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

December 14, 2012

Rick Woods
SBA Communications Corporation
33 Boston Post Road West Suite 320
Marlborough, MA 01752

RE: **EM-SPRINT-086-121126** –Sprint Spectrum notice of intent to modify an existing telecommunications facility located at 71 Moxley Hill Road, Montville, Connecticut.

Dear Mr. Woods:

The Connecticut Siting Council (Council) hereby denies your request to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies, until such time that Sprint Spectrum provides a structural analysis indicating that modifications/reinforcements will be made to the tower, as necessary, to ensure that it does not exceed 100% of the applicable structural standard.

The proposed modification is not in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies.

Very truly yours,

Linda Roberts
Executive Director

LR/CDM/cm

c: The Honorable Ronald K. McDaniel, Mayor, Town of Montville
Marcia Vlaun, Town Planner, Town of Montville

CSC
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November 27, 2012

The Honorable Ronald K. McDaniel
Mayor
Town of Montville
310 Norwich New London Turnpike
Uncasville, CT 06382

RE: **EM-SPRINT-086-121126** –Sprint Spectrum notice of intent to modify an existing telecommunications facility located at 71 Moxley Hill Road, Montville, Connecticut.

Dear Mayor McDaniel:

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

If you have any questions or comments regarding the proposal, please call me or inform the Council by December 11, 2012.

Thank you for your cooperation and consideration.

Very truly yours,

Linda Roberts
Executive Director

LR/cm

c: Marcia Vlaun, Town Planner, Town of Montville

EM-SPRINT-086-121126

SBA

November 20, 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
71 Moxley Hill Road
Montville, CT 06353
N 41 ° 26' 11.26"
W 72 ° 7' 23.70"

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 71 Moxley Hill Road Montville, CT.

The 71 Moxley Hill Road facility consists of a 190' GUYED 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 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
33 Boston Post Road West Suite 320
Marlborough, MA 01752
508-251-1691 x 319 + T
508-251-1755 + F
508-614-0389 + C
rwoods@sbasite.com

November 20, 2012

Mayor Ronald McDaniel
Town of Montville
310 Norwich-New London Tpke.
Uncasville, CT 06382

RE: Telecommunications Facility-71 Moxley Hill Road Montville, CT 06353

Dear Mayor McDaniel,

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
33 Boston Post Road West Suite 320
Marlborough, MA 01752
508-251-1691 x 319 + T
508-251-1755 + F
508-614-0389 + C
rwoods@sbasite.com

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

Sprint Existing Facility

Site ID: CT23XC400

Montville S.
71 Moxley Hill Road
Montville, CT 06353

October 19, 2012

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

EBI Consulting
environmental | engineering | due diligence

October 19, 2012

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

Re: Emissions Values for Site: **CT23XC400 – Montville S**

EBI Consulting was directed to analyze the proposed upgrades to the existing Sprint facility located at 71 Moxley Hill Road, Montville, 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 71 Moxley Hill Road, Montville, 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 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 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 **160 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	CT23XC400 - Montville S
Site Addresss	71 Moxley Hill Road, Montville, CT, 06353
Site Type	Guyed 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	ERP	Power Density Value	Power Density Percentage
1a	RFS	APXVSPP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	2	40	15.9	160	154	1/2 "	0.5	0	1386.9474	21.02444	2.10244%
1a	RFS	APXVSPP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	160	154	1/2 "	0.5	0	389.96892	5.911457	1.04259%
															Sector total Power Density Value:		3.145%

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	160	154	1/2 "	0.5	0	1386.9474	21.02444	2.10244%
2a	RFS	APXVSPP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	160	154	1/2 "	0.5	0	389.96892	5.911457	1.04259%
															Sector total Power Density Value:		3.145%

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	160	154	1/2 "	0.5	0	1386.9474	21.02444	2.10244%
3a	RFS	APXVSPP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	160	154	1/2 "	0.5	0	389.96892	5.911457	1.04259%
															Sector total Power Density Value:		3.145%

Site Composite MPE%	
Carrier	MPE %
Sprint	9.435%
Verizon Wireless	18.870%
Nextel	1.670%
T-Mobile	1.480%
Metro PCS	1.560%
AT&T	7.920%
Total Site MPE %	40.935%

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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 **9.435% (3.145%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 **40.935%** 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

FDH Engineering, Inc., 2730 Rowland Rd. Raleigh, NC 27615, Ph. 919.755.1012, Fax 919.755.1031

Structural Analysis for SBA Network Services, Inc.

190' Guy Tower

SBA Site Name: Montville 3
SBA Site ID: CT10016-A
Sprint Site Name: Montville S.
Sprint Site ID: CT23XC400

FDH Project Number 12-03634E S3

Analysis Results

Tower Components	100.4%	Sufficient
Foundations	52.5%	Sufficient

Prepared By:

Randy C. Williams

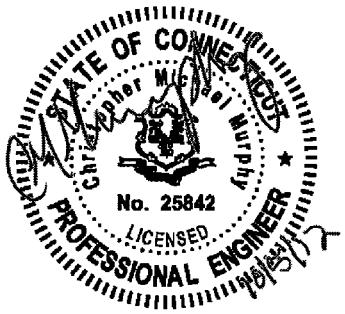
Randy C. Williams, EI
Project Engineer

Reviewed By:

Christopher M. Murphy

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

FDH Engineering, Inc.
2730 Rowland Rd.
Raleigh, NC 27615
(919) 755-1012
info@fdh-inc.com



October 5, 2012

Prepared pursuant to ANSI/TIA-222-G Structural Standard for Antenna Supporting Structures and Antennas

TABLE OF CONTENTS

EXECUTIVE SUMMARY

At the request of SBA Network Services, Inc., FDH Engineering, Inc. performed an analysis of the existing guyed tower located in Uncasville, CT to determine whether the tower is structurally adequate to support both the existing and proposed loads, pursuant to the *Structural Standard for Antenna Supporting Structures and Antennas, ANSI/TIA-222-G*. Information pertaining to the existing/proposed antenna loading, current tower geometry, geotechnical data, and the member sizes was obtained from:

- Rohn, Inc. (Eng. File No. 37183AE001) original design drawings dated April 21, 1998
- FDH, Inc. (Project No. 07-0319T) TIA Inspection Report dated April 13, 2007
- FDH Engineering, Inc. (Project No. 11-02193E G1) Geotechnical Evaluation of Subsurface Conditions dated August 10, 2011
- SBA Network Services, Inc.

