



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

July 12, 2007

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

RE: **EM-CING-025-034-088-129-145-166-070612** - New Cingular Wireless PCS, LLC notice of intent to modify existing telecommunications facilities located at 1119 Summit Road, Cheshire; 48 Newtown Road, Danbury; 585 So. Main Street (a/k/a New Haven Road), Naugatuck; 126 Pioneer Heights Road, Somers; 23 Holland Road, Union; and 347 East Street, Wolcott, Connecticut.

Dear Mr. Levine:


At a public meeting held on July 3, 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.

The proposed modifications are to be implemented as specified here and in your notice dated June 12, 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.

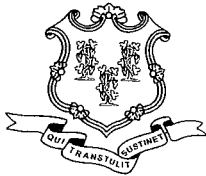
Thank you for your attention and cooperation.

Very truly yours,


Daniel F. Caruso
Chairman

DFC/MP/cm

- c: The Honorable Matt Hall, Council Chairman, Town of Cheshire
Richard A. Pfurr, Town Planner, Town of Cheshire
Michael A. Milone, Town Manager, Town of Cheshire
The Honorable Mark D. Boughton, City of Danbury
Dennis Elpern, City Planner, City of Danbury
The Honorable Ronald San Angelo, Mayor, Town of Naugatuck
Keith Rosenfeld, Town Planner, Town of Naugatuck
The Honorable David A. Pinney, First Selectman, Town of Somers
Patrice Carson, Town Planner, Town of Somers
The Honorable Thomas L. Fitzgerald, First Selectman, Town of Union
David D. Eaton, Zoning Enforcement Officer, Town of Union
Thomas G. Dunn, Mayor, Town of Wolcott
George Leggio, Zoning Enforcement Officer, Town of Wolcott
Thomas J. Regan, Esq., Brown Rudnick Berlack Israels LLP
Christopher B. Fisher, Esq., Cuddy & Feder LLP
Kenneth C. Baldwin, Esq., Robinson & Cole LLP
Christine Farrell, T-Mobile
Jeffrey W. Barbadora, Crown Castle
Fifty Newtown Road Corporation/Wireless Capital Partners
American Tower Corporation



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June 22, 2007

The Honorable Thomas L. Fitzgerald
First Selectman
Town of Union
1043 Buckley Highway
Union, CT 06076

RE: **EM-CING-025-034-088-129-145-166-070612** - New Cingular Wireless PCS, LLC notice of intent to modify existing telecommunications facilities located at 1119 Summit Road, Cheshire; 48 Newtown Road, Danbury; 585 So. Main Street (a/k/a New Haven Road), Naugatuck; 126 Pioneer Heights Road, Somers; 23 Holland Road, Union; and 347 East Street, Wolcott.

Dear Mr. Fitzgerald:

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 Tuesday, July 3, 2007 at 1:30 p.m. in Hearing Room One, Ten Franklin Square, New Britain, Connecticut.

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

Thank you for your cooperation and consideration.

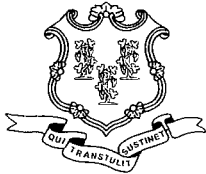
Very truly yours,

S. Derek Phelps
Executive Director

SDP/MP

Enclosure: Notice of Intent

c: David D. Eaton, Zoning Enforcement Officer, Town of Union



Daniel F. Caruso
Chairman

STATE OF CONNECTICUT

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June 22, 2007

The Honorable Matt Hall
Council Chairman
Town of Cheshire
Town Hall
84 South Main Street
Cheshire, CT 06410

RE: **EM-CING-025-034-088-129-145-166-070612** - New Cingular Wireless PCS, LLC notice of intent to modify existing telecommunications facilities located at 1119 Summit Rd., Cheshire; 48 Newtown Rd., Danbury; 585 So. Main St.(a/k/a New Haven Rd), Naugatuck; 126 Pioneer Heights Rd., Somers; 23 Holland Rd., Union; and 347 East St., Wolcott.

Dear Mr. Hall:

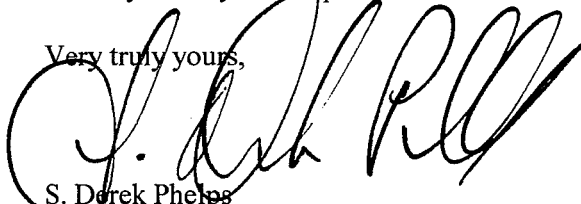
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If you have any questions or comments regarding this proposal, please call me or inform the Council by June 28, 2007.

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Very truly yours,

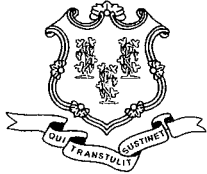


S. Derek Phelps
Executive Director

SDP/MP/laf

Enclosure: Notice of Intent

c: Richard A. Pfurr, Town Planner, Town of Cheshire
Michael A. Milone, Town Manager, Town of Cheshire



Daniel F. Caruso
Chairman

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June 22, 2007

The Honorable Mark D. Boughton
Mayor
City of Danbury
City Hall
155 Deer Hill Avenue
Danbury, CT 06810

RE: **EM-CING-025-034-088-129-145-166-070612** - New Cingular Wireless PCS, LLC notice of intent to modify existing telecommunications facilities located at 1119 Summit Road, Cheshire; 48 Newtown Road, Danbury; 585 So. Main Street (a/k/a New Haven Road), Naugatuck; 126 Pioneer Heights Road, Somers; 23 Holland Road, Union; and 347 East Street, Wolcott.

Dear Mayor Boughton:

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 Tuesday, July 3, 2007 at 1:30 p.m. in Hearing Room One, Ten Franklin Square, New Britain, Connecticut.

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

Thank you for your cooperation and consideration.

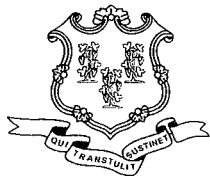
Very truly yours,

S. Derek Phelps
Executive Director

SDP/MP/laf

Enclosure: Notice of Intent

c: Dennis Elpern, City Planner, City of Danbury



Daniel F. Caruso
Chairman

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June 22, 2007

The Honorable Ronald San Angelo
Mayor
Town of Naugatuck
Town Hall
229 Church Street
Naugatuck, CT 06770

RE: **EM-CING-025-034-088-129-145-166-070612** - New Cingular Wireless PCS, LLC notice of intent to modify existing telecommunications facilities located at 1119 Summit Road, Cheshire; 48 Newtown Road, Danbury; 585 So. Main Street (a/k/a New Haven Road), Naugatuck; 126 Pioneer Heights Road, Somers; 23 Holland Road, Union; and 347 East Street, Wolcott.

Dear Mayor Angelo:

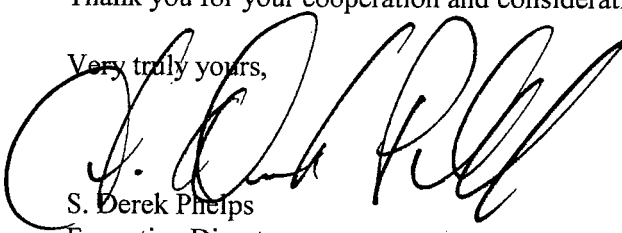
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If you have any questions or comments regarding this proposal, please call me or inform the Council by June 28, 2007.

Thank you for your cooperation and consideration.

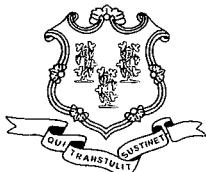
Very truly yours,


S. Derek Phelps
Executive Director

SDP/MP/laf

Enclosure: Notice of Intent

c: Keith Rosenfeld, Town Planner, Town of Naugatuck



Daniel F. Caruso
Chairman

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June 22, 2007

The Honorable David A. Pinney
First Selectman
Town of Somers
Town Hall
600 Main Street
P. O. Box 308
Somers, CT 06071

RE: **EM-CING-025-034-088-129-145-166-070612** - New Cingular Wireless PCS, LLC notice of intent to modify existing telecommunications facilities located at 1119 Summit Road, Cheshire; 48 Newtown Road, Danbury; 585 So. Main Street (a/k/a New Haven Road), Naugatuck; 126 Pioneer Heights Road, Somers; 23 Holland Road, Union; and 347 East Street, Wolcott.

