank you,

Kri Pelletier
SBA Communications Corporation
33 Boston Post Road West Suite 320
Marlborough, MA 01752
508-251-0720 x 3804 + T
508-251-1755 + F
203-446-7700 + C
kpelletier@sbasite.com

T-Mobile

Equipment Modification

2895 State Street, Hamden, CT 06517
Site number CT11611B_L700

Tower Owner: SBA 2015 Tower Assets, LLC

Equipment Configuration: Monopole

Current and/or approved:

- (3) Ericsson Air21 B2A/B4P - Panel
- (3) Ericsson Air21 B4A/B2P – Panel
- (3) Ericsson KRY 112 144/1 TMA
- (12) 1-5/8" Feedlines
- (1) 1-5/8" Fiber

Final Configuration:

- (3) Ericsson Air21 B2A/B4P - Panel
- (3) Ericsson Air21 B4A/B2P – Panel
- (3) Commscope LNX-6515DS-A1M – Panel
- (3) Ericsson KRY 112 144/1 TMA
- (3) Ericsson S11B12 RRU
- (12) 1-5/8" Feedlines
- (1) 1-5/8" Fiber

Structural Information:

The attached structural analysis demonstrates that the tower and foundation will have adequate structural capacity to accommodate the proposed modifications.

Power Density:

The anticipated Maximum Composite contributions from the T-Mobile facility are 2.70% of the allowable FCC established general public limit. The anticipated composite MPE value for this site assuming all carriers present is 5.11% of the allowable FCC established general public limit sampled at the ground level.

Site Composite MPE%	
Carrier	MPE%
T-Mobile (Per Sector Max)	2.70 %
Verizon Wireless	2.41 %
Site Total MPE %:	5.11 %

October 6, 2015

Mayor Curt B. Leng
Town of Hamden
2750 Dixwell Ave.
Hamden, CT 06518

RE: Telecommunications Facility @ 2895 State Street, Hamden, CT 06517

Dear Mayor Leng,

In order to accommodate technological changes and enhance system performance in the State of Connecticut, T-Mobile will be changing its equipment configuration at certain cell sites.

As required by Regulations of Connecticut State Agencies (R.C.S.A.) Section 16-50j-73, the Connecticut Siting Council has been notified of the changes and will review T-Mobile's proposal. Please accept this letter as notification under Section 16-50j-73 of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2).

The accompanying letter to the Siting Council fully describes T-Mobile's proposal for the referenced cell site. However, if you have any questions or require any further information on our plans or the Siting Council's procedures, please call me at 508.251.0720 x 3804.

Thank you,

Kri Pelletier
SBA Communications Company
33 Boston Post Road West Suite 320
Marlborough, MA 01752
508-251-0720 x 3804 + T
508-251-1755 + F
203-446-7700 + C
kpelletier@sbasite.com

October 6, 2015

Wireless Capital Partners, LLC, ("WCP")
Dept 2996
Los Angeles, CA 90084
Attn: President or Manager

RE: Telecommunications Facility @ 2895 State Street, Hamden, CT 06517

To Whom It May Concern:

In order to accommodate technological changes and enhance system performance in the State of Connecticut, T-Mobile will be changing its equipment configuration at certain cell sites.

As required by Regulations of Connecticut State Agencies (R.C.S.A.) Section 16-50j-73, the Connecticut Siting Council has been notified of the changes and will review T-Mobile's proposal. Please accept this letter as notification under Section 16-50j-73 of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2).

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Tower Engineering Solutions
Phone (972) 483-0607, Fax (972) 975-9615
8445 Freeport Parkway, Suite 375, Irving, Texas 75063

Structural Analysis Report

Existing 136 ft EEI Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT46137-A-01

Customer Site Name: Hamden-State St

Carrier Name: T-Mobile

Carrier Site ID / Name: CT11611B

Site Location: 2895 State Street

Hamden, Connecticut

New Haven County

Latitude: 41.360008

Longitude: -72.885833

Analysis Result:

Max Structural Usage: 99.4% [Pass]

Max Foundation Usage: 83.5% [Pass]

Report Prepared By : Jie Chen

Introduction

The purpose of this report is to summarize the analysis results on the 136 ft EEI Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Engineered Endeavors Incorporated (Job No. 5315-P01) Structure & Foundation Design Calculations dated August 16. 1999
Foundation Drawing	N/A
Geotechnical Report	Dr. Clarence Welti, P.E., P.C., Project Name: Nextel Tower Site, dated 5/27/1999
Modification Drawings	N/A

Analysis Criteria

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

Basic Wind Speed Used in the Analysis:	85.0 mph (fastest mile)
Basic Wind Speed with Ice:	74 mph (fastest mile) with 1/2" radial ice concurrent
Operational Wind Speed:	50 mph + 0" Radial ice
Standard/Codes:	ANSI/TIA/EIA 222-F / 2005 Connecticut State Building Code

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	136.0	6	Andrew HBX-6517DS-VTM - Panel	Low Profile Platform	(2) 1 5/8" Fiber	Verizon
2		6	Andrew LNX-6514DS-VTM - Panel			
3		3	Alcatel Lucent RRH-2X40-700U RRHs			
4		3	Alcatel Lucent RRH-2X40-AWS RRHs			
-	128.0	3	Ericsson Air21 B2A/B4P - Panel	Low Profile Platform	(12) 1 5/8" (1) 1 5/8" Fiber	T-Mobile
-		3	Ericsson Air21 B4A/B2P - Panel			
-		3	Ericsson KRY 112 144/1 TMA			

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	128.0	3	Ericsson Air21 B2A/B4P - Panel	Low Profile Platform	(12) 1 5/8" (1) 1 5/8" Fiber	T-Mobile
6		3	Ericsson Air21 B4A/B2P - Panel			
7		3	Commscope LNX-6515DS-A1M - Panel			
8		3	Ericsson KRY 112 144/1 TMA			
9		3	Ericsson S11B12 RRU			

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

Analysis Results

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

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	**75.5%**	**58.0%**	**99.4%**
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)
Original Design Reactions	2324.8	21.8
Analysis Reactions	1894.0	18.2
% of Design Reactions	81.5%	83.5%

No foundation drawing is available for the analysis of the existing foundation. Since the reactions calculated from the current analysis are less than those indicated on the original structural design drawing, the foundations are assumed to be adequate to resist the reactions from the current analysis.

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by ANSI/TIA/EIA 222-F for the installed antennas. Maximum twist/sway at the elevation of the proposed equipment is 1.9818 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

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

Standard Conditions

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

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

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

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

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

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

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

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

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

Usage Diagram - Max Stress 75.5% at 92.0ft

Structure:	CT46137-A-SBA	**Code:**	EIA/TIA-222-F	9/29/2015	
Site Name:	Hamden-State St	**Exposure:**	C		
Height:	136.00 (ft)	**Gh:**	1.69	Page: 1	
Base Elev:	0.000 (ft)				

Tower Engineering Solutions

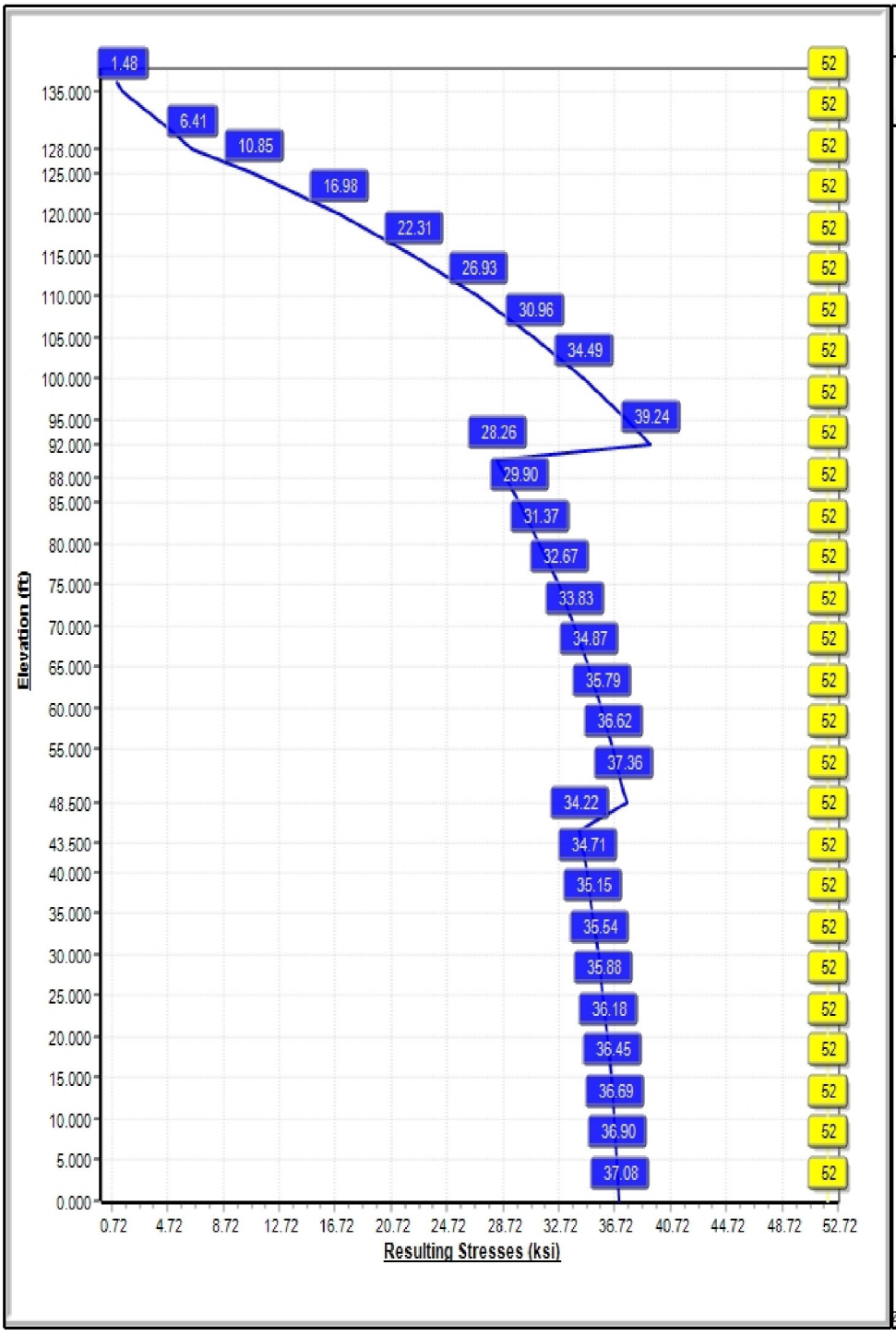
Dead Load Factor:	1.00
Wind Load Factor:	1.00

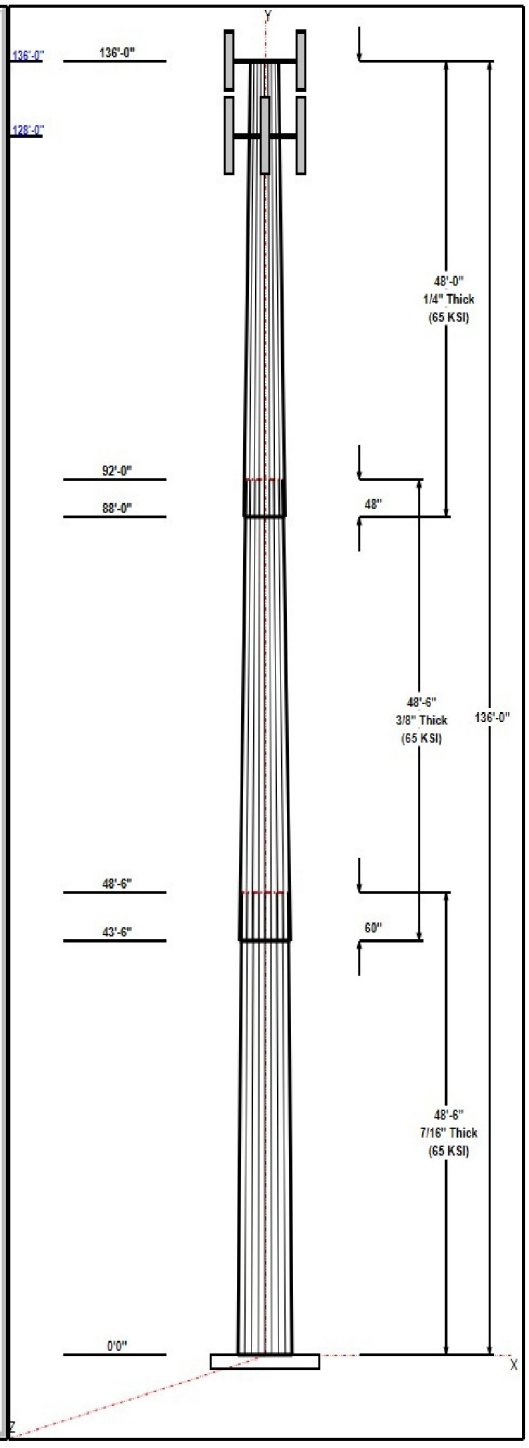
52 Alllowable Stress

39 Resulting Stress

Load Case : 85 mph Wind with 0 in Ice

Iterations: 24





Structure: CT46137-A-SBA

Type: Tapered
Site Name: Hamden-State St
Height: 136.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.18566

