STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
www.ct.gov/csc

June 18, 2013

Alex Giannaras
HPC Development LLC
22 Shelter Rock Lane
Building C
Danbury, CT 06810

RE: **EM-T-MOBILE-014-130521** – T-Mobile Northeast LLC notice of intent to modify an existing telecommunications facility located at 850 West Main Street, Branford, Connecticut.

Dear Mr. Giannaras:

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

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

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated May 20, 2013. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Very truly yours,

Melanie A. Bachman
Acting Executive Director

MAB/CDM/jb

c: The Honorable Anthony "Unk" DaRos, First Selectman, Town of Branford
Daniel Shapiro, Chm, Inland Wetland Commission, Town of Branford
Laura Magaraci, Zoning Enforcement Officer, Town of Branford
Crown Castle

HPC Wireless Services
22 Shelter Rock Lane.
Building C
Danbury, CT, 06810
P.: 203.797.1112

HPC WIRELESS SERVICES

EM-T-MOBILE-014-130521

ORIGINAL

May 20, 2013

VIA OVERNIGHT COURIER

Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051
Attn: Ms. Melanie A. Bachman, Acting Executive Director

Re: T-Mobile Northeast LLC – exempt modification
850 West Main Street, Branford, Connecticut

Dear Ms. Bachman:

This letter and attachments are submitted on behalf of T-Mobile Northeast LLC ("T-Mobile"). T-Mobile is making modifications to certain existing sites in its Connecticut system in order to implement LTE technology. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction that 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 First Selectman of the Town of Branford.

T-Mobile plans to modify the existing wireless communications facility owned by Crown Castle and located at 850 West Main Street in the Town of Branford (coordinates 41°-16'-40.188" N, 72°-50'-12.696" W). Attached are a compound plan and elevation depicting the planned changes, and documentation of the structural sufficiency of the structure to accommodate the revised antenna configuration. Also included is a power density report reflecting the modification to T-Mobile's operations at the site.

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

1. T-Mobile will replace its six (6) existing panel antennas with six (6) new antennas at a center line of approximately 130'. T-Mobile will also remove three (3) of six (6)

TMAs. A hybrid cable will be run from the equipment to the antennas along the existing coaxial cable run. The proposed modifications will not extend the height of the approximately 130' structure.

2. T-Mobile's proposed changes will have no effect on the site boundaries.

3. The proposed changes will not increase the noise level at the existing facility by six decibels or more. The incremental effect of the proposed changes will be negligible.

4. The changes to the facility will not increase the calculated "worst case" power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environments as calculated for a mixed frequency site. As indicated on the attached report prepared by EBI Consulting, T-Mobile's operations at the site will result in a power density of approximately 0.678%; the combined site operations will result in a total power density of approximately 29.418%.

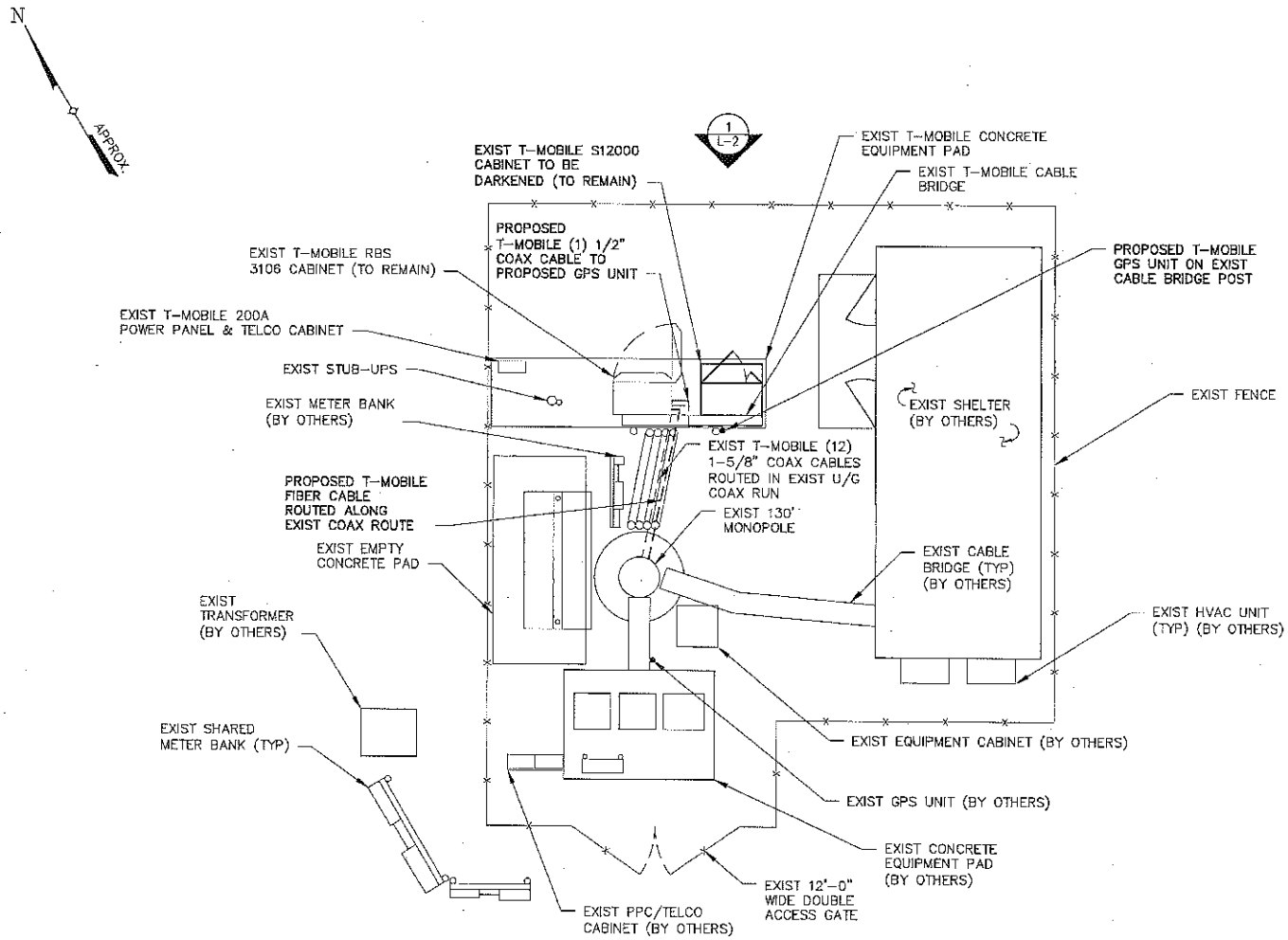
Please feel free to contact me by phone at (617) 281-0084 or by e-mail at agiannaras@hpcwireless.com with questions concerning this matter. Thank you for your consideration.

Respectfully yours,

Alex Giannaras

Alex Giannaras

cc: Honorable Anthony DaRos, First Selectman, Town of Branford
SBC Real Estate Group (underlying property owner)



1 / L-1 SITE PLAN

SCALE: 1/8" = 1'-0"

STRUCTUAL NOTE:

EXIST MOUNTS AND MONOPOLE TO BE VERIFIED FOR STRUCTURAL SUITABILITY OF PROPOSED INSTALLATION BY A STATE LICENSED P.E.

CONFIGURATION

2C

0 1 2 3

ORIGINAL SIZE IN INCHES

TECTONIC

• PLANNING • SURVEYING
• ENGINEERING • CONSTRUCTION MANAGEMENT

TECTONIC Engineering & Surveying Consultants P.C.

1279 Route 300
Newburgh, NY 12550
Phone: (845) 567-0858
Fax: (845) 567-0703

T-Mobile NORTHEAST LLC.

T-MOBILE NORTHEAST, LLC.
4 SYLVAN DRIVE
PARSIPPANY, NJ 07054
PHONE: (973) 898-5500

APPROVALS

T-MOBILE
LANDLORD
RF
CONSTRUCTION

PROJECT NUMBER	DESIGNED BY
8844.CTNH101A	TN

REV	DATE	REVISION	DRAWN BY
A	04/25/13	FOR COMMENT	JT

ISSUED BY | DATE

SITE INFORMATION

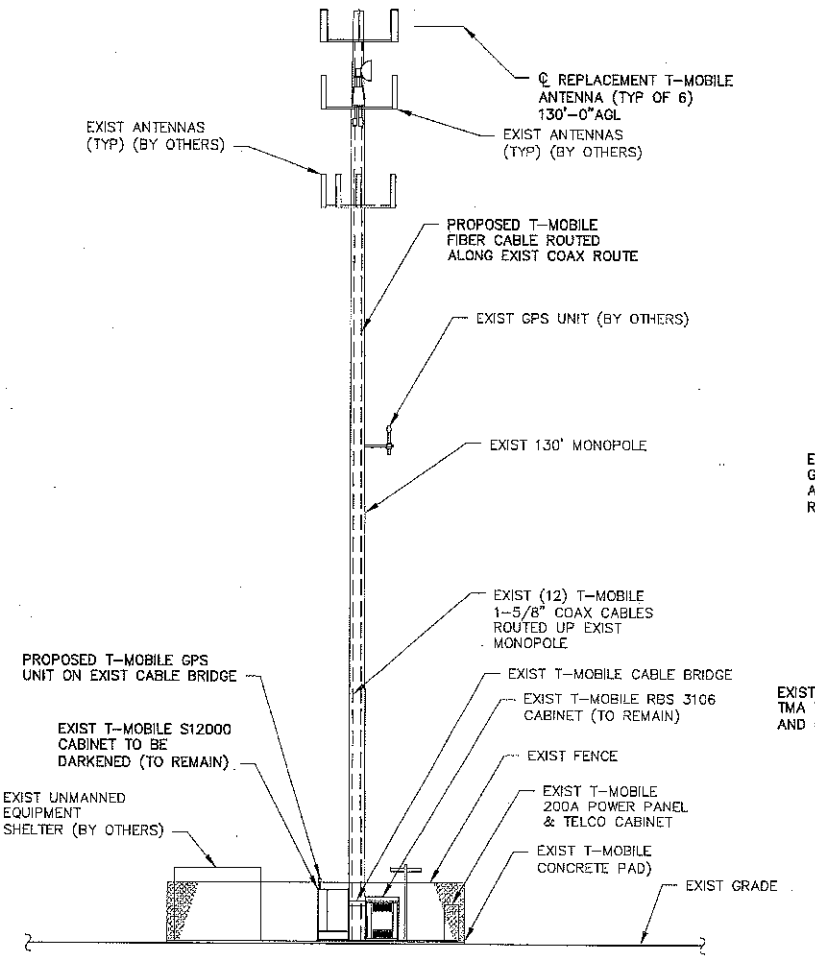
CTNH101A
NH101/GLOBALSIGNAL/BRAN
850 WEST MAIN STREET,
BRANFORD, CT 06405

SHEET TITLE

ELEVATION & ANTENNA PLAN

SHEET NUMBER

L1



1 / L-2 ELEVATION

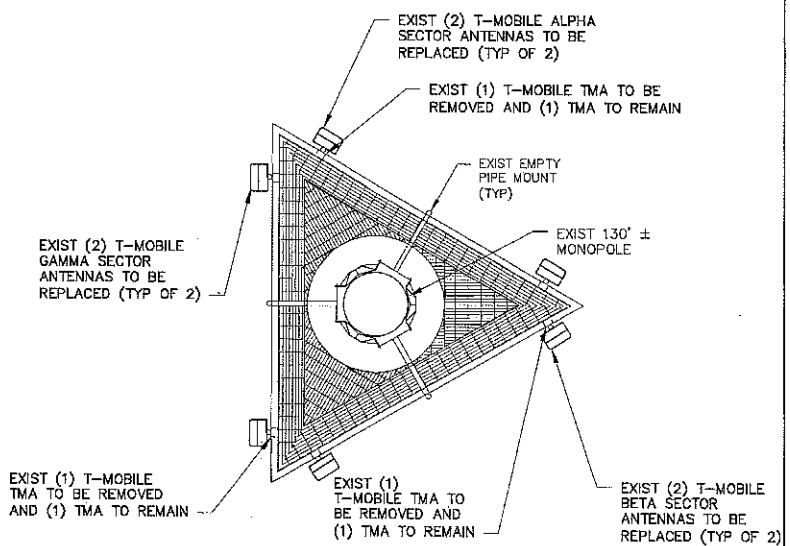
SCALE: 1/16" = 1'-0"

N

APPROX.

