



# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

Ten Franklin Square  
New Britain, Connecticut 06051  
Phone: (860) 827-2935  
Fax: (860) 827-2950

August 8, 2002

Peter W. van Wilgen  
SNET Mobility, LLC  
500 Enterprise Drive  
Rocky Hill, CT 06067-3900

RE: **EM-CING-005-023-066-092-162-020711** - SNET Mobility, LLC notice of intent to modify existing telecommunications facilities located in Barkhamsted, Canton, Harwinton, New Hartford, and Winchester, Connecticut.

Dear Mr. van Wilgen:

At a public meeting held on August 1, 2002, the Connecticut Siting Council (Council) acknowledged your notice to modify these existing telecommunications facilities, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated July 11, 2002. 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 sites that would not increase tower heights, extend the boundaries of the tower site, increase noise levels at the tower site boundaries by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundaries to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. These facilities have also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on these towers.

This decision is under the exclusive jurisdiction of the Council. Any additional change to these facilities 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.

Thank you for your attention and cooperation.

Very truly yours,

*MAG/laf*

Mortimer A. Gelston  
Chairman

MAG/laf

c: See attached list.

List Attachment.

- c: Honorable Michael D. Fox, First Selectman, Town of Barkhamsted
- Karl Nilsen, Zoning Enforcement Officer, Town of Barkhamsted
- Frederick E. Turkington, Jr., Chief Administrative Officer, Town of Canton
- Eric Barz, Town Planner, Town of Canton
- Honorable Mary B. Tomolonius, First Selectman, Town of Canton
- Honorable Marie M. Knudsen, First Selectman, Town of Harwinton
- William J. Tracy, Jr., Planning Chairman, Town of Harwinton
- Honorable William F. Baxter, First Selectman, Town of New Hartford
- Karl Nilsen, Zoning Enforcement Officer, Town of New Hartford
- Honorable John F. Arcelaschi, Mayor, Town of Winchester
- Margaret A. Johnson, Town Manager, Town of Winchester
- Anthony Cannavo, Planning and Zoning Chairman, Town of Winchester



SNET Mobility, LLC  
500 Enterprise Drive  
Rocky Hill, Connecticut 06067-3900  
Phone: (860) 513-7730  
Fax: (860) 513-7190

Peter W. van Wilgen  
Senior Manager – Construction

HAND DELIVERED

EM-CING-005-023-066-092-162-020711

July 11, 2002

Mr. Mortimer A. Gelston, Chairman  
Connecticut Siting Council  
10 Franklin Square  
New Britain, Connecticut 06051

RECEIVED  
JUL 11 2002  
CONNECTICUT  
SITING COUNCIL

Re: SNET Mobility, LLC notice of intent to modify existing telecommunications facilities located in Harwinton, Canton, Barkhamsted, New Hartford, and Winchester

Dear Mr. Gelston:

In order to accommodate technological changes, implement E-911 capability and enhance system performance, SNET Mobility, LLC ("SNET" or "Cingular Wireless") plans to modify the antenna configurations at 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 each of the municipalities in which an affected cell site is located.

Attached are summary sheets detailing the planned changes, including power density calculations reflecting the change in the effect of Cingular's operations at each site. Also included is documentation of the structural sufficiency of each tower to accommodate the revised antenna configuration.

The changes to the facilities do not constitute modifications as defined in Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facilities will not be significantly changed or altered. Rather, the planned changes to the facilities fall squarely within those activities explicitly provided for in R.C.S.A. Section 16-50j-72(b)(2).

Mr. Mortimer A. Gelston

July 11, 2002

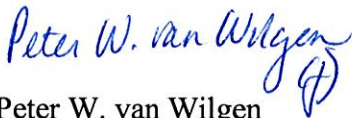
Page 2

1. The height of the overall structure will be unaffected. At almost all sites, new panel antennas approximately the same size will replace those previously installed. Tower mount amplifiers, approximately 5" x 9" x 13", will be added to the platform on which the panel antennas are mounted to enhance signal reception at the cell site. In addition, the mandated provision of E-911 capability will require installation of one LMU ("location measurement unit"), approximately 5 inches high, on either the tower, the equipment shelter or the ice bridge. One GPS receive-only antenna will be attached to the equipment shelter at each site. None of the 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.
3. The proposed changes will not increase the noise level at the existing facility by six decibels or more.
4. Radio frequency power density will increase due to use of additional channels broadcasting at higher power. 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, Cingular Wireless respectfully submits that the proposed changes at the referenced sites constitute exempt modifications under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (860) 513-7730 with questions concerning this matter. Thank you for your consideration.

