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

September 19, 2012

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

RE: **EM-SPRINT-025-120817** – Sprint Spectrum notice of intent to modify an existing telecommunications facility located at 500 Highland Avenue, Cheshire, 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:

- 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 August 15, 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,

LRoberts

Linda Roberts
Executive Director

LR/CDM/jbw

c: The Honorable Timothy Slocum, Council Chairman, Town of Cheshire
Michael A. Milone, Town Manager, Town of Cheshire
William S. Voelker, AICP, Town Planner, Town of Cheshire
Cheshire Police Department

August 23, 2012

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

RE: Notice of Exempt Modification
500 Highland Ave
Cheshire, CT 06410
Site # CT43XC809
N 41 ° 30' 40.30"
W 72 ° 53' 54.45"

Dear Mr. Martin and Members of the Siting Council:

Pursuant to the exempt modification previously submitted for the above mentioned site I would like to add the following information:

1. The proposed changes will not increase the noise level at the existing facility by six decibels or more.

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@sbasite.com

SBA Communications Corporation
One Research Drive
Suite 200C
Westborough, MA 01581

T + 508.799.2460
F + 508.366.5507

sbasite.com

August 16, 2012

David Martin
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: 8 Exempt Modification Packages

Dear Mr. Martin:

On behalf of Sprint Spectrum, SBA Communications is submitting 8 exempt modification applications to the Connecticut Siting council for the sites listed below. In each application package you will find five (5) copies of a passing Structural Analysis, five (5) EME studies, five (5) sets of drawings, and a check in the amount of $625.

CT33XC604-297 North St. Plymouth, CT
CT03XC068-331 Killingworth Road Guilford, CT
CT33XC521-11 Francis J. Clarke Circle Bethel, CT
CT54XC770-151 Berkshire Road Newtown, CT
CT43XC865-39 Ciro Road North Branford, CT
CT43XC809-500 Highland Ave. Cheshire, CT
CT03XC033-108 Foxon Road North Branford, CT
CT54XC717-459 Burr Road Southbury, CT

Please let me know if you require any additional materials in order to process these applications.

Thank you,

Rick Woods

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@sbasite.com

EM-SPRINT-025-120817

August 15, 2012

ORIGINAL

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

RE: Notice of Exempt Modification
500 Highland Ave
Cheshire, CT 06410
N 41 ° 30' 40.30"
W 72 ° 53' 54.45"

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 500 Highland Ave. Cheshire, CT.

The 500 Highland Avenue facility consists of a 160' Monopole Tower managed by SBA Site Management. 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 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 cal 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@sbasite.com

Sprint Spectrum
Equipment Modification

500 Highland Ave. Cheshire, CT
Site number CT43XC809

Tower Owner: SBA Communications Corporation

Equipment Configuration: Monopole Tower

Current and/or approved:
Six (6) Decibel Antennas @ 158'
Six (6) lines of 1-5/8" coax
Two (2) equipment cabinets

Planned Modifications:
Remove all existing antenna and coax
Install Three (3) Network Vision antennas & Six (6) RRHs @ 158'
Install Three (3) Hybriflex fiber cables
Install Three (3) Filters
Install Four (4) RETs
Install One (1) Fiber Distribution Box
Install One (1) equipment cabinet

Structural Information:

The attached structural analysis demonstrates that the tower and foundation will have adequate structural capacity to accommodate the proposed modifications.

Power Density:

Calculations for Sprint's proposed operations at the site indicate a radio frequency electromagnetic radiation power density, of approximately 9.685% of the standard adopted by the FCC. The total site composite MPE % is 55.065%

Site Composite MPE %	
Carrier	MPE %
Sprint	9.685%
Pocket	3.600%
Town Emergency Services	5.130%
T-Mobile	3.910%
AT&T	6.050%
Nextel	6.640%
Verizon Wireless	20.050%
Total Site MPE %	**55.065%**

August 16, 2012

Mr. Michael Milone
Cheshire Town Manager
84 South Main St.
Cheshire, CT 06410

RE: Telecommunications Facility-500 Highland Ave. Cheshire, CT 06410

Dear Mr. Milone,

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,

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@sbasite.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: HUDSON DESIGN GROUP, LLC
DATED: JUNE 13, 2012

