May 28, 2014

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

RE: Notice of Exempt Modification
1201 Wolcott Road
Wolcott, CT 06716
Sprint Site #: NV2.5_CT33XC073
N 41° 37' 17.69"
W -72° 58' 25.08"

Dear Mr. Martin and Members of the Siting Council:

On behalf of Sprint Spectrum, SBA Communications is submitting an exempt modification application to the Connecticut Siting council for modification of existing equipment at a tower facility located at 1201 Wolcott Road, Wolcott, CT.

The 1201 Wolcott Road facility consists of a 350' SELF SUPPORT Tower owned and operated by SBA Structures, LLC. In order to accommodate technological changes and enhance system performance in the State of Connecticut, Sprint Spectrum 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 Sprint's Network Vision modification project, Sprint 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 Sprint'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 Sprint Spectrum, respectfully submits that he proposed changes at the referenced site constitute exempt modifications under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (508) 251-0720 x 3804 with any questions you may have concerning this matter.

Thank you,

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

Sprint Spectrum
Equipment Modification

1201 Wolcott Road, Wolcott, CT
Site number CT33XC073

Tower Owner: SBA Structures, LLC

Equipment Configuration: SELF SUPPORT Tower

Current and/or approved:

- (9) Decibel DB980H90T2E-M
- (9) 1-5/8" feed lines

Planned Modifications:

- (3) RFS APXVTM14-C-I20
- (3) RFS APXVSPP18-C-A20
- (3) Alcatel Lucent 1900 MHz RRHs
- (3) Alcatel Lucent 800 MHz RRHs
- (3) Alcatel Lucent 800 MHz Filters
- (4) RFS ACU-A20-N RETs
- (3) Alcatel Lucent TD-8x20-25 RRHs
- (4) 1-1/4" 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 Sprint facility are 17.203% of the allowable FCC established general public limit. The anticipated composite MPE value for this site assuming all carriers present is 36.453% of the allowable FCC established general public limit sampled at the ground level.

Site Composite MPE %	
Carrier	MPE %
Sprint	17.203%
LoJack	0.000%
TSR Wireless	0.470%
Weblink Wireless	2.830%
Wolcott Ambulance	0.520%
Nextel	1.430%
Clearwire	0.420%
Marcus	2.640%
AT&T	9.350%
MetroPCS	1.590%
Total Site MPE %	36.453%

May 28, 2014

Mayor Thomas G. Dunn
Town of Wolcott
10 Kenea Avenue
Wolcott, CT 06716

RE: Telecommunications Facility @ 1201 Wolcott Road, Wolcott, CT 06716

Dear Mayor Dunn,

In order to accommodate technological changes and enhance system performance in the State of Connecticut, Sprint Spectrum 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 Sprint'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 Sprint's proposal for the referenced cell site. However, if you have any questions or require any further information on our plans or the Siting Council's procedures, please call me at (508) 251-0720 x 3804.

Thank you,

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

May 29, 2014

Mr. Edward F. Cleary
50 Beech Road
Wolcott CT 06716

RE: Telecommunications Facility @ 1201 Wolcott Road, Wolcott, CT 06716

Dear Mr. Cleary,

In order to accommodate technological changes and enhance system performance in the State of Connecticut, Sprint Spectrum 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 Sprint'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 Sprint's proposal for the referenced cell site. However, if you have any questions or require any further information on our plans or the Siting Council's procedures, please call me at (508) 251-0720 x 3804.

Thank you,

Kri Pelletier
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EBI Consulting
environmental | engineering | due diligence

RADIO FREQUENCY FCC REGULATORY COMPLIANCE MAXIMUM PERMISSIBLE EXPOSURE (MPE) ASSESSMENT

Sprint Existing Facility

Site ID: CT33XC073

Wolcott

1201 Wolcott Road
Wolcott, CT 06716

May 21, 2014

EBI Project Number: 62143084

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

EBI Consulting
environmental | engineering | due diligence

May 21, 2014

Sprint
Attn: RF Engineering Manager
1 International Boulevard, Suite 800
Mahwah, NJ 07495

Re: Radio Frequency Maximum Permissible Exposure (MPE) Assessment for Site:
CT33XC073 - Wolcott

Site Total: 36.453% - MPE% in full compliance

EBI Consulting was directed to analyze the proposed upgrades to the existing Sprint facility located at 1201 Wolcott Road, Wolcott, CT, for the purpose of determining whether the radio frequency (RF) exposure levels from the proposed Sprint equipment upgrades 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 ($\mu W/cm^2$). The general population exposure limit for the cellular band (850 MHz Band) is approximately 567 $\mu W/cm^2$, and the general population exposure limit for the 1900 MHz and 2500 MHz bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed upgrades to the existing Sprint Wireless antenna facility located at 1201 Wolcott Road, Wolcott, CT, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. All calculations were performed assuming the main lobe of the antenna was focused at the base of the tower to present a worst case scenario. Actual values seen from this site will be dramatically less than those shown in this report. 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 emissions were calculated using the following assumptions:

1) 3 channels in the 1900 MHz Band were considered for each sector of the proposed installation.
2) 1 channel in the 800 MHz Band was considered for each sector of the proposed installation
3) 2 channels in the 2500 MHz Band 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 maximum gain of the antenna per the antenna manufactures supplied specifications was used in this direction.

