



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

Daniel F. Caruso
Chairman

October 24, 2007

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

RE: **EM-CING-047-052-131-142-164-071004** – New Cingular Wireless PCS, LLC notice of intent to modify existing telecommunications facilities located at 232 South Main Street, East Windsor; 319-321 New Britain Avenue, Farmington; 250 Meriden-Waterbury Turnpike, Southington; 5 Barbara Road, Tolland; and 750 Rainbow Road, Windsor, Connecticut.

Dear Mr. Levine:

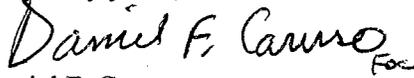
At a public meeting held on October 16, 2007, the Connecticut Siting Council (Council) acknowledged your notice to modify these existing telecommunications facilities, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the condition that the modifications specified for the Tolland tower in the structural analysis report dated September 27, 2007, and sealed by Jaime Reyes, P.E., be performed prior to the antenna installation and that a signed letter from a Professional Engineer be submitted to the Council to certify that the modifications have been properly completed.

The proposed modifications are to be implemented as specified here and in your notice[s] dated October 4, 2007, including the placement of all necessary equipment and shelters within the tower compounds. 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 existing facility sites that would not increase tower heights, extend the boundaries of the tower sites, increase noise levels at the tower site boundaries by six decibels, and increase the total radio frequencies electromagnetic radiation power densities 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. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to any of 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,

Handwritten signature of Daniel F. Caruso in cursive, with a small 'For' written below the signature.

Daniel F. Caruso
Chairman

DFC/MP/cm

- c: The Honorable Linda L. Roberts, First Selectman, Town of East Windsor
- Laurie Whitten, Town Planner, Town of East Windsor
- The Honorable Donald Trinks, Mayor, Town of Windsor
- Mario Zavarella, Town Planner, Town of Windsor
- The Honorable John Barry, Chairman Town Council, Town of Southington
- Mary Hughes, Town Planner, Town of Southington
- The Honorable Kathleen W. Bach, Chairman Town Council, Town of Tolland
- Linda Farmer, Town Planner, Town of Tolland
- The Honorable Mike Clark, Chairman Town Council, Town of Farmington
- Jeffrey Ollendorf, Town Planner, Town of Farmington
- Balch Communications
- John Rogus
- American Tower
- Christopher B. Fisher, Esq., Cuddy & Feder LLP



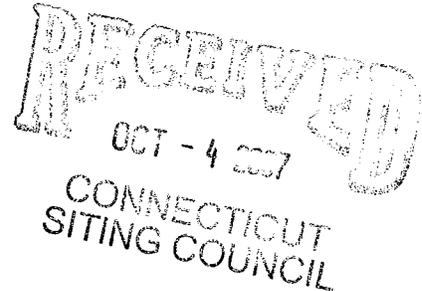
New Cingular Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 513-7636
Fax: (860) 513-7190

EM-CING-047-052-131-142-164-071004

Steven L. Levine
Real Estate Consultant

HAND DELIVERED

October 4, 2007



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 5 existing tele-communications facilities located in East Windsor, Farmington, Southington, Tolland, and Windsor

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 ("Cingular") 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 each of the municipalities in which an affected cell site is locate.

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 are summary sheets detailing the planned changes, including power density calculations reflecting the change in the effect of Cingular's operations at each affected 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).

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

- Replacement of existing panel antennas with new antennas of similar size, shape, and weight, or, installation of additional antennas of similar size, shape, and weight.
- 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.

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 noted in the following 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 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, 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) 513-7636 with questions concerning this matter. Thank you for your consideration.

Sincerely,



Steven L. Levine
Real Estate Consultant

Attachments

**CINGULAR WIRELESS
Equipment Modification**

232 South Main Street, East Windsor, CT
Site Number 1194
Exempt Modifications 10/8/97 and 9/5/02

Tower Owner/Manager: Balch Communications

Equipment configuration: Self-supporting Lattice Tower

Current and/or approved: Nine CSS DUO1417 antennas @ 170 ft c.l.
Nine runs 1 5/8 inch coax
Six TMA's

Planned Modifications: Remove three existing antennas
Install 3 Powerwave 7770 antennas (or equivalent) @ 170 ft
Install three additional runs 1 5/8 inch coax (total of 12)
Install three diplexers @ 170 ft

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 22.4 % 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 19.5 % 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 *							16.70
Cingular TDMA *	170	880 - 894	16	100	0.0199	0.5867	3.39
Cingular GSM *	170	880 - 894	2	296	0.0074	0.5867	1.26
Cingular GSM *	170	1930 - 1970	2	427	0.0106	1.0000	1.06
Total							22.4%

* 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 *							16.70
Cingular GSM	170	880 - 894	2	296	0.0074	0.5867	1.26
Cingular GSM	170	1900 Band	1	427	0.0053	1.0000	0.53
Cingular UMTS	170	880 - 894	1	500	0.0062	0.5867	1.06
Total							19.5%

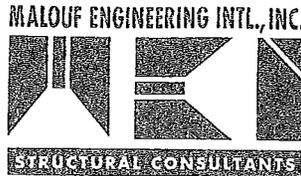
* Per CSC Records

Structural information:

The attached structural analysis demonstrates that the tower and foundation have adequate structural capacity to accommodate the proposed modifications. (Malouf Engineering Intl., dated 9/21/07)

September 21, 2007

Mr. Derek Creaser
HUDSON DESIGN GROUP, LLC
 representing **AT&T**
 46 Beechwood Drive
 North Andover, MA 01845



SUBJECT	FEASIBILITY STRUCTURAL EVALUATION		
Structure:	188 ft Self-Supporting	Rohn SSV	
Client/ Site Name /#:	Hudson D.G./ AT&T	East Windsor	# 1194
Owner/Site Name /#:	Balch Bridge Street Corp	East Windsor	
MEI Project ID:	CT00871S-07V0_R1		
Location:	232 S. Main St	Hartford County	
	East Windsor, CT 06088	F.A # 1042961	
	LAT	41-52-38.0 N	LON 72-36-39.0 W

Malouf Engineering Int'l (MEI), as requested, has performed a feasibility structural evaluation of the above mentioned structure to assess the impact of the changed condition as noted below.

The structural evaluation performed used the following criteria:

CODE / STANDARD	ANSI/TIA-222-F-96 Standard / IBC 2003 Code - CT Building Code	
LOADING CASES	Full Wind:	80 Mph (with No Radial Ice)
	Iced Case:	69 Mph + 0.50" Radial Ice
	Service:	50 Mph

Table 1: Proposed Changed Condition Appurtenances

Elev (ft)	Tenant	Ants Qty	Appurtenance Model / Description	Mount Description	Lines Qty	Line size & Location
168 ± *	AT&T	3	7770 Panel Antennas	[exist sector mounts]	3	1-1/4"-FZ [in addition to exist] 3/8" -(I)
		3	LGP 13519 Diplexers			
		1	Powerwave 7060 CILOC			
		3	Powerwave 7020 RCU/RET's			
168	AT&T	6	TMA's [already existing]		1	

* Note: Existing (3) panel antennas (1/sector) are to be removed and replaced with above.