SBA SITE #: CT33762-M
SBA SITE NAME: LIGHT TOWER

Sprint® VISION™

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:
CT43XC809

SITE NAME:
CHESHIRE POLICE DEPARTMENT

SITE ADDRESS:
500 HIGHLAND AVENUE
CHESHIRE, CT 06410

SITE INFORMATION

SITE NUMBER:	CT43XC809	LOCAL POWER COMPANY:	CL&P
SITE NAME:	CHESHIRE POLICE DEPARTMENT	LOCAL TELCO COMPANY:	AT&T
SITE ADDRESS:	500 HIGHLAND AVENUE CHESHIRE, CT 06410	APPLICANT:	SPRINT 1 INTERNATIONAL BLVD, SUITE 800 MAHWAH, NJ 07495
COUNTY:	NEW HAVEN	APPLICANT REPRESENTATIVE:	ALCATEL-LUCENT 1 ROBBINS ROAD WESTFORD, MA 01886 (978)952-1600
ZONING:	C-1	SITE ACQUISITION CONSULTANT:	SBA COMMUNICATIONS CORP. ONE RESEARCH DRIVE SUITE 200C WESTBOROUGH, MA 01581
PARCEL ID:	MAP: 051 LOT 2	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° 30' 40.30" W 72° 53' 54.45"		
GROUND ELEV.(*):	204'± (AMSL)		
STRUCTURE TYPE:	MONOPOLE		
STRUCTURE HEIGHT:	160' (AGL)		
ANTENNA RAD CENTER: (**)	158'-0" (AGL)		
PROPERTY OWNER:	TOWN OF CHESHIRE		
STRUCTURE MANAGER:	SBA SITE MANAGEMENT, LLC 12250 WEBER HILL RD, SUITE 120 ST. LOUIS, MO 63127		

(*) SOURCE OF COORDINATES/ELEVATION - SBA AND SPRINT SITERRA DATABASE.

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

VICINITY MAP

TRUE NORTH
SCALE: N.T.S.

DIRECTIONS FROM 1 INTERNATIONAL BLVD, MAHWAH, NJ 07495:

TAKE RT-17 N. WHEN FREEWAY ENDS, BEAR RIGHT TAKING THE RAMP TO TAPPAN ZEE BR/NEW YORK CITY/I-87 S/I-287/NEW YORK STATE THRUWAY SOUTH. CONTINUE, NAME CHANGES TO NEW YORK STATE THRUWAY S/I-287 E/I-87 S 17. FREEWAY FORKS, KEEP RIGHT TO SAW MILL PKWY SOUTH/NEW YORK CITY/SAW MILL PKWY NORTH(RT-119)/ELMSFORD/I-87 S. EXIT RIGHT FOLLOWING THE SIGN SAW MILL PKWY NORTH(RT-119)/ELMSFORD (EXIT 8A). RAMP FORKS, KEEP LEFT TO KATONAH/SAW MILL RIVER PKWY NORTH. ENTER RAMP FOLLOWING THE SIGN BREWSTER/I-684. EXIT RIGHT FOLLOWING THE SIGN DANBURY/I-84 E (EXIT 9E). KEEP RIGHT TO STAY ON I-84E. TAKE EXIT 27 FOR I-691E. TOWARD MERIDEN. TAKE EXIT 3 FOR CT-10 TOWARD CHESHIRE. TURN RIGHT ONTO CT-10 / HIGHLAND AVE. SITE IS LOCATED IN THE LEFT

SHEET INDEX

SHEET NO.	DESCRIPTION
T-1	TITLE SHEET
GN-1	GENERAL NOTES
A-1	COMPOUND PLAN AND ELEVATION
A-2	ANTENNA SCENARIO & EQUIPMENT LAYOUT
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

GENERAL NOTES

1. 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
2. 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.
3. 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

1. INSTALL RETRO FIT KIT IN EXISTING MOD CELL & INSTALL FIBER DISTRIBUTION BOX WITHIN EXISTING LEASE AREA. INSTALL (1) NEW BBU CABINET.
2. REMOVE (6) EXISTING CDMA ANTENNAS AND REPLACE WITH (3) NETWORK VISION ANTENNAS & (6) RRH'S.
3. REMOVE EXISTING CDMA COAX CABLES & INSTALL (3) HYBRIFLEX CABLES FROM EQUIPMENT CABINET TO ANTENNA
4. REMOVE EXISTING GPS ANTENNA AND REPLACE WITH NEW GPS ANTENNA

