STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
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E-Mail: siting.council@ct.gov
www.ct.gov/csc

August 3, 2018

Romina Kirchmaier
Smartlink LLC
85 Rangeway Road
Building 3, Suite 102
Billerica, MA 08132

RE: **EM-AT&T-166-180412** – AT&T notice of intent to modify an existing telecommunications facility located at 347 East Street, Wolcott, Connecticut.

Dear Ms. Kirchmaier:

The Connecticut Siting Council (Council) received a notice of intent to modify the above-referenced facility on April 12, 2018. On April 27, 2018, the Council issued a letter (enclosed) stating that your filing was incomplete because the Structural Analysis Report provided in the exempt modification filing was run using ANSI/TIA/EIA-222-F standards and not the more recent Revision G of ANSI/TIA/EIA-222 which was adopted by the Connecticut State Building Code effective October 1, 2016. The Council requested that Smartlink provide a structural analysis report for the proposed modifications using ANSI/TIA/EIA-222-G.

On August 2, 2018, the Council received a Structural Analysis Report dated July 10, 2018 stamped and signed by a Professional Engineer duly licensed in the State of Connecticut and indicating that it was performed based on the ANSI/TIA/EIA-222-G standards. However on page 8 of this structural analysis under item 4.1) Recommendations, it states "Perform modifications detailed in Appendix D to remedy the deficiencies identified in Crown Castle Work Order No. 1575608."

There are no appendices in this or the original filing and there are no deficiencies or modifications indicated in the Construction drawings or the Structural Analysis Reports.

Therefore, the exempt modification filing remains incomplete at this time. The Council recommends that Smartlink provide the appendices "A, C, &D," referenced in the updated Structural Analysis Report on or before September 3, 2018. If additional time is needed to gather the requested information, please submit a written request for an extension of time prior to September 3, 2018.

This notice of incompletion shall have the effect of tolling the Federal Communications Commission (FCC) 60-day timeframe in accordance with Paragraph 217 of the FCC Wireless Infrastructure Report and Order issued on October 21, 2014 (FCC 14-153).

Thank you for your attention to this matter. Should you have any questions, please feel free to contact me at 860-827-2951.

Sincerely,

Melanie Bachman
Executive Director

MAB/MP/IN

c: The Honorable Thomas G. Dunn, Mayor, Town of Wolcott
David Kalinowski, Zoning Inspector, Town of Wolcott

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Date: **July 10, 2018**

Timothy Howell
Crown Castle
3530 Toringdon Way, Suite 300
Charlotte, NC 28277

JACOBS
Jacobs Engineering Group, Inc.
5449 Bells Ferry Road
Acworth, GA 30102
770-701-2500

Subject: **Structural Modification Report**

Carrier Designation:

***AT&T Mobility* Co-Locate**
Carrier Site Number: 10035040
Carrier Site Name: WOLCOTT - EAST ST.

Crown Castle Designation:

Crown Castle BU Number: 806362
Crown Castle Site Name: NHV 108 943133
Crown Castle JDE Job Number: 508676
Crown Castle Work Order Number: 1588046
Crown Castle Order Number: 443181 Rev. 0

Engineering Firm Designation: **Jacobs Engineering Group, Inc. Project Number:** 1588046

Site Data:

INTERSECTION OF RTE 322/MERIDIAN RDWOLCOTT SITE, WOLCOTT, New Haven County, CT
Latitude *41° 33' 34.41"*, Longitude *-72° 56' 49.1"*
180 Foot - Self Support Tower

Dear Timothy Howell,

Jacobs Engineering Group, Inc. is pleased to submit this **"Structural Modification Report"** to determine the structural integrity of the above mentioned tower. This analysis has been performed in accordance with the *Crown Castle* Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 1202724, in accordance with order 443181, revision 0.

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

LC4: Modified Structure w/ Existing + Reserved + Proposed **Sufficient Capacity**
Note: See Table I and Table II for the proposed and existing/reserved loading, respectively.