STRUCTUAL NOTE:

EXIST MOUNTS AND MONOPOLE TO BE VERIFIED FOR STRUCTURAL SUITABILITY OF PROPOSED INSTALLATION BY A STATE LICENSED P.E.



2 / L-2 ANTENNA PLAN

SCALE: 1/4" = 1'-0"

CONFIGURATION

2C

0 1 2 3

ORIGINAL SIZE IN INCHES

TECTONIC

• PLANNING • ENGINEERING • SURVEYING • CONSTRUCTION MANAGEMENT

TECTONIC Engineering & Surveying Consultants P.C.

1279 Route 300
Newburgh, NY 12550
Phone: (845) 567-0858
Fax: (845) 567-9703

T-Mobile NORTHEAST LLC

T-MOBILE NORTHEAST, LLC.
4 SYLVAN DRIVE
PARSIPPANY, NJ 07054
PHONE: (973) 656-6500

APPROVALS

T-MOBILE
LANDLORD
RF
CONSTRUCTION

PROJECT NUMBER	DESIGNED BY
6544.CTNH101A	TN

REV	DATE	REVISION	DRAWN BY
1	04/25/13	FOR COMMENT	JT

ISSUED BY	DATE

SITE INFORMATION

CTNH101A
NH101/GLOBALSIGNAL/BRAN
850 WEST MAIN STREET,
BRANFORD, CT 06405

SHEET TITLE

ELEVATION & ANTENNA PLAN

SHEET NUMBER

L-2

Date: **April 24, 2013**

Veronica Harris
Crown Castle
1200 McArthur Blvd
Mahwah, NJ 07430

FDH Engineering, Inc.
6521 Meridien Drive
Raleigh, NC 27616
(919) 755-1012

Subject: **Structural Analysis Report**

Carrier Designation:	***T-Mobile* Co-Locate**	
	Carrier Site Number:	CTNH101A
	Carrier Site Name:	CTNH101A
Crown Castle Designation:	**Crown Castle BU Number:**	876322
	Crown Castle Site Name:	TARTAGLIA PROPERTY
	Crown Castle JDE Job Number:	232458
	Crown Castle Work Order Number:	601006
	Crown Castle Application Number:	186732 Rev. 2
Engineering Firm Designation:	**FDH Engineering, Inc. Project Number:**	1328021400
Site Data:	**850 West Main Street, BRANFORD, New Haven County, CT** **Latitude *41° 16' 40.188"*, Longitude *-72° 50' 12.696"*** **130 Foot - Monopole Tower**	

Dear Veronica Harris,

FDH Engineering, Inc. is pleased to submit this **"Structural Analysis 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 540953, in accordance with application 186732, revision 2.

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:

LC7: Existing + Reserved + Proposed Equipment **Sufficient Capacity**
Note: See Table I and Table II for the proposed and existing/reserved loading, respectively.

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

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.

We at *FDH Engineering, Inc.* appreciate the opportunity of providing our 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.

Respectfully submitted by:

Byron K Webb

Byron K Webb, EI
Project Engineer

Reviewed by:

Christopher M. Murphy

Christopher M. Murphy, PE
President
CT PE License No. 25842

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 130 ft. Monopole tower designed by SUMMIT in July of 1998. The tower was extended per extension drawings prepared by Global Signal in December 2006. The tower was originally designed for a wind speed of 90 mph per TIA/EIA-222-F.

2) ANALYSIS CRITERIA

The structural analysis was performed for this tower in accordance with the requirements of TIA/EIA-222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures using a fastest mile wind speed of 85 mph with no ice, 37.6 mph with 0.75 inch ice thickness and 50 mph under service loads.

Table 1 - Proposed Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
128.0	130.0	3	ericsson	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	7	1-5/8	-
		3	ericsson	ERICSSON AIR 21 B4A B2P w/ Mount Pipe			
		3	ericsson	KRY 112 144/1			

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
128.0	130.0	3	rfs celwave	APX16DWV-16DWV-S-E-A20 w/ Mount Pipe	-	-	3
		3	rfs celwave	ATMAA1412D-1A20			
		3	rfs celwave	ATMPP1412D-1CWA			
		3	rfs celwave	APXV18-209014-C w/ Mount Pipe			
	128.0	1	crown mounts	Platform Mount [LP 305-1]	6	1-5/8	1
118.0	124.0	2	andrew	VHLP2-11	3	1/2	1
		1	dragonwave	A-ANT-23G-2-C			
	120.0	3	alcatel lucent	800 EXTERNAL NOTCH FILTER	3	1-1/4	2
		9	rfs celwave	ACU-A20-N			
		3	rfs celwave	APXVSPP18-C-A20 w/ Mount Pipe			
		3	argus technologies	LLPX310R w/ Mount Pipe	6	5/16	1
		3	samsung telecommunications	FDD_R6_RRH			
	118.0	1	crown mounts	Platform Mount [LP 712-1]			

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
116.0	116.0	3	alcatel lucent	1900MHz RRH (65MHz)	-	-	2
		3	alcatel lucent	800MHZ RRH			
		1	crown mounts	Side Arm Mount [SO 103-3]			
110.0	114.0	1	kathrein	OG-860/1920/GPS-A	1	1/2	1
	111.0	3	antel	BXA-70063-6CF-EDIN-0 w/ Mount Pipe	-	-	2
		6	rfs celwave	APL868013-42T0 w/ Mount Pipe	12	1-5/8	1
		3	rymsa wireless	MG D3-800Tx w/ Mount Pipe			
	110.0	6	rfs celwave	FD9R6004/1C-3L			
		1	crown mounts	Platform Mount [LP 712-1]			
50.0	52.0	1	kathrein	OG-860/1920/GPS-A	1	5/16	1
	50.0	1	crown mounts	Side Arm Mount [SO 701-1]			

Notes:
1) Existing Equipment
2) Reserved Equipment
3) Existing 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)
120	120	12	decibel	DB980H	-	-
110	110	12	generic	Panel Antenna (CaAa=3.9 ft^2)		
100	100	12	generic	Panel Antenna (CaAa=3.9 ft^2)		
85	85	2	generic	Whip Antenna		
50	50	1	generic	GPS Antenna		

3) ANALYSIS PROCEDURE

Table 4 - Documents Provided

Document	Remarks	Reference	Source
4-GEOTECHNICAL REPORTS	Goodkind & O'Dea, Inc.	1614542	CCISITES
4-POST-MODIFICATION INSPECTION	Tower Engineering Professionals	1956410	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	Paul J. Ford and Company	1613605	CCISITES
4-TOWER MANUFACTURER DRAWINGS	Paul J. Ford and Company	1529811	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	Global Signal Services LLC	2483868	CCISITES

3.1) Analysis Method

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

3.2) Assumptions

1) Tower and structures were built in accordance with the manufacturer's specifications.
2) The tower and structures have been maintained in accordance with the manufacturer's specification.
3) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
4) When applicable, transmission cables are considered as structural components for calculating wind loads as allowed by TIA/EIA-222-F.

This analysis may be affected if any assumptions are not valid or have been made in error. FDH Engineering, 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
L1	130 - 120.5	Pole	TP18.5x18.5x0.375	1	-2.32	597.73	12.8	Pass
L2	120.5 - 120	Pole	TP22x18.5x0.375	2	-2.33	597.73	12.8	Pass
L3	120 - 77	Pole	TP29.742x22x0.25	3	-9.46	1205.97	79.4	Pass
L4	77 - 37.75	Pole	TP36.308x28.5668x0.3125	4	-15.55	1840.62	97.1	Pass
L5	37.75 - 0	Pole	TP42.48x34.8729x0.375	5	-24.74	2643.11	99.0	Pass
							Summary	
						Pole (L5)	99.0	Pass
						Rating =	99.0	Pass

Table 6 - Tower Component Stresses vs. Capacity -- LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Flange Connection	120	20.6	Pass
1	Anchor Rods	0	61.3	Pass
1	Base Plate	0	72.2	Pass
1	Base Foundation	0	42.7	Pass
1	Base Foundation Soil Interaction	0	47.6	Pass

Structure Rating (max from all components) =	99.0%

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

4.1) Recommendations

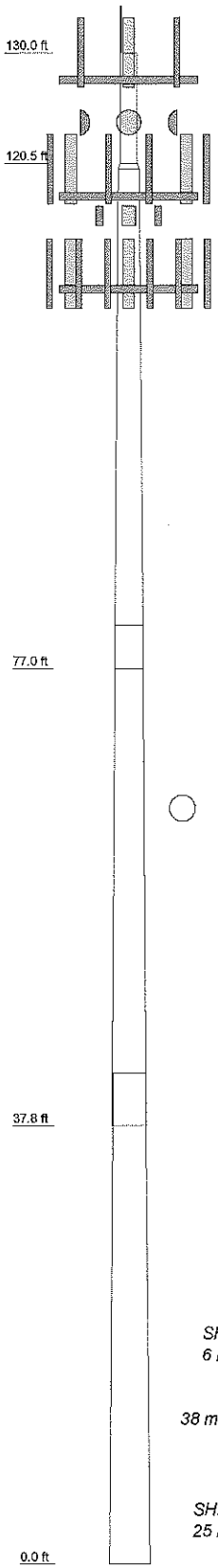
The tower and its foundation have sufficient capacity to carry the existing, reserved and proposed loads. No modifications are required at this time.