CALL BEFORE YOU DIG
1-800-922-4455 OR DIAL 811

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: _____

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

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

Hudson Design Group LLC
1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 2-101 TEL: (978) 557-5553
N. ANDOVER, MA 01845 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
2	06/13/12	FOR CONSTRUCTION	NB
1	04/02/12	ISSUED FOR REVIEW	DR

SITE NUMBER:
CT43XC809
SITE NAME:
CHESHIRE POLICE DEPARTMENT
SITE ADDRESS:
500 HIGHLAND AVENUE
CHESHIRE, CT 06410

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: HUDSON DESIGN GROUP, LLC
DATED: JUNE 13, 2012

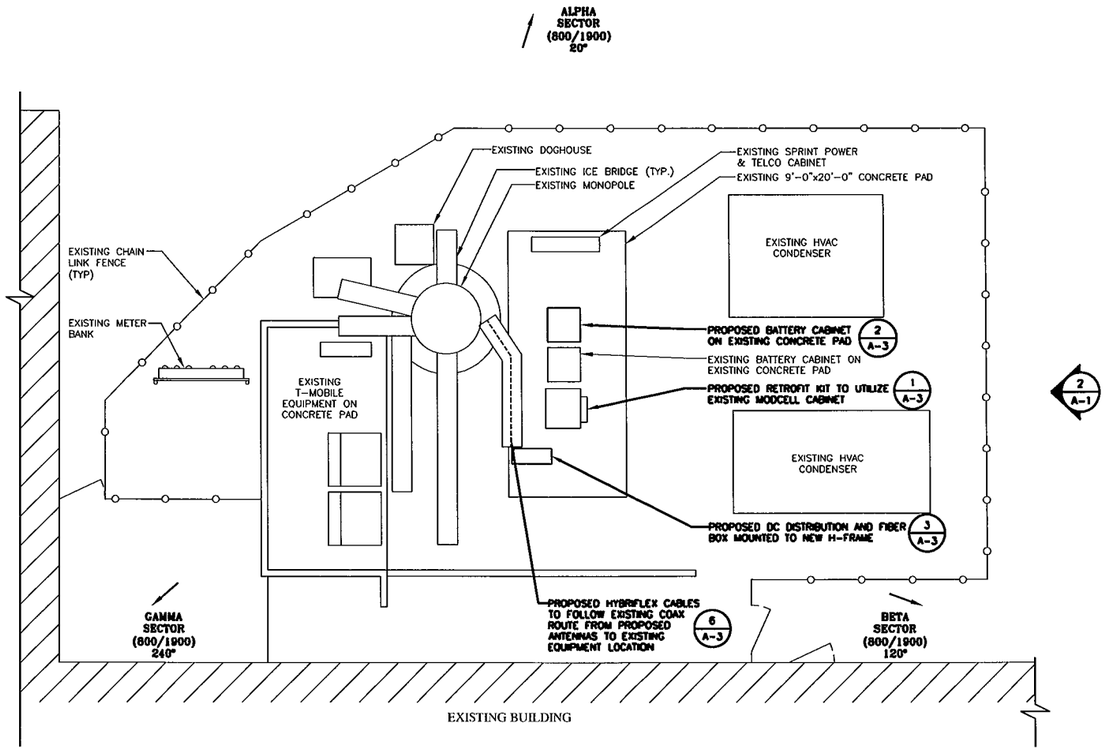
NOTES:

1) VERIFY EXACT ANTENNA MODEL & AZIMUTHS WITH RF ENGINEER PRIOR TO INSTALLATION.

2) REMOVE EXISTING GPS ANTENNA AND REPLACE WITH NEW GPS ANTENNA.