This analysis has been performed in accordance with the 2016 Connecticut State Building Code based upon an ultimate 3-second gust wind speed of 125 mph converted to a nominal 3-second gust wind speed of 97 mph per Section 1609.3 and Appendix N as required for use in the TIA-222-G Standard per Exception #5 of Section 1609.1.1. Exposure Category C with a maximum topographic factor, Kzt of 1.624 and Risk Category II were used in this analysis.

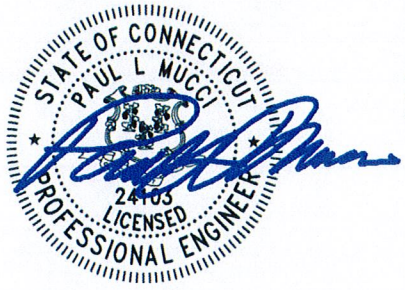
All modifications and equipment proposed in this report shall be installed in accordance with the attached drawings for the determined available structural capacity to be effective.

Jacobs Engineering Group, Inc. appreciates the opportunity to provide continuing professional services to you and *Crown Castle*. If you have any questions or need further assistance on this or any other projects, please give us a call.

Structural modification prepared by:

Philip Lin
Tower Structural Engineer

tnxTower Report - version 8.0.2.1



Engineer of Record:
2018-07-10
T14:13:41-04:00

Paul L. Mucci, P.E.
Senior Project Engineer

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1) INTRODUCTION

This tower is a 180 ft Self Support tower designed by ROHN in September of 1986. The tower was originally designed per EIA-222-E. The original design wind speed is unavailable.

2) ANALYSIS CRITERIA

The structural analysis was performed for this tower in accordance with the requirements of TIA-222-G Structural Standard for Antenna Supporting Structures and Antennas using a 3-second gust wind speed of 97 mph with no ice, 50 mph with 0.75 inch ice thickness and 60 mph under service loads, exposure category C with topographic category 5 and crest height of 530 feet.

Table 1 - Proposed Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
158.0	160.0	3	ericsson	RRUS 32 B2	-	-	-
		6	kaelus	DBC0061F1V51-2			
		2	quintel technology	QS66512-2 w/ Mount Pipe			

Table 2 - Existing and Reserved Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
180.0	186.0	3	rfs celwave	ATMAA1412D-1A20	12	1-5/8	1
		3	commscope	ATBT-BOTTOM-24V	6	1-5/8	2
		3	commscope	SBNHH-1D65A w/ Mount Pipe			
	182.0	3	rfs celwave	ATMAA1412D-1A20			
177.0	177.0	3	alcatel lucent	RRH2X60-AWS	13	1-5/8	1
		3	alcatel lucent	RRH2X60-PCS			
		3	alcatel lucent	RRH2x60-700			
		2	andrew	DB846F65ZAXY w/ Mount Pipe			
		2	antel	LPA-80063/6CFx5 w/ Mount Pipe			
		6	commscope	SBNHH-1D45B w/ Mount Pipe			
		3	commscope	SBNHH-1D65B w/ Mount Pipe			
		2	rfs celwave	DB-T1-6Z-8AB-0Z			
		2	swedcom	SC-E 6014 rev2 w/ Mount Pipe			
		1	tower mounts	Sector Mount [SM 504-3]			