Sincerely,



Peter W. van Wilgen  
Senior Manager - Construction

Enclosures

**CINGULAR WIRELESS**  
**Antenna Modification**

**Site Address:** 159 Weingart Road, Harwinton  
Docket No. 138

**Tower Owner/Manager:** Springwich Cellular Limited Partnership;  
managed by SpectraSite Communications, Inc.

**Antenna configuration** Antenna center line – 185'

**Current and/or approved:** 9 Allgon 7120.16 or comparable

**Planned:** 9 CSS DUO4-8670 or comparable  
6 tower mount amplifiers  
1 LMU (at 46.5')

**Power Density:**

Calculations for Cingular's current operations at the site indicate a radio frequency electromagnetic radiation power density, measured at the tower base, of approximately 3.4% of the standard adopted by the FCC. As depicted in the second table below, the total radio frequency electromagnetic radiation power density for Cingular's planned operations would be approximately 4.8%, or an additional 1.4% of the standard.

Cingular Current

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm <sup>2</sup> )	Standard Limits (mW/cm <sup>2</sup> )	Percent of Limit
SNET	185	880 - 894	19	100	0.0200	0.5867	3.4

Cingular Planned

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm <sup>2</sup> )	Standard Limits (mW/cm <sup>2</sup> )	Percent of Limit
SNET TDMA	185	880 - 894	16	100	0.0168	0.5867	2.9
SNET GSM	185	880 - 894	2	296	0.0062	0.5867	1.1
SNET GSM	185	1930 - 1935	2	427	0.0090	1.0000	0.9
<b>Total</b>							<b>4.8%</b>

**Structural information:** Please see attached.



RE: CT-0038 [Harwinton]  
 Structural Evaluation of 182' Monopole  
 159 Weingart Road  
 Harwinton, CT 06791  
 Litchfield County

Date: May 21, 2002

SpectraSite Engineering has performed a *Level 1 evaluation*<sup>1</sup> for the above-noted tower. The evaluation was based on the requirements of the TIA/EIA-222-F Standard for a basic wind speed of 80 mph without ice and 75% of the wind load with 1/2" radial ice.

Table 1. Existing and Proposed Antennas

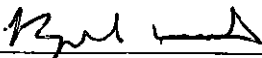
ELEVATION (Ft-AGL)	ANTENNA	CARRIER	COAX*	NOTES
185	(9) Allgon 71201605 on Platform Mount with Handrails	Cingular	(9) 7/8"	Remove Existing
185	(9) CSS DUO4-8670 (6) CSS ADC Amplifiers on Platform Mount with Handrails	Cingular	(9) 7/8"	Proposed Replacement
46.5	(1) Nokia CS7218701 On Standoff Mount	Cingular	(1) 1/2"	Proposed

\*Coax installed inside pole.

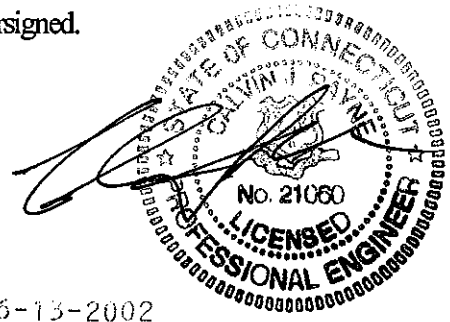
The subject tower and foundation are *adequate* to support the above stated loads and *in conformance* with the requirements of TIA/EIA-222-F Standard.

*The tower should be re-evaluated as future loads are added or if actual loads are found different from those mentioned in Table 1.*

Should any questions arise concerning this report please contact the undersigned.

  
 Raphael Mohamed, P. Eng.  
 Project Engineer

06-13-2002  
 Calvin J. Payne, P.E.  
 Chief Engineer



<sup>1</sup> Level 1 evaluation means:  
 • the applied (existing and proposed) loads (Table 1) on the tower are compared to the original design loads,  
 • the design wind criteria is compared to the recent code requirements.

**CINGULAR WIRELESS**  
**Antenna Modification**

**Site Address:** 4 Hoffman Road, Canton  
Docket No. 62

**Tower Owner/Manager:** Springwich Cellular Limited Partnership;  
managed by SpectraSite Communications, Inc.

**Antenna configuration** Antenna center line – 154'

**Current and/or approved:** 12 ALP 110 11 or comparable

**Planned:** 9 DUO4-8670 or comparable  
6 tower mount amplifiers  
1 LMU (at 38.75')

**Power Density:**

Calculations for Cingular's current operations at the site indicate a radio frequency electromagnetic radiation power density, measured at the tower base, of approximately 4.9% of the standard adopted by the FCC. As depicted in the second table below, the total radio frequency electromagnetic radiation power density for Cingular's planned operations would be approximately 7.0%, or an additional 2.1% of the standard.

