

April 20, 2015

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

RE: Notice of Exempt Modification
160 Deer Run Rd, Wilton, CT
N 41° 14' 29.00"
W 73° 28' 12.00"
T-Mobile Site #: CT11346C_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 160 Deer Run Rd, Wilton, CT.

The 160 Deer Run Rd, Wilton, CT facility consists of a 118' Self Support Tower owned and operated by SBA Site Management. 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.

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 the 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@sbsite.com



T-Mobile Equipment Modification

160 Deer Run Rd, Wilton, CT
Site number CT11346C_L700

Tower Owner: SBA Site Management

Equipment Configuration: Self Support

Current and/or approved:

- (3) Ericsson Air 21 B2A/B4P
- (3) Ericsson Air 21 B4A/B2P
- (3) Ericsson KRY 112/71
- (12) 1-5/8" lines
- (1) 1-5/8" fiber

Planned Modifications:

- (3) Ericsson Air 21 B2A/B4P
- (3) Ericsson Air 21 B4A/B2P
- (3) Ericsson KRY 112/71
- (3) Commscope LNX-6515DS-VTM
- (3) Ericsson S11B12
- (12) 1-5/8" lines
- (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 9.62% of the allowable FCC established general public limit. The anticipated composite MPE value for this site assuming all carriers present is 67.99% of the allowable FCC established general public limit sampled at the ground level.

Site Composite MPE%	
Carrier	MPE%
T-Mobile	9.62
AT&T	19.83 %
Verizon Wireless	25.42 %
Sprint Nextel	9.82 %
On Site Readings (Baseline)	3.30 %
Site Total MPE %:	67.99 %



April 20, 2015

Bill Brennan, First Selectman
Wilton Town Hall
238 Danbury Road
Wilton, CT 06897

RE: Telecommunications Facility @ 160 Deer Run Rd, Wilton, CT

Dear Mr. Brennan,

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,

A handwritten signature in black ink, appearing to read "Kri Pelletier", is positioned above the typed name and contact information.

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@sbsite.com

April 20, 2015

Westport Broadcasting, LLC
P.O. Box 1041
Virginia Beach VA 23451-1041

RE: Telecommunications Facility @ 160 Deer Run Rd, Wilton, CT

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).

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,



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**Structural Analysis for
SBA Network Services, Inc.**

118' Self-Support Tower

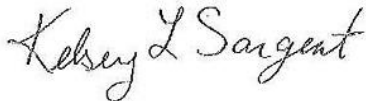
**SBA Site Name: Wilton, CT-Optasite
SBA Site ID: CT98078
T-Mobile Site ID: CT11346C**

FDH Velocitel Project Number 15BFPK1400

Analysis Results

Tower Components	91.2 %	Sufficient
Foundation	65.9 %	Sufficient

Prepared By:



Kelsey Sargent
Project Engineer

Reviewed By:



Dennis D. Abel, PE
Director-Structural Engineering
CT PE License No. 23247

Velocitel, Inc., d.b.a. FDH Velocitel
6521 Meridien Drive
Raleigh, NC 27616
(919) 755-1012
info@fdh-inc.com



April 10, 2015

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EXECUTIVE SUMMARY

At the request of SBA Network Services, Inc., FDH Velocitel performed a structural analysis of the monopole located in Wilton, CT to determine whether the tower is structurally adequate to support both the existing and proposed loads pursuant to the *Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, TIA/EIA-222-F* and the *2005 Connecticut Building Code (CBC)*. Information pertaining to the existing/proposed antenna loading, current tower geometry, soil parameters, foundation dimensions, and member sizes was obtained from:

- World Tower (Drawing No. Q06515) original design drawings dated October 16, 2006
- JWB Tower Services, LLC (FCC No. 1256129) Lattice Tower Mapping and Inventory dated May 11, 2011
- JGI Eastern, Inc. (Project No. 06517G) Geotechnical Evaluation dated August 31, 2006
- SBA Network Services, Inc.

The *basic design wind speed* per the *TIA/EIA-222-F* standards and *2005 CBC* is 85 mph without ice and 38 mph with 3/4" radial ice. Ice is considered to increase in thickness with height.

Conclusions

With the existing and proposed antennas from T-Mobile in place at 118 ft., the tower meets the requirements of the *TIA/EIA-222-F* standards and *2005 CBC* provided the **Recommendations** listed below are satisfied. Furthermore, provided the foundation was constructed per the original design drawings (see World Tower Drawing No. Q06515) and given the existing soil parameters (see JGI Project No. 06517), the foundation should have the necessary capacity to support both the proposed and existing loading. For a more detailed description of the analysis of the tower, see the **Results** section of this report.

Our structural analysis has been performed assuming all information provided to FDH Velocitel is accurate (i.e., the steel data, tower layout, existing antenna loading, and proposed antenna loading) and that the tower has been properly erected and maintained per the original design drawings.

Recommendations

To ensure the requirements of the *TIA/EIA-222-F* standards and *2005 CBC* are met with the existing and proposed loading in place, we have the following recommendations:

1. Feed lines should be installed as shown in **Figure 1**.
2. The TMAs should be installed directly behind the panel antennas.
3. RRU/RRH Stipulation: The equipment may be installed in any arrangement as determined by the client.