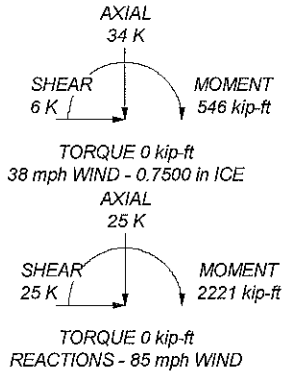
APPENDIX A

TNXTOWER OUTPUT

Section	1	2	3	4	5
Length (ft)	9.50	0.50	43.00	43.00	42.25
Number of Sides	1	1	12	12	12
Thickness (in)	0.3750	0.3750	0.2500	0.3125	0.3750
Socket Length (ft)			3.75	4.50	
Top Dia (in)	18.5000	18.5000	22.0000	28.5668	34.8729
Bot Dia (in)	18.5000	22.0000	29.7420	36.3080	42.4800
Grade			A53-B-35	A572-65	
Weight (K)	0.7	0.0	3.0	4.7	6.6

15.1





DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Lightning Rod	130	Mount Pipe	118
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	128	Mount Pipe	118
		Mount Pipe	118
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	128	VHLP2-11	118
		A-ANT-23G-2-C	118
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	128	VHLP2-11	118
		800MHZ RRH	116
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	128	alcatel lucent 1900MHz RRH (65MHz)	116
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	128	800MHZ RRH	116
		Side Arm Mount [SO 103-3]	116
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	128	(2) Mount Pipe	116
		(2) Mount Pipe	116
KRY 112 144/1	128	(2) Mount Pipe	116
KRY 112 144/1	128	alcatel lucent 1900MHz RRH (65MHz)	116
KRY 112 144/1	128	800MHZ RRH	116
Platform Mount [LP 305-1]	128	alcatel lucent 1900MHz RRH (65MHz)	116
Empty Mount Pipe	128	(2) APL868013-42T0 w/ Mount Pipe	110
Empty Mount Pipe	128	(2) FD9R6004/1C-3L	110
Empty Mount Pipe	128	(2) FD9R6004/1C-3L	110
LLPX310R w/ Mount Pipe	118	(2) FD9R6004/1C-3L	110
FDD_R6_RRH	118	MG D3-800Tx w/ Mount Pipe	110
800 EXTERNAL NOTCH FILTER	118	MG D3-800Tx w/ Mount Pipe	110
(3) ACU-A20-N	118	MG D3-800Tx w/ Mount Pipe	110
APXVSPP18-C-A20 w/ Mount Pipe	118	BXA-70063-6CF-EDIN-0 w/ Mount Pipe	110
LLPX310R w/ Mount Pipe	118		
FDD_R6_RRH	118	BXA-70063-6CF-EDIN-0 w/ Mount Pipe	110
800 EXTERNAL NOTCH FILTER	118		
(3) ACU-A20-N	118	BXA-70063-6CF-EDIN-0 w/ Mount Pipe	110
APXVSPP18-C-A20 w/ Mount Pipe	118		
LLPX310R w/ Mount Pipe	118	Platform Mount [LP 712-1]	110
FDD_R6_RRH	118	OG-860/1920/GPS-A	110
800 EXTERNAL NOTCH FILTER	118	(2) APL868013-42T0 w/ Mount Pipe	110
(3) ACU-A20-N	118	(2) APL868013-42T0 w/ Mount Pipe	110
APXVSPP18-C-A20 w/ Mount Pipe	118	Side Arm Mount [SO 701-1]	50
Platform Mount [LP 712-1]	118	OG-860/1920/GPS-A	50

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A53-B-35	35 ksi	63 ksi	A572-65	65 ksi	80 ksi

TOWER DESIGN NOTES

1. Tower is located in New Haven County, Connecticut.
2. Tower designed for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 38 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 99%

FDH Engineering, Inc.
6521 Meridien Drive
Raleigh, NC 27616
Phone: (919) 755-1012
FAX: (919) 755-1031
Consulting Engineers

Job: Tartaglia Property BU#876322		
Project: 1328021400		
Client: Crown Castle	Drawn by: Byron K Webb	App'd:
Code: TIA/EIA-222-F	Date: 04/24/13	Scale: NTS
Path:		Dwg No. E-1

tnxTower	Job	Page
	Tartaglia Property BU#876322	1 of 16
FDH Engineering, Inc. 6521 Meridien Drive Raleigh, NC 27616 Phone: (919) 755-1012 FAX: (919) 755-1031	Project 1328021400	Date 16:25:30 04/23/13
	Client Crown Castle	Designed by Byron K Webb

Tower Input Data

There is a pole section.
This tower is designed using the TIA/EIA-222-F standard.
The following design criteria apply:

Tower is located in New Haven County, Connecticut.
Basic wind speed of 85 mph.
Nominal ice thickness of 0.7500 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 38 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 50 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.333.
Local bending stresses due to climbing loads, feedline supports, and appurtenance mounts are not considered.

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	130.00-120.50	9.50	0.00	Round	18.5000	18.5000	0.3750		A53-B-35 (35 ksi)
L2	120.50-120.00	0.50	0.00	Round	18.5000	22.0000	0.3750		A53-B-35 (35 ksi)
L3	120.00-77.00	43.00	3.75	12	22.0000	29.7420	0.2500	1.0000	A572-65 (65 ksi)
L4	77.00-37.75	43.00	4.50	12	28.5668	36.3080	0.3125	1.2500	A572-65 (65 ksi)
L5	37.75-0.00	42.25		12	34.8729	42.4800	0.3750	1.5000	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	18.5000	21.3530	877.5217	6.4162	9.2500	94.8672	1752.6528	10.6701	0.0000	0
	18.5000	21.3530	877.5217	6.4162	9.2500	94.8672	1752.6528	10.6701	0.0000	0
L2	18.5000	21.3530	877.5217	6.4162	9.2500	94.8672	1752.6528	10.6701	0.0000	0
	22.0000	25.4764	1490.3634	7.6552	11.0000	135.4876	2976.6666	12.7306	0.0000	0
L3	22.7761	17.5087	1057.2060	7.7865	11.3960	92.7699	2142.1860	8.6173	5.2260	20.904
	30.7912	23.7411	2635.6911	10.5581	15.4064	171.0782	5340.6247	11.6846	7.3009	29.203
L4	30.2735	28.4309	2896.9880	10.1150	14.7976	195.7740	5870.0831	13.9928	6.8184	21.819
	37.5888	36.2205	5990.1331	12.8864	18.8075	318.4963	12137.6337	17.8266	8.8930	28.458
L5	36.9419	41.6562	6327.7629	12.3502	18.0642	350.2940	12821.7632	20.5019	8.3409	22.242
	43.9785	50.8418	11504.6684	15.0736	22.0046	522.8292	23311.5772	25.0228	10.3796	27.679

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in
L1 130.00-120.50				1	1	1		
L2 120.50-120.00				1	1	1		
L3 120.00-77.00				1	1	1		
L4 77.00-37.75				1	1	1		
L5 37.75-0.00				1	1	1		

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
LDF7-50A(1-5/8")	C	No	Inside Pole	128.00 - 0.00	13	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
						1" Ice	0.00	0.82
						2" Ice	0.00	0.82
						4" Ice	0.00	0.82
7983A(1/2")	C	No	Inside Pole	118.00 - 0.00	3	No Ice	0.00	0.08
						1/2" Ice	0.00	0.08
						1" Ice	0.00	0.08
						2" Ice	0.00	0.08
						4" Ice	0.00	0.08
9207(5/16")	C	No	Inside Pole	118.00 - 0.00	6	No Ice	0.00	0.60
						1/2" Ice	0.00	0.60
						1" Ice	0.00	0.60
						2" Ice	0.00	0.60
						4" Ice	0.00	0.60
HB114-1-0813U4-M5J(1 1/4")	C	No	CaAa (Out Of Face)	118.00 - 0.00	1	No Ice	0.15	1.20
						1/2" Ice	0.25	2.45
						1" Ice	0.35	4.30
						2" Ice	0.55	9.85
						4" Ice	0.95	28.27
HB114-1-0813U4-M5J(1 1/4")	C	No	Inside Pole	118.00 - 0.00	2	No Ice	0.00	1.20
						1/2" Ice	0.00	1.20
						1" Ice	0.00	1.20
						2" Ice	0.00	1.20
						4" Ice	0.00	1.20
LDF4-50A(1/2")	C	No	Inside Pole	110.00 - 0.00	1	No Ice	0.00	0.15
						1/2" Ice	0.00	0.15
						1" Ice	0.00	0.15
						2" Ice	0.00	0.15
						4" Ice	0.00	0.15
LDF7-50A(1-5/8")	C	No	Inside Pole	110.00 - 0.00	12	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
						1" Ice	0.00	0.82
						2" Ice	0.00	0.82
						4" Ice	0.00	0.82
860 10000(5/16)	C	No	Inside Pole	50.00 - 0.00	1	No Ice	0.00	0.00
						1/2" Ice	0.00	0.00
						1" Ice	0.00	0.00
						2" Ice	0.00	0.00
						4" Ice	0.00	0.00

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Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
Safety Line 3/8	C	No	Inside Pole	130.00 - 0.00	1	No Ice	0.00	0.22
						1/2" Ice	0.00	0.22
						1" Ice	0.00	0.22
						2" Ice	0.00	0.22
						4" Ice	0.00	0.22

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	130.00-120.50	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.08
L2	120.50-120.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.01
L3	120.00-77.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	6.314	1.10
L4	77.00-37.75	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	6.044	1.11
L5	37.75-0.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	5.813	1.07

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	130.00-120.50	A	0.880	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.08
L2	120.50-120.00	A	0.876	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.01
L3	120.00-77.00	A	0.854	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	13.320	1.21
L4	77.00-37.75	A	0.801	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	12.752	1.21
L5	37.75-0.00	A	0.750	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	11.862	1.16

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	130.00-120.50	0.0000	0.0000	0.0000	0.0000
L2	120.50-120.00	0.0000	0.0000	0.0000	0.0000
L3	120.00-77.00	-0.1798	0.1038	-0.3350	0.1934
L4	77.00-37.75	-0.1894	0.1093	-0.3604	0.2081
L5	37.75-0.00	-0.1910	0.1103	-0.3589	0.2072

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Lightning Rod	C	From Leg	0.00 0.00 2.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.25 0.66 0.97 1.49 2.68	0.25 0.66 0.97 1.49 2.68	0.03 0.03 0.04 0.06 0.14
***									
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.83 7.35 7.86 8.93 11.18	5.64 6.48 7.26 8.86 12.29	0.11 0.17 0.23 0.38 0.81
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.83 7.35 7.86 8.93 11.18	5.64 6.48 7.26 8.86 12.29	0.11 0.17 0.23 0.38 0.81
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	C	From Leg	4.00 0.00 2.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.83 7.35 7.86 8.93 11.18	5.64 6.48 7.26 8.86 12.29	0.11 0.17 0.23 0.38 0.81
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.83 7.35 7.86 8.93 11.18	5.64 6.48 7.26 8.86 12.29	0.11 0.17 0.23 0.38 0.81
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.83 7.35 7.86 8.93 11.18	5.64 6.48 7.26 8.86 12.29	0.11 0.17 0.23 0.38 0.81
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	C	From Leg	4.00 0.00 2.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.83 7.35 7.86 8.93 11.18	5.64 6.48 7.26 8.86 12.29	0.11 0.17 0.23 0.38 0.81
KRY 112 144/1	A	From Leg	4.00 0.00 2.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.41 0.50 0.60 0.82 1.36	0.19 0.26 0.33 0.51 0.97	0.01 0.01 0.02 0.03 0.08