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
168.0	168.0	1	dragonwave	A-ANT-18G-2-C	1	7983A	1
		1	andrew	VHLP2-18			
		3	alcatel lucent	PCS 1900MHz 4x45W-65MHz	4	1-1/4	2
		6	alcatel lucent	RRH2x50-800			
		3	commscope	NNVV-65B-R4			
		3	nokia	AAHC			
		1	tower mounts	Sector Mount [SM 402-3]			
158.0	160.0	1	andrew	SBNH-1D6565C w/ Mount Pipe	12	1-1/4	1
		1	cci antennas	TPA-65R-LCUUUU-H8 w/ Mount Pipe	4	3/4	
		3	ericsson	RRUS 32	2	3/8	
		2	kmw communications	AM-X-CD-16-65-00T-RET w/ Mount Pipe			
		3	powerwave technologies	7770.00 w/ Mount Pipe			
		1	raycap	DC6-48-60-18-8F			
		6	cci antennas	TPX-070821	-	-	3
		3	ericsson	RRU-12			
		2	quintel technology	QS66512-3 w/ Mount Pipe			
	158.0	3	ericsson	RRUS-11	-	-	1
		3	communication components inc.	DTMABP7819VG12A			
		3	ericsson	RRUS 11			
		3	powerwave technologies	7020.00			
		1	raycap	DC6-48-60-18-8F			
		1	tower mounts	Sector Mount [SM 504-3]			
40.0	40.0	1	gps	GPS_A	1	1/2	1
		1	tower mounts	Side Arm Mount [SO 306-1]			

Notes:
1) Existing Equipment
2) Reserved Equipment
3) Equipment To Be Removed; Not Considered In This Analysis

Table 3 - Design Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
180.0	180.0	4	rfs celwave	PD10017	-	-
170.0	170.0	3	rfs celwave	PD1132D	-	-
160.0	160.0	2	generic	6' STD Dish	-	-

3) ANALYSIS PROCEDURE

Table 4 - Documents Provided

Document	Remarks	Reference	Source
4-GEOTECHNICAL REPORTS	FDH Engineering, Inc.	2303630	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	Rohn	217670	CCISITES
4-TOWER MANUFACTURER DRAWINGS	Rohn	529684	CCISITES
4-EXPOSURE CATEGORY / TOPOGRAPHIC FACTOR	Crown Castle	5965877	CCISITES

3.1) Analysis Method

tnxTower (version 8.0.2.1), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

1) Tower and structures were built in accordance with the manufacturer's specifications.
2) The tower and structures have been maintained in accordance with the manufacturer's specification.
3) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
4) The existing base plate grout was not considered in this analysis.
5) Tower modifications outlined in Appendix D must be installed for this analysis to be valid.