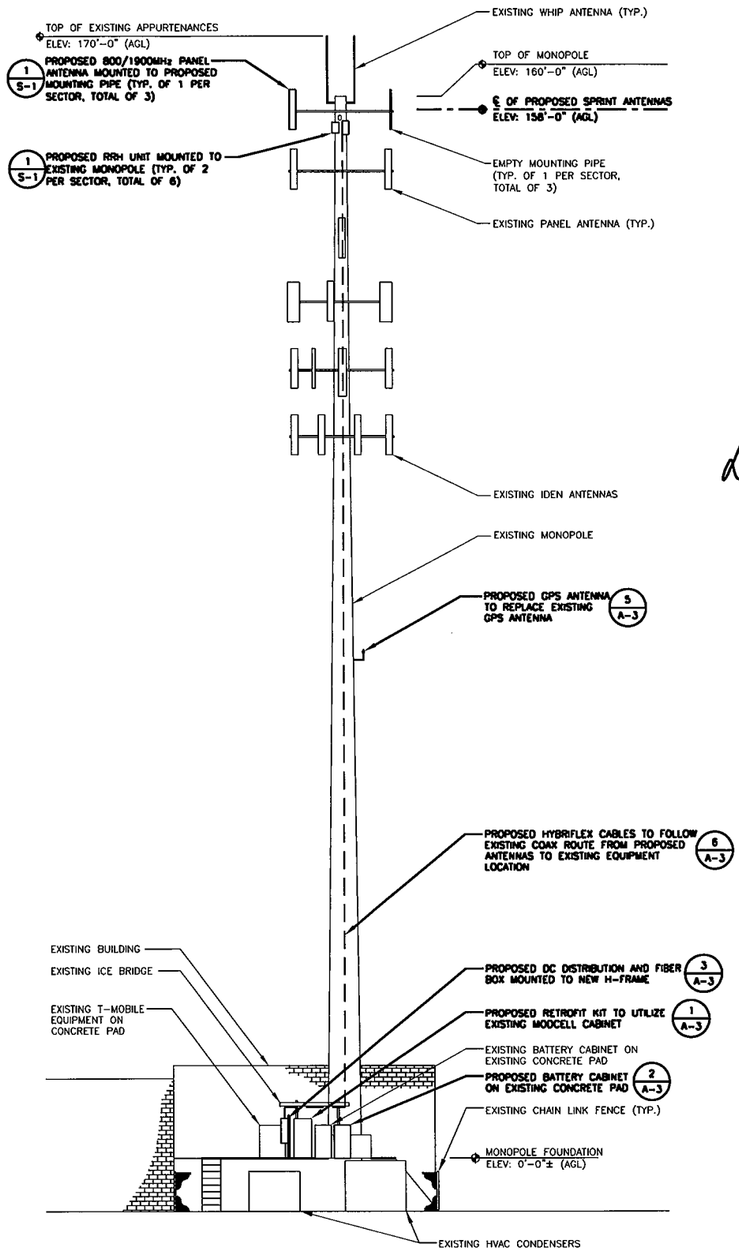
ANTENNA CONFIGURATION NOTE:

PER THE MLA BETWEEN SPRINT AND SBA, ALL EXISTING NEXTEL EQUIPMENT MUST BE REMOVED WITHIN 6 MONTHS UNLESS OTHERWISE NOTED



COMPOUND PLAN 1 A-1
SCALE: 3/16"=1'-0"

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



EAST ELEVATION 2 A-1
SCALE: 3/32"=1'-0"

GRAPHIC SCALE
0 5'-4" 10'-8" 21'-4" 32'-0"

Sprint VISION
1 INTERNATIONAL BLVD. 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
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1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 2-101
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
2	06/13/12	FOR CONSTRUCTION	NB
1	04/02/12	ISSUED FOR REVIEW	DR

SITE NUMBER:
CT43XC809
SITE NAME:
CHESHIRE POLICE DEPARTMENT
SITE ADDRESS:
500 HIGHLAND AVENUE
CHESHIRE, CT 06410

SHEET TITLE
COMPOUND PLAN AND ELEVATION

SHEET NUMBER
A-1

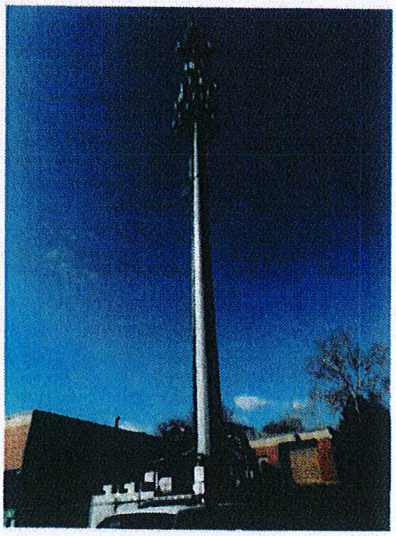
STRUCTURAL ANALYSIS REPORT

For

Sprint Site No: CT43XC809
SBA Site No: CT33762-M
CHESHIRE POLICE DEPARTMENT

500 Highland Avenue
Cheshire, CT 06410

Antennas Mounted to the Monopole



Prepared for:

SBA

Sprint

1 INTERNATIONAL BLVD, SUITE 800
MAHWAH, NJ 07495
TEL: (201) 684-4223

Dated:
June 14, 2012

Prepared by:

Hudson Design Group LLC

STATE OF CONNECTICUT
GI KAI WANG
No. 28220
LICENSED PROFESSIONAL ENGINEER
6/14/12

1600 Osgood Street Building 20 North, Suite 2-101
North Andover, MA 01845
Phone: (978) 557-5553
www.hudsondesigngroupllc.com

SCOPE OF WORK:

Hudson Design Group LLC (HDG) has been authorized by SBA to conduct a structural evaluation of the 160' monopole supporting the proposed Sprint antennas located at elevation 158'± above the ground level.

This report represents this office's findings, conclusions and recommendations pertaining to the support of Sprint's existing and proposed antennas listed within this report.

Record drawing prepared by Sabre Communications Corp., dated July 10, 2003 was available and obtained for our use. The previous structural analysis report prepared by Malouf Engineering Intl., Inc., dated August 31, 2007 was also available and obtained for our use. This office conducted an on-site visual survey on February 28, 2012.

CONCLUSION SUMMARY:

Based on our evaluation, we have determined that the existing monopole, base plate and anchor bolts **are in conformance** with the ANSI/TIA-222-F Standard for the loading considered under the criteria listed in this report. The monopole structure is rated at **91.0%** - Base Plate Controlling.

Hudson Design Group LLC

APPURTENANCES CONFIGURATION:

Tenant	Appurtenances	Elev.	Mount
	Lighting Rod	159'	Monopole
	(2) DB212-1	159'	T-Frame
	DB810K-XT	159'	3' Side Mount Standoff
Sprint	(3) 5' Pipes	**158'**	Low Profile Platform
Sprint	***(3) APXVSPP18 Antennas***	**158'**	Low Profile Platform
Sprint	***(6) RRHs***	**156'**	***Ring Mount***
	(6) RR65-19-00 Antennas	149'	Low Profile Platform
	(6) TMAs	149'	Low Profile Platform
	(3) Panel Antennas	139'	3' Side Mount Standoff
	(6) DUO1414-8686 Antennas	127'	Low Profile Platform
	(6) ADC CG-1900 TMAs	127'	Low Profile Platform
	(3) ADC Diplexers	127'	Low Profile Platform
	(3) 5' Pipes	127'	Low Profile Platform
	(3) 7770 Antennas	127'	Low Profile Platform
	(6) LGP13519 Diplexers	127'	Low Profile Platform
	(3) 7060 Converters	127'	Low Profile Platform
	(3) 7020 RET	127'	Low Profile Platform
	(12) Panel Antennas	119'	Low Profile Platform
	(12) Panel Antennas	109'	Low Profile Platform
	(3) UHF/VHF Antennas	80'	Ring Mount
Sprint	***PCTEL GPS***	80'	Ring Mount

Proposed SPRINT Appurtenances shown in Bold.

SPRINT EXISTING/PROPOSED COAX CABLES:

Tenant	Coax Cables	Elev.	Mount
Sprint	(6) 1 5/8" Cables	158'	Inside Monopole
Sprint	***(3) Hybriflex Cables***	**158'**	Inside Monopole

Proposed SPRINT Coax Cables shown in Bold.

ANALYSIS RESULTS SUMMARY:

Component	Max. Stress Ratio	Elev. of Component (ft)	Pass/Fail	Comments
Pole Section-L1	36.0 %	146.0 – 160.0	PASS	
Pole Section-L2	78.7 %	95.25 – 146.0	PASS	
Pole Section-L3	79.9 %	46.5 – 95.25	PASS	
Pole Section-L4	83.5 %	0 – 46.5	PASS	
Base Plate	91.0 %	Base of Monopole	PASS	

Hudson Design Group LLC

DESIGN CRITERIA:

1. EIA/TIA-222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures

   County: New Haven
   Wind Load: 85 mph (fastest mile)
   105 mph (3 second gust)
   Nominal Ice Thickness: 1/2 inch

2. Approximate height above grade to proposed antennas: 158'

Calculations and referenced documents are attached

ASSUMPTIONS:

1. The monopole dimensions, member sizes are as indicated in the Record Drawing by Sabre Communications Corp., dated July 10, 2003.