9/29/2015

Tower Engineering Solutions

Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	48.50	34.00	43.00	0.438		0.18566	65
2	48.50	26.67	35.67	0.375	Slip	0.18566	65
3	48.00	19.00	27.91	0.250	Slip	0.18566	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
136.00	136.00	6	HBX-6517DS-VTM	Verizon
136.00	136.00	6	LNX-6514DS-VTM	Verizon
136.00	136.00	1	Low Profile Platform	Verizon
136.00	136.00	3	RRH-2X40-700U	Verizon
136.00	136.00	3	RRH-2X40-AWS	Verizon
128.00	128.00	3	Air21 B2A/B4P	T-Mobile
128.00	128.00	3	Air21 B4A/B2P	T-Mobile
128.00	128.00	3	KRY 112 144/1	T-Mobile
128.00	128.00	3	LNX-6515DS-A1M	T-Mobile
128.00	128.00	1	Low Profile Platform	T-Mobile
128.00	128.00	3	S11B12	T-Mobile

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	136.00	Inside	1 5/8" Fiber	Verizon
0.00	128.00	Inside	1 5/8" Coax	T-Mobile
0.00	128.00	Inside	1 5/8" Fiber	T-Mobile

Anchor Bolts

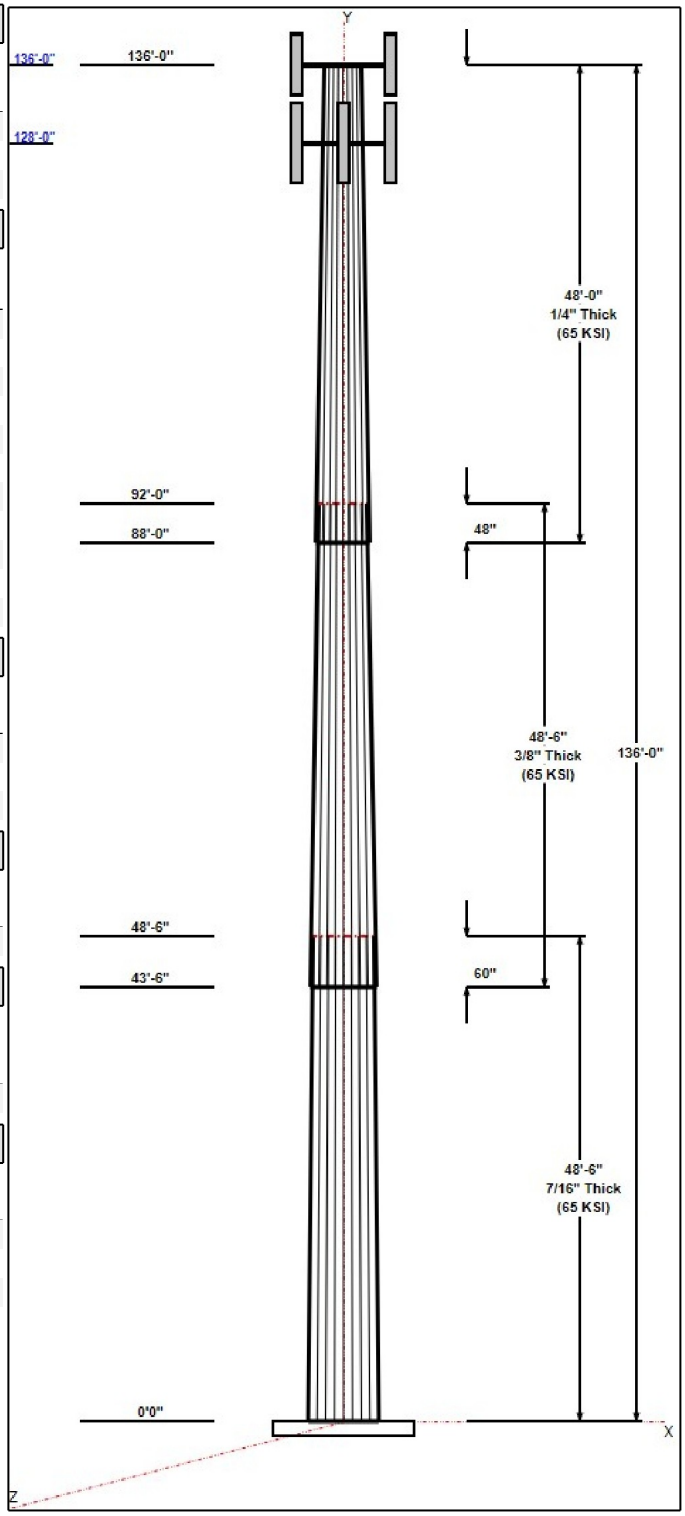
Qty	Specifications	Grade (ksi)	Arrangement
16	2.25" 18J	75.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.0000	57.0	60.0	Round

Reactions

Load Case	Moment	Shear	Axial
85 mph Wind with 0" Ice	1894.0	18.2	22.9
73.61 mph Wind with 0.5" Ice	1572.6	14.7	27.2
50 mph Wind with 0" Ice	656.2	6.3	22.9

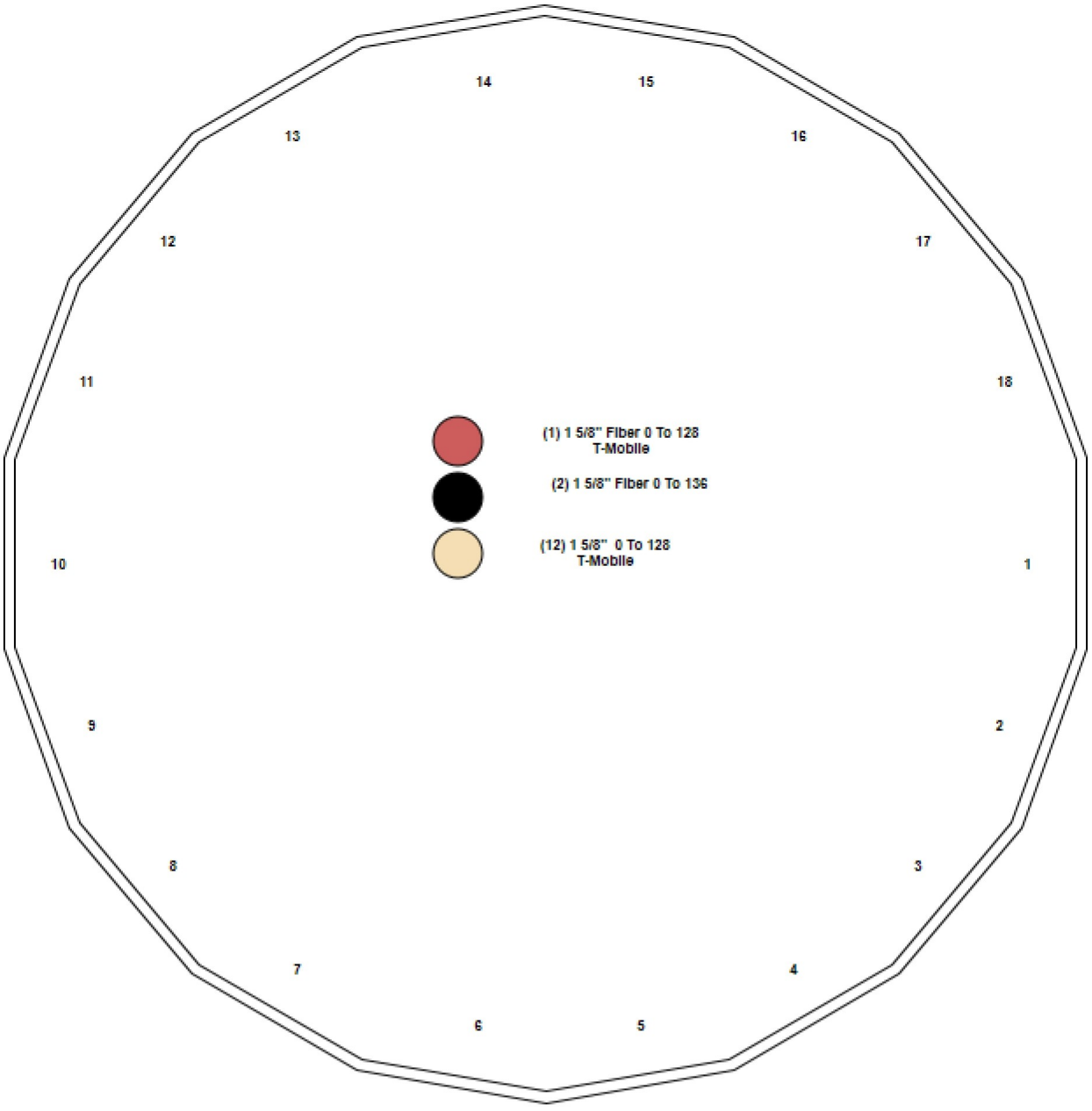


Structure: CT46137-A-SBA - Coax Line Placement

Type: Monopole
Site Name: Hamden-State St
Height: 136.00 (ft)

9/29/2015

Tower Engineering Solutions



Shaft Properties

Structure:	CT46137-A-SBA	**Code:**	EIA/TIA-222-F	9/29/2015	
Site Name:	Hamden-State St	**Exposure:**	C		
Height:	136.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 4	

Tower Engineering Solutions

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	48.500	0.4375	65		0.00	8,722
2	18	48.500	0.3750	65	Slip	60.00	6,049
3	18	48.000	0.2500	65	Slip	48.00	3,007
					Total Shaft Weight:		**17,779**

	Bottom						Top						
Sec. No.	**Dia (in)**	**Elev (ft)**	**Area (sqin)**	**Ix (in^4)**	**W/t Ratio**	**D/t Ratio**	**Dia (in)**	**Elev (ft)**	**Area (sqin)**	**Ix (in^4)**	**W/t Ratio**	**D/t Ratio**	**Taper**
1	43.00	0.00	59.10	13527.07	15.91	98.28	34.00	48.50	46.60	6629.90	12.29	77.70	0.185662
2	35.67	43.50	42.01	6613.82	15.36	95.12	26.67	92.00	31.30	2733.70	11.12	71.11	0.185662
3	27.91	88.00	21.95	2121.90	18.27	111.6	19.00	136.0	14.88	660.83	11.99	76	0.185662

Loading Summary

Structure:	CT46137-A-SBA	**Code:**	EIA/TIA-222-F	9/29/2015	
Site Name:	Hamden-State St	**Exposure:**	C		
Height:	136.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 5	

Tower Engineering Solutions

Discrete Appurtenances

				No Ice			Ice				
No.	**Elev (ft)**	**Description**	**Qty**	**Weight (lb)**	**CaAa (sf)**	**CaAa Factor**	**Weight (lb)**	**CaAa (sf)**	**CaAa Factor**	**Hor. Ecc. (ft)**	**Vert Ecc (ft)**
1	136.0	HBX-6517DS-VTM	6	18.70	5.30	0.75	46.20	6.010	0.75	0.00	0.00
2	136.0	LNX-6514DS-VTM	6	33.10	8.33	0.80	83.10	9.150	0.80	0.00	0.00
3	136.0	Low Profile Platform	1	1500.00	22.00	1.00	1800.00	27.00	1.00	0.00	0.00
4	136.0	RRH-2X40-700U	3	50.00	2.48	0.93	71.10	2.810	0.93	0.00	0.00
5	136.0	RRH-2X40-AWS	3	44.00	2.52	0.82	61.40	2.870	0.82	0.00	0.00
6	128.0	Air21 B2A/B4P	3	123.00	11.54	0.89	190.20	12.02	0.89	0.00	0.00
7	128.0	Air21 B4A/B2P	3	90.40	6.58	0.86	128.10	6.970	0.86	0.00	0.00
8	128.0	KRY 112 144/1	3	11.00	0.41	0.70	14.10	0.550	0.70	0.00	0.00
9	128.0	LNX-6515DS-A1M	3	49.80	11.41	0.80	115.60	12.34	0.80	0.00	0.00
10	128.0	Low Profile Platform	1	1200.00	25.00	1.00	1500.00	31.00	1.00	0.00	0.00
11	128.0	S11B12	3	51.00	3.31	0.70	67.10	3.520	0.70	0.00	0.00
		Totals:	**35**	**4,268.40**			**6,018.60**				

Linear Appurtenances

			No Ice		Ice		
Bottom Elev. (ft)	**Top Elev. (ft)**	**Description**	**Weight (lb/ft)**	**CaAa (sf/ft)**	**Weight (lb/ft)**	**CaAa (sf/ft)**	**Exposed**
0.00	136.0	(2) 1 5/8" Fiber	2.20	0.00	0.00	0.00	Inside
0.00	128.0	(12) 1 5/8" Coax	1.04	0.00	0.00	0.00	Inside
0.00	128.0	(1) 1 5/8" Fiber	3.30	0.00	0.00	0.00	Inside
		Totals:	**854.72**		**0.00**		

Shaft Section Properties

Structure:	CT46137-A-SBA	**Code:**	EIA/TIA-222-F	9/29/2015	
Site Name:	Hamden-State St	**Exposure:**	C		
Height:	136.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 6	