Cingular Current

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm <sup>2</sup> )	Standard Limits (mW/cm <sup>2</sup> )	Percent of Limit
SNET	154	880 - 894	19	100	0.0288	0.5867	4.9

Cingular Planned

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm <sup>2</sup> )	Standard Limits (mW/cm <sup>2</sup> )	Percent of Limit
SNET TDMA	154	880 - 894	16	100	0.0243	0.5867	4.1
SNET GSM	154	880 - 894	2	296	0.0090	0.5867	1.5
SNET GSM	154	1930 - 1935	2	427	0.0129	1.0000	1.3
<b>Total</b>							<b>7.0%</b>

**Structural information:** Please see attached.



RE: CT-0024 [Cntn-Canton]  
 Structural Evaluation of 155' Monopole  
 4 Hoffmann Road  
 Canton, CT 06019  
 Hartford County

Date: May 21, 2002

SpectraSite Engineering has performed a *Level 1 evaluation*<sup>1</sup> for the above-noted tower. The evaluation was based on the requirements of the TIA/EIA-222-F Standard for a basic wind speed of **80 mph** without ice and 75% of the wind load with 1/2" radial ice.

Table 1. Existing and Proposed Antennas

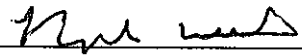
ELEVATION (Ft-AGL)	ANTENNA	CARRIER	COAX*	NOTES
163 156 154	(1) 12' Omni (1) 5' Yagi (9) Swedcom ALP-11011 on Platform Mount with Handrails	Cingular	(1) 7/8" (1) 7/8" (9) 7/8" [I]	Remove Existing
163 156 154 154	(1) 12' Omni (1) 5' Yagi (9) CSS DUO4-8670 (6) CSS ADC Amplifiers on Platform Mount with Handrails	Cingular	(1) 7/8" (1) 7/8" (9) 7/8" [I]	Proposed Replacement
114	(1) 12' Omni on Standoff Mount	TBD	(1) 1-5/8" [O]	Existing
38.75	(1) Nokia CS7218701 on Standoff Mount	Cingular	(1) 1/2"	Proposed

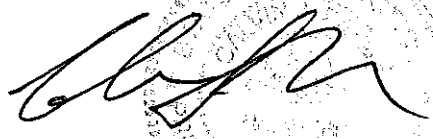
\*Coax installed inside monopole.

The subject tower and foundation are *adequate* to support the above stated loads and *in conformance* with the requirements of TIA/EIA-222-F Standard.

*The tower should be re-evaluated as future loads are added or if actual loads are found different from those mentioned in Table 1.*

Should any questions arise concerning this report please contact the undersigned.

  
 Raphael Mohamed, P. Eng.  
 Project Engineer

  
 06-13-2002  
 Calvin J. Payne, P.E.  
 Chief Engineer

<sup>1</sup> Level 1 evaluation means:  
 • the applied (existing and proposed) loads (Table 1) on the tower are compared to the original design loads,  
 • the design wind criteria is compared to the recent code requirements.



**CINGULAR WIRELESS  
Antenna Modification**

**Site Address:** Canton Springs Road, Canton  
tower share

**Tower Owner/Manager:** Canton Fire Department; managed by Verizon Wireless

**Antenna configuration** Antenna center line -- 130'

**Current and/or approved:** 12 DB846H80 or comparable

**Planned:** 9 CSS DUO4-8670 or comparable  
6 tower mount amplifiers  
1 LMU (at 112')

**Power Density:**

Calculations for Cingular's current operations at the site indicate a radio frequency electromagnetic radiation power density, measured at the tower base, of approximately 6.9% of the standard adopted by the FCC. As depicted in the second table below, the total radio frequency electromagnetic radiation power density for Cingular's planned operations would be approximately 9.8%, or an additional 2.9% of the standard.

Cingular Current

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm <sup>2</sup> )	Standard Limits (mW/cm <sup>2</sup> )	Percent of Limit
SNET	130	880 - 894	19	100	0.0404	0.5867	6.9

Cingular Planned

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm <sup>2</sup> )	Standard Limits (mW/cm <sup>2</sup> )	Percent of Limit
SNET TDMA	130	880 - 894	16	100	0.0340	0.5867	5.8
SNET GSM	130	880 - 894	2	296	0.0126	0.5867	2.1
SNET GSM	130	1930 - 1935	2	427	0.0182	1.0000	1.8
<b>Total</b>							<b>9.8%</b>

**Structural information:** Please see attached.

## 1. EXECUTIVE SUMMARY

This report summarizes the structural analysis of the existing 140' monopole located on 14 Canton Springs Road in Canton, Connecticut. The analysis was conducted in accordance with the TIA/EIA-222-F standard for wind velocity of 90 mph bare and 90 mph concurrent with 1/2" ice. The antenna loading considered in the analysis consists of all existing and proposed antennas, transmission lines, and ancillary items as outlined on the following page of this report. The proposed Cingular Wireless modification is to replace the existing Cingular Wireless antennas with the antennas listed below:

		<u>Antenna Centerline Elevation</u>
(9) DUO4-8670 antennas and (6) amplifiers with standard platform and (9) 7/8" coax cable within the monopole	Cingular	@ 130' elevation
(1) LMU GSM RX antenna with (1) 1/2" coax cable within the monopole	Cingular	@ 112' elevation

The results of the analysis indicate the structure to be in compliance with the proposed loading condition for the monopole. The monopole is considered feasible with the TIA/EIA-222-F wind load classification specified above and all the existing and proposed antenna loading. No further analysis was conducted on the tower foundation since the forces calculated were below the original design.

