

# 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@po.state.ct.us](mailto:siting.council@po.state.ct.us)

Web Site: [www.state.ct.us/csc/index.htm](http://www.state.ct.us/csc/index.htm)

September 26, 2002

Peter W. van Wilgen  
Southwestern Bell Mobile Systems, LLC  
500 Enterprise Drive  
Rocky Hill, CT 06067-3900

RE: **EM-CING-015-034-035-051-057-085-103-117-126-135-138-157-158-161-020917** - Southwestern Bell Mobile Systems, LLC notice of intent to modify existing telecommunications facilities located in Bridgeport, Danbury, Darien, Fairfield, Greenwich, Monroe, Newtown, Norwalk, Redding, Shelton, Stamford, Stratford, Weston, Westport, and Wilton, Connecticut.

Dear Mr. van Wilgen:

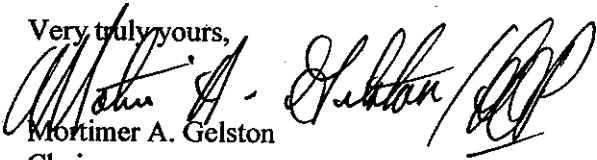
At a public meeting held on September 25, 2002, the Connecticut Siting Council (Council) acknowledged your notice to modify these existing telecommunications facilities, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated September 17, 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,

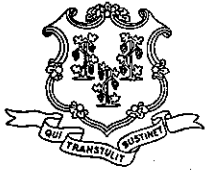
  
Mortimer A. Gelston  
Chairman

MAG/DM/laf

c: See attached list.

List Attachment.

- c: Honorable Joseph P. Ganim, Mayor, City of Bridgeport
- Michael P. Nidoh, City Planner, City of Bridgeport
- Melanie J. Howlett, Assistant City Attorney, City of Bridgeport
- Honorable Mark D. Boughton, First Selectman, City of Danbury
- Dennis Elpern, City Planner, City of Danbury
- Honorable Robert F. Harrel, Jr., First Selectman, Town of Darien
- David J. Keating, Zoning Enforcement Officer, Town of Darien
- Peter Curry, Office Administrator, Town of Darien
- Honorable Kenneth A. Flatto, First Selectman, Town of Fairfield
- Joseph E. Devonshuk, Town Planner, Town of Fairfield
- Honorable Lolly H. Prince, First Selectman, Town of Greenwich
- Diane Fox, Town Planner, Town of Greenwich
- Honorable Alex A. Knopp, First Selectman, City of Norwalk
- Michael Greene, Director of Planning and Zoning, City of Norwalk
- Honorable Andrew J. Nunn, First Selectman, Town of Monroe
- Daniel A. Tuba, Planning Administrator, Town of Monroe
- Honorable Herbert C. Rosenthal, First Selectman, Town of Monroe
- Gary Frenette, Zoning Enforcement Officer, Town of Newtown
- Honorable Natalie T. Ketcham, First Selectman, Town of Redding
- Aimee Pardee, Zoning Enforcement Officer, Town of Redding
- Honorable Mark A. Lauretti, First Selectman, City of Shelton
- Richard Schultz, Planning Administrator, City of Shelton
- Honorable Daniel P. Malloy, First Selectman, City of Stamford
- Robin Stein, Planning and Zoning Director, City of Stamford
- Mark S. Barnhart, Town Manager, Town of Stratford
- Gary Lorentson, Planning & Zoning Administrator, Town of Stratford
- Honorable Paul F. Hannah, Jr., First Selectman, Town of Wilton
- Robert Nerney, Town Planner, Town of Wilton
- Honorable Diane G. Farrell, First Selectman, Town of Westport
- Katherine Barnard, Director of Planning & Zoning, Town of Westport
- Honorable Woody Bliss, First Selectman, Town of Weston
- Roy Hill, Town Administrator, Town of Weston
- Robert P. Turner, Zoning Enforcement Officer, Town of Weston



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September 17, 2002

Honorable Andrew J. Nunn  
First Selectman  
Town of Monroe  
Town Hall  
7 Fan Hill Road  
Monroe, CT 06468-1800

RE: **EM-CING-015-034-035-051-057-085-103-117-126-135-138-157-158-161-020917**  
Southwestern Bell Mobile Systems, LLC notice of intent to modify existing telecommunications facilities located in Bridgeport, Danbury, Darien, Fairfield, Greenwich, Monroe, Newtown, Norwalk, Redding, Shelton, Stamford, Stratford, Weston, Westport, and Wilton, Connecticut.