6) The antennas used in this modeling are the RFS APXVSPP18-C-A20 and the RFS APXVTMM-C-120. This is based on feedback from the carrier with regards to anticipated antenna selection. The RFS APXVSPP18-C-A20 has a 15.9 dBd gain value at its main lobe at 1900 MHz and 13.4 dBd at its main lobe for 850 MHz. The RFS APXVTMM-C-120 has a 15.9 dBd gain value at its main lobe at 2500 MHz. All calculations were performed assuming the main lobe of the antenna was focused at the base of the tower to present a worst case scenario.
7) The antenna mounting height centerline for the proposed antennas is**134 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	CT33XC073 - Wolcott
Site Addresss	1201 Wolcott Road, Wolcott, CT 06716
Site Type	Self Support Tower

Sector 1

Antenna Number	Antenna Make	Antenna Model	Radio Type	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 (dB)	ERP	Power Density Percentage
1a	RFS	APXVSPP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	3	60	15.9	134	128	1/2 "	0.5	3	1042.6805	2.28790%
1a	RFS	APXVSPP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	134	128	1/2 "	0.5	3	195.44744	0.75637%
1B	RFS	APXVTMM14-C-120	RRH	2500 MHz	CDMA / LTE	20	2	40	15.9	134	128	1/2 "	0.5	3	695.12033	2.69007%
														Sector total Power Density Value:		5.734%

Sector 2

Antenna Number	Antenna Make	Antenna Model	Radio Type	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 (dB)	ERP	Power Density Percentage
2a	RFS	APXVSPP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	3	60	15.9	134	128	1/2 "	0.5	3	1042.6805	2.28790%
2a	RFS	APXVSPP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	134	128	1/2 "	0.5	3	195.44744	0.75637%
2B	RFS	APXVTMM14-C-120	RRH	2500 MHz	CDMA / LTE	20	2	40	15.9	134	128	1/2 "	0.5	3	695.12033	2.69007%
														Sector total Power Density Value:		5.734%

Sector 3

Antenna Number	Antenna Make	Antenna Model	Radio Type	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 (dB)	ERP	Power Density Percentage
3a	RFS	APXVSPP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	3	60	15.9	134	128	1/2 "	0.5	3	1042.6805	2.28790%
3a	RFS	APXVSPP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	134	128	1/2 "	0.5	3	195.44744	0.75637%
3B	RFS	APXVTMM14-C-120	RRH	2500 MHz	CDMA / LTE	20	2	40	15.9	134	128	1/2 "	0.5	3	695.12033	2.69007%
														Sector total Power Density Value:		5.734%

Site Composite MPE %	
Carrier	MPE %
Sprint	17.203%
LoJack	0.000%
TSR Wireless	0.470%
Weblink Wireless	2.830%
Wolcott Ambulance	0.520%
Nextel	1.430%
Clearwire	0.420%
Marcus	2.640%
AT&T	9.350%
MetroPCS	1.590%
Total Site MPE %	**36.453%**

EBI Consulting
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Summary

All calculations performed for this analysis yielded results that were well within the allowable limits for general public Maximum Permissible Exposure (MPE) to radio frequency energy.

The anticipated Maximum Composite contributions from the Sprint facility are **17.203% (5.734% 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 **36.453%** of the allowable FCC established general public limit sampled at 6 feet above ground level. This total composite site value is based upon MPE 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

FDH Engineering, Inc., 6521 Meridien Dr. Raleigh, NC 27616, Ph. 919.755.1012, Fax 919.755.1031

Structural Analysis for SBA Network Services, Inc.

350' Self-Support Tower

SBA Site Name: Cleary Tower (Edward)
SBA Site ID: CT20021-A-05
Sprint Site ID: CT33XC073

FDH Project Number 1462GQ1400

Analysis Results

Tower Components	97.8 %	Sufficient
Foundation	69.4 %	Sufficient

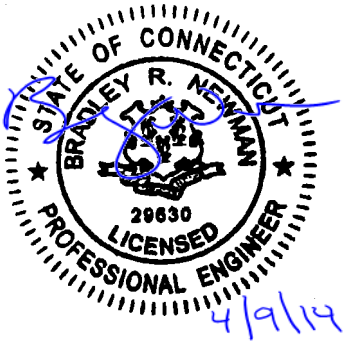
Prepared By:

Cary J. Webb, PE
Project Engineer

Reviewed By:

Bradley R. Newman, PE
Senior Project Engineer
CT PE License No. 29630

FDH Engineering, Inc.
6521 Meridien Dr.
Raleigh, NC 27616
(919) 755-1012
info@fdh-inc.com



April 9, 2014

Prepared pursuant to TIA/EIA-222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures and 2005 Connecticut Building Code

TABLE OF CONTENTS

EXECUTIVE SUMMARY

At the request of SBA Network Services, Inc., FDH Engineering, Inc. performed a structural analysis of the existing self-supported tower located in Wolcott, 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 *2005 Connecticut Building Code*. Information pertaining to the existing/proposed antenna loading, current tower geometry, the member sizes, and foundation dimensions was obtained from:

- Paul J. Ford & Co. (Job No. A03-T143) Structural Analysis Report dated December 22, 2003
- FDH, Inc. (Job No. 06-0879T) EIA/TIA Inspection Report dated September 19, 2006
- FDH Engineering, Inc. (Project No. 11-11229E S2) Modifications Drawings for a 350' Self-Support Tower dated January 31, 2012
- FDH Engineering, Inc. (Project No. 11-11229E S2) Post Construction Inspection Report dated March 7, 2012
- SBA Network Services, Inc.