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
KRY 112 144/1	A	From Leg	4.00 0.00 2.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.41 0.50 0.60 0.82 1.36	0.19 0.26 0.33 0.51 0.97	0.01 0.01 0.02 0.03 0.08
KRY 112 144/1	A	From Leg	4.00 0.00 2.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.41 0.50 0.60 0.82 1.36	0.19 0.26 0.33 0.51 0.97	0.01 0.01 0.02 0.03 0.08
Platform Mount [LP 305-1]	C	None		0.0000	128.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	18.01 23.33 28.65 39.29 60.57	18.01 23.33 28.65 39.29 60.57	1.12 1.35 1.58 2.05 2.97
Empty Mount Pipe	A	From Leg	4.00 0.00 2.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.00 1.39 1.70 2.35 3.78	1.00 1.39 1.70 2.35 3.78	0.01 0.02 0.03 0.06 0.18
Empty Mount Pipe	B	From Leg	4.00 0.00 2.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.00 1.39 1.70 2.35 3.78	1.00 1.39 1.70 2.35 3.78	0.01 0.02 0.03 0.06 0.18
Empty Mount Pipe	C	From Leg	4.00 0.00 2.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.00 1.39 1.70 2.35 3.78	1.00 1.39 1.70 2.35 3.78	0.01 0.02 0.03 0.06 0.18
***									
LLPX310R w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	5.07 5.48 5.91 6.79 8.70	2.98 3.53 4.09 5.31 8.13	0.05 0.08 0.13 0.23 0.54
FDD_R6_RRH	A	From Leg	4.00 0.00 2.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.79 1.97 2.16 2.57 3.49	0.78 0.92 1.07 1.39 2.14	0.03 0.04 0.06 0.09 0.20
800 EXTERNAL NOTCH FILTER	A	From Leg	4.00 0.00 2.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.77 0.89 1.02 1.30 1.97	0.37 0.46 0.56 0.79 1.34	0.01 0.02 0.02 0.04 0.11
(3) ACU-A20-N	A	From Leg	4.00 0.00 2.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.08 0.12 0.17 0.30 0.67	0.14 0.19 0.25 0.40 0.80	0.00 0.00 0.00 0.01 0.04
APXVSPP18-C-A20 w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	8.50 9.15 9.77 11.03 13.68	6.95 8.13 9.02 10.84 14.85	0.08 0.15 0.22 0.41 0.91
LLPX310R w/ Mount Pipe	B	From Leg	4.00	0.0000	118.00	No Ice	5.07	2.98	0.05

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00			1/2" Ice	5.48	3.53	0.08
			2.00			1" Ice	5.91	4.09	0.13
						2" Ice	6.79	5.31	0.23
						4" Ice	8.70	8.13	0.54
FDD_R6_RRH	B	From Leg	4.00	0.0000	118.00	No Ice	1.79	0.78	0.03
			0.00			1/2" Ice	1.97	0.92	0.04
			2.00			1" Ice	2.16	1.07	0.06
						2" Ice	2.57	1.39	0.09
						4" Ice	3.49	2.14	0.20
800 EXTERNAL NOTCH FILTER	B	From Leg	4.00	0.0000	118.00	No Ice	0.77	0.37	0.01
			0.00			1/2" Ice	0.89	0.46	0.02
			2.00			1" Ice	1.02	0.56	0.02
						2" Ice	1.30	0.79	0.04
						4" Ice	1.97	1.34	0.11
(3) ACU-A20-N	B	From Leg	4.00	0.0000	118.00	No Ice	0.08	0.14	0.00
			0.00			1/2" Ice	0.12	0.19	0.00
			2.00			1" Ice	0.17	0.25	0.00
						2" Ice	0.30	0.40	0.01
						4" Ice	0.67	0.80	0.04
APXVSPP18-C-A20 w/ Mount Pipe	B	From Leg	4.00	0.0000	118.00	No Ice	8.50	6.95	0.08
			0.00			1/2" Ice	9.15	8.13	0.15
			2.00			1" Ice	9.77	9.02	0.22
						2" Ice	11.03	10.84	0.41
						4" Ice	13.68	14.85	0.91
LLPX310R w/ Mount Pipe	C	From Leg	4.00	0.0000	118.00	No Ice	5.07	2.98	0.05
			0.00			1/2" Ice	5.48	3.53	0.08
			2.00			1" Ice	5.91	4.09	0.13
						2" Ice	6.79	5.31	0.23
						4" Ice	8.70	8.13	0.54
FDD_R6_RRH	C	From Leg	4.00	0.0000	118.00	No Ice	1.79	0.78	0.03
			0.00			1/2" Ice	1.97	0.92	0.04
			2.00			1" Ice	2.16	1.07	0.06
						2" Ice	2.57	1.39	0.09
						4" Ice	3.49	2.14	0.20
800 EXTERNAL NOTCH FILTER	C	From Leg	4.00	0.0000	118.00	No Ice	0.77	0.37	0.01
			0.00			1/2" Ice	0.89	0.46	0.02
			2.00			1" Ice	1.02	0.56	0.02
						2" Ice	1.30	0.79	0.04
						4" Ice	1.97	1.34	0.11
(3) ACU-A20-N	C	From Leg	4.00	0.0000	118.00	No Ice	0.08	0.14	0.00
			0.00			1/2" Ice	0.12	0.19	0.00
			2.00			1" Ice	0.17	0.25	0.00
						2" Ice	0.30	0.40	0.01
						4" Ice	0.67	0.80	0.04
APXVSPP18-C-A20 w/ Mount Pipe	C	From Leg	4.00	0.0000	118.00	No Ice	8.50	6.95	0.08
			0.00			1/2" Ice	9.15	8.13	0.15
			2.00			1" Ice	9.77	9.02	0.22
						2" Ice	11.03	10.84	0.41
						4" Ice	13.68	14.85	0.91
Platform Mount [LP 712-1]	C	None		0.0000	118.00	No Ice	24.53	24.53	1.34
						1/2" Ice	29.94	29.94	1.65
						1" Ice	35.35	35.35	1.96
						2" Ice	46.17	46.17	2.58
						4" Ice	67.81	67.81	3.82
Mount Pipe	A	From Leg	4.00	0.0000	118.00	No Ice	1.00	1.00	0.01
			0.00			1/2" Ice	1.39	1.39	0.02
			0.00			1" Ice	1.70	1.70	0.03

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						2" Ice	2.35	2.35	0.06
						4" Ice	3.78	3.78	0.18
Mount Pipe	B	From Leg	4.00 0.00 0.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.00 1.39 1.70 2.35 3.78	1.00 1.39 1.70 2.35 3.78	0.01 0.02 0.03 0.06 0.18
Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	118.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.00 1.39 1.70 2.35 3.78	1.00 1.39 1.70 2.35 3.78	0.01 0.02 0.03 0.06 0.18
***									
alcatel lucent 1900MHz RRH (65MHz)	A	From Leg	2.00 0.00 0.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.70 2.94 3.18 3.70 4.85	2.77 3.01 3.26 3.78 4.93	0.06 0.08 0.11 0.18 0.35
800MHZ RRH	A	From Leg	2.00 0.00 0.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.49 2.71 2.93 3.41 4.46	2.07 2.27 2.48 2.93 3.93	0.05 0.07 0.10 0.16 0.32
alcatel lucent 1900MHz RRH (65MHz)	B	From Leg	2.00 0.00 0.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.70 2.94 3.18 3.70 4.85	2.77 3.01 3.26 3.78 4.93	0.06 0.08 0.11 0.18 0.35
800MHZ RRH	B	From Leg	2.00 0.00 0.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.49 2.71 2.93 3.41 4.46	2.07 2.27 2.48 2.93 3.93	0.05 0.07 0.10 0.16 0.32
alcatel lucent 1900MHz RRH (65MHz)	C	From Leg	2.00 0.00 0.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.70 2.94 3.18 3.70 4.85	2.77 3.01 3.26 3.78 4.93	0.06 0.08 0.11 0.18 0.35
800MHZ RRH	C	From Leg	2.00 0.00 0.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.49 2.71 2.93 3.41 4.46	2.07 2.27 2.48 2.93 3.93	0.05 0.07 0.10 0.16 0.32
Side Arm Mount [SO 103-3]	C	None		0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	9.50 11.80 14.10 18.70 27.90	9.50 11.80 14.10 18.70 27.90	0.22 0.32 0.41 0.60 0.97
(2) Mount Pipe	A	From Leg	2.00 0.00 0.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.87 1.11 1.36 1.90 3.23	0.87 1.11 1.36 1.90 3.23	0.02 0.02 0.03 0.06 0.16
(2) Mount Pipe	B	From Leg	2.00 0.00 0.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.87 1.11 1.36 1.90	0.87 1.11 1.36 1.90	0.02 0.02 0.03 0.06

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						4" Ice	3.23	3.23	0.16
(2) Mount Pipe	C	From Leg	2.00 0.00 0.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.87 1.11 1.36 1.90 3.23	0.87 1.11 1.36 1.90 3.23	0.02 0.02 0.03 0.06 0.16
***									
OG-860/1920/GPS-A	A	From Leg	4.00 0.00 4.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.33 0.43 0.55 0.80 1.41	0.40 0.51 0.63 0.89 1.52	0.00 0.01 0.01 0.02 0.08
(2) APL868013-42T0 w/ Mount Pipe	A	From Leg	4.00 0.00 1.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.10 3.48 3.88 4.76 6.66	4.92 5.60 6.28 7.71 10.83	0.02 0.06 0.11 0.22 0.54
(2) APL868013-42T0 w/ Mount Pipe	B	From Leg	4.00 0.00 1.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.10 3.48 3.88 4.76 6.66	4.92 5.60 6.28 7.71 10.83	0.02 0.06 0.11 0.22 0.54
(2) APL868013-42T0 w/ Mount Pipe	C	From Leg	4.00 0.00 1.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.10 3.48 3.88 4.76 6.66	4.92 5.60 6.28 7.71 10.83	0.02 0.06 0.11 0.22 0.54
(2) FD9R6004/1C-3L	A	From Leg	4.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.37 0.45 0.54 0.75 1.28	0.08 0.14 0.20 0.34 0.74	0.00 0.00 0.01 0.02 0.06
(2) FD9R6004/1C-3L	B	From Leg	4.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.37 0.45 0.54 0.75 1.28	0.08 0.14 0.20 0.34 0.74	0.00 0.00 0.01 0.02 0.06
(2) FD9R6004/1C-3L	C	From Leg	4.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.37 0.45 0.54 0.75 1.28	0.08 0.14 0.20 0.34 0.74	0.00 0.00 0.01 0.02 0.06
MG D3-800Tx w/ Mount Pipe	A	From Leg	4.00 0.00 1.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.57 3.98 4.39 5.33 7.34	3.42 4.12 4.78 6.16 9.18	0.03 0.07 0.11 0.21 0.52
MG D3-800Tx w/ Mount Pipe	B	From Leg	4.00 0.00 1.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.57 3.98 4.39 5.33 7.34	3.42 4.12 4.78 6.16 9.18	0.03 0.07 0.11 0.21 0.52
MG D3-800Tx w/ Mount Pipe	C	From Leg	4.00 0.00 1.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.57 3.98 4.39 5.33 7.34	3.42 4.12 4.78 6.16 9.18	0.03 0.07 0.11 0.21 0.52

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
BXA-70063-6CF-EDIN-0 w/ Mount Pipe	A	From Leg	4.00 0.00 1.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.97 8.61 9.22 10.46 13.07	5.80 6.95 7.82 9.60 13.37	0.04 0.10 0.17 0.34 0.80
BXA-70063-6CF-EDIN-0 w/ Mount Pipe	B	From Leg	4.00 0.00 1.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.97 8.61 9.22 10.46 13.07	5.80 6.95 7.82 9.60 13.37	0.04 0.10 0.17 0.34 0.80
BXA-70063-6CF-EDIN-0 w/ Mount Pipe	C	From Leg	4.00 0.00 1.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.97 8.61 9.22 10.46 13.07	5.80 6.95 7.82 9.60 13.37	0.04 0.10 0.17 0.34 0.80
Platform Mount [LP 712-1]	C	None		0.0000	110.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	24.53 29.94 35.35 46.17 67.81	24.53 29.94 35.35 46.17 67.81	1.34 1.65 1.96 2.58 3.82
***									
OG-860/1920/GPS-A	A	From Leg	4.00 0.00 2.00	0.0000	50.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.33 0.43 0.55 0.80 1.41	0.40 0.51 0.63 0.89 1.52	0.00 0.01 0.01 0.02 0.08
Side Arm Mount [SO 701-1]	A	From Leg	0.00 0.00 0.00	0.0000	50.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.85 1.14 1.43 2.01 3.17	1.67 2.34 3.01 4.35 7.03	0.07 0.08 0.09 0.12 0.18

