



Daniel F. Caruso
Chairman

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

Internet: ct.gov/csc

January 20, 2009

Steven L. Levine
Real Estate Consultant
New Cingular Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, CT 06067-3900

RE: **EM-CING-121-081208** - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 160 Witch Meadow Road, Salem, Connecticut.

Dear Mr. Levine:

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 proposed coax shall be installed inside the monopole.
- The proposed tower mounted amplifiers and diplexers shall be installed directly behind the proposed antennas; and
- The Council shall be notified in writing that the tower mounted amplifiers, diplexers, and coax were installed as specified.

The proposed modifications are to be implemented as specified here and in your notice dated December 8, 2008, including the placement of all necessary equipment and shelters within the tower compound. 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.

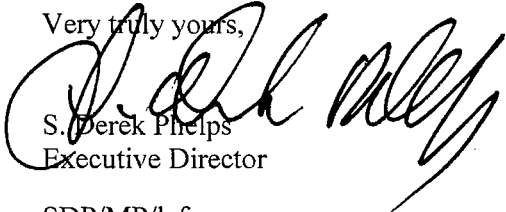
This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies 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. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.



CONNECTICUT SITING COUNCIL
Affirmative Action / Equal Opportunity Employer

Thank you for your attention and cooperation.

Very truly yours,

A handwritten signature in black ink, appearing to read "S. Derek Phelps". The signature is written in a cursive style with a large initial "S" and a long, sweeping underline.

S. Derek Phelps
Executive Director

SDP/MP/laf

c: The Honorable Robert T. Ross, First Selectman, Town of Salem
Tom Seidel/Linda Parquette, Town Planner, Town of Salem
SBA, Inc.

EM-CING-121-081208



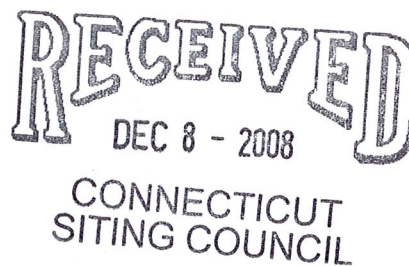
New Cingular Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 513-7636
Fax: (860) 513-7190

Steven L. Levine
Real Estate Consultant

ORIGINAL

HAND DELIVERED

December 8, 2008



Honorable Daniel F. Caruso, Chairman,
and Members of the Connecticut Siting Council
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: New Cingular Wireless PCS, LLC notice of intent to modify an existing tele-communications facility located at 160 Witch Meadow Road. Salem (owner, SBA)

Dear Chairman Caruso and Members of the Council:

In order to accommodate technological changes, implement Uniform Mobile Telecommunications System ("UMTS") capability, and enhance system performance in the State of Connecticut, New Cingular Wireless PCS, LLC ("AT&T") 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.

UMTS technology offers services to mobile computer and phone users anywhere in the world. Based on the Global System for Mobile (GSM) communication standard, UMTS is the planned worldwide standard for mobile users. UMTS, fully implemented, gives computer and phone users high-speed access to the Internet as they travel. They have the same capabilities even when they roam, through both terrestrial wireless and satellite transmissions.

Attached is a summary of the planned modifications, including power density calculations reflecting the change in AT&T's operations at the site. Also included is documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

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 height of the overall structure will be unaffected. Modifications to the existing site include all or some of the following as necessary to bring the site into conformance with the plan:

- Replacement of existing panel antennas with new antennas or, installation of additional antennas of a size required to accommodate UMTS.
- Installation of small tower mount amplifiers ("TMA's") and/or diplexers to the platform on which the panel antennas are mounted to enhance signal reception.
- Installation of additional or larger coaxial cables as required.
- Installation of an additional equipment cabinet in existing shelters, or on existing or enlarged concrete pads.
- Radome enlargement for flagpole and "stick" structures to accommodate larger antennas and additional associated equipment.

None of these modifications will extend the height of the tower.

2. The proposed changes will not extend the site boundaries. There will be no effect on the site compound other than some enlarged equipment pads as may be noted in the attachments.