The *basic design wind speed* per the *TIA/EIA-222-F* standards and *2005 Connecticut Building Code* 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 Sprint in place at 134', the tower meets the requirements of the *TIA/EIA-222-F* standards and *2005 Connecticut Building Code* provided the **Recommendations** listed below are satisfied. Furthermore, provided the foundations were designed and constructed to support the original design reactions (see Paul J. Ford & Co. Job No. A03-T143), the foundations should have the necessary capacity to support the existing and proposed 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 Engineering, Inc. 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 Connecticut Building Code* are met with the existing and proposed loading in place, we have the following recommendations:

1. Coax must be installed as shown in **Figure 1**.
2. 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 Engineering, Inc. should be contacted to perform a revised analysis.*

Table 1 - Appurtenance Loading

Existing Loading:

Antenna Elevation (ft)	Description	Coax and Lines	Carrier	Mount Elevation (ft)	Mount Type
360	(1) Andrew 600200-4 Omni	(1) 1-1/4"	Marcus	350	(1) Star Mount w/ (9) Standoffs
	(1) RFS CAT #200 Omni	(1) 1/2"	---		
	(1) Celwave CAT #1110-0	(1) 7/8"	LoJack		
350	(1) Decibel DB809DK Omni	---	---		
338.5	(1) Andrew 600200-4 Omni	(1) 1-1/4"	---	328.5	(1) 4' Standoff
328	(2) TX RX 101-58-10-0-03	(2) 1-1/4"	Marcus	318	(1) 6' Standoff
222	(6) Andrew HBX-6516DS-VTM (6) Andrew ATM200-A20 RETs	(12) 1-5/8" (1) 3/8"	Metro PCS	222	(3) Andrew QT-SF10-B 10.5' T-Frames
212	(3) Argus LLPX310R (3) BTSs (1) Andrew VHLP2-11 Dish (1) Andrew VHLP2.5-11 Dish	(2) 1/2" (3) 5/8" (3) 1/4" (3) 5/16"	Clearwire	212	(3) 10' T-Frames
201.5	(8) Decibel DB844H90E-XY (4) Decibel DB844H65E-XY	(12) 1-1/4"	Nextel	201.5	(3) 15' T-Frames
186	(6) KMW AM-X-CD-16-65-00T (3) Kathrein 800 10121 (3) Powerwave 7770.00 (6) CCI DTMABP7819VG12A TMAs (6) Powerwave LGP13519 Diplexers (6) Ericsson RRUS-11 RRUs (1) Raycap DC6-48-60-18-8F Surge Arrestor	(12) 1-5/8" (1) 10mm Fiber (2) 12 gauge DC	AT&T	186	(3) 13.5' T-Frames
172.5	(1) Radiowaves SPD2-5.8NS Dish (1) Radiowaves SPD3-2.4NS Dish	(2) 1/2"	Marcus	172.5	(2) Pipe Mounts (5.25' x 4.5")
158	(1) Celwave 201-7	(1) 5/8"	Wolcott	158	(1) 17" Standoff Mount
---	---	---	---	140	(3) 10' T-Frames
134	(9) Decibel DB980H90T2E-M	(9) 1-5/8"	Sprint	134	(3) 15' T-Frames
70	(1) Channel Master 1.0M Dish	(1) 1/2"	---	70	(1) Pipe Mount (27" x 2.4")

Proposed Loading:

Antenna Elevation (ft)	Description	Coax and Lines	Carrier	Mount Elevation (ft)	Mount Type
134	(3) RFS APXVTM14-C-I20 (3) RFS APXVSPP18-C-A20 (3) Alcatel Lucent 1900 MHz RRHs (3) Alcatel Lucent 800 MHz RRHs (3) Alcatel Lucent 800 MHz Filters (4) RFS ACU-A20-N RETs (3) Alcatel Lucent TD-8x20-25 RRHs	(4) 1-1/4" Fiber	Sprint	134	(3) 15' T-Frames

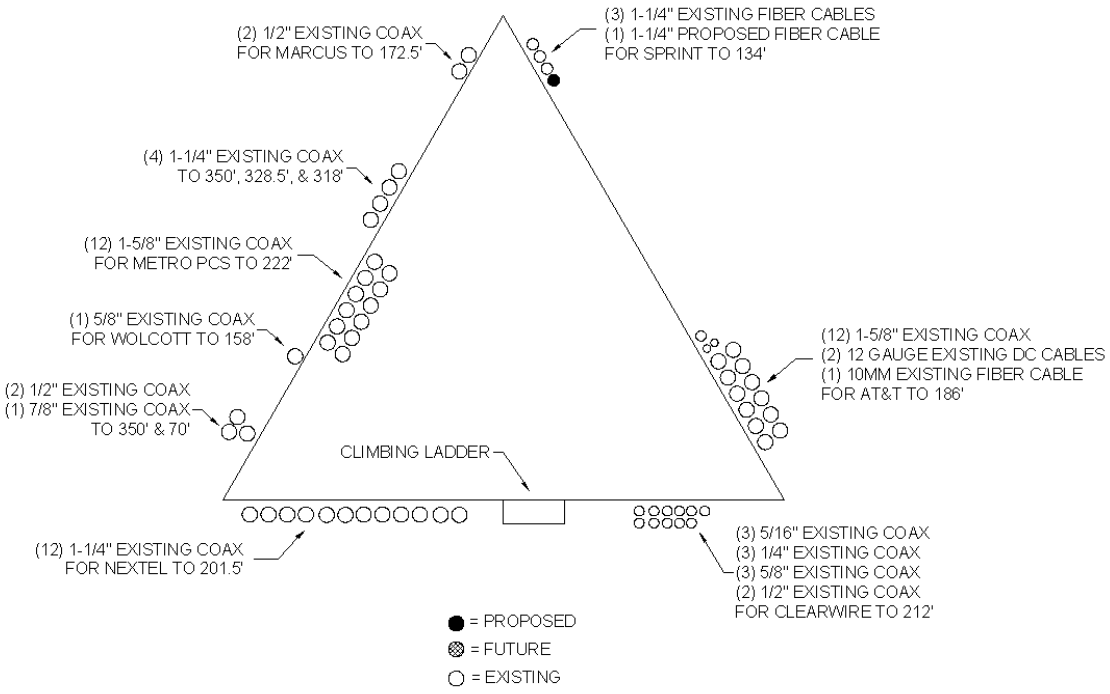


Figure 1 – Coax Layout

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. *Note: Capacities up to 100% are considered acceptable.* **Table 4** displays the maximum foundation reactions.

