

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

September 6, 2007

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

RE: EM-CING-023-081-099-126-146-070816 - New Cingular Wireless PCS, LLC notice of intent to modify existing telecommunications facilities located at 14 Canton Springs Road, Canton; 2 Larkin Drive, Middlebury; 108 Foxon Road, North Branford; 309 River Road, Shelton; and 60 Industrial Park Road, Vernon, Connecticut.

Dear Mr. Levine:

At a public meeting held on August 29, 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 Middlebury tower be reinforced per the structural analysis report dated August 6, 2007 and sealed by Richard Sambor, P.E. prior to the antenna swap and that a signed letter from a Professional Engineer is 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 dated August 15, 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 fruly yours,

Daniel F. Caruso

Chairman

DFC/MP/cm

C: The Honorable Andrew Esposito III, Mayor, Town of North Branford
 Carol Zeeb, Town Planner, Town of North Branford
 The Honorable Mark A. Lauretti, Mayor, City of Shelton
 Richard Schultz, Planning Administrator, City of Shelton
 The Honorable Ellen L. Marmer, Mayor, Town of Vernon
 Gene F. Bolles, Zoning Enforcement Officer, Town of Vernon
 The Honorable Mary B. Tomolonius, First Selectman, Town of Canton
 The Honorable Edward B. St. John, First Selectman, Town of Middlebury
 William J. Stowell, Planning and Zoning Chairman, Town of Middlebury
 Kenneth C. Baldwin, Robinson and Cole
 Connecticut State Police
 SBA
 Christine Farrell, T-Mobile
 Mountaintop Services

Daniel F. Caruso

Chairman

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051 Phone: (860) 827-2935 Fax: (860) 827-2950 E-Mail: siting.council@ct.gov Internet: ct.gov/csc

August 17, 2007

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

RE:

EM-CING-023-081-099-126-146-070816 - New Cingular Wireless PCS, LLC notice of intent to modify existing telecommunication facilities located at 14 Canton Springs Road, Canton; 2 Larkin Drive, Middlebury; 108 Foxon Road, North Branford; 309 River Road, Shelton; and 60 Industrial Park Road, Vernon, Connecticut.

Dear Ms. Tomolonius:

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

The Council will consider this item at the next meeting scheduled for August 29, 2007 at 1:30 p.m. in Hearing Room Two, Ten Franklin Square, New Britain, Connecticut.

If you have any questions or comments regarding this proposal, please call me or inform the Council by August 28, 2007.

Thank you for your cooperation and consideration.

Very truly yours

S. Derek Phelps Executive Director

SDP/cm

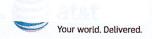
Enclosure: Notice of Intent

c: Sarajane S. Pickett, Town Planner, Town of Canton



EM-CING-023-081-099-126-146-070816





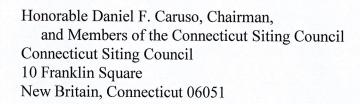
New Cingular Wireless PCS, LLC 500 Enterprise Drive Rocky Hill, Connecticut 06067-3900 Phone: (860) 513-7636 Fax: (860) 513-7190

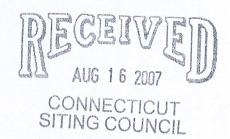
Steven L. Levine Real Estate Consultant

HAND DELIVERED

August 15, 2007

27





Re: New Cingular Wireless PCS, LLC notice of intent to modify 5 existing telecommunications facilities located in Canton, Middlebury, North Branford, Shelton, and Vernon

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

14 Canton Springs Rd, Canton, CT Site Number 1022 Exempt Modifications 10/8/99 and 8/10/02

Tower Owner/Manager: Verizon

Equipment configuration: Monopole

Current and/or approved: Nine CSS DUO1417 antennas @ 132 ft c.l.

Nine runs 7/8 inch coax

Six TMA's / three diplexers @ 132 ft

Planned Modifications: Remove three existing antennas

Install three Powerwave 7770 antennas at 132 ft c.l. Install three additional diplexers at 132 ft (total of 6)

Install three runs 7/8 inch coax (total of 12)

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 28.2 % 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 22.1 % of the standard.

Existing

Company	(feet) (MHz)		Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm²)	Standard Limits (mW/cm²)	Percent of Limit	
Other Users *							18.68	
Cingular TDMA *	132	880 - 894	16	100	0.0330	0.5867	5.63	
Cingular GSM *	132	880 - 894	2	296	0.0122	0.5867	2.08	
Cingular GSM *	132	1900 Band	2	427	0.0176	1.0000	1.76	
Total							28.2%	

^{*} Per CSC Records

Proposed

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm²)	Standard Limits (mW/cm²)	Percent of Limit
Other Users *							18.68
Cingular GSM	154	880 - 894	2	296	0.0090	0.5867	1.53
Cingular GSM	154	1900 Band	1	427	0.0065	1.0000	0.65
Cingular UMTS	154	880 - 894	1	500	0.0076	0.5867	1.29
* Por GGC P							22249%

^{*} 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 8/7/07)

August 7, 2007

Mr. Derek Creaser Hudson Design Group, LLC representing AT&T 46 Beechwood Drive North Andover, MA 01845



SUBJECT	FEASIBILITY STRUCTURAL EVALUATION								
Structure:	140 ft Monopole	e EEI							
Client/ Site Name /#:	Hudson D.G./ AT&T	Cantor	r FD-Canton s Rd	# 1022					
Owner/Site Name /#:			*						
MEI Project ID:	CT00840M-07V0			<u> </u>					
Location:	14 Canton Springs Rd Canton, CT 06019		Hartford County F.A #: N/A						
	LAT 41-49-22.3 N		LON	72-53-42.6 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
130	AT&T	3	Allgon 7770 Panel Ants.	[exist Standard	[9] Exist	7/8"-(I) [re-use exist]
		3	LGP 13519 Diplexers	Platform w/ rails]	(3) New	[re-use exist]
		3	RCU/RET's		1	3/8" -(I)

^{*} Note: Existing center panel antennas are to be removed and replaced with above.

Table 2: Previous Analysis Appurtenances

Elev (ft)	Tenant	Ants Oty	Appurtenance Model / Description	Mount Description	Lines Qty	Line size & Location
150	Town	1	Omni Directional Antenna	4' Sidearm Mnt.	1	7/8" - I
130	Cingular	9	DUO4-8670 Panel Antennas + (6) TMA/ Diplexers	Standard Platform	9	7/8" - I
120	Verizon	8	DB950F65E-M Panel Antennas	Standard Platform	12	1 5/8" - I
		4	DB844H90EXY Panel Antennas			
112	Cingular	1	LMU GSM RX Antenna	On Exist. Platf.	1	1/2" - I
110	Nextel	12	7130.16 Panel Antennas	Standard Platform	12	1 5/8" - I
100	T-Mobile	6	RR90-17-02DP Panel Antennas	LP Platform w/o rails	12	1 5/8" - I
90	Sprint	12	DB980F65 Panel Antennas	LP Platform w/o rails	12	1 5/8" - I
80	AT&T	6	7250.03 Panel Antennas	(3) LP T-Arm Mounts	12	1 5/8" - I
50	Sprint	1	GPS Antenna	Standoff Mnt.	1	7/8" - I

⁽I) = internal; (E) = External - as per TIA-222

CANTON FD - CANTON SPRINGS RD SITE #1022

MEI Project ID CT00840M-07V0 - Pa. 2

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 analysis data by URS Corp., ref. job # 36921458.00000, VZ1-060, dated 01/14/04 - Tower Max. Stress at 68.5%.
Changed Condition	As per AT&T /Cingular Wireless RF approval email, dated 04/30/07 version 2007-02, Supplied by Hudson Design Group, LLC on 07/03/07.