This analysis is based on:

- 1) Tower and foundation design prepared by Engineered Endeavors Incorporated job no. 4960 dated May 13, 1999 and May 21, 1999.
- 2) Antenna loading as specified on the following page of this report.
- 3) TIA/EIA-222-F wind load classification.

This report is only valid as per the assumptions and data utilized in this report for antenna loading, mounts and associated cables. The user of this report shall field verify the assumption of the antenna and mount configuration and that adequate space is available for routing the coaxial cable inside the monopole prior to installation. Notify the engineer immediately if any of the assumptions in this report are found to be other than specified.

If you should have any questions, please call.

Sincerely,

URS Corporation AES



Richard A. Sambor, P.E.  
Manager Facilities Design



RAS/mks

cc: Richard R. Johanson - Bechtel  
Doug Roberts - URS  
I. Artaiz, AIA - URS  
A. Abadjian, PM - URS  
CF/Book

**Introduction:**

A structural analysis of this 140' communications monopole was performed by URS Corporation AES (URS) for Cingular Wireless. The monopole is located at the Canton Fire Department on 14 Canton Springs Road in Canton, Connecticut.

The tower and foundation design was prepared by Engineered Endeavors Incorporated job no. 4960 dated May 13, 1999 and May 21, 1999.

This analysis was conducted to evaluate twist (rotation), sway (deflection), and stress on the monopole. The analysis was also used to find the effect of the forces to the foundation resulting from the antenna arrangement listed below.

The antenna and mount configuration:

Antenna Centerline Elevation

(1) Omnidirectional antenna with a 4' side arm mount and (1) 7/8" coax cable within the monopole	Town	@ 150' elevation
(9) DUO4-8670 antennas and (6) amplifiers with standard platform and (9) 7/8" coax cable within the monopole	Cingular (Proposed)	@ 130' elevation
(12) ALP9212 antenna with standard platform and (12) 1 5/8" coax cable within the monopole	Verizon	@ 120' elevation
(1)LMU GSM RX antenna with (1) 1/2" coax cable within the monopole	Cingular (Proposed)	@ 112' elevation
(12) Allgon 7130.16 antenna with standard platform and (12) 1-5/8" coax cable within the monopole	Nextel	@ 110' elevation
(3) RR90-17-02DP antenna with low profile platform and (6) 1-5/8" coax cable within the monopole	Voicestream	@ 100' elevation
(12) DB980F65 antenna with low profile platform and (12) 1-5/8" coax cable within the monopole	Sprint	@ 90' elevation
(6) Allgon 7250.03 antenna with (3) T-Arm mount with (12) 1-5/8" coax cable within the monopole	AT&T	@ 80' elevation
(1) GPS with (1) 7/8" coax cable	Sprint	@ 50' elevation

- Note:**
1. Porthole may be required. Installation of porthole shall be done per manufacturer suggestion.
  2. Cingular Wireless shall conduct verification on the assumption of the antenna and mount configuration and that adequate space is available for routing the coaxial cable inside the monopole prior to installation. Notify the engineer immediately if any of the assumptions in this report are found to be other than specified.

## **Structural Analysis:**

### Methodology:

The structural analysis was done in accordance with TIA/EIA-222-F June 1996, Structural Standard for Steel Antenna Towers and Antenna Supporting Structures, the American Institute of Steel Construction (AISC) and the Manual of Steel Construction; Allowable Stress Design (ASD).

The analysis was conducted using ERI Tower 2.0. Two load conditions were evaluated as shown below which were compared to allowable stresses according to AISC and TIA/EIA. The two load combinations were investigated in ERI Tower 2.0 to determine the stress, sway and rotation.

Load Condition 1 = 90 mph Wind Load (without ice) + Tower Dead Load  
Load Condition 2 = 90 mph Wind Load (with ice) + Ice Load + Tower Dead Load

The TIA/EIA standard permits one-third increase in allowable stresses for towers and monopoles less than 700 feet tall. For purposes of this analysis, allowable stresses of the monopole members were increased by one-third in computing the load capacity.

### **Evaluation of Monopole:**

Combined axial and bending stresses on the monopole structure were evaluated to compare with allowable stresses in accordance with AISC. The calculated stresses under the proposed loading were below the allowable stresses.

### Analysis Results:

Our analysis determined that the monopole will support the proposed new antenna arrangements under the analysis criteria outlined on the previous page. No further analysis was conducted on the tower foundation since the forces calculated were below the original design.

Our analysis for the proposed new antenna arrangement and load condition is provided in Appendix A.