Dear Mr. Nunn:

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 tentatively scheduled for September 25, 2002, at 1:30 p.m. in Hearing Room One, 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/slm

Enclosure: Notice of Intent

c: Daniel A. Tuba, Planning Administrator, Town of Monroe



Southwestern Bell Mobile Systems, 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

September 17, 2002

**RECEIVED**

SEP 17 2002

CONNECTICUT  
SITING COUNCIL

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

Re: Southwestern Bell Mobile Systems, LLC Notice of Intent to Modify 31 Existing Telecommunications Facilities Located in Fairfield County

Dear Mr. Gelston:

In order to accommodate technological changes, implement E-911 capability and enhance system performance, Southwestern Bell Mobile Systems, LLC ("SBMS" or "Cingular"; formerly SNET Mobility, LLC) plans to modify instrumentation and/or antenna configurations at most of its existing cell sites in Fairfield County. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction at 31 facilities under Siting Council jurisdiction that will constitute exempt modifications 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 are being sent to the chief elected official of each of the 15 municipalities in which an affected cell site is located.

Cingular has a critical "business need" to modify 40 Fairfield County sites under Council jurisdiction without unnecessary delay, which is to allow Cingular to launch its GSM service in the entire state at the same time, including Fairfield County. Modifications to accomplish the Fairfield County GSM overlay are less extensive than the modifications necessary in the rest of the state. Therefore, Cingular respectfully submits a single *simplified* Notice of Intent to modify these 31 Fairfield County sites. A similarly-streamlined notice for the remaining 9 sites was submitted earlier.

We feel the simplified Notice is a reasonable approach because there are several fundamental differences between the build-out plans for these 31 Fairfield County sites and the rest of the

state which will greatly simplify the Siting Council analysis. First, as discussed below, the changes will actually lessen (or maintain existing) tower loading and RF emissions at each of the affected existing sites. Secondly, the visual impact of the changes to the tower arrays will be hardly noticeable. The replacement antennas are actually very similar in dimensions and design, except the antenna "beam width" is being reduced from 110° to 90° to reduce interference potential.

Cingular could reasonably maintain that the modifications constitute facility maintenance or one-for-one antenna replacements. In either case, no notice to the Council would be necessary. Factors that convince Cingular to give notice for these modifications are that Cingular will now operate both TDMA *and* GSM modes at 850 MHz in Fairfield County and that these modifications are part of a significant state-wide and nation-wide roll-out of the GSM and E-911 technologies.

Cingular is, therefore, taking the conservative approach of notifying the Council of its plans for these 31 Fairfield County sites in a single filing. It is our opinion that relevant information is summarized briefly and succinctly in the attachments, and an in-depth analysis of each and every site will be unnecessary. Thus, the Council's consideration of this Notice should require very little time or effort on the part of Council Staff.

We will submit more detailed notices for any other Fairfield County facilities under Council jurisdiction that will undergo more extensive modifications.

#### **Cingular's GSM Buildout for Fairfield County: No 1900 MHz Operations**

Cingular's GSM overlay for Fairfield County differs from its plan for other Connecticut Counties. In Fairfield County Cingular will transmit and receive only in the 850 MHz range for both TDMA and GSM. Across the rest of the state, Cingular will also operate GSM in the 1900 MHz band. This difference in plans arises from the details of an operating agreement between Cingular and VoiceStream Wireless.

Eliminating the 1900 MHz range from the Fairfield County buildout plan allows the use of smaller, lighter-weight antennas, and results in reduced structural loading and radio frequency emissions. (See discussions below.)

