



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](mailto:siting.council@ct.gov)

[www.ct.gov/csc](http://www.ct.gov/csc)

March 3, 2009

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

RE: **EM-CING-028-090116** - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 355 Route 85, Colchester, 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.

The proposed modifications are to be implemented as specified here and in your notice dated January 15, 2009, 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.

Thank you for your attention and cooperation.

Very truly yours,

  
S. Derek Phelps  
Executive Director

SDP/MP/laf

c: The Honorable Linda M. Riley Hodge, First Selectman, Town of Colchester  
Christopher Beauchemin, Town Planner, Town of Colchester  
American Tower Corporation



EM-CING-028-090116



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

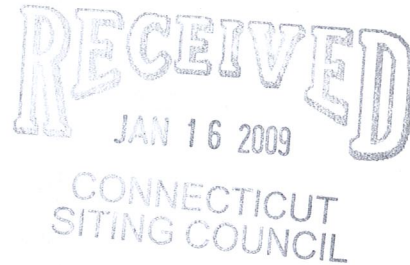
Steven L. Levine  
Real Estate Consultant

ORIGINAL

HAND DELIVERED

January 15, 2009

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 355 Route 85, Colchester (owner, American Tower)

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.
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**

355 Route 85, Colchester  
Site Number 5730  
Former AT&T cell site  
Exempt Modification approved 9/02

**Tower Owner/Manager:** American Tower

**Equipment Configuration:** Monopole

**Current and/or Approved:** Three Allgon 7250 panel antennas @ 150 ft AGL  
Six runs 1 1/4 inch coax cable  
Concrete foundation with outdoor cabinets

**Planned Modifications:** Remove all existing antennas  
Install new low profile platform @ 150 ft  
Install six Powerwave 7770 antennas (or equivalent) @ 150 ft  
Install six TMA's and six diplexers @ 150 ft  
Install six additional lines 1 1/4 inch coax  
Remove one outdoor cabinet  
Install one new outdoor cabinet for UMTS

**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 13.7 % 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 18 % of the standard.

**Existing**

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
Other Users *							12.06
AT&T GSM *	150	1900 Band	4	250	0.0160	1.0000	1.60
<b>Total</b>							<b>13.7%</b>

\* Per CSC records

## Proposed

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
Other Users *							12.06
AT&T UMTS	150	880 - 894	1	500	0.0080	0.5867	1.36
AT&T GSM	150	1900 Band	2	427	0.0136	1.0000	1.36
AT&T GSM	150	880 - 894	4	296	0.0189	0.5867	3.23
<b>Total</b>							<b>18.0%</b>

\* Per CSC records

### Structural information:

The attached structural analysis demonstrates that the tower and foundation will have adequate structural capacity to accommodate the proposed equipment modifications. (American Tower, 12/8/08)



**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

January 15, 2009

Linda M. Hodge, 1<sup>st</sup> Selectman  
Town of Colchester  
Town Hall, 127 Norwich Ave.  
Colchester, CT 06415

Re: Telecommunications Facility – 355 Route 85

Dear Ms. Hodge:

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,

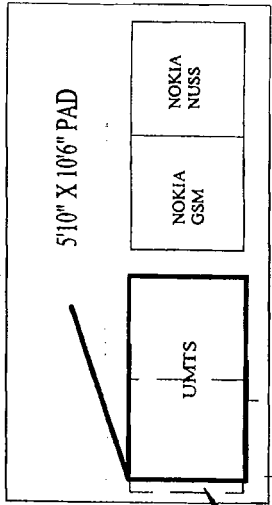
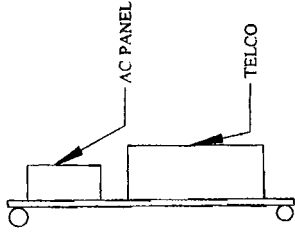
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Enclosure

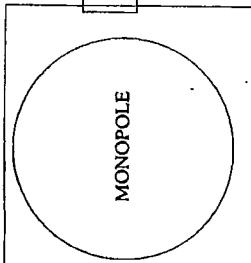


SITENUMBER:  
5730  
SITE NAME  
Colchester South

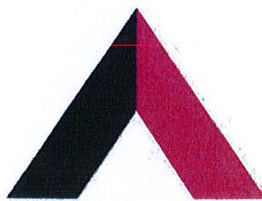
TITLE:	EQUIPMENT PLAN
MISC. INFO:	
DWG. BY:	SGB
DATE:	07/07/08
SCALE:	N.T.S.
SHEET:	1 OF 1



MARCONI CABINET  
TO BE REMOVED



PASSED



**AMERICAN TOWER™**  
CORPORATION

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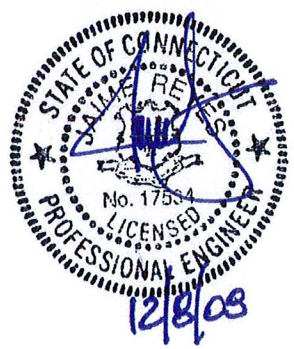
**Structural Analysis Report**

**Structure** : 180 ft Valmont Monopole  
**ATC Site Name** : Colchester CT 6, CT  
**ATC Site Number** : 302465  
**Proposed Carrier** : AT&T Mobility  
**Carrier Site Name** : Colchester South  
**Carrier Site Number** : 5730  
**County** : New London  
**Eng. Number** : 42733921  
**Date** : December 8, 2008  
**Usage** : 68% (Pole Shafts), 61% (Anchor Bolts),  
65% (Appr., Base Plate)

Submitted by:  
Uma S. Atluri, MS, EIT  
Project Engineer  
*Uma S. Atluri*

Reviewed by:  
Jaime Reyes, P.E.  
Director of Engineering

**American Tower Engineering Services**  
8505 Freeport Parkway  
Suite 135  
Irving, TX 75063  
Phone: 972-999-8900





**Introduction**

The purpose of this report is to summarize results of the structural analysis performed on the 180 ft Valmont Monopole located at Colchester CT 6, CT, New London County (ATC site # 302465). The tower was originally designed and manufactured by Valmont (Drawing # 17494-98 dated June 8, 1998).