Increment Length: **5 (ft)**

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)
0.00		0.4375	43.000	59.101	13527.1	15.92	98.29	65	52	0.0
5.00		0.4375	42.072	57.812	12661.1	15.55	96.16	65	52	994.6
10.00		0.4375	41.143	56.523	11833.0	15.17	94.04	65	52	972.6
15.00		0.4375	40.215	55.234	11041.7	14.80	91.92	65	52	950.7
20.00		0.4375	39.287	53.945	10286.6	14.42	89.80	65	52	928.8
25.00		0.4375	38.358	52.656	9566.7	14.05	87.68	65	52	906.9
30.00		0.4375	37.430	51.367	8881.1	13.67	85.55	65	52	884.9
35.00		0.4375	36.502	50.078	8229.2	13.30	83.43	65	52	863.0
40.00		0.4375	35.574	48.789	7609.9	12.93	81.31	65	52	841.1
43.50	Bot - Section 2	0.4375	34.924	47.887	7195.5	12.66	79.83	65	52	575.7
45.00		0.4375	34.645	47.500	7022.6	12.55	79.19	65	52	457.0
48.50	Top - Section 1	0.3750	34.745	40.908	6105.6	14.93	92.65	65	52	1052.1
50.00		0.3750	34.467	40.576	5958.4	14.80	91.91	65	52	208.0
55.00		0.3750	33.539	39.472	5484.8	14.36	89.44	65	52	681.0
60.00		0.3750	32.610	38.367	5037.0	13.92	86.96	65	52	662.2
65.00		0.3750	31.682	37.262	4614.2	13.49	84.49	65	52	643.4
70.00		0.3750	30.754	36.157	4215.8	13.05	82.01	65	52	624.6
75.00		0.3750	29.825	35.052	3841.0	12.61	79.53	65	52	605.8
80.00		0.3750	28.897	33.947	3489.1	12.18	77.06	65	52	587.0
85.00		0.3750	27.969	32.842	3159.4	11.74	74.58	65	52	568.2
88.00	Bot - Section 3	0.3750	27.412	32.179	2971.9	11.48	73.10	65	52	331.9
90.00		0.3750	27.040	31.737	2851.2	11.30	72.11	65	52	365.9
92.00	Top - Section 2	0.2500	27.169	21.360	1955.5	17.75	108.68	65	52	360.9
95.00		0.2500	26.612	20.918	1836.6	17.36	106.45	65	52	215.8
100.00		0.2500	25.684	20.181	1649.4	16.70	102.74	65	52	349.6
105.00		0.2500	24.756	19.444	1475.3	16.05	99.02	65	52	337.1
110.00		0.2500	23.827	18.708	1313.9	15.39	95.31	65	52	324.6
115.00		0.2500	22.899	17.971	1164.7	14.74	91.60	65	52	312.0
120.00		0.2500	21.971	17.235	1027.3	14.09	87.88	65	52	299.5
125.00		0.2500	21.042	16.498	901.1	13.43	84.17	65	52	287.0
128.00		0.2500	20.485	16.056	830.6	13.04	81.94	65	52	166.2
130.00		0.2500	20.114	15.761	785.7	12.78	80.46	65	52	108.3
135.00		0.2500	19.186	15.025	680.7	12.12	76.74	65	52	261.9
136.00		0.2500	19.000	14.878	660.8	11.99	76.00	65	52	50.9
										17778.7

Wind Loading - Shaft

Structure: CT46137-A-SBA
Site Name: Hamden-State St
Height: 136.00 (ft)
Base Elev: 0.000 (ft)

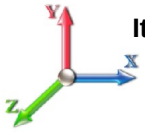
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

9/29/2015

Tower Engineering Solutions

Load Case: 85 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 24

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	18.496	31.26	304.58	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	18.496	31.26	298.01	0.650	0.000	5.00	17.723	11.52	360.1	0.0	994.6
10.00		0.00	1.00	18.496	31.26	291.43	0.650	0.000	5.00	17.336	11.27	352.2	0.0	972.6
15.00		0.00	1.00	18.496	31.26	284.86	0.650	0.000	5.00	16.950	11.02	344.4	0.0	950.7
20.00		0.00	1.00	18.496	31.26	278.28	0.650	0.000	5.00	16.563	10.77	336.5	0.0	928.8
25.00		0.00	1.00	18.496	31.26	271.71	0.650	0.000	5.00	16.176	10.51	328.7	0.0	906.9
30.00		0.00	1.00	18.496	31.26	265.13	0.650	0.000	5.00	15.789	10.26	320.8	0.0	884.9
35.00		0.00	1.02	18.810	31.79	260.74	0.650	0.000	5.00	15.402	10.01	318.3	0.0	863.0
40.00		0.00	1.06	19.541	33.02	259.00	0.650	0.000	5.00	15.016	9.76	322.3	0.0	841.1
43.50	Bot - Section 2	0.00	1.08	20.015	33.83	257.33	0.650	0.000	3.50	10.281	6.68	226.0	0.0	575.7
45.00		0.00	1.09	20.210	34.15	256.52	0.650	0.000	1.50	4.442	2.89	98.6	0.0	457.0
48.50	Top - Section 1	0.00	1.12	20.647	34.89	254.42	0.650	0.000	3.50	10.229	6.65	232.0	0.0	1052.1
50.00		0.00	1.13	20.827	35.20	259.07	0.650	0.000	1.50	4.326	2.81	99.0	0.0	208.0
55.00		0.00	1.16	21.402	36.17	255.55	0.650	0.000	5.00	14.168	9.21	333.1	0.0	681.0
60.00		0.00	1.19	21.941	37.08	251.58	0.650	0.000	5.00	13.781	8.96	332.2	0.0	662.2
65.00		0.00	1.21	22.449	37.94	247.23	0.650	0.000	5.00	13.394	8.71	330.3	0.0	643.4
70.00		0.00	1.24	22.929	38.75	242.54	0.650	0.000	5.00	13.007	8.45	327.6	0.0	624.6
75.00		0.00	1.26	23.386	39.52	237.55	0.650	0.000	5.00	12.621	8.20	324.2	0.0	605.8
80.00		0.00	1.29	23.821	40.26	232.29	0.650	0.000	5.00	12.234	7.95	320.1	0.0	587.0
85.00		0.00	1.31	24.237	40.96	226.78	0.650	0.000	5.00	11.847	7.70	315.4	0.0	568.2
88.00	Bot - Section 3	0.00	1.32	24.478	41.37	223.37	0.650	0.000	3.00	6.923	4.50	186.1	0.0	331.9
90.00		0.00	1.33	24.636	41.63	221.05	0.650	0.000	2.00	4.621	3.00	125.1	0.0	365.9
92.00	Top - Section 2	0.00	1.34	24.791	41.90	218.70	0.650	0.000	2.00	4.559	2.96	124.2	0.0	360.9
95.00		0.00	1.35	25.020	42.28	219.24	0.650	0.000	3.00	6.723	4.37	184.8	0.0	215.8
100.00		0.00	1.37	25.389	42.91	213.15	0.650	0.000	5.00	10.895	7.08	303.9	0.0	349.6
105.00		0.00	1.39	25.745	43.51	206.88	0.650	0.000	5.00	10.508	6.83	297.2	0.0	337.1
110.00		0.00	1.41	26.090	44.09	200.45	0.650	0.000	5.00	10.121	6.58	290.1	0.0	324.6
115.00		0.00	1.43	26.423	44.66	193.87	0.650	0.000	5.00	9.735	6.33	282.6	0.0	312.0
120.00		0.00	1.45	26.747	45.20	187.14	0.650	0.000	5.00	9.348	6.08	274.6	0.0	299.5
125.00		0.00	1.46	27.060	45.73	180.28	0.650	0.000	5.00	8.961	5.82	266.4	0.0	287.0
128.00	Appurtenance(s)	0.00	1.47	27.244	46.04	176.11	0.650	0.000	3.00	5.191	3.37	155.4	0.0	166.2
130.00		0.00	1.48	27.365	46.25	173.30	0.650	0.000	2.00	3.383	2.20	101.7	0.0	108.3
135.00		0.00	1.50	27.662	46.75	166.19	0.650	0.000	5.00	8.187	5.32	248.8	0.0	261.9
136.00	Appurtenance(s)	0.00	1.50	27.720	46.85	164.76	0.650	0.000	1.00	1.591	1.03	48.4	0.0	50.9
								Totals:	**136.00**			**8,511.0**		**17,778.7**

Discrete Appurtenance Forces

Structure:	CT46137-A-SB	**Code:**	EIA/TIA-222-F	9/29/2015	
Site Name:	Hamden-State St	**Exposure:**	C		
Height:	136.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 8	

Tower Engineering Solutions

Load Case: 85 mph Wind with 0" Ice

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations: 24

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	136.00	HBX-6517DS-VTM	6	27.720	46.847	0.75	23.85	112.20	0.000	0.000	1117.31	0.00	0.00
2	136.00	RRH-2X40-700U	3	27.720	46.847	0.93	6.92	150.00	0.000	0.000	324.15	0.00	0.00
3	136.00	Low Profile Platform	1	27.720	46.847	1.00	22.00	1500.00	0.000	0.000	1030.64	0.00	0.00
4	136.00	LNX-6514DS-VTM	6	27.720	46.847	0.80	39.98	198.60	0.000	0.000	1873.15	0.00	0.00
5	136.00	RRH-2X40-AWS	3	27.720	46.847	0.82	6.20	132.00	0.000	0.000	290.42	0.00	0.00
6	128.00	Air21 B2A/B4P	3	27.244	46.043	0.89	30.81	369.00	0.000	0.000	1418.67	0.00	0.00
7	128.00	S11B12	3	27.244	46.043	0.70	6.95	153.00	0.000	0.000	320.04	0.00	0.00
8	128.00	Low Profile Platform	1	27.244	46.043	1.00	25.00	1200.00	0.000	0.000	1151.07	0.00	0.00
9	128.00	LNX-6515DS-A1M	3	27.244	46.043	0.80	27.38	149.40	0.000	0.000	1260.84	0.00	0.00
10	128.00	KRY 112 144/1	3	27.244	46.043	0.70	0.86	33.00	0.000	0.000	39.64	0.00	0.00
11	128.00	Air21 B4A/B2P	3	27.244	46.043	0.86	16.98	271.20	0.000	0.000	781.64	0.00	0.00
						Totals:		**4,268.40**			**9,607.58**		

Total Applied Force Summary

Structure:	CT46137-A-SB	**Code:**	EIA/TIA-222-F	9/29/2015	
Site Name:	Hamden-State St	**Exposure:**	C		
Height:	136.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 9	

Tower Engineering Solutions

Load Case: 85 mph Wind with 0" Ice

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations: 24

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		360.10	1027.28	0.00	0.00
10.00		352.24	1005.34	0.00	0.00
15.00		344.38	983.41	0.00	0.00
20.00		336.52	961.48	0.00	0.00
25.00		328.66	939.55	0.00	0.00
30.00		320.80	917.62	0.00	0.00
35.00		318.25	895.69	0.00	0.00
40.00		322.32	873.76	0.00	0.00
43.50		226.04	598.58	0.00	0.00
45.00		98.61	466.84	0.00	0.00
48.50		232.00	1075.04	0.00	0.00
50.00		98.97	217.76	0.00	0.00
55.00		333.09	713.66	0.00	0.00
60.00		332.16	694.87	0.00	0.00
65.00		330.30	676.07	0.00	0.00
70.00		327.63	657.27	0.00	0.00
75.00		324.21	638.47	0.00	0.00
80.00		320.12	619.67	0.00	0.00
85.00		315.42	600.87	0.00	0.00
88.00		186.14	351.50	0.00	0.00
90.00		125.06	378.95	0.00	0.00
92.00		124.16	373.93	0.00	0.00
95.00		184.77	235.41	0.00	0.00
100.00		303.86	382.32	0.00	0.00
105.00		297.19	369.79	0.00	0.00
110.00		290.08	357.26	0.00	0.00
115.00		282.56	344.73	0.00	0.00
120.00		274.65	332.19	0.00	0.00
125.00		266.37	319.66	0.00	0.00
128.00	(16) appurtenances	5127.27	2361.38	0.00	0.00
130.00		101.70	112.67	0.00	0.00
135.00		248.79	272.90	0.00	0.00
136.00	(19) appurtenances	4684.12	2145.88	0.00	0.00
	Totals:	**18,118.54**	**22,901.80**	**0.00**	**0.00**

Resulting Forces and Deflections

Structure:	CT46137-A-SB	**Code:**	EIA/TIA-222-F	9/29/2015	
Site Name:	Hamden-State St	**Exposure:**	C		
Height:	136.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 10	