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft^2	Weight K
VHLP2-11	A	Paraboloid w/o Radome	From Leg	3.00 0.00 6.00	0.0000		118.00	2.17	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.72 4.01 4.30 4.88 6.04	0.03 0.05 0.07 0.11 0.19
A-ANT-23G-2-C	B	Paraboloid w/o Radome	From Leg	3.00 0.00 6.00	0.0000		118.00	2.17	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.72 4.01 4.30 4.88 6.04	0.03 0.05 0.07 0.11 0.19
VHLP2-11	C	Paraboloid w/o Radome	From Leg	3.00 0.00	0.0000		118.00	2.17	No Ice 1/2" Ice	3.72 4.01	0.03 0.05

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft²	Weight K
				6.00					1" Ice	4.30	0.07
									2" Ice	4.88	0.11
									4" Ice	6.04	0.19

Load Combinations

Comb. No.	Description
1	Dead Only
2	Dead+Wind 0 deg - No Ice
3	Dead+Wind 30 deg - No Ice
4	Dead+Wind 60 deg - No Ice
5	Dead+Wind 90 deg - No Ice
6	Dead+Wind 120 deg - No Ice
7	Dead+Wind 150 deg - No Ice
8	Dead+Wind 180 deg - No Ice
9	Dead+Wind 210 deg - No Ice
10	Dead+Wind 240 deg - No Ice
11	Dead+Wind 270 deg - No Ice
12	Dead+Wind 300 deg - No Ice
13	Dead+Wind 330 deg - No Ice
14	Dead+Ice+Temp
15	Dead+Wind 0 deg+Ice+Temp
16	Dead+Wind 30 deg+Ice+Temp
17	Dead+Wind 60 deg+Ice+Temp
18	Dead+Wind 90 deg+Ice+Temp
19	Dead+Wind 120 deg+Ice+Temp
20	Dead+Wind 150 deg+Ice+Temp
21	Dead+Wind 180 deg+Ice+Temp
22	Dead+Wind 210 deg+Ice+Temp
23	Dead+Wind 240 deg+Ice+Temp
24	Dead+Wind 270 deg+Ice+Temp
25	Dead+Wind 300 deg+Ice+Temp
26	Dead+Wind 330 deg+Ice+Temp
27	Dead+Wind 0 deg - Service
28	Dead+Wind 30 deg - Service
29	Dead+Wind 60 deg - Service
30	Dead+Wind 90 deg - Service
31	Dead+Wind 120 deg - Service
32	Dead+Wind 150 deg - Service
33	Dead+Wind 180 deg - Service
34	Dead+Wind 210 deg - Service
35	Dead+Wind 240 deg - Service
36	Dead+Wind 270 deg - Service
37	Dead+Wind 300 deg - Service
38	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	130 - 120.5	Pole	Max Tension	2	0.00	-0.00	-0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	14	-4.16	0.03	0.23
			Max. Mx	11	-2.34	29.52	0.59
			Max. My	2	-2.32	0.02	30.29
			Max. Vy	11	-3.83	29.52	0.59
			Max. Vx	2	-3.96	0.02	30.29
			Max. Torque	5			0.14
L2	120.5 - 120	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-4.22	0.03	0.23
			Max. Mx	11	-2.39	31.45	0.66
			Max. My	2	-2.37	0.02	32.27
			Max. Vy	11	-3.86	31.45	0.66
			Max. Vx	2	-3.99	0.02	32.27
			Max. Torque	5			0.14
L3	120 - 77	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-16.73	0.16	0.20
			Max. Mx	11	-9.48	549.57	6.03
			Max. My	2	-9.46	0.07	555.50
			Max. Vy	11	-16.36	549.57	6.03
			Max. Vx	2	-16.49	0.07	555.50
			Max. Torque	5			0.21
L4	77 - 37.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-23.89	0.33	0.27
			Max. Mx	11	-15.56	1258.06	11.38
			Max. My	2	-15.55	0.12	1268.80
			Max. Vy	11	-20.42	1258.06	11.38
			Max. Vx	2	-20.52	0.12	1268.80
			Max. Torque	4			0.33
L5	37.75 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-34.12	0.53	0.15
			Max. Mx	11	-24.74	2206.18	16.97
			Max. My	2	-24.74	0.19	2220.88
			Max. Vy	11	-24.44	2206.18	16.97
			Max. Vx	2	-24.54	0.19	2220.88
			Max. Torque	4			0.33

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	14	34.12	0.00	0.00
	Max. H_x	11	24.77	24.42	0.13
	Max. H_z	2	24.77	0.00	24.51
	Max. M_x	2	2220.88	0.00	24.51
	Max. M_z	5	2205.79	-24.42	0.13
	Max. Torsion	4	0.33	-21.19	12.23
	Min. Vert	2	24.77	0.00	24.51
	Min. H_x	5	24.77	-24.42	0.13
	Min. H_z	8	24.77	0.00	-24.46
	Min. M_x	8	-2213.53	0.00	-24.46
	Min. M_z	11	-2206.18	24.42	0.13
	Min. Torsion	10	-0.33	21.23	-12.26

tnxTower	Job	Page
	Tartaglia Property BU#876322	12 of 16
FDH Engineering, Inc. 6521 Meridien Drive Raleigh, NC 27616 Phone: (919) 755-1012 FAX: (919) 755-1031	**Project** 1328021400	**Date** 16:25:30 04/23/13
	Client Crown Castle	**Designed by** Byron K Webb

Tower Mast Reaction Summary

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
Dead Only	24.77	-0.00	-0.00	-0.15	0.19	0.00
Dead+Wind 0 deg - No Ice	24.77	-0.00	-24.51	-2220.88	0.19	-0.21
Dead+Wind 30 deg - No Ice	24.77	12.32	-21.08	-1904.13	-1117.41	-0.30
Dead+Wind 60 deg - No Ice	24.77	21.19	-12.23	-1107.11	-1915.24	-0.33
Dead+Wind 90 deg - No Ice	24.77	24.42	-0.13	-16.97	-2205.79	-0.27
Dead+Wind 120 deg - No Ice	24.77	21.23	12.26	1110.33	-1921.34	-0.13
Dead+Wind 150 deg - No Ice	24.77	12.10	21.21	1920.65	-1088.27	0.06
Dead+Wind 180 deg - No Ice	24.77	-0.00	24.46	2213.53	0.19	0.21
Dead+Wind 210 deg - No Ice	24.77	-12.10	21.21	1920.65	1088.66	0.30
Dead+Wind 240 deg - No Ice	24.77	-21.23	12.26	1110.33	1921.73	0.33
Dead+Wind 270 deg - No Ice	24.77	-24.42	-0.13	-16.97	2206.18	0.27
Dead+Wind 300 deg - No Ice	24.77	-21.19	-12.23	-1107.11	1915.62	0.13
Dead+Wind 330 deg - No Ice	24.77	-12.32	-21.08	-1904.13	1117.80	-0.05
Dead+Ice+Temp	34.12	-0.00	-0.00	-0.15	0.53	0.00
Dead+Wind 0 deg+Ice+Temp	34.12	0.00	-5.73	-545.86	0.57	-0.09
Dead+Wind 30 deg+Ice+Temp	34.12	2.88	-4.93	-468.33	-273.98	-0.11
Dead+Wind 60 deg+Ice+Temp	34.12	4.95	-2.86	-272.22	-470.32	-0.10
Dead+Wind 90 deg+Ice+Temp	34.12	5.71	-0.03	-4.01	-541.84	-0.07
Dead+Wind 120 deg+Ice+Temp	34.12	4.96	2.86	272.68	-471.72	-0.02
Dead+Wind 150 deg+Ice+Temp	34.12	2.83	4.95	471.82	-267.32	0.04
Dead+Wind 180 deg+Ice+Temp	34.12	0.00	5.71	543.89	0.57	0.09
Dead+Wind 210 deg+Ice+Temp	34.12	-2.83	4.95	471.82	268.46	0.11
Dead+Wind 240 deg+Ice+Temp	34.12	-4.96	2.86	272.68	472.86	0.10
Dead+Wind 270 deg+Ice+Temp	34.12	-5.71	-0.03	-4.01	542.98	0.07
Dead+Wind 300 deg+Ice+Temp	34.12	-4.95	-2.86	-272.22	471.46	0.02
Dead+Wind 330 deg+Ice+Temp	34.12	-2.88	-4.93	-468.33	275.11	-0.04
Dead+Wind 0 deg - Service	24.77	0.00	-8.48	-769.74	0.19	-0.07
Dead+Wind 30 deg - Service	24.77	4.26	-7.29	-660.03	-387.15	-0.10
Dead+Wind 60 deg - Service	24.77	7.33	-4.23	-383.81	-663.66	-0.12
Dead+Wind 90 deg - Service	24.77	8.45	-0.05	-5.99	-764.22	-0.10
Dead+Wind 120 deg - Service	24.77	7.35	4.24	384.72	-665.78	-0.04
Dead+Wind 150 deg - Service	24.77	4.19	7.34	665.55	-377.04	0.02
Dead+Wind 180 deg - Service	24.77	0.00	8.46	766.98	0.19	0.07
Dead+Wind 210 deg - Service	24.77	-4.19	7.34	665.55	377.43	0.10
Dead+Wind 240 deg - Service	24.77	-7.35	4.24	384.72	666.17	0.12
Dead+Wind 270 deg - Service	24.77	-8.45	-0.05	-5.99	764.60	0.10
Dead+Wind 300 deg - Service	24.77	-7.33	-4.23	-383.81	664.04	0.04
Dead+Wind 330 deg - Service	24.77	-4.26	-7.29	-660.03	387.53	-0.02

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX	PY	PZ	PX	PY	PZ	% Error
	K	K	K	K	K	K	
1	0.00	-24.77	0.00	0.00	24.77	0.00	0.000%
2	0.00	-24.77	-24.52	0.00	24.77	24.51	0.006%
3	12.32	-24.77	-21.08	-12.32	24.77	21.08	0.000%
4	21.19	-24.77	-12.23	-21.19	24.77	12.23	0.000%
5	24.42	-24.77	-0.13	-24.42	24.77	0.13	0.003%
6	21.24	-24.77	12.26	-21.23	24.77	-12.26	0.000%
7	12.10	-24.77	21.21	-12.10	24.77	-21.21	0.000%
8	0.00	-24.77	24.46	0.00	24.77	-24.46	0.006%
9	-12.10	-24.77	21.21	12.10	24.77	-21.21	0.000%
10	-21.24	-24.77	12.26	21.23	24.77	-12.26	0.000%
11	-24.42	-24.77	-0.13	24.42	24.77	0.13	0.003%