The *basic design wind speed* per the *ANSI/TIA-222-G* standard is 120 mph without ice and 50 mph with 3/4" radial ice. Ice is considered to increase in thickness with height. Furthermore, this structure was analyzed as a Class II structure in Exposure Category B with a topographical factor of 1.

Conclusions

With the existing and proposed loading from Sprint in place at 160', the tower meets the requirements of the *ANSI/TIA-222-G* standard provided the **Recommendations** listed below are satisfied. Furthermore, given the existing foundation dimensions (see Rohn Eng. File No. 37183AE001) and existing soil parameters (see FDH Engineering, Inc. Project No. 11-02193E G1), 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 *ANSI/TIA-222-G* standard are met with the existing and proposed loading in place, we have the following recommendations:

1. Coax lines should be installed as shown in **Figure 1.**
2. RRU/RRH Stipulation: The proposed 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 this 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
183	(9) Allgon 7130.16.33.00	(9) 1-5/8"	Nextel	183	(3) 12' T-Frames
175	(6) Kathrein 800 10504 (6) Kathrein 860-10118 RETs	(12) 1-5/8" (1) 3/8"	Metro PCS	175	(3) T-Frames (Andrew QT-SF10-2-72)
159.5	(6) Decibel DB980H90E-M	(6) 1-5/8"	Sprint	159.5	(3) 15.5' T-Frames
150.5	(3) EMS RR65-18-02DP (6) Remec S20057A1 TMAs	(6) 1-5/8"	T-Mobile	150.5	(3) 15' T-Frames
141.5	(3) Antel BXA-70063/6CF (6) Rymsa AT-41-645TX (3) Rymsa MGD5-800T2 (6) RFS FD9R6004/2C-3L Diplexers	(12) 1-5/8"	Verizon	141.5	(3) 13.5' T-Frames
130	(3) Powerwave 7770 (1) KMW AM-X-CD-16-65-00T (1) KMW AM-X-CD-14-65-00T (1) Andrew SBNH 1D6565C (6) Powerwave LGP21401 TMAs (6) Ericsson RRUS-11 RRUs (1) Raycap DC6-48-60-18-8F Surge Arrestor	(12) 1-1/4" (2) DC Cables (1) Fiber Cable	AT&T	130	(3) 12' T-Frames
76.5	(1) GPS (7.5" x 3")	(1) 1/2'	Verizon	76.5	(1) 38" Standoff

Proposed Loading:

Antenna Elevation (ft)	Description	Coax and Lines	Carrier	Mount Elevation (ft)	Mount Type
160	(3) RFS APXVSPP18-C-A20 (3) ALU 1900MHz RRUs (3) ALU 800MHz RRUs (3) ALU 800MHz Filters (4) RFS ACU-A20-N RETs	(3) 1-1/4"	Sprint	159.5	(3) 15.5' T-Frames

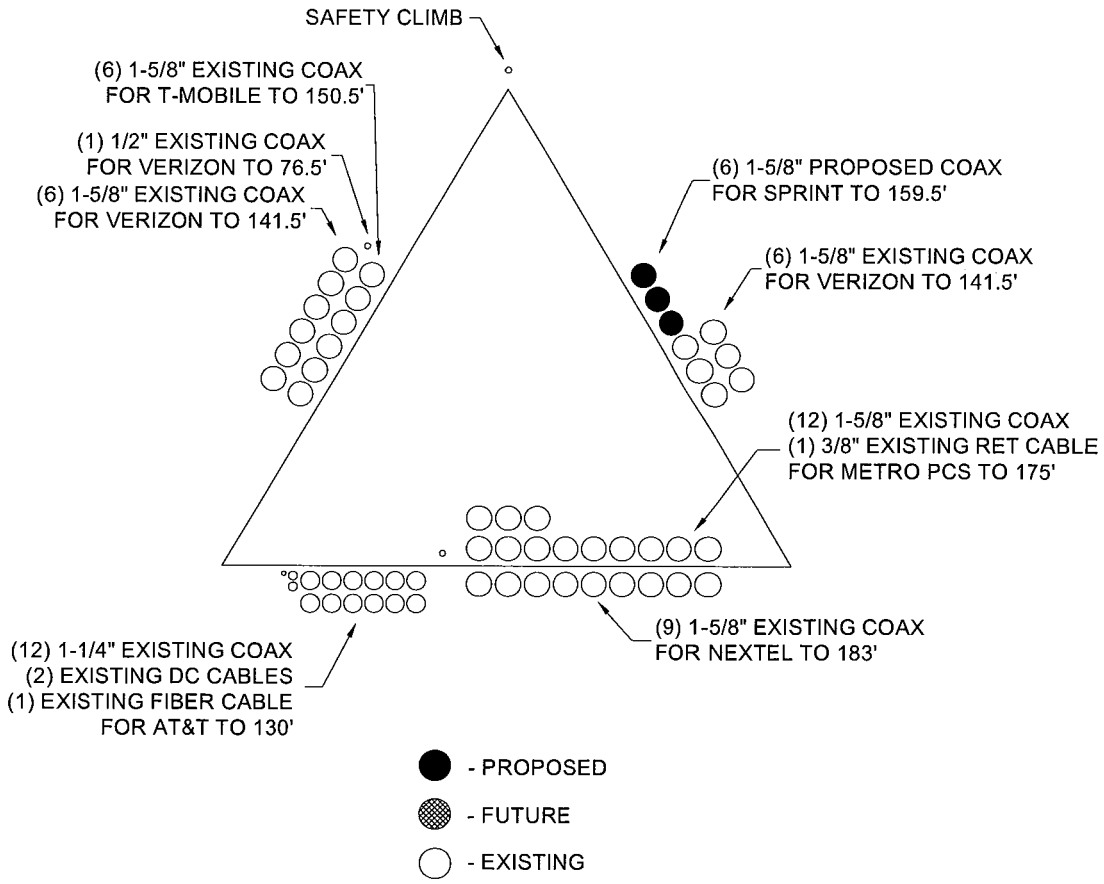


Figure 1 – Coax Layout

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 (assumed)
Diagonals	36 ksi (assumed)
Horizontals	36 ksi (assumed)