2. The appurtenances configuration is as stated in this report. The appurtenances configuration is based on previous structural analysis report prepared by Malouf Engineering Intl., Inc., dated August 31, 2007 and best estimate from the photos taken by HDG.

3. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer requirements.

4. The monopole and foundation are properly constructed and maintained. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities.

5. The support mounts and platforms are not analyzed and are considered adequate to support the loading. The analysis is limited to the primary support structure itself.

6. All prior structural modifications, if any, are assumed to be as per the data supplied (if available), and installed properly.

7. The foundation of the monopole was not checked due to lack of information. As-built foundation drawings and geotechnical report would be required to determine whether the foundation is adequate

Hudson Design Group LLC

SUPPORT RECOMMENDATIONS:

HDG recommends that the proposed antennas be mounted on the existing platform supported by the monopole; the proposed RRHs be mounted on the proposed ring mount supported by the monopole. The proposed GPS be mounted on the existing ring mount supported by the monopole.

Hudson Design Group LLC

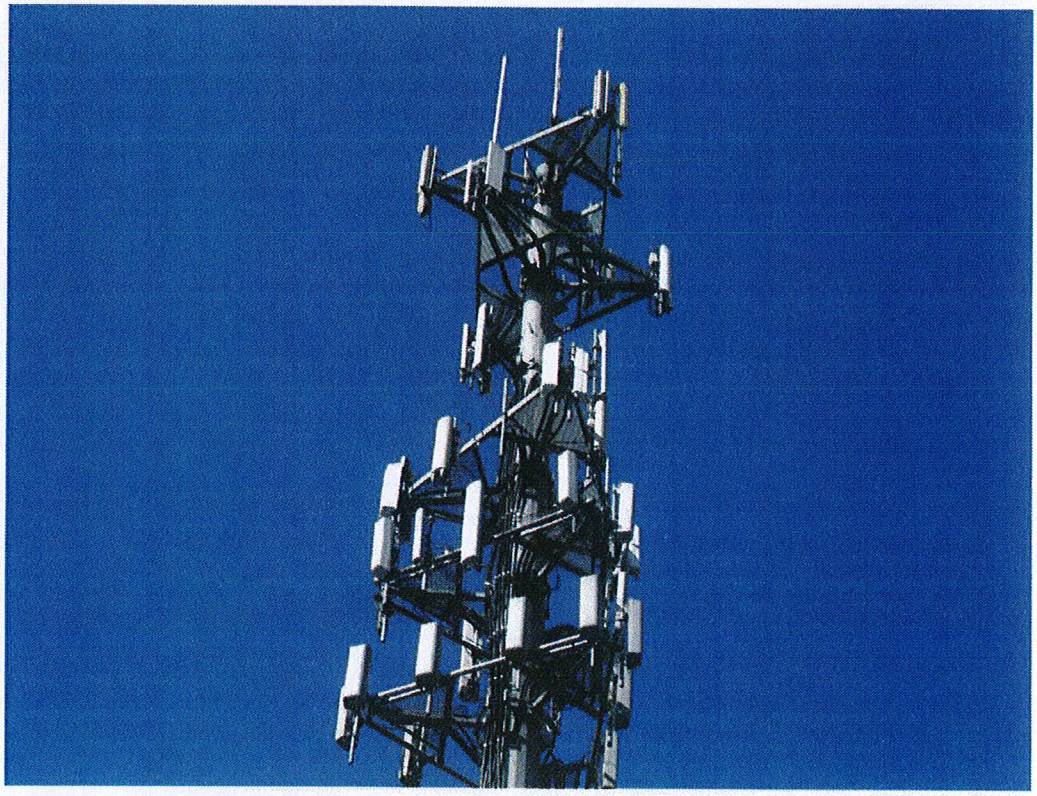


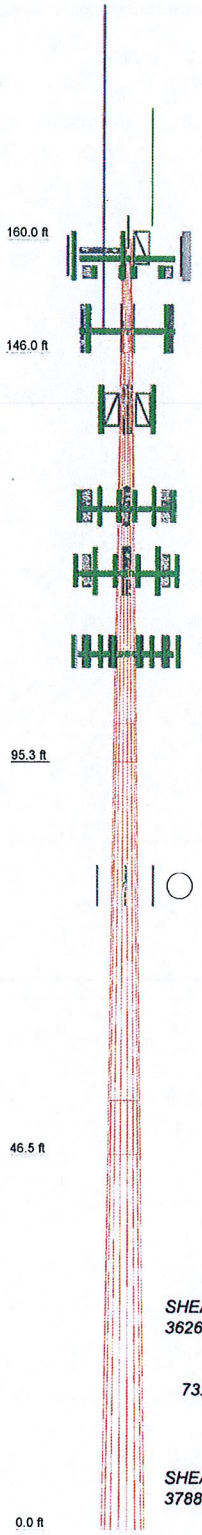
Photo 1: Photo illustrating the monopole with Appurtenances shown.

Hudson Design Group LLC

CALCULATIONS

Section	4	3	2	1
Length (ft)	53.25	53.50	53.50	14.00
Number of Sides	18	18	18	18
Thickness (in)	0.3750	0.3750	0.3125	0.1875
Socket Length (ft)		6.75	4.75	2.75
Top Dia (in)	45.9565	31.0217	15.5490	12.2880
Bot Dia (in)	64.0000	48.9712	33.2152	18.8128
Grade	A572-65			
Weight (lb)	11776.4	8585.3	4346.3	407.2

Total Weight: 25115.2



AXIAL
54816 lb

SHEAR
36267 lb

MOMENT
3852487 lb-ft

TORQUE 6372 lb-ft
73.6 mph WIND - 0.5000 in ICE

AXIAL
44441 lb

SHEAR
37882 lb

MOMENT
4010701 lb-ft

TORQUE 4832 lb-ft
REACTIONS - 85.0 mph WIND

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Lightning Rod	159	Powerwave 7060.00 Converter	127
Valmont T-Arm (1)	159	Powerwave 7060.00 Converter	127