**Analysis**

The existing tower was analyzed using Semaan Engineering Solutions, Inc., Software. The analysis assumes that the tower is in good, undamaged, and non-corroded condition. A 5% overstress is allowed in the existing structural members to account for program variances.

Basic Wind Speed: 85 mph (Fastest Mile)  
 Radial Ice: 73.61 mph (Fastest Mile) w/ 0.5" ice Concurrent  
 Standard/Code: TIA/EIA-222-F / 2006 IBC Section 1609.1.1, Exception (4) and Section 3108.4 / 2005 & 2008 CT Supplement

**Antenna Loads**

The following antenna loads were used in the tower analysis.

**Existing Antennas**

Elev. (ft)	Qty	Antennas	Mount	Coax (I/O)	Carrier
180.0	3	72"x12" Panels	(3) T-Arms	(15) 1 5/8(I)	Sprint Nextel
	9	48"x12" Panels			

**Proposed Antennas**

Elev. (ft)	Qty	Antennas	Mount	Coax (I/O)	Carrier
150.0	3	14"x9" TTA	(3) T-Arms	(12) 1 5/8(I)	AT&T Mobility
	6	Powerwave LGP21401			
	6	Powerwave LGP21903			
	3	36"x 8"x 6" Panels			
	9	72"x12" Panels			

Note: (O) – Coax installed outside the pole shafts. (I) – Coax installed inside the pole shafts.

The existing and the proposed transmission lines were considered running inside or outside the pole shafts as indicated above.

## **Results**

The existing 180 ft Valmont Monopole with the existing and the proposed antennas is structurally acceptable per TIA/EIA-222 Rev F standards. The maximum structure usage is: 68% (pole shafts), 61% (Anchor Bolts) and 65% (Apr., Base Plate).

Additional exit and/or entry ports may be required to accommodate the running of the proposed lines to the proposed antennas. These additional ports may not be installed without installation drawings providing the location, size and welding requirements of each port.

To ensure compliance with all conditions of this structural analysis, port installation drawings shall be provided by American Tower's Engineering Department under a subsequent project.

Pole Reactions	Original Design Reactions	Current Analysis Reactions	% Of Design
Moment (ft-kips)	4,932.4	3,566.6	73
Shear (kips)	41.5	33.5	81

The structure base reactions resulting from the current analysis do not exceed the ones shown on the original structural drawings or calculations. Therefore, assuming the original foundation was designed correctly, the existing foundation should be adequate to support the new reactions. Therefore, no modification to the existing foundation will be required.

## **Conclusion**

The existing monopole and its foundation were found to be adequate to support the existing and proposed antennas with the transmission line distribution as described above while meeting the requirements of the code or standard as specified in this report.

If you have any questions or require additional information, please call (972) 999-8900.

## **Standard Conditions**

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

- Information supplied by the client regarding the structure itself, the antenna and feed line loading on the structure and its components, or other relevant information.
- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to ATC Engineering Services and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and are in an un-corroded condition and have not deteriorated; and we, therefore, assume that their capacity has not significantly changed from the "as new" condition.

All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/EIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. ATC Engineering Services is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

Job Information	
Pole : 302465	Code: TIA/EIA-222 Rev F
Description : 180 ft Valmont Monopole	
Client : AT&T Mobility	
Location : Colchester CT 6, CT	
Shape : 12 Sides	Base Elev (ft): 0.00
Height : 180.00 (ft)	Taper: 0.260791(in/ft)

Sections Properties								
Shaft Section	Length (ft)	Diameter (in)		Thick Joint (in)	Type	Overlap		Steel Grade (ksi)
		Access Top	Flats Bottom			Length (in)	Taper (in/ft)	
1	51.000	50.70	64.00	0.438		0.000	0.260791	65
2	50.167	40.23	53.31	0.375	Slip Joint	86.000	0.260791	65
3	49.917	29.38	42.40	0.313	Slip Joint	71.000	0.260791	65
4	46.583	18.87	31.01	0.219	Slip Joint	55.000	0.260791	65

Discrete Appurtenance				
Attach Elev (ft)	Force Elev (ft)	Qty	Description	
180.000	180.000	3	72"x12" Panels	
180.000	180.000	9	48"x12" Panels	
180.000	177.000	3	T-Arms	
150.000	150.000	3	14"x9" TTA	
150.000	150.000	6	Powerwave LGP21401	
150.000	150.000	6	Powerwave LGP21903	
150.000	150.000	3	36"x 8"x 6" Panels	
150.000	150.000	9	72"x12" Panels	
150.000	150.000	3	T-Arms	

Linear Appurtenance				
Elev (ft)		Description	Exposed To Wind	
From	To			
0.000	150.0	1 5/8" Coax	No	
0.000	180.0	1 5/8" Coax	No	

Load Cases	
No Ice	85.00 mph Wind with No Ice
Ice	73.61 mph Wind with Ice
Twist/Sway	50.00 mph Wind with No Ice

Reactions			
Load Case	Moment (Kip-ft)	Shear (Kips)	Axial (Kips)
No Ice	3566.61	33.52	39.26
Ice	2893.86	26.55	45.31
Twist/Sway	1234.83	11.60	39.29

Dish Deflections			
Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
Twist/Sway	0.00	0.000	0.000