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

If the assumptions outlined in this report differ from actual field conditions, FDH 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	190 - 170	Leg	ROHN 3 EH	27.4	Pass
		Diagonal	L2x2x1/4	20.4 46.8 (b)	Pass
		Top Girt	L2x2x1/4	0.5	Pass
		Bottom Girt	L2x2x1/4	4.3	Pass
T2	170 - 150	Leg	ROHN 3 EH	62.7	Pass
		Diagonal	L2x2x1/4	36.4 84.6 (b)	Pass
		Top Girt	L2x2x1/4	16.4	Pass
		Bottom Girt	L2x2x1/4	7.8	Pass
		Guy A@167.227	7/8	54.1	Pass
		Guy B@167.227	7/8	54.5	Pass
		Guy C@167.227	7/8	54.5	Pass
T3	150 - 130	Leg	ROHN 2.5 X-STR	100.4	Pass
		Diagonal	ROHN TS1.5x16 ga	55.2	Pass
		Top Girt	ROHN TS1.5x16 ga	4.0	Pass
		Bottom Girt	ROHN TS1.5x16 ga	6.2	Pass
T4	130 - 110	Leg	ROHN 2.5 X-STR	96.5	Pass
		Diagonal	ROHN TS1.5x11 ga	50.6 54.4 (b)	Pass
		Top Girt	ROHN TS1.5x11 ga	10.9	Pass
		Bottom Girt	ROHN TS1.5x11 ga	7.4	Pass
T5	110 - 90	Leg	ROHN 3 EH	74.9	Pass
		Diagonal	ROHN TS1.5x11 ga	76.0 83.0 (b)	Pass
		Top Girt	ROHN TS1.5x11 ga	9.1	Pass
		Bottom Girt	ROHN TS1.5x11 ga	15.9	Pass
		Guy A@92.7734	5/8	70.3	Pass
		Guy B@92.7734	5/8	70.9	Pass
		Guy C@92.7734	5/8	70.9	Pass
T6	90 - 70	Leg	ROHN 3 EH	73.3	Pass
		Diagonal	ROHN TS1.5x16 ga	91.8	Pass

Section No.	Elevation ft	Component Type	Size	% Capacity	Pass Fail
				98.6 (b)	
		Top Girt	ROHN TS1.5x16 ga	12.3	Pass
		Bottom Girt	ROHN TS1.5x16 ga	9.5	Pass
T7	70 - 50	Leg	ROHN 3 EH	72.3	Pass
		Diagonal	ROHN TS1.5x11 ga	50.3 55.0 (b)	Pass
		Top Girt	ROHN TS1.5x11 ga	14.7	Pass
		Bottom Girt	ROHN TS1.5x11 ga	4.7	Pass
T8	50 - 35	Leg	ROHN 3 EH	75.3	Pass
		Diagonal	ROHN TS1.5x16 ga	33.3	Pass
		Top Girt	ROHN TS1.5x16 ga	4.8	Pass
		Bottom Girt	ROHN TS1.5x16 ga	3.2	Pass
T9	35 - 20	Leg	ROHN 3 EH	74.7	Pass
		Diagonal	ROHN TS1.5x16 ga	58.1 61.8 (b)	Pass
		Top Girt	ROHN TS1.5x16 ga	4.5	Pass
		Bottom Girt	ROHN TS1.5x16 ga	7.0	Pass
T10	20 - 5	Leg	ROHN 3 EH	66.0	Pass
		Diagonal	ROHN TS1.5x11 ga	42.9 46.8 (b)	Pass
		Top Girt	ROHN TS1.5x11 ga	5.7	Pass
		Bottom Girt	ROHN TS1.5x11 ga	20.8	Pass
T11	5 - 0	Leg	ROHN 3 EH	68.8	Pass
		Horizontal	L3x3x1/4	20.3	Pass

Table 4 – Maximum Base Reactions

	Current Analysis *(ANSI/TIA-222-G)**		Original Design *(TIA/EIA-222-F)*	
Reaction	Horizontal	Vertical	Horizontal	Vertical
Tower Base	4 k	183 k	---	173 k
Anchor @ 150'	63 k	55 k	66 k	59 k

*Foundations determined adequate per independent analysis.

GENERAL COMMENTS

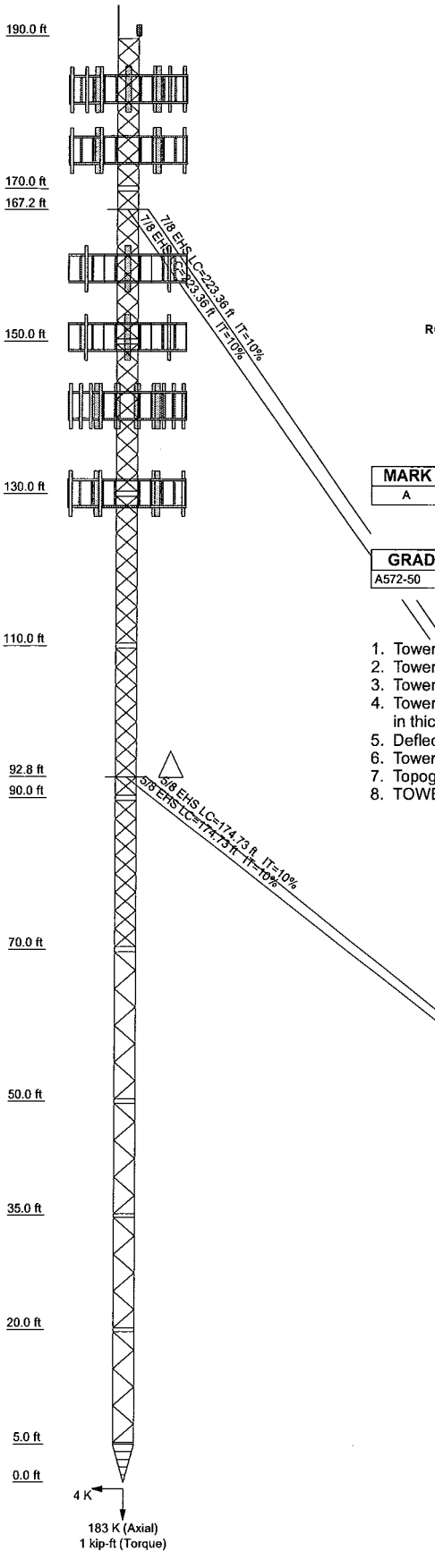
This engineering analysis is based upon the theoretical capacity of the structure. It is not a condition assessment of the tower and its foundation. It is the responsibility of SBA Network Services, Inc. to verify that the tower modeled and analyzed is the correct structure (with accurate antenna loading 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.