Tower Engineering Solutions

Load Case: 85 mph Wind with 0" Ice

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations: 24

Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	Deflect X (in)	Deflect Z (in)	Deflect Resultant (in)	Rotation Sway (deg)	Rotation Twist (deg)
0.00	-18.157	-22.870	0.000	0.000	0.000	-1893.9	0.000	0.000	0.000	0.000	0.000
5.00	-17.870	-21.783	0.000	0.000	0.000	-1803.2	-0.104	0.000	0.104	-0.194	0.000
10.00	-17.585	-20.718	0.000	0.000	0.000	-1713.8	-0.413	0.000	0.413	-0.392	0.000
15.00	-17.301	-19.677	0.000	0.000	0.000	-1625.9	-0.931	0.000	0.931	-0.593	0.000
20.00	-17.020	-18.659	0.000	0.000	0.000	-1539.4	-1.661	0.000	1.661	-0.797	0.000
25.00	-16.741	-17.663	0.000	0.000	0.000	-1454.3	-2.605	0.000	2.605	-1.004	0.000
30.00	-16.465	-16.692	0.000	0.000	0.000	-1370.6	-3.769	0.000	3.769	-1.214	0.000
35.00	-16.185	-15.743	0.000	0.000	0.000	-1288.3	-5.154	0.000	5.154	-1.427	0.000
40.00	-15.887	-14.827	0.000	0.000	0.000	-1207.3	-6.763	0.000	6.763	-1.642	0.000
43.50	-15.670	-14.205	0.000	0.000	0.000	-1151.7	-8.024	0.000	8.024	-1.797	0.000
45.00	-15.584	-13.711	0.000	0.000	0.000	-1128.2	-8.600	0.000	8.600	-1.864	0.000
48.50	-15.340	-12.615	0.000	0.000	0.000	-1073.7	-10.025	0.000	10.025	-2.020	0.000
50.00	-15.267	-12.359	0.000	0.000	0.000	-1050.7	-10.670	0.000	10.670	-2.089	0.000
55.00	-14.956	-11.596	0.000	0.000	0.000	-974.38	-12.987	0.000	12.987	-2.330	0.000
60.00	-14.641	-10.854	0.000	0.000	0.000	-899.60	-15.557	0.000	15.557	-2.574	0.000
65.00	-14.322	-10.133	0.000	0.000	0.000	-826.40	-18.382	0.000	18.382	-2.817	0.000
70.00	-14.002	-9.434	0.000	0.000	0.000	-754.79	-21.462	0.000	21.462	-3.061	0.000
75.00	-13.680	-8.757	0.000	0.000	0.000	-684.78	-24.796	0.000	24.796	-3.304	0.000
80.00	-13.357	-8.102	0.000	0.000	0.000	-616.38	-28.384	0.000	28.384	-3.545	0.000
85.00	-13.029	-7.479	0.000	0.000	0.000	-549.60	-32.222	0.000	32.222	-3.782	0.000
88.00	-12.834	-7.114	0.000	0.000	0.000	-510.51	-34.643	0.000	34.643	-3.926	0.000
90.00	-12.694	-6.724	0.000	0.000	0.000	-484.85	-36.307	0.000	36.307	-4.021	0.000
92.00	-12.557	-6.334	0.000	0.000	0.000	-459.46	-38.010	0.000	38.010	-4.115	0.000
95.00	-12.379	-6.065	0.000	0.000	0.000	-421.79	-40.639	0.000	40.639	-4.253	0.000
100.00	-12.076	-5.645	0.000	0.000	0.000	-359.89	-45.253	0.000	45.253	-4.555	0.000
105.00	-11.774	-5.245	0.000	0.000	0.000	-299.51	-50.173	0.000	50.173	-4.840	0.000
110.00	-11.475	-4.865	0.000	0.000	0.000	-240.64	-55.379	0.000	55.379	-5.100	0.000
115.00	-11.179	-4.507	0.000	0.000	0.000	-183.27	-60.840	0.000	60.840	-5.330	0.000
120.00	-10.887	-4.171	0.000	0.000	0.000	-127.37	-66.521	0.000	66.521	-5.519	0.000
125.00	-10.597	-3.861	0.000	0.000	0.000	-72.942	-72.373	0.000	72.373	-5.658	0.000
128.00	-5.262	-2.017	0.000	0.000	0.000	-41.152	-75.943	0.000	75.943	-5.712	0.000
130.00	-5.151	-1.912	0.000	0.000	0.000	-30.629	-78.337	0.000	78.337	-5.737	0.000
135.00	-4.876	-1.664	0.000	0.000	0.000	-4.876	-84.357	0.000	84.357	-5.769	0.000
136.00	-4.684	0.000	0.000	0.000	0.000	0.000	0.000	0.000	85.563	-5.770	0.000

Resulting Stresses

Structure:	CT46137-A-SBA	**Code:**	EIA/TIA-222-F	9/29/2015	
Site Name:	Hamden-State St	**Exposure:**	C		
Height:	136.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 11	

Tower Engineering Solutions

Load Case: 85 mph Wind with 0" Ice

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations: 24

	Applied Stresses								
Elev (ft)	fa Axial (Y) (ksi)	fvx Shear (X) (ksi)	fvz Shear (Z) (ksi)	fvt Torsion (ksi)	fbx Bending (X) (ksi)	fbz Bending (Z) (ksi)	fb Combined (ksi)	Fb Allow Stress (ksi)	f/Fb Stress Ratio
0.00	0.39	0.62	0.00	0.00	0.00	36.68	37.08	52.0	0.713
5.00	0.38	0.62	0.00	0.00	0.00	36.51	36.90	52.0	0.710
10.00	0.37	0.63	0.00	0.00	0.00	36.31	36.69	52.0	0.706
15.00	0.36	0.63	0.00	0.00	0.00	36.08	36.45	52.0	0.701
20.00	0.35	0.64	0.00	0.00	0.00	35.82	36.18	52.0	0.696
25.00	0.34	0.64	0.00	0.00	0.00	35.53	35.88	52.0	0.690
30.00	0.32	0.65	0.00	0.00	0.00	35.19	35.54	52.0	0.684
35.00	0.31	0.65	0.00	0.00	0.00	34.82	35.15	52.0	0.676
40.00	0.30	0.66	0.00	0.00	0.00	34.39	34.71	52.0	0.668
43.50	0.30	0.66	0.00	0.00	0.00	34.06	34.37	52.0	0.661
45.00	0.29	0.66	0.00	0.00	0.00	33.91	34.22	52.0	0.658
48.50	0.31	0.76	0.00	0.00	0.00	37.23	37.56	52.0	0.723
50.00	0.30	0.76	0.00	0.00	0.00	37.03	37.36	52.0	0.719
55.00	0.29	0.76	0.00	0.00	0.00	36.30	36.62	52.0	0.704
60.00	0.28	0.77	0.00	0.00	0.00	35.48	35.79	52.0	0.689
65.00	0.27	0.77	0.00	0.00	0.00	34.57	34.87	52.0	0.671
70.00	0.26	0.78	0.00	0.00	0.00	33.55	33.83	52.0	0.651
75.00	0.25	0.79	0.00	0.00	0.00	32.40	32.67	52.0	0.629
80.00	0.24	0.79	0.00	0.00	0.00	31.10	31.37	52.0	0.604
85.00	0.23	0.80	0.00	0.00	0.00	29.64	29.90	52.0	0.575
88.00	0.22	0.80	0.00	0.00	0.00	28.69	28.94	52.0	0.557
90.00	0.21	0.81	0.00	0.00	0.00	28.02	28.26	52.0	0.544
92.00	0.30	1.18	0.00	0.00	0.00	38.89	39.24	52.0	0.755
95.00	0.29	1.19	0.00	0.00	0.00	37.24	37.58	52.0	0.723
100.00	0.28	1.21	0.00	0.00	0.00	34.14	34.49	52.0	0.663
105.00	0.27	1.22	0.00	0.00	0.00	30.62	30.96	52.0	0.596
110.00	0.26	1.24	0.00	0.00	0.00	26.59	26.93	52.0	0.518
115.00	0.25	1.25	0.00	0.00	0.00	21.95	22.31	52.0	0.429
120.00	0.24	1.27	0.00	0.00	0.00	16.60	16.98	52.0	0.327
125.00	0.23	1.29	0.00	0.00	0.00	10.38	10.85	52.0	0.209
128.00	0.13	0.66	0.00	0.00	0.00	6.18	6.41	52.0	0.123
130.00	0.12	0.66	0.00	0.00	0.00	4.78	5.03	52.0	0.097
135.00	0.11	0.65	0.00	0.00	0.00	0.84	1.48	52.0	0.028
136.00	0.00	0.63	0.00	0.00	0.00	0.00	1.10	52.0	0.021

Wind Loading - Shaft

Structure: CT46137-A-SBA
Site Name: Hamden-State St
Height: 136.00 (ft)
Base Elev: 0.000 (ft)

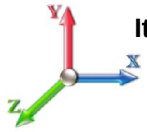
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

9/29/2015

Tower Engineering Solutions

Load Case: 73.61 mph Wind with 0.5" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 24

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	13.871	23.44	263.77	0.650	0.500	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	13.871	23.44	258.07	0.650	0.500	5.00	18.140	11.79	276.4	131.4	1125.9
10.00		0.00	1.00	13.871	23.44	252.38	0.650	0.500	5.00	17.753	11.54	270.5	128.5	1101.1
15.00		0.00	1.00	13.871	23.44	246.69	0.650	0.500	5.00	17.366	11.29	264.6	125.6	1076.3
20.00		0.00	1.00	13.871	23.44	240.99	0.650	0.500	5.00	16.980	11.04	258.7	122.8	1051.6
25.00		0.00	1.00	13.871	23.44	235.30	0.650	0.500	5.00	16.593	10.79	252.8	119.9	1026.8
30.00		0.00	1.00	13.871	23.44	229.60	0.650	0.500	5.00	16.206	10.53	246.9	117.0	1002.0
35.00		0.00	1.02	14.106	23.84	225.80	0.650	0.500	5.00	15.819	10.28	245.1	114.2	977.2
40.00		0.00	1.06	14.655	24.77	224.29	0.650	0.500	5.00	15.432	10.03	248.4	111.3	952.4
43.50	Bot - Section 2	0.00	1.08	15.010	25.37	222.85	0.650	0.500	3.50	10.573	6.87	174.3	76.5	652.2
45.00		0.00	1.09	15.156	25.61	222.15	0.650	0.500	1.50	4.567	2.97	76.0	33.2	490.3
48.50	Top - Section 1	0.00	1.12	15.484	26.17	220.33	0.650	0.500	3.50	10.521	6.84	178.9	76.1	1128.3
50.00		0.00	1.13	15.620	26.40	224.36	0.650	0.500	1.50	4.451	2.89	76.4	32.4	240.3
55.00		0.00	1.16	16.051	27.13	221.31	0.650	0.500	5.00	14.584	9.48	257.2	105.0	786.0
60.00		0.00	1.19	16.455	27.81	217.87	0.650	0.500	5.00	14.198	9.23	256.6	102.2	764.3
65.00		0.00	1.21	16.836	28.45	214.10	0.650	0.500	5.00	13.811	8.98	255.4	99.3	742.7
70.00		0.00	1.24	17.196	29.06	210.04	0.650	0.500	5.00	13.424	8.73	253.6	96.4	721.0
75.00		0.00	1.26	17.538	29.64	205.72	0.650	0.500	5.00	13.037	8.47	251.2	93.6	699.3
80.00		0.00	1.29	17.865	30.19	201.16	0.650	0.500	5.00	12.651	8.22	248.3	90.7	677.7
85.00		0.00	1.31	18.177	30.72	196.39	0.650	0.500	5.00	12.264	7.97	244.9	87.8	656.0
88.00	Bot - Section 3	0.00	1.32	18.358	31.02	193.44	0.650	0.500	3.00	7.173	4.66	144.6	51.7	383.6
90.00		0.00	1.33	18.476	31.22	191.43	0.650	0.500	2.00	4.788	3.11	97.2	34.6	400.5
92.00	Top - Section 2	0.00	1.34	18.592	31.42	189.40	0.650	0.500	2.00	4.726	3.07	96.5	34.2	395.0
95.00		0.00	1.35	18.764	31.71	189.86	0.650	0.500	3.00	6.973	4.53	143.7	50.2	266.0
100.00		0.00	1.37	19.041	32.18	184.59	0.650	0.500	5.00	11.312	7.35	236.6	80.8	430.4
105.00		0.00	1.39	19.308	32.63	179.16	0.650	0.500	5.00	10.925	7.10	231.7	77.9	415.0
110.00		0.00	1.41	19.566	33.07	173.59	0.650	0.500	5.00	10.538	6.85	226.5	75.1	399.6
115.00		0.00	1.43	19.816	33.49	167.89	0.650	0.500	5.00	10.151	6.60	221.0	72.2	384.2
120.00		0.00	1.45	20.059	33.90	162.07	0.650	0.500	5.00	9.764	6.35	215.2	69.3	368.8
125.00		0.00	1.46	20.294	34.30	156.13	0.650	0.500	5.00	9.378	6.10	209.1	66.5	353.4
128.00	Appurtenance(s)	0.00	1.47	20.432	34.53	152.51	0.650	0.500	3.00	5.441	3.54	122.1	38.9	205.0
130.00		0.00	1.48	20.523	34.68	150.08	0.650	0.500	2.00	3.550	2.31	80.0	25.4	133.7
135.00		0.00	1.50	20.745	35.06	143.92	0.650	0.500	5.00	8.604	5.59	196.1	60.7	322.6
136.00	Appurtenance(s)	0.00	1.50	20.789	35.13	142.68	0.650	0.500	1.00	1.674	1.09	38.2	12.0	62.9
								Totals:	**136.00**			**6,594.9**		**20,392.2**

Discrete Appurtenance Forces

Structure:	CT46137-A-SB	**Code:**	EIA/TIA-222-F	9/29/2015	
Site Name:	Hamden-State St	**Exposure:**	C		
Height:	136.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 13	

Tower Engineering Solutions

Load Case: 73.61 mph Wind with 0.5" Ice

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations: 24

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	136.00	HBX-6517DS-VTM	6	20.789	35.134	0.75	27.05	277.20	0.000	0.000	950.19	0.00	0.00
2	136.00	RRH-2X40-700U	3	20.789	35.134	0.93	7.84	213.30	0.000	0.000	275.44	0.00	0.00
3	136.00	Low Profile Platform	1	20.789	35.134	1.00	27.00	1800.00	0.000	0.000	948.61	0.00	0.00
4	136.00	LNX-6514DS-VTM	6	20.789	35.134	0.80	43.92	498.60	0.000	0.000	1543.06	0.00	0.00
5	136.00	RRH-2X40-AWS	3	20.789	35.134	0.82	7.06	184.20	0.000	0.000	248.05	0.00	0.00
6	128.00	Air21 B2A/B4P	3	20.432	34.530	0.89	32.09	570.60	0.000	0.000	1108.19	0.00	0.00
7	128.00	S11B12	3	20.432	34.530	0.70	7.39	201.30	0.000	0.000	255.25	0.00	0.00
8	128.00	Low Profile Platform	1	20.432	34.530	1.00	31.00	1500.00	0.000	0.000	1070.44	0.00	0.00
9	128.00	LNX-6515DS-A1M	3	20.432	34.530	0.80	29.62	346.80	0.000	0.000	1022.65	0.00	0.00
10	128.00	KRY 112 144/1	3	20.432	34.530	0.70	1.16	42.30	0.000	0.000	39.88	0.00	0.00
11	128.00	Air21 B4A/B2P	3	20.432	34.530	0.86	17.98	384.30	0.000	0.000	620.94	0.00	0.00
						Totals:		**6,018.60**			**8,082.70**		