### **Limitations/Assumptions:**

This report is based on the following:

1. Tower loading for antennas and mounts as listed in this report.
2. Tower is properly installed and maintained.
3. All members were as specified in the original design Documents and are in good condition.
4. All required members are in place.
5. All bolts are in place and are properly tightened.
6. Tower is in plumb condition.
7. All members are galvanized.
8. All tower members were properly designed, detailed, fabricated, and installed and have been properly maintained since erection.
9. Foundations were properly constructed to support original design loads as specified in the original design Documents.
10. All co-axial cable is installed within or outside the monopole, except as noted.

URS is not responsible for any modifications completed prior to or hereafter, which URS is not or was not directly involved. Modifications include but are not limited to:

1. Removing/Replacing antennas
2. Adding antennas and amplifiers

URS hereby states that this document represents the entire report and that it assumes no liability for any factual changes that may occur after the date of this report. All representations, recommendations, and conclusions are based upon information contained and set forth herein. If you are aware of any information which conflicts with that which is contained herein, or you are aware of any defects arising from original design, material, fabrication, or erection deficiencies, you should disregard this report and immediately contact URS. URS disclaims all liability for any representation, recommendation, or conclusion not expressly stated herein.

**CINGULAR WIRELESS  
Antenna Modification**

**Site Address:** New Hartford Road, a/k/a Rust Road, Barkhamsted  
Docket No. 182

**Tower Owner/Manager:** AT&T Wireless

**Antenna configuration** Antenna center line – 114'

**Current and/or approved:** 12 Allgon 7120.16 or comparable

**Planned:** 9 CSS DUO4-8670 or comparable  
3 tower mount amplifiers

**Power Density:**

Calculations for Cingular's current operations at the site indicate a radio frequency electromagnetic radiation power density, measured at the tower base, of approximately 9.0% of the standard adopted by the FCC. As depicted in the second table below, the total radio frequency electromagnetic radiation power density for Cingular's planned operations would be approximately 12.7%, or an additional 3.7% of the standard.

Cingular Current

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm <sup>2</sup> )	Standard Limits (mW/cm <sup>2</sup> )	Percent of Limit
SNET	114	880 - 894	19	100	0.0526	0.5867	9.0

Cingular Planned

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm <sup>2</sup> )	Standard Limits (mW/cm <sup>2</sup> )	Percent of Limit
SNET TDMA	114	880 - 894	16	100	0.0443	0.5867	7.5
SNET GSM	114	880 - 894	2	296	0.0164	0.5867	2.8
SNET GSM	114	1930 - 1935	2	427	0.0236	1.0000	2.4
<b>Total</b>							<b>12.7%</b>

**Structural information:** Please see attached.



June 26, 2002

Mr. Richard R. Johanson  
Project Manager-Bechtel  
175 Capitol Boulevard, Suite 100  
Rocky Hill, CT 06067

**Reference: Existing Telecommunications Facility  
Cingular Wireless Site No.: 1115  
127 New Hartford Road  
Barkhamsted, Connecticut  
F300002292.41**

Dear Mr. Johanson:

URS Corporation AES (URS) conducted a review and evaluated the existing 158' treepole tower structure located at 127 New Hartford Road in Barkhamsted, Connecticut. The purpose of this review was to evaluate the affect of the proposed modification to the existing Cingular Wireless antennas and mounts on the existing treepole structure. The treepole was designed by Paul J. Ford & Company, Job No.: 29200-1316. The treepole was manufactured by Summit Manufacturing, LLC, Job No.: 10916 dated September 5, 200. The treepole foundation was designed by Paul J. Ford & Company dated September 5, 2000. The treepole and its foundation were originally designed to support six telecommunication carriers. The proposed Cingular Wireless modifications are to replace the existing Cingular Wireless antennas with antennas listed below.

	<u>Antenna Center Elevation</u>
(9) DUO4-8670 antennas on (3) T Arm mounts and (3) MHA amplifiers with (9) 1 1/4" coaxial cable installed within the pole	Cingular 114'

It is our determination that the existing treepole and its foundation have sufficient structural capacity to support the presently installed carriers and the proposed Cingular Wireless modification as specified above. This evaluation is based on requirements of the TIA/EIA-222-F dated March 1996 and the Connecticut State Building Code dated 1999 and the latest supplement and amendments.

We have attached our structural report for this site outlining the criteria and assumptions used for this review. The user of this report shall review the attached report and field verify the antenna and mount criteria as specified in this report. Notify the engineer immediately if any field the assumptions in this report are found to be other than specified.

If you should have any questions, please call.