APPURTENANCE LISTING

The proposed and existing antennas with their corresponding cables/coax lines are shown in **Table 1**. *If the actual layout determined in the field deviates from the layout, FDH Velocitel should be contacted to perform a revised analysis.*

Table 1 - Appurtenance Loading

Existing Loading:

Antenna Elevation (ft)	Description	Feed Lines	Carrier	Mount Elevation (ft)	Mount Type
124	(1) 12' x 3" Ø Omni	(2) 7/8"	---	118	(2) Pipe Mounts
123	(1) 10' x 3" Ø Omni				
118	(3) Ericsson Air 21 B2A/B4P (3) Ericsson Air 21 B4A/B2P (3) Ericsson KRY 112/71	(12) 1-5/8" (1) 1-5/8" Fiber	T-Mobile	118	(3) Pipe Mounts
110	(6) Powerwave 7770 (3) Powerwave P65-16-XLH-RR (5) Powerwave LGP 21401 (1) Andrew E15Z01P13 (6) Ericsson RRUS-11 (2) Raycap DC6-48-60-18-8F	(12) 1-5/8" (1) 3" Flex Conduit	AT&T	110	(3) Face Mounts
98	(3) Antel BXA 185085/12CF (3) Antel 80090/8CF (3) RFS APX75-866512 (6) RFS RD9R6004/2C-3L	(12) 1-5/8"	Verizon	98	(3) T-Frames
87	(3) 60"x12"x5" Panels	(9) 1-5/8"	Sprint	87	(3) Side Arms
70	(1) 8'x3"Ø Omni	(1) 1/2"	---	65	(1) Side Arm
68	(1) 10'x3"Ø Omni	(2) 7/8"	---	62	(1) Side Arm
56	(1) 10'x3"Ø Omni				
60	(1) Scala PR-850	(1) 7/8"	---	56	(1) Pipe Mount
52	(1) Scala PR-850	(1) 7/8"			
58	(1) Scala PR-850	(1) 7/8"		58	Direct

Proposed Carrier Final Loading:

Antenna Elevation (ft)	Description	Feed Lines	Carrier	Mount Elevation (ft)	Mount Type
118	(3) Ericsson Air 21 B2A/B4P (3) Ericsson Air 21 B4A/B2P (3) Ericsson KRY 112/71 (3) Commscope LNX-6515DS-VTM (3) Ericsson S11B12	(12) 1-5/8" (1) 1-5/8" Fiber	T-Mobile	118	(3) T-Arms (Assumed CaAa=11.59 ft ²)

RESULTS

The following yield strength of steel for individual members was used for analysis:

Table 2 - Material Strength

Member Type	Yield Strength
Legs	50 ksi
Bracing	36 ksi

Table 3 displays the summary of the ratio (as a percentage) of force in the member to their capacities. Values greater than 100% indicate locations where the maximum force in the member exceeds its capacity. **Table 4** displays the maximum foundation reactions.

If the assumptions outlined in this report differ from actual field conditions, FDH Velocitel should be contacted to perform a revised analysis. Furthermore, as no information pertaining to the allowable twist and sway requirements for the existing or proposed appurtenances was provided, deflection and rotation were not taken into consideration when performing this analysis.

See the **Appendix** for detailed modeling information

Table 3 - Summary of Working Percentage of Structural Components

Section No.	Elevation (ft)	Component Type	Size	% Capacity*	Pass Fail
T1	118 - 100	Leg	1 3/4	62.2	Pass
		Diagonal	L2x2x1/8	40.9 64.0 (b)	Pass
		Top Girt	L2x2x1/8	20.1	Pass
T2	100 - 80	Leg	2 1/2	63.0	Pass
		Diagonal	L2x2x3/16	52.8 78.7 (b)	Pass
T3	80 - 60	Leg	2 3/4	73.8	Pass
		Diagonal	L2x2x3/16	43.9 54.2 (b)	Pass
T4	60 - 40	Leg	3	75.9	Pass
		Diagonal	L2x2x3/16	63.3	Pass
T5	40 - 20	Leg	3 1/4	74.8	Pass
		Diagonal	L3x3x1/4	41.6 69.7 (b)	Pass
		Secondary Horizontal	L2x2x1/8	57.9	Pass
T6	20 - 0	Leg	3 1/2	66.5	Pass
		Diagonal	L3x3x1/4	43.9 67.5 (b)	Pass
		Secondary Horizontal	L2x2x1/8	73.4	Pass

Table 4 - Maximum Base Reactions

Load Type	Direction	Current Analysis (TIA/EIA-222-F)	Original Design (ANSI/TIA-222-G)
Individual Foundation	Horizontal	15 k	38 k
	Uplift	177 k	232 k
	Compression	198 k	260 k
Overturning Moment	---	1,888 k-ft	2,496 k-ft

GENERAL COMMENTS

This engineering analysis is based upon the theoretical capacity of the structure. It is not a condition assessment of the tower and its foundation. It is the responsibility of SBA Network Services, Inc. to verify that the tower modeled and analyzed is the correct structure (with accurate antenna loading information) modeled. If there are substantial modifications to be made or the assumptions made in this analysis are not accurate, FDH Velocitel should be notified immediately to perform a revised analysis.

LIMITATIONS

All opinions and conclusions are considered accurate to a reasonable degree of engineering certainty based upon the evidence available at the time of this report. All opinions and conclusions are subject to revision based upon receipt of new or additional/updated information. All services are provided exercising a level of care and diligence equivalent to the standard and care of our profession. No other warranty or guarantee, expressed or implied, is offered. Our services are confidential in nature and we will not release this report to any other party without the client's consent. The use of this engineering work is limited to the express purpose for which it was commissioned and it may not be reused, copied, or distributed for any other purpose without the written consent of FDH Velocitel.