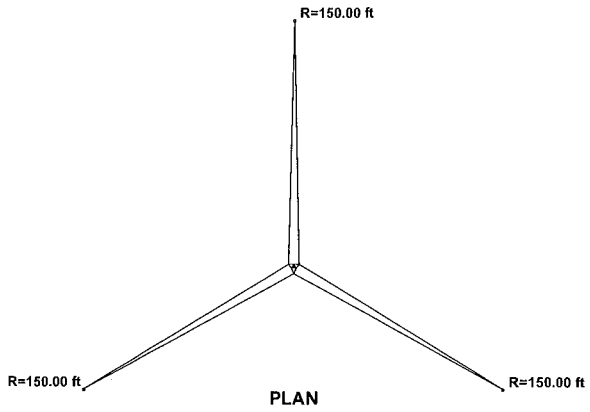
LIMITATIONS

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	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
Legs					ROHN 3 EH			ROHN 2.5 X-STR		ROHN 3 EH	
Leg Grade							A572-50				
Diagonals	N.A.	A	ROHN TS1.5x16 ga		ROHN TS1.5x11 ga	ROHN TS1.5x16 ga	ROHN TS1.5x11 ga		ROHN TS1.5x16 ga	L2x2x1/4	
Diagonal Grade	N.A.						A36				
Top Girts	N.A.	A	ROHN TS1.5x16 ga		ROHN TS1.5x11 ga	ROHN TS1.5x16 ga	ROHN TS1.5x11 ga		ROHN TS1.5x16 ga	L2x2x1/4	
Bottom Girts	N.A.	A	ROHN TS1.5x16 ga		ROHN TS1.5x11 ga	ROHN TS1.5x16 ga	ROHN TS1.5x11 ga		ROHN TS1.5x16 ga	L2x2x1/4	
Horizontals	B						N.A.				
Face Width (ft)											3.41667
# Panels @ (ft)	5 @ 1						74 @ 2.40885				
Weight (K)	10.5	0.3	0.6	0.5	0.5	0.8	1.8	0.9	0.7	2.1	1.3





SYMBOL LIST

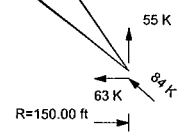
MARK	SIZE	MARK	SIZE
A	ROHN TS1.5x11 ga	B	L3x3x1/4

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 London County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-G Standard.
3. Tower designed for a 120 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 100.4%



ALL REACTIONS ARE FACTORED

FDH Engineering, Inc.
6521 Meridien Drive
Raleigh, North Carolina
Phone: (919) 755-1012
FAX: (919) 755-1031
Tower Analysis

Job: Montville 3, CT10016-A			
Project: 12-03634E S3			
Client: SBA Network Services, Inc.	Drawn by: Randy Williams	App'd:	
Code: TIA-222-G	Date: 10/05/12	Scale: NTS	
Path: C:\Users\Randy Williams\Desktop\Montville 3_CT\S3_SA_SNV\Analysis\Montville 3_CT_CT10016-A (F).eri		Dwg No. E-1	

STRUCTURAL DESIGNS AND DETAILS FOR ANTENNA MOUNTS AND RRH MOUNTS COMPLETED BY COM-EX CONSULTANTS ON BEHALF OF ALCATEL-LUCENT ARE INCLUSIVE OF THE ENTIRE ANTENNA STRUCTURE, INCLUDING TOWERS (ANALYZED BY OTHERS), TOWER PLATFORMS, ARMS AND ALL OTHER ASPECTS OF THE STRUCTURE THAT WILL SUPPORT THE SPRINT NETWORK VISIONS EQUIPMENT DEPLOYMENT FOR THE INTERIM AND FINAL EQUIPMENT SCENARIOS.

Sprint® VISION

SITE NUMBER:

CT23XC400

SITE NAME:

MONTVILLE S.

SITE ADDRESS:

71 MOXLEY HILL ROAD
MONTVILLE, CT 06353

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 MAY BE DETERMINED BY TENANT AND/OR THE SERVICING UTILITY COMPANY IN COMPLIANCE WITH LOCAL LAWS AND REGULATIONS.

SBA SITE #: CT10016-A-03
SBA SITE NAME: MONTVILLE 3, CT

CONNECTICUT LAW REQUIRES TWO WORKING DAYS NOTICE PRIOR TO ANY EARTH MOVING ACTIVITIES BY CALLING 800-922-4455 OR DIAL 811

Sprint VISION
1 INTERNATIONAL BLVD, SUITE 800
MAHWAH, NJ 07495
PHONE: (201) 684-4000 FAX (201) 684-4223

Alcatel·Lucent
1 ROBBINS ROAD
WESTFORD, MA 01886
OFFICE: (978) 692-1153

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

COM-EX Consultants
4 SECOND AVENUE
SUITE 204
DENVILLE, NJ 07834
PHONE: 862.209.4300
FAX: 862.209.4301

INFORMATION ON THIS SET OF DRAWINGS IS NOT FOR OFFICIAL USE UNLESS ACCOMPANIED BY THE STAMPED SEAL & SIGNATURE OF A PROFESSIONAL ENGINEER