Dear Mr. Pinney:

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 Tuesday, July 3, 2007 at 1:30 p.m. in Hearing Room One, Ten Franklin Square, New Britain, Connecticut.

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

Thank you for your cooperation and consideration.

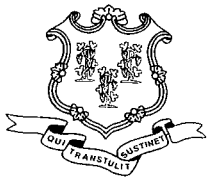
Very truly yours,

S. Derek Phelps
Executive Director

SDP/MP/laf

Enclosure: Notice of Intent

c: Patrice Carson, Town Planner, Town of Somers



Daniel F. Caruso
Chairman

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June 22, 2007

The Honorable Thomas G. Dunn
Mayor
Town of Wolcott
Town Hall
10 Kenea Avenue
Wolcott, CT 06716

RE: **EM-CING-025-034-088-129-145-166-070612** - New Cingular Wireless PCS, LLC notice of intent to modify existing telecommunications facilities located at 1119 Summit Road, Cheshire; 48 Newtown Road, Danbury; 585 So. Main Street (a/k/a New Haven Road), Naugatuck; 126 Pioneer Heights Road, Somers; 23 Holland Road, Union; and 347 East Street, Wolcott.

Dear Mayor Dunn:

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 Tuesday, July 3, 2007 at 1:30 p.m. in Hearing Room One, Ten Franklin Square, New Britain, Connecticut.

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

Thank you for your cooperation and consideration.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/MP/laf

Enclosure: Notice of Intent

c: George Leggio, Zoning Enforcement Officer, Town of Wolcott



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

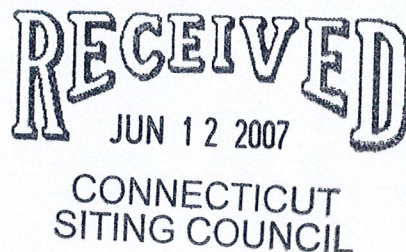
EM-CING-025-034-088-129-145-166-070612

Steven L. Levine
Real Estate Consultant

HAND DELIVERED

June 12, 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 6 existing telecommunications facilities located in Cheshire, Danbury, Naugatuck, Somers, Union, and Wolcott

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 located.

UMTS technology offers services to mobile computer and phone users anywhere in the world. Based on the Global System for Mobile (GSM) communication standard, UMTS is the planned worldwide standard for mobile users. UMTS, fully implemented, gives computer and phone users high-speed access to the Internet as they travel. They have the same capabilities even when they roam, through both terrestrial wireless and satellite transmissions.

Attached 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

1119 Summit Road, Cheshire, CT
 Site Number 5263
 Former AT&T site
 Approved in Siting Council Docket 199

Tower Owner/Manager: Crown Castle

Equipment configuration: Monopole

Current and/or approved: Nine Allgon 7250 antennas @ 160 ft c.l.
 Twelve runs 1 5/8 inch coax

Planned Modifications: Remove existing antennas
 Install six Powerwave 7770 antennas @ 160 ft c.l.
 Install six TMA's and six diplexers @ 160 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 23.1 % 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 24.6 % 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 *							21.61
Cingular GSM *	158	1900 Band	4	250	0.0144	1.0000	1.44
Total							23.1%

* 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 *							21.61
Cingular GSM	160	1900 Band	3	427	0.0180	1.0000	1.80
Cingular UMTS	160	880 - 894	1	500	0.0070	0.5867	1.20
Total							24.6%

* Per CSC records.

Structural information:

The attached structural analysis demonstrates that the tower and foundation have sufficient structural capacity for Cingular's proposed modifications. (PSG Engineering, Ltd., Project 0701H131-A060167, dated 5/24/07)



Date: **May 24, 2007**

Veronica Harris
Crown Castle International
1200 McArthur Blvd.
Mahwah, NJ 07430
(201) 236-9094

PSG Engineering, Ltd.
8206 Forest Gate Drive
Sugar Land, TX 77479

Phone: (281) 343-7099
Fax: (281) 343-7127

Subject: Analysis Structural Report

Carrier Designation

Cingular Wireless Co-Locate
Carrier Site Number: "5263"
Carrier Site Name: "Cheshire-Larsens Pond"

Crown Castle Designation

Crown Castle BU Number: 801367
Crown Castle Site Name: CT NHV-2075 CAC 801367
Crown Castle JDE Job Number: 88478

Engineering Firm Designation

PSG Engineering Project Number: 0701H131-A060167

Site Data

1121 Summit Road, Cheshire, CT, New Haven County
Latitude 41° 32' 11.2", Longitude -72° 57' 26.3"
167 Foot - Monopole Tower

Dear Ms. Harris,

PSG Engineering, Ltd. is pleased to submit this "**Structural Analysis Report**" to determine the structural integrity of the aforementioned tower. This analysis has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 240135, in accordance with application 45564, revision 0.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC1: Existing + Reserved + Proposed Equipment

Sufficient Capacity

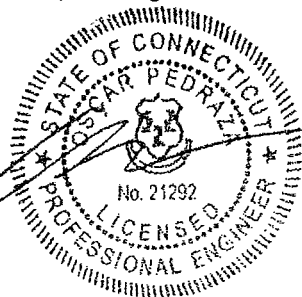
Note: See Table 1 and Table 2 for the proposed and existing/reserved loading.

The analysis has been performed in accordance with the TIA/EIA 222-F standard based upon a wind speed of 85 mph fastest mile (105 mph 3-second gust).

We at *PSG Engineering, Ltd.* appreciate the opportunity of providing our continuing professional services to you and Crown Castle International. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted,

Oscar Pedraza, P.E.
President



1) INTRODUCTION

The tower superstructure analysis is based on the original tower design by Paul J, Ford for Summit Manufacturing dated June 13, 2001 (TIA/EIA-222-F: 85 mph with 1/2" radial ice). The tower substructure analysis is based on the original foundation design by Paul J, Ford for Summit Manufacturing dated June 13, 2001 and a geotechnical report by Clough, Harbour & Associates LLP dated May 15, 2001.

2) ANALYSIS CRITERIA

This tower is designed using the TIA/EIA-222-F standard.

The following design criteria apply:

- Basic wind speed of 85 mph.
- Nominal ice thickness of 0.5000 in.
- Ice density of 56 pcf.
- A wind speed of 74 mph is used in combination with ice.
- Deflections calculated using a wind speed of 50 mph.
- Feedline torque is considered.
- Pressures are calculated at each section.
- Stress ratio used in tower member design is 1.333

Table Legend
Proposed = (P)
Installed = (I)
Reserved = (R)

Table 1 – Proposed (P) Antenna and Cable Information

Center Line Elevation (feet)	Number Of Antenna	Antenna Manufacturer	Antenna Model	Mount	Number Of Feed Lines	Feed Line Size (inches)
160	6(P)	Powerwave Technologies	7770.00	-	-	-
	6(P)		LGP21401			
	6(P)		LGP13519			
	6(R)	Allgon	7184			

Table 2 – Installed (I) and Reserved (R) Antenna and Cable Information

Center Line Elevation (feet)	Number Of Antenna	Antenna Manufacturer	Antenna Model	Mount	Number Of Feed Lines	Feed Line Size (inches)
174	1(I)	Decibel	DB222-A	Low Profile Platform (1)	1(I) (Internal)	7/8
167	6(I)	Antel	WPA-80090/4CF		12(I) (Internal)	1 5/8
	6(I)	Decibel	DB948F85T2E-M		1(I) (Internal)	1/2
	1(I)	Standard	GPS			
*160	*4(I)+3(R)	*Allgon	*7184	Low Profile Platform (1)	12(I) (Internal)	1 5/8
	*3(I)		*7250.03			
	2(I)		*7220.42			
147	6(I)+6(R)	Decibel	DB978H90T2E-M	Low Profile Platform (1)	6(I)+6(R) (Internal)	1 5/8
139	12(I)	RFS/Celwave	APX16PV-16PVL	Low Profile Platform (1)	14(I) (Internal)	1 5/8
	6(I)+12(R)	REMEC	S20057A-1			
128	12(I)	Decibel	DB846G90A-XY	Low Profile Platform (1)	12(I) (Internal)	1 1/4

*Note: All antennas will be removed and replaced with proposed antenna configuration. Installed mount and coax lines will remain to support proposed loads.