If the assumptions outlined in this report differ from actual field conditions, FDH Engineering, Inc. 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	350 - 340	Leg	2	22.1	Pass
		Diagonal	L2x1 1/2x3/16	26.0 35.9 (b)	Pass
		Top Girt	L2x1 1/2x3/16	7.3 7.4 (b)	Pass
T2	340 - 320	Leg	2	58.4	Pass
		Diagonal	L2x1 1/2x3/16	35.1 50.3 (b)	Pass
T3	320 - 300	Leg	2 1/2	56.4	Pass
		Diagonal	L2x2x3/16	23.6 38.1 (b)	Pass
T4	300 - 280	Leg	3 1/4	43.6	Pass
		Diagonal	L2 1/2x2 1/2x3/16	22.4 33.0 (b)	Pass
T5	280 - 260	Leg	3 1/4	53.4	Pass
		Diagonal	L2 1/2x2 1/2x3/16	33.2 36.5 (b)	Pass
T6	260 - 240	Leg	3 1/2	49.8	Pass
		Diagonal	L3x3x3/16	28.6 42.9 (b)	Pass
T7	240 - 220	Leg	3 1/2	46.6	Pass
		Diagonal	2L2 1/2x2 1/2x3/16x3/8	22.5 28.1 (b)	Pass
		Secondary Horizontal	L2 1/2x2 1/2x3/16	30.5	Pass
T8	220 - 200	Leg	3 3/4	46.3	Pass
		Diagonal	2L2 1/2x2 1/2x3/16x3/8	39.7	Pass
		Secondary Horizontal	L2 1/2x2 1/2x3/16	48.2	Pass
T9	200 - 180	Leg	4	47.5	Pass
		Diagonal	2L3x3x3/16x3/8	37.9 52.2 (b)	Pass
		Secondary Horizontal	L3x3x3/16	42.4	Pass

Section No.	Elevation ft	Component Type	Size	% Capacity*	Pass Fail
T10	180 - 160	Leg	4 1/4	49.0	Pass
		Diagonal	2L3x3x3/16x3/8	50.0 60.1 (b)	Pass
		Secondary Horizontal	L3x3x3/16	63.3	Pass
T11	160 - 140	Leg	4 1/4	57.0	Pass
		Diagonal	2L3x3x3/16x3/8	62.3 64.2 (b)	Pass
		Secondary Horizontal	L3 1/2x3 1/2x1/4	42.8 50.2 (b)	Pass
T12	140 - 120	Leg	4 1/2	55.2	Pass
		Diagonal	2L3x3x1/4x3/8	62.1 69.7 (b)	Pass
		Horizontal	2L2 1/2x2 1/2x3/16x3/8	40.0	Pass
		Redund Horz 1 Bracing	L2x2x3/16	97.4	Pass
		Redund Diag 1 Bracing	L2 1/2x2 1/2x3/16	61.3	Pass
		Inner Bracing	L3 1/2x3 1/2x1/4	0.5	Pass
T13	120 - 100	Leg	4 3/4	93.6	Pass
		Diagonal	2L3x3x1/4x3/8	67.3 70.7 (b)	Pass
		Horizontal	2L2 1/2x2 1/2x3/16x3/8	54.3	Pass
		Redund Diag 1 Bracing	L2 1/2x2 1/2x3/16	75.0	Pass
		Inner Bracing	L4x4x1/4	0.6	Pass
T14	100 - 80	Leg	4 3/4	62.0	Pass
		Diagonal	2L3x3x1/4x3/8	75.4	Pass
		Horizontal	2L2 1/2x2 1/2x3/16x3/8	70.8	Pass
		Redund Horz 1 Bracing	L2x2x3/8	93.0	Pass
		Redund Diag 1 Bracing	L2 1/2x2 1/2x3/16	89.7	Pass
		Inner Bracing	L4x4x1/4	0.6	Pass
T15	80 - 60	Leg	5	96.6	Pass
		Diagonal	2L3 1/2x3 1/2x1/4x3/8	53.8 60.4 (b)	Pass
		Horizontal	2L3x3x3/16x3/8	51.5	Pass
		Redund Diag 1 Bracing	L3x3x3/16	60.9	Pass
		Inner Bracing	2L3x3x3/16x3/8	0.7	Pass
T16	60 - 40	Leg	5 1/4	89.9	Pass
		Diagonal	2L3 1/2x3 1/2x1/4x3/8	60.4 61.4 (b)	Pass
		Horizontal	2L3x3x3/16x3/8	64.3	Pass
		Redund Diag 1 Bracing	L3x3x3/16	71.4	Pass
		Inner Bracing	2L3x3x3/16x3/8	0.7	Pass
T17	40 - 20	Leg	5 1/4	97.8	Pass
		Diagonal	2L3 1/2x3 1/2x1/4x3/8	66.1	Pass
		Horizontal	2L3 1/2x3 1/2x1/4x3/8	38.1	Pass
		Redund Diag 1 Bracing	L3x3x3/16	83.7	Pass
		Inner Bracing	2L3 1/2x3 1/2x1/4x3/8	0.6	Pass
T18	20 - 0	Leg	5 1/2	91.0	Pass
		Diagonal	2L3 1/2x3 1/2x1/4x3/8	72.6	Pass
		Horizontal	2L3 1/2x3 1/2x1/4x3/8	46.2	Pass
		Redund Diag 1 Bracing	L3x3x3/16	96.7	Pass
		Inner Bracing	2L3 1/2x3 1/2x1/4x3/8	0.7	Pass

*Capacities include 1/3 allowable stress increase for wind per *TIA/EIA-222-F* standards.