STATE OF CONNECTICUT · NICHOLAS D. BARILE · No. 29643 · LICENSED PROFESSIONAL ENGINEER

NICHOLAS D. BARILE
PROFESSIONAL ENGINEER. CT LIC. No. 29643

SITE INFORMATION

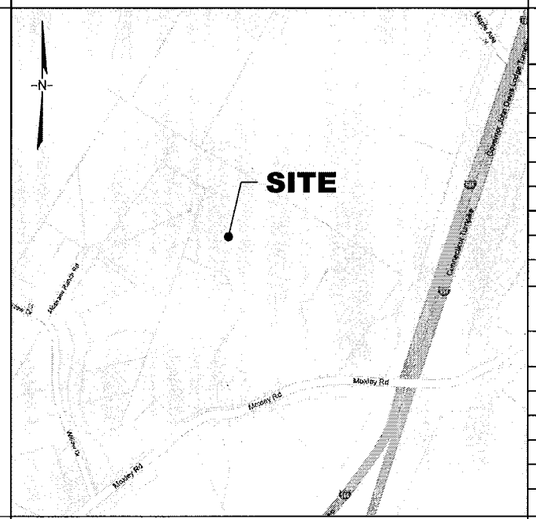
SITE ID NUMBER:	CT23XC400
SITE NAME:	MONTVILLE S.
SITE ADDRESS:	7 MOXLEY HILL ROAD MONTVILLE, CT 06353
COUNTY:	NEW LONDON COUNTY
COORDINATES: (*)	N 41° 26' 11.26" W 72° 7' 23.70
GROUND ELEVATION: (*)	187' AMSL
STRUCTURE TYPE:	GUYED TOWER
STRUCTURE HEIGHT:	±190' AGL
ANTENNA HEIGHT (**) (RAD CENTER):	SECTOR 1: ±159.5' SECTOR 2: ±159.5' SECTOR 3: ±159.5'

(*) - COORDINATES DETERMINED FROM SPRINT SITERRA DATABASE AND CONFIRMED BY ALCATEL-LUCENT USING GOOGLE EARTH

(**) - 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 THE ALU/SPRINT DATABASE

PROPERTY OWNER:	KEN THOMAS 15C TANTUMMAHEAG ROAD. OLD LYME, CT. 06371
STRUCTURE OWNER:	SBA TOWERS II, LLC 5900 BROKEN SOUND PARKWAY BOCA RATON, FL 33487
LOCAL POWER COMPANY:	CONNECTICUT LIGHT & POWER CO.
LOCAL TELEPHONE COMPANY:	COX
APPLICANT:	SPRINT 1 INTERNATIONAL BLVD - SUITE 800 MAHWAH, NJ 07495 PHONE: (201) 684-4000
APPLICANT REPRESENTATIVE:	ALCATEL-LUCENT 1 ROBBINS ROAD WESTFORD, MA 01886 PHONE: (978) 952-1600
SITE ACQUISITION REPRESENTATIVE:	SBA COMMUNICATIONS CORPORATION 33 BOSTON POST ROAD WEST, SUITE 320 MARLBOROUGH, MA 01752 (508) 251-1807
ARCHITECT/ENGINEER:	COM-EX CONSULTANTS 4 SECOND AVENUE DENVILLE, NJ 07834 PHONE (862) 209-4300

VICINITY MAP (NOT TO SCALE)



CONSTRUCTION DRAWING SHEET INDEX

SHEET NUMBER:	SHEET DESCRIPTION
T-1	TITLE SHEET
GN-1	GENERAL NOTES
A-1	COMPOUND PLAN, EQUIPMENT PLANS & ELEVATION
A-2	ANTENNA SCENARIOS & RF SYSTEM SCHEDULE
A-3	CONSTRUCTION DETAILS
A-4	RF DATA SHEET & ANTENNA SECTOR INSTALLATION DETAIL
A-5	CABINET AND ANTENNA WIRING DIAGRAM
E-1	ELECTRIC , TELCO , GROUNDING PLANS AND DETAILS
E-2	TYPICAL POWER AND GROUNDING ONE-LINE DIAGRAM

AAV DRAWING SHEET INDEX

SHEET NUMBER:	SHEET DESCRIPTION
T-1	TITLE SHEET
C-1	SITE SURVEY PHOTOS 1
C-2	SITE SURVEY PHOTOS 2
C-3	SITE PLAN
C-4	SPECIFICATIONS & DETAILS

SCHEDULE OF REVISIONS

REV. NO.	DATE	DESCRIPTION OF CHANGES
9		
8		
7		
6		
5		
4		
3		
2	11/05/12	REVISED PER CLIENT COMMENTS
1	09/26/12	CONSTRUCTION REVIEW

DRAWN BY:	GSB
CHECKED BY:	NB
SCALE:	AS NOTED
JOB NO:	12021-SBA

GENERAL NOTES

1. THIS IS AN UNMANNED TELECOMMUNICATIONS FACILITY AND NOT FOR HUMAN HABITATION:
   - HANDICAP ACCESS REQUIREMENTS ARE NOT REQUIRED
   - FACILITY HAS NO PLUMBING OR REFRIGERANTS
   - THIS FACILITY SHALL MEET OR EXCEED ALL FAA AND FCC REGULATOR REQUIREMENTS
2. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE PROJECT OWNER'S REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.
3. DEVELOPMENT AND USE OF THE SITE WILL CONFORM TO ALL APPLICABLE CODES AND ORDINACES.
   BUILDING CODE: 2003 IBC; 2003 IRC (STATE BUILDING CODE, 2005 CT SUPPLEMENT)
   ELECTRICAL CODE: 2005 NEC (NFPA-70)

SCOPE OF WORK

SPRINT PROPOSES TO MODIFY THIS EXISTING WIRELESS COMMUNICATIONS FACILITY AS FOLLOWS:

1. ONE (1) EXISTING CDMA OUTDOOR EQUIPMENT CABINET TO BE REPLACED WITH ONE (1) MULTIMODAL EQUIPMENT CABINET WITHIN THE EXISTING SPRINT LEASE AREA.
2. ONE (1) EXISTING POWERHOUSE CABINET TO BE REPLACED WITH ONE (1) BATTERY CABINETS.
3. ONE (1) PROPOSED FIBER DISTRIBUTION BOX (J-BOX) INSTALLED ON PROPOSED H-FRAME WITHIN EXISTING SPRINT LEASE AREA.
4. SIX (6) EXISTING ANTENNAS TO BE REPLACED WITH THREE (3) PROPOSED ANTENNAS AND SIX (6) RRHs INSTALLED ON EXISTING SPRINT ANTENNA FRAME ON EXISTING ANTENNA SUPPORT STRUCTURE.
5. SIX (6) EXISTING COAXIAL CABLES TO BE REPLACED WITH THREE (3) PROPOSED HYBRIFLEX CABLES
6. ONE (1) GPS ANTENNA TO REPLACE EXISTING GPS ANTENNA
7. EXISTING LOCAL EXCHANGE CARRIER LANDLINE BACKHAUL FACILITIES TO BE REPLACED WITH PROPOSED ALTERNATIVE ACCESS VENDOR (AAV) FIBER OPTIC FACILITIES INCLUDING PROPOSED OVERHEAD/UNDERGROUND CONDUITS AND NETWORK INTERFACE DEVICE.