APPENDIX

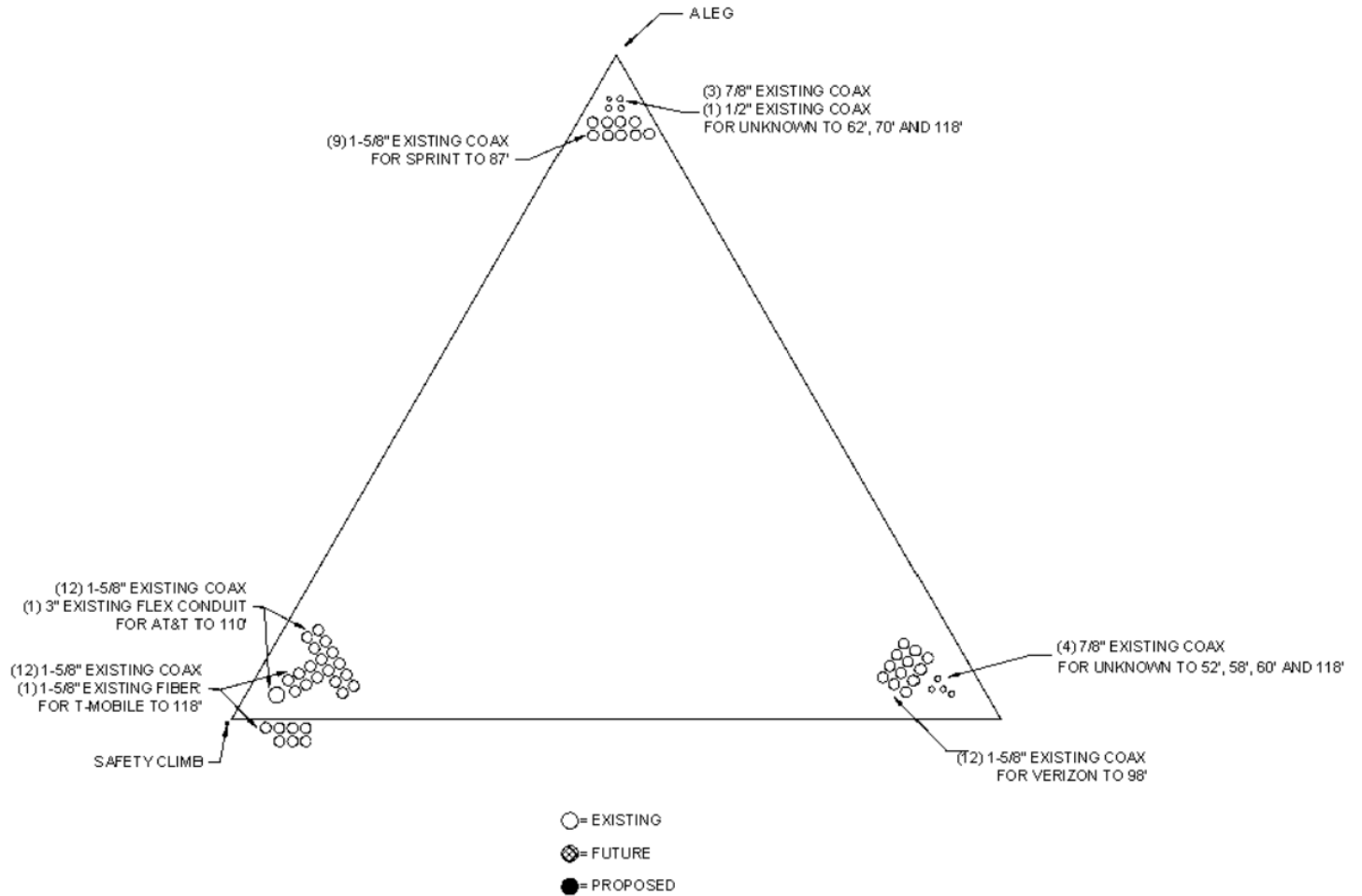


Figure 1 – Coax Layout

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Lightning Rod	118	(2) RRU-11	110
Pipe Mount	118	(2) RRU-11	110
Pipe Mount	118	DC6-48-60-18-8F	110
3"Ø x 10' Omni	118	DC6-48-60-18-8F	110
3"x12' Omni	118	(3) Face Mounts	110
AIR 21 B2A/B4P w/Mount Pipe	118	APX75-866512 w/ Mount Pipe	98
AIR 21 B2A/B4P w/Mount Pipe	118	APX75-866512 w/ Mount Pipe	98
AIR 21 B2A/B4P w/Mount Pipe	118	APX75-866512 w/ Mount Pipe	98
AIR 21 B4A/B2P w/Mount Pipe	118	BXA-185080/12CF	98
AIR 21 B4A/B2P w/Mount Pipe	118	BXA-185080/12CF	98
AIR 21 B4A/B2P w/Mount Pipe	118	BXA-185080/12CF	98
LNX-6515DS-VTM w/ Mount Pipe	118	BXA-80090/8CF	98
LNX-6515DS-VTM w/ Mount Pipe	118	BXA-80090/8CF	98
LNX-6515DS-VTM w/ Mount Pipe	118	BXA-80090/8CF	98
KRY 112 71	118	(2) FD9R6004/2C-3L Diplexer	98
KRY 112 71	118	(2) FD9R6004/2C-3L Diplexer	98
KRY 112 71	118	(2) FD9R6004/2C-3L Diplexer	98
S11B12	118	(3) T-Frames	98
S11B12	118	60" x 12" x 5" w/ Mount Pipe	87
S11B12	118	60" x 12" x 5" w/ Mount Pipe	87
(3) T-Arms	118	60" x 12" x 5" w/ Mount Pipe	87
(2) 7770	110	(3) Side Arm	87
(2) 7770	110	3"Ø x 8' Omni	65
(2) 7770	110	(1) Side Arm	65
P65-16-XLH-RR	110	3"Ø x 10' Omni	62
P65-16-XLH-RR	110	3"Ø x 10' Omni	62
P65-16-XLH-RR	110	(1) Side Arm	62
(2) LGP21401 TMA	110	PR-850	58
(2) LGP21401 TMA	110	PR-850	56
LGP21401 TMA	110	PR-850	56
E15Z01P13 TMA	110	Pipe Mount	56
(2) RRU-11	110		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