(2) DB212-1	159	Powerwave 7020.00 Dual Band RET	127
3' Side Mount Standoff	159	Powerwave 7020.00 Dual Band RET	127
DB810K-XT	159	Powerwave 7020.00 Dual Band RET	127
PiROD 15' Low Profile Platform (Sprint - existing)	158	(2) ADC CG-1900 TMA	127
2"x5' pipe (Sprint - existing)	158	(2) ADC CG-1900 TMA	127
2"x5' pipe (Sprint - existing)	158	PiROD 15' Low Profile Platform	127
2"x5' pipe (Sprint - existing)	158	(2) DUO1417-8686 w/Mount Pipe	127
APXVSPP18-C w/mount pipe (Sprint - proposed)	158	(2) DUO1417-8686 w/Mount Pipe	127
APXVSPP18-C w/mount pipe (Sprint - proposed)	158	(2) DUO1417-8686 w/Mount Pipe	127
APXVSPP18-C w/mount pipe (Sprint - proposed)	158	(2) ADC CG-1900 TMA	127
Collar Mount (Sprint - proposed)	156	ADC Diplexer	127
(2) RRH (sprint) (Sprint - proposed)	156	ADC Diplexer	127
(2) RRH (sprint) (Sprint - proposed)	156	ADC Diplexer	127
(2) RRH (sprint) (Sprint - proposed)	156	2"x5' pipe	127
PiROD 15' Low Profile Platform	149	PiROD 15' Low Profile Platform	119
(2) RR65-19-00DP w/Mount Pipe	149	(3) Panel Antenna 4'x12"x8" w/mount pipe	119
(2) RR65-19-00DP w/Mount Pipe	149	(3) Panel Antenna 4'x12"x8" w/mount pipe	119
(2) RR65-19-00DP w/Mount Pipe	149	(3) Panel Antenna 4'x12"x8" w/mount pipe	119
(2) Gen. TMA	149	Panel Antenna 72"x13.5"x4" w/mount pipe	119
(2) Gen. TMA	149	Panel Antenna 72"x13.5"x4" w/mount pipe	119
(2) Gen. TMA	149	Panel Antenna 72"x13.5"x4" w/mount pipe	119
Panel Antenna 6'x13"x5" w/mount pipe	139	PiROD 15' Low Profile Platform	109
Panel Antenna 6'x13"x5" w/mount pipe	139	(4) Panel Antenna 4'x12"x8" w/mount pipe	109
3' Side Mount Standoff	139	(4) Panel Antenna 4'x12"x8" w/mount pipe	109
3' Side Mount Standoff	139	(4) Panel Antenna 4'x12"x8" w/mount pipe	109
3' Side Mount Standoff	139	UHF/VHF Antenna	80
Panel Antenna 6'x13"x5" w/mount pipe	139	Collar Mount	80
2"x5' pipe	127	UHF/VHF Antenna	80
2"x5' pipe	127	UHF/VHF Antenna	80
Powerwave 7770 w/mount pipe	127	PCTEL GPS-TMG-HR-26N (Sprint - proposed)	80
Powerwave 7770 w/mount pipe	127		
Powerwave 7770 w/mount pipe	127		
(2) Powerwave LGP13519 diplexer	127		
(2) Powerwave LGP13519 diplexer	127		
(2) Powerwave LGP13519 diplexer	127		
Powerwave 7060.00 Converter	127		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