Table 3 – Original Tower Manufacturer Design Antenna and Cable Information

Center Line Elevation (feet)	Number Of Antenna	Antenna Manufacturer	Antenna Model	Mount	Number Of Feed Lines	Feed Line Size (inches)
167	Not Available		40 Sq. Ft.	Platform w/Handrail (1)	Not Available (Internal)	
158			40 Sq. Ft.	Platform w/Handrail (1)		
148			40 Sq. Ft.	Platform w/Handrail (1)		
138			40 Sq. Ft.	Platform w/Handrail (1)		
128			40 Sq. Ft.	Platform w/Handrail (1)		
118			40 Sq. Ft.	Platform w/Handrail (1)		

3) ANALYSIS PROCEDURE

Table 4 – Documents Provided

Document	Remarks	Reference	Source
Original Tower Design	Summit	799210	Crown Site Data Manager
Original Foundation Design		842573	
Geotechnical Report	Clough, Harbour & Associates LLP	445076	
CAD Level Drawing(s)	167',158',148',138',128' Level Drawing(s)	-	Crown CAD Dept.

3.1) Analysis Method

RISATower (Version 4.7.2.1), a commercially available software program, was used to create a three-dimensional model of the tower and calculate member stresses for various dead, live, wind, and ice load cases. All loads were computed in accordance with the ANSI/EIA/TIA 222F or the local building code requirements. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

1. Tower and structures were built in accordance with the manufacturer's specifications.
2. The tower and structures have been maintained in accordance with the manufacturer's specifications.
3. The configuration of antennas, transmission cables, mounts, and other appurtenances are as specified in Tables 1 and 2 and the Level drawing(s) listed in Table 4.
4. When applicable, transmission cables are considered to be structural components for calculating wind loads, as allowed by TIA/EIA-222F.

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and PSG Engineering should be allowed to review any new information to determine its effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

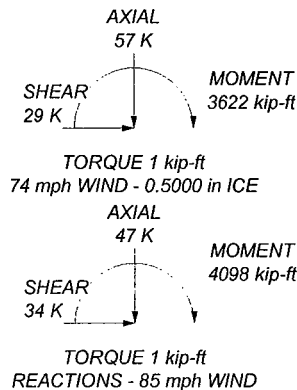
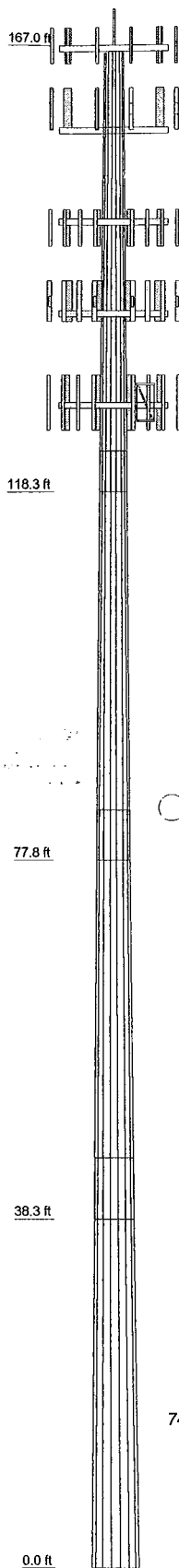
Table 5 – Tower Component Stresses vs. Capacity – LC1

Notes	Component	Elevation (ft)	% Capacity	Pass/Fail
RISA Tower Analysis Summary:(Monopole)				
			Summary	
Notes:	Component	Elevation	% Capacity	Pass/Fail
	L1	167 - 118.25	56.8	Pass
	L2	118.25 - 77.75	80.8	Pass
	L3	77.75 - 38.25	81.2	Pass
	L4	38.25 - 0	76.2	Pass
Individual Components:				
Notes:	Component	Elevation	% Capacity	Pass/Fail
	Base Plate	-	64.7	Pass
	Anchor Bolts	-	90.0	Pass
	Base Foundation (Compared with original design loads)	-	80.4	Pass
Structure Rating (max from all components) =				90.0%

4.1) Recommendations (if applicable)

No modifications are necessary.

Length (ft)	489"	45'	45'	45'	3.9
Number of Sides	18	18	18	18	5.9
Thickness (in)	0.2500	0.3125	0.3750	0.4375	8.6
Lap Splice (ft)		46"	56"	69"	11.8
Top Dia (in)			33.8114	42.3931	
Bot Dia (in)			44.3000	52.8700	
Grade					A607-65
Weight (K)					30.1



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
DB222-A	174	PIROD 13' Low Profile Platform (Monopole)	158
Generic C-2 Lightning Spur	169	PIROD 13' Low Profile Platform (Monopole)	148
(2) WPA-80090/4CF w/Mount Pipe	167	(4) DB978H90T2E-M w/Mount Pipe	147
(2) DB948F85T2E-M w/Mount Pipe	167	(4) DB978H90T2E-M w/Mount Pipe	147
(2) WPA-80090/4CF w/Mount Pipe	167	(4) DB978H90T2E-M w/Mount Pipe	147
(2) DB948F85T2E-M w/Mount Pipe	167	(6) S20057A-1	139
GPS	167	(4) APX16PV-16PV w/Mount Pipe	139
PIROD 13' Low Profile Platform Top (Monopole)	167	(6) S20057A-1	139
(2) DB948F85T2E-M w/Mount Pipe	167	(4) APX16PV-16PV w/Mount Pipe	139
(2) LGP2140X (TMA)	160	(6) S20057A-1	139
(2) LGP13519	160	(4) APX16PV-16PV w/Mount Pipe	139
(2) 7184 w/Mount Pipe	160	PIROD 13' Low Profile Platform (Monopole)	138
(2) 7770.00 w/Mount Pipe	160	5' Standoff T-Arm (14' face width)	128
(2) LGP2140X (TMA)	160	(4) DB846G90A-XY w/Mount Pipe	128
(2) LGP13519	160	5' Standoff T-Arm (14' face width)	128
(2) 7184 w/Mount Pipe	160	(4) DB846G90A-XY w/Mount Pipe	128
(2) 7770.00 w/Mount Pipe	160	PIROD 13' Low Profile Platform (Monopole)	128
(2) LGP2140X (TMA)	160	(4) DB846G90A-XY w/Mount Pipe	128
(2) LGP13519	160		
(2) 7184 w/Mount Pipe	160		
(2) 7770.00 w/Mount Pipe	160		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A607-65	65 ksi	80 ksi			

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. TOWER RATING: 81.2%

PSG Engineering, Ltd.
245 Commerce Green Blvd., Suite 240
Sugar Land, TX 77478
Phone: 281.265.3444
FAX: 281.265.3454

Job: PSG Engineering Project Number: 0701H131-A01
Project: (801367) (CT NHV-2075 CAC 801367)
Client: Crown Castle International Drawn by: PSG App'd:
Code: TIA/EIA-222-F Date: 05/24/07 Scale: NTS
Path: N:\Production\0701H131\801367.dwg Dwg No. E-1



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

June 12, 2007

Mr. Michael A. Milone, Town Manager
Town of Cheshire
Town Hall, 84 South Main St.
Cheshire, CT 06410

Re: Telecommunications Facility – 1119 Summit Road, Cheshire

Dear Mr. Milone:

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**

48 Newtown Road, Danbury, CT
Site Number 2157
Separate AT&T Wireless and Cingular installations
Exempt Modifications 12/99, 7/01, 8/02, 9/02, 3/03

Tower Owner/Manager: Fifty Newtown Road Corporation / Wireless Capital Partners

Equipment configuration: Monopole with Pipe Mount

CSC Approved: Three EMS RR90-17 antennas @ 110 ft c.l.
One 10-ft. Pipe Mount atop 100 ft tower
Twelve RFS APL868013 Antennas @ 100 ft c.l.
Unspecified number of cable runs
Equipment rooms at 48 and 50 Newtown Road

Existing: Three EMS RR90-17 antennas @ 110 ft c.l.
One 10-ft. Pipe Mount atop 100 ft tower
Six Powerwave 7770 antennas @ 100 ft
Three RFS APL868013 Antennas @ 100 ft c.l.
Three temporary antennas
Six TMA's @ 100 ft
Twelve runs 1 5/8 inch coax
Equipment rooms at 48 and 50 Newtown Road

Proposed: Six Powerwave 7770 antennas @ 100 ft c.l.
Six TMA's @ 100 ft
Twelve runs 1 5/8 inch coax
One equipment room at 48 Newtown Road only

Present and Planned Tower Configuration / Consolidation / Notice of Decommissioning

Cingular hereby gives notice to the Council that it is decommissioning components of its operations at the Newtown Road site. This site is also included in the UMTS upgrade program, as discussed in the next section.