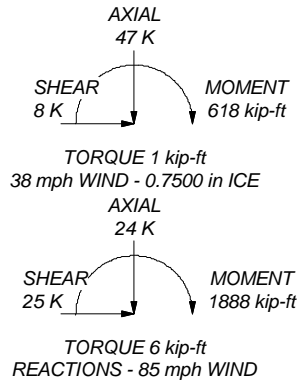
TOWER DESIGN NOTES

1. Tower is located in Fairfield 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: 91.2%

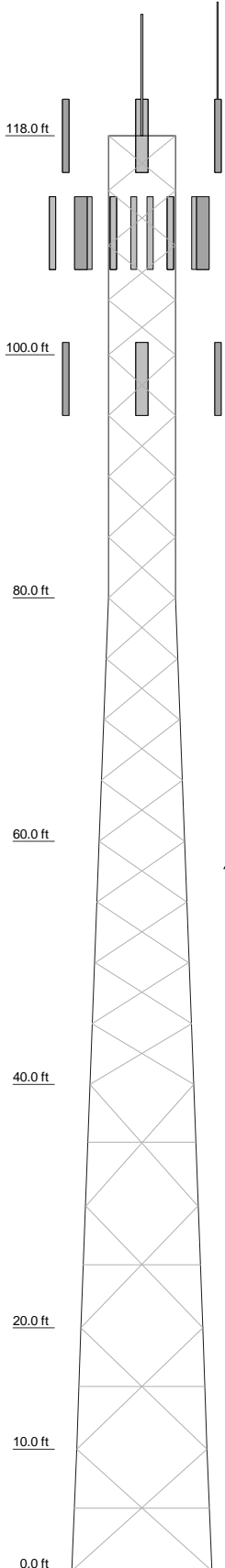
MAX. CORNER REACTIONS AT BASE:

DOWN: 198 K
SHEAR: 15 K

UPLIFT: -177 K
SHEAR: 14 K



Section	T1	T2	T3	T4	T5	T6	T7	
Legs	SR 1 3/4	SR 2 1/2	SR 2 3/4	SR 3	SR 3 1/4	SR 3 1/2	SR 3 1/2	
Leg Grade			A572-50					
Diagonals	L2x2x1/8		L2x2x3/16		L3x3x1/4			
Diagonal Grade			A36					
Top Girts	L2x2x1/8							
Sec. Horizontals			N.A.					
Face Width (ft)	6.5			7	8.5	10	10.75	11.5
# Panels @ (ft)	4 @ 4.5	1.4	1.7	2.0	2.6	1.5	1.5	11.4
Weight (K)	0.8							



Velocitel Engineering Services, PLLC
6521 Meridien Drive, Suite 107
Raleigh, North Carolina 27616
Phone: 9197551012
FAX: 9197551031

Job: Wilton, CT-Optasite, CT98078		
Project: 15BFPK1400		
Client: SBA Network Services, Inc.	Drawn by: KSargent	App'd:
Code: TIA/EIA-222-F	Date: 04/10/15	Scale: NTS
Path:		Dwg No. E-1

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

T-Mobile Existing Facility

Site ID: CT11346C

Optasite Wilton FT
160 Deer Run Road
Wilton, CT 06897

April 20, 2015

EBI Project Number: 6215002636

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general public allowable limit:	67.99 %

April 20, 2015

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

Emissions Analysis for Site: **CT11346C – Optasite Wilton FT**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **160 Deer Run Road, Wilton, 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 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ 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 ($\mu\text{W}/\text{cm}^2$). The general population exposure limit for the 700 MHz Band is $467 \mu\text{W}/\text{cm}^2$, and the general population exposure limit for the PCS and AWS bands is $1000 \mu\text{W}/\text{cm}^2$. 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 **160 Deer Run Road, Wilton, 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 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 **118 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.

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):	118	Height (AGL):	118	Height (AGL):	118
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	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%	1.34	Antenna B1 MPE%	1.34	Antenna C1 MPE%	1.34
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):	118	Height (AGL):	118	Height (AGL):	118
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%	1.34	Antenna B2 MPE%	1.34	Antenna C2 MPE%	1.34
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):	118	Height (AGL):	118	Height (AGL):	118
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%	0.53	Antenna B3 MPE%	0.53	Antenna C3 MPE%	0.53

Site Composite MPE%	
Carrier	MPE%
T-Mobile	9.62
AT&T	19.83 %
Verizon Wireless	25.42 %
Sprint Nextel	9.82 %
On Site Readings (Baseline)	3.30 %
Site Total MPE %:	67.99 %

T-Mobile Sector 1 Total:	3.21 %
T-Mobile Sector 2 Total:	3.21 %
T-Mobile Sector 3 Total:	3.21 %
Site Total:	67.99 %

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:	3.21 %
Sector 2:	3.21 %
Sector 3 :	3.21 %
T-Mobile Total:	9.62 %
Site Total:	67.99 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **67.99%** 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

**T-MOBILE
NORTHEAST LLC**

35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
OFFICE: (860) 648-1116



SBA COMMUNICATIONS CORP.
33 BOSTON POST ROAD WEST, SUITE 320 TEL: (508) 251-0720
MARLBOROUGH, MA 01752 FAX: (508) 251-1755



1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 3090 TEL: (978) 557-5553
N. ANDOVER, MA 01845 FAX: (978) 336-5586



Daniel P. Hamm

CHECKED BY: KB

APPROVED BY: DPH

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
0	02/27/15	ISSUED FOR CONSTRUCTION	JA

SITE NUMBER:

CT11346C

SITE NAME:

CT346 / OPTASITE
WILTON FT

SITE ADDRESS:

160 DEER RUN RD
WILTON, CT 06897
FAIRFIELD COUNTY

SHEET TITLE

COMPOUND &
ELEVATION PLAN

SHEET NUMBER

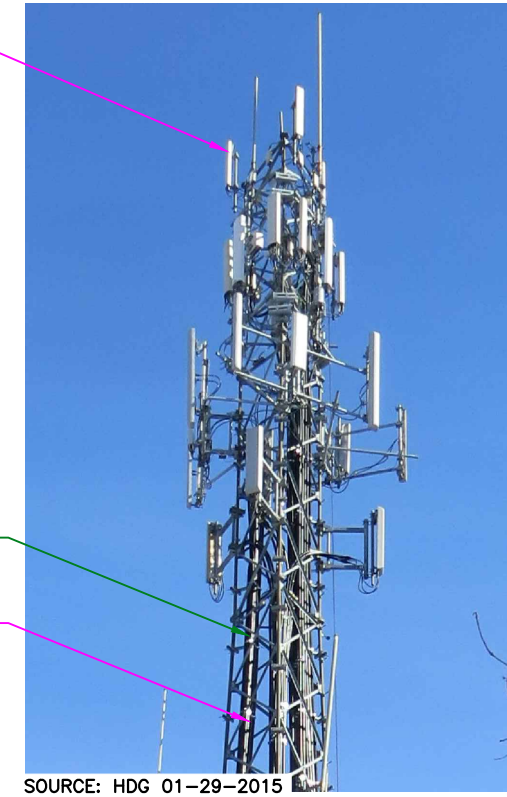
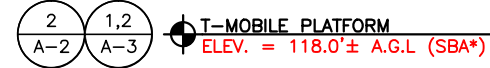
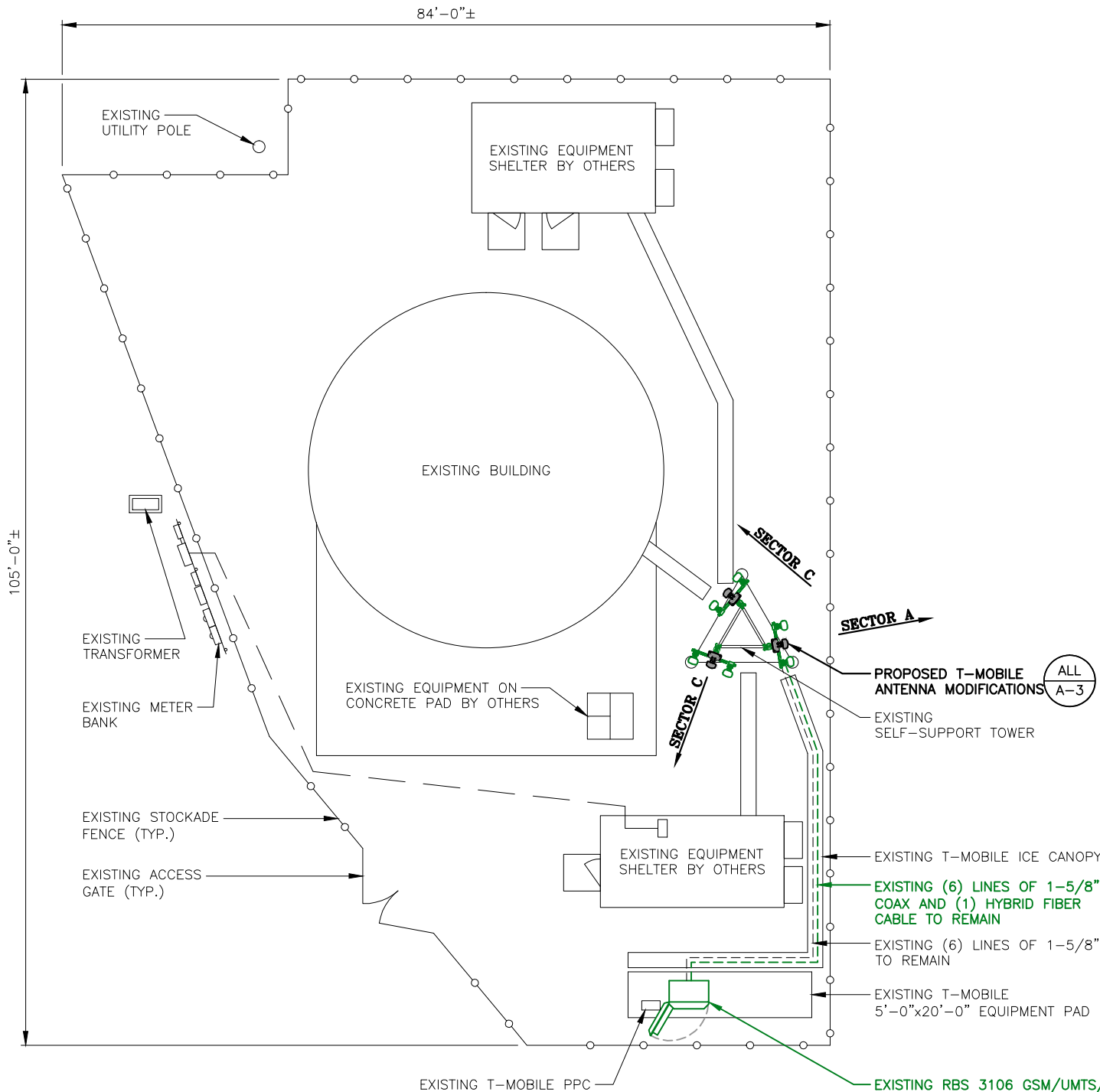
A-1

STRUCTURAL NOTES:

- ADDITIONAL TOWER MAPPING AND STRUCTURAL ANALYSIS ARE REQUIRED PRIOR TO CONSTRUCTION. DRAWINGS ARE SUBJECT TO CHANGE PENDING OUTCOME OF STRUCTURAL ANALYSIS.
- MOUNT ALL ANTENNAS, RRU'S, COAX, ETC. IN ACCORDANCE WITH STRUCTURAL ANALYSIS.