Table 2: Previous Analysis Appurtenances

Elev (ft)	Tenant	Ants Qty	Appurtenance Model / Description	Mount Description	Lines Qty	Line size & Location
188		9	RR90-17-02DP Panels	13' Platform	9	1 5/8"
184		6	ALP7250.03 Panels	(3) 10' Sector Mounts	6	1 5/8"
168		9	CSS DUO1417-8686 Panels	(3) 15' Sector Mounts	9	1 5/8"
153		9	ALP7250.03 Panels	(3) 12' Sector Mounts	9	1 5/8"
144		9	ALP-9011 Panels	(3) 15' Sector Mounts	15	1 5/8"
		6	DB948F85 Panels			
124		6	DB980H90 Panels	(3) 10' Sector Mounts	6	1 5/8"

The information used as source data to represent the existing structure and the related appurtenances is as follows:

Structure & Current Appurtenances	Structure data and design appurtenances loading as per previous structural analysis data by APT Project #CT141510 & original design data per Rohn, ref. job # 34769PH, drawing #A963110, dated 09/27/96 - Tower analysis Max. Stress at 67%.
Changed Condition	As per AT&T /Cingular Wireless RF approval email, dated 04/26/07 Version 2007-02, Supplied by Hudson Design Group, LLC on 08/15/07.

The subject structure is evaluated for the feasibility of the installation of the proposed changed condition previously noted. The data records furnished were reviewed and the appurtenances loading was evaluated (no computer analysis performed, only relative loading magnitude comparison), in accordance with the TIA-222 Standard provisions and with the agreed limited scope of work terms and the results of this feasibility evaluation are reported. This evaluation is based on information supplied, and therefore, its results are based on and as accurate as that supplied data. MEI has made no independent determination of its accuracy. This existing structure is assumed, for the purpose of this evaluation, to have been properly maintained and to be in good condition with no structural defects and with no deterioration to its capacity ('as-new').

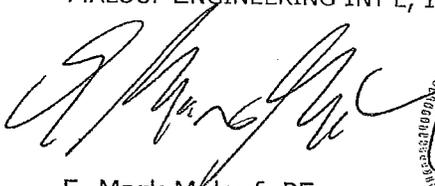
Based on the feasibility structural evaluation of the data provided, the subject structure, including foundation, would meet the minimum requirements of ANSI/TIA 222-F Standard for the proposed changed condition as stated above when considering the structure to have been properly designed for the stated appurtenances. The proposed loading would stress the structure slightly more (about 5% or less) than the previous structural analysis.

Therefore, **the installation of the noted proposed changed condition is structurally acceptable** on this existing structure in accordance with the ANSI/TIA 222-F Standard for the loading considered under the criteria listed and referenced.

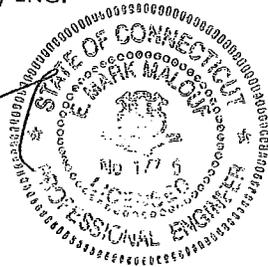
MEI appreciates the opportunity of providing our continuing professional services to you. If you have any questions or need further assistance on this or other projects please contact us.

Respectfully submitted,

MALOUF ENGINEERING INT'L, INC.



E. Mark Malouf, PE
Connecticut #17715
972-783-2578 ext. 106
mmalouf@maloufengineering.com





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

October 4, 2007

Edward J. Filipone, 1st Selectman
Town of East Windsor
Town Hall 11 Rye St.
Broad Brook, Connecticut 06016

Re: Telecommunications Facility – 232 South Main Street

Dear Mr. Filipone:

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 (“Cingular”) 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 Cingular’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 Cingular’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

**CINGULAR WIRELESS
Equipment Modification**

319-321 New Britain Avenue, Farmington, CT (Unionville)
Site Number 5404
Former AT&T site
Exempt Modification 9/5/02

Tower Owner/Manager: Town of Farmington

Equipment configuration: Monopole

Current and/or approved: Three Allgon 7250 antennas @ 150 ft c.l. (approved for 6)
Six runs 1 5/8 inch coax

Planned Modifications: Remove existing antennas
Install 3 Powerwave 7770 antennas (or equivalent) @ 150 ft
Install six TMA's @ 150 ft

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 50.9 % 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 54.3 % 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 *							49.31
Cingular GSM *	150	1900 Band	4	250	0.0160	1.0000	1.60
Total							50.9%

* 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 *							49.31
Cingular GSM	150	1900 Band	4	570	0.0364	1.0000	3.64
Cingular UMTS	150	880 - 894	1	500	0.0080	0.5867	1.36
Total							54.3%

* Per CSC Records

Structural information:

The attached structural analysis demonstrates that the tower and foundation have adequate structural capacity to accommodate the proposed modifications. (Malouf Engineering Intl, dated 9/28/07)



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

October 4, 2007

Kathleen Eagen, Town Manager
Town of Farmington
Town Hall One Monteith Dr.
Farmington, CT 06032-1053

Re: Telecommunications Facility – 319-321 New Britain Avenue, Farmington (Unionville)

Dear Ms. Eagen:

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 (“Cingular”) 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 Cingular’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 Cingular’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 Report



at&t – Unionville-Farmington Site #5404 Farmington, CT

September 28, 2007

MEI PROJECT ID: CT00937M-07V0

MALOUF ENGINEERING INTL., INC.



STRUCTURAL CONSULTANTS

17950 PRESTON ROAD, SUITE 720 • DALLAS, TEXAS 75252-5635 • TEL. 972 -783-2578 FAX 972-783-2583
www.maloufengineering.com





September 28, 2007

STRUCTURAL ANALYSIS

Structure:	190 ft Monopole	Pirol / 18-Sided
Client / Site ID:	Hudson D.G. / AT&T	Unionville-Farmington Site #5404
Owner / Site ID:	AT&T	Unionville-Farmington Site #5404
MEI Project ID:	CT00937M-07V0	
Location:	319-321 New Britain Ave. Farmington, CT 06085	Hartford County FCC # 1226793
	LAT 41-44-59.3 N	LON 72-52-21.7 W

EXECUTIVE SUMMARY:

Malouf Engineering Int'l (MEI), as requested, has performed a structural analysis of the above mentioned structure to assess the impact of the changed condition as noted in Table 1.

Based on the stress analysis performed, the existing structure is **in conformance** with the ANSI/TIA **222-F** Standard for the loading considered under the criteria listed and referenced in the report sections.

The installation of the proposed changed condition consisting of replacement of the existing AT&T antennas with new (3) Allgon LGP 7770 Panels + (6) LGP 21401 TMA's onto existing (3) 3ft Standoff Mounts at Elev. 150 ft ± c.l. fed with (6) 1-5/8" dia. lines [existing - internal] is structurally acceptable.

MEI appreciates the opportunity of providing our continuing professional services to you. If you have any questions or need further assistance on this or any other projects please contact us.

Respectfully submitted,

MALOUF ENGINEERING INT'L, INC.