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

4) ANALYSIS RESULTS

Table 5 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T1	180 - 160	Leg	ROHN 2.5 STD	1	-22.458	45.528	49.3	Pass
T2	160 - 140	Leg	ROHN 3 X-STR	42	-81.342	94.336	86.2	Pass
T3	140 - 133.333	Leg	ROHN 4 X-STR	81	-100.965	159.904	63.1	Pass
T4	133.333 - 126.667	Leg	ROHN 4 X-STR	96	-120.272	159.904	75.2	Pass
T5	126.667 - 120	Leg	ROHN 4 X-STR	111	-139.314	159.904	87.1	Pass
T6	120 - 100	Leg	ROHN 5 X-STR	126	-184.503	201.195	91.7	Pass
T7	100 - 90	Leg	P 5 XS w HSS 6.625x0.500 Half Pipe	153	-210.843	311.932	67.6	Pass
T8	90 - 80	Leg	P 5 XS w HSS 6.625x0.500 Half Pipe	168	-234.339	311.932	75.1	Pass
T9	80 - 70	Leg	Rohn 6 EHS w HSS 7.500x0.375 Half Pipe	183	-257.413	348.724	73.8	Pass
T10	70 - 60	Leg	Rohn 6 EHS w HSS 7.500x0.375 Half Pipe	198	-280.946	348.724	80.6 82.0 (b)	Pass
T11	60 - 50	Leg	P 6 XS w HSS 7.500x0.375 Half Pipe	213	-304.309	403.375	75.4	Pass
T12	50 - 40	Leg	P 6 XS w HSS 7.500x0.375 Half Pipe	228	-327.692	403.375	81.2 95.3 (b)	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T13	40 - 30	Leg	P 6 XS w HSS 7.500x0.375 Half Pipe	243	-350.932	403.328	87.0	Pass
T14	30 - 20	Leg	P 6 XS w HSS 7.500x0.375 Half Pipe	258	-372.908	403.328	92.5	Pass
T15	20 - 0	Leg	Rohn 8 EHS w HSS9.625x0.375 Half Pipe	273	-393.171	547.818	71.8	Pass
T1	180 - 160	Diagonal	ROHN 2 STD	12	-11.437	17.637	64.8	Pass
T2	160 - 140	Diagonal	ROHN 2 STD	48	-14.149	15.187	93.2	Pass
T3	140 - 133.333	Diagonal	ROHN 2 STD	87	-14.205	14.601	97.3	Pass
T4	133.333 - 126.667	Diagonal	P 2 STD w HSS 2.875x0.250 Half Pipe	103	-14.319	18.3712	74.1	Pass
T5	126.667 - 120	Diagonal	P 2 STD w HSS 2.875x0.250 Half Pipe	118	-14.387	17.702	77.8	Pass
T6	120 - 100	Diagonal	P 2.5 STD w HSS 3.500x0.300 Half Pipe	132	-17.921	24.746	81.3	Pass
T7	100 - 90	Diagonal	P 2.5 STD w HSS 3.500x0.300 Half Pipe	159	-16.729	23.802	72.3	Pass
T8	90 - 80	Diagonal	P 2.5 STD w HSS 3.500x0.300 Half Pipe	175	-16.960	22.221	76.3	Pass
T9	80 - 70	Diagonal	P 2.5 STD w HSS 3.500x0.300 Half Pipe	189	-17.765	20.246	83.6	Pass
T10	70 - 60	Diagonal	P 2.5 STD w HSS 3.500x0.300 Half Pipe	204	-18.105	20.246	91.1	Pass
T11	60 - 50	Diagonal	P 2.5 XS w HSS 3.500x0.300 Half Pipe	219	-18.675	22.664	82.4	Pass
T12	50 - 40	Diagonal	P 2.5 XS w HSS 3.500x0.300 Half Pipe	234	-19.024	21.226	89.6	Pass
T13	40 - 30	Diagonal	ROHN 3 STD	249	-18.781	20.586	91.2	Pass
T14	30 - 20	Diagonal	ROHN 3 STD	264	-19.024	19.246	98.8	Pass
T15	20 - 0	Diagonal	ROHN 3 STD	285	-30.066	32.170	93.5	Pass
T1	180 - 160	Horizontal	ROHN 1.5 STD	10	-6.119	22.564	27.1	Pass
T2	160 - 140	Horizontal	ROHN 1.5 STD	46	-8.759	19.143	45.8	Pass
T3	140 - 133.333	Horizontal	ROHN 2 STD	85	-9.131	30.720	29.7 36.8 (b)	Pass
T6	120 - 100	Horizontal	ROHN 2 STD	130	-11.053	22.627	48.8	Pass
T7	100 - 90	Horizontal	ROHN 2 STD	157	-11.169	19.805	56.4	Pass
T9	80 - 70	Horizontal	ROHN 2.5 STD	187	-12.331	32.891	37.5 49.6 (b)	Pass