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 about the same or less than the previous 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

August 15, 2007

Honorable Mary B. Tomolonius 1st Selectman, Town of Canton Town Hall 4 Market St. Collinsville, CT 06022-0168

Re: Telecommunications Facility - 14 Canton Springs Road, Canton (Fire Station)

Dear Ms. Tomolonius:

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

2 Larkin Drive, Middlebury, CT

Site Number 1078

Exempt Modifications 5/23/94, 7/20/95, 10/7/02, and 11/21/02

Tower Owner/Manager: CT State Police

Equipment configuration: Self-supporting lattice tower

Current and/or approved: Nine CSS DUO1417 antennas @ 140 ft c.l.

Nine runs 1 ¼ inch coax

Six TMA's / three diplexers @ 140 ft

Planned Modifications: Remove three existing antennas

Install three Powerwave 7770 antennas at 140 ft c.l. Install three additional diplexers at 140 ft (total of 6)

Install three runs 1 1/4 inch coax (total of 12)

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 87.4 % 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 84.9 % of the standard.

Existing

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm²)	Standard Limits (mW/cm²)	Percent of Limit
Other Users *						1.1	79.02
Cingular TDMA *	140	880 - 894	16	100	0.0294	0.5867	5.00
Cingular GSM *	140	880 - 894	2	296	0.0109	0.5867	1.85
Cingular GSM *	140	1900 Band	2	427	0.0157	1.0000	1.57
Total							87.4%

^{*} 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/cm²)	Percent of Limit
Other Users *							79.02
Cingular GSM	140	880 - 894	3	296	0.0163	0.5867	2:78
Cingular GSM	140	1900 Band	2	427	0.0157	1.0000	1.57
Cingular UMTS	140	880 - 894	1	500	0.0092	0.5867	1.56
Total	Inches and the second s						849%

^{*} Per CSC Records

Structural information:

The attached structural analysis demonstrates that the foundation has adequate structural capacity to accommodate the proposed modifications, but that the tower itself will be overstressed under the proposed loading. The analysis, however, provides a set of structural modifications that will eliminate the overstress condition. (URS Corp., dated 8/6/07) Cingular will have the structural modifications installed prior to proceeding with the proposed equipment modifications. For this reason, we respectfully request 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

August 15, 2007

Honorable Edward B. St. John 1st Selectman, Town of Middlebury Town Hall 1212 Whittemore Rd. Middlebury, CT 06762-0392

Re: Telecommunications Facility – 2 Larkin Drive, Middlebury

Dear Mr. St. John:

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

DETAILED STRUCTURAL ANALYSIS AND EVALUATION OF 160' SELF SUPPORTING LATTICE TOWER FOR NEW ANTENNA ARRANGEMENT

Cingular Site #1078
Connecticut State Police
2 Larkin Drive
Middlebury, Connecticut

prepared for

Site Acquisitions, Inc.

184 Rockingam Road, Unit A Londonderry, NH 03053



AT&T 500 Enterprise Drive, Suite 3A Rocky Hill, CT 06067

prepared by



URS CORPORATION 500 ENTERPRISE DRIVE, SUITE 3B ROCKY HILL, CT 06067 TEL. 860-529-8882

> 36915476.00008 SAI-016

August 6, 2007

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1. EXECUTIVE SUMMARY

This report summarizes the structural analysis of the 160' lattice tower located at 2 Larkin Drive in Middlebury, Connecticut. The analysis was conducted in accordance with the 2005 Connecticut State Building Code, the TIA/EIA-222-F standard, and the Connecticut State Police Requirements for a wind velocity of 90 mph (fastest mile) and 90 mph (fastest mile) concurrent with ½" ice. Twist (rotation) and sway (deflection) were determined in accordance with Connecticut State Police Requirements for a wind velocity of 90 mph (fastest mile) concurrent with ½" ice. The antenna loading considered in the analysis consists of all existing, future, and proposed antennas, transmission lines, and ancillary items as outlined in the Introduction of this report. The proposed AT&T antenna modification is listed below:

Proposed Antenna and Mount	Carrier	Antenna Center Elevation
Remove: (3) CSS DUO1417-8686 antennas	AT&T (existing)	@ 140'
Install: (3) Powerwave 7770 antennas and (3) Powerwave LGP13519 Diplexer's on (3) existing T-frames. (3) 1 1/4" dia coax cables	AT&T (proposed)	@ 140'

The results of the analysis indicate that the existing tower structure is over capacity for the proposed loading conditions. With reinforcement, the tower will be considered structurally adequate with the wind load classification specified above with the entire existing and proposed antenna loading. Recommended modifications are outlined in greater detail in section 4 and 6 of this report. With reinforcement, the tower sway is 0.58 degrees, and the tower twist is 0.07 degrees. These are within the Connecticut State Police Requirement of 0.75 degrees for twist and sway.

This analysis is based on:

- The tower structure's theoretical capacity not including any assessment of the condition of the tower.
- Tower geometry, member sizes and foundation taken from Tower and Foundation reports prepared by Stainless, Inc. project number 358807 dated December 14, 1993.
- 3) Antenna inventory as specified in section 2 and 6 of this report.
- 4) Coax cable orientation as specified in section 6 of this report.

This report is only valid as per the assumptions and data utilized in this report for antenna inventory, mounts and associated cables. The Connecticut State Police provided the tower inventory for this site. URS personnel performed a visual inspection of the inventory from ground level. The user of this report shall field verify the antenna and mount configuration used, as well as the physical condition of the tower members and connections. Notify the engineer in writing immediately if any of the information in this report is found to be other than specified.

If you should have any questions, please call.

Sincerely,

URS Corporation AES

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

RAS/jrm cc:

DR, AA, IA, CF/Book – UR

2. INTRODUCTION

The subject tower is located at 2 Larkin Drive in Middlebury, Connecticut. The structure is a self-supporting three-legged 160' steel tapered lattice tower manufactured by Stainless Incorporated.

The existing structure supports several communication antennas. The inventory provided by the Connecticut State Police with the AT&T proposed modifications is summarized below:

Antenna Type	Carrier	Mount	Centerline Elevation	Gable
4' Lightning Rod	(existing)	Pipe mount above	177'	
16' Lightning Rod Mounting Pipe	(existing)	None	168'	
(1) Celwave PD-83 antenna	(existing)	Leg Mount	165'	(1) 7/8" coax cable
Tower Light	(existing)	None	160'-6"	
(3) 6' Microwave - Dishes w/radomes	(future)	Leg Mounts	160'	(3) EW63 coax cables
(2) OGT9-806 antennas	(existing)	4' Stand-off	160'-6"	(2) 1 5/8" coax cables
(1) Decibel DB810K-Y	(existing)	4' Stand-off	160'	(1) 1 5/8" coax cable
(1) Decibel DB810K-Y	(existing)	Stand-off (listed above)	160'	(1) 1 5/8" coax cable
(2) Decibel DB304-A	(existing)	Direct Leg Mount	160'	(2) 7/8" coax cables
(2) OGT9-806 antennas	(existing)	4' Stand-offs	149'-3"	(1) 1 5/8" coax cable
(3) Filter/Diplexers	(existing)	(3) 4' Stand-offs (listed above)	155'	NA
6' Dish w/ Ice Canopy	(existing)	Dish Mount	150'	(1) 7/8" coax cable
(6) CSS DUO1417- 8686 antennas (3) Diplexers and (6) TMAs	AT&T (existing)	(3) T-Frames	140'	(9) 1 1/4" coax cables
(3) Powerwave 7770 antennas and (3) Diplexers	AT&T (proposed)	(3) T-Frames (same as listed above)	140'	(3) 1 1/4" coax cables
(3) EMS RR90-17-02- DP antennas	T-Mobile (existing)	(2) 3' Stand off mounts	125'	(6) 1 1/4" coax cables
(1) Celwave PD1142	(existing)	3' Stand off	127'	(1) 7/8" coax cable
(2) 6' Dishes w/ Ice Canopy	(existing)	(2) Dish Mounts	110'	(2) EW63 coax cables
(6) Decibel DB980H90 antennas	Sprint (existing)	Pipe Mounts	94'	(6) 1 1/4" coax cables
(1) PD-10054-3 antenna	(existing)	1' Stand off mount	85'	(1) 7/8" coax cable
GPS	(Sprint)	2' Stand off	67'	(1) 1/2" coax cable

This structural analysis of the communications tower was performed by URS Corporation, AES for AT&T Wireless. The purpose of this analysis was to investigate the structural integrity of the existing tower with its existing and proposed antenna loads. The analysis was conducted to evaluate twist (rotation), sway (deflection), and stress on the tower.