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
R.F. ENGINEER	DATE
LANDLORD/ PROPERTY OWNER	DATE

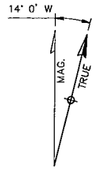
CT23XC400
MONTVILLE S.
71 MOXLEY HILL ROAD
MONTVILLE, CT 06353
NEW LONDON COUNTY

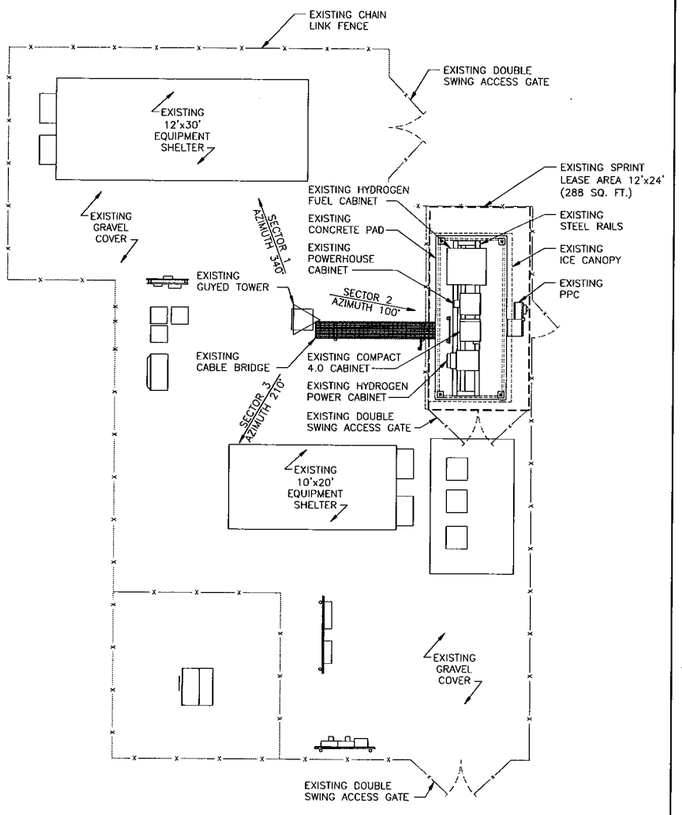
DRAWING TITLE:

TITLE SHEET

DRAWING SHEET: 1 OF 9

T-1

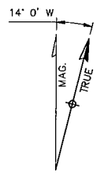


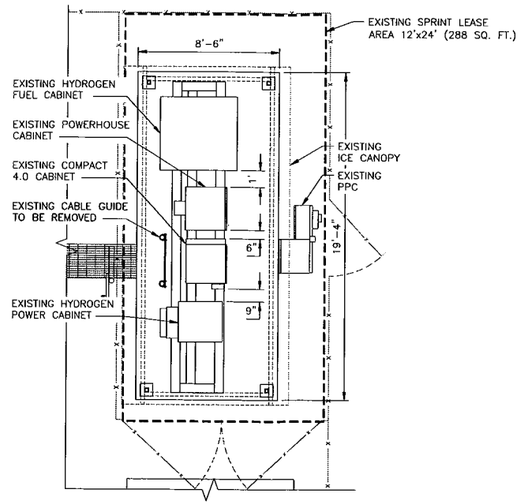


1 / A-1 EXISTING COMPOUND PLAN
SCALE: 1/8"=1'

GRAPHIC SCALE

(IN FEET)
1/8 Inch = 1 Foot
(24"x36" SHEET SIZE)

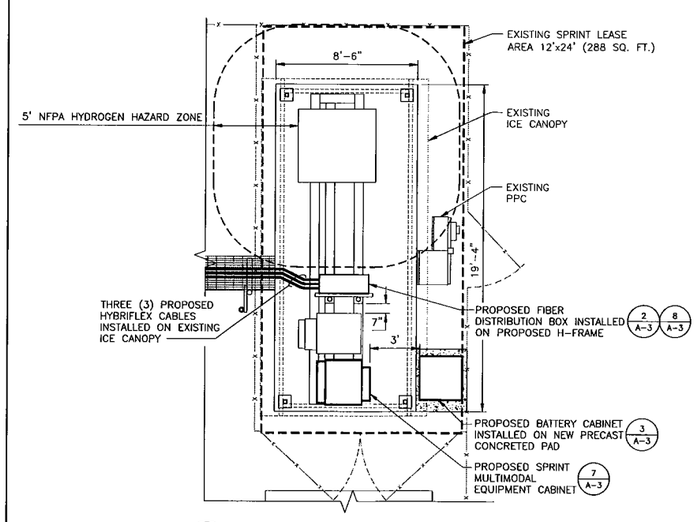




2 / A-1 EXISTING EQUIPMENT PLAN
SCALE: 1/4"=1'

GRAPHIC SCALE

(IN FEET)
1/4 Inch = 1 Foot
(24"x36" SHEET SIZE)