T10	70 - 60	Horizontal	ROHN 2.5 STD	202	-13.025	29.084	44.8 52.4 (b)	Pass
T11	60 - 50	Horizontal	ROHN 2.5 STD	217	-13.781	25.460	54.1 55.5 (b)	Pass
T12	50 - 40	Horizontal	ROHN 2.5 STD	232	-14.313	22.473	63.7	Pass
T13	40 - 30	Horizontal	ROHN 2.5 STD	247	-14.729	19.983	73.7	Pass
T14	30 - 20	Horizontal	ROHN 2.5 STD	262	-14.651	17.780	82.4	Pass
T15	20 - 0	Horizontal	ROHN 3 STD	281	-16.598	31.409	52.8	Pass
T1	180 - 160	Top Girt	ROHN 1.5 STD	5	-2.395	22.635	10.6	Pass
T4	133.333 - 126.667	Top Girt	ROHN 2 STD	98	-9.571	29.069	32.9 38.5 (b)	Pass
T5	126.667 - 120	Top Girt	ROHN 2 STD	113	-9.937	27.195	36.5 40.0 (b)	Pass
T8	90 - 80	Top Girt	ROHN 2 STD	170	-11.474	16.954	67.7	Pass
T15	20 - 0	Redund Horz 1 Bracing	ROHN 1.5 x 11GA	292	-1.355	5.637	24.0	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T15	20 - 0	Redund Diag 1 Bracing	ROHN 1.5 STD	293	-1.272	4.141	30.7	Pass
T15	20 - 0	Redund Hip 1 Bracing	ROHN 1.5 x 11GA	288	-0.035	4.941	0.7	Pass
T15	20 - 0	Redund Hip Diagonal 1 Bracing	ROHN 2.5 STD	289	-0.102	10.600	1.0	Pass
T1	180 - 160	Inner Bracing	L2x2x1/8	18	-0.007	6.529	0.6	Pass
T2	160 - 140	Inner Bracing	L2x2x1/8	54	-0.007	4.871	0.7	Pass
T3	140 - 133.333	Inner Bracing	L2x2x1/8	93	-0.010	4.255	0.8	Pass
T4	133.333 - 126.667	Inner Bracing	L2x2x1/8	108	-0.009	3.749	0.8	Pass
T5	126.667 - 120	Inner Bracing	L2x2x1/8	123	-0.009	3.328	0.8	Pass
T6	120 - 100	Inner Bracing	L2x2x1/8	138	-0.010	2.510	1.0	Pass
T7	100 - 90	Inner Bracing	L2 1/2x2 1/2x3/16	165	-0.012	6.199	0.7	Pass
T8	90 - 80	Inner Bracing	L2 1/2x2 1/2x3/16	180	-0.012	5.252	0.7	Pass
T9	80 - 70	Inner Bracing	L3x3x3/16	195	-0.014	7.896	0.5	Pass
T10	70 - 60	Inner Bracing	L3x3x3/16	210	-0.014	6.881	0.6	Pass
T11	60 - 50	Inner Bracing	L3 1/2x3 1/2x1/4	225	-0.016	12.717	0.5	Pass
T12	50 - 40	Inner Bracing	L3 1/2x3 1/2x1/4	240	-0.017	11.267	0.5	Pass
T13	40 - 30	Inner Bracing	L3 1/2x3 1/2x1/4	255	-0.019	10.052	0.5	Pass
T14	30 - 20	Inner Bracing	L3 1/2x3 1/2x1/4	270	-0.020	8.973	0.5	Pass
T15	20 - 0	Inner Bracing	ROHN 3 STD	301	-0.022	29.869	0.3	Pass
							Summary	
						Leg (T12)	95.3	Pass
						Diagonal (T14)	98.8	Pass
						Horizontal (T14)	82.4	Pass
						Top Girt (T8)	67.7	Pass
						Redund Horz 1 Bracing (T15)	24.0	Pass
						Redund Diag 1 Bracing (T15)	30.7	Pass
						Redund Hip 1 Bracing (T15)	0.7	Pass
						Redund Hip Diagonal 1 Bracing (T15)	1.0	Pass
						Inner Bracing (T6)	1.0	Pass
						Bolt Checks	95.3	Pass
						Rating =	98.8	Pass

Table 6 - Tower Component Stresses vs. Capacity - LC4

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	74.6	Pass
1	Base Foundation Structural	0	74.2	Pass
1	Base Foundation Soil Interaction	0	43.3	Pass

Structure Rating (max from all components) =	**98.8%**

Notes:
1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed..

4.1) Recommendations

Perform the modifications detailed in "Appendix D" to remedy the deficiencies identified in Crown Castle Work Order No. 1575608.