Table 4 - Maximum Base Reactions

Load Type	Direction	Current Analysis *(TIA/EIA-222-F)*	Original Design *(EIA/TIA-222-E)*
Individual Foundation	Horizontal	57 k	---
	Uplift	401 k	631 k
	Compression	521 k	751 k
Overturning Moment	---	14,995 k-ft	---

GENERAL COMMENTS

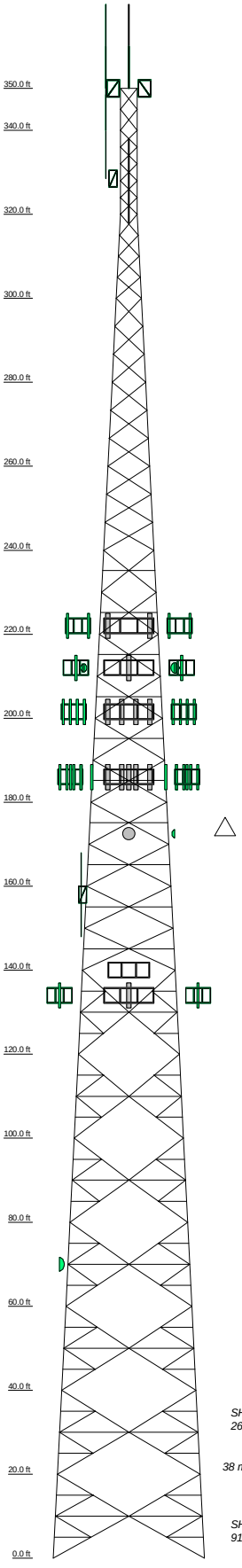
This engineering analysis is based upon the theoretical capacity of the structure. It is not a condition assessment of the tower and its foundation. It is the responsibility of SBA Network Services, Inc. to verify that the tower modeled and analyzed is the correct structure (with accurate antenna loading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

APPENDIX

Section	T18	T17	T16	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
Legs	SR 5 1/2	SR 5 1/4	SR 5	SR 4 3/4	SR 4 1/2	SR 4 1/4	SR 4	SR 3 3/4	SR 3 1/2	SR 3 1/4	SR 2 1/2	SR 2						
Leg Grade	A572-50																	
Diagonals	L3 1/2x3 1/2x1/4x3/8			L3.3x3x1/4x3/8		L3.3x3x3/16x3/8		L2 1/2x2 1/2x3/16		L3x3x3/16		L2.2 1/2x2 1/2x3/16x3/8		L2 1/2x2 1/2x3/16		L2x2x3/16		L2x1 1/2x3/16
Diagonal Grade	A36																	
Top Girts	N.A.																	A
Horizontals	L3 1/2x3 1/2x1/4x3/8		L3.3x3x3/16x3/8		L2.2 1/2x2 1/2x3/16x3/8			L3 1/2x3 1/2x1/4				N.A.						
Sec. Horizontals			N.A.									N.A.						
Red. Horizontals	L3x3x3/16		L2 1/2x2 1/2x3/16		L2x2x3/8		L2x2x3/16					N.A.						
Red. Diagonals		L3x3x3/16		L2 1/2x2 1/2x3/16								N.A.						
Inner Bracing	L3 1/2x3 1/2x1/4x3/8		L3.3x3x3/16x3/8		L4x4x1/4		L3 1/2x3 1/2x1/4					N.A.						4
Face Width (ft) 36	34	32	30	28	26	24	22	20	18	16	14	12	10	8	6	4 @ 5	5 @ 4	2 @ 5
# Panels @ (ft)	24 @ 10												9 @ 6.66667					
Weight (K) 89.7	10.3	9.5	8.1	7.0	6.7	6.1	5.7	5.2	4.7	3.9	3.4	2.8	2.3	2.3	2.2	1.4	1.0	0.5



MAX. CORNER REACTIONS AT BASE:
DOWN: 521 K
SHEAR: 57 K

UPLIFT: -401 K
SHEAR: 46 K

AXIAL
211 K
SHEAR 26 K *MOMENT 4444 kip-ft*

TORQUE 14 kip-ft
38 mph WIND - 0.7500 in ICE
AXIAL
120 K
SHEAR 91 K *MOMENT 14995 kip-ft*

TORQUE 51 kip-ft
REACTIONS - 85 mph WIND

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Lightning Rod	355	(2) Powerwave LGP13519 Diplexer	186
Flash Beacon Lighting	350	DC6-48-60-18-8F Surge Arrestor	186
DB809DK-Y	350	(3) 13.5' T-Frames	186
Andrew 600200-5	350	(2) AM-X-CD-16-65-00T-RET w/ Mount Pipe	186
RFS CAT #200	350	800 10121 w/Mount Pipe	186
CAT #1110-9	350	800 10121 w/Mount Pipe	186
Standoff Mount - 7'-9"	350	800 10121 w/Mount Pipe	186
Standoff Mount - 7'	350	7770.00 w/Mount Pipe	186
Standoff Mount - 7'-9"	350	7770.00 w/Mount Pipe	186
Standoff Mount - 7'-9"	350	7770.00 w/Mount Pipe	186
Standoff Mount - 7'	350	(2) AM-X-CD-16-65-00T-RET w/ Mount Pipe	186
Standoff Mount - 7'-9"	350	(2) AM-X-CD-16-65-00T-RET w/ Mount Pipe	186
Standoff Mount - 7'-9"	350	Pipe Mount 5.25' x 4.5"	172.5
Standoff Mount - 7'	350	Pipe Mount 5.25' x 4.5"	172.5
Standoff Mount - 7'-9"	350	SPD2-5.8NS	172.5
Andrew 600200-4	328.5	SPD3-2.4NS	172.5
4' Side Mount Standoff (1)	328.5	201-7	158
(2) TX RX 101-58-10-0-03	318	Standoff Mount - 17"	158
6' Side Mount Standoff (1)	318	(3) 10' T-Frames	140
(2) HBX-6516DS-VTM w/ Mount Pipe	222	800 MHz Filter	134
(2) HBX-6516DS-VTM w/ Mount Pipe	222	800 MHz Filter	134
(2) HBX-6516DS-VTM w/ Mount Pipe	222	ACU-A20-N RET	134
(2) ATM200-A20 RET	222	ACU-A20-N RET	134
(2) ATM200-A20 RET	222	(2) ACU-A20-N RET	134
(2) ATM200-A20 RET	222	Empty Mount Pipe	134
(3) 10.5' T-Frames MNT	222	Empty Mount Pipe	134
Argus LLPX310R w/ Mount Pipe	212	Empty Mount Pipe	134
Argus LLPX310R w/ Mount Pipe	212	APXVTM14-C-I20 w/ Mount Pipe	134
Argus LLPX310R w/ Mount Pipe	212	APXVTM14-C-I20 w/ Mount Pipe	134
BTS	212	APXVTM14-C-I20 w/ Mount Pipe	134
BTS	212	TD-RRH8x20-25	134
BTS	212	TD-RRH8x20-25	134
(3) 10' T-Frames	212	TD-RRH8x20-25	134
VHLP2-11	212	1900 MHz RRH	134
VHLP2.5-11	212	1900 MHz RRH	134
(4) DB844H90E-XY w/Mount Pipe	201.5	800 MHz RRH	134
(4) DB844H90E-XY w/Mount Pipe	201.5	800 MHz RRH	134
(4) DB844H65E-XY w/Mount Pipe	201.5	800 MHz Filter	134
(3) 15' T-Frames	201.5	(3) 15' T-Frames	134
(2) RRUS-11	186	APXVSPP18-C-A20 w/Mount Pipe	134
(2) RRUS-11	186	1900 MHz RRH	134
(2) RRUS-11	186	800 MHz RRH	134
(2) DTMABP7819VG12A TMA	186	APXVSPP18-C-A20 w/Mount Pipe	134
(2) DTMABP7819VG12A TMA	186	APXVSPP18-C-A20 w/Mount Pipe	134
(2) DTMABP7819VG12A TMA	186	Pipe Mount 27" x 2.4"	70
(2) Powerwave LGP13519 Diplexer	186	1M Dish	70
(2) Powerwave LGP13519 Diplexer	186		