Analysis performed by:

Luan Nguyen, PE
Project Engineer

Reviewed & Approved by:

E. Mark Malouf
E. Mark Malouf, PE
Connecticut #17715
972-783-2578 ext. 106
mmalouf@maloufengineering.com

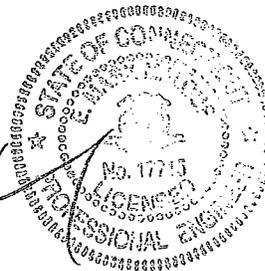


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1. INTRODUCTION & SCOPE

A rigorous structural analysis was performed by Malouf Engineering Int'l (MEI), as requested and authorized by Derek Creaser, Hudson Design Group on behalf of AT&T, to determine the acceptance of the proposed changed conditions in conformance with the ANSI/TIA-222-F Standard, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures".

The scope of this independent analysis is to determine the overall stability and the adequacy of structural members, foundations, and member connections, as available and stated. This analysis considers the structure to have been properly installed and maintained with no structural defects. Installation procedures and related loading are not within the scope of this analysis and should be performed and evaluated by a competent person of the erection contractor.

The different report sections detail the applicable information used in this evaluation, relating to the tower data, the appurtenances configuration and the wind and ice loading considered.

2. SOURCE OF DATA

The following information has been used in this evaluation as source data that accurately represent the existing structure and the related appurtenances:

	Source	Information	Reference
STRUCTURE			
Tower	Hudson D. G.	Original Tower Design	Pirot Dwg. No. 157375-B, Eng. File No. A-118703 dated 10/26/01.
Foundation	Hudson D. G.	Original Tower Design	Pirot Dwg. No. 157375-B, Eng. File No. A-118703 dated 10/26/01.
Material Grade	Available from supplied documents – refer to Appendix.		
CURRENT APPURTENANCES			
	Hudson D. G.	Previous Tower Analysis Report & recent site photos	Pirot Dwg. Eng. File No. A-118703 dated 11/07/01.
CHANGED CONDITION			
	Hudson D. G.	Cingular RF Data sheet	Issue dated 4/26/07

Background Information:

Based on available information, the following is known regarding this structure:

DESIGNER / FABRICATOR	Pirot / 18-Sided
DESIGN CRITERIA	TIA/EIA 222-F – 85 / 74 Mph + 0" / 1/2" Ice
PRIOR STRUCTURAL MODIFICATIONS	None Known

3. ANALYSIS CRITERIA

The structural analysis performed used the following criteria:

CODE / STANDARD	IBC 2003 / ANSI/TIA-222-F-96 Standard	
LOADING CASES	<i>Full Wind:</i>	80 Mph - with No Radial Ice
	<i>Iced Case:</i>	69 Mph (fastest-mile) + 1/2" Radial Ice
	<i>Service:</i>	50 Mph

Appurtenances Configuration

The following appurtenances configuration has been considered:

Table 1: Proposed Changed Condition Appurtenances

Elev (ft)	Tenant	Ants Qty	Appurtenance Model / Description	Mount Description	Lines Qty	Line size & Location
150	AT&T	3	Allgon LGP 7770 Panels	[(3) 3ft Standoff Mounts - existing]	6	1-5/8" - (I) [Re-use existing]
		6	LGP 21401 TMA's			

Table 2: Current and Reserved/Future Appurtenances

Elev (ft)	Tenant	Ants Qty	Appurtenance Model / Description	Mount Description	Lines Qty	Line size & Location
190		1	Lightning Rod on Extension	(3) 5' Sidearm Mounts	3	7/8" - (I)
		2	10'x3" Omni Whip Antenna			
		1	4' Parareflector Grid Dish			
185		1	12'x3" Omni Whip Antenna	(2) 5' Sidearm Mounts	2	7/8" - (I)
		1	4' Parareflector Grid Dish			
180		1	8'x3" Omni Whip Antenna	(1) 5' Sidearm Mounts	1	7/8" - (I)
		1	Empty 5' Sidearm Mount			
170	Sprint	6	5' Panel Antennas	L.P. Platform w/o Rails	6	1-5/8" - (I)
113		3	10'x3" Omni Whip Antenna	(3) 5' Sidearm Mounts	3	1/2" - (I)
90		3	18'x3" Omni Whip Antenna	(3) 5' Sidearm Mounts	3	1/2" - (I)

Notes:

1. Please note appurtenances not listed above are to be removed/not present as per data supplied.
2. (I) = internal; (E) = External; (FZ) = Within Face Zone & (OFZ) = Outside Face Zone - as per TIA-222-G.
3. The above antennas, mounts, and lines represent MEI's understanding of the appurtenances configuration. If different than above, the analysis is invalid. Please refer to Appendix 2 for EPA wind areas used in the calculations. Please contact MEI if any discrepancies are found.

4. ANALYSIS PROCEDURE

The subject structure is analyzed for feasibility of the installation of the proposed changed condition previously noted. The data records furnished were reviewed and a computer stress analysis was performed in accordance with the TIA-222 Standard provisions and with the agreed scope of work terms and the results of this analysis are reported.

Analysis Program

The computer program used to model the structure is a rigorous Finite Element Analysis program, RISATower (ver. 5.0.2.2), a commercially available program developed by C-Concepts, WI and now maintained by RISA Technologies. The latticed structures members are modeled using beam/truss and cable members and the pole members using tubular beam elements. The structural parameters and geometry of the members are included in the model. The dead and temperature loads and the wind loads are internally calculated by the program for the different wind directions and then applied as external loads on the structure. This existing tower is assumed, for the purpose of this analysis, to have been properly maintained and to be in good condition with no structural defects and with no deterioration to its member capacities. Refer to the related section in this report for a listing of the assumptions made.

Assumptions

This engineering study is based on the theoretical capacity of the members and is not a condition assessment of the structure. This analysis is based on information supplied, and therefore, its results are based on and as accurate as that supplied data. MEI has made no independent determination, nor is it required to, of its accuracy. The following assumptions were made for this structural stress analysis:

- This existing tower is assumed, for the purpose of this analysis, to have been properly maintained and to be in good condition with no structural defects and with no deterioration to its member capacities ('as-new' condition).
- The tower member sizes and configuration are considered accurate as supplied. The material grade is as per data supplied and/or as assumed and as stated.
- The appurtenances configuration is as supplied and/or as stated in the report. It is assumed to be complete and accurate. All antennas, mounts, coax and waveguides are assumed to be properly installed and supported as per manufacturer requirements.
- Some assumptions are made regarding antennas and mounts sizes and their projected areas based on best interpretation of data supplied and of best knowledge of antenna type & industry practice.
- The top platform, if applicable, is considered adequate to support the loading. No actual analysis of the platform itself is performed, with the analysis being limited to analyzing the pole and its foundation.
- The soil parameters are as per data supplied or as assumed and stated in the calculations. Refer to the Appendix. If no data is available, the foundation system is assumed to support the structure with its new reactions.
- All welds and connections are assumed to develop at least the member capacity, unless determined otherwise and explicitly stated in this report. All guy cable assemblies, as applicable, are assumed to develop the rated breaking strength of the wire.
- All prior structural modifications, if any, are assumed to be as per data supplied/available, and to have been properly installed and to be fully effective.