As the Council is aware, Cingular is currently involved in the very complicated process of merging two pre-existing overlapping wireless networks, i.e., Cingular and AT&T Wireless, into one. In many cases this requires decommissioning of existing equipment.

Owing to its history, the 48 Newtown Road site poses unique challenges to the consolidation process.

Prior to 1999, there was a tower at 50 Newtown Road where Cingular's predecessor (Springwich) established a cell site utilizing an equipment room inside the landlord's building. This landlord also owns the adjacent 48 Newtown Road property, and in 1999, agreement was reached to construct a taller replacement tower at 48 Newtown Road for multiple carriers. The original tower at 50 Newtown Road was removed. Springwich transferred its antennas to the new tower, but continued using its established equipment room at 50 Newtown Road. That Council-approved condition persists to this day.

In 2001 AT&T Wireless obtained Council approval to place a pipe mount and antennas atop the 48 Newtown Road tower and its radio equipment inside the building 48 Newtown Road.

The merger between AT&T and Cingular requires stepwise consolidation of the two cell sites into one. Cingular will remove the pipe mount and utilize only the 100-ft-level platform. Cingular will also transfer its radio equipment to the 48 Newtown Road equipment room. Thus, Cingular's installation will be entirely on the 48 Newtown Road property.

Unfortunately, the consolidation process has not always proceeded as one might wish in order to satisfy carrier obligations to the Council. Owing to unusual circumstances at the time, field crews inadvertently powered-down the AT&T antennas on the pipe mount, re-routed cables, and replaced some of Cingular's RFS antennas with Powerwave antennas without notice to the Council. Moreover, they did not at that time remove the pipe mount or the AT&T antennas. Consolidation of the sites also required temporary installation of three antennas to permit un-interrupted service, and these temporary antennas were not removed when the job was complete.

With apologies to the Council for its earlier failure to give notice, Cingular hereby gives notice to the Council that it is decommissioning:

- the pipe mount,
- the AT&T antennas,
- the remaining three RFS antennas,
- the Cingular equipment room at 50 Newtown Road, and
- the coax cables running from 50 Newtown Road to the tower at 48 Newtown Road.

At its earliest opportunity, Cingular will remove the AT&T antennas, the pipe mount, and the temporary antennas. However, since Cingular will continue TDMA transmissions until early in 2008, it will continue to use the 50 Newtown Road equipment room, the connecting coax, and the remaining RFS antennas until TDMA is discontinued. The antennas and coax will then be decommissioned and removed, and the equipment room will be vacated.

Power Density / UMTS Upgrade

In addition to facility consolidation and decommissioning as discussed above, Cingular intends to include this facility in its on-going UMTS upgrade. The Powerwave antennas and TMA's have been installed in part to enable UMTS.

Power density at the site will change due to both the decommissioning and the UMTS upgrade. 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 36.7 % of the standard adopted by the FCC. As depicted in the second table below,

the total radio frequency electromagnetic radiation power density following proposed modifications would be approximately 32.9 % 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 *							17.42
AT&T Wireless	108	1900 Band	4	275	0.0339	1.0000	3.39
Cingular TDMA *	98	880 - 894	19	100	0.0711	0.5867	12.12
Cingular GSM *	98	880 - 894	2	296	0.0222	0.5867	3.78
Total							36.7%

* 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 *							17.42
Cingular GSM	100	880 - 894	6	296	0.0639	0.5867	10.88
Cingular GSM	100	1900 Band	1	427	0.0154	1.0000	1.54
Cingular UMTS	100	880 - 894	1	500	0.0180	0.5867	3.06
Total							32.9%

* Per CSC Records

Structural Information

The 48 Newtown Road tower was designed for three platforms supporting twelve Allgon ALP 9212 panel antennas apiece. (See attached EEI design dated 7/99.)

The attached structural analysis by Manzi Engineering dated 2/01 demonstrates that the tower is structurally sufficient to also support a 10-ft pipe extension for AT&T Wireless with three additional antennas and six additional runs of 1 ¼ inch coax. This analysis includes the 24 antennas allocated in the tower design for the lower platforms (Nextel and Verizon).

The proposed final configuration for the Newtown Road tower eliminates the pipe mount, the AT&T antennas, Cingular's remaining RFS antennas, and the temporary antennas.

Cingular's proposal will return the upper portion of the tower to its original design configuration, i.e., no pipe mount extension, no AT&T cluster mount antennas, and near equivalence of weight and wind-loading on Cingular's 100-ft platform between the approved antennas and the proposed loading. (See attached cut sheets.)

- Approved: 12 Allgon 9212 antennas @ 27 lb = 324 lbs. Wind-loading area, 11 in. x 52 in.

- Proposed: 6 Powerwave 7770 antennas @ 35 lbs + 6 TMA's @ 18 lbs = 318 lbs. Wind-loading area, 11 in. x 55 in.

Since the two lower platforms do not exceed design loading either, the final loading is within the original design specifications for the tower.

We respectfully submit that an updated structural analysis is not necessary for the proposed modifications.

MANZI ENGINEERING

3 CIFRE LANE
PLAISTOW, NH 03865
(603) 382-6219
(603) 382-0523 (fax)

**SPECIALIZING IN TELECOMMUNICATIONS
RELATED STRUCTURAL ENGINEERING**

February 19, 2001

Natcomm, L.L.C.
63-2 North Branford Road
Branford, CT 06405
Attn: Jason Pintek

Dear Jason,

Per your recent request I am providing you with the enclosed analysis of the existing 100 ft "Engineered Endeavors" monopole located in Danbury, CT (also referred to as "Germantown"). This analysis considers the addition of 3 EMS RR90-17 panels cluster mounted 10 ft above the top of the existing pole with the associated coax run down the outside of the pole.

This analysis was done in accordance with the EIA/TIA-222-F "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures". Wind loads were generated for a basic design wind speed of 85 mph and a loading combination that included 1/2" of radial ice as is required for Fairfield, County.

All pertinent pole loading information was taken from the February 5, 2001 CSB Communications tower inventory report as supplied by you and are assumed to be correct. All pole structural properties and existing foundation information are as supplied by NATCOMM LLC.

PROPOSED FINAL CONFIGURATION:

- 3 new EMS RR90-17 panels at 110'-0" agl
- 12 existing Allgon 7120.16 panels centered on existing 10'-8" E.E.I. top platform
- 12 existing Allgon 7129.16 panels centered on existing 12'-0" E.E.I. platform @ 88'-0" agl
- 12 existing DB844H90 panels centered on existing 14'-0" Summit platform @ 78'-0" agl
- 6 new runs of 1 1/4" coax run down outside of pole

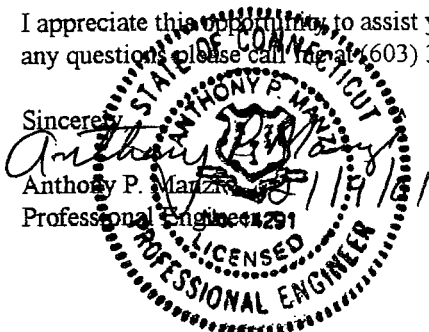
Based on my investigation your addition of 3 EMS RR90-17 panels and associated coax as listed within this report will meet all the structural requirements of the EIA/TIA-222 -F "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures".