Total Applied Force Summary

Structure:	CT46137-A-SB	**Code:**	EIA/TIA-222-F	9/29/2015	
Site Name:	Hamden-State St	**Exposure:**	C		
Height:	136.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 14	

Tower Engineering Solutions

Load Case: 73.61 mph Wind with 0.5" Ice

Iterations: 24

Dead Load Factor 1.00

Wind Load Factor 1.00

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		276.41	1158.64	0.00	0.00
10.00		270.51	1133.84	0.00	0.00
15.00		264.62	1109.05	0.00	0.00
20.00		258.73	1084.25	0.00	0.00
25.00		252.83	1059.46	0.00	0.00
30.00		246.94	1034.66	0.00	0.00
35.00		245.13	1009.87	0.00	0.00
40.00		248.44	985.07	0.00	0.00
43.50		174.33	675.10	0.00	0.00
45.00		76.03	500.07	0.00	0.00
48.50		178.95	1151.17	0.00	0.00
50.00		76.37	250.13	0.00	0.00
55.00		257.15	818.70	0.00	0.00
60.00		256.63	797.03	0.00	0.00
65.00		255.42	775.37	0.00	0.00
70.00		253.58	753.71	0.00	0.00
75.00		251.17	732.05	0.00	0.00
80.00		248.26	710.38	0.00	0.00
85.00		244.87	688.72	0.00	0.00
88.00		144.64	403.18	0.00	0.00
90.00		97.17	413.56	0.00	0.00
92.00		96.52	408.08	0.00	0.00
95.00		143.72	285.61	0.00	0.00
100.00		236.60	463.12	0.00	0.00
105.00		231.71	447.72	0.00	0.00
110.00		226.50	432.33	0.00	0.00
115.00		220.98	416.93	0.00	0.00
120.00		215.16	401.53	0.00	0.00
125.00		209.06	386.14	0.00	0.00
128.00	(16) appurtenances	4239.47	3269.93	0.00	0.00
130.00		80.03	138.11	0.00	0.00
135.00		196.08	333.64	0.00	0.00
136.00	(19) appurtenances	4003.59	3038.41	0.00	0.00
	Totals:	**14,677.57**	**27,265.56**	**0.00**	**0.00**

Resulting Forces and Deflections

Structure:	CT46137-A-SB	**Code:**	EIA/TIA-222-F	9/29/2015	
Site Name:	Hamden-State St	**Exposure:**	C		
Height:	136.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 15	

Tower Engineering Solutions

Load Case: 73.61 mph Wind with 0.5" Ice

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations: 24

Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	Deflect X (in)	Deflect Z (in)	Deflect Resultant (in)	Rotation Sway (deg)	Rotation Twist (deg)
0.00	-14.716	-27.244	0.000	0.000	0.000	-1572.5	0.000	0.000	0.000	0.000	0.000
5.00	-14.512	-26.045	0.000	0.000	0.000	-1499.0	-0.086	0.000	0.086	-0.162	0.000
10.00	-14.309	-24.871	0.000	0.000	0.000	-1426.4	-0.343	0.000	0.343	-0.326	0.000
15.00	-14.106	-23.722	0.000	0.000	0.000	-1354.9	-0.774	0.000	0.774	-0.493	0.000
20.00	-13.904	-22.599	0.000	0.000	0.000	-1284.3	-1.381	0.000	1.381	-0.663	0.000
25.00	-13.703	-21.502	0.000	0.000	0.000	-1214.8	-2.168	0.000	2.168	-0.836	0.000
30.00	-13.502	-20.430	0.000	0.000	0.000	-1146.3	-3.137	0.000	3.137	-1.011	0.000
35.00	-13.299	-19.383	0.000	0.000	0.000	-1078.8	-4.291	0.000	4.291	-1.190	0.000
40.00	-13.078	-18.369	0.000	0.000	0.000	-1012.3	-5.633	0.000	5.633	-1.370	0.000
43.50	-12.915	-17.677	0.000	0.000	0.000	-966.58	-6.686	0.000	6.686	-1.500	0.000
45.00	-12.854	-17.158	0.000	0.000	0.000	-947.21	-7.167	0.000	7.167	-1.557	0.000
48.50	-12.669	-15.992	0.000	0.000	0.000	-902.22	-8.357	0.000	8.357	-1.688	0.000
50.00	-12.621	-15.715	0.000	0.000	0.000	-883.21	-8.897	0.000	8.897	-1.745	0.000
55.00	-12.391	-14.861	0.000	0.000	0.000	-820.11	-10.833	0.000	10.833	-1.948	0.000
60.00	-12.156	-14.030	0.000	0.000	0.000	-758.16	-12.983	0.000	12.983	-2.153	0.000
65.00	-11.918	-13.223	0.000	0.000	0.000	-697.38	-15.347	0.000	15.347	-2.359	0.000
70.00	-11.677	-12.439	0.000	0.000	0.000	-637.79	-17.927	0.000	17.927	-2.565	0.000
75.00	-11.434	-11.679	0.000	0.000	0.000	-579.40	-20.722	0.000	20.722	-2.770	0.000
80.00	-11.189	-10.942	0.000	0.000	0.000	-522.23	-23.731	0.000	23.731	-2.974	0.000
85.00	-10.936	-10.237	0.000	0.000	0.000	-466.29	-26.953	0.000	26.953	-3.175	0.000
88.00	-10.786	-9.824	0.000	0.000	0.000	-433.48	-28.986	0.000	28.986	-3.297	0.000
90.00	-10.679	-9.401	0.000	0.000	0.000	-411.91	-30.384	0.000	30.384	-3.378	0.000
92.00	-10.573	-8.982	0.000	0.000	0.000	-390.55	-31.816	0.000	31.816	-3.458	0.000
95.00	-10.441	-8.671	0.000	0.000	0.000	-358.83	-34.025	0.000	34.025	-3.575	0.000
100.00	-10.211	-8.179	0.000	0.000	0.000	-306.63	-37.907	0.000	37.907	-3.833	0.000
105.00	-9.981	-7.708	0.000	0.000	0.000	-255.57	-42.050	0.000	42.050	-4.075	0.000
110.00	-9.750	-7.258	0.000	0.000	0.000	-205.67	-46.436	0.000	46.436	-4.297	0.000
115.00	-9.519	-6.829	0.000	0.000	0.000	-156.92	-51.041	0.000	51.041	-4.494	0.000
120.00	-9.288	-6.423	0.000	0.000	0.000	-109.32	-55.834	0.000	55.834	-4.656	0.000
125.00	-9.057	-6.043	0.000	0.000	0.000	-62.888	-60.775	0.000	60.775	-4.776	0.000
128.00	-4.560	-3.137	0.000	0.000	0.000	-35.718	-63.789	0.000	63.789	-4.822	0.000
130.00	-4.470	-3.004	0.000	0.000	0.000	-26.598	-65.812	0.000	65.812	-4.844	0.000
135.00	-4.247	-2.687	0.000	0.000	0.000	-4.247	-70.897	0.000	70.897	-4.871	0.000
136.00	-4.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	71.916	-4.872	0.000

Resulting Stresses

Structure:	CT46137-A-SBA	**Code:**	EIA/TIA-222-F	9/29/2015	
Site Name:	Hamden-State St	**Exposure:**	C		
Height:	136.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 16	

Tower Engineering Solutions

Load Case: 73.61 mph Wind with 0.5" Ice

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations: 24

Applied Stresses

Elev (ft)	fa Axial (Y) (ksi)	fvx Shear (X) (ksi)	fvz Shear (Z) (ksi)	fvt Torsion (ksi)	fbx Bending (X) (ksi)	fbz Bending (Z) (ksi)	fb Combined (ksi)	Fb Allow Stress (ksi)	f/Fb Stress Ratio
0.00	0.46	0.50	0.00	0.00	0.00	30.46	30.93	52.0	0.595
5.00	0.45	0.51	0.00	0.00	0.00	30.35	30.81	52.0	0.593
10.00	0.44	0.51	0.00	0.00	0.00	30.22	30.67	52.0	0.590
15.00	0.43	0.51	0.00	0.00	0.00	30.07	30.51	52.0	0.587
20.00	0.42	0.52	0.00	0.00	0.00	29.89	30.32	52.0	0.583
25.00	0.41	0.52	0.00	0.00	0.00	29.68	30.10	52.0	0.579
30.00	0.40	0.53	0.00	0.00	0.00	29.44	29.85	52.0	0.574
35.00	0.39	0.54	0.00	0.00	0.00	29.16	29.56	52.0	0.569
40.00	0.38	0.54	0.00	0.00	0.00	28.83	29.22	52.0	0.562
43.50	0.37	0.54	0.00	0.00	0.00	28.58	28.97	52.0	0.557
45.00	0.36	0.55	0.00	0.00	0.00	28.47	28.85	52.0	0.555
48.50	0.39	0.62	0.00	0.00	0.00	31.28	31.69	52.0	0.610
50.00	0.39	0.63	0.00	0.00	0.00	31.13	31.53	52.0	0.607
55.00	0.38	0.63	0.00	0.00	0.00	30.55	30.95	52.0	0.595
60.00	0.37	0.64	0.00	0.00	0.00	29.91	30.29	52.0	0.583
65.00	0.35	0.64	0.00	0.00	0.00	29.17	29.55	52.0	0.568
70.00	0.34	0.65	0.00	0.00	0.00	28.35	28.71	52.0	0.552
75.00	0.33	0.66	0.00	0.00	0.00	27.41	27.77	52.0	0.534
80.00	0.32	0.66	0.00	0.00	0.00	26.35	26.70	52.0	0.514
85.00	0.31	0.67	0.00	0.00	0.00	25.15	25.49	52.0	0.490
88.00	0.31	0.68	0.00	0.00	0.00	24.36	24.69	52.0	0.475
90.00	0.30	0.68	0.00	0.00	0.00	23.80	24.13	52.0	0.464
92.00	0.42	1.00	0.00	0.00	0.00	33.06	33.52	52.0	0.645
95.00	0.41	1.01	0.00	0.00	0.00	31.68	32.14	52.0	0.618
100.00	0.41	1.02	0.00	0.00	0.00	29.09	29.55	52.0	0.568
105.00	0.40	1.03	0.00	0.00	0.00	26.13	26.59	52.0	0.511
110.00	0.39	1.05	0.00	0.00	0.00	22.72	23.18	52.0	0.446
115.00	0.38	1.07	0.00	0.00	0.00	18.80	19.27	52.0	0.371
120.00	0.37	1.09	0.00	0.00	0.00	14.25	14.74	52.0	0.284
125.00	0.37	1.11	0.00	0.00	0.00	8.95	9.51	52.0	0.183
128.00	0.20	0.57	0.00	0.00	0.00	5.37	5.65	52.0	0.109
130.00	0.19	0.57	0.00	0.00	0.00	4.15	4.45	52.0	0.086
135.00	0.18	0.57	0.00	0.00	0.00	0.73	1.34	52.0	0.026
136.00	0.00	0.54	0.00	0.00	0.00	0.00	0.94	52.0	0.018

Wind Loading - Shaft

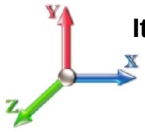
Structure:	CT46137-A-SBA	**Code:**	EIA/TIA-222-F	9/29/2015	
Site Name:	Hamden-State St	**Exposure:**	C		
Height:	136.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 17	