3. ANALYSIS METHODOLOGY AND LOADING CONDITIONS

The structural analysis was done in accordance with the 2005 Connecticut State Building Code, TIA/EIA-222-F—Structural Standard for Steel Antenna Towers and Antenna Supporting Structures, the Connecticut State Police Requirements, and the American Institute of Steel Construction (AISC) Manual of Steel Construction—Allowable Stress Design (ASD).

The analysis was conducted using RISA Tower 5.0. Two load conditions were evaluated as shown below which were compared to allowable stresses according to AISC and TIA/EIA.

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

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

4. FINDINGS AND EVALUATION

The stresses on the tower structure were evaluated to compare with the allowable stress in accordance with AISC. The results of the analysis indicate that the existing tower structure is over capacity for the proposed loading conditions. With reinforcement, the tower will be considered structurally adequate for the proposed loading condition with the wind load specified above.

The anchor bolts and foundation were found to be within the allowable limits. Proposed reinforcement of the tower includes replacing the overstressed members as outlined in the table below:

					Existing	and Proposed R	einforcement.		
					egs .	OFFICE ACCUST CHARACTERS AND A PROPERTY OF A PROPERTY OF THE PARTY OF	ional		zontal .
Section No	Ele	val	ion	Existing	Proposed	Existing :	Proposed	Existing	Proposed
T1	150'	-	160'						
T2	125'	-	150'						VIL
T3	100'	-	125'			2L 21/2x2x3/16	2L 21/2x2x1/4		
T4	75'	-	100'						
T5	50'	-	75'					L3x3x1/4	L3x3x3/8
T 6	25'	1	50'			2L 31/2x3x1/4	2L 31/2x3x5/16		
T 7	0	Ŀ	25'			2L 31/2x3x1/4	2L 31/2x3x5/16		

5. CONCLUSIONS

The results of the analysis indicate that the existing tower structure does not have the capacity to support the proposed loading conditions. With reinforcement, the tower will be considered structurally adequate for the proposed loading condition with the wind load specified above.

Limitations/Assumptions:

This report is based on the following:

- 1) Tower inventory as listed in this report.
- 2) Tower is properly installed and maintained.
- 3) All members are as specified in the original design documents and are in good condition.
- 4) All required members are in place.
- 5) All bolts are in place and are properly tightened.
- 6) Tower is in plumb condition.
- 7) All member protective coatings are in good condition.
- 8) All tower members were properly designed, detailed, fabricated, and installed and have been properly maintained since erection.
- Foundations were properly constructed to support original design loads as specified in the original design documents.

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

- A. Adding antennas
- B. Removing/replacing antennas
- C. Adding coaxial cables

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

Ongoing and Periodic Inspection and Maintenance:

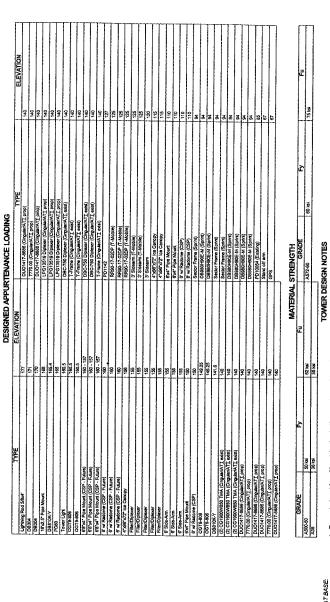
After the Contractor has successfully completed the installation and the work has been accepted, the owner will be responsible for the ongoing and periodic inspection and maintenance of the tower.

The owner shall refer to TIA/EIA-222-F for recommendations for maintenance and inspection. The frequency of the inspection and maintenance intervals is to be determined by the owner based upon actual site and environmental conditions. It is recommended that a complete and thorough inspection of the entire tower structural system be performed at least yearly and more frequently as conditions warrant. According to TIA/EIA-222-F section 14.1, Note 1; it is recommended that the structure be inspected after severe wind and/or ice storms or other extreme loading conditions.

at&t 500 ENTERPRISE DRIVE ROCKY HILL, CONNECTICUT 1-(880)-529-882 TOWER REINFORCEMENT DETAILS BES CORPORATION THE INFORMATION CONTANED IN THIS SET OF DOCUMENTS IS PROPERED BY NATURE, ANY USE OR DISCLOSURE OTHER THAN THAN WHERE IS STRUTLY PROHIBITED. 1078
MIDDLEBURY
CSP TOWER
2 LARKIN DRIVE
MIDDLEBURY, CT AS NOTED SK-1 OCSTING DIADOSCONS OF THE STRUCTURE IS TWEN FROM DROWING (SECENDET) FOR TOWER STRUCTURE, DIVIDI DECEMBER 14, 1803 MAD IS NOT GLARANTED. COMPINATER SAWL, TWE FIELD JESCHMEIBRITS NECESSARY TO ASSURE PROPER FIT OF LLA TRIBUSTO WORK. THE SECUENCY OF THE WINDS SHALL SE DONG OF AT THE ARD SHALL SE DONE WITH LESS THAN 15 JUHN WIND PRESENT IN THE MERSON SHALL SELECT SECUENCY TO THE WIND THE COMPLICATION SHILL INE OFFICIACIONE CONTROL TO ANNOTATE THOSE TO ECTING COMPLICATION COURSENCY CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL TO CONTROL TO CONTROL TO CONTROL CONTRO THE DISTING COMME, CHIEF AND ALL ACCESSIORES SHALL SE RELOCATED AND REHISTALED BY THE CONTRACTOR WITHOUT INTERRUPTION IN SERVICE WHERE THEY ARE IN CONFLICT WITH TOWER REINFONCEMENT. CORRIGIENT SHELL WETT THE STE FROM TO THE STUPF OF WORK WITH SUPPLIED RECEIVE EXPLAINED. TO GRINN LOCKEL INSTRUCTION, RECEIVED THE STUPPLING SHELL SET CONNECTED BY TIED CRISE DEFECTION THE RESIDENCY WE DESCRIPE OF SHELL SET CONNECTED BY TIED CRISE DEFECTION IN THE KEISLEY WAS DESCRIBED. WHE WENGER STUPPLINGS WITH GROWN THE STRUCKEN CRISE STRUCKEN STUPPLINGS WITH GROWN THE STRUCKEN OF THE STRUCKEN THE STRUCKEN THE CRISE WAS THE STRUCKEN THE CRISE THE STRUCKEN THE STRUCKEN THE CRISE THE STRUCKEN THE CRISE THE STRUCKEN THE STRUCK TESTION AND TESTING OF ALL RELEASE AND HONE STREAM FOLLOWS. HE S PROPRIES BY AN INSERTION TO THE LOGARITHM, RE AND BY THE CONTRUCTION HAS APPROVED THE THE DESIRENT HIS RESPECTIVE THE WAS APPOUNDED. THE BESTELL WHICH THE BESTELL AND HOT LESS THAN THE DELISE. SELECTED AT REMOVE, HE DOES NOWINSTROM. FOUR COPPES OF ALL INSPECTION. TEST REPORTS SHALL BE SUBMITED TO THE ENGREESH WITHIN TEN (10) WORKING DAYS OF THE DATE OF INSPECTION. WHERE FILTS WE WAS LIGHT ON CHANGES TO CLERRORS AND RELEASE ALL CHANGES ALL DESCRIPTIONS AND RESPONDED TO CHANGES TO CHANGES TO CHANGES TO CHANGE THE PROPERTY OF THE CONFICTION OF THE CHANGES TO CHANGES TO CHANGE THE CHANGES TO CHANGE THE CHANGES TO CHANGE THE CHANGES T THE TRANSPORT OF THE TR PARTICULAR STATE OF SECURIOR TO ALL RESERVED OF THE SECURIOR TO THE CORDS.