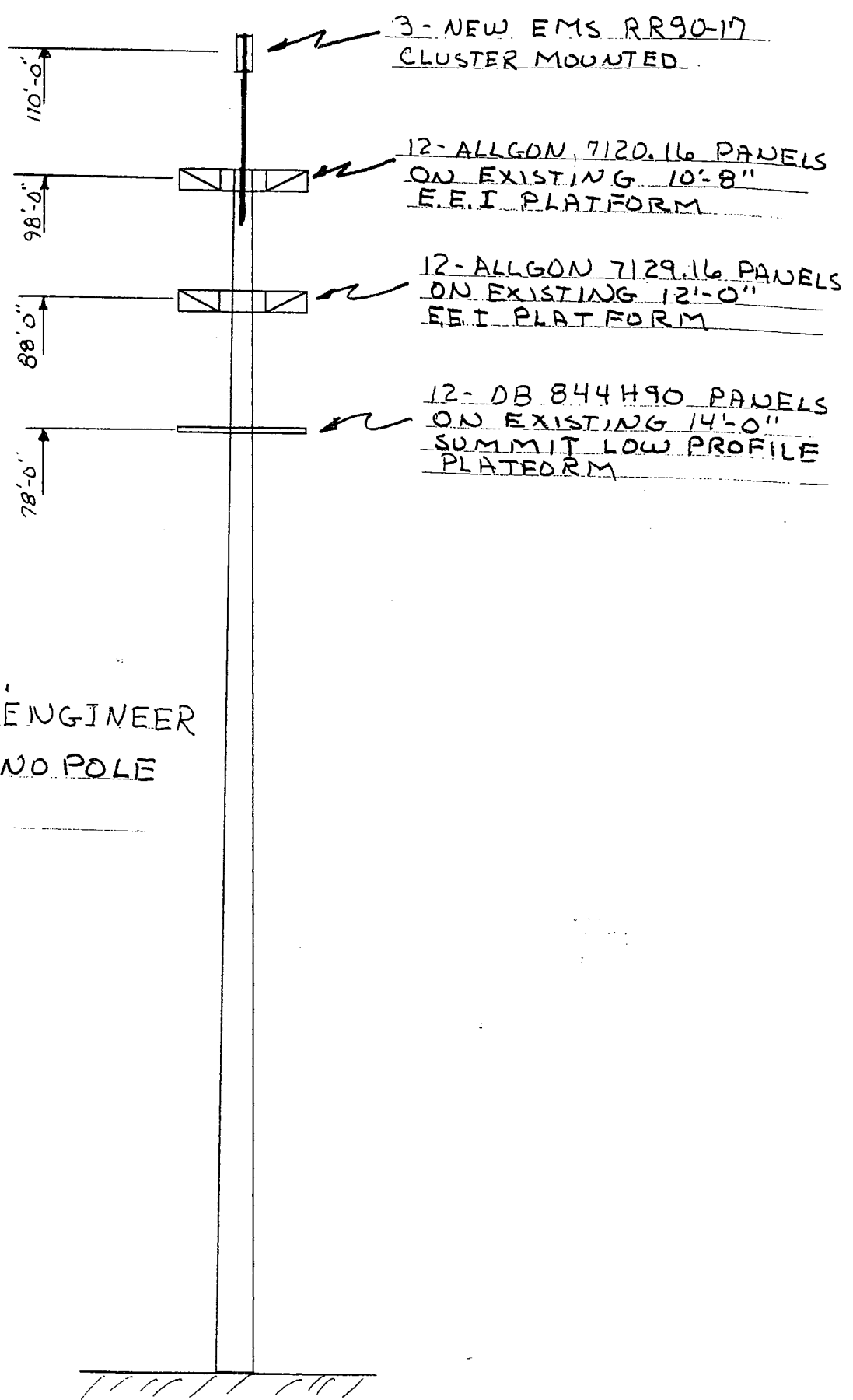
Any changes in antenna type, platform type or routing of coax could affect the validity of this analysis and should be reevaluated.

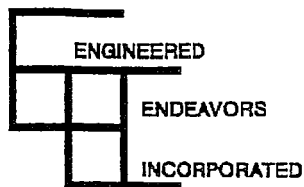
I appreciate this opportunity to assist you and look forward to working with you in the future. If you have any questions please call me at (603) 382-6219.

Sincerely,

Anthony P. Manzi
Professional Engineer

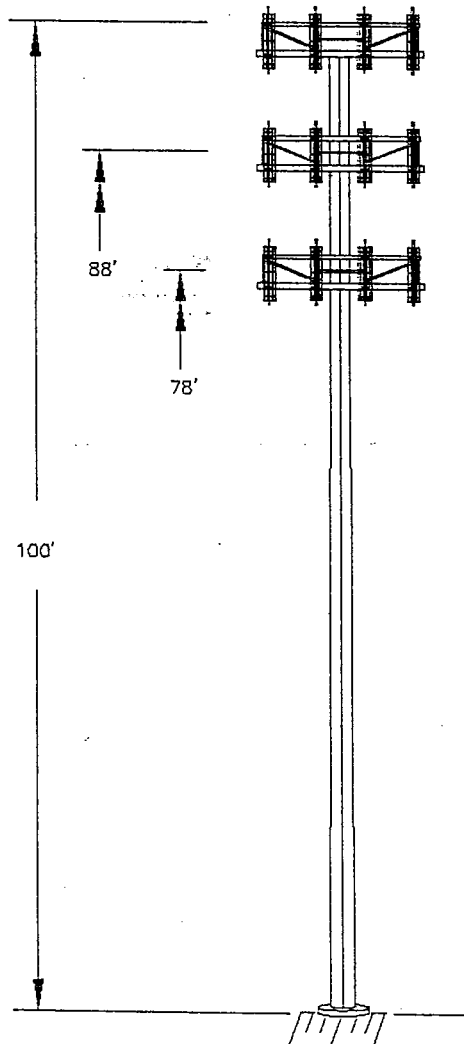






Customer BELL ATLANTIC/CT By L. PADGETT 7/6/99
Structure 100' MONOPOLE Checked _____
Date 5246
Job/Quote No. _____

SITE LOCATION — FAIRFIELD COUNTY, CT
SITE NAME — GERMANTOWN



ANTENNA LOADING:

(12) ALP 9212 DIRECTIONAL ANTENNAS
STANDARD PLATFORM

(12) ALP 9212 DIRECTIONAL ANTENNAS
STANDARD PLATFORM @ 88' (FUTURE)

(12) ALP 9212 DIRECTIONAL ANTENNAS
STANDARD PLATFORM @ 78' (FUTURE)



DESIGN NOTES:

DESIGNED IN ACCORDANCE WITH TIA/EIA 222 F
85 MPH BASIC WIND SPEED
1/2" RADIAL ICE

CASE I — 85 MPH BASIC WIND SPEED

CASE II — 75% OF 85 MPH BASIC WIND
WITH 1/2" SIMULTANEOUS ICE

NOTE: IT IS THE RESPONSIBILITY
OF THE PURCHASER TO VERIFY
THAT THE WIND LOADS AND DESIGN
CRITERIA SPECIFIED MEET THE REQUIREMENTS
OF ALL LOCAL BUILDING CODES

ENGINEERED ENDEAVORS, INC.

7610 Jenther Drive * Mentor, Ohio 44060
Telephone: (440) 918-1101 * Telefax: (440) 918-1108

Engineered Endeavors Inc.