ANTENNA MOUNT STRUCTURAL ASSESSMENT REQUIREMENT:

ENGINEER OF RECORD HAS MADE A VISUAL ASSESSMENT ONLY AND 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.



PARTIAL ELEVATION PHOTO DETAIL 2/A-1
SCALE: N.T.S.

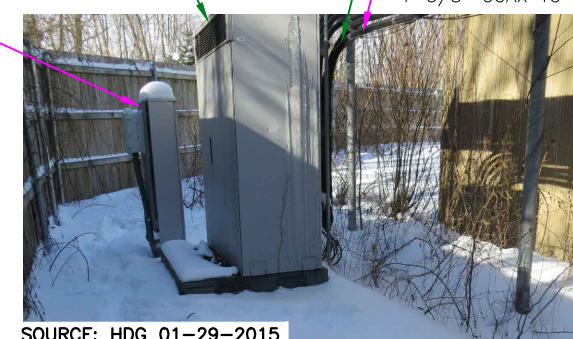
EXISTING (6) LINES OF 1-5/8" COAX AND (1) HYBRID FIBER CABLE TO REMAIN

EXISTING (6) LINES OF 1-5/8" COAX TO REMAIN

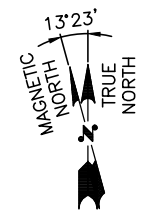
EXISTING RBS 3106 GSM/UMTS/LTE CABINET
INSTALL PROPOSED RAN EQUIPMENT IN EXISTING 3106 CABINET (REFER TO FINAL RFDS)

EXISTING (6) LINES OF 1-5/8" COAX AND (1) HYBRID FIBER CABLE TO REMAIN

EXISTING (6) LINES OF 1-5/8" COAX TO REMAIN

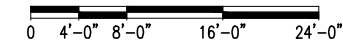


EQUIPMENT PHOTO DETAIL 3/A-1
SCALE: N.T.S.



COMPOUND PLAN

22x34 SCALE: 1/8"=1'-0"
11x17 SCALE: 1/16"=1'-0"



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CHECKED BY: KB

APPROVED BY: DPH

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REV.	DATE	DESCRIPTION	BY
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SITE NUMBER:
CT11346C
SITE NAME:
CT346 / OPTASITE
WILTON FT
SITE ADDRESS:
160 DEER RUN RD
WILTON, CT 06897
FAIRFIELD COUNTY

SHEET TITLE
EXISTING &
PROPOSED ANTENNA
PLANS

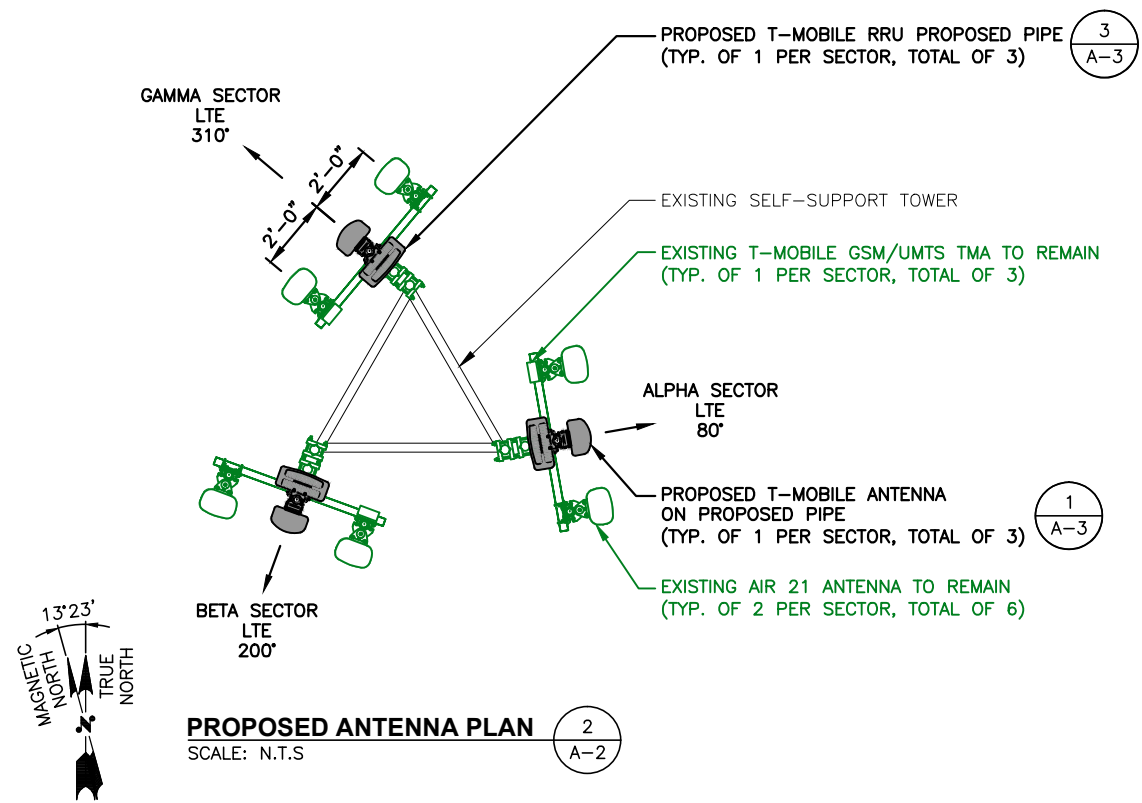
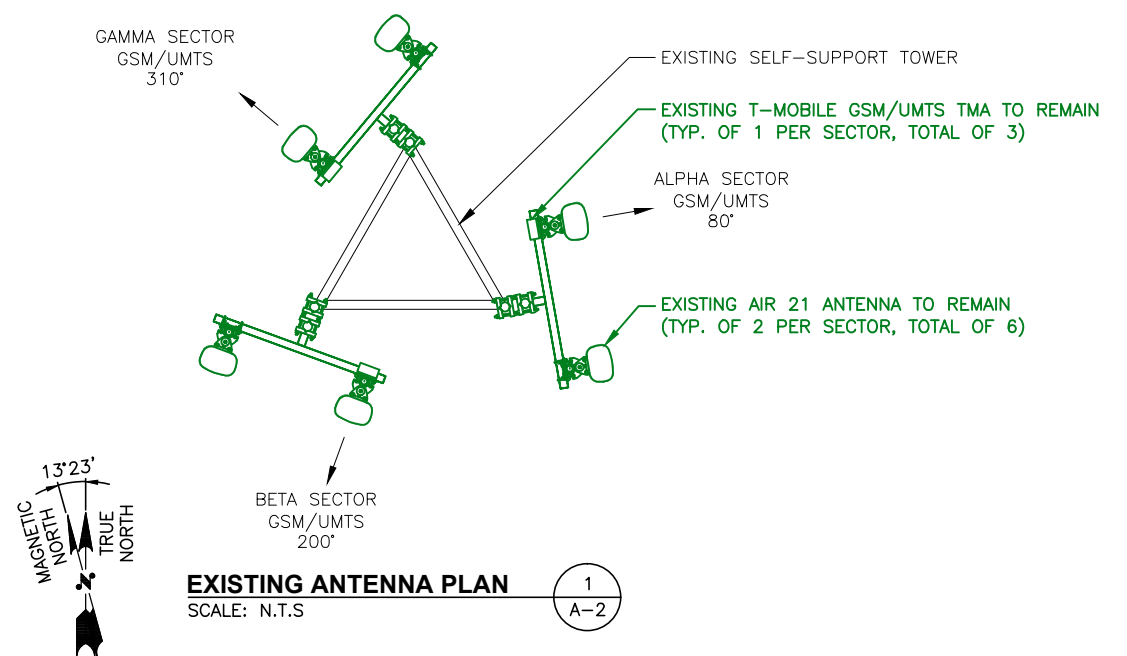
SHEET NUMBER
A-2