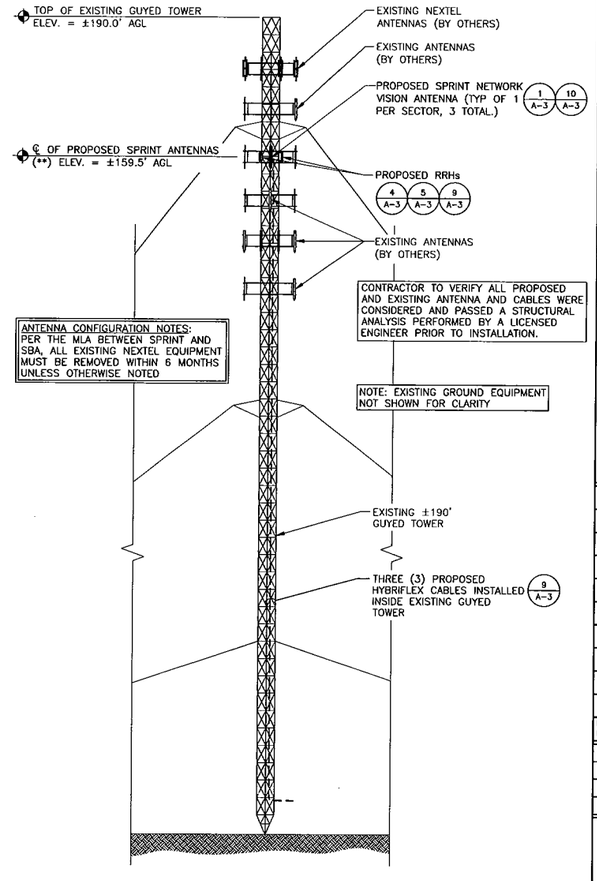


3 / A-1 FINAL EQUIPMENT PLAN
SCALE: 1/4"=1'

GRAPHIC SCALE

(IN FEET)
1/4 Inch = 1 Foot
(24"x36" SHEET SIZE)

(**) - 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 THE ALU/SPRINT DATABASE



4 / A-1 FINAL GUYED TOWER ELEVATION
SCALE: 1/16"=1'

GRAPHIC SCALE

(IN FEET)
1/16 Inch = 1 Foot
(24"x36" SHEET SIZE)

Sprint VISION
1 INTERNATIONAL BLVD, SUITE 800
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WESTFORD, MA 01886
OFFICE: (978) 692-1153

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

COM-EX Consultants
4 SECOND AVENUE
SUITE 204
DENVILLE, NJ 07834
PHONE: 862.209.4300
FAX: 862.209.4301

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STATE OF CONNECTICUT NICHOLAS D. BARILE No. 28643 LICENSED PROFESSIONAL ENGINEER

NICHOLAS D. BARILE
PROFESSIONAL ENGINEER CT LIC No 28643

SCHEDULE OF REVISIONS

REV. NO.	DATE	DESCRIPTION OF CHANGES
9		
8		
7		
6		
5		
4		
3		
2	11/05/12	REVISED PER CLIENT COMMENTS
1	09/26/12	CONSTRUCTION REVIEW

DRAWN BY:	GSB
CHECKED BY:	NB
SCALE:	AS NOTED
JOB NO:	12021-SBA

CT23XC400
MONTVILLE S.
71 MOXLEY HILL ROAD
MONTVILLE, CT 06353
NEW LONDON COUNTY

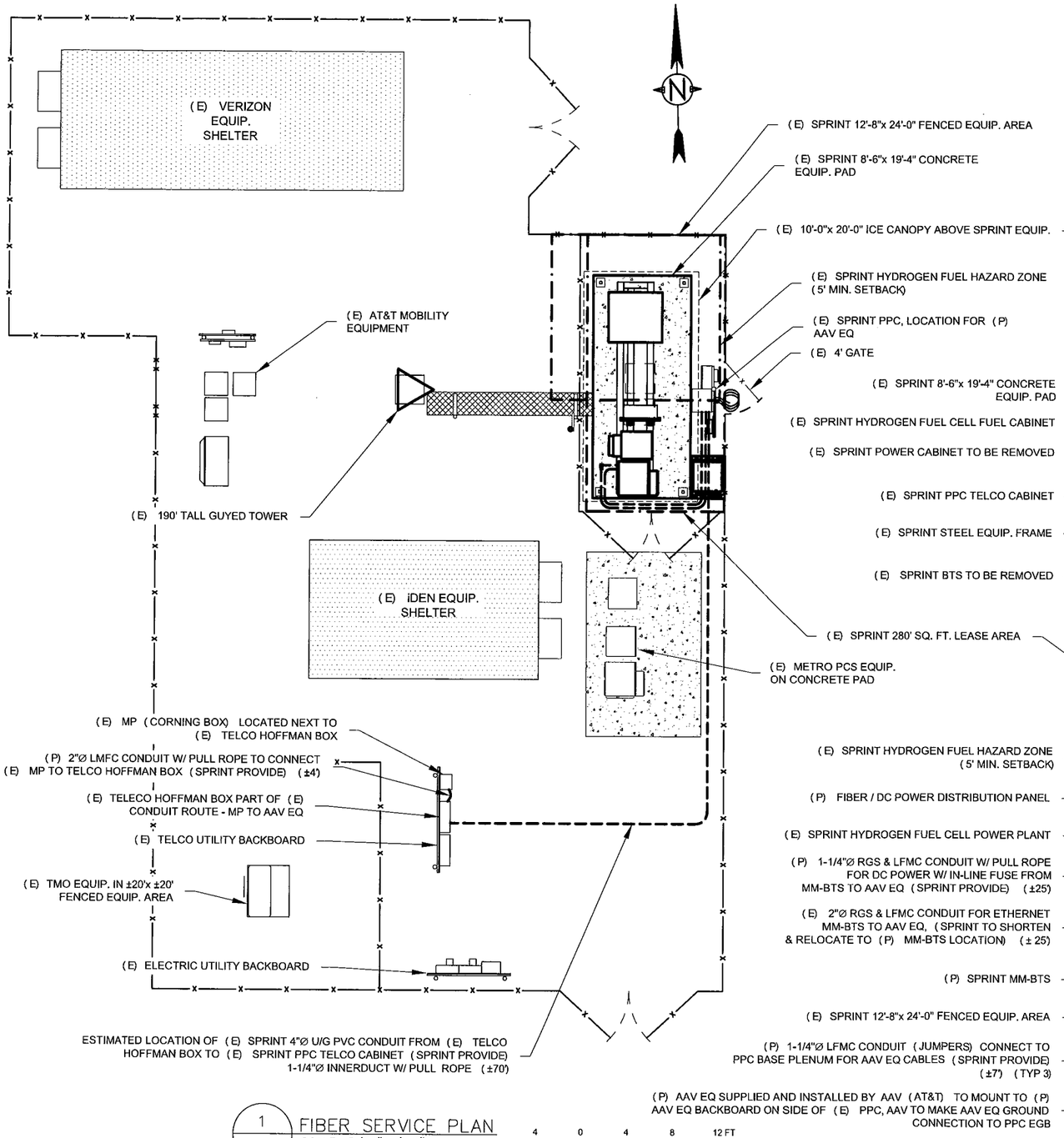
DRAWING TITLE:

COMPOUND PLAN, EQUIPMENT PLANS & ELEVATION

DRAWING SHEET: 3 OF 9

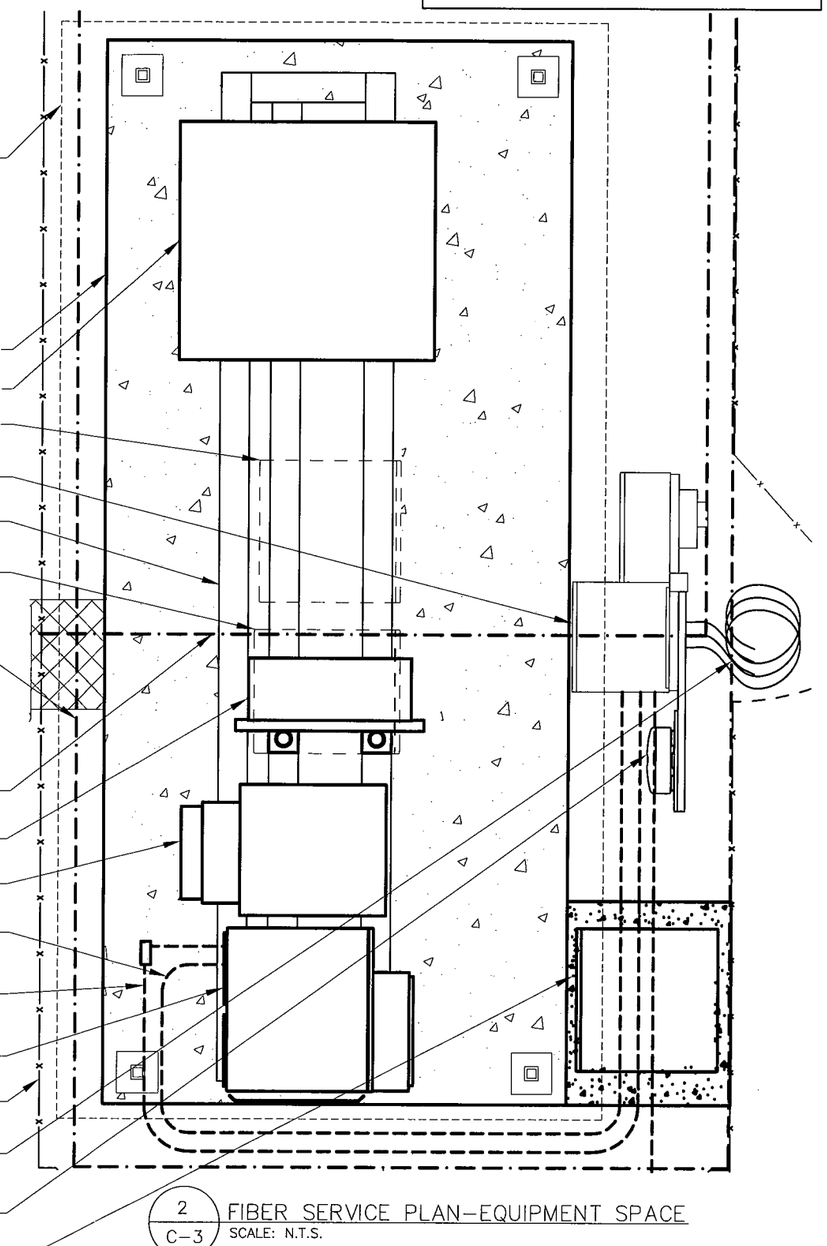
A-1

NOTE:
AAV VENDER (AT&T) TO SUPPLY AND INSTALL MULTI-MODAL FIBER CABLE THROUGH CONDUIT ROUTE - MP TO SPRINT PPC TELCO CABINET



1 C-3 FIBER SERVICE PLAN
SCALE: 3/32"=1'-0"

4 0 4 8 12 FT
SCALE 3/32"=1'-0"



2 C-3 FIBER SERVICE PLAN-EQUIPMENT SPACE
SCALE: N.T.S.

ABBREVIATIONS

AAV	ALTERNATE ACCESS VENDER
AGL	ABOVE GROUND LEVEL
BBU	BATTERY BACKUP UNIT
(E)	EXISTING
EGB	EQUIPMENT GROUND BAR
EQ	EQUIPMENT
FHH	FIBER HANDHOLE
MM-BTS	MULTI-MODAL BASE TRANSCEIVER STATION
MP	MEET POINT
(P)	PROPOSED
PPC	POWER PROTECTION CABINET
THB	TELCO HOFFMAN BOX
NTS	NOT TO SCALE

COM-EX Consultants
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PHONE: 862.209.4300
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NEW JERSEY STATE BOARD OF PROFESSIONAL ENGINEERS CERTIFICATE OF AUTHORIZATION # 24GA28078100

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TEL: (978) 952-1600

SCHEDULE OF REVISIONS

REV NO.	DATE	DESCRIPTION OF CHANGES
5		
4		
3		
2		
1	10/31/12	REVISION
0	09/14/12	INITIAL SUBMISSION

DRAWN BY:	ELP
CHECKED BY:	JCP
SCALE:	AS NOTED
JOB NO:	12021-SBA

CT23XC400

71 MOXLEY HILL ROAD
MONTVILLE, CT 06353

DRAWING TITLE:

SITE PLAN

DRAWING SHEET: 1 OF 4

C-3