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	L2x1 1/2x3/16		

MATERIAL STRENGTH

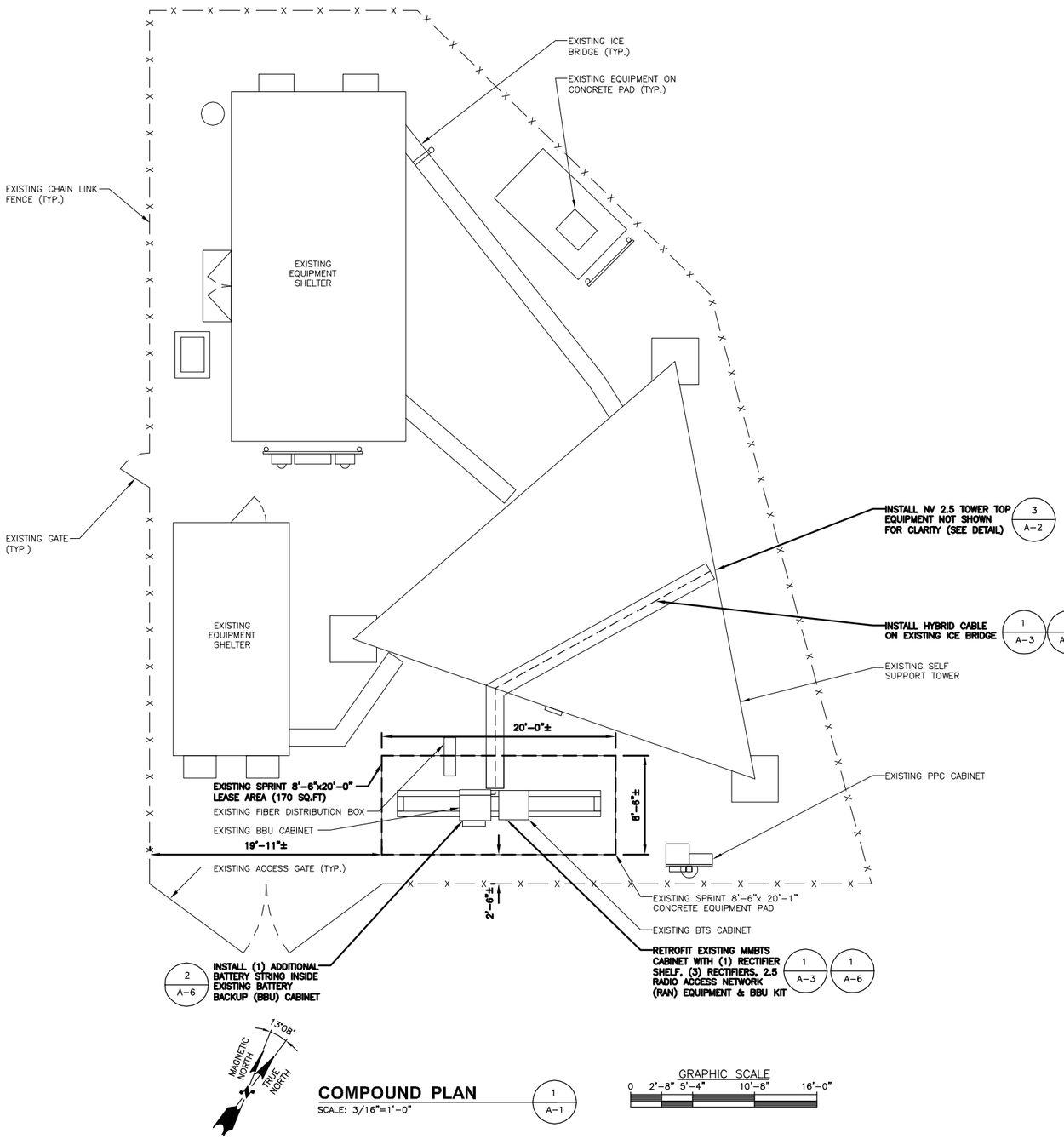
GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in 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.