Load Comb.	Sum of Applied Forces PX K	PY K	PZ K	Sum of Reactions PX K	PY K	PZ K	% Error
12	-21.19	-24.77	-12.23	21.19	24.77	12.23	0.000%
13	-12.32	-24.77	-21.08	12.32	24.77	21.08	0.000%
14	0.00	-34.12	0.00	0.00	34.12	0.00	0.000%
15	0.00	-34.12	-5.73	-0.00	34.12	5.73	0.001%
16	2.88	-34.12	-4.93	-2.88	34.12	4.93	0.001%
17	4.95	-34.12	-2.86	-4.95	34.12	2.86	0.001%
18	5.71	-34.12	-0.03	-5.71	34.12	0.03	0.001%
19	4.96	-34.12	2.86	-4.96	34.12	-2.86	0.001%
20	2.83	-34.12	4.95	-2.83	34.12	-4.95	0.001%
21	0.00	-34.12	5.71	-0.00	34.12	-5.71	0.001%
22	-2.83	-34.12	4.95	2.83	34.12	-4.95	0.001%
23	-4.96	-34.12	2.86	4.96	34.12	-2.86	0.001%
24	-5.71	-34.12	-0.03	5.71	34.12	0.03	0.001%
25	-4.95	-34.12	-2.86	4.95	34.12	2.86	0.001%
26	-2.88	-34.12	-4.93	2.88	34.12	4.93	0.001%
27	0.00	-24.77	-8.48	-0.00	24.77	8.48	0.006%
28	4.26	-24.77	-7.29	-4.26	24.77	7.29	0.001%
29	7.33	-24.77	-4.23	-7.33	24.77	4.23	0.001%
30	8.45	-24.77	-0.05	-8.45	24.77	0.05	0.006%
31	7.35	-24.77	4.24	-7.35	24.77	-4.24	0.001%
32	4.19	-24.77	7.34	-4.19	24.77	-7.34	0.001%
33	0.00	-24.77	8.46	-0.00	24.77	-8.46	0.006%
34	-4.19	-24.77	7.34	4.19	24.77	-7.34	0.001%
35	-7.35	-24.77	4.24	7.35	24.77	-4.24	0.001%
36	-8.45	-24.77	-0.05	8.45	24.77	0.05	0.006%
37	-7.33	-24.77	-4.23	7.33	24.77	4.23	0.001%
38	-4.26	-24.77	-7.29	4.26	24.77	7.29	0.001%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	6	0.00000001	0.00000001
2	Yes	15	0.00005909	0.00009007
3	Yes	20	0.00000001	0.00012684
4	Yes	20	0.00000001	0.00012765
5	Yes	16	0.00002647	0.00010575
6	Yes	20	0.00000001	0.00012756
7	Yes	20	0.00000001	0.00012501
8	Yes	15	0.00005912	0.00008990
9	Yes	20	0.00000001	0.00012548
10	Yes	20	0.00000001	0.00012739
11	Yes	16	0.00002647	0.00010578
12	Yes	20	0.00000001	0.00012747
13	Yes	20	0.00000001	0.00012728
14	Yes	6	0.00000001	0.00000001
15	Yes	16	0.00000001	0.00011211
16	Yes	17	0.00000001	0.00009951
17	Yes	17	0.00000001	0.00010050
18	Yes	16	0.00000001	0.00011125
19	Yes	17	0.00000001	0.00009984
20	Yes	17	0.00000001	0.00009827
21	Yes	16	0.00000001	0.00011153
22	Yes	17	0.00000001	0.00009919
23	Yes	17	0.00000001	0.00009988
24	Yes	16	0.00000001	0.00011150

25	Yes	17	0.00000001	0.00010050
26	Yes	17	0.00000001	0.00010037
27	Yes	14	0.00013740	0.00009673
28	Yes	17	0.00000001	0.00009357
29	Yes	17	0.00000001	0.00009573
30	Yes	14	0.00013739	0.00010428
31	Yes	17	0.00000001	0.00009426
32	Yes	17	0.00000001	0.00009257
33	Yes	14	0.00013740	0.00009633
34	Yes	17	0.00000001	0.00009356
35	Yes	17	0.00000001	0.00009394
36	Yes	14	0.00013739	0.00010434
37	Yes	17	0.00000001	0.00009538
38	Yes	17	0.00000001	0.00009448

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	130 - 120.5	33.481	27	2.1343	0.0011
L2	120.5 - 120	29.244	27	2.1202	0.0009
L3	120 - 77	29.022	27	2.1191	0.0009
L4	80.75 - 37.75	13.313	27	1.5696	0.0004
L5	42.25 - 0	3.614	27	0.7850	0.0002

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
130.00	Lightning Rod	27	33.481	2.1343	0.0011	36187
128.00	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	27	32.587	2.1318	0.0010	36187
124.00	VHLP2-11	27	30.801	2.1263	0.0010	28885
118.00	LLPX310R w/ Mount Pipe	27	28.137	2.1129	0.0009	9178
116.00	alcatel lucent 1900MHz RRH (65MHz)	27	27.259	2.1033	0.0009	7820
110.00	OG-860/1920/GPS-A	27	24.661	2.0563	0.0008	6063
50.00	OG-860/1920/GPS-A	27	4.998	0.9395	0.0002	2410

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	130 - 120.5	96.371	2	6.1458	0.0032
L2	120.5 - 120	84.190	2	6.1057	0.0028
L3	120 - 77	83.552	2	6.1027	0.0028
L4	80.75 - 37.75	38.361	2	4.5231	0.0013
L5	42.25 - 0	10.422	2	2.2634	0.0006

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
130.00	Lightning Rod	2	96.371	6.1458	0.0032	12997
128.00	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	2	93.801	6.1387	0.0031	12997
124.00	VHLP2-11	2	88.667	6.1231	0.0029	10367
118.00	LLPX310R w/ Mount Pipe	2	81.008	6.0849	0.0027	3268
116.00	alcatel lucent 1900MHz RRH (65MHz)	2	78.481	6.0575	0.0027	2780
110.00	OG-860/1920/GPS-A	2	71.012	5.9226	0.0025	2151
50.00	OG-860/1920/GPS-A	2	14.412	2.7087	0.0007	839

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
L1	130 - 120.5 (1)	TP18.5x18.5x0.375	9.50	0.00	0.0	21.000	21.3530	-2.32	448.41	0.005
L2	120.5 - 120 (2)	TP22x18.5x0.375	0.50	0.00	0.0	21.000	21.3530	-2.33	448.41	0.005
L3	120 - 77 (3)	TP29.742x22x0.25	43.00	0.00	0.0	39.000	23.1975	-9.46	904.70	0.010
L4	77 - 37.75 (4)	TP36.308x28.5668x0.3125	43.00	0.00	0.0	39.000	35.4053	-15.55	1380.81	0.011
L5	37.75 - 0 (5)	TP42.48x34.8729x0.375	42.25	0.00	0.0	39.000	50.8418	-24.74	1982.83	0.012

Pole Bending Design Data

Section No.	Elevation ft	Size	Actual M_x kip-ft	Actual f_{bx} ksi	Allow. F_{bx} ksi	Ratio $\frac{f_{bx}}{F_{bx}}$	Actual M_y kip-ft	Actual f_{by} ksi	Allow. F_{by} ksi	Ratio $\frac{f_{by}}{F_{by}}$
L1	130 - 120.5 (1)	TP18.5x18.5x0.375	30.29	3.831	23.100	0.166	0.00	0.000	23.100	0.000
L2	120.5 - 120 (2)	TP22x18.5x0.375	30.29	3.831	23.100	0.166	0.00	0.000	23.100	0.000
L3	120 - 77 (3)	TP29.742x22x0.25	555.50	40.820	39.000	1.047	0.00	0.000	39.000	0.000
L4	77 - 37.75 (4)	TP36.308x28.5668x0.3125	1268.80	50.041	39.000	1.283	0.00	0.000	39.000	0.000
L5	37.75 - 0 (5)	TP42.48x34.8729x0.375	2220.88	50.974	39.000	1.307	0.00	0.000	39.000	0.000

Pole Shear Design Data

tnxTower	Job: Tartaglia Property BU#876322	Page: 16 of 16
FDH Engineering, Inc. 6521 Meridien Drive Raleigh, NC 27616 Phone: (919) 755-1012 FAX: (919) 755-1031	Project: 1328021400	Date: 16:25:30 04/23/13
	Client: Crown Castle	Designed by: Byron K Webb

Section No.	Elevation ft	Size	Actual V K	Actual f_v ksi	Allow. F_v ksi	Ratio $\frac{f_v}{F_v}$	Actual T kip-ft	Actual f_{vt} ksi	Allow. F_{vt} ksi	Ratio $\frac{f_{vt}}{F_{vt}}$
L1	130 - 120.5 (1)	TP18.5x18.5x0.375	3.96	0.186	14.000	0.027	0.01	0.001	14.000	0.000
L2	120.5 - 120 (2)	TP22x18.5x0.375	3.99	0.187	14.000	0.022	0.01	0.001	14.000	0.000
L3	120 - 77 (3)	TP29.742x22x0.25	16.49	0.711	26.000	0.056	0.07	0.002	26.000	0.000
L4	77 - 37.75 (4)	TP36.308x28.5668x0.3125	20.52	0.580	26.000	0.045	0.13	0.002	26.000	0.000
L5	37.75 - 0 (5)	TP42.48x34.8729x0.375	24.54	0.483	26.000	0.038	0.21	0.002	26.000	0.000

Pole Interaction Design Data

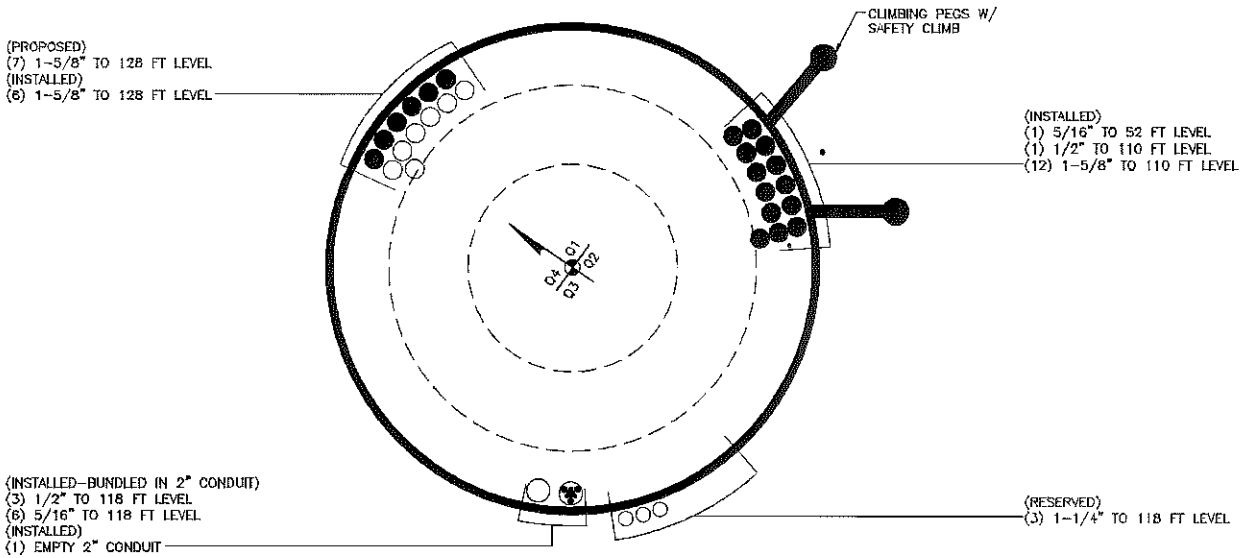
Section No.	Elevation ft	Ratio $\frac{P}{P_a}$	Ratio $\frac{f_{bx}}{F_{bx}}$	Ratio $\frac{f_{by}}{F_{by}}$	Ratio $\frac{f_v}{F_v}$	Ratio $\frac{f_{vt}}{F_{vt}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	130 - 120.5 (1)	0.005	0.166	0.000	0.027	0.000	0.171 ✔	1.333	H1-3+VT ✔
L2	120.5 - 120 (2)	0.005	0.166	0.000	0.022	0.000	0.171 ✔	1.333	H1-3+VT ✔
L3	120 - 77 (3)	0.010	1.047	0.000	0.056	0.000	1.058 ✔	1.333	H1-3+VT ✔
L4	77 - 37.75 (4)	0.011	1.283	0.000	0.045	0.000	1.295 ✔	1.333	H1-3+VT ✔
L5	37.75 - 0 (5)	0.012	1.307	0.000	0.038	0.000	1.320 ✔	1.333	H1-3+VT ✔