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יסומבת אבואסו	Tower designed for a 90 mph basic wind in accordance with the TIMEIA-222-F Standard.	0.50 in ice.	
	for a 90 mph basic wind in accordar	Tower is also designed for a 90 mph basic wind with 0.50 in ice.	2 Doffmeliano and house in a constant
	 Tower designed 	Tower is also de	A

Tower is also designed for a 90 mph basic wind i
 Deflections are based upon a 50 mph wind.
 TOWER RATING: 96.7%

MAX. CORNUER REACTIONS AT BASE

DEUM: 2314

UPDIM: 2314

SHEAR: 371 K

AXAL

65 K

TOROLLE 58 GO, R

SHEAR

30 K

MOMENT

31 K

MOMENT

52 K

MOMENT

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AVAL

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SSP	Vest	App'd:	Scale: NTS	Dwg No. E-1
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160' Self Support Lattice - CSP	ebury, CT - Larkin L	Site Acquisitions Inc.	TAVEIA-222-F	*1086ERI Flee(SALO16,38915478
8_	Project Middle	Clent	Code:	Path: Prosessir
RS Corporation	500 Enterprise Drive	Rocky Hill, CT 06067	Phone: (860) 529-8882	AX: (860) 529-3991
RSC	00 Ente	ocky Hij	Phone: (8)	FAX: (86

CINGULAR WIRELESS **Equipment Modification**

108 Foxon Road, North Branford, CT

Site Number 5184 Former AT&T site

Exempt Modification approved 9/9/03¹

Tower Owner/Manager:

SBA

Equipment configuration:

Monopole

Current and/or approved: Nine Allgon 7184 antennas @ 157 ft c.l.

Nine runs 1 5/8 inch coax

Planned Modifications:

Remove three existing antennas

Install three Powerwave 7770 antennas @ 157 ft c.l.

Install six TMA's @ 132 ft c.l.

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 12.0 % 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 9.3 % of the standard.

Existing

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm²)	Standard Limits (mW/cm²)	Percent of Limit
Other Users *							6.82
Cingular GSM *	156	1900 Band	14	250	0.0517	1.0000	5.17
Total							12.0%

^{*} Per CSC records.

¹ TS-T-Mobile-099-030825. The attached letter to the Council from Atty. Christopher Fisher dated 9/5/03 sought to rectify AT&T's earlier failure to file a notice of exempt modification for co-location in 2001 (post-Covello). Although no explicit acknowledgment of the AT&T installation in response to Atty. Fisher's letter was found in Council records, the attached approval letter for TS-T-Mobile-099-030825 does refer to "additional correspondence dated September 5, 2003" - most likely a reference to Atty. Fisher's letter. Additionally, power density records maintained by Council staff do incorporate information provided in the letter under TS-T-Mobile-099-030825. These references would imply Council approval of the AT&T co-location at that time. If, however, the Council presently deems the 2003 acknowledgment incomplete, Cingular respectfully requests that the Council now acknowledge prior installation of the existing AT&T / Cingular equipment configuration.

Proposed

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm²)	Standard Limits (mW/cm²)	Percent of Limit
Other Users *				4.4			6.82
Cingular GSM	157	1900 Band	2	427	0.0125	1.0000	1.25
Cingular UMTS	157	880 - 894	1	500	0.0073	0.5867	1.24
s long.					9 9 9		9,3%

^{*} Per CSC records.

Structural information:

The attached structural analysis demonstrates that the tower and foundation have adequate structural capacity to accommodate the proposed modifications. (Paul J. Ford and Co., dated 8/3/07)





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

August 15, 2007

Mr. Karl F. Kilduff, Town Manager Town of North Branford Town Hall 909 Foxon Road North Branford, CT 06471-0287

Re: Telecommunications Facility – 106/108/150 Foxon Road, North Branford

Dear Mr. Kilduff:

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



CONNECTICUT SITING COUNCIL

CUDDY & FEDER LLP

90 MAPLE AVENUE WHITE PLAINS, NEW YORK 10601-5196

NEIL J. ALEXANDER (1870 CT)
THOMAS N. DEFINNE (1870 DC)
THOMAS M. BLOOMER
JOSEPH P. CARLUCCI
LUCIA CHIOCCHIO (1870 CT)
ROGERI DISIENA
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CHRISTOPHER B. FISHER (1850 CT)
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KAREN G. GRANIK
JOSINIA J. GRANIK
JOSINIA J. GRANIK
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NORWALK, CONNECTICUT

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WILLIAM S, NULL
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ELISARI-TH N, RADOW
NEIL T, RIMSKY
RUTH E. NOTH
JONATHAN S. SAUL (GIBO NJ)
JENNIFER L, VAN TUYL
CI INUNCEY L. WALKER (JIBO CA)

Of Countal ANDREW A. GLICKSON (ulso OT) ROBERT L. OSAR (1450 TX) MARYANN M. PALEIMO ROBERT C. SCHNEIDER

September 5, 2003

BY FAX
Michael Parrone
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: <u>TS-T-Mobile-099-030825</u>

Dear Mr. Parrone:

I am writing in furtherance of our discussions regarding the above referenced matter which was recently filed by T-Mobile. As you know, the tower at issue is one owned by SBA, Inc. and was apparently approved locally at a time prior to Siting Council jurisdiction over PCS towers. My client advises me that its installation on the tower was completed in 2001 and that SBA was responsible for obtaining permits for same, a practice employed on several SBA towers at that time. Apparently, whether required or not, SBA failed to file an exempt modification with the Council for this particular AT&T site and simply obtained a local building permit for the work which was done.

Nevertheless, we respectfully request that the Council accept this letter as notice of an exempt modification and that it incorporate an acknowledgment for same into T-Mobile's filing. In that regard, we note that T-Mobile's filing contains plans, structural and power density information which include all of AT&T's antennas and equipment information as existing conditions. For purposes of the Council's database, we note that AT&T's antennas are currently at a +- antenna centerline of 156', utilize transmit frequencies in the 1945 -1970 Mhz range and worst case power density information should be calculated using an ERP/sector of 3500W (14

CUDDY & FEDER LLP

September 5, 2003 Page 2

Thank you for bringing this matter to our attention and your assistance in updating the Council's records with respect to this facility.

Verytryty yours

Christopher B. Visho

cc: Harold Hewett (CT-184)



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 Web Site: www.state.ct.us/csc/index.htm

September 10, 2003

Stephen J. Humes LeBoeuf, Lamb, Greene & MacRae Goodwin Square 225 Asylum Street Hartford, CT 06103

RE:

TS-T-MOBILE-099-030825 - Omnipoint Communications, Inc. request for an order to approve tower sharing at an existing telecommunications facility located at 106 Foxon Road, North Branford, Connecticut.

Dear Attorney Humes:

At a public meeting held September 9, 2003, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the Council has ordered the shared use of this facility to avoid the unnecessary proliferation of tower structures. 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. Any additional change to this facility may require an explicit request to this agency pursuant to General Statutes § 16-50aa or notice pursuant to Regulations of Connecticut State Agencies Section 16-50j-73, as applicable. Such request or 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.