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

4. Radio frequency power density may increase due to use of one or more GSM channel for UMTS transmissions. However, the changes 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, New Cingular Wireless 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 (860) 513-7636 with questions concerning this matter. Thank you for your consideration.

Sincerely,



Steven L. Levine
Real Estate Consultant

Attachments

**NEW CINGULAR WIRELESS
Equipment Modification**

160 Witch Meadow Road, Salem
Site Number 2195
Exempt Modification approved 10/00 and 8/02

Tower Owner/Manager: SBA

Equipment Configuration: Monopole

Current and/or Approved: Nine CSS DUO-1417-8686 panel antennas @ 185 ft AGL
Six TMA's and three diplexers @ 185ft
Nine runs 7/8 inch coax cable
Equipment Shelter

Planned Modifications: Remove all existing antennas, TMA's, diplexers, and coax
Install six Powerwave 7770 antennas (or equivalent) @ 185 ft
Install six TMA's and six diplexers @ 185 ft
Install twelve lines 1 5/8 inch coax

Power Density:

Worst-case calculations for existing wireless operations at the site indicate a radio frequency electromagnetic radiation power density, measured at ground level beside the tower, of approximately 7.2 % of the standard adopted by the FCC. As depicted in the second table below, the total radio frequency electromagnetic radiation power density following proposed modifications would be approximately 6.3 % of the standard.

Existing

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm ²)	Standard Limits (mW/cm ²)	Percent of Limit
Other Users *							2.41
AT&T TDMA *	185	880 - 894	16	100	0.0168	0.5867	2.87
AT&T GSM *	185	1900 Band	2	427	0.0090	1.0000	0.90
AT&T GSM *	185	880 - 894	2	296	0.0062	0.5867	1.06
Total							7.2%

* Per CSC records

Proposed

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm ²)	Standard Limits (mW/cm ²)	Percent of Limit
Other Users *							2.41
AT&T UMTS	185	880 - 894	1	500	0.0053	0.5867	0.90
AT&T GSM	185	1900 Band	2	427	0.0090	1.0000	0.90
AT&T GSM	185	880 - 894	4	296	0.0124	0.5867	2.12
Total							6.3%

* Per CSC records

Structural information:

The attached structural analysis demonstrates that the tower and foundation have adequate structural capacity to accommodate the proposed equipment modifications. (FDH Engineering, 12/3/08)



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500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 513-7636
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Steven L. Levine
Real Estate Consultant

December 8, 2008

Robert T. Ross, 1st Selectman
Town of Salem
Town Office Bldg. 270 Hartford Road
Salem, CT 06420

Re: Telecommunications Facility – 160 Witch Meadow Road

Dear Mr. Ross:

In order to accommodate technological changes, implement Uniform Mobile Telecommunications System (“UMTS”) capability, and enhance system performance in the State of Connecticut, New Cingular Wireless PCS, LLC (“AT&T”) 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 AT&T’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 AT&T’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 (860) 513-7636 or Mr. Derek Phelps, Executive Director, Connecticut Siting Council at (860) 827-2935.

Sincerely,

Steven L. Levine
Real Estate Consultant

Enclosure



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

195' Monopole

**Site Name: North Salem
Site ID: CT01916-S**

2195

160 WITCH MEADOW RD

FDH Project Number 08-11115E S1

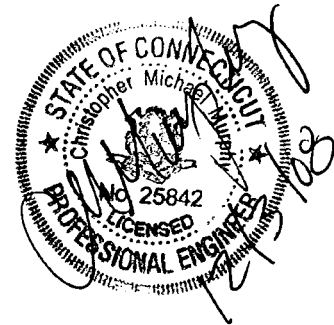
Prepared By:

James Mathewson III, EI
Project Engineer

Reviewed By:

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

FDH Engineering, Inc.
2730 Rowland Rd., Suite 100
Raleigh, NC 27615
(919)-755-1012
info@fdh-inc.com



December 3, 2008

Prepared pursuant to ANSI T14-222-G Structural Standards for Antenna Supporting Structures and Antennas

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EXECUTIVE SUMMARY

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

- ❑ Semaan Engineering Solutions, Inc. (Project No. CT-01916) structural analysis and modification package dated May 6, 2002
- ❑ Fred A. Nudd Corporation (Project No. 7014) original design drawings dated February 2, 2000
- ❑ FDH Engineering, Inc. (Project No. 07-06232E) structural analysis report dated June 28, 2007
- ❑ SBA Network Services, Inc.