If any of the above assumptions are not valid or have been made in error, this analysis results may be invalidated, MEI should be contacted to review any contradictory information to determine its effect.

5. ANALYSIS RESULTS

The results of the structural stress analysis based on data available and with the previous listed criteria, indicated the following:

Table 3: Stress Analysis Results

Member Type	Maximum Stress Ratio	Controlling Location / Component	Pass/Fail	Comment
POLE SHAFT	54.8%	Elev. 31.25 - 0 ft	Pass	
BASE PLATE	44.3%	Base Plate Stiffeners	Pass	
ANCHOR RODS	57.1%	Bolt Tensions	Pass	
FOUNDATION	19.9%	Download Capacity	Pass	

Notes:

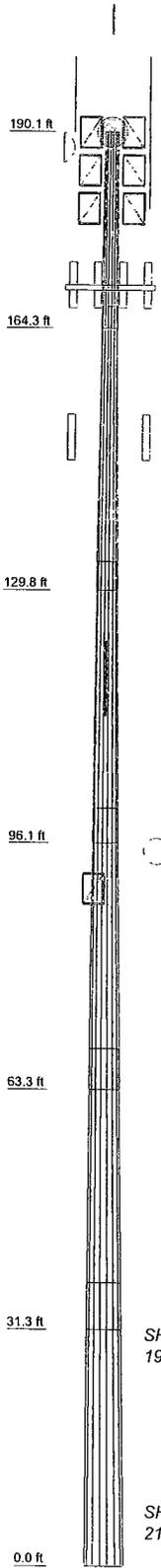
1. The Maximum Stress Ratio is the percentage that the maximum load in the member is relative to the allowable load as determined by Code requirements.
2. Refer to the Appendix 2 for more details on the member loads.
3. A maximum stress ratio between 100% to 105% may be considered as *Acceptable* according to industry standard practice.

6. FINDINGS & RECOMMENDATIONS

- Based on the rigorous stress analysis results, the subject structure is **rated at 57.1%** of its support capacity (controlling component: Anchor Rods) with the proposed changed condition considered. Please refer to Table 3 and to Appendix 2 for more details of the analysis results.
- Based on the stress analysis performed, the existing structure is **in conformance** with the ANSI/TIA **222-F** Standard for the loading considered under the criteria listed and referenced in the report sections.
- ***The installation of the proposed changed condition consisting of replacement of the existing AT&T antennas with new (3) Allgon LGP 7770 Panels + (6) LGP 21401 TMA's onto existing (3) 3ft Standoff Mounts at Elev. 150 ft ± c.l. fed with (6) 1-5/8" dia. lines [existing - internal] is structurally acceptable.***
- This pole has additional support capacity for the appurtenances and loading criteria considered. However, no changes to the configuration considered should be made without performing a new proper evaluation.

Rigging and temporary supports required for the erection/modification shall be determined, documented, furnished and installed by the erector/contractor accounting for the loads imposed on the structure due to the proposed construction method.

Section	1	2	3	4	5	6
Length (ft)	25.75	37.50	37.50	37.50	37.50	37.50
Number of Sides	18	18	18	18	18	18
Thickness (in)	0.2500	0.3125	0.3750	0.3750	0.3750	0.3750
Lap Splice (ft)	2.92		3.83	4.67	5.50	6.25
Top Dia (in)	19.5625	24.7708	32.4878	39.8473	46.9609	53.8477
Bot Dia (in)	26.0000	34.0625	41.7500	49.0625	56.1250	62.9375
Grade			A572-65			
Weight (lb)	1586.5	3683.6	5580.7	6694.9	7771.4	8811.8
						34109.0



DESIGNED APPURTENANCE LOADING

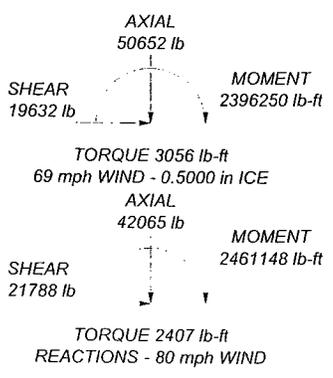
TYPE	ELEVATION	TYPE	ELEVATION
Lightning Rod on Ext. (E)	205	8'x3" Omni Whip Ant. (E)	180
10'x3" Omni Whip Ant. (E)	190	5' Sidearm Mount (E)	180
5' Sidearm Mount (E)	190	(6) 5' Panel Antennas (E)	170
10'x3" Omni Whip Ant. (E)	190	LP PLATFORM w/o Rails (E)	170
5' Sidearm Mount (E)	190	(3) 3' Sidearm Mount (E)	150
5' Sidearm Mount (E)	190	(3) Allgon 7770 Panel Antennas (P)	150
4' Parareflector Grid Dish (E)	190	(6) LGP 21401 TMA's (P)	150
12'x3" Omni Whip Ant. (E)	185	(3) 10'x3" Omni Whip Ant. (E)	113
5' Sidearm Mount (E)	185	(3) 5' Sidearm Mount (E)	113
5' Sidearm Mount (E)	185	(3) 18'x3" Omni Whip Ant. (E)	90
4' Parareflector Grid Dish (E)	185	(3) 5' Sidearm Mount (E)	90
Empty 5' Sidearm Mount w/ Pipe Mounts (E)	180		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for a 80 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 69 mph basic wind with 0.50 in ice.
4. Deflections are based upon a 60 mph wind.
5. TOWER RATING: 57.1%



<p>Malouf Engineering Int'l, Inc. 17950 Preston Road, Suite #720 Dallas, TX 75252 Phone: (972) 783-2578 FAX: (972) 783-2583</p>	<p>Job: 190 FT MNP, UNIONVILLE-FARMINGTON SITE #5404</p>
	<p>Project: CT00937M-07V0</p>
	<p>Client: HUDSON DESIGN GROUP / AT&T Drawn by: L.Nguyen App'd:</p>
	<p>Code: TIA/EIA-222-F Date: 09/28/07 Scale: NTS</p>
	<p>Path: C:\MEI\Projects\07 DATAMNP\CT00937M-07V0\CT00937M-07V0.en Dwg No. E-1</p>

**CINGULAR WIRELESS
Equipment Modification**

250 Meriden-Waterbury Turnpike, Southington, CT
Site Number 1033
Exempt Modifications 7/15/99 and 10/7/02

Tower Owner/Manager: John Rogus

Equipment configuration: Self-Supporting Lattice Tower

Current and/or approved: Nine CSS DUO1417 antennas @ 78 ft c.l.
Nine runs 7/8 inch coax
Six TMA's / 3 diplexers @ 78 ft

Planned Modifications: Remove three existing antennas
Install 3 Powerwave 7770 antennas (or equivalent) @ 78 ft
Install three additional 7/8 inch coax (total of 12)
Install three additional diplexers @ 78 ft

Decom???

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 49.2 % 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 34.9 % of the standard.