7610 Jenther Drive
Mentor, Ohio 44060
Tel (440) 918-1101 Fax (440) 918-1108

Communications Structure Nonlinear Analysis and Design Program

15:52:14 07-06-1999
Revision 1.2 - 4/22/98
Engineer: L. PADGETT

Customer BELL ATLANTIC MOBILE/CT
Job Name 5246
Structure 100' MONOPOLE
Location FAIRFIELD COUNTY, CT
Site GERMANTOWN

OD BOT	OD TOP	NUM. SIDES	THICK INCH	TAPER IN/FT	LENGTH FT	JOINT INCH	JOINT TYPE	YIELD KSI	WEIGHT LBS	JOINT HEIGHT
27.98	17.50	18	0.2500	0.210	50.00	48.00	SLIP	52.0	2999.	48.00
37.00	26.52	18	0.3125	0.210	50.00	0.00	BASEPL	52.0	5242.	0.00
TOTAL TUBE WEIGHT								8242.	POUNDS	
POLE SHAFT LENGTH								96.00	FEET	

E = 29600.0 KSI
UNIT WGT = 0.283 LBS/CU IN
AISC constants are used for stress reductions.
TUBE SECTIONS HAVE 18 SIDES AND ARE TREATED AS ROUND
Internal bend radius = 3 X T
Tube diameters are measured flat to flat.
Tube diameters are increased by 1.020 for wind across points.
Drag coefficients are increase by 1.300 for steps on the pole.
AISC Tube Shape Coefficient of 1.000 is applied.
ORIGINAL DATA FILE NAME H:\LAP\QUOTES9\9625-100
REVISED DATA FILE NAME H:\LAP\JOBS5\5246-100

APPURTENANCES

DESCRIPTION	NUM.	ELEV.	Kz	AREA	WGT	Ca	AREA	WGT	Ca	FACTOR
				< WITHOUT ICE >			< WITH ICE >			
ALP 9212-N	12	98.	1.365	3.90	27.	2.0000	4.24	55.	2.0000	0.75
STD AMPS PLATFORM	1	98.	1.365	33.75	2000.	1.0000	42.20	3000.	1.0000	1.00
ALP 9212-N	12	88.	1.323	3.90	27.	2.0000	4.24	55.	2.0000	0.75
ALP 9212-N	12	78.	1.279	3.90	27.	2.0000	4.24	55.	2.0000	0.75
STD AMPS PLATFORM	1	78.	1.279	33.75	2000.	1.0000	42.20	3000.	1.0000	1.00
STD AMPS PLATFORM	1	88.	1.323	33.75	2000.	1.0000	42.20	3000.	1.0000	1.00

SUMMARY TABLE

ELEV	STRESS RATIO	AXIAL	BENDING	LOADING
96.00	0.04	2.05	8.9	1 85 MPH BASIC WIND SPEED
88.00	0.16	4.39	47.2	1 85 MPH BASIC WIND SPEED
78.00	0.40	6.94	143.9	1 85 MPH BASIC WIND SPEED
68.00	0.65	7.69	288.2	1 85 MPH BASIC WIND SPEED
58.00	0.82	8.54	436.8	1 85 MPH BASIC WIND SPEED
48.00	0.95	8.54	589.6	1 85 MPH BASIC WIND SPEED
36.00	0.88	11.39	778.6	1 85 MPH BASIC WIND SPEED
24.00	0.93	13.23	973.2	1 85 MPH BASIC WIND SPEED
12.00	0.96	14.61	1173.5	1 85 MPH BASIC WIND SPEED
0.00	0.99	15.33	1379.3	1 85 MPH BASIC WIND SPEED

MAXIMUM SUPPORT MOMENT K-FT 1379.35
CORRESPONDING AXIAL FORCE KIPS 15.32
CORRESPONDING SHEAR FORCE KIPS 17.49

BASE PLATE AT ELEVATION 0.00 FEET

TUBE DIAMETER 37.00 INCHES

DESIGN MOMENT 1379.3 KIP FT

DESIGN MOMENT IS 0. DEGREES FROM THE WIND DIRECTION

BOLTS ARE ON THE KNUCKLES OF THE TUBE

APPLIED AXIAL FORCE 15.3 KIPS

APPLIED SHEAR 17.49 KIPS

BOLT DATA

BOLT TYPE A615 GR75

BOLTS ARE EVENLY SPACED

DIAMETER 2.250 INCHES

EFFECTIVE AREA 3.250 SQ IN

TOTAL LENGTH (DET) 6.0 FEET

MINIMUM EMBEDMENT 5.0 FEET

NUMBER OF BOLTS 8

BOLT CIRCLE DIAMETER 45.00 INCHES

ALLOWABLE STRESS 60.0 KSI

APPLIED AXIAL STRESS 57.2 KSI

MAX BOLT FORCE 185.8 KIPS

BOLT BENDING STRESS 3.2 KSI

COMBINED BOLT STRESS 60.4 KSI

CLEARANCE UNDER PLATE 3.25 INCHES

BOLT WEIGHT POUNDS

PLATE DATA

DIAMETER OF PLATE 51.00 INCHES

MATERIAL A871 GR60

PROVIDED THICKNESS 1.500 INCHES

REQUIRED THICKNESS 1.455 INCHES

BOLT HOLE DIAMETER 2.625 INCHES

CENTER HOLE SIZE 27.00 INCHES

NET WEIGHT 605.7 POUNDS

RAW STOCK WEIGHT 1104.1 POUNDS

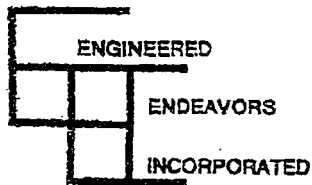
SURFACE AREA 19.82 SQ FT

ALLOWABLE STRESS 59.99 KSI

MAX APPLIED STRESS 56.47 KSI

CONCRETE STRENGTH 3000. PSI

Base Plate - use 51.00 inch ROUND x 1.500 inch A871 GR60
with (8) 2.250 diameter x 6.00 foot caged A615 GR75 double end
threaded bolts w/(5) hex nuts each on a 45.00 inch bolt circle

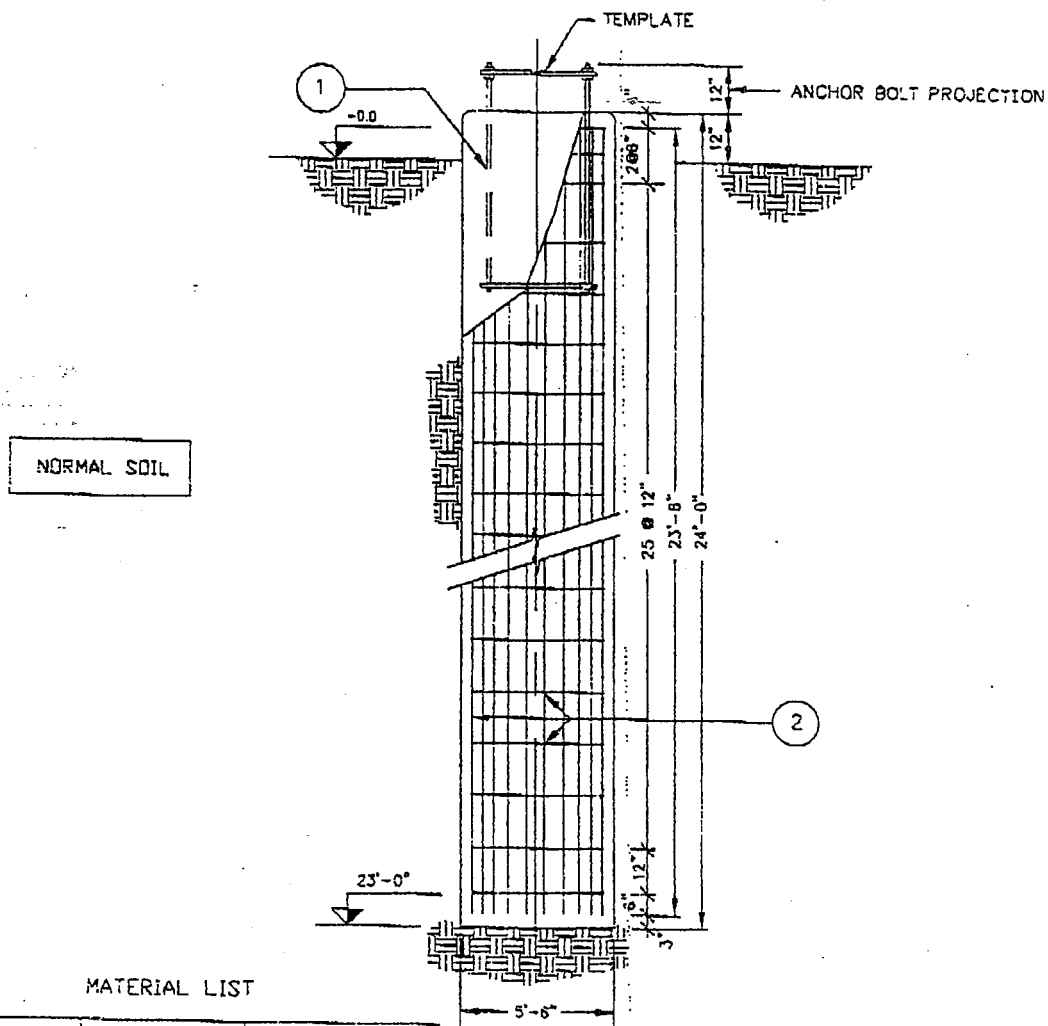


Customer BELL ATLANTIC/CT By L.A.P. 08/02/99
 Structure 100' MONOPOLE Checked 5246
 Date
 Job/Quote No.