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
L1	130 - 120.5	Pole	TP18.5x18.5x0.375	1	-2.32	597.73	12.8	Pass
L2	120.5 - 120	Pole	TP22x18.5x0.375	2	-2.33	597.73	12.8	Pass
L3	120 - 77	Pole	TP29.742x22x0.25	3	-9.46	1205.97	79.4	Pass
L4	77 - 37.75	Pole	TP36.308x28.5668x0.3125	4	-15.55	1840.62	97.1	Pass
L5	37.75 - 0	Pole	TP42.48x34.8729x0.375	5	-24.74	2643.11	99.0	Pass
							Summary	
						Pole (L5)	99.0	Pass
						RATING =	**99.0**	**Pass**

APPENDIX B

BASE LEVEL DRAWING



BUSINESS UNIT: 876322 TOWER ID: C_BASELEVEL

APPENDIX C

ADDITIONAL CALCULATIONS

Stiffened or Unstiffened, Exterior Flange Plate - Any Bolt Material TIA Rev F

Site Data

BU#: *876322*
Site Name: *Tartaglia Property*
App #:

Pole Manufacturer:	Other

Bolt Data			
Qty:	8		
Diameter (in.):	0.875	Bolt Fu:	120
Bolt Material:	A325	Bolt Fy:	92
N/A:	75	<-- Disregard	Bolt Fty: 44.00
N/A:	55	<-- Disregard	

Plate Data		
Diam:	26.25	in
Thick, t:	1.25	in
Grade (Fy):	50	ksi
Strength, Fu:	65	ksi
Single-Rod B-eff:	7.26	in

Stiffener Data (Welding at Both Sides)		
Config:	0	*
Weld Type:		
Groove Depth:		in **
Groove Angle:		degrees
Fillet H. Weld:		<-- Disregard
Fillet V. Weld:		in
Width:		in
Height:		in
Thick:		in
Notch:		in
Grade:		ksi
Weld str.:		ksi

Pole Data		
Diam:	18.5	in
Thick:	0.375	in
Grade:	35	ksi
# of Sides:	0	"0" IF Round
Fu	63	ksi
Reinf. Fillet Weld	0	"0" if None

Stress Increase Factor		
ASIF:	1.333	

Reactions		
Moment:	30.29	ft-kips
Axial:	2.33	kips
Shear:	3.99	kips
Elevation:	120	feet

If No stiffeners, Criteria: AISC ASD <-Only Applcable to Unstiffened Cases

Flange Bolt Results | Rigid

Bolt Tension Capacity, **B**:	35.27	kips
Max Bolt directly applied T:	7.28	Kips
Min. PL "tc" for **B** cap. **w/o** Pry:	1.161	in
Min PL "treq" for actual **T w/ Pry:**	0.386	in
Min PL "t1" for actual **T w/o Pry:**	0.527	in
Prying Force, Q:	0.00	kips
Total Bolt Tension=T+Q:	7.28	kips
Non-Prying Bolt Stress Ratio, T/B:	20.6%	Pass

Service, ASD
Fty*ASIF

Exterior Flange Plate Results Flexural Check | Rigid

Compression Side Plate Stress:	6.7	ksi
Allowable Plate Stress:	50.0	ksi
Compression Plate Stress Ratio:	13.4%	Pass
No Prying		
Tension Side Stress Ratio, (treq/t)^2:	9.5%	Pass

Service ASD
0.75*Fy*ASIF
Comp. Y.L. Length: 15.29

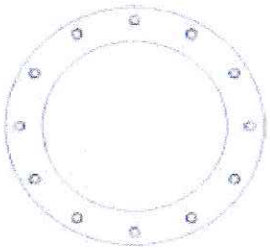
n/a

Stiffener Results

Horizontal Weld :	n/a
Vertical Weld:	n/a
Plate Flex+Shear, fb/Fb+(fv/Fv)^2:	n/a
Plate Tension+Shear, ft/Ft+(fv/Fv)^2:	n/a
Plate Comp. (AISC Bracket):	n/a

Pole Results

Pole Punching Shear Check: n/a



* 0 = none, 1 = every bolt, 2 = every 2 bolts, 3 = 2 per bolt

** Note: for complete joint penetration groove welds the groove depth must be exactly 1/2 the stiffener thickness for calculation purposes

Square, Stiffened / Unstiffened Base Plate, Any Rod Material - Rev. F /G

Assumptions: 1) Rod groups at corners. Total # rods divisible by 4. Maximum total # of rods = 48 (12 per Corner).
2) Rod Spacing = Straight Center-to-Center distance between any (2) adjacent rods (same corner)
3) Clear space between bottom of leveling nut and top of concrete **not** exceeding (1)*(Rod Diameter)

Site Data

BU #: *876322*
Site Name: *Tartgalia Property*
App #:

Anchor Rod Data		
Qty:	16	
Diam:	2.25	in
Rod Material:	A615-J	
Yield, Fy:	75	ksi
Strength, Fu:	100	ksi
Bolt Circle:	55	in
Anchor Spacing:	6	in

Plate Data		
W=Side:	55	in
Thick:	3.5	in
Grade:	50	ksi
Clip Distance:	4.94	in

Stiffener Data (Welding at both sides)		
Configuration:	Unstiffened	
Weld Type:		**
Groove Depth:		in **
Groove Angle:		degrees
Fillet H. Weld:		<-- Disregard
Fillet V. Weld:		in
Width:		in
Height:		in
Thick:		in
Notch:		in
Grade:		ksi
Weld str.:		ksi

Pole Data		
Diam:	42.48	in
Thick:	0.375	in
Grade:	65	ksi
# of Sides:	12	"0" IF Round

Stress Increase Factor		
ASD ASIF:	1.333	

Base Reactions		
TIA Revision:	F	
Unfactored Moment, M:	2221	ft-kips
Unfactored Axial, P:	25	kips
Unfactored Shear, V:	25	kips

Anchor Rod Results

TIA F --> Maximum Rod Tension	119.6 Kips
Allowable Tension:	195.0 Kips
Anchor Rod Stress Ratio:	61.3% Pass

Base Plate Results	Flexural Check
Base Plate Stress:	36.1 ksi
Allowable PL Bending Stress:	50.0 ksi
Base Plate Stress Ratio:	72.2% Pass

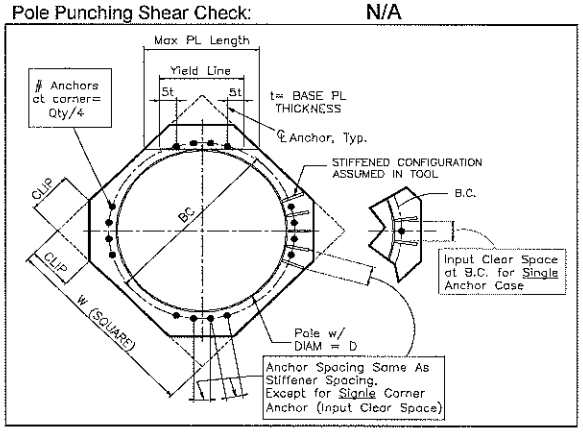
PL Ref. Data
Yield Line (in):
35.30
Max PL Length:
35.30

N/A - Unstiffened
Stiffener Results

Horizontal Weld :	N/A
Vertical Weld:	N/A
Plate Flex+Shear, fb/Fb+(fv/Fv)^2:	N/A
Plate Tension+Shear, ft/Ft+(fv/Fv)^2:	N/A
Plate Comp. (AISC Bracket):	N/A

Pole Results

Pole Punching Shear Check: N/A



** Note: for complete joint penetration groove welds the groove depth must be exactly 1/2 the stiffener thickness for calculation purposes

Moment Capacity of Drilled Concrete Shaft (Caisson) for TIA Rev F or G

Note: Shaft assumed to have ties, not spiral, transverse reinforcing

Site Data

BU#: *876322*
Site Name: *Targatlia Property*
App #:

Enter Load Factors Below:		
For M (WL)	1.3	<---- Enter Factor
For P (DL)	1.3	<---- Enter Factor

Pier Properties

Concrete:

Pier Diameter =	7.0	ft
Concrete Area =	5541.8	in^2

Reinforcement:

Clear Cover to **Tie**=	4.00	in
Horiz. **Tie** Bar Size=	5	
Vert. Cage Diameter =	6.11	ft
Vert. Cage Diameter =	73.34	in
Vertical Bar Size =	11	
Bar Diameter =	1.41	in
Bar Area =	1.56	in^2
Number of Bars =	32	
As Total=	49.92	in^2
A s/ Aconc, Rho:	0.0090	0.90%

ACI 10.5 , ACI 21.10.4, and IBC 1810.
Min As for Flexural, Tension Controlled, Shafts:
(3)*(Sqrt(f'c)/Fy: 0.0027
200 / Fy: 0.0033

Minimum Rho Check:

Actual Req'd Min. Rho:	0.33%	Flexural
Provided Rho:	0.90%	**OK**

Ref. Shaft Max Axial Capacities, ϕ Max(Pn or Tn):		
Pn per ACI 318 (10-2)		
at Mu=(ϕ=0.65)Mn=		
	2695.68	kips
at Mu=ϕ=(0.90)Mn=	0.00	ft-kips

Maximum Shaft Superimposed Forces

TIA Revision:	F	
Max. Service Shaft M:	2443	ft-kips (* **Note**)
Max. Service Shaft P:	25	kips
Max Axial Force Type:	Comp.	