Existing / Approved

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 *							21.38
Cingular TDMA*	77	880 - 894	16	100	0.0970	0.5867	16.54
Cingular GSM*	77	880 - 894	2	296	0.0359	0.5867	6.12
Cingular GSM*	77	1900 Band	2	427	0.0518	1.0000	5.18
Total							49.2%

* 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 *							21.38
Cingular GSM	78	880 - 894	2	296	0.0350	0.5867	5.96
Cingular GSM	78	1900 Band	1	427	0.0252	1.0000	2.52
Cingular UMTS	78	880 - 894	1	500	0.0296	0.5867	5.04
Total							34.9%

* Per CSC records.

Structural information:

The attached structural analysis demonstrates that the tower and foundation have sufficient structural capacity to accommodate the proposed modifications. (Malouf Engineering Intl., dated 9/21/07)



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

October 4, 2007

John Weichsel, Town Manager
Town of Southington
Town Office Bldg. 75 Main St.
Southington, CT 06489

Re: Telecommunications Facility – 250 Meriden-Waterbury Turnpike, Southington

Dear Mr. Weichsel:

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 (“Cingular”) 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 Cingular’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 Cingular’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 Report



Southington-Rogus Site # 1033
250 Meriden Waterbury Tnpk., Southington, Connecticut

Sept. 21, 2007

MEI PROJECT ID: CT00926S-07V0

MALOUF ENGINEERING INTL., INC.



7950 PRESTON ROAD, SUITE 720 ■ DALLAS, TEXAS 75252-5635 ■ TEL. 972-783-2578 FAX 972-783-2583
www.maloufengineering.com





September 21, 2007

STRUCTURAL ANALYSIS

Structure:	80ft Self-Supporting	Pirod / SST	
Client/ Site Name /#:	Hudson D.G. / AT&T	Southington-Rogus	# 1033
Owner/Site Name /#:	AT&T	SNET 5641-0188	FA #10035233
MEI Project ID:	CT00926S-07V0		
Location:	250 Meriden Waterbury Turnpike, Southington, CT 06489	Hartford County FCC #	
	LAT .	41-33-24.5 N	LON 72-51-10.8 W

EXECUTIVE SUMMARY:

Malouf Engineering Int'l (MEI), as requested, has performed a structural analysis of the above mentioned structure to assess the impact of the changed condition as noted in Table 1.

Based on the stress analysis performed, the existing structure is **in conformance** with the ANSI/TIA **222-F** Standard for the loading considered under the criteria listed and referenced in the report sections.

The installation of the proposed changed condition of the replacement of (3) existing AT&T panels with new (3) LGP Allgon 7770 Panels, (3) Powerwave 13519 Diplexers, (3) Powerwave 7020 RET's, (3) Powerwave 7060 CiLOC onto existing platform at Elev. 79 ft c.l. fed, in addition to existing lines, with new (3) 7/8" dia. coax Lines is structurally acceptable.

MEI appreciates the opportunity of providing our continuing professional services to you. If you have any questions or need further assistance on this or any other projects please contact us.

Respectfully submitted,

MALOUF ENGINEERING INT'L, INC.

Analysis performed by:

Reviewed & Approved by:

Krishna Manda, PE
Project Engineer

(Handwritten Signature)
E. Mark Malouf, PE
Connecticut # 17715
972-783-2578 ext. 106
mmalouf@maloufengineering.com

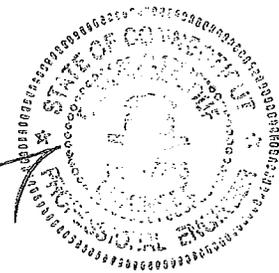


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1. INTRODUCTION & SCOPE

A structural analysis was performed by Malouf Engineering Int'l (MEI), as requested and authorized by Mr. Derek Creaser, Hudson Design Group, LLC, on behalf of AT&T to determine the acceptance of the proposed changed conditions in conformance with the ANSI/TIA-222-F Standard, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures".

The scope of this independent analysis is to determine the overall stability and the adequacy of structural members, foundations, and member connections, as available and stated. This analysis considers the structure to have been properly installed and maintained with no structural defects. Installation procedures and related loading are not within the scope of this analysis and should be performed and evaluated by a competent person of the erection contractor.

The different report sections detail the applicable information used in this evaluation, relating to the tower data, the appurtenances configuration and the wind and ice loading considered.

2. SOURCE OF DATA

The following information has been used in this evaluation as source data that accurately represent the existing structure and the related appurtenances:

	Source	Information	Reference
STRUCTURE			
Tower	Hudson D.G. / Derek Creaser	Previous Structural Analysis report	URS Corporation job #36911702.00000 Dated 9/16/2002
Foundation		Not Available	
Material Grade	Partial information is available from supplied documents noted above and assumed as per typical towers of this type – refer to Appendix.		
CURRENT APPURTENANCES			
	Hudson D.G. / Derek Creaser	Previous Analysis Report/ Recent Photos	URS Corporation job #36911702.00000
CHANGED CONDITION			
	Hudson D.G. / Derek Creaser	Cingular RF Data sheet	AT&T RF Data sheet Rev. 2007-02 Dated 4/23/2007

Background Information:

Based on available information, the following is known regarding this structure:

DESIGNER / FABRICATOR	Pirot (File #A-115911 dated 7/27/1999)
DESIGN CRITERIA	TIA/EIA 222-E –Unknown
PRIOR STRUCTURAL MODIFICATIONS	None known

3. ANALYSIS CRITERIA

The structural analysis performed used the following criteria:

CODE / STANDARD	ANSI/TIA-222-F Standard	
LOADING CASES	<i>Full Wind:</i>	80 Mph (with No Radial Ice)
	<i>Iced Case:</i>	69.2 Mph + 0.5" Radial Ice
	<i>Service:</i>	50 Mph

Appurtenances Configuration

The following appurtenances configuration has been considered:

Table 1: Proposed Changed Condition Appurtenances

Elev (ft)	Tenant	Ants Qty	Appurtenance Model / Description	Mount Description	Lines Qty	Line size & Location
79 ⁴	AT&T	3	LGP Allgon 7770 Panels	[exist platform]	3	7/8" / (FZ)
		3	Powerwave 13519 Diplexer			
		3	Powerwave 7020 RET's			
		3	Powerwave 7060 CiLOC			
						[In addition to exist lines]

Table 2: Current and Reserved/Future Appurtenances

Elev (ft)	Tenant	Ants Qty	Appurtenance Model / Description	Mount Description	Lines Qty	Line size & Location
80		1	ASP 682		1	7/8" / (FZ)
		1	PD 201		1	7/8" / (FZ)
		1	6ft Whip		1	7/8" / (FZ)
79	AT&T	6	DUO1417-8686 Panels	(3) T-Frame Mounts	6	7/8" / (FZ)
		3	ADC Diplexers		3	7/8" / (FZ)
		6	ADC/CG-1900W850 TMA			
63		1	ASP680 Omni	Side arm mount	1	7/8" / (FZ)
		1	8' Omni antenna	Side arm mount	1	7/8" / (FZ)
49		1	PD220 Omni	Side arm mount	1	1/2" / (FZ)
48		1	SPF-701 Omni	Side arm mount	1	7/8" / (FZ)
38		1	16' Omni antenna	Side arm mount	1	1/2" / (FZ)
				Empty Side arm mount		

Notes:

1. Please note appurtenances not listed above are to be removed/not present as per data supplied.
2. (I) = internal; (E) = External; (FZ) = Within Face Zone & (OFZ) = Outside Face Zone - as per TIA-222-G.
3. The above antennas, mounts, and lines represent MEI's understanding of the appurtenances configuration. If different than above, the analysis is invalid. Please refer to Appendix 2 for EPA wind areas used in the calculations. Please contact MEI if any discrepancies are found.
4. AT&T replacing existing (1) panel antenna/sector with proposed panels and adding (1) 7/8" dia. Coax and the (1) Diplexer per sector.