This decision applies only to this request for tower sharing and is not applicable to any other request or construction.

The proposed shared use is to be implemented as specified in your letter dated August 25, 2003, and additional correspondence dated September 5, 2003.

Thank you for your attention and cooperation.

Very truly yours,

Pamela B. Katz, P.E.

Chairman

PBK/laf

c: Honorable Joanne Wentworth, Mayor, Town of North Branford Carol Zeeb, Town Planner, Town of North Branford Sheila R. Becker, Regional Director of Compliance, SBA, Inc. Thomas J. Regan, Esq., Brown Rudnick Berlack Israels LP Christopher B. Fisher, Esq., Cuddy & Feder LP Thomas F. Flynn III, Nextel Communications



August 3, 2007 Mark Luther SBA Properties, Inc. 5990 Broken Sound Pkwy Boca Raton, FL 33487-2797 570-558-3450

Existing Structure is Adequate Existing Monopole is Adequate Existing Foundation is Adequate

Subject: Structural Analysis Report of Existing 175-Ft Monopole

SBA Properties, Inc PO Number:

753862702

Engineering Firm Designation

Paul J. Ford and Company

31307-0010

Site Data

North Brandford, , CT

Dear Mark Luther,

Paul J. Ford and Company is pleased to submit this "Structural Analysis Report" to determine the structural adequacy of the above monopole. This analysis has been performed in accordance with TIA/EIA-222-F Standard for the following Basic Wind Speeds: 85 mph without ice, 74 mph with 0.5" radial ice, and 50 mph (Operational) without ice.

The monopole was analyzed with the addition of the proposed antenna loading shown in the table below combined with the existing and reserved loading on the structure:

Elevation •	t 🕢 (ount	Antenna Description
157		3	Powerwave Technologies 7770 w/ Mount Pipe
107	<u> </u>	_ 6	Powerwave LGP2140X

Based on our analysis, we have determined that the existing monopole structure and foundation have sufficient capacity to adequately support the existing, reserved, and proposed loading. Modifications are not required at this

Respectfully submitted

Michael Sheyn Structural Engineer 🛆

msheyn@pjfweb.com

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INTRODUCTION

At the request of SBE Properties, Inc, Paul J. Ford and Company has analyzed the monopole at the site located in North Brandford, , CT. This structural analysis has been performed in accordance with the TIA/EIA-222-F-1996 Standard, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures" to determine if the monopole structure has adequate capacity to support the existing, reserved, and proposed antenna loading.

ANALYSIS CRITERIA

The existing monopole has been analyzed for the antenna and coax loading listed in Tables 1A, 2A, and 2B below. The monopole has been analyzed in accordance with the TIA/EIA-222-F-1996 Standard for the following fastest-mile Basic Wind Speeds: 85 mph without ice, 74 with 0.5" radial ice, and 50 mph without ice as recommended for , CT.

Table 1A - Proposed Antenna Information

	Elevation - ft	* Count	Antenna Description	Statue .
	157	3	Powerwave Technologies 7770 w/ Mount Pipe	Proposed
1		<u> 6</u>	Powerwave LGP2140X	Proposed

Table 2A - Existing and Reserved Antenna Information

Elevation - ft	Count	Antenna Description	Status
177	1 1	Decibel ASPG952	Existing
	1	14' Low Profile Platform	Existing
175	6	DB978H90E-M w/Mount Pipe	Existing
	6	DB978H90E-M w/Mount Pipe	Reserved
167	12	Decibel DB844H90E-XY w/Mount Pipe	Existing
. 165	1 1	14' Low Profile Platform	Existing
157	9	Aligon 7184.xx	Existing
155	1	14' Low Profile Platform	Existing
147	6	RR90-17-02DP w/Mount Pipe	Existing
1-77	3	RR90-17-02DP w/Mount Pipe	Reserved
	6	TMA	Existing
145	11	14' Low Profile Platform	Existing

Table 2B - Existing and Reserved Cable Information

Elevation - ft	Count	Gable Description	Location	Status
İ	1	LDF5-50A (7/8 FOAM)	i Internal	Existing
175 - 0	6	LDF7-50A (1-5/8 FOAM)	Internal	Existing
107 0	6	LDF7-50A (1-5/8 FOAM)	Internal	Reserved
167 - 0	12	LDF7-50A (1-5/8 FOAM)	Internal	Existing
157 - 0	3	LDF7-50A (1-5/8 FOAM)	Internal	Reserved
	12	LDF7-50A (1-5/8 FOAM)	Internal	Existing
147 - 0	12	LDF7-50A (1-5/8 FOAM)	Internal	Existing
L	112	LDF7-50A (1-5/8 FOAM)	Internal	Reserved

Information for the existing monopole and foundation is based on the available drawings, documents, and/or information listed in Table 3 below.

Table 3 - Reference Documents Provided

Document	Source	Reference	Remarks
Tower Loading	SBA		E-Mail from Mark Luther, to Rich Hoffman, 7/13/2007
Original Tower Drawings	Fred A. Nudd Corp.		9/19/2000
Foundation Drawings	Fred A. Nudd Corp.		4/17/2000
Geotechnical Report	Jaworsky Geotech	00319G	11112000
Structural Analysis	Paul J. Ford & Company		11/15/2001

ANALYSIS PROCEDURE

ANALYSIS METHODS

RISA Tower (Version 5.0.2.0), a commercially available software program, was used to create a three-dimensional model of the monopole and calculate member stresses for various dead, live, wind, and ice load cases. The analysis was performed in accordance with the TIA/EIA-222-F Standard. Selected output from the analysis is included in Appendix A.

ASSUMPTIONS

- 1. Monopole was fabricated and installed in accordance with the manufacturer's specifications.
- 2. Monopole has been properly maintained in accordance with manufacturer's specifications.
- 3. The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1A, 1B, 2A, and 2B and the referenced drawings.
- 4. Monopole was reinforced in conformance with the referenced modification drawings.

If any of the above assumptions are not valid or have been made in error, then the results of this analysis may be affected. In that case, please notify Paul J. Ford and Company immediately so that we can review any new and/or modified information and determine its affect on the analysis results regarding the structural adequacy of the monopole and foundation.

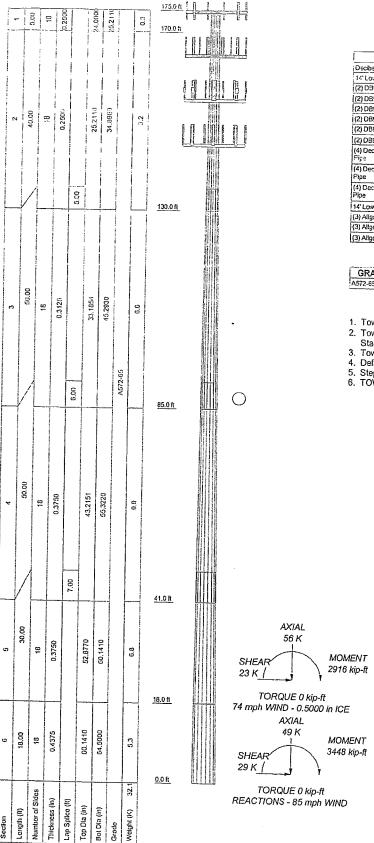
ANALYSIS RESULTS

Our structural analysis indicates that the existing monopole structure and foundation have sufficient capacity to adequately support the existing, reserved, and proposed loading.

