

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

October 9, 2012

Rick Woods
SBA Communications Corporation
One Research Dr. Suite 200C
Westborough, MA 01581

RE: **EM-SPRINT-166-120907** – Sprint Spectrum notice of intent to modify an existing telecommunications facility located at 1201 Wolcott Road, Wolcott, Connecticut.

Dear Mr. Woods:

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:

- The coax lines and accessory equipment shall be installed in accordance with the recommendations made in the Structural Analysis Report prepared by FDH Engineering dated June 27, 2012 and stamped by Christopher Murphy;
- Following the installation of the proposed equipment, Sprint shall provide documentation certifying that the installation complied with the engineer's recommendation;
- Any deviation from the proposed modification as specified in this notice and supporting materials with 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;
- Not less than 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 September 6, 2012. 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,



Linda Roberts
Executive Director

LR/CDM/jbw

c: The Honorable Thomas G. Dunn, Mayor, Town of Wolcott
David Kalinowski, Zoning Enforcement Officer, Town of Wolcott
Sean Gormley, SBA



EM-SPRINT-166-120907

September 6, 2012

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

RECEIVED
SEP - 7 2012
CONNECTICUT
SITING COUNCIL

RE: Notice of Exempt Modification
1201 Wolcott Road
Wolcott, CT 06716
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 Communications. 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 antennas and associated 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. Also included is documentation of the structural sufficiency of the tower to accommodate the revised antenna and equipment configuration 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 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) 614-0389 with any questions you may have concerning this matter.

Thank you,

Rick Woods
SBA Communications Corporation
One Research Dr. Suite 200C
Westborough, MA 01581
508-366-5505 x 319 + T
508-366-5507 + F
508-614-0389 + C
rwoods@sbsite.com



Sprint Spectrum Equipment Modification

1201 Wolcott Road Wolcott, CT
Site number CT33XC073

Tower Owner: SBA Communications Corporation

Equipment Configuration: Self-Support Tower

Current and/or approved: Nine (9) CDMA Antennas @ 134'
Nine (9) lines of 1-5/8" coax
Two (2) equipment cabinets

Planned Modifications: Remove Nine (9) CDMA antennas & Nine (9) lines of 1-5/8"
Install Three (3) Network Vision antennas & Six (6) RRHs @ 134'
Install Three (3) Hybriflex fiber cables
Install Three (3) Filters
Install Four (4) RETs
Install One (1) Fiber Distribution Box
Replace Two (2) existing equipment cabinets with Three (3) new cabinets

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 18.222% of the allowable FCC established general public limit. The anticipated composite MPE value for this site assuming all carriers present is 29.992% of the allowable FCC established general public limit sampled at the ground level.

Site Composite MPE %	
Carrier	MPE %
Sprint	18.222%
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	1.870%
Metro PCS	1.590%
Total Site MPE %	29.992%



September 6, 2012

Mayor Thomas Dunn
Town of Wolcott
10 Kenea Ave
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) 614-0389.

Thank you,

A handwritten signature in blue ink, appearing to read "Rick Woods", is positioned above the typed name.

Rick Woods
SBA Communications Company
One Research Dr. Suite 200C
Westborough, MA 01581
508-366-5505 x 319 + T
508-366-5507 + F
508-614-0389 + C
rwoods@sbsite.com

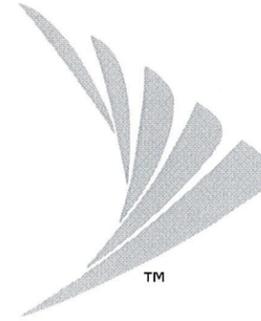
STRUCTURAL NOTE:

STRUCTURAL DESIGNS AND DETAILS FOR ANTENNA MOUNTS AND RRH MOUNTS COMPLETED BY HUDSON DESIGN GROUP LLC ON BEHALF OF ALCATEL-LUCENT ARE INCLUSIVE OF THE ENTIRE ANTENNA FRAME/PLATFORM/ANTENNA/RRH MOUNTS SECURED TO THE TOWER STRUCTURE.

STRUCTURAL NOTE:

G.C. TO REFER TO SPECIAL INSTALLATION REQUIREMENTS AND/OR MODIFICATIONS RECOMMENDED IN STRUCTURAL ANALYSIS REPORT PREPARED BY FDH ENGINEERING, INC. DATED: JUNE 27, 2012

SBA SITE #: CT20021-A
SBA SITE NAME: CLEARY TOWER (EDWARD)



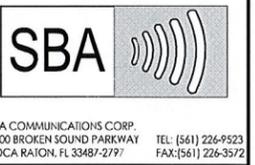
NOTE:

OWNER AND TENANT MAY, FROM TIME TO TIME AT TENANT'S OPTION, REPLACE THIS EXHIBIT WITH AN EXHIBIT SETTING FORTH THE LEGAL DESCRIPTION OF THE SITE, OR WITH ENGINEERED OR AS-BUILT DRAWING DEPICTING THE SITE OR ILLUSTRATING STRUCTURAL MODIFICATIONS OR CONSTRUCTION PLANS OF THE SITE. ANY VISUAL OR TEXTUAL REPRESENTATION OF THE EQUIPMENT LOCATED WITHIN THE SITE CONTAINED IN THESE OTHER DOCUMENTS IS ILLUSTRATIVE ONLY, AND DOES NOT LIMIT THE RIGHTS OF SPRINT AS PROVIDED FOR IN THE AGREEMENT. THE LOCATIONS OF ANY ACCESS AND UTILITY EASEMENTS ARE ILLUSTRATIVE ONLY. ACTUAL LOCATIONS MAY BE DETERMINED BY TENANT AND/OR THE SERVICING UTILITY COMPANY IN COMPLIANCE WITH LOCAL LAWS AND REGULATIONS.

SITE NUMBER:
CT33XC073

SITE NAME:
WOLCOTT

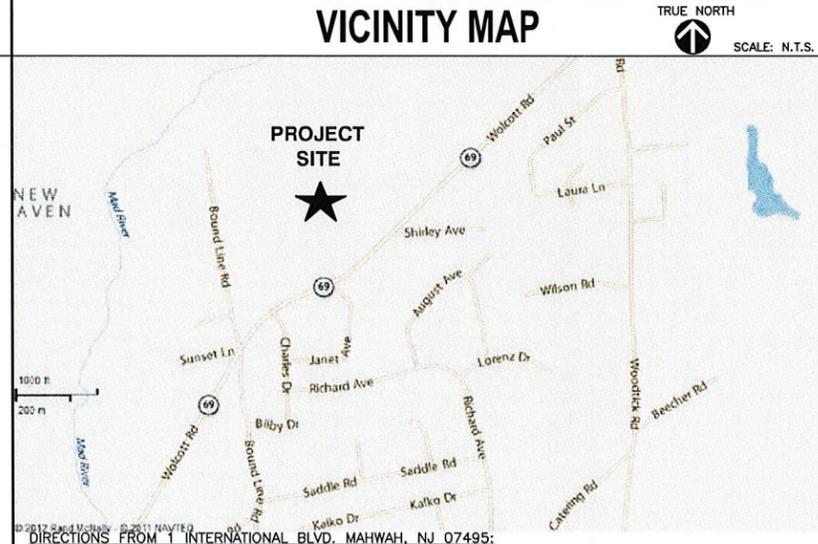
SITE ADDRESS:
1201 WOLCOTT ROAD
WOLCOTT, CT 06716



SITE INFORMATION

SITE NUMBER:	CT33XC073	LOCAL POWER COMPANY:	NORTHEAST UTILITIES COMP.
SITE NAME:	WOLCOTT	LOCAL TELCO COMPANY:	VERIZON
SITE ADDRESS:	1201 WOLCOTT ROAD WOLCOTT, CT 06716	APPLICANT:	SPRINT 1 INTERNATIONAL BLVD, SUITE 800 MAHWAH, NJ 07495
COUNTY:	NEW HAVEN	APPLICANT REPRESENTATIVE:	ALCATEL-LUCENT TODD AMANN 600 MOUNTAIN AVENUE MURRAY HILL, NJ 07974 TEL: (914) 715-9363
ZONING:	GC	SITE ACQUISITION CONSULTANT:	SBA COMMUNICATIONS CORP. 1 RESEARCH DRIVE SUITE 200C WESTBOROUGH, MA 01581
PARCEL ID:	MAP: 119; LOT 7	A&E CONSULTANT:	HUDSON DESIGN GROUP LLC 1600 OSGOOD STREET BLDG 20 NORTH, SUITE 2-101 NORTH ANDOVER, MA 01845 TEL: (978) 557-5553 FAX: (978) 336-5586
COORDINATES(*):	N 41° 37' 17.69" W 72° 58' 25.08"	(**) NOTE: NETWORK VISION ANTENNA RADIATION CENTERLINE AGL (FEET) BASED ON SBA EQUIPMENT DATABASE AND SBA STRUCTURAL ANALYSIS AND WILL SUPERSEDE ANY CONFLICTING INFORMATION DERIVED FROM ALU/SPRINT DATABASE.	
GROUND ELEV.(*):	960± (AMSL)		
STRUCTURE TYPE:	SELF SUPPORT		
STRUCTURE HEIGHT:	350' (AGL)		
ANTENNA RAD CENTER(**):	134' (AGL)		
PROPERTY OWNER:	EDWARD CLEARY 50 BEACH ROAD WOLCOTT, CT 06716		
STRUCTURE OWNER:	SBA STRUCTURES, INC 5900 BROKEN SOUND PKWY BOCA RATON, FL 33487		
(*) SOURCE OF COORDINATES/ELEVATION - SBA AND SPRINT SITERRA DATABASE.			

VICINITY MAP



DIRECTIONS FROM 1 INTERNATIONAL BLVD, MAHWAH, NJ 07495:
ENTER RAMP FOLLOWING THE SIGN RT-17 N. BEAR RIGHT TAKING THE RAMP TO TAPPAN ZEE BR/NEW YORK CITY/I-87 S/I-287/NEW YORK STATE THRUWAY SOUTH. CONTINUE ON NEW YORK STATE THRUWAY S/I-287 E/I-87 S. KEEP LEFT TO WHITE PLAINS/RYE/I-287 E (EXIT 8). EXIT RIGHT FOLLOWING THE SIGN BREWSTER/I-684 (EXIT 9A). KEEP LEFT TO BREWSTER/I-684. EXIT RIGHT FOLLOWING THE SIGN DANBURY/I-84 E (EXIT 9E). KEEP RIGHT TO WATERBURY/HARTFORD/I-84 E. EXIT RIGHT FOLLOWING THE SIGN BALDWIN ST/DOWNTOWN WATERBURY (EXIT 22). TURN RIGHT ON S MAIN ST. TAKE LEFT ON E CLAY ST. TURN LEFT ON S ELM ST. TURN RIGHT ON E MAIN ST. TAKE LEFT ON WOLCOTT ST. ARRIVE AT YOUR DESTINATION SITE WILL BE ON THE LEFT.

SHEET INDEX

SHEET NO.	DESCRIPTION
T-1	TITLE SHEET
GN-1	GENERAL NOTES
A-1	COMPOUND PLAN & ELEVATION
A-2	ANTENNA SCENARIO
A-3	DETAILS
A-4	RF DATA SHEET
A-5	CABINET & ANTENNA WIRING DIAGRAM
S-1	STRUCTURAL DETAILS
E-1	TYPICAL POWER & GROUNDING ONE LINE DIAGRAM

APPROVALS

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE CONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND MAY IMPOSE CHANGES OR MODIFICATIONS.

CONSTRUCTION: _____ DATE: _____
 LEASING/ SITE ACQUISITION: _____ DATE: _____
 RF ENGINEER: _____ DATE: _____
 LANDLORD/ PROPERTY OWNER: _____ DATE: _____

APPROVED
By Bryan Bakis, P.E. for SBA Communications Corp. at 2:55 pm, Jul 18, 2012

GENERAL NOTES

- THIS IS AN UNMANNED TELECOMMUNICATION FACILITY AND NOT FOR HUMAN HABITATION:
- HANDICAPPED ACCESS NOT REQUIRED
- POTABLE WATER OR SANITARY SERVICE IS NOT REQUIRED
- NO OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES REQUIRED
- CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON JOB SITE. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK. FAILURE TO NOTIFY THE ARCHITECT/ENGINEER PLACE THE RESPONSIBILITY ON THE CONTRACTOR TO CORRECT THE DISCREPANCIES AT THE CONTRACTOR'S EXPENSE.
- DEVELOPMENT AND USE OF THE SITE WILL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES. BUILDING CODE: 2003 IBC WITH 2005 CT SUPPLEMENT & 2009 CT AMENDMENT ELECTRICAL CODE: 2005 NATIONAL ELECTRICAL CODE STRUCTURAL CODE: TIA/EIA-222-F STRUCTURAL STANDARDS FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS

SCOPE OF WORK

- REPLACE EXISTING MODCELL CABINET WITH (1) MM-BTS CABINET & INSTALL FIBER DISTRIBUTION BOX WITHIN EXISTING LEASE AREA. REPLACE EXISTING POWER CABINET WITH (2) BBU CABINETS.
 - REMOVE (6) EXISTING CDMA ANTENNAS AND REPLACE WITH (3) NETWORK VISION ANTENNAS & (6) RRH'S.
 - REMOVE EXISTING CDMA COAX CABLES & INSTALL (3) HYBRIFLEX CABLES FROM EQUIPMENT CABINET TO ANTENNA.
 - REMOVE EXISTING GPS ANTENNA AND REPLACE WITH NEW GPS ANTENNA.
- CALL BEFORE YOU DIG
1-800-922-4455 OR DIAL 811



CHECKED BY: KB

APPROVED BY: DPH

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
2	07/02/12	FOR CONSTRUCTION	SF
1	04/04/12	ISSUED FOR REVIEW	DD

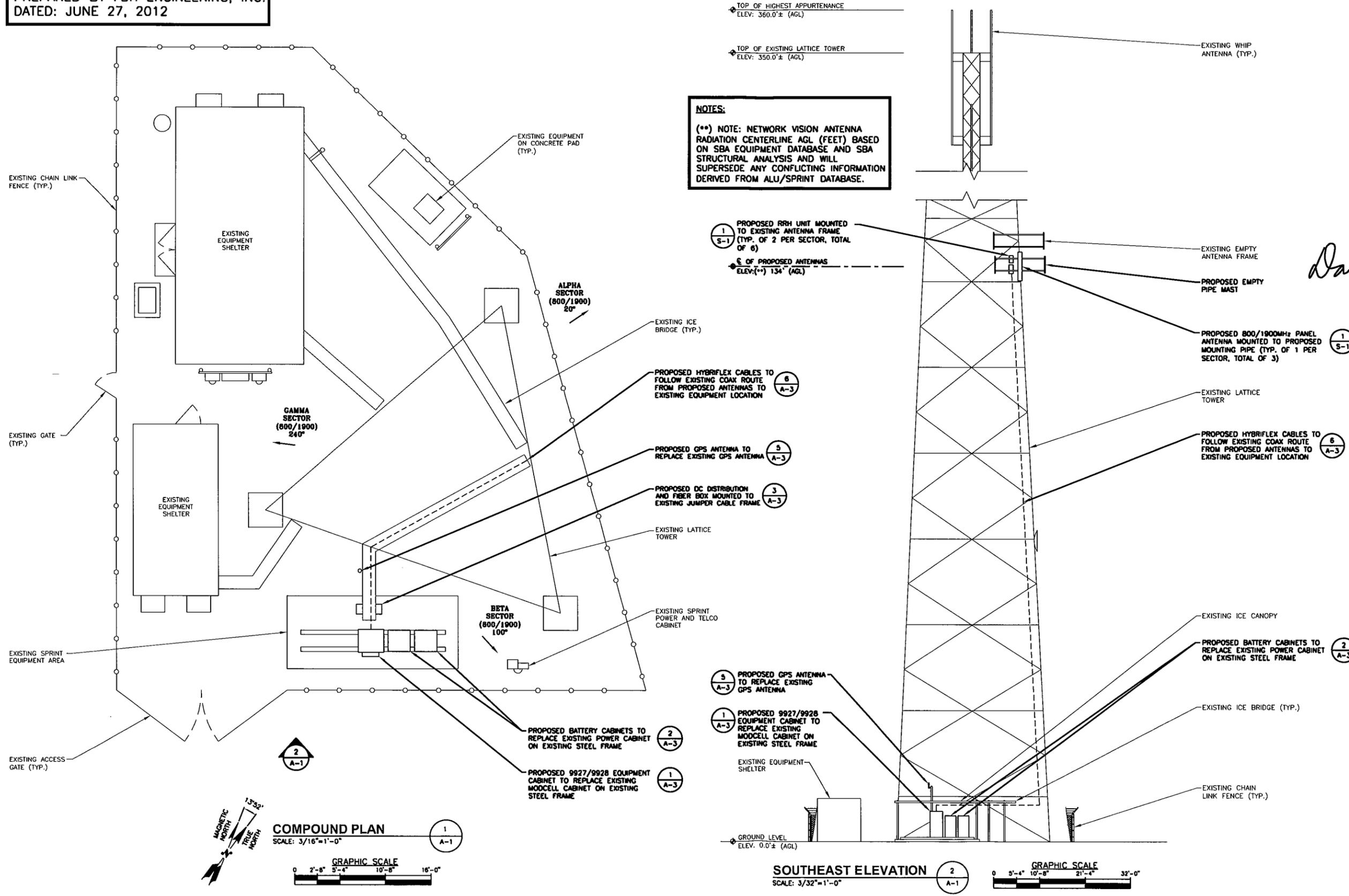
SITE NUMBER:
CT33XC073
 SITE NAME:
WOLCOTT
 SITE ADDRESS:
1201 WOLCOTT ROAD
WOLCOTT, CT 06716

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

STRUCTURAL NOTE:
 G.C. TO REFER TO SPECIAL INSTALLATION REQUIREMENTS AND/OR MODIFICATIONS RECOMMENDED IN STRUCTURAL ANALYSIS REPORT PREPARED BY FDH ENGINEERING, INC. DATED: JUNE 27, 2012

NOTES:
 1) VERIFY EXACT ANTENNA MODEL & AZIMUTHS WITH RF ENGINEER PRIOR TO INSTALLATION.
 2) REMOVE EXISTING GPS ANTENNA AND REPLACE WITH NEW GPS ANTENNA.



NOTES:
 (***) NOTE: NETWORK VISION ANTENNA RADIATION CENTERLINE AGL (FEET) BASED ON SBA EQUIPMENT DATABASE AND SBA STRUCTURAL ANALYSIS AND WILL SUPERSEDE ANY CONFLICTING INFORMATION DERIVED FROM ALU/SPRINT DATABASE.

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

Sprint VISION
 1 INTERNATIONAL B.V.D. SUITE 800
 MAHWAH, NJ 07495
 TEL: (800) 357-7641

SBA
 SBA COMMUNICATIONS CORP.
 5900 BROKEN SOUND PARKWAY
 BOCA RATON, FL 33487-2797
 TEL: (561) 226-9523
 FAX: (561) 226-3572

Hudson Design Group, LLC
 1600 OSGOOD STREET
 BUILDING 20 NORTH, SUITE 2-101
 N. ANDOVER, MA 01845
 TEL: (978) 557-5553
 FAX: (978) 336-5586

CHECKED BY: KB

APPROVED BY: DPH

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
2	07/02/12	FOR CONSTRUCTION	SF
1	04/04/12	ISSUED FOR REVIEW	DD

SITE NUMBER:
 CT33XC073
 SITE NAME:
 WOLCOTT
 SITE ADDRESS:
 1201 WOLCOTT ROAD
 WOLCOTT, CT 06716

SHEET TITLE
 COMPOUND PLAN & ELEVATION

SHEET NUMBER
 A-1



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
Sprint Site Name: Wolcott
Sprint Site ID: CT33XC073**

FDH Project Number 12-04939E S2

Analysis Results

Tower Components	97.3%	Sufficient
Foundation	69.0%	Sufficient

Prepared By:

Brandon T. Compton, EI
Project Engineer

Reviewed By:

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

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



June 27, 2012

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

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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	(12) 1-5/8"	Metro PCS	222	(3) Andrew QT-SF10-B 10.5' T-Frames
	(6) Andrew ATM200-A20 RETs	(1) 3/8"			
212	(3) Argus LLPX310R	(2) 1/2"	Cleanwire	212	(3) 10' T-Frames
	(3) BTSs	(3) 5/8"			
	(1) Andrew VHLP2-11 Dish (1) Andrew VHLP2.5-11 Dish	(3) 1/4" (3) 5/16"			
201.5	(8) Decibel DB844H90E-XY	(12) 1-1/4"	Nextel	201.5	(3) 15' T-Frames
	(4) Decibel DB844H65E-XY				
186	(6) KMW AM-X-CD-16-65-00T	(12) 1-5/8" (1) 10mm Fiber (2) 12 gauge DC	AT&T	186	(3) 13.5' T-Frames
	(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					
172.5	(1) Radiowaves SPD2-5.8NS Dish	(2) 1/2"	Marcus	172.5	(2) Pipe Mounts (5.25' x 4.5")
	(1) Radiowaves SPD3-2.4NS Dish				
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 APXVSP18-C-A20	(3) 1-1/4" Fiber	Sprint	134	(3) 15' T-Frames
	(3) Alcatel Lucent 1900 MHz RRHs				
	(3) Alcatel Lucent 800 MHz RRHs				
	(3) Alcatel Lucent 800 MHz Filters				
	(4) RFS ACU-A20-N RETs				

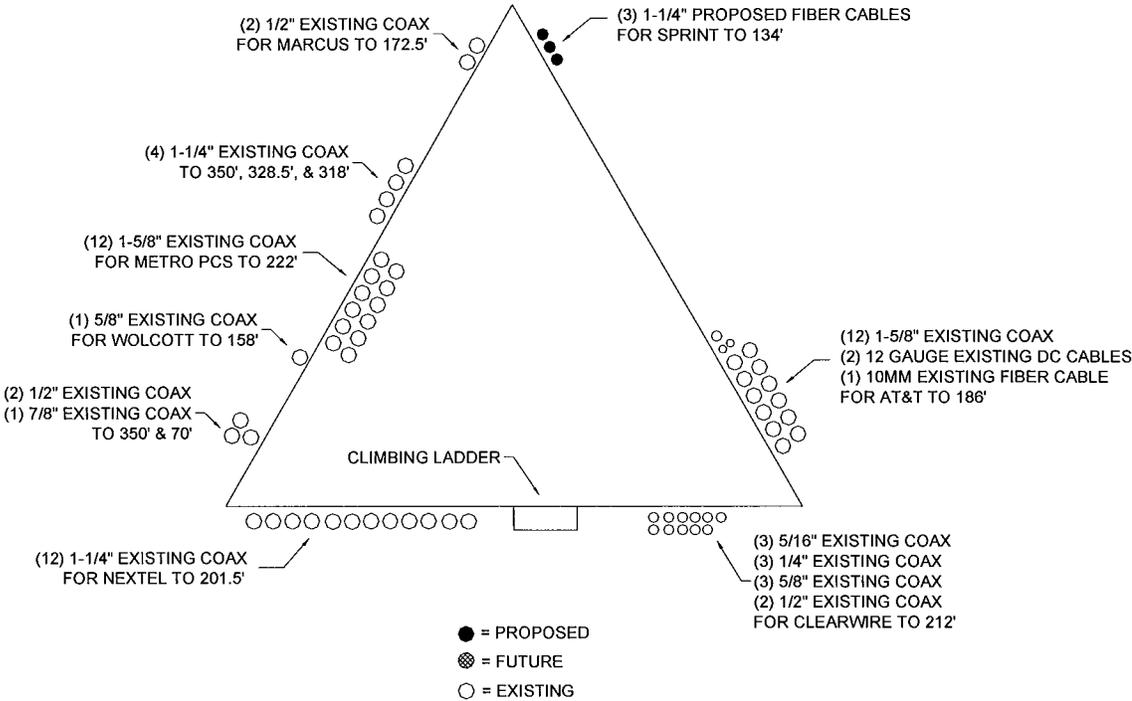


Figure 1 – Coax Layout

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 60.2 (b)	Pass
		Secondary Horizontal	L3x3x3/16	63.3	Pass
T11	160 - 140	Leg	4 1/4	57.1	Pass
		Diagonal	2L3x3x3/16x3/8	62.3 64.2 (b)	Pass
		Secondary Horizontal	L3 1/2x3 1/2x1/4	42.8 50.3 (b)	Pass
T12	140 - 120	Leg	4 1/2	55.1	Pass
		Diagonal	2L3x3x1/4x3/8	61.1 68.5 (b)	Pass
		Horizontal	2L2 1/2x2 1/2x3/16x3/8	39.9	Pass
		Redund Horz 1 Bracing	L2x2x3/16	97.3	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	93.3	Pass
		Diagonal	2L3x3x1/4x3/8	66.2 69.6 (b)	Pass
		Horizontal	2L2 1/2x2 1/2x3/16x3/8	54.1	Pass
		Redund Diag 1 Bracing	L2 1/2x2 1/2x3/16	74.7	Pass
		Inner Bracing	L4x4x1/4	0.6	Pass
T14	100 - 80	Leg	4 3/4	61.8	Pass
		Diagonal	2L3x3x1/4x3/8	74.4	Pass
		Horizontal	2L2 1/2x2 1/2x3/16x3/8	70.6	Pass
		Redund Horz 1 Bracing	L2x2x3/8	92.7	Pass
		Redund Diag 1 Bracing	L2 1/2x2 1/2x3/16	89.4	Pass
		Inner Bracing	L4x4x1/4	0.6	Pass
T15	80 - 60	Leg	5	96.2	Pass
		Diagonal	2L3 1/2x3 1/2x1/4x3/8	53.1 59.7 (b)	Pass
		Horizontal	2L3x3x3/16x3/8	51.2	Pass
		Redund Diag 1 Bracing	L3x3x3/16	60.6	Pass
		Inner Bracing	2L3x3x3/16x3/8	0.7	Pass
T16	60 - 40	Leg	5 1/4	89.4	Pass
		Diagonal	2L3 1/2x3 1/2x1/4x3/8	59.7 60.7 (b)	Pass
		Horizontal	2L3x3x3/16x3/8	64.0	Pass
		Redund Diag 1 Bracing	L3x3x3/16	71.0	Pass
		Inner Bracing	2L3x3x3/16x3/8	0.7	Pass
T17	40 - 20	Leg	5 1/4	97.2	Pass
		Diagonal	2L3 1/2x3 1/2x1/4x3/8	65.4	Pass
		Horizontal	2L3 1/2x3 1/2x1/4x3/8	37.9	Pass
		Redund Diag 1 Bracing	L3x3x3/16	83.2	Pass
		Inner Bracing	2L3 1/2x3 1/2x1/4x3/8	0.6	Pass
T18	20 - 0	Leg	5 1/2	90.5	Pass
		Diagonal	2L3 1/2x3 1/2x1/4x3/8	71.9	Pass
		Horizontal	2L3 1/2x3 1/2x1/4x3/8	45.9	Pass
		Redund Diag 1 Bracing	L3x3x3/16	96.1	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	56 k	---
	Uplift	398 k	631 k
	Compression	518 k	751 k
Overturning Moment	---	14,904 k-ft	---

GENERAL COMMENTS

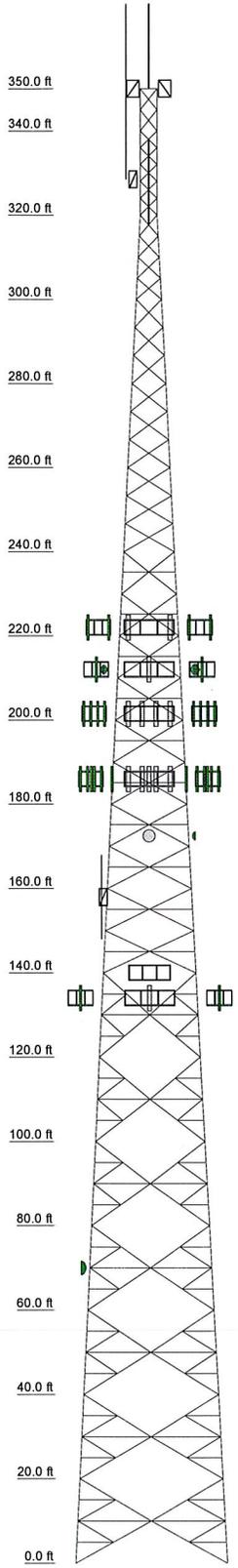
This engineering analysis is based upon the theoretical capacity of the structure. It is not a condition assessment of the tower and its foundation. It is the responsibility of SBA Network Services, Inc. to verify that the tower modeled and analyzed is the correct structure (with accurate antenna loading 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 1/4	SR 5	SR 4 3/4	SR 4 1/2	SR 4 1/2	SR 4 1/4	A572-50	SR 4 3/4	SR 4	SR 3 1/2	SR 3 1/2	SR 3 1/4	SR 3 1/4	SR 2 1/2	SR 2		
Diagonals	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L2 1/2x2 1/2x3/16x3/8	2L2 1/2x2 1/2x3/16x3/8	L3x3x3/16	L3x3x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L2x2x3/16	L2x1 1/2x3/16		
Diagonal Grade									A36										
Top Girts									N.A.									A	
Horizontals	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L2 1/2x2 1/2x3/16x3/8	2L2 1/2x2 1/2x3/16x3/8	2L2 1/2x2 1/2x3/16x3/8	2L2 1/2x2 1/2x3/16x3/8	L3x3x3/16	L3x3x3/16	L3x3x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	N.A.	
Sec. Horizontals					N.A.	N.A.	N.A.	N.A.											
Red. Horizontals					L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	N.A.	
Red. Diagonals					L3x3x3/16	L3x3x3/16	L3x3x3/16	L3x3x3/16	L3x3x3/16	L3x3x3/16	L3x3x3/16	L3x3x3/16	L3x3x3/16	L3x3x3/16	L3x3x3/16	L3x3x3/16	L3x3x3/16	L3x3x3/16	N.A.
Inner Bracing	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	2L3 1/2x3 1/2x1/4x3/8	N.A.	
Face Width (ft)	34	32	30	28	26	24	22	20	18	16	14	12	10	8	6	4	2	0.5	
# Panels @ (ft)	89.7	85	80.7	76.1	71.5	67.0	62.5	58.0	53.5	49.0	44.5	40.0	35.5	31.0	26.5	22.0	17.5	13.0	
Weight (K)																			



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Lightning Rod	355	(2) Powerwave LGP13519 Diplexer	186
Flash Beacon Lighting	350	(2) Powerwave LGP13519 Diplexer	186
DB809DK-Y	350	(2) Powerwave LGP13519 Diplexer	186
Andrew 600200-5	350	DC6-48-60-18-8F Surge Arrestor	186
RFS CAT #200	350	(3) 13.5' T-Frames	186
CAT #1110-9	350	(2) AM-X-CD-16-65-00T-RET w/ Mount Pipe	186
Standoff Mount - 7'-9"	350	800 10121 w/Mount Pipe	186
Standoff Mount - 7'	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
Andrew 600200-4	328.5	(2) AM-X-CD-16-65-00T-RET w/ Mount Pipe	186
4' Side Mount Standoff (1)	328.5	Pipe Mount 5.25" x 4.5"	172.5
(2) TX RX 101-58-10-0-03	318	Pipe Mount 5.25" x 4.5"	172.5
6' Side Mount Standoff (1)	318	SPD2-5.8NS	172.5
(2) HBX-6516DS-VTM w/ Mount Pipe	222	SPD3-2.4NS	172.5
(2) HBX-6516DS-VTM w/ Mount Pipe	222	201-7	158
(2) HBX-6516DS-VTM w/ Mount Pipe	222	Standoff Mount - 17"	158
(2) ATM200-A20 RET	222	(3) 10' T-Frames	140
(2) ATM200-A20 RET	222	800 MHz Filter	134
(2) ATM200-A20 RET	222	800 MHz Filter	134
(3) 10.5' T-Frames MNT	222	ACU-A20-N RET	134
Argus LLPX310R w/ Mount Pipe	212	ACU-A20-N RET	134
Argus LLPX310R w/ Mount Pipe	212	(2) Empty Mount Pipe	134
BTS	212	(2) Empty Mount Pipe	134
BTS	212	(2) Empty Mount Pipe	134
BTS	212	1900 MHz RRH	134
(3) 10' T-Frames	212	1900 MHz RRH	134
VHLP2-11	212	800 MHz RRH	134
VHLP2-5-11	212	800 MHz RRH	134
(4) DB844H90E-XY w/Mount Pipe	201.5	800 MHz Filter	134
(4) DB844H90E-XY w/Mount Pipe	201.5	(3) 15' T-Frames	134
(4) DB844H65E-XY w/Mount Pipe	201.5	APXVSP18-C-A20 w/Mount Pipe	134
(3) 15' T-Frames	201.5	1900 MHz RRH	134
(2) RRUS-11	186	800 MHz RRH	134
(2) RRUS-11	186	APXVSP18-C-A20 w/Mount Pipe	134
(2) RRUS-11	186	APXVSP18-C-A20 w/Mount Pipe	134
(2) DTMABP7819VG12A TMA	186	Pipe Mount 27" x 2.4"	70
(2) DTMABP7819VG12A TMA	186	1M Dish	70
(2) DTMABP7819VG12A TMA	186		

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	L2x1 1/2x3/16	B	L3 1/2x3 1/2x1/4

MAX. CORN DOWN: SHEAR: UPLIFT: SHEAR:

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.
- AXIAL 210 K
SHEAR 26 K
TORQUE 14 kip-ft
38 mph WIND - 0.7500 in ICE
AXIAL 120 K
SHEAR 91 K
MOMENT 14904 kip-ft
TORQUE 50 kip-ft
REACTIONS - 85 mph WIND

<p>FDH Engineering, Inc. 6521 Meridien Drive Raleigh, NC 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<p>Job: Cleary Tower (Edward), CT20021-A</p>
	<p>Project: 12-04939E S2</p>
	<p>Client: SBA Network Services, Inc. Drawn by: Brandon Compton App'd:</p>
	<p>Code: TIA/EIA-222-F Date: 06/27/12 Scale: NTS</p>
	<p>Path: Dwg No. E-1</p>



EBI Consulting

environmental | engineering | due diligence

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

Sprint Existing Facility

Site ID: CT33XC073

Wolcott
1201 Wolcott Road
Wolcott, CT 06716

August 21, 2012

August 21, 2012

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

Re: Emissions Values for Site CT33XC073 – Wolcott

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 emissions 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 97-01 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 cellular band is approximately $567 \mu\text{W}/\text{cm}^2$, and the general population exposure limit for the PCS band 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 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 CDMA Carriers (1900 MHz) were considered for each sector of the proposed installation.
- 2) 1 CDMA Carrier (850 MHz) was considered for each sector of the proposed installation
- 3) 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.
- 4) 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.
- 5) The antenna used in this modeling is the RFS APXVSPP18-C-A20. This is based on feedback from the carrier with regards to anticipated antenna selection. This antenna 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. 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.

- 6) The antenna mounting height centerline of the proposed antennas is **134 feet** above ground level (AGL)
- 7) 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	CT03XC073 - Wolcott
Site Address	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)	Antenna analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	RFS	APXVSP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	3	60	15.9	134	128	1/2"	0.5	0	2080.4211	45.64963	4.56496%
1a	RFS	APXVSP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	134	128	1/2"	0.5	0	389.96892	8.556892	1.50915%
Sector total Power Density Value: 6.074%																	

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)	Antenna analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
2a	RFS	APXVSP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	3	60	15.9	134	128	1/2"	0.5	0	2080.4211	45.64963	4.56496%
2a	RFS	APXVSP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	134	128	1/2"	0.5	0	389.96892	8.556892	1.50915%
Sector total Power Density Value: 6.074%																	

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)	Antenna analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
3a	RFS	APXVSP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	3	60	15.9	134	128	1/2"	0.5	0	2080.4211	45.64963	4.56496%
3a	RFS	APXVSP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	134	128	1/2"	0.5	0	389.96892	8.556892	1.50915%
Sector total Power Density Value: 6.074%																	

Site Composite MPE %	
Carrier	MPE %
Sprint	18.222%
Lolack	0.000%
TSR Wireless	0.4770%
WebLink Wireless	2.830%
Wolcott Ambulance	0.520%
Nextel	1.430%
Clearwire	0.420%
Marcus	2.640%
AT&T	1.870%
Metro PCS	1.590%
Total Site MPE %	29.952%

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 Sprint facility are **18.222% (6.074% 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 **29.992%** 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

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