4. ANALYSIS PROCEDURE

The subject structure is analyzed for feasibility of the installation of the proposed changed condition previously noted. The data records furnished were reviewed and a computer stress analysis was performed in accordance with the TIA-222 Standard provisions and with the agreed scope of work terms and the results of this analysis are reported.

Analysis Program

The computer program used to model the structure is a rigorous Finite Element Analysis program, RISATower (ver.5.02.2), a commercially available program developed by C-Concepts, WI and now maintained by RISA Technologies. The latticed structures members are modeled using beam/truss and cable members and the pole members using tubular beam elements. The structural parameters and geometry of the members are included in the model. The dead and temperature loads and the wind loads are internally calculated by the program for the different wind directions and then applied as external loads on the structure.

Assumptions

This engineering study is based on the theoretical capacity of the members and is not a condition assessment of the structure. This analysis is based on information supplied, and therefore, its results are based on and as accurate as that supplied data. MEI has made no independent determination, nor is it required to, of its accuracy. The following assumptions were made for this structural stress analysis:

- This existing tower is assumed, for the purpose of this analysis, to have been properly maintained and to be in good condition with no structural defects and with no deterioration to its member capacities ('as-new' condition).
- The tower member sizes and configuration are considered accurate as supplied. The material grade is as per data supplied and/or as assumed and as stated.
- The appurtenances configuration is as supplied and/or as stated in the report. It is assumed to be complete and accurate. All antennas, mounts, coax and waveguides are assumed to be properly installed and supported as per manufacturer requirements.
- Some assumptions are made regarding antennas and mounts sizes and their projected areas based on best interpretation of data supplied and of best knowledge of antenna type & industry practice.
- Mounts/Platforms are considered adequate to support the loading. No actual analysis of the platform/mount itself is performed, with the analysis being limited to analyzing the structure.
- The soil parameters are as per data supplied or as assumed and stated in the calculations. Refer to the Appendix. If no data is available, the foundation system is assumed to support the structure with its new reactions.
- All welds and connections are assumed to develop at least the member capacity, unless determined otherwise and explicitly stated in this report. All guy cable assemblies, as applicable, are assumed to develop the rated breaking strength of the wire.
- All prior structural modifications, if any, are assumed to be as per data supplied/available, and to have been properly installed and to be fully effective.

If any of the above assumptions are not valid or have been made in error, this analysis results may be invalidated, MEI should be contacted to review any contradictory information to determine its effect.

5. ANALYSIS RESULTS

The results of the structural stress analysis based on data available and with the previous listed criteria, indicated the following:

Table 3: Stress Analysis Results

Member Type	Maximum Stress Ratio	Controlling Location / Component	Pass/Fail	Comment
LEGS	92.3%	Elev. 20 - 0ft	Pass	
DIAGONALS	67.1%	Elev. 80 - 60ft	Pass	
HORIZONTAL	12.2%	Elev. 80 - 60ft	Pass	
FOUNDATION	Cannot Determine		Cannot Determine	Data Not available- Consider Acceptable.

Notes:

1. The Maximum Stress Ratio is the percentage that the maximum load in the member is relative to the allowable load as determined by Code requirements.
2. Refer to the Appendix 2 for more details on the member loads.
3. A maximum stress ratio between 100% to 105% may be considered as *Acceptable* according to industry standard practice.

6. FINDINGS & RECOMMENDATIONS

- Based on the rigorous stress analysis results, the subject structure is **rated at 92.3%** of its support capacity (controlling component: Legs) with the proposed changed condition considered. Please refer to Table 3 and to Appendix 2 for more details of the analysis results.
- Based on the stress analysis performed, the existing structure is **in conformance** with the ANSI/TIA **222-F** Standard for the loading considered under the criteria listed and referenced in the report sections.
- ***The installation of the proposed changed condition of the replacement of (3) existing AT&T panels with new (3) LGP Allgon 7770 Panels, (3) Powerwave 13519 Diplexers, (3) Powerwave 7020 RET's, (3) Powerwave 7060 CiLOC onto existing platform at Elev. 79 ft c.l. fed, in addition to existing lines, with new (3) 7/8" dia. coax Lines is structurally acceptable.***
- This structure has limited additional support capacity for the appurtenances and loading criteria considered. Therefore, No changes to the configuration considered should be made without performing a new proper evaluation.

Rigging and temporary supports required for the erection/modification shall be determined, documented, furnished and installed by the erector/contractor accounting for the loads imposed on the structure due to the proposed construction method.

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
ASP682 (E)	80	LGP 13519 Diplexer (ATI/P)	79
6' Omni (E)	80	Powerwave 7060 Ciloc (ATI/P)	79
PD201-1 (E)	80	Powerwave 7060 Ciloc (ATI/P)	79
(2) DUO1417-8686 w/Mount Pipe (ATI/E)	79	Powerwave 7060 Ciloc (ATI/P)	79
(2) DUO1417-8686 w/Mount Pipe (ATI/E)	79	7020 RET (ATI/P)	79
(2) DUO1417-8686 w/Mount Pipe (ATI/E)	79	7020 RET (ATI/P)	79
(2) DUO1417-8686 w/Mount Pipe (ATI/E)	79	7020 RET (ATI/P)	79
(2) ADC/CG 1900W850 TMA (ATI/E)	79	T-Frame Sector Mounts (3) (ATI/E)	79
(2) ADC/CG 1900W850 TMA (ATI/E)	79	ASP680 (E)	63
(2) ADC/CG 1900W850 TMA (ATI/E)	79	3' Side Arm Mount (E)	63
ADC Diplexer (ATI/E)	79	8' Omni (E)	63
ADC Diplexer (ATI/E)	79	3' Side Arm Mount (E)	63
ADC Diplexer (ATI/E)	79	PD220 (E)	49
7770.00 w/ Pipe Mount (ATI/P)	79	3' Side Arm Mount (E)	49
7770.00 w/ Pipe Mount (ATI/P)	79	ASPF701 (E)	48
7770.00 w/ Pipe Mount (ATI/P)	79	3' Side Arm Mount (E)	48
LGP 13519 Diplexer (ATI/P)	79	16' whip (E)	38
LGP 13519 Diplexer (ATI/P)	79	3' Side Arm Mount (E)	38
		Empty 3' Side Arm Mount (E)	38