#### **Structural Considerations: Tower Loading Decreases at Each Facility**

Prior to this submission, Cingular has notified the Council of other GSM-related construction in many Connecticut cities and towns. Unlike the modifications being undertaken by Cingular in other Connecticut counties, the tower modifications in Fairfield County should be very simple to analyze from the perspective of the Siting Council. Cingular's plans consist only of replacing existing antennas with an equal number of lighter-weight models.

Most notably, Cingular *will not install any of the tower mount amplifiers, duplexers, and diplexers* which added significant weight to towers in other counties. Cingular is able to eliminate the additional hardware because it will operate only in the 850 MHz range in Fairfield County, rather than at both 850 and 1930 MHz. The duplexers and diplexers are sometimes necessary, depending on individual site design, when Cingular's equipment is operating at two frequencies simultaneously, which will not be the case in Fairfield County.

Additionally, the new antenna arrays will have antennas with less wind loading area so as to generate less wind loading than the existing antennas.

Furthermore, the 40 Fairfield County sites can be divided into two classes, namely, those for which existing antennas are suitable for use in the GSM system and those for which antennas must be replaced.

First, there are 9 sites where only instrumentation in and on the equipment building will be modified, e.g. radio equipment and GPS antenna. No changes to structural loading will occur on the tower itself because the existing antennas will be used for the GSM overlay. These 9 sites were dealt with in a filing submitted to the Council on September 13, 2002.

Second, there are 31 sites at which new antennas will be installed to replace existing antennas. In each instance there will be a one-for-one replacement, e.g., 3 old antennas replaced by three new. In each instance, furthermore, the new antennas will weigh less and present less wind loading area than the existing antennas.

Table 1 below compares the weight of existing antennas to the weight of the new antennas at the 31 sites. For each structure, there will be a net decrease in loading from weight of the equipment. Table 2 below compares wind loading area (manufacturer specifications) for the existing antennas with wind loading for the replacement antennas. Again, each tower experiences a net decrease in wind loading area.

In short, because tower loading is directly proportional to tower loading area, tower loading will *decrease* significantly from existing conditions as a consequence of the planned antenna change-outs. Where the tower is now supporting the existing load, it will certainly support the lesser load planned. Thus, in Cingular's opinion, there is no need for structural analysis of the 31 Fairfield County sites discussed in this Notice.

#### **Radio Frequency Emissions Do Not Increase Beyond Previously Approved Levels**

Cingular will guarantee that radio frequency emissions will not increase beyond levels previously approved by the Council, namely, up to 1900 ERP per sector for each site.

Cingular obtained the Council's earlier approval for each of the 31 existing sites by submitting

hypothetical worst-case power density analyses using 19 channels at 100 Watts ERP per channel in each sector. This is the source of the 1900 Watt ERP standard. In many instances, however, the Fairfield County sites are actually operated well below the maximum power approved.

In the case of the Fairfield County sites, Cingular will add 4 GSM channels to the existing number of TDMA channels. If power output per channel were to remain constant, some sites would exceed the 1900 Watt ERP standard with the increased number of channels. Cingular's need to streamline the notification process, however, outweighs its need to increase power emissions above 1900 Watts ERP. Cingular will ensure that no sector emits more than 1900 Watts ERP once modifications are complete by *reducing* wherever necessary the power at which each channel operates. This can be accomplished without compromising Cingular's goal of improving the extent and quality of its cellular service in Fairfield County.

Table 3 lists the 31 Fairfield County sites with antenna change-outs and shows in Column (a) the total power emitted in Watts ERP for the highest-power sector at the facility. Column (b) gives the total power output for the sector after addition of 4 GSM channels at the same power output per channel as before. Where Column (b) equals or exceeds 1700 Watts ERP, Cingular will reduce the power per channel to 40 Watts ERP, and the resulting total power output is shown in Column (c). Nowhere, therefore, will the total power output for a sector approach or exceed 1700 Watts ERP during actual operation of the towers, providing a conservative margin relative to the 1900 Watt ERP standard.