FDH Engineering, Inc.
6521 Meridien Drive, Suite 107
Raleigh, NC 27616
Phone: 9197551012
FAX: 9197551031
Tower Analysis

Job:	Cleary Tower (Edward), CT20021-A
Project:	1462GQ1400
Client: SBA Network Services, Inc.	Drawn by: Cary Webb / App'd:
Code: TIA/EIA-222-F	Date: 04/09/14 / Scale: NTS
Path:	Dwg No. E-1



COMPOUND PLAN

SCALE: 3/16"=1'-0" (1 / A-1)

GRAPHIC SCALE

0 2'-8" 5'-4" 10'-8" 16'-0"

SOURCE: SPRINT SITE AUDIT 09-14-13

RAN EQUIPMENT PHOTO DETAIL

SCALE: N.T.S. (2 / A-1)

Sprint

1 INTERNATIONAL BLVD, SUITE 800
MAHWAH, NJ 07495
TEL: (800) 357-7641

SBA

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

Hudson Design Group LLC

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

STATE OF CONNECTICUT
DANIEL P. HAMM
No. 24178
LICENSED PROFESSIONAL ENGINEER

Daniel P. Hamm

CHECKED BY: KB

APPROVED BY: DPH

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
0	05/15/14	ISSUED FOR CONSTRUCTION	SF

SITE NUMBER:
CT33XC073-A

SITE NAME:
WOOLCOTT

SITE ADDRESS:
1201 WOLCOTT ROAD
WOLCOTT, CT 06716

SHEET TITLE

COMPOUND PLAN

SHEET NUMBER

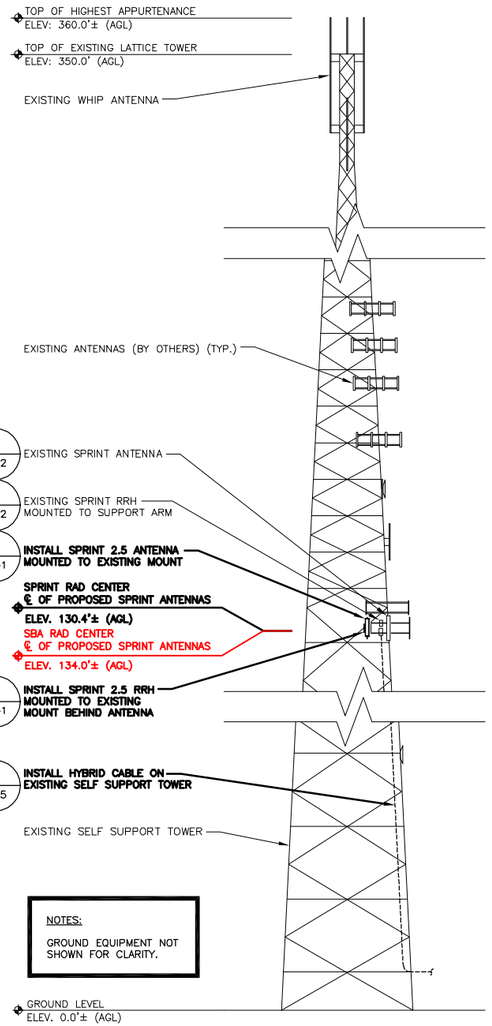
A-1

NOTE:

EXISTING AZIMUTHS FROM SPRINT SITE AUDIT DATED 09/14/13

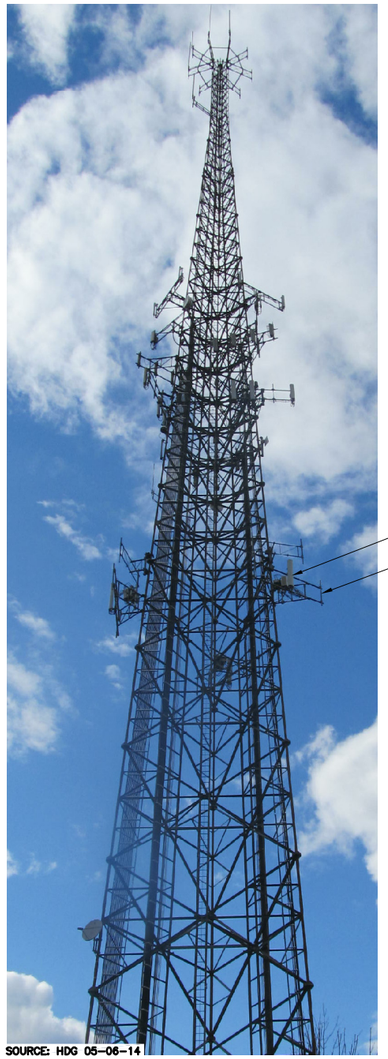
SPECIAL CONSTRUCTION NOTE:
SPRINT TOWER TOP WORK IS CONTINGENT ON THE FOLLOWING:
* COMPLETION OF A GLOBAL STRUCTURAL STABILITY ANALYSIS (PROVIDED BY TOWER OWNER).
* COMPLETION OF AN ANTENNA/RRH MOUNT STRUCTURAL ASSESSMENT (PROVIDED BY A&E VENDOR).
* GC SHALL FURNISH, INSTALL AND COMPLETE ALL REQUIRED STRUCTURAL MODIFICATIONS AS INDICATED IN BEFORE-MENTIONED ANALYSIS AND ASSESSMENT.
* SBA COMMUNICATIONS CORPORATION SHALL PROVIDE WRITTEN ACCEPTANCE/APPROVAL FOR THE COMPLETION OF ALL TOWER/FOUNDATION STRUCTURAL MODIFICATIONS INCLUDING (AS NECESSARY) CONTROLLED CONSTRUCTION INSPECTIONS, SHOP-DRAWING APPROVALS, MATERIALS TEST RESULTS, AND FINAL ENGINEER'S AFFIDAVIT.