Tower Engineering Solutions

Load Case: 50 mph Wind with 0" Ice

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations: 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	6.400	10.82	179.17	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	6.400	10.82	175.30	0.650	0.000	5.00	17.723	11.52	124.6	0.0	994.6
10.00		0.00	1.00	6.400	10.82	171.43	0.650	0.000	5.00	17.336	11.27	121.9	0.0	972.6
15.00		0.00	1.00	6.400	10.82	167.56	0.650	0.000	5.00	16.950	11.02	119.2	0.0	950.7
20.00		0.00	1.00	6.400	10.82	163.69	0.650	0.000	5.00	16.563	10.77	116.4	0.0	928.8
25.00		0.00	1.00	6.400	10.82	159.83	0.650	0.000	5.00	16.176	10.51	113.7	0.0	906.9
30.00		0.00	1.00	6.400	10.82	155.96	0.650	0.000	5.00	15.789	10.26	111.0	0.0	884.9
35.00		0.00	1.02	6.509	11.00	153.37	0.650	0.000	5.00	15.402	10.01	110.1	0.0	863.0
40.00		0.00	1.06	6.762	11.43	152.35	0.650	0.000	5.00	15.016	9.76	111.5	0.0	841.1
43.50	Bot - Section 2	0.00	1.08	6.926	11.70	151.37	0.650	0.000	3.50	10.281	6.68	78.2	0.0	575.7
45.00		0.00	1.09	6.993	11.82	150.89	0.650	0.000	1.50	4.442	2.89	34.1	0.0	457.0
48.50	Top - Section 1	0.00	1.12	7.144	12.07	149.66	0.650	0.000	3.50	10.229	6.65	80.3	0.0	1052.1
50.00		0.00	1.13	7.207	12.18	152.39	0.650	0.000	1.50	4.326	2.81	34.2	0.0	208.0
55.00		0.00	1.16	7.406	12.52	150.32	0.650	0.000	5.00	14.168	9.21	115.3	0.0	681.0
60.00		0.00	1.19	7.592	12.83	147.99	0.650	0.000	5.00	13.781	8.96	114.9	0.0	662.2
65.00		0.00	1.21	7.768	13.13	145.43	0.650	0.000	5.00	13.394	8.71	114.3	0.0	643.4
70.00		0.00	1.24	7.934	13.41	142.67	0.650	0.000	5.00	13.007	8.45	113.4	0.0	624.6
75.00		0.00	1.26	8.092	13.68	139.74	0.650	0.000	5.00	12.621	8.20	112.2	0.0	605.8
80.00		0.00	1.29	8.242	13.93	136.64	0.650	0.000	5.00	12.234	7.95	110.8	0.0	587.0
85.00		0.00	1.31	8.387	14.17	133.40	0.650	0.000	5.00	11.847	7.70	109.1	0.0	568.2
88.00	Bot - Section 3	0.00	1.32	8.470	14.31	131.39	0.650	0.000	3.00	6.923	4.50	64.4	0.0	331.9
90.00		0.00	1.33	8.525	14.41	130.03	0.650	0.000	2.00	4.621	3.00	43.3	0.0	365.9
92.00	Top - Section 2	0.00	1.34	8.578	14.50	128.65	0.650	0.000	2.00	4.559	2.96	43.0	0.0	360.9
95.00		0.00	1.35	8.657	14.63	128.96	0.650	0.000	3.00	6.723	4.37	63.9	0.0	215.8
100.00		0.00	1.37	8.785	14.85	125.38	0.650	0.000	5.00	10.895	7.08	105.1	0.0	349.6
105.00		0.00	1.39	8.908	15.06	121.69	0.650	0.000	5.00	10.508	6.83	102.8	0.0	337.1
110.00		0.00	1.41	9.028	15.26	117.91	0.650	0.000	5.00	10.121	6.58	100.4	0.0	324.6
115.00		0.00	1.43	9.143	15.45	114.04	0.650	0.000	5.00	9.735	6.33	97.8	0.0	312.0
120.00		0.00	1.45	9.255	15.64	110.08	0.650	0.000	5.00	9.348	6.08	95.0	0.0	299.5
125.00		0.00	1.46	9.363	15.82	106.05	0.650	0.000	5.00	8.961	5.82	92.2	0.0	287.0
128.00	Appurtenance(s)	0.00	1.47	9.427	15.93	103.59	0.650	0.000	3.00	5.191	3.37	53.8	0.0	166.2
130.00		0.00	1.48	9.469	16.00	101.94	0.650	0.000	2.00	3.383	2.20	35.2	0.0	108.3
135.00		0.00	1.50	9.572	16.18	97.76	0.650	0.000	5.00	8.187	5.32	86.1	0.0	261.9
136.00	Appurtenance(s)	0.00	1.50	9.592	16.21	96.92	0.650	0.000	1.00	1.591	1.03	16.8	0.0	50.9
								Totals:	**136.00**			**2,945.0**		**17,778.7**

Discrete Appurtenance Forces

Structure:	CT46137-A-SB	**Code:**	EIA/TIA-222-F	9/29/2015	
Site Name:	Hamden-State St	**Exposure:**	C		
Height:	136.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 18	

Tower Engineering Solutions

Load Case: 50 mph Wind with 0" Ice

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations: 23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	136.00	HBX-6517DS-VTM	6	9.592	16.210	0.75	23.85	112.20	0.000	0.000	386.61	0.00	0.00
2	136.00	RRH-2X40-700U	3	9.592	16.210	0.93	6.92	150.00	0.000	0.000	112.16	0.00	0.00
3	136.00	Low Profile Platform	1	9.592	16.210	1.00	22.00	1500.00	0.000	0.000	356.62	0.00	0.00
4	136.00	LNX-6514DS-VTM	6	9.592	16.210	0.80	39.98	198.60	0.000	0.000	648.15	0.00	0.00
5	136.00	RRH-2X40-AWS	3	9.592	16.210	0.82	6.20	132.00	0.000	0.000	100.49	0.00	0.00
6	128.00	Air21 B2A/B4P	3	9.427	15.932	0.89	30.81	369.00	0.000	0.000	490.89	0.00	0.00
7	128.00	S11B12	3	9.427	15.932	0.70	6.95	153.00	0.000	0.000	110.74	0.00	0.00
8	128.00	Low Profile Platform	1	9.427	15.932	1.00	25.00	1200.00	0.000	0.000	398.30	0.00	0.00
9	128.00	LNX-6515DS-A1M	3	9.427	15.932	0.80	27.38	149.40	0.000	0.000	436.28	0.00	0.00
10	128.00	KRY 112 144/1	3	9.427	15.932	0.70	0.86	33.00	0.000	0.000	13.72	0.00	0.00
11	128.00	Air21 B4A/B2P	3	9.427	15.932	0.86	16.98	271.20	0.000	0.000	270.47	0.00	0.00
						Totals:		**4,268.40**			**3,324.42**		

Total Applied Force Summary

Structure:	CT46137-A-SB	**Code:**	EIA/TIA-222-F	9/29/2015	
Site Name:	Hamden-State St	**Exposure:**	C		
Height:	136.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 19	

Tower Engineering Solutions

Load Case: 50 mph Wind with 0" Ice

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations: 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		124.60	1027.28	0.00	0.00
10.00		121.88	1005.34	0.00	0.00
15.00		119.16	983.41	0.00	0.00
20.00		116.44	961.48	0.00	0.00
25.00		113.72	939.55	0.00	0.00
30.00		111.01	917.62	0.00	0.00
35.00		110.12	895.69	0.00	0.00
40.00		111.53	873.76	0.00	0.00
43.50		78.21	598.58	0.00	0.00
45.00		34.12	466.84	0.00	0.00
48.50		80.28	1075.04	0.00	0.00
50.00		34.25	217.76	0.00	0.00
55.00		115.26	713.66	0.00	0.00
60.00		114.93	694.87	0.00	0.00
65.00		114.29	676.07	0.00	0.00
70.00		113.37	657.27	0.00	0.00
75.00		112.18	638.47	0.00	0.00
80.00		110.77	619.67	0.00	0.00
85.00		109.14	600.87	0.00	0.00
88.00		64.41	351.50	0.00	0.00
90.00		43.27	378.95	0.00	0.00
92.00		42.96	373.93	0.00	0.00
95.00		63.93	235.41	0.00	0.00
100.00		105.14	382.32	0.00	0.00
105.00		102.83	369.79	0.00	0.00
110.00		100.37	357.26	0.00	0.00
115.00		97.77	344.73	0.00	0.00
120.00		95.03	332.19	0.00	0.00
125.00		92.17	319.66	0.00	0.00
128.00	(16) appurtenances	1774.14	2361.38	0.00	0.00
130.00		35.19	112.67	0.00	0.00
135.00		86.09	272.90	0.00	0.00
136.00	(19) appurtenances	1620.80	2145.88	0.00	0.00
	Totals:	**6,269.39**	**22,901.80**	**0.00**	**0.00**

Resulting Forces and Deflections

Structure:	CT46137-A-SB	**Code:**	EIA/TIA-222-F	9/29/2015	
Site Name:	Hamden-State St	**Exposure:**	C		
Height:	136.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 20	

Tower Engineering Solutions

Load Case: 50 mph Wind with 0" Ice

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations: 23

Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	Deflect X (in)	Deflect Z (in)	Deflect Resultant (in)	Rotation Sway (deg)	Rotation Twist (deg)
0.00	-6.282	-22.898	0.000	0.000	0.000	-656.17	0.000	0.000	0.000	0.000	0.000
5.00	-6.183	-21.863	0.000	0.000	0.000	-624.76	-0.036	0.000	0.036	-0.067	0.000
10.00	-6.084	-20.851	0.000	0.000	0.000	-593.85	-0.143	0.000	0.143	-0.136	0.000
15.00	-5.986	-19.861	0.000	0.000	0.000	-563.43	-0.323	0.000	0.323	-0.205	0.000
20.00	-5.889	-18.892	0.000	0.000	0.000	-533.50	-0.575	0.000	0.575	-0.276	0.000
25.00	-5.793	-17.946	0.000	0.000	0.000	-504.05	-0.903	0.000	0.903	-0.348	0.000
30.00	-5.698	-17.022	0.000	0.000	0.000	-475.08	-1.306	0.000	1.306	-0.421	0.000
35.00	-5.601	-16.120	0.000	0.000	0.000	-446.59	-1.786	0.000	1.786	-0.494	0.000
40.00	-5.499	-15.241	0.000	0.000	0.000	-418.59	-2.344	0.000	2.344	-0.569	0.000
43.50	-5.424	-14.640	0.000	0.000	0.000	-399.34	-2.781	0.000	2.781	-0.623	0.000
45.00	-5.395	-14.170	0.000	0.000	0.000	-391.20	-2.980	0.000	2.980	-0.646	0.000
48.50	-5.311	-13.092	0.000	0.000	0.000	-372.32	-3.474	0.000	3.474	-0.700	0.000
50.00	-5.286	-12.870	0.000	0.000	0.000	-364.36	-3.698	0.000	3.698	-0.724	0.000
55.00	-5.179	-12.150	0.000	0.000	0.000	-337.93	-4.501	0.000	4.501	-0.808	0.000
60.00	-5.070	-11.450	0.000	0.000	0.000	-312.04	-5.392	0.000	5.392	-0.892	0.000
65.00	-4.961	-10.768	0.000	0.000	0.000	-286.68	-6.372	0.000	6.372	-0.977	0.000
70.00	-4.851	-10.106	0.000	0.000	0.000	-261.88	-7.440	0.000	7.440	-1.061	0.000
75.00	-4.740	-9.463	0.000	0.000	0.000	-237.62	-8.597	0.000	8.597	-1.145	0.000
80.00	-4.630	-8.839	0.000	0.000	0.000	-213.92	-9.841	0.000	9.841	-1.229	0.000
85.00	-4.517	-8.235	0.000	0.000	0.000	-190.77	-11.173	0.000	11.173	-1.312	0.000
88.00	-4.450	-7.882	0.000	0.000	0.000	-177.22	-12.013	0.000	12.013	-1.361	0.000
90.00	-4.402	-7.502	0.000	0.000	0.000	-168.32	-12.590	0.000	12.590	-1.394	0.000
92.00	-4.355	-7.126	0.000	0.000	0.000	-159.52	-13.181	0.000	13.181	-1.427	0.000
95.00	-4.294	-6.887	0.000	0.000	0.000	-146.46	-14.094	0.000	14.094	-1.475	0.000
100.00	-4.191	-6.500	0.000	0.000	0.000	-124.99	-15.695	0.000	15.695	-1.580	0.000
105.00	-4.087	-6.126	0.000	0.000	0.000	-104.03	-17.404	0.000	17.404	-1.679	0.000
110.00	-3.985	-5.766	0.000	0.000	0.000	-83.602	-19.211	0.000	19.211	-1.769	0.000
115.00	-3.883	-5.420	0.000	0.000	0.000	-63.678	-21.108	0.000	21.108	-1.849	0.000
120.00	-3.783	-5.087	0.000	0.000	0.000	-44.261	-23.081	0.000	23.081	-1.915	0.000
125.00	-3.682	-4.769	0.000	0.000	0.000	-25.349	-25.115	0.000	25.115	-1.963	0.000
128.00	-1.829	-2.470	0.000	0.000	0.000	-14.302	-26.355	0.000	26.355	-1.982	0.000
130.00	-1.790	-2.358	0.000	0.000	0.000	-10.645	-27.187	0.000	27.187	-1.990	0.000
135.00	-1.695	-2.088	0.000	0.000	0.000	-1.695	-29.278	0.000	29.278	-2.002	0.000
136.00	-1.621	0.000	0.000	0.000	0.000	0.000	0.000	0.000	29.698	-2.002	0.000

Resulting Stresses

Structure:	CT46137-A-SBA	**Code:**	EIA/TIA-222-F	9/29/2015	
Site Name:	Hamden-State St	**Exposure:**	C		
Height:	136.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 21	