ANTENNA MOUNT STRUCTURAL ASSESSMENT REQUIREMENT:
ENGINEER OF RECORD HAS MADE A VISUAL ASSESSMENT ONLY AND 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.

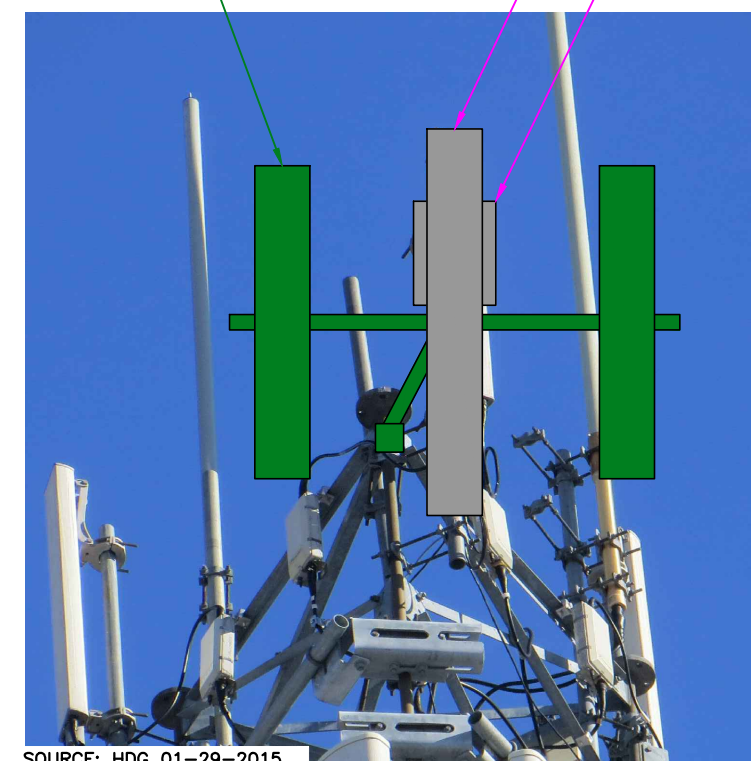
STRUCTURAL NOTES:
1. ADDITIONAL TOWER MAPPING AND STRUCTURAL ANALYSIS ARE REQUIRED PRIOR TO CONSTRUCTION. DRAWINGS ARE SUBJECT TO CHANGE PENDING OUTCOME OF STRUCTURAL ANALYSIS.
2. MOUNT ALL ANTENNAS, RRU'S, COAX, ETC. IN ACCORDANCE WITH STRUCTURAL ANALYSIS.

SPECIAL WORK NOTE:
VERTICALLY CENTER ON EXISTING MOUNTING RAIL, THE PIPE MAST AND ANTENNA

SPECIAL CONSTRUCTION NOTE:
EXISTING CONDITIONS AS DEPICTED HEREIN REFLECT THE INSTALLATION OF EQUIPMENT ALONG WITH ADDITIONAL EQUIPMENT MODIFICATIONS AND RETROFITS DEPICTED IN GREEN TEXT AND GREEN LINEWORK IN ACCORDANCE WITH LATEST CDS PREPARED BY "ATLANTIS GROUP" ON 12.02.14.