The *basic design wind speed* per *ANSI/TIA-222-G* standards is 120 mph without ice and 50 mph with 3/4" radial ice.

Conclusions

With the existing and proposed antennas from AT&T in place at 185 ft, the tower meets the requirements of the *ANSI/TIA-222-G* standards. Furthermore, provided the foundation was designed and constructed to support the original design reactions (see Fred A. Nudd Corporation Project No. 7014), the foundation 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 is accurate (i.e., the steel data, tower layout, existing antenna loading, and proposed antenna loading) and that the tower was properly erected and maintained per the original design drawings.

Recommendations

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

1. The proposed coax should be installed inside the monopole.
2. The proposed TMAs and Diplexers should be installed directly behind the proposed antennas.

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 should be contacted to perform a revised analysis.*

Table 1 – Appurtenance Loading

Existing Loading:

No.	Centerline Elevation (ft)	Coax and Lines ¹	Carrier	Mount Type	Description
1-6	195	(15) 1-5/8"	Sprint	Low Profile Platform	(6) Decibel DB980H90E-M (6) EMS RR90-11-00DBL
7-15	185	(9) 7/8" (1) 1/2" ²	AT&T	T-Arm	(9) CSS DUO4-8670 (6) TMA (3) Diplexers (1) GPS
16	175	---	AT&T	Low Profile Platform	---

¹ The existing coax is located inside the pole's shaft, unless otherwise noted.

² The existing loading for AT&T at 185 ft will be altered. See the proposed loading below.

Proposed Loading:

No.	Centerline Elevation (ft)	Coax and Lines	Carrier	Mount Type	Description
1-6	185	(12) 1 5/8" ¹	AT&T	T-Arm	(6) Powerwave 7770.00 (6) TMA (6) Diplexers

¹ This represents the final configuration for AT&T at 185 ft. According to the information provided by SBA, AT&T will remove (9) CSS DUO4-8670, (6) TMAs, (3) Diplexers, (1) GPS, (9) 7/8" coax and (1) 1/2" coax and install (6) Powerwave 7770.00 antennas, (6) Powerwave LGP21401 TMAs, (6) Diplexers and (12) 1 5/8" coax.

RESULTS

Based on information obtained from the original design drawings, the yield strength of steel for individual members was as follows:

Table 2 - Material Strength

Member Type	Yield Strength
Tower Shaft Sections	36 & 65 ksi
Base Plate	50 ksi
Anchor Bolts	105 ksi

Table 3 displays the ratio (as a percentage) of factored 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 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
L1	195 - 180	Pole	TP24x24x0.281	37.3	Pass
L2	180 - 140	Pole	TP33.52x24x0.25	73.0	Pass
L3	140 - 130	Pole	TP34.6875x33.52x0.313	63.8	Pass
L4	130 - 125	Pole	TP36.47x33.4778x0.313	69.5	Pass
L5	125 - 93	Pole	TP44.09x36.47x0.375	69.9	Pass
L6	93 - 85	Pole	TP44.6875x44.09x0.438	63.1	Pass
L7	85 - 41	Pole	TP54.5x43.5128x0.438	75.9	Pass
L8	41 - 0	Pole	TP64.5x52.0217x0.438	82.8	Pass
			Anchor Bolts	OK	Pass
			Base Plate	OK	Pass