In terms of power density, recall that power density is related to total power output by the inverse square of the antenna centerline height on the tower. The replacement antennas will be mounted on the towers at the same centerline heights as the old antennas, and power output will not exceed previously approved levels. Power density at ground level, therefore, will remain at or below approved levels as well.

### Summary

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).

1. The height of the overall structure will be unaffected. At each of the 31 Fairfield County sites presented herein, new panel antennas of approximately the same size will replace those previously installed. Panel antenna mounting heights will be the same for the new antennas as for the old antennas. In addition, the mandated provision of E-911 capability will be achieved through use of the new antennas rather than the installation of an additional location measurement ("LMU") antenna. One GPS receive-only antenna will be attached to the

Mr. Mortimer A. Gelston

September 17, 2002

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equipment shelter at each site. Therefore, none of the modifications will increase the height of the tower or significantly increase its visual effect.

2. The proposed changes will not extend the site boundaries. There will be no effect on the site compound.

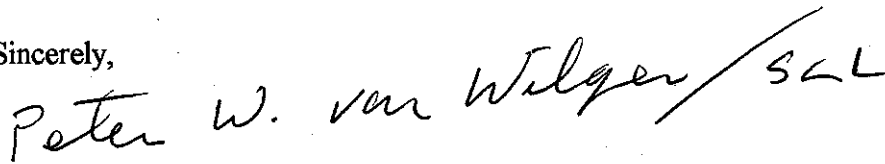
3. The proposed changes will not increase the noise level at the existing facility by six decibels or more.

4. Radio frequency power density will not increase beyond the 1900 Watts ERP level previously approved by the Council for each sector of each site. Therefore, no facility will exceed Federal or State RF power emission standards as a consequence of Cingular's activities.

For the foregoing reasons, Cingular Wireless respectfully submits that the proposed changes at the 40 referenced Fairfield County 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



Table 1: Fairfield County GSM -- Before & After Comparison of Cingular Equipment Weight Loads