Tower Engineering Solutions

Load Case: 50 mph Wind with 0" Ice

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations: 23

	Applied Stresses								
Elev (ft)	fa Axial (Y) (ksi)	fvx Shear (X) (ksi)	fvz Shear (Z) (ksi)	fvt Torsion (ksi)	fbx Bending (X) (ksi)	fbz Bending (Z) (ksi)	fb Combined (ksi)	Fb Allow Stress (ksi)	f/Fb Stress Ratio
0.00	0.39	0.21	0.00	0.00	0.00	12.71	13.10	52.0	0.252
5.00	0.38	0.22	0.00	0.00	0.00	12.65	13.03	52.0	0.251
10.00	0.37	0.22	0.00	0.00	0.00	12.58	12.95	52.0	0.249
15.00	0.36	0.22	0.00	0.00	0.00	12.50	12.87	52.0	0.248
20.00	0.35	0.22	0.00	0.00	0.00	12.41	12.77	52.0	0.246
25.00	0.34	0.22	0.00	0.00	0.00	12.31	12.66	52.0	0.244
30.00	0.33	0.22	0.00	0.00	0.00	12.20	12.54	52.0	0.241
35.00	0.32	0.23	0.00	0.00	0.00	12.07	12.40	52.0	0.238
40.00	0.31	0.23	0.00	0.00	0.00	11.92	12.24	52.0	0.235
43.50	0.31	0.23	0.00	0.00	0.00	11.81	12.12	52.0	0.233
45.00	0.30	0.23	0.00	0.00	0.00	11.76	12.06	52.0	0.232
48.50	0.32	0.26	0.00	0.00	0.00	12.91	13.24	52.0	0.255
50.00	0.32	0.26	0.00	0.00	0.00	12.84	13.17	52.0	0.253
55.00	0.31	0.26	0.00	0.00	0.00	12.59	12.91	52.0	0.248
60.00	0.30	0.27	0.00	0.00	0.00	12.31	12.62	52.0	0.243
65.00	0.29	0.27	0.00	0.00	0.00	11.99	12.29	52.0	0.236
70.00	0.28	0.27	0.00	0.00	0.00	11.64	11.93	52.0	0.229
75.00	0.27	0.27	0.00	0.00	0.00	11.24	11.52	52.0	0.222
80.00	0.26	0.27	0.00	0.00	0.00	10.79	11.07	52.0	0.213
85.00	0.25	0.28	0.00	0.00	0.00	10.29	10.55	52.0	0.203
88.00	0.24	0.28	0.00	0.00	0.00	9.96	10.22	52.0	0.197
90.00	0.24	0.28	0.00	0.00	0.00	9.73	9.97	52.0	0.192
92.00	0.33	0.41	0.00	0.00	0.00	13.50	13.86	52.0	0.267
95.00	0.33	0.41	0.00	0.00	0.00	12.93	13.28	52.0	0.255
100.00	0.32	0.42	0.00	0.00	0.00	11.86	12.20	52.0	0.235
105.00	0.32	0.42	0.00	0.00	0.00	10.64	10.98	52.0	0.211
110.00	0.31	0.43	0.00	0.00	0.00	9.24	9.57	52.0	0.184
115.00	0.30	0.44	0.00	0.00	0.00	7.63	7.96	52.0	0.153
120.00	0.30	0.44	0.00	0.00	0.00	5.77	6.11	52.0	0.118
125.00	0.29	0.45	0.00	0.00	0.00	3.61	3.97	52.0	0.076
128.00	0.15	0.23	0.00	0.00	0.00	2.15	2.34	52.0	0.045
130.00	0.15	0.23	0.00	0.00	0.00	1.66	1.85	52.0	0.036
135.00	0.14	0.23	0.00	0.00	0.00	0.29	0.58	52.0	0.011
136.00	0.00	0.22	0.00	0.00	0.00	0.00	0.38	52.0	0.007

Final Analysis Summary

Structure:	CT46137-A-SBA	**Code:**	EIA/TIA-222-F	9/29/2015	
Site Name:	Hamden-State St	**Exposure:**	C		
Height:	136.00 (ft)	**Gh:**	1.69		
Base Elev:	0.000 (ft)	**Struct Class:**	II	Page: 22	

Tower Engineering Solutions

Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	t MZ (ft-kips)
85 mph Wind with 0" Ice	18.2	0.00	22.87	0.00	0.00	1894.00
73.61 mph Wind with 0.5" Ice	14.7	0.00	27.24	0.00	0.00	1572.60
50 mph Wind with 0" Ice	6.3	0.00	22.90	0.00	0.00	656.17

Max Stresses

Load Case	fa Axial (Y) (ksi)	fvx Shear (X) (ksi)	fvz Shear (Z) (ksi)	fvt Torsion (ksi)	fbx Bending (X) (ksi)	fbz Bending (Z) (ksi)	Combined Stress (ksi)	Allowable Stress (ksi)	Elev (ft)	Stress Ratio
85 mph Wind with 0" Ice	0.30	1.18	0.00	0.00	0.00	38.89	39.24	52.0	92.00	0.755
73.61 mph Wind with 0.5" Ice	0.42	1.00	0.00	0.00	0.00	33.06	33.52	52.0	92.00	0.645
50 mph Wind with 0" Ice	0.33	0.41	0.00	0.00	0.00	13.50	13.86	52.0	92.00	0.267

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

T-Mobile Existing Facility

Site ID: CT11611B

Hamden_Rt5
2895 State Road
Hamden, CT 06450

October 6, 2015

EBI Project Number: 6215005002

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general public allowable limit:	5.11 %

21 B Street · Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

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October 6, 2015

T-Mobile USA
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, CT 06002

Emissions Analysis for Site: **CT11611B – Hamden_Rt5**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **2895 State Road, Hamden, CT**, for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limit for the 700 MHz Band is approximately 467 $\mu W/cm^2$, and the general population exposure limit for the PCS and AWS bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at **2895 State Road, Hamden, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6 foot person standing at the base of the tower.

For all calculations, all equipment was calculated using the following assumptions:

1) 2 GSM / UMTS channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

2) 2 UMTS channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

3) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

4) 1 LTE channel (700 MHz Band) was considered for each sector of the proposed installation. This channel has a transmit power of 30 Watts.

5) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.

6) For the following calculations the sample point was the top of a six foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

7) The antennas used in this modeling are the **Ericsson AIR21 (B4A/B2P** & **B2A/B4P)** for 1900 MHz (PCS) and 2100 MHz (AWS) channels and the **Commscope LNX-6515DS-VTM** for 700 MHz channels. This is based on feedback from the carrier with regards to anticipated antenna selection. The **Ericsson AIR21 (B4A/B2P** & **B2A/B4P)** have a maximum gain of **15.9 dBd** at their main lobe. The **Commscope LNX-6515DS-VTM** has a maximum gain of **14.6 dBd** at its main lobe. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

8) The antenna mounting height centerline of the proposed antennas is **128 feet** above ground level (AGL).

9) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

All calculations were done with respect to uncontrolled / general public threshold limits.

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T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	**1**	Antenna #:	**1**	Antenna #:	**1**
Make / Model:	Ericsson AIR21 B4A/B2P	Make / Model:	Ericsson AIR21 B4A/B2P	Make / Model:	Ericsson AIR21 B4A/B2P
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	128	Height (AGL):	128	Height (AGL):	128
Frequency Bands	1900 MHz(PCS)	Frequency Bands	1900 MHz(PCS)	Frequency Bands	1900 MHz(PCS)
Channel Count	2	Channel Count	2	# PCS Channels:	2
Total TX Power:	120	Total TX Power:	120	# AWS Channels:	120
ERP (W):	4,668.54	ERP (W):	4,668.54	ERP (W):	4,668.54
Antenna A1 MPE%	1.13	Antenna B1 MPE%	1.13	Antenna C1 MPE%	1.13
Antenna #:	**2**	Antenna #:	**2**	Antenna #:	**2**
Make / Model:	Ericsson AIR21 B2A/B4P□	Make / Model:	Ericsson AIR21 B2A/B4P□	Make / Model:	Ericsson AIR21 B2A/B4P□
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	128	Height (AGL):	128	Height (AGL):	128
Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)
Channel Count	4	Channel Count	4	Channel Count	4
Total TX Power:	120	Total TX Power:	120	Total TX Power:	120
ERP (W):	4,668.54	ERP (W):	4,668.54	ERP (W):	4,668.54
Antenna A2 MPE%	1.13	Antenna B2 MPE%	1.13	Antenna C2 MPE%	1.13
Antenna #:	**3**	Antenna #:	**3**	Antenna #:	**3**
Make / Model:	Commscope LNX-6515DS-VTM	Make / Model:	Commscope LNX-6515DS-VTM	Make / Model:	Commscope LNX-6515DS-VTM
Gain:	14.6 dBd	Gain:	14.6 dBd	Gain:	14.6 dBd
Height (AGL):	128	Height (AGL):	128	Height (AGL):	128
Frequency Bands	700 MHz	Frequency Bands	700 MHz	Frequency Bands	700 MHz
Channel Count	1	Channel Count	1	Channel Count	1
Total TX Power:	30	Total TX Power:	30	Total TX Power:	30
ERP (W):	865.21	ERP (W):	865.21	ERP (W):	865.21
Antenna A3 MPE%	0.45	Antenna B3 MPE%	0.45	Antenna C3 MPE%	0.45

Site Composite MPE%	
Carrier	**MPE%**
T-Mobile (Per Sector Max)	**2.70 %**
Verizon Wireless	2.41 %
Site Total MPE %:	**5.11 %**

T-Mobile Sector 1 Total:	2.70 %
T-Mobile Sector 2 Total:	2.70 %
T-Mobile Sector 3 Total:	2.70 %
Site Total:	5.11 %

T-Mobile _per sector	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
T-Mobile 2100 MHz (AWS) LTE	**2**	**2334.27**	**128**	**11.28**	**2100**	**1000**	**1.13 %**
T-Mobile 700 MHz LTE	**1**	**865.21**	**128**	**2.09**	**700**	**467**	**0.45 %**
T-Mobile 1900 MHz (PCS) GSM/UMTS	**2**	**1167.14**	**128**	**5.64**	**1900**	**1000**	**0.56 %**
T-Mobile 2100 MHz (AWS) UMTS	**2**	**1167.14**	**128**	**5.64**	**2100**	**1000**	**0.56 %**
						Total:	**2.70%**

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Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general public exposure to RF Emissions.

The anticipated maximum composite contributions from the T-Mobile facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general public exposure to RF Emissions are shown here:

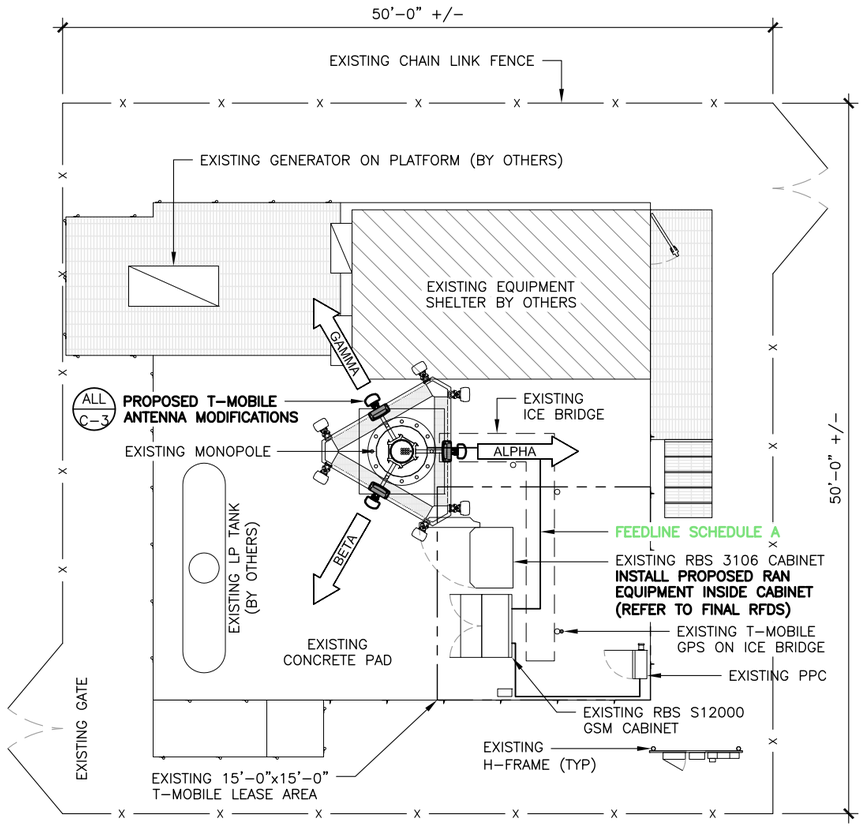
T-Mobile Sector	Power Density Value (%)
Sector 1:	2.70 %
Sector 2:	2.70 %
Sector 3 :	2.70 %
T-Mobile Per Sector Maximum:	2.70 %
Site Total:	5.11 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **5.11%** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

Scott Heffernan
RF Engineering Director

EBI Consulting
21 B Street
Burlington, MA 01803



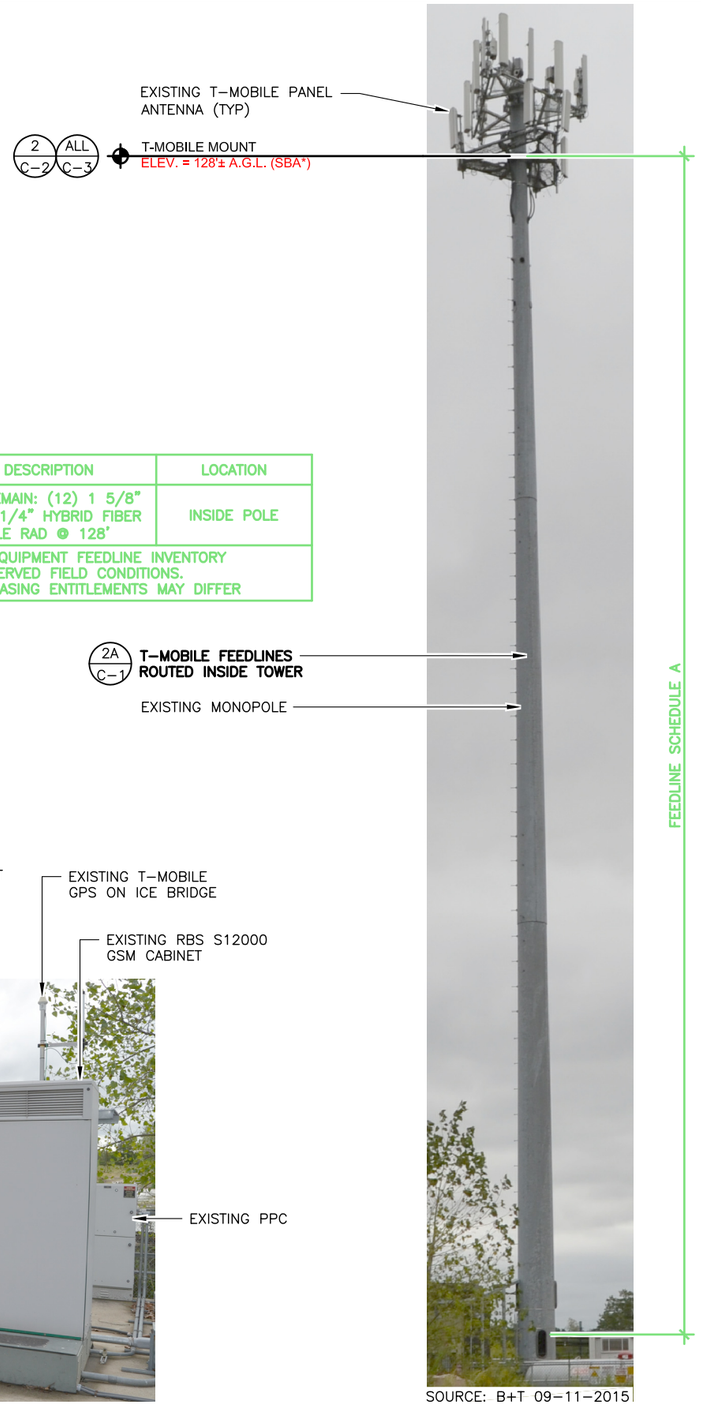
STRUCTURAL NOTES:

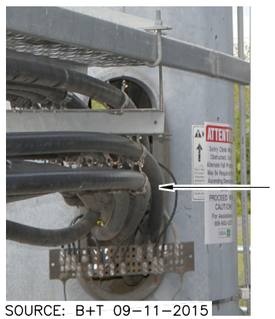
PRIOR TO COMMENCING CONSTRUCTION, GC SHALL REFER TO TOWER STRUCTURAL ANALYSIS PROVIDED BY SBA TO DETERMINE IF THERE ARE ANY SUPPLEMENTAL OR SPECIAL INSTALLATION REQUIREMENTS FOR TOWER TOP EQUIPMENT AND FOR CABLE BUNDLING, SHIELDING, MOUNTING OR RELOCATION ARRANGEMENTS.