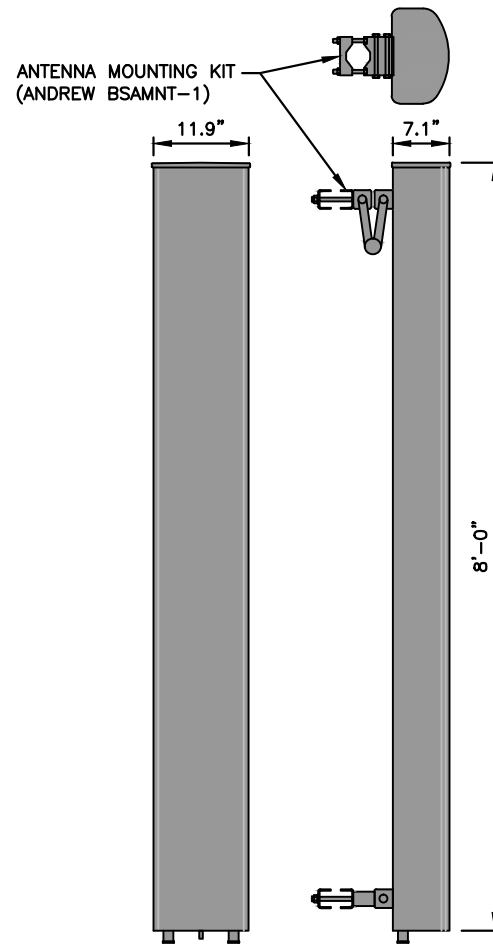
EXISTING AIR 21 ANTENNA TO REMAIN (TYP. OF 2 PER SECTOR, TOTAL OF 6)



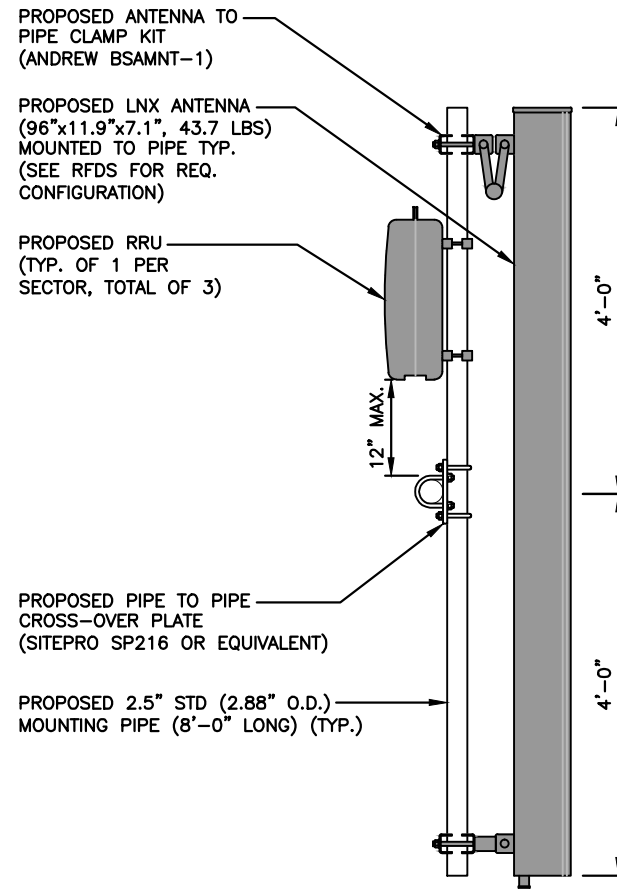
PROPOSED ANTENNA PHOTO DETAIL
SCALE: N.T.S.

PROPOSED T-MOBILE ANTENNA ON PROPOSED PIPE (TYP. OF 1 PER SECTOR, TOTAL OF 3)

PROPOSED T-MOBILE RRU ON PROPOSED PIPE (TYP. OF 1 PER SECTOR, TOTAL OF 3)



LNx ANTENNA DETAIL (1)
SCALE: N.T.S. A-3

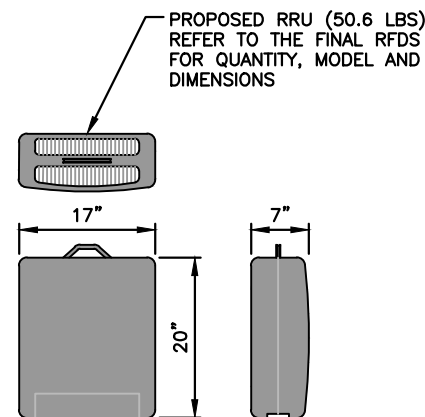


PROPOSED ANTENNA & RRU MOUNTING DETAIL (2)
SCALE: N.T.S. A-3

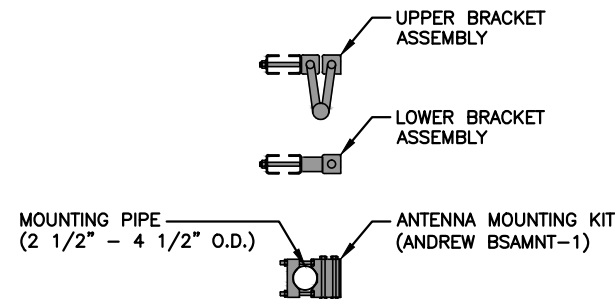
ANTENNA MOUNT STRUCTURAL ASSESSMENT REQUIREMENT:
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SPECIAL WORK NOTE:
VERTICALLY CENTER ON EXISTING MOUNTING RAIL, THE PIPE MAST AND ANTENNA



PROPOSED RRU DETAIL (3)
SCALE: N.T.S. A-3



ANTENNA MOUNTING BRACKET (4)
SCALE: N.T.S. A-3

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