CellID	Town	Address	Owner of Structure	Struct. Type	Old Antenna Model	Number of Old Antennas	Wt of each old antenna in pounds	Old Total Weight in pounds	New Antenna Model	Number of New Antennas	Wt of each new antenna in pounds	New Total Weight in pounds	Change in Weight of Equipment in pounds
2176	Bridgeport	430 John St.	SNET/SCLP	bm/ssl	ALP11011	9	24.5	220.5	RFS APL868013-42T4	9	8.2	73.8	-146.7
2133	Danbury	Moses Mtn.	SNET/SCLP	ssl	ALP11011	11	24.5	269.5	RFS APL868013-42T4	11	8.2	90.2	-179.3
2157	Danbury	50 Newtown Rd.	Newtown Rd Corp	m	7120.16	9	15.4	138.6	RFS APL868013-42T4	9	8.2	73.8	-64.8
2104	Darien	50 Ledge Rd	BAM	m	ALP11011	9	24.5	220.5	RFS APL868013-42T4	9	8.2	73.8	-146.7
2105	Fairfield	281 Woodhouse Rd	CROWN	m	ALP11011	9	24.5	220.5	RFS APL868013-42T4	9	8.2	73.8	-146.7
2120	Fairfield	55 Walls Dr.	Robert Scinto	bm/ssl	ALP11011	9	24.5	220.5	RFS APL868013-42T4	9	8.2	73.8	-146.7
2128	Fairfield	3965 Congress St.	Town of Fairfield	m	ALP11011	9	24.5	220.5	RFS APL868013-42T4	9	8.2	73.8	-146.7
2129	Greenwich	1 Butternut Hollow Rd.	DPS	ssl	7120.16	9	15.4	138.6	RFS APL868013-42T4	9	8.2	73.8	-64.8
2130	Greenwich	363 Riversville Rd.	SNET/SCLP	m	ALP11011	9	24.5	220.5	RFS APL868013-42T4	9	8.2	73.8	-146.7
2144	Monroe	230 Guinea Rd.	SNET/SCLP	ssl	ALP11011	9	24.5	220.5	RFS APL868013-42T4	9	8.2	73.8	-146.7
2127	Newtown	Rte. 34	BAM	m	7120.16	9	15.4	138.6	RFS APL868013-42T4	9	8.2	73.8	-64.8
2108	Norwalk	613 Connecticut Ave.	SNET Cellular	m	ALP11011	9	24.5	220.5	RFS APL868013-42T4	9	8.2	73.8	-146.7
2122	Norwalk	50 Rockland Rd.	CROWN	ssl	ALP11011	9	24.5	220.5	RFS APL868013-42T4	9	8.2	73.8	-146.7
2132	Norwalk	Willard Rd.	SNET	ssl	ALP11011	9	24.5	220.5	RFS APL868013-42T4	9	8.2	73.8	-146.7
2138	Norwalk	Shirley St.	Commodore Media	gl	ALP11011	6	24.5	147	RFS APL868013-42T4	6	8.2	49.2	-97.8
2152	Redding	100 Old Redding Rd.	SCLP	ssl	ALP11011	9	24.5	220.5	RFS APL868013-42T4	9	8.2	73.8	-146.7
2044	Shelton	17 Daybreak Ln.	CL&P	pm	ALP11011	9	24.5	220.5	RFS APL868013-42T4	9	8.2	73.8	-146.7
2113	Shelton	219 Nells Rock Rd.	SNET/SCLP	ssl	ALP11011	9	24.5	220.5	RFS APL868013-42T4	9	8.2	73.8	-146.7
2109	Stamford	1590 Newfield Ave.	SNET/SCLP	m	7120.16	12	15.4	184.8	RFS APL868013-42T4	12	8.2	98.4	-86.4
2118	Stamford	555 Main St.	SNET	bm/ssl	ALP11011	9	24.5	220.5	RFS APL868013-42T4	9	8.2	73.8	-146.7
2135	Stamford	Catconah Ln.	ATT	ssl	ALP11011	9	24.5	220.5	RFS APL868013-42T4	9	8.2	73.8	-146.7
2141	Stamford	652 Glenbrook Rd.	Glenbrook Ind Assoc	wt	ALP11011	9	24.5	220.5	RFS APL868013-42T4	9	8.2	73.8	-146.7
2208	Stamford	Guinea Rd.	CROWN	m	ALP11011	9	24.5	220.5	RFS APL868013-42T4	9	8.2	73.8	-146.7
2043	Stratford	Chapel St (Harvest Ridge)	CL&P	pm	7120.16	9	15.4	138.6	RFS APL868013-42T4	9	8.2	73.8	-64.8
2112	Stratford	623 Honeyspot Rd	John & Deb Beck	bm/g/m	7120.16	9	15.4	138.6	RFS APL868013-42T4	9	8.2	73.8	-64.8
2055	Weston	56 Norfield Rd.	VoiceStream	m	7120.16	9	15.4	138.6	RFS APL868013-42T4	9	8.2	73.8	-64.8
2100	Westport	20 Post Office Ln.	SCLP	m	ALP11011	9	24.5	220.5	RFS APL868013-42T4	9	8.2	73.8	-146.7
2117	Westport	Shelwood Island Rd.	CT State Police	ssl	7120.16	9	15.4	138.6	RFS APL868013-42T4	9	8.2	73.8	-64.8
2104	Westport	515 Post Rd.	Westport Fire Dept	m	7120.16	9	15.4	138.6	RFS APL868013-42T4	9	8.2	73.8	-64.8
2102	Westport	28 Mathers St.	CROWN	ssl	ALP11011	9	24.5	220.5	RFS APL868013-42T4	9	8.2	73.8	-146.7
2101	Westport	56 Fernwood Ln.	DPS	ssl	ALP11011	9	24.5	220.5	RFS APL868013-42T4	9	8.2	73.8	-146.7

CONNECTICUT SITING COMMISSION

SEP 17

RECEIVED