Table 4 - Component Stresses vs. Capacity

sa Tower Analysis Summary:	Component	ft a	Capacity Capacity	
	L1	175 - 170		
	L2	170 - 130	3.5	Pass
	L3		44.1	Pass
	L4	130 - 85	61.2	Pass
		85 - 41	61.2	Pass
	L5	41 - 18	67.7	Pass
ditional Components:	L6	18 - 0	57.6	Pass
Original # Reinforcement	A DESCRIPTION OF THE PROPERTY			
Original + Reinforcement	Base Plate	0 - 0 - 0	86.7	Pass
- Original - Premioreement	Anchor Rods	0-0	67.8	Pass
	Foundation (Soil) - PJF Pole	0-0	22.18	Pass
	Foundation (Structural) - PJF			1 033
	Pole	0 - 0	56.7	Pass

As summarized in Table 4 above, our analysis indicates that the existing monopole structure and foundation have sufficient capacity to adequately support the existing, reserved, and proposed loading. Modifications are not required at this time.



DESIGNED APPURTENANCE LOADING

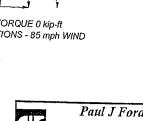
LELEVATION	TYPE ELEVA				
177	Powerwave Technologies 7770 w/	157			
175	Mount Pipe	131			
175	Powerwave Technologies 7770 w/	157			
175	Mount Pipe	1			
175	Powerwave Technologies 7770 w/	157			
175		1			
1175	(2) Powerwave LGP2140X	157			
1175	(2) Powerwave LGP2140X	157			
	(2) Powerwave LGP2140X	157			
107	14" Low Profile Platform	155			
167	(2) RR90-17-02DP w/Mount Pipe	147			
	(2) RR90-17-02DP w/Mount Pipe	147			
167	(2) RR90-17-02DP w/Mount Pipe	147			
<u> </u>	RR90-17-02DP w/Mount Pipe	147			
165		147			
157		147			
157		145			
157	1	1145			
	175 175 175 175 175 175 175 167 167 167	177			

MATERIAL STRENGTH

GRADE	Fy	/	Fu	GRADE	Ev	F.,
A572-65	65 ksi	80 ksi		1 0.0.02	<u> </u>	<u> Fu</u>

TOWER DESIGN NOTES

- 1. Tower is located in New Haven County, Connecticut.
- 2. Tower designed for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
- 3. Tower is also designed for a 74 mph basic wind with 0.50 in ice.
 4. Deflections are based upon a 50 mph wind.
 5. Step Bolts Full Height
 6. TOWER RATING: 67.7%



Paul J Ford and Company ^{∞:} 175-ft Monopole / PJF #31307-0010 250 E. Broad Street Suite 1500 Project: CT03110-S Client SBA Drawn by: Michael Sheyn App'd: Columbus, OH 43215 Code: TIA/EIA-222-F | Date: 08/03/07 Phone: 614.221.6679 Scale: NTS FAX: 614.448.4105

CINGULAR WIRELESS Equipment Modification

309 River Road, Shelton

Site Number 5160 Former AT&T Site

Exempt Modification approved 8-15-02

Tower Owner/Manager:

T-Mobile

Equipment Configuration:

Stealth Flagpole

Current and/or Approved: Three Allgon 7250 Panel Antennas @ 98 ft c.l.

Six 7/8 inch coax cables

Three outdoor equipment cabinets on 6 x 11 ft concrete pad

Planned Modifications:

No changes to equipment in flagpole are proposed

Install an additional 6 x 8 ft concrete pad

Install two additional outdoor equipment cabinets 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 20.0 % 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 22.6 % of the standard.

Existing

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm²)	Standard Limits (mW/cm²)	Percent of Limit
Other Users *							16.25
Cingular GSM	98	1900 Band	4	250	0.0374	1.0000	3.74
Total							20.0%

^{*} Per CSC records

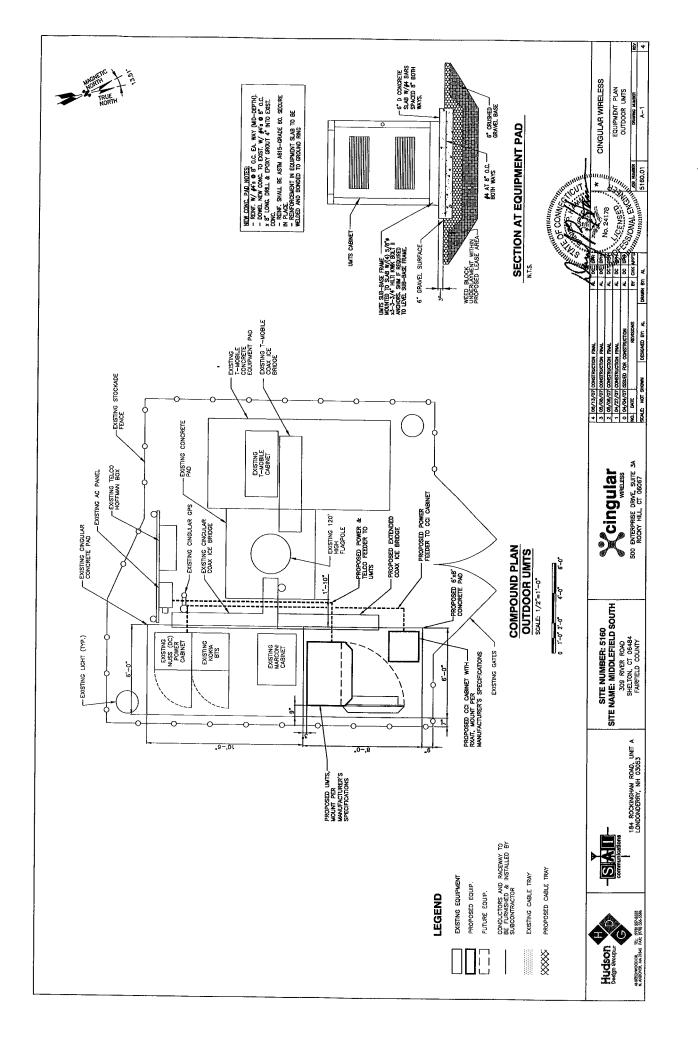
Proposed

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm²)	Standard Limits (mW/cm²)	Percent of Limit
Other Users *					100		16.25
Cingular GSM	98	1900 Band	2	427	0.0320	1.0000	3.20
Cingular UMTS	98	880 - 894	1	500	0.0187	0.5867	3.19
Tiofal							222/61//6

^{*} Per CSC records

Structural information:

There will be no modifications to equipment on the tower itself. For this reason, no new structural analysis was performed.







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

August 15, 2007

Honorable Mark A. Lauretti, Mayor City of Shelton City Hall 54 Hill St. Shelton, CT 06484-0364

Re: Telecommunications Facility – 309 River Road, Shelton

Dear Mayor Lauretti:

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

60 Industrial Park Road, Vernon, CT

Site Number 5310

Former AT&T Wireless Cell Site Exempt Modification 6/3/02

Tower Owner/Manager: Mountaintop Services

Equipment configuration: Monopole

Current and/or approved: Three Allgon 7250 antennas @ 165 ft c.l.

Six runs 1 5/8 inch coax

Two existing concrete pads with three outdoor cabinets

Planned Modifications: Remove three existing antennas

Install three Powerwave 7770 antennas at 165 ft c.l.

Install six TMA's @ 100 ft Remove one outdoor cabinet

Enlarge smaller existing pad from 3 x 3 ft to 4 x 6 ft

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 10.6 % 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 11.9 % of the standard.