MATERIAL STRENGTH

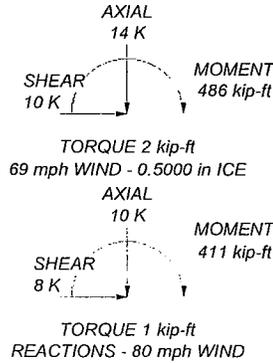
GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

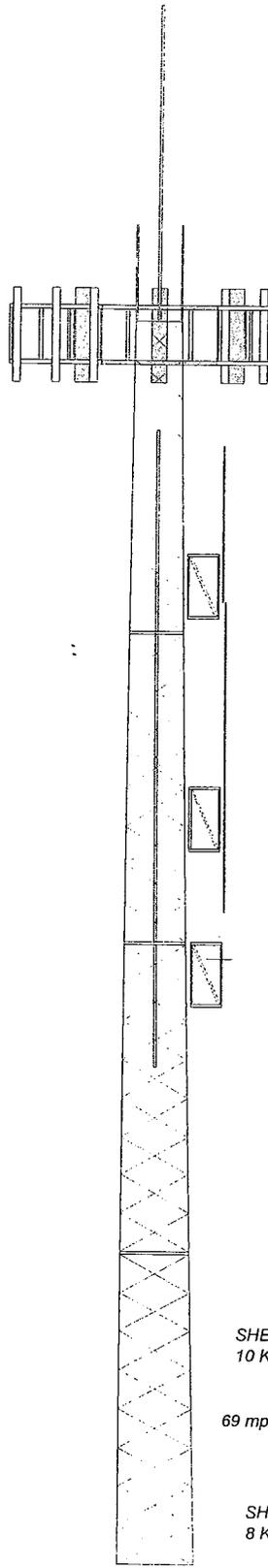
1. Tower is located in Hartford County, Connecticut.
2. Tower designed for a 80 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 69 mph basic wind with 0.50 in ice.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 92.3%

MAX. CORNER REACTIONS AT BASE:

DOWN: 117 K
 UPLIFT: -107 K
 SHEAR: 5 K



Section	T1	T2	T3	T4
Legs	SR 1 1/2	SR 1 3/4	SR 2	SR 2 1/4
Leg Grade	SR 5/8	SR 3/4	A572-50	SR 7/8
Diagonals	A36	SR 3/4	A572-50	SR 7/8
Diagonal Grade	SR 5/8	SR 3/4	SR 7/8	SR 7/8
Top Girts	SR 5/8	SR 3/4	SR 7/8	SR 7/8
Bottom Girts	SR 5/8	SR 3/4	SR 7/8	SR 7/8
Face Width (ft)	3	3.5	4	4.5
# Panels @ (ft)			32 @ 2.47917	
Weight (K)	6.6	0.8	1.2	1.4
	81.0 ft	80.0 ft	60.0 ft	40.0 ft
			20.0 ft	0.0 ft



<p>Malouf Engineering Int'l Inc. 17950 Preston Road, Suite #720 Dallas, Texas 75252-5635 Phone: (972) 783 2578 FAX: (972) 783 2583</p>	Job: 80FT SST/SOUTHINGTON-ROGUS SITE# 103 Project: CT00926S-07V0	
	Client: HUDSON/ AT&T Code: TIA/EIA-222-F	Drawn by: MM Date: 09/21/07
	Path: E:\Projects\MALOUF\007\CT00926S-07V0_HUDS_80FTSST-SOUTHINGTON-ROGUS\AC\00926S-07V0.dwg	App'd: Scale: NTS Dwg No. E-1

**CINGULAR WIRELESS
Equipment Modification**

5 Barbara Road, Tolland, CT
Site Number 1037
Docket 100; Exempt Modifications 8/1/96, 5/28/98, 8/1/02

Tower Owner/Manager: American Tower

Equipment configuration: Monopole

Current and/or approved: Nine CSS DUO1417 antennas @ 151 ft c.l.
Nine runs 1 ¼ inch coax
Six TMA's @ 151 ft

Planned Modifications: Remove three existing antennas
Install 3 Powerwave 7770 antennas (or equivalent) at 151 ft
Install three additional runs 1 ¼ inch coax
Install three additional diplexers @ 151 ft (total of 6)

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 22.6 % 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 20.3 % 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 *							15.23
Cingular TDMA *	150	880 - 894	16	100	0.0256	0.5867	4.36
Cingular GSM *	150	880 - 894	2	296	0.0095	0.5867	1.61
Cingular GSM *	150	1900 Band	2	427	0.0136	1.0000	1.36
Total							22.6%

* 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 *							15.23
Cingular GSM	151	880 - 894	3	296	0.0140	0.5867	2.39
Cingular GSM	151	1900 Band	2	427	0.0135	1.0000	1.35
Cingular UMTS	151	880 - 894	1	500	0.0079	0.5867	1.34
Total							20.3%

* Per CSC Records

Structural information:

The attached structural analysis indicates that the foundation is adequate to accommodate the proposed modifications, but that the tower shaft will be overstressed with the additional loading. (American Tower, dated 9/27/07) The structural, however, recommends tower strengthening modifications which Cingular will have completed prior to making the proposed equipment modifications. For this reason, Cingular respectfully requests a conditional approval for the proposed modifications.



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

October 4, 2007

Mr. Steven Werbner, Town Manager
Town of Tolland
Hicks Memorial Municipal Center 21 Tolland Green
Tolland, CT 06084-9445

Re: Telecommunications Facility – 5 Barbara Road, Tolland

Dear Mr. Werbner:

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 (“Cingular”) 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 Cingular’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).

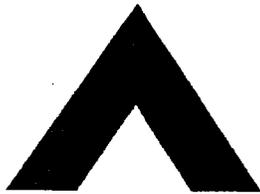
The accompanying letter to the Siting Council fully describes Cingular’s proposal for the referenced cell site. However, if you have any questions or require any further information on our plans or the Siting Council’s procedures, please call me at (860) 513-7636 or Mr. Derek Phelps, Executive Director, Connecticut Siting Council at (860) 827-2935.

Sincerely,

Steven L. Levine
Real Estate Consultant

Enclosure

FAILED



AMERICAN TOWER™
CORPORATION

Structural Analysis Report

Structure : 155 ft Engineered Endeavors Inc
Monopole

ATC Site Name : Tolland CT, CT

ATC Site Number : 302495

Proposed Carrier : Cingular

Carrier Site Name : Tolland

Carrier Site Number : 1037

County : Tolland

Eng. Number : 40486523

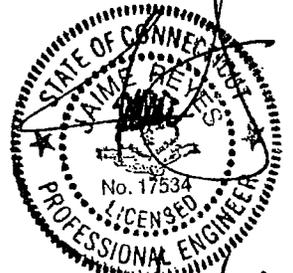
Date : September 27, 2007

Usage : 119.9% (Shaft)

Submitted by:
Ram Kodali, P.E.
Project Engineer

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

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



9/27/07

Introduction

The purpose of this report is to summarize results of the structural analysis performed on the 155 ft Engineered Endeavors Inc Monopole located at Tolland CT, Tolland County, CT (ATC site #302495). The tower was originally designed and manufactured by Engineered Endeavors Inc (Drawing # GS50842 dated June 24, 1998). The original design profile is attached for additional information. The original base plate was reinforced as per SpectraSite dwg # M1 dated November 15, 2004. These modifications were considered in the current analysis.