(*) **Note:** Max Shaft Superimposed Moment does not necessarily equal to the shaft top reaction moment

Load Factor	**Shaft Factored Loads**		
1.30	Mu:	3175.9	ft-kips
1.30	Pu:	32.5	kips

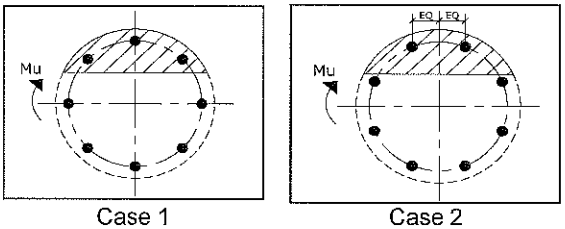
Material Properties

Concrete Comp. strength, f'c =	3000	psi
Reinforcement yield strength, Fy =	60	ksi
Reinforcing Modulus of Elasticity, E =	29000	ksi
Reinforcement yield strain =	0.00207	
Limiting compressive strain =	0.003	
ACI 318 Code		
Select Analysis ACI Code=	2002	
Seismic Properties		
Seismic Design Category =	B	
Seismic Risk =	**Low**	

Solve (Run) <-- Press Upon Completing All Input

Results:

Governing Orientation Case: **2**



Case 1 Case 2

Dist. From Edge to Neutral Axis:	**16.79**	in
Extreme Steel Strain, εt:	**0.0110**	
	0.900	

Output Note: Negative Pu=Tension

	7435.52	ft-kips
Drilled Shaft Superimposed Mu:	**3175.90**	ft-kips
	42.7%	

CAISSON Version 10.61 4:23:28 PM Tuesday, April 23, 2013
FDH Engineering

```
*****************************************************************************************
*                                                                                       *
* CAISSON - Pier Foundations Analysis and Design -  Copyright Power Line Systems, Inc. 1993-2010 *
*                                                                                       *
*****************************************************************************************
```

Project Title: BU 876322, Tartaglia Property
Project Notes: 1328021400

Calculation Method: Full 8CD

******* I N P U T D A T A

Pier Properties

Diameter (ft)	Distance of Top of Pier above Ground (ft)	Concrete Strength (ksi)	Steel Yield Strength (ksi)
7.00	0.50	3.00	60.00

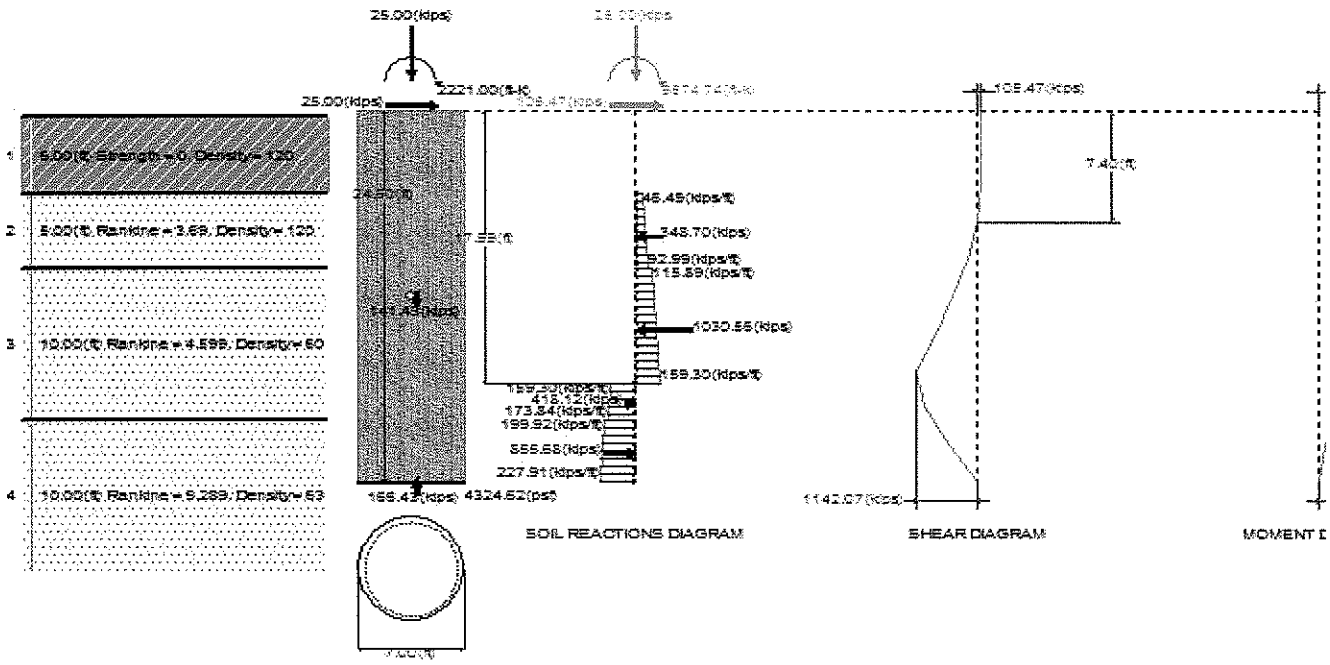
Soil Properties

Layer	Type	Thickness (ft)	Depth at Top of Layer (ft)	Density (lbs/ft^3)	CU (psf)	KP	PHI (deg)
1	Clay	5.00	0.00	120.0			
2	Sand	5.00	5.00	120.0		3.690	35.00
3	Sand	10.00	10.00	60.0		4.599	40.00
4	Sand	10.00	20.00	63.0		5.289	43.00

Design (Factored) Loads at Top of Pier

Moment (ft-k)	Axial Load (kips)	Shear Load (kips)	Additional Safety Factor Against Soil Failure	
2221.0	25.0	25.00	4.20	SOIL CAPACITY = 2/4.2= 47.6%

******* R E S U L T S



Calculated Pier Properties

Length (ft)	Weight (kips)	Pressure Due To Axial Load (psf)	Pressure Due To Weight (psf)	Total End-Bearing Pressure (psf)
24.500	141.431	649.6	3675.0	4324.6

Ultimate Resisting Forces Along Pier

Type	Distance of Top of Layer to Top of Pier (ft)	Thickness (ft)	Density (lbs/ft^3)	CU (psf)	KP	Force (kips)	Arm (ft)
Clay	0.50	5.00	120.0			0.00	3.00
Sand	5.50	5.00	120.0		3.690	348.70	8.28
Sand	10.50	7.49	60.0		4.599	1030.56	14.44
Sand	17.99	2.51	60.0		4.599	-418.12	19.26
Sand	20.50	4.00	63.0		5.289	-855.68	22.54

Shear and Moments Along Pier

Distance below Top of Pier (ft)	Shear (with Safety Factor) (kips)	Moment (with Safety Factor) (ft-k)	Shear (without Safety Factor) (kips)	Moment (without Safety Factor) (ft-k)	
0.00	105.5	9574.7	25.1	2279.7	
2.45	105.5	9833.1	25.1	2341.2	
4.90	105.5	10091.5	25.1	2402.7	
7.35	3.5	10260.6	0.8	2443.0	MAX
9.80	-180.4	10055.3	-43.0	2394.1	
12.25	-454.9	9299.0	-108.3	2214.0	
14.70	-781.1	7791.9	-186.0	1855.2	
17.15	-1142.1	5443.1	-271.9	1296.0	
19.60	-1009.8	2588.5	-240.4	616.3	
22.05	-537.4	666.9	-127.9	158.8	
24.50	-0.0	-0.0	-0.0	-0.0	

EBI Consulting
environmental | engineering | due diligence

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

T-Mobile Existing Facility

Site ID: CTNH101A

NH101/ Global Signal Branford
850 West Main Street
Branford, CT 06405

May 14, 2013

EBI Project Number: 62136254

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

EBI Consulting
environmental | engineering | due diligence

May 14, 2013

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

Re: Emissions Values for Site: **CTNH101A – NH101 / Global Signal Branford**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at 850 West Main Street, Branford, 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 μW/cm2 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 (μW/cm2). The general population exposure limit for the cellular band is 567 μW/cm2, and the general population exposure limit for the PCS band is 1000 μW/cm2. 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 850 West Main Street, Branford, 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, the actual antenna pattern gain value in the direction of the sample area was used. For this report the sample point is 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 channels (1935.000 MHz—to 1945.000 MHz / 1980.000 MHz—to 1985.000 MHz) were considered for each sector of the proposed installation.
2) 2 UMTS channels (2110.000 MHz to 2120.000 MHz / 2140.000 MHz to 2145.000 MHz) were considered for each sector of the proposed installation
3) 2 LTE channels (2110.000 MHz to 2120.000 MHz / 2140.000 MHz to 2145.000 MHz) were considered for each sector of the proposed installation
4) 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.
5) For the following calculations the sample point was the top of a six foot person standing at the base of the tower. The actual gain in this direction was used per the manufactures supplied specifications.
6) The antenna used in this modeling is the Ericsson AIR21 for LTE, UMTS and GSM. This is based on feedback from the carrier with regards to anticipated antenna selection. This antenna has a 15.6 dBd gain value at its main lobe. Actual antenna gain values were used for all calculations as per the manufacturers specifications

7) The antenna mounting height centerline of the proposed antennas is **130 feet** above ground level (AGL)
8) 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 calculation were done with respect to uncontrolled / general public threshold limits

Site ID	CTNH101A - Global Signal Branford
Site Addresss	850 West Main Street, Branford, CT 06405
Site Type	Monopole

Sector 1

Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	130	124	None	0	0	48.326044	1.12991	0.11299%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-			0	-3.95	130	124	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	130	124	1-5/8"	0	0	24.163022	0.564955	0.05650%
2B	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	130	124	1-5/8"	0	0	24.163022	0.564955	0.05650%
														Sector total Power Density Value:		0.226%	

Sector 2

Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	130	124	None	0	0	48.326044	1.12991	0.11299%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-			0	-3.95	130	124	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	130	124	1-5/8"	0	0	24.163022	0.564955	0.05650%
28	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	130	124	1-5/8"	0	0	24.163022	0.564955	0.05650%
														Sector total Power Density Value:		0.226%	

Sector 3

Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	130	124	None	0	0	48.326044	1.12991	0.11299%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-			0	-3.95	130	124	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	130	124	1-5/8"	0	0	24.163022	0.564955	0.05650%
28	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	130	124	1-5/8"	0	0	24.163022	0.564955	0.05650%
														Sector total Power Density Value:		0.226%	

Site Composite MPE %	
Carrier	MPE %
T-Mobile	0.678%
Sprint	7.760%
Clearwire	1.260%
Verizon Wireless	19.720%
Total Site MPE %	**29.418%**

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environmental | engineering | due diligence

Summary

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

The anticipated Maximum Composite contributions from the T-Mobile facility are **0.678% (0.226% from each sector)** of the allowable FCC established general public limit considering all three sectors simultaneously sampled at the ground level.

The anticipated composite MPE value for this site assuming all carriers present is **29.418%** 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 within the allowable 100% threshold standard per the federal government.

Scott Heffernan
RF Engineering Director

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CONNECTICUT SITING COUNCIL
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www.ct.gov/csc

May 23, 2013

The Honorable Anthony "Unk" DaRos
First Selectman
Town of Branford
Town Hall
1019 Main Street
P. O. Box 150
Branford, CT 06405-0150

RE: **EM-T-MOBILE-014-130521** – T-Mobile Northeast LLC notice of intent to modify an existing telecommunications facility located at 850 West Main Street, Branford, Connecticut.

Dear First Selectman DaRos:

The Connecticut Siting Council (Council) received a request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72, a copy of which has already been provided to you.

If you have any questions or comments regarding the proposal, please call me or inform the Council by June 7, 2013.

Thank you for your cooperation and consideration.

Very truly yours,

Melanie A. Bachman
Acting Executive Director

MAB/jb

c: Daniel Shapiro, Chm, Inland Wetland Commission, Town of Branford
Laura Magaraci, Zoning Enforcement Officer, Town of Branford

CONNECTICUT SITING COUNCIL