Table 4 – Maximum Base Reactions

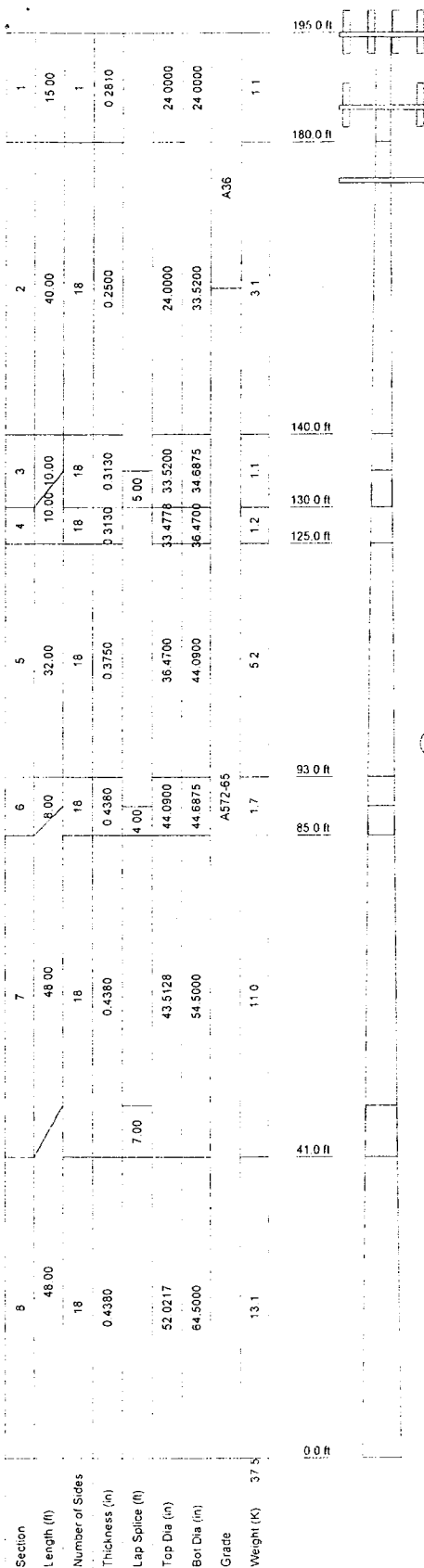
Load Type	Current Analysis (ANSI/TIA-222-G)	Original Design (TIA/EIA-222-F)
Axial	77 k	49 k
Shear	50 k	44 k
Moment	5,473 k-ft	6,090 k-ft

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.



DESIGNED APPURTENANCE LOADING

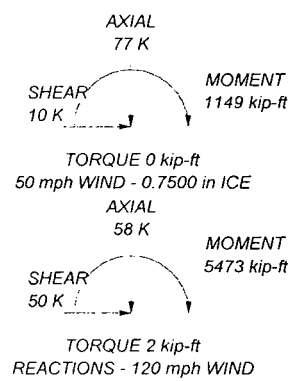
TYPE	ELEVATION	TYPE	ELEVATION
13' Low Profile Platform (Monopole)	195	(2) Diplexer	185
(2) RR90-11-00DBL	195	(2) Diplexer	185
(2) RR90-11-00DBL	195	(2) LGP21401	185
(2) RR90-11-00DBL	195	(2) LGP21401	185
(2) DB980H90E-M	195	(2) LGP21401	185
(2) DB980H90E-M	195	(2) Empty Pipe Mount	185
(2) DB980H90E-M	195	(2) Empty Pipe Mount	185
13' Low Profile Platform (Monopole)	185	(2) Empty Pipe Mount	185
(2) 7770.00	185	13' Low Profile Platform (Monopole)	175
(2) 7770.00	185	(4) Empty Pipe Mount	175
(2) 7770.00	185	(4) Empty Pipe Mount	175
(2) Diplexer	185	(4) Empty Pipe Mount	175

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A36	36 ksi	58 ksi	A572-65	65 ksi	80 ksi

TOWER DESIGN NOTES

1. Tower is located in New London County, Connecticut.
2. Tower designed for Exposure C 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. Existing modifications were not considered in the tower capacity, but were included in the wind loading.
7. TOWER RATING: 82.8%



<p>FDH Engineering, Inc. 2730 Rowland Road Raleigh, North Carolina Phone: (919) 755-1012 FAX: (919) 755-1031</p>	Job: North Salem, CT Site ID: CT01916-S Project: 08-1115E S1
	Client: SBA Network Services Drawn by James Mathewson III, EIT App'd
	Code: TIA-222-G Date: 12/03/08 Scale: NTS
	Path: _____ Dwg No. E