NOTE:
SPRINT RAD CENTER SHOWN IN RED TEXT BASED ON SBA-PROVIDED COLLOCATION APPLICATION, EQUIPMENT DATABASE, AND STRUCTURAL ANALYSIS. THE SBA-PROVIDED ANTENNA RAD CENTER SHALL SUPERSEDE ANY CONFLICTING INFORMATION DERIVED FROM THE SPRINT NV 2.5 RFDS.



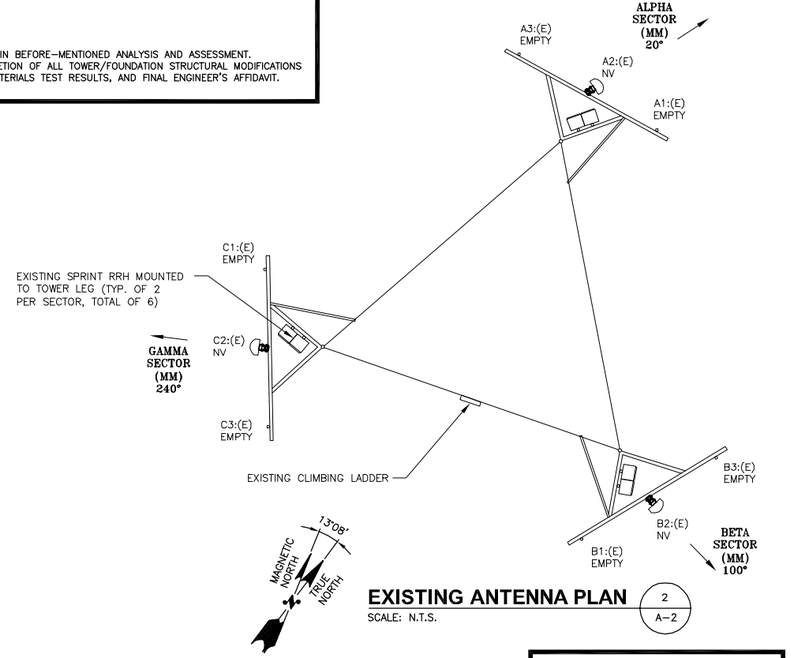
ELEVATION 1 A-2
SCALE: 1:20

GRAPHIC SCALE
0 10 20 40 60 FEET



SOURCE: HDG 05-06-14

EXISTING PARTIAL ELEVATION PHOTO DETAIL
SCALE: N.T.S.



EXISTING ANTENNA PLAN 2 A-2
SCALE: N.T.S.

SPECIAL WORK NOTE:
JUMPERS FROM 2.5 RRH TO 2.5 ANTENNA CAN NOT EXCEED 15'. NOTIFY SPRINT CONSTRUCTION MANAGER OF ANY DISCREPANCY.

NOTES:
1) VERIFY EXISTING AZIMUTHS WITH RF ENGINEER PRIOR TO INSTALLATION.

ANTENNA STATUS LEGEND:

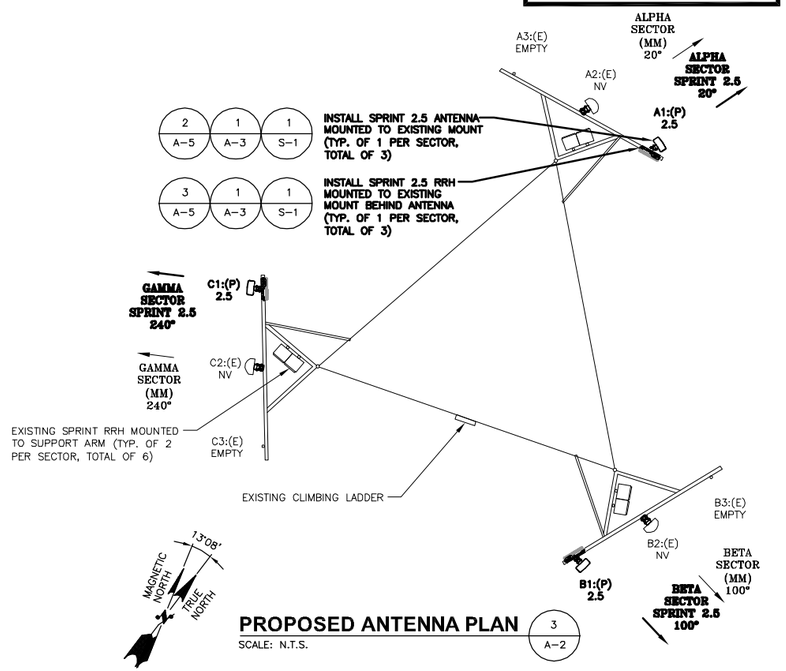
EMPTY - EMPTY PIPE

(E) - EXISTING

(P) - INSTALL

NV - SPRINT ANTENNA MODEL APXVSPP18-C-A20

2.5 - SPRINT ANTENNA



PROPOSED ANTENNA PLAN 3 A-2
SCALE: N.T.S.

Sprint
1 INTERNATIONAL BLVD, SUITE 800
MAHWAH, NJ 07495
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1600 OSGOOD STREET
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N. ANDOVER, MA 01845 TEL: (978) 557-5553
FAX: (978) 336-5586

STATE OF CONNECTICUT
DANIEL P. HAMM
No. 24178
LICENSED PROFESSIONAL ENGINEER

CHECKED BY: KB

APPROVED BY: DPH

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
0	05/15/14	ISSUED FOR CONSTRUCTION	SF

SITE NUMBER:
CT33XC073-A

SITE NAME:
WOOLCOTT

SITE ADDRESS:
1201 WOLCOTT ROAD
WOLCOTT, CT 06716

SHEET TITLE
ELEVATION AND ANTENNA PLANS

SHEET NUMBER
A-2