Sincerely,  
**URS Corporation AES**

  
Mohsen Sahirad, P.E.  
Senior Structural Engineer



MS/rmn

cc: Doug Roberts - URS  
Ignacio Artaiz - URS  
Alitz Abadjian - URS  
CF/Book

URS Corporation  
500 Enterprise Drive, Suite 3B  
Rocky Hill, CT 06067  
Tel: 860.529.8882  
Fax: 860.529.3991

**CINGULAR WIRELESS  
Antenna Modification**

**Site Address:** 200 Antolini Road, New Hartford  
Docket No. 184

**Tower Owner/Manager:** AT&T Wireless

**Antenna configuration** Antenna center line -- 113'

**Current and/or approved:** 12 Allgon 7120.16 or comparable

**Planned:** 9 CSS DUO4-8670 or comparable  
6 tower mount amplifiers

**Power Density:**

Calculations for Cingular's current operations at the site indicate a radio frequency electromagnetic radiation power density, measured at the tower base, of approximately 9.1% of the standard adopted by the FCC. As depicted in the second table below, the total radio frequency electromagnetic radiation power density for Cingular's planned operations would be approximately 12.9%, or an additional 3.8% of the standard.

Cingular Current

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm <sup>2</sup> )	Standard Limits (mW/cm <sup>2</sup> )	Percent of Limit
SNET	113	880 - 894	19	100	0.0535	0.5867	9.1

Cingular Planned

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm <sup>2</sup> )	Standard Limits (mW/cm <sup>2</sup> )	Percent of Limit
SNET TDMA	113	880 - 894	16	100	0.0451	0.5867	7.7
SNET GSM	113	880 - 894	2	296	0.0167	0.5867	2.8
SNET GSM	113	1930 - 1935	2	427	0.0240	1.0000	2.4
<b>Total</b>							<b>12.9%</b>

**Structural information:** Please see attached.





June 21, 2002

Mr. Richard R. Johanson  
Project Manager-Bechtel  
175 Capitol Boulevard, Suite 100  
Rocky Hill, CT 06067

**Reference: Existing Telecommunications Facility  
Cingular Wireless Site No.: 1117  
20 Antolini Road  
New Hartford, Connecticut  
F300002292.37**

Dear Mr. Johanson:

URS Corporation AES (URS) conducted a review and evaluated an existing 114' monopole tower structure scheduled to be extended, to a new height of 145'. The monopole is located at 20 Antolini Road, New Hartford, Connecticut. The purpose of this review was to evaluate the affect of the proposed modification to the existing Cingular Wireless antennas and mounts on the proposed extension to the monopole structure. The monopole was designed by Engineered Endeavors, Inc., File No.: 7671 (first 114'), approved December 01, 2000 and File No. 8859 (30' extension). The monopole foundation was designed by URS Corporation - Project No.: F300001682.04. The foundation design accounts for the future 30' extension. The monopole with extension and its foundation were designed to support six telecommunication carriers with (12) Allgon 7130.16 panel antennas on low profile platforms for each carrier at elevations 90', 100', 113', 125', 135', 145', two whips at 145' and a siren. The monopole will support Cingular Wireless antennas at 113' Nextel at 125', AT&T Wireless at 135', and Sprint PCS, Fire Department whips and siren at 145' (for details see the attached report). The proposed Cingular Wireless modifications are to replace the existing Cingular Wireless antennas with antennas listed below at the time of antenna relocation on the extended monopole.

		<u>Antenna Center Elevation</u>
(9) DUO4-8670 antennas on low profile platform amplifiers with (9) 7/8" coaxial cable installed within the pole	Cingular	113'

It is our determination that the 145' monopole and its foundation will have sufficient structural capacity to support the Cingular antennas, Nextel antennas, AT&T antennas, Sprint Antennas, one future unoccupied platform, two Fire Department whips, and a Fire Department siren. This evaluation is based on requirements of the TIA/EIA-222-F dated March 1996 and the Connecticut State Building Code dated 1999 and the latest supplement and amendments.

We have attached our structural review for this site outlining the criteria and assumptions used for this review. The user of this report shall review the attached report and filed verify antennas and mounts criteria as specified in this report. Notify the engineer immediately if any of the assumption in this report are found to be other than sepecified

If you should have any questions, please call.

Sincerely,  
**URS Corporation AES**

Mohsen Sahirad, P.E.  
Senior Structural Engineer

MS/mks

Enclosures

cc: Doug Roberts - URS  
Ignacio Artaiz - URS  
Alitz Abadjian - URS  
CF/Book



URS Corporation  
500 Enterprise Drive, Suite 3B  
Rocky Hill, CT 06067  
Tel: 860.529.8882  
Fax: 860.529.3991

**CINGULAR WIRELESS  
Antenna Modification**

**Site Address:** 15 Oakdale Avenue, Winchester  
Docket No. 138

**Tower Owner/Manager:** Springwich Cellular Limited Partnership;  
managed by SpectraSite Communications, Inc.

**Antenna configuration** Antenna center line – 184'

**Current and/or approved:** 12 DB846H80 or comparable

**Planned:** 12 CSS DUO4-8670 or comparable  
12 tower mount amplifiers  
1 LMU (at 46.5')

**Power Density:**

Calculations for Cingular's current operations at the site indicate a radio frequency electromagnetic radiation power density, measured at the tower base, of approximately 3.4% of the standard adopted by the FCC. As depicted in the second table below, the total radio frequency electromagnetic radiation power density for Cingular's planned operations would be approximately 4.9%, or an additional 1.5% of the standard.