SITE NAME - GERMANTOWN

SITE LOCATION - FAIRFIELD COUNTY, CT

NORMAL SOIL FOUNDATION



MATERIAL LIST

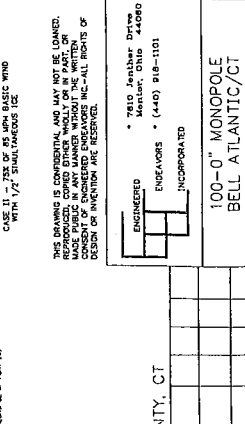
ITEM	QTY.	LENGTH	DESCRIPTION
①	5	5'-0"	2 1/4" ANC. BOLTS A615-GR.75
②	##	##	(ASTM A615-GR.60)

CONCRETE (cub.yd.)	22.0	4000 psi
STEEL (lbs)	1834.9	ASTM A615-GR.60

FOUNDATION LOADING


MOMENT, kip-ft	1379.30
SHEAR, kips	17.50
AXIAL, kips	15.30

NOT FOR CONSTRUCTION

[illegible]

NOTE: WATER DRAINAGE MUST BE PROVIDED UNDERNEATH THE STRUCTURE BASE PRIOR TO EROSION TO ENSURE THAT MOISTURE DOES NOT

(6) 2 1/4" x 6"



• 7610 Feather Drive
Mentor, Ohio 44060

• (440) 918-1101

ENGINEERS

INCORPORATED

100-0" MONOPOLE
BELL ATLANTIC/CT

VIEW
 NONE
 TEMPLATE B-45.00T.5E
 13 1/8"

[illegible]

Swedcom Corporation

ALP 9212—N

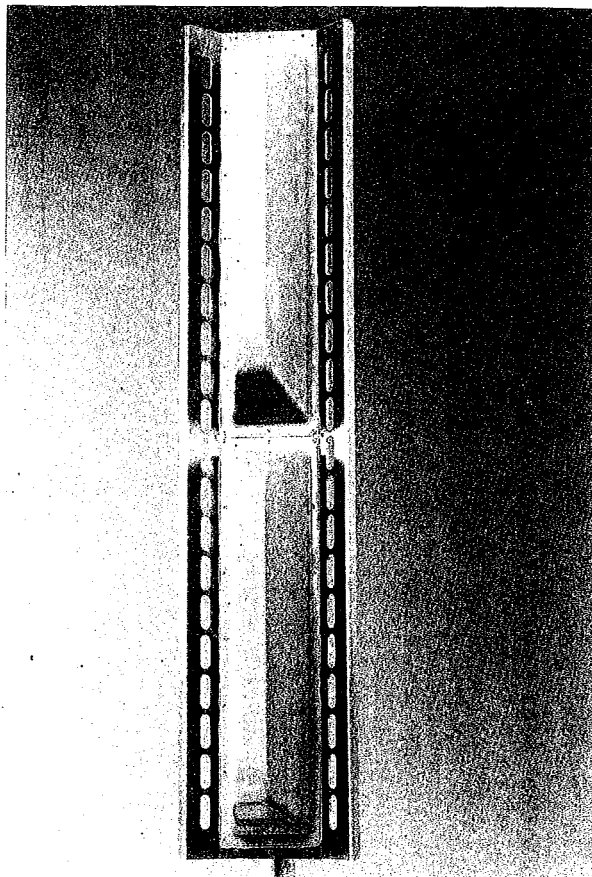
LOG-PERIODIC REFLECTOR ANTENNA

92 Degrees 12 dBd

Features:

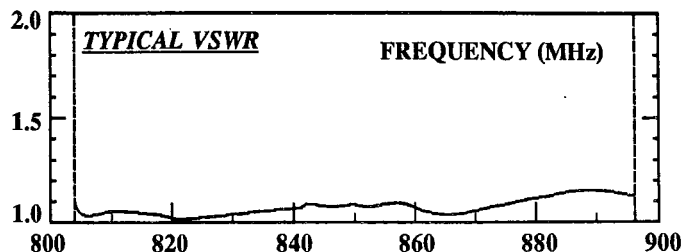
- ☐ Broadbanded. (800-900 MHz)
- ☐ Low backlobe radiation. Front to back ratio better than 28 dB.
- ☐ Low intermodulation products.
- ☐ Low wind-load.
- ☐ Low weight.
- ☐ Small size.
- ☐ Rugged design.

Please see the following pages including radiation patterns for ALP 9212-N.



Electrical Specifications:

Frequency range:	806-896 MHz
Impedance:	50 Ohm
Connector:	N female
VSWR:	Typ. 1.3:1 max 1.5:1
Polarization:	Vertical
Gain:	12 dBd
Front to back ratio:	> 28 dB
Intermodulation: (2 x 25 W)	IM5 - 107 dBm
Power Rating:	500 W
H-Plane: -3 dB	95°
E-Plane: -3 dB	15°
Lightning Protection:	DC Grounded



Mechanical Specifications:

Overall height:	52 in. (1320 mm)
Width:	11.4 in. (290 mm)
Depth:	11.4 in. (290 mm)
Weight including brackets:	26.7 lbs (12 Kg)
Rated wind velocity:	113 mph (180 Km/h)
Wind Area (CxA/Front):	3.9 sq.ft (0.36 sq.m)
Lateral thrust at rated wind:	
Worst case	570 N

Materials:

Radiating elements:	Aluminum
Element housing:	Grey PVC
Reflector:	Aluminum
Mounting Hardware	
clamps:	Hot dip galvanized steel
bolts:	Stainless steel

Manufactured by: **Allgon System AB**

Dual Broadband Antenna

90° 1.4 m MET Antenna

806-960/1710-2170 MHz

Part Number:
7770.00

Horizontal Beamwidth: 90°
Gain: 13.5/16 dBi

Electrical Downtilt: Adjustable
Connector Type: 7/16 female

The Powerwave dual band dual polarized broadband antenna has individual adjustable electrical downtilt per band (upgradeable to Remote Electrical Tilt (RET)). Four connector ports allow separate tilts on each frequency band and ensure the use of diversity concepts. The phase shifter technology, based on a patented sliding dielectric, minimizes intermodulation distortion and maximizes efficiency. The slant +/- 45° dual polarization system provides the independent fading signals needed for achieving top-quality coverage via diversity concepts. The Powerwave Broadband antenna design is based on a patented stacked aperture-coupled patch technology, which provides high isolation performance and a wide VSWR bandwidth. The antennas have superior radiation patterns due to a unique reflector design which provides a very small variation of the -3dB horizontal beam width over the frequency band as well as a high front-to-back ratio.