ANTENNA MOUNT STRUCTURAL ASSESSMENT REQUIREMENT:

ENGINEER OF RECORD HAS MADE A VISUAL ASSESSMENT ONLY AND HAS DETERMINED THAT THE EXISTING ANTENNA MOUNT SHALL BE REPLACED OR MODIFIED TO ACCOMMODATE ANY ADDITIONAL EQUIPMENT LOADS. STRUCTURAL DESIGNS AND DETAILS AS SHOWN HEREIN FOR STRUCTURAL MODIFICATIONS OF THE EXISTING ANTENNA MOUNT ARE PRELIMINARY ONLY AND FINAL CONSTRUCTION DETAILS ARE SUBJECT TO CHANGE PENDING THE COMPLETION OF AN ANTENNA MOUNT STRUCTURAL ASSESSMENT.

FEEDLINE SCHEDULE	FEEDLINE DESCRIPTION	LOCATION
A	EXISTING TO REMAIN: (12) 1 5/8" COAX & (1) 1 1/4" HYBRID FIBER TO T-MOBILE RAD @ 128'	INSIDE POLE
EXISTING T-MOBILE EQUIPMENT FEEDLINE INVENTORY BASED ON OBSERVED FIELD CONDITIONS. RFDS AND FEEDLINE LEASING ENTITLEMENTS MAY DIFFER		





EXISTING (12) LINES OF 1 5/8" COAX AND (1) 1 1/4" HYBRID FIBER TO 128' TO REMAIN. **(REFER TO SBA PROVIDED STRUCTURAL ANALYSIS FOR SPECIAL CABLE INSTALLATION REQUIREMENTS, BUNDLING, SHIELDING, MOUNTING AND RELOCATION OF EXISTING CABLES)**

SOURCE: B+T 09-11-2015

SOURCE: B+T 09-11-2015

SOURCE: B+T 09-11-2015

1 OVERALL SITE PLAN

SCALE: 0' 5' 10' 15' 25' 11x17 SCALE: 3/32"=1'-0" 22x34 SCALE: 3/16"=1'-0"

N

2A FEEDLINE PHOTO DETAIL @ TOWER BASE

SCALE: N.T.S.

2B EQUIPMENT PHOTO DETAIL

SCALE: N.T.S.

3 ELEVATION PHOTO DETAIL

SCALE: N.T.S.

B+T GRP
1717 S. BOULDER
SUITE 300
TULSA, OK 74119
PH: (918) 587-4630
www.btgrp.com

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

SBA COMMUNICATIONS CORP.
33 BOSTON POST ROAD WEST, SUITE 320
MARLBOROUGH, MA 01752

CT11611B

CT11611B_ HAMDEN_RT5

2895 STATE ROAD
HAMDEN, CT 06450

PROJECT NO:	101026.001
CHECKED BY:	RCM

ISSUED FOR:

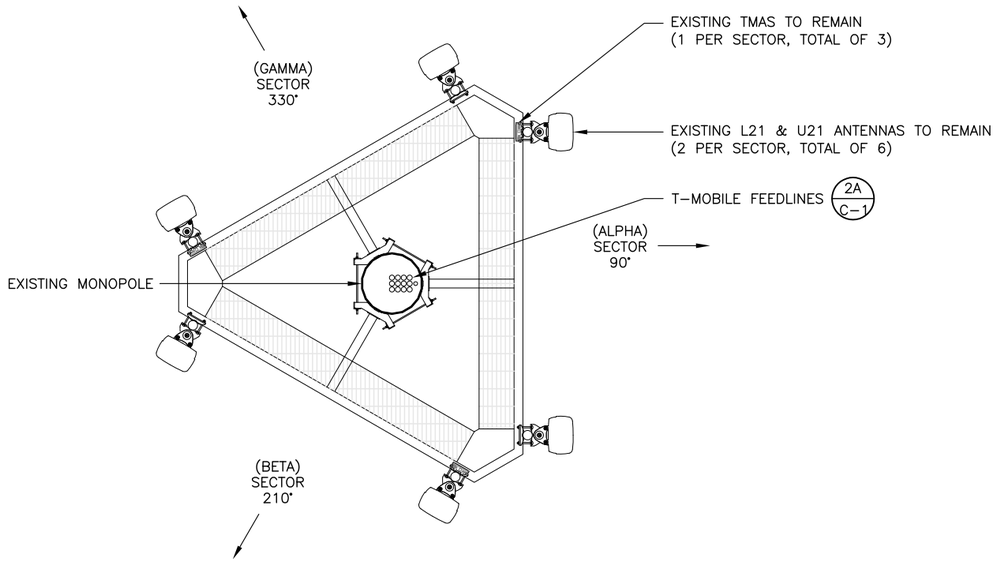
REV	DATE	DRWN	DESCRIPTION
0	9/23/15	MDW	CONSTRUCTION

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/16

9/23/15

STATE OF CONNECTICUT ★ CHAD TUTTLE ★ No. 23924 LICENSED PROFESSIONAL ENGINEER

SHEET NUMBER: C-1 REVISION: 0

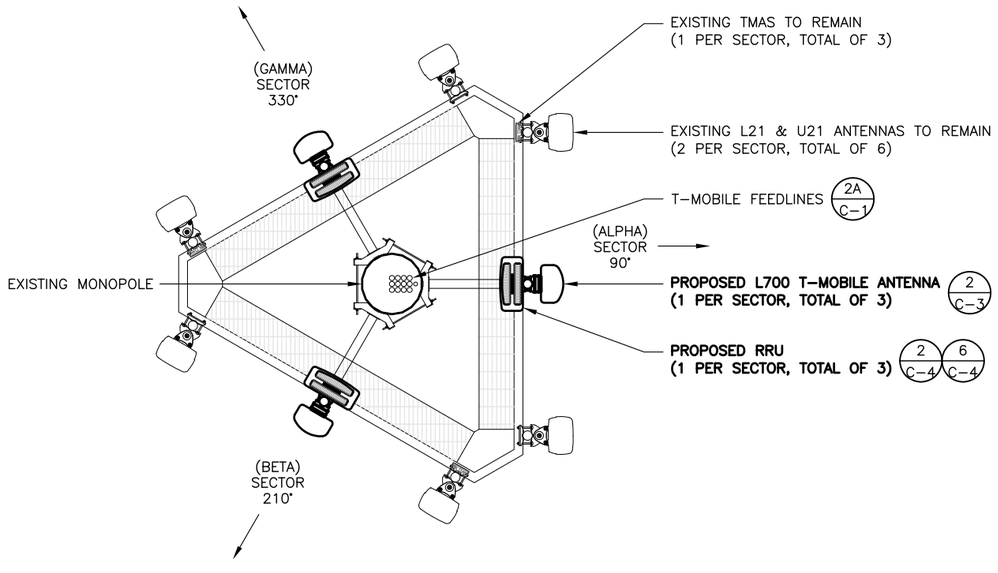


1A EXISTING ANTENNA PLAN

SCALE: 0' 1' 4' 10'

11x17 SCALE: 1/4"=1'–0"
22x34 SCALE: 1/2"=1'–0"

N



1B PROPOSED ANTENNA PLAN

SCALE: 0' 1' 4' 10'

11x17 SCALE: 1/4"=1'–0"
22x34 SCALE: 1/2"=1'–0"

N

SOURCE: B+T 09–11–2015

2 ANTENNA MOUNT PHOTO DETAIL

SCALE: N.T.S.

STRUCTURAL NOTES:

PRIOR TO COMMENCING CONSTRUCTION, GC SHALL REFER TO TOWER STRUCTURAL ANALYSIS PROVIDED BY SBA TO DETERMINE IF THERE ARE ANY SUPPLEMENTAL OR SPECIAL INSTALLATION REQUIREMENTS FOR TOWER TOP EQUIPMENT AND FOR CABLE BUNDLING, SHIELDING, MOUNTING OR RELOCATION ARRANGEMENTS.

SPECIAL WORK NOTE:

GC AND TOWER CREW SHALL CHECK WITH THE RF ENGINEER FOR LATEST RFDS, RAN SCENARIO AND TOWER TOP EQUIPMENT SPECIFICATIONS.

ANTENNA INSTALLATION SPECIAL WORK NOTE:

ANTENNA IS TO BE INSTALLED ON EXISTING PIPE MOUNT SO THAT THE VERTICAL CENTER OF THE ANTENNA IS AT THE RAD CENTER SPECIFIED IN THE LATEST VERSION OF THE RFDS.

B+T GRP
1717 S. BOULDER
SUITE 300
TULSA, OK 74119
PH: (918) 587-4630
www.btgrp.com

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BLOOMFIELD, CT 06002

SBA COMMUNICATIONS CORP.
33 BOSTON POST ROAD WEST, SUITE 320
MARLBOROUGH, MA 01752

CT11611B

CT11611B_ HAMDEN_RT5

2895 STATE ROAD
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PROJECT NO:	101026.001
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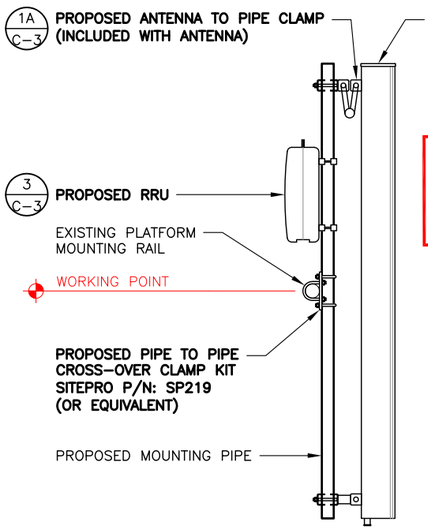
Expires 2/10/16

9/23/15

STATE OF CONNECTICUT ★ CHAD TUTTLE ★ No. 23924 LICENSED PROFESSIONAL ENGINEER

SHEET NUMBER:	REVISION:
C-2	0

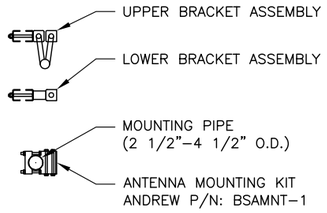


1 PROPOSED L700 ANTENNA & RRU MOUNTING DETAIL

SCALE: N.T.S.

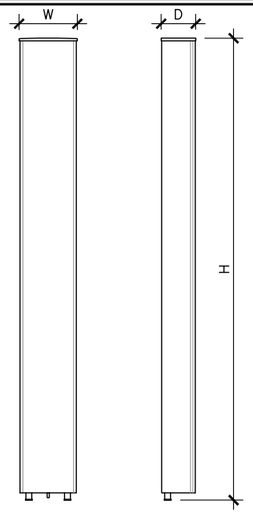
ANTENNA INSTALLATION SPECIAL WORK NOTE:

ANTENNA IS TO BE INSTALLED ON EXISTING PIPE MOUNT SO THAT THE VERTICAL CENTER OF THE ANTENNA IS AT THE RAD CENTER SPECIFIED IN THE LATEST VERSION OF THE RFDS.



1A L700 ANTENNA MOUNTING BRACKET

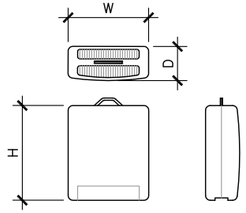
SCALE: N.T.S.



L700 ANTENNA SPECS	
MANUFACTURER	ANDREW
MODEL #	LNX-6515DS-VTM
WIDTH	11.9"
DEPTH	7.1"
HEIGHT	96.4"
WEIGHT	50.3 LBS

2 L700 ANTENNA DETAIL

SCALE: N.T.S.



RRU SPECIFICATIONS	
MANUFACTURER	ERICSSON
MODEL #	RRUS11 B12
WIDTH	17"
DEPTH	7"
HEIGHT	20"
WEIGHT	50.6 LBS

3 REMOTE RADIO UNIT (RRU)

SCALE: N.T.S.

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