Cingular Current

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm <sup>2</sup> )	Standard Limits (mW/cm <sup>2</sup> )	Percent of Limit
SNET	184	880 - 894	19	100	0.0202	0.5867	3.4

Cingular Planned

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm <sup>2</sup> )	Standard Limits (mW/cm <sup>2</sup> )	Percent of Limit
SNET TDMA	184	880 - 894	16	100	0.0170	0.5867	2.9
SNET GSM	184	880 - 894	2	296	0.0063	0.5867	1.1
SNET GSM	184	1930 - 1935	2	427	0.0091	1.0000	0.9
<b>Total</b>							<b>4.9%</b>

**Structural information:** Please see attached.



RE: CT-0042 [Winchester]  
 Structural Evaluation of 180' EEI Monopole  
 15 Oakdale Avenue  
 Winchester, CT 06511  
 Litchfield County

Date: May 22, 2002

SpectraSite Engineering has performed a *Level 1 evaluation*<sup>1</sup> for the above-noted tower. The evaluation was based on the requirements of TIA/EIA-222-F Standards for a basic wind speed of 80 mph without ice and 75% of the wind load with 1/2" radial ice.

Table 1. Existing and Proposed Antennas

Elevation (Fl. A.G.L.)	Antenna	Carrier	Transmission Lines*	Notes
188 185 184	(4) 10' Omni (1) 4 Yagi (12) Decibel DB846H80-SX w/ Platform & Handrails	Cingular	(17) 1-5/8" [I]	Remove Existing
188 185 184 184	(4) 10' Omni (1) 4 Yagi (12) CSS DU 043670 (12) CSS ADC Amplifiers w/ Platform & Handrails	Cingular	(17) 1-5/8" [I]	Proposed Replacement
174	(2) Antel LPD7905/4 (2) Antel RWA80012 (2) Allgon 7262.01 w/ Platform & Handrails	AT&T	(12) 1-5/8" [I]	Proposed Reconfiguration
155	(2) 21' Omni w/ Stand-off Mount	CTPD	(2) 1-5/8" [O]	Existing
135	(9) Decibel DB980H90E-XY w/ Platform Mount	Sprint	(9) 1-5/8" [I]	Existing
125	(12) Decibel DB844H80 w/ Platform Mount	Verizon	(12) 1-5/8" [I]	Proposed
114.5	(12) Decibel DB844H90 w/ Platform Mount	Nextel	(12) 1-1/4" [I]	Proposed
46.5	(1) Nokia CS72187.01 on Standoff Mount	Cingular	(1) 1/2" [O]	Proposed

\*[I]/[O] denotes coax installed inside or outside the monopole respectively.

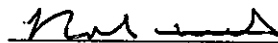
<sup>1</sup> Level 1 evaluation means:

- the applied (existing and proposed) loads (Table 1) on the tower are compared to the original design loads,
- the design wind criteria is compared to the recent code requirements.

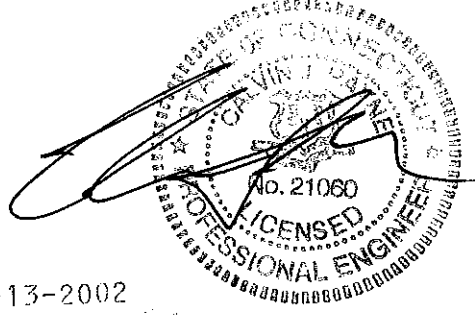
The subject tower, and it's foundation, are *adequate* to support the above stated loads and *in conformance* with the requirements of TIA/EIA-222-F Standard.

*The tower should be re-evaluated as future loads are added or if actual loads are found different from those mentioned in Table 1.*

Please do not hesitate to give me a call if you have any questions or concerns.

  
\_\_\_\_\_  
Raphael Mohamed, P. Eng.  
Project Engineer

06-13-2002

  
\_\_\_\_\_  
Calvin J. Payne, P.E.  
Chief Engineer



STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

Ten Franklin Square  
New Britain, Connecticut 06051  
Phone: (860) 827-2935  
Fax: (860) 827-2950

July 24, 2002

Honorable Mary B. Tomolonius  
First Selectman  
Town of Canton  
4 Market Street  
P. O. Box 168  
Collinsville, CT 06022-0168

RE: **EM-CING-005-023-066-092-162-020711** - SNET Mobility, LLC notice of intent to modify existing telecommunications facilities located in Barkhamsted, Canton, Harwinton, New Hartford, and Winchester, Connecticut.

Dear Ms. Tomolonius:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

The Council will consider this item at the next meeting scheduled for August 1, 2002, at 2:30 p.m. in Hearing Room Two, Ten Franklin Square, New Britain, Connecticut.