Key Benefits

- Excellent broad- and multi-band capabilities
- Polarization purity makes good diversity gain
- Excellent pattern performance and high gain over frequency
- High passive intermodulation performance
- Light, slim and robust design

Preliminary

ANTENNA
SYSTEMS

BASE STATION
SYSTEMS

COVERAGE
SYSTEMS

THE POWER IN WIRELESS®

 **Powerwave**
technologies

Dual Broadband Antenna

Electrical Specifications (Preliminary)

Frequency band (MHz)	806-960	1710-2170
Gain, ± 0.5 dB (dBi)	13.5	16.0
Polarization	Dual linear $\pm 45^\circ$	
Nominal Impedance (Ohm)	50	
VSWR	1.5:1	1.5:1
Isolation between inputs (dB)	30	30
Inter band isolation (dB)	40	30
Horizontal -3 dB beamwidth	$85 \pm 5^\circ$	$85 \pm 5^\circ$
Tracking, Horizontal plane, $\pm 60^\circ$ (dB)	< 2.0	< 2.0
Tracking, Horizontal plane, $\pm 60^\circ$ (dB)		< 2.0
Electrical downtilt range (adjustable)	0° to 10°	0° to 8°
Vertical -3 dB beamwidth	$14.3 \pm 2.0^\circ$	$6.6 \pm 1^\circ$
Sidelobe suppression, Vertical 1 st upper (dB)	$> 17, 16, 15$ $x=0, 5, 10^\circ$ MET	$> 17, 16, 15$ $x=0, 4, 8^\circ$ MET
Vertical beam squint	$< 0.8^\circ$	$< 0.5^\circ$
First null-fill (dB)	< -25	< -25
Front-to-back ratio (dB)	> 25	> 27
Front-to-back ratio, total power (dB)	> 20	> 23
IM3, 2Tx@43dBm (dBc)	< -153	< -153
IM3, 2Tx@43dBm (dBc)		< -153
IM7, 2Tx@43dBm (dBc)		< -160
Power Handling, Average per input (W)	400	250
Power Handling, Average total (W)	800	500

All specifications are subject to change without notice.
Contact your Powerwave representative for complete performance data.

Mechanical Specifications

Connector Type	4 x 7/16 DIN female
Connector Position	Bottom
Dimensions, HxWxD	1408mm x 280mm x 125mm (55"x11"x5")
Weight Including Brackets	15.8 kg (35 lbs)
Wind Load, Frontal, 42m/s Cd=1	435N (98 lbf)
Survival Wind Speed (m/s)	70 (156mph)
Lightning Protection	DC grounded
Radome Material	GRP
Radome Color	Light Gray
Mounting	Pre-mounted Standard Brackets
Packing Size	1550mm x 355mm x 255mm (61"x14"x10")

Corporate Headquarters

Powerwave Technologies, Inc. Tel: 714-466-1000
1801 East St. Andrew Place Fax: 714-466-5800
Santa Ana, CA 92705 USA www.powerwave.com

Main European Office

Antennvägen 6
SE-187 80 Täby
Sweden
Tel: +46 8 540 822 00
Fax: +46 8 540 823 40

Main Asia Pacific Office

23 F Tai Yau Building
181 Johnston Road
Wanchai, Hong Kong
Tel: +852 2512 6123
Fax: +852 2575 4860



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COVERAGE AND CAPACITY

TECHNOLOGY LEADERSHIP

GLOBAL PARTNER

INTEGRATED SOLUTIONS

QUALITY AND RELIABILITY

Tower Mounted Amplifier

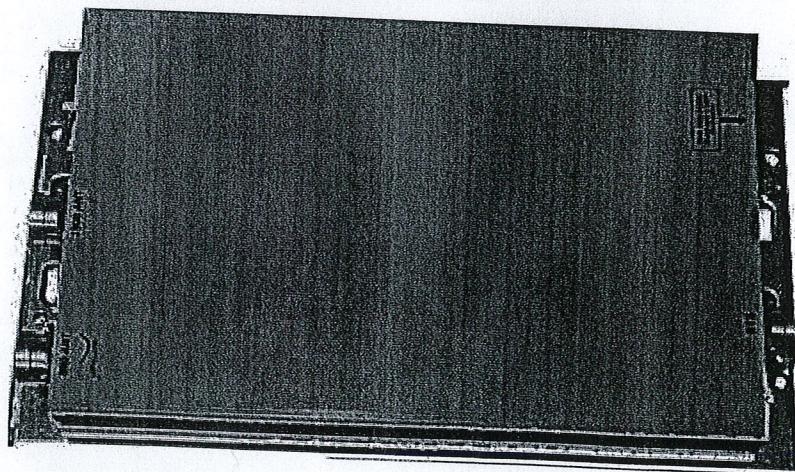
LGP2140X TMA-DD-1900 FB with 850 Bypass Tower Mounted Amplifier

800/1900 MHz

Frequency: 1850-1900 MHz Band
Gain: 12 dBd

IMD Specification: <-118dBm
Return Loss: 18 dB or better

Powerwave's 2140X Series of tower mounted amplifiers are designed for full band coverage of the PCS-1900 band with an 800 MHz cellular band bypass. It has dual duplex capability so you can use one line for RX/TX and transmit through the TMA while amplifying RX on the same line. Deployed in a network it will increase capacity and coverage as well as extend the battery life time for the handsets. The 800 MHz cellular band passes through the TMA without amplification.



ANTENNA
SYSTEMS

BASE STATION
SYSTEMS

COVERAGE
SYSTEMS

THE POWER IN WIRELESS®

 **Powerwave**
technologies

800/1900 MHz

LGP2140X - Tower Mount Amplifier

Gain	12 dB
Uplink frequency	1850-1910 MHz
Downlink frequency	1930 – 1990 MHz
Return loss	18 dB or better
Noise figure	1.5 dB typical
Intermodulation@2x43dBm carriers	<-118 dBm in receive band
Output 3 rd order Intercept Point (OIP3)	>+22 dBm
Rejection 1912 MHz (RX in Filter)	10 dB
Rejection in TX band	80 dB
Alarm functionality	Two levels, individually supervised LNA branches
Power consumption	1.5 W per LNA @12 VDC
Supply voltage	9 - 15 V

Mechanical Specifications

RF connectors	7/16 DIN female(s)
Dimensions	14"x7"x2.7" (365x176x68mm)
Weight	17.5 lbs (<8kg)
Mounting kit	Mounting kit is included for pole and wall. Other types may be available on request.

Corporate Headquarters
Powerwave Technologies, Inc.
1801 East St. Andrew Place
Santa Ana, CA 92705 USA
Tel: 714-466-1000
Fax: 714-466-5800
www.powerwave.com

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+46 8 540 822 00
+46 8 540 824 85 FAX

THE POWER IN WIRELESS®



Powerwave Technologies, Inc. is an ISO9001 and TL9000 certified company, is a leading supplier of high performance RF infrastructure products for use in wireless communications networks. Powerwave products are utilized in both cellular and PCS base stations in both digital and analog networks. ©Copyright February 2003, Powerwave Technologies, Inc. All Rights reserved. Powerwave, Powerwave Technologies are and the Powerwave logo are registered trademarks of Powerwave Technologies, Inc.

COVERAGE AND CAPACITY

TECHNOLOGY LEADERSHIP

GLOBAL PARTNER

INTEGRATED SOLUTIONS

QUALITY AND RELIABILITY



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

June 12, 2007

Hon. Mark D. Boughton, Mayor
City of Danbury
City Hall, 155 Deer Hill Ave.,
Danbury, CT 06810-7726

Re: Telecommunications Facility – 48 Newtown Road, Danbury, CT

Dear Mayor Boughton:

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. Additionally, Cingular is in the post-merger process of consolidating separate AT&T Wireless and Cingular cell sites at this location into one.

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

585 South Main Street (a/k/a New Haven Road), Naugatuck, CT
Site Number 2166
Local P&Z Approval and Building Permit (attached), 1995

Tower Owner/Manager: American Tower

Equipment configuration: Wooden Utility Monopole

Current and/or approved: Six DUO1417 antennas @ 52 ft c.l.
Four TMA's @ 52 ft
Six runs 1 5/8 inch coax

Planned Modifications: Remove two existing antennas
Install two Powerwave 7770 antennas @ 52 ft c.l.
Install two runs 1 5/8 inch coax
Install two diplexers @ 52 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 68.4 % 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 39.5 % 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 *							2.40
Cingular TDMA *	50	880 - 894	16	100	0.2301	0.5867	39.22
Cingular GSM *	50	880 - 894	2	296	0.0851	0.5867	14.51
Cingular GSM *	50	1900 Band	2	