Analysis

The 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) / 105 mph (3-Second Gust) per IBC 2003 CODE
(As per 2005 Connecticut Building Code Supplement)
Radial Ice: 73.61 mph (Fastest Mile) w/ 1/2" ice
Code: TIA/EIA-222-F

Antenna Loads

The following antenna loads were used in the tower analysis.

Existing Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax	Carrier
163.3	3	EMS RR901702DP	Antennas are in Stealth Mount	(6) 1 5/8	T-Mobile
155.0	1	7' Omni	Platform w/ Handrails	(1) 7/8	USA Mobility
150.0	6	CSS DUO4-8670		(6) 1 1/4	Cingular
	6	ADC Dual band 850-1900		N/A	
142.0	6	Decibel 948F85T2E-M	Platform w/ Handrails	(15) 1 5/8	Verizon
	9	Swedcom ALP9212			
130.0	9	Decibel DB980H90T2E-M	Platform w/ Handrails	(9) 1 5/8	Sprint
115.0	3	72" x 12" x 6" Panel	Platform w/ Handrails	(12) 1 5/8	Nextel
	9	48" x 12" x 6" Panel			
	9	TTA			
105.0	3	Panel 36" x 8" x 6"	Round Low Profile Platform	N/A	AT&T
	9	72" x 12" x 6" Panel		(3) 1 5/8	
82.0	1	GPS	(1) Stand Off	(1) 1/2 *	Verizon
81.0	1	GPS	(1) Stand Off	(1) 1/2 *	T-Mobile
61.0	2	GPS	(2) Stand Off	(2) 1/2 *	Nextel
55.0	1	GPS	(1) Stand Off	(1) 1/2 *	Sprint
15.0	1	Chanelmaster 1.2 Meter	Dish Mount	(1) RG6 *	Arch Wireless

* Outside

Proposed Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax	Carrier
150.0	3	Powerwave LGP21401	Existing Platform w/ Handrails	N/A	Cingular
	3	Powerwave 7770.00		(6) 1 1/4	

Install proposed coax inside the monopole. All other transmission lines are assumed to be run inside the pole with the exception of those indicated above. The coax lines outside the pole shall be strapped tightly to the outside face of the pole shaft.

Results

The existing 155 ft Engineered Endeavors Inc Monopole with the existing and the proposed antennas **is not** structurally acceptable per TIA/EIA-222-F. The maximum structure usage is: 119.9% (Shaft).

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)	3,309.00	4,233.54	127.9
Shear (kips)	32.20	40	124.2

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.

Modifications

We recommend the following modifications:

The pole shaft needs to be reinforced from 0' to 95' elevation.

The final design and details for the required modifications will be a separate scope of work under a subsequent project.

Conclusion

Based on the analysis results, the structure does not meet the requirements per TIA/EIA-222-F standards. The tower and foundation can support the existing and proposed equipment after the modifications listed in this report are completed.

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

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							0.00
Windsor Fire Department	100	553	4	110	0.0158	0.3687	4.29
Cingular GSM	93	1900 Band	2	427	0.0355	1.0000	3.55
Cingular UMTS	93	880 - 894	1	500	0.0208	0.5867	3.54
Total							11.4%

Structural information:

The attached structural analysis demonstrates that the tower and foundation have adequate structural capacity to accommodate the proposed modifications. (Paul J. Ford & Co., dated 9/12/07)



PAUL J. FORD AND COMPANY
STRUCTURAL ENGINEERS
 250 East Broad Street • Suite 1500 • Columbus, Ohio 43215

September 12, 2007

Hudson Design Group, Inc.
 46 Beechwood Drive
 North Andover, MA 01845

Attn: Derek Creaser

Re: Existing 101-ft Monopole
 Located in at Windsor North West, Hartford County, CT: Site 5003
 PJF Project #A00007-T191 (Reference PJF # 29203-0052)

Dear Mr. Creaser:

Paul J. Ford and Company understands that AT&T proposes an antenna swap on the above referenced monopole. Paul J. Ford and Company originally designed the monopole for PennSummit Tubular, LLC per PJF project #29203-0052 and PST #1960.. The monopole was desned and fabricated in 2003, for an 85 mph fastest mile wind velocity for the following antenna loading:

Table 1 - Design Antenna Loading

Elev.	Antenna Description
101'	(2) 4' Diameter Standard Dishes (9) 48" x 12" x 3" Panel Antennas On a 14' Low Profile Platform
93'	(6) Allgon 7920 Panel Antennas On a 14' Low Profile Platform
83'	(9) 48" x 12" x 3" Panel Antennas On a 14' Low Profile Platform
73'	(9) 48" x 12" x 3" Panel Antennas On a 14' Low Profile Platform

For this structural review, we were provided with antenna information regarding the existing and proposed antennas, as well as recent pictures. Based on information provided, it is our understanding that the following antenna loading is to be considered for this structural review:

Table 2 - Proposed Antenna Loading

Status	Elev.	Antenna Description	Owner
Existing	97'	(1) Dipole Antenna On a Boom Arm Mount	Unknown
Proposed	93'	(3) Powerwave 7770 + (6) LGP21401 TMA's (*) On (3) Flush Antenna Mounts	AT&T

(*) Proposed antennas to replace (3) existing AWS90162 antennas.

Existing / proposed coax are mounted on the inside of the pole shaft and are not exposed to wind.

September 12, 2007

Page 2 of 2

Hudson Design Group, Inc.

Attn: Derek Creaser

Re: Existing 101-ft Monopole

Located in at Windsor North West, Hartford County, CT: Site 5003

PJF Project #A00007-T191 (Reference PJF # 29203-0052)

For this structural review we have compared design wind areas with wind areas from the existing and proposed antennas. Based on our comparison we have concluded that the existing and proposed antenna wind area will not exceed the wind areas from the original design. Therefore, the existing monopole should be capable of supporting the new antennas. The existing monopole and foundation were assumed to be in good condition.

If you have any questions or concerns regarding the review of this monopole structure, please feel free to contact us at (614) 221-6679.

Sincerely,

PAUL J. FORD AND COMPANY



Kurt J. Swarts, P.E.
Project Engineer
e-mail: kswarts@pjfweb.com



Michael F. Plahovinsak, P.E.
Connecticut License #25849



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

October 4, 2007

Peter Souza, Town Manager
Town of Windsor
Town Hall 275 Broad St.
Windsor, CT 06095-0472

Re: Telecommunications Facility – 750 Rainbow Road (Fire Station)

Dear Mr. Souza:

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 (“Cingular”) 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 Cingular’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 Cingular’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