Please call me or inform the Council if you have any questions or comments regarding this proposal.

Thank you for your cooperation and consideration.

Very truly yours,

S. Derek Phelps  
Executive Director

SDP/laf

Enclosure: Notice of Intent

c: Eric Barz, Town Planner, Town of Canton  
Frederick E. Turkington, Jr., Chief Administrative Officer, Town of Canton



STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

Ten Franklin Square  
New Britain, Connecticut 06051  
Phone: (860) 827-2935  
Fax: (860) 827-2950

July 24, 2002

Honorable John F. Arcelaschi  
Mayor  
Town of Winchester  
Town Hall  
338 Main Street  
Winsted, CT 06098

RE: **EM-CING-005-023-066-092-162-020711** - SNET Mobility, LLC notice of intent to modify existing telecommunications facilities located in Barkhamsted, Canton, Harwinton, New Hartford, and Winchester, Connecticut.

Dear Mayor Arcelaschi:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

The Council will consider this item at the next meeting scheduled for August 1, 2002, at 2:30 p.m. in Hearing Room Two, Ten Franklin Square, New Britain, Connecticut.

Please call me or inform the Council if you have any questions or comments regarding this proposal.

Thank you for your cooperation and consideration.

Very truly yours,

*SDP/laf*

S. Derek Phelps  
Executive Director

SDP/laf

Enclosure: Notice of Intent

c: Anthony Cannavo, Planning and Zoning Chairman, Town of Winchester  
Margaret A. Johnson, Town Manager, Town of Winchester



# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

Ten Franklin Square  
New Britain, Connecticut 06051  
Phone: (860) 827-2935  
Fax: (860) 827-2950

July 24, 2002

Honorable Michael D. Fox  
First Selectman  
Town of Barkhamsted  
Town Hall  
Route 318  
P. O. Box 185  
Pleasant Valley, CT 06063

RE: **EM-CING-005-023-066-092-162-020711** - SNET Mobility, LLC notice of intent to modify existing telecommunications facilities located in Barkhamsted, Canton, Harwinton, New Hartford, and Winchester, Connecticut.

Dear Mr. Fox:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

The Council will consider this item at the next meeting scheduled for August 1, 2002, at 2:30 p.m. in Hearing Room Two, Ten Franklin Square, New Britain, Connecticut.

Please call me or inform the Council if you have any questions or comments regarding this proposal.

Thank you for your cooperation and consideration.

Very truly yours,

*SDP/laf*

S. Derek Phelps  
Executive Director

SDP/laf

Enclosure: Notice of Intent

c: Karl Nilsen, Zoning Enforcement Officer, Town of Barkhamsted



STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

Ten Franklin Square  
New Britain, Connecticut 06051  
Phone: (860) 827-2935  
Fax: (860) 827-2950

July 24, 2002

Honorable Marie M. Knudsen  
First Selectman  
Town of Harwinton  
Town Hall  
100 Bentley Drive  
Harwinton, CT 06791

RE: **EM-CING-005-023-066-092-162-020711** - SNET Mobility, LLC notice of intent to modify existing telecommunications facilities located in Barkhamsted, Canton, Harwinton, New Hartford, and Winchester, Connecticut.

Dear Ms. Knudsen:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

The Council will consider this item at the next meeting scheduled for August 1, 2002, at 2:30 p.m. in Hearing Room Two, Ten Franklin Square, New Britain, Connecticut.

Please call me or inform the Council if you have any questions or comments regarding this proposal.

Thank you for your cooperation and consideration.

Very truly yours,

A handwritten signature in black ink that reads "SDP/rlk".

S. Derek Phelps  
Executive Director

SDP/laf

Enclosure: Notice of Intent

c: William J. Tracy, Jr., Planning Chairman, Town of Harwinton





STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

Ten Franklin Square  
New Britain, Connecticut 06051  
Phone: (860) 827-2935  
Fax: (860) 827-2950

July 24, 2002

Honorable William F. Baxter  
First Selectman  
Town of New Hartford  
Town Hall  
530 Main Street  
P. O. Box 426  
New Hartford, CT 06057

RE: **EM-CING-005-023-066-092-162-020711** - SNET Mobility, LLC notice of intent to modify existing telecommunications facilities located in Barkhamsted, Canton, Harwinton, New Hartford, and Winchester, Connecticut.

Dear Mr. Baxter:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

The Council will consider this item at the next meeting scheduled for August 1, 2002, at 2:30 p.m. in Hearing Room Two, Ten Franklin Square, New Britain, Connecticut.

Please call me or inform the Council if you have any questions or comments regarding this proposal.

Thank you for your cooperation and consideration.

Very truly yours,

*SDP/laf*

S. Derek Phelps  
Executive Director

SDP/laf

Enclosure: Notice of Intent

c: Karl Nilsen, Zoning Enforcement Officer, Town of New Hartford