Existing

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm²)	Standard Limits (mW/cm²)	Percent of Limit
Other Users *	E .						9.32
Cingular GSM	165	1900 Band	4	250	0.0132	1.0000	1.32
Total							10.6%

^{*} Per CSC Records

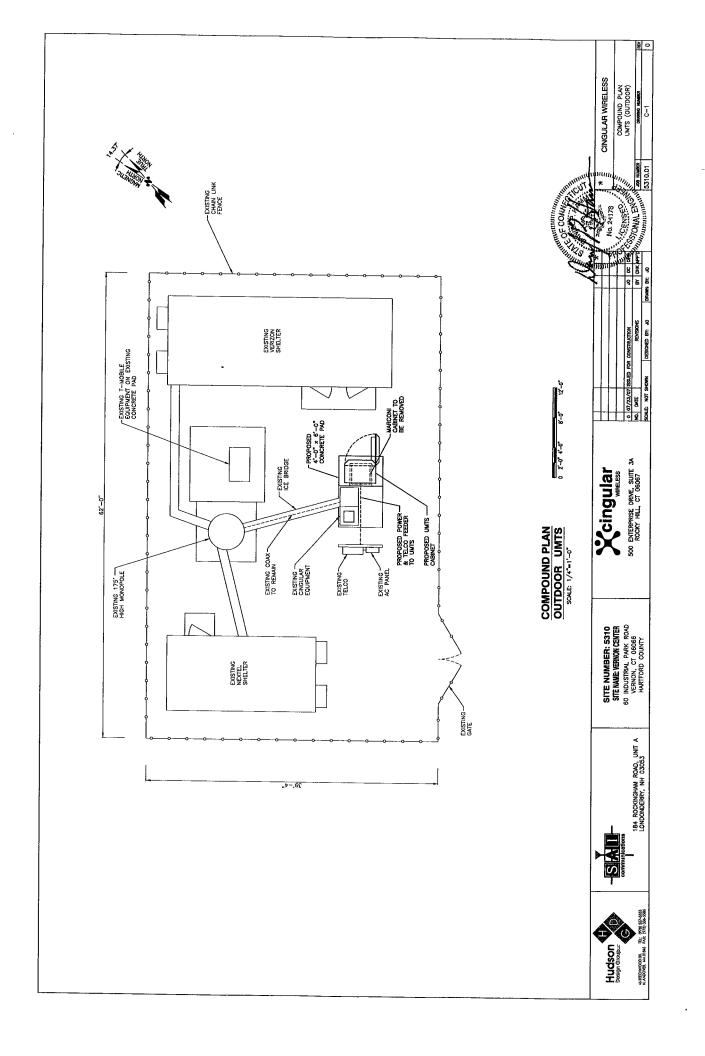
Proposed

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm²)	Standard Limits (mW/cm²)	Percent of Limit
Other Users *						1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1	9.32
Cingular UMTS	165	880 - 894	1	500	0.0066	0.5867	1.13
Cingular GSM	165	1900 Band	2	557	0.0147	1.0000	1.47
Total	<i>y</i>						11.9%

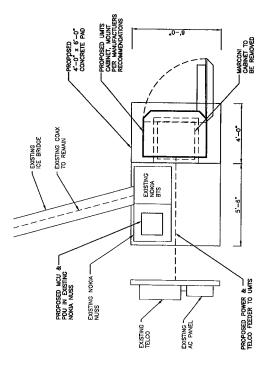
^{*} Per CSC Records

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 8/7/07)







EQUIPMENT PLAN OUTDOOR UMTS SCAE: 1/2"=1'-0'

0 1'-0" 2'-0" 4'-0" 6'-0"





SITE NUMBER: 5310
SITE NAME VERNON CENTER
60 INDUSTRIAL PARK ROAD
VERNON, CT 06066
HARTFORD COUNTY

Cingular	OO ENTERPRISE DRIVE, SUITE 3A
X	500

	,				
WHELESS	П				
NIEBPRICE DRIVE SHITE 34	0	77/23/07	ISSUED FOR	07/23/07 ISSUED FOR CONSTRUCTION	
ROCKY HILL, CT 06067	ġ	DATE		REVISIONS	
	3	SCALE: NOT SHOWN	HOMEN	DESIGNED BY: JO	DRAW

01 * 1 * 1 * 1 * 1 * 1 * 1 * 1 * 1 * 1 *	CINGULAR WIRELESS	M. 24178	EQUIPMENT PLAN	THE CONTRACT OF THE CONTRACT O	Control of the contro	NO. DATE REVISIONS BY CHK PROPTING TO WILLIAMS NUMBER DEVINING MAKERS	CONTROL MAN COLUMN TO THE PARTY OF THE PARTY
•	74	3	WIRELESS		AE, SUITE 3A	L CT 06067	





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

August 15, 2007

Honorable Ellen L. Marmer, Mayor Town of Vernon Memorial Bldg. 14 Park Pl. Vernon, CT 06066

Re: Telecommunications Facility – 60 Industrial Park Road, Vernon

Dear Mayor Marmer:

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 – Vernon Center Site # 5310

60 Industrial Park Rd, Vernon, CT 06066

Aug 07, 2007

MEI PROJECT ID: CT00842M-07V0



17950 Preston Road, Suite 720 • Dallas, Texas 75252-5635 • Tel. 972 -783-2578 Fax 972-783-2583 **www.maloufengineering.com**





Aug 06, 2007

STRUCTURAL ANALYSIS

Structure:	175 ft Mond	pole	PiRod / Step	oned
Client/ Site Name /#:	Hudson / A	T&T	Vernon Center	
Owner/Site Name /#:				11 0010
MEI Project ID:	CT00842M-0	7V0		
Location:	60 Industrial Vernon, CT 06		Tolland Coun	ty
	LAT	41-50-7.1 N	LON	72-27-18 W

EXECUTIVE SUMMARY:

Malouf Engineering Int'l (MEI), as requested, has performed a rigorous 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 existing AT&T (3) panel antennas with new (3) LGP Allgon 7770 panel antennas, (6) Powerwave LGP 21401 TMA's and (3) RCU/RET units onto the existing close contact mounts fed with (6) 1-5/8" Coaxes (exist) at Elev. 165 ft c.l. 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:

E. Mark Malouf, PĚ Connecticut #17715

Reviewed & Approved by:

972-783-2578 ext. 106

mmalouf@maloufengineering.com

Project Engineer

Luan Nguyen, PE

TABLE OF CONTENT INTRODUCTION & SCOPE ______4 1. SOURCE OF DATA______4 2. Background Information:-----4 ANALYSIS CRITERIA ______5 3. Appurtenances Configuration-----5 ANALYSIS PROCEDURE______6 4. Analysis Program -----6 Assumptions -----6 ANALYSIS RESULTS _______ 7 5. FINDINGS & RECOMMENDATIONS ______ 8 6. REPORT DISCLAIMER ______9 7.

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 with 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			<u> </u>
Tower	Hudson D.G. / Derek Creaser	Previous Analysis Report – Analysis was for 80 Mph instead of required 85 Mph	URS Analysis Project No. VZ1-199 Dated 07/29/2006.
Foundation	Hudson D.G. / Derek Creaser	Previous Analysis Report	URS Analysis Project No. VZ1-199 Dated 07/29/2006.
Material Grade	Available from supplied	documents - refer to Appe	
CURRENT APPURTENANC			
	Hudson D.G. / Derek Creaser	Previous Analysis Report & mainly recent Photos	URS Analysis Project No. VZ1-199 Dated 07/29/2006.
CHANGED CONDITION			· · · · · · · · · · · · · · · · · · ·
	Hudson D.G. / Derek Creaser	Cingular RF Data Sheet	Dated 4/27/2007, ver. 2007-02

Background Information:

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

DESIGNER / FABRICATOR	PiRod / Stepped
DESIGN CRITERIA	TIA/EIA 222-F - Unknown
PRIOR STRUCTURAL MODIFICATIONS	None known

3. ANALYSIS CRITERIA

The structural analysis performed used the following criteria:

CODE / STANDARD	ANSI/TIA-22	2-F-96 Standard / IBC2003
LOADING CASES	Full Wind:	85 Mph (with No Radial Ice)
	Iced Case:	74 Mph + 1/2" Radial Ice
	Service:	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	Line size &
165	AT&T	3 .	LGP Allgon 7770 Panels	[close contact mounts -	6	1-5/8" - (I)
		6	LGP 21401 TMA's	exist]		[re-use exist]
		3	RCU/RET	1		-

Table 2: **Current and Reserved/Future Appurtenances**

Elev (ft)	Tenant	Ants Qty	Appurtenance Model / Description	Mount Description	Lines	Line size &
173	T-Mobile	6	RR90-17-02DP Antenna	Low Profile Platform	12	1-5/8" - (I)
155	Verizon	6	DB948F85T2E-M Panels	15' Low Profile Platform	6	1-5/8" - (I)
		6	WPA-80090/4CF Panels		6	1-5/8" - (I)
145	Nextel	12	DB844H90 Panels	15' Low Profile Platform	12	1-5/8" - (I)

Notes:

- 1. Please note appurtenances not listed above are to be removed/not present as per data supplied.
- (I) = internal; (E) = External; (FZ) = Within Face Zone & (OFZ) = Outside Face Zone as per TIA-222.
 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. 5.02.2), 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 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 invalided, 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 Elevation / Component	Pass/Fail	Comment
POLE SHAFT	76.80%	Elev. 40' - 60'	Pass	
BASE PLATE	64.50%	Base Plate	Pass	
Anchor Rods	67.40%	Bolt Tension	Pass	
FOUNDATION	55.70%	Download Capacity	Pass	

Notes:

2. Refer to the Appendix 2 for more details on the member loads.

^{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.

^{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 76.8%** of its support capacity (controlling component: shaft) 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 existing AT&T (3) panel antennas with new (3) LGP Allgon 7770 panel antennas, (6) Powerwave LGP 21401 TMA's and (3) RCU/RET units onto the existing close contact mounts fed with (6) 1-5/8" Coaxes (exist) at Elev. 165 ft c.l. is structurally acceptable.
- This structure 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.

7. REPORT DISCLAIMER

The engineering services rendered by Malouf Engineering International, Inc. ('MEI') in connection with this Structural Analysis are limited to a computer analysis of the tower structure, size and capacity of its members. MEI does not analyze the fabrication, including welding and connection capacities, except as included in this Report.

The analysis performed and the conclusions contained herein are based on the assumption that the tower has been properly installed and maintained, including, but not limited to the following:

- 1. Proper alignment and plumbness.
- 2. Correct guy tensions, as applicable.
- 3. Correct bolt tightness or slip jacking of sleeved connections.
- 4. No significant deterioration or damage to any structural component.

Furthermore, the information and conclusions contained in this Report were determined by application of the current "state-of-the-art" engineering and analysis procedures and formulae. Malour Engineering International, I no. Assumes no obligation to revise any of the information or conclusions contained in this Report in the event that such engineering and analysis procedures and formulae are hereafter modified or revised. In addition, under no circumstances will Malour Engineering International, Inc. Have any obligation or responsibility whatsoever for or on account of consequential or incidental damages sustained by any person, firm or organization as a result of any information or conclusions contained in the Report, and the maximum liability of Malour Engineering International, Inc., if any, pursuant to this Report shall be limited to the total funds actually received by Malour Engineering International, Inc. For preparation of this Report.

Customer has requested Malouf Engineering International, Inc. To prepare and submit to Customer an engineering analysis with respect to the Subject Tower and has further requested Malouf Engineering International, Inc. to make appropriate recommendations regarding suggested structural modifications and changes to the Subject Tower. In making such request of Malouf Engineering International, Inc., Customer has informed Malouf Engineering International, Inc. that Customer will make a determination as to whether or not to implement any of the changes or modifications which may be suggested by Malouf Engineering International, Inc. and that Customer will have any such changes or modifications made by riggers, erectors and other subcontractors of Customer's choice. Malouf Engineering International, Inc. shall have the right to rely upon the accuracy of the information supplied by the customer and shall not be held responsible for the Customer's misrepresentation or omission of relevant fact whether intentional or otherwise.

Customer hereby agrees and acknowledges that Malouf Engineering International, Inc. shall have no liability whatsoever to Customer or to others for any work or services performed by any persons other than Malouf Engineering International, Inc. in connection with the implementation of services including but not limited to any services rendered for Customer or for others by riggers, erectors or other subcontractors. Customer acknowledges and agrees that any riggers, erectors or subcontractors retained or employed by Customer shall be solely responsible to Customer and to others for the quality of work performed by them and that Malouf Engineering International, Inc. shall have no liability or responsibility whatsoever as a result of any negligence or breach of contract by any such rigger, erector or subcontractor and that Customer and rigger, erector, or subcontractor will provide Malouf Engineering International, Inc. with a Certificate of Insurance naming Malouf Engineering International, Inc. as additional insured.

			,		175.0 ft	in structure
1	P24x3/8	15.00		1420.6	 160.0 ft	TYP
	P30×3/%	30.00		.375.2		ICT_MOBILE) Low Profile Platform (T_MOBILE) ALGON LGP 7770 F (P)(3)<2> (ATL) ILGP 21401 TMA's (P) IRET Unit (P)(3)<2> (ATL) IDB948F65T2E-M Par (CERIZON)
່ ເຄ i	P36x3:8	20.00	1	2856.3		GRADE
	P42x3/8	20.00		3337.3	120.0 ft	1. Tower is local 2. Tower design 3. Tower is also 4. Deflections ar 5. CINGULAR: 6. TOWER RAT
	 		A53-B-42		100.0 ft	
w	P48x3/8	20.00	4	3818.4		0
			<u> </u> 		80.0 ft	
9	P54x3/8	20.00		4299.4		
7	P60x3/8	20.00		4780.5	<u>60.0 ft</u>	
		!			40.0 ft	
ω	P60x1/2	20.00		6360.6	20.0 ft	AXIAL 57839 lb SHEAR MOMENT 20847 lb 2432081 lb-ft
o	P60x5/8	20.00		7934.1	0.0 ft	74 mph WIND - 0.5000 in ICE AXIAL 49013 lb MOMENT SHEAR 24446 lb
Section	Size	Length (ft)	Grade	Weight (lb) 37182.5	<u>0.0 II</u>	REACTIONS - 85 mph WIND

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION	
RR90-17-02DP Panels (E)(6)<1> !(T_MOBILE)	173	WPA-80090/4CF Panels (E)(6)<3> (VERIZON)	155	
(Low Profile Platform (E)(1)<1> (T_MOBILE)	173	15' Low Profile Platform (E)(1)<3> (VERIZON)	₁ 155	1
ALLGON LGP 7770 PANELS (P)(3)<2> (ATI)	165	DB844H90 Panels (E)(12)<4> (NEXTEL)	1145	7
LGP 21401 TMA's (P)(6)<2> (ATI)	1165	15' Low Profile Platform (E)(1)<4>	145	i
RET Unit (P)(3)<2> (ATI)	165	(NEXTEL)	:	
DB948F85T2E-M Panels (E)(6)<3> (VERIZON)	155			

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fv	 Fu	
A53-8-42	42 ksi	63 ksi			 	

TOWER DESIGN NOTES

- ated in Tolland County, Connecticut.
- ned for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
 o designed for a 74 mph basic wind with 0.50 in ice.
 are based upon a 50 mph wind.
 EAST PLANO SITE #E035 / USID 8113
 TING: 76.8%



Malouf Engineering Int'l, Inc.

17950 Preston Road; Suite #720 Dallas, TX 75252 Phone: (972) 783-2578 FAX: (972) 783-2583

Pob: 175	FT MP	CTOOR	42M-07\/0

Project: VERNON CENTER SITE #5310 Code: TIA/EIA-222-F Date: 08/07/07 Dwg No. E-1