1. Tower is located in New Haven County, Connecticut.
2. Tower designed for a 85.0 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 73.6 mph basic wind with 0.50 in ice.
4. Deflections are based upon a 50.0 mph wind.
5. TOWER RATING: 91%

Hudson Design Group, LLC
1600 Osgood Street, Building 20 North, Suite 2-101
North Andover, MA 01845
Phone: (978) 557-5553
FAX: (978) 226-5586

Job: CT43XC809 Cheshire, CT			
Project: 160' Monopole			
Client: SPRINT	Drawn by: kw	App'd:	
Code: TIA/EIA-222-F	Date: 06/14/12	Scale: NTS	
Path:		Dwg No. E-1	

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

Sprint Existing Facility

Site ID: CT43XC809

Cheshire Police Department
500 Highland Avenue
Cheshire, CT 06410

August 07, 2012

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

EBI Consulting
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August 7, 2012

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

Re: Emissions Values for Site **CT43XC809 – Cheshire Police Department**

EBI Consulting was directed to analyze the proposed upgrades to the existing Sprint facility located at 500 Highland Avenue, Cheshire, 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 97-01and 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 is approximately 567 $\mu W/cm^2$, and the general population exposure limit for the PCS band 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 500 Highland Avenue, Cheshire, 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) 2 CDMA Carriers (1900 MHz) were considered for each sector of the proposed installation.
2) 1 CDMA Carriers (850 MHz) were 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 **158 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	CT43XC809 - Cheshire Police Dept
Site Addresss	500 Highland Avenue, Cheshire, CT 06410
Site Type	Monopole

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	ERP	Power Density Value	Power Density Percentage
1a	RFS	APXVSPP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	2	40	15.9	158	152	1/2 "	0.5	0	1386.9474	21.58136	2.15814%
1a	RFS	APXVSPP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	158	152	1/2 "	0.5	0	389.96892	6.068045	1.07020%
														Sector total Power Density Value:			3.2283%

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	ERP	Power Density Value	Power Density Percentage
2a	RFS	APXVSPP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	2	40	15.9	158	152	1/2 "	0.5	0	1386.9474	21.58136	2.15814%
2a	RFS	APXVSPP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	158	152	1/2 "	0.5	0	389.96892	6.068045	1.07020%
														Sector total Power Density Value:			3.2283%

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	ERP	Power Density Value	Power Density Percentage
3a	RFS	APXVSPP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	2	40	15.9	158	152	1/2 "	0.5	0	1386.9474	21.58136	2.15814%
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Site Composite MPE %	
Carrier	MPE %
Sprint	9.685%
Pocket	3.600%
Town Emergency Services	5.130%
T-Mobile	3.910%
AT&T	6.050%
Nextel	6.640%
Verizon Wireless	20.050%
Total Site MPE %	**55.065%**

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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 **9.685% (3.228% 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 **55.065%** 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

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

Sprint Existing Facility

Site ID: CT43XC809

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August 07, 2012

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August 7, 2012

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

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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	ERP	Power Density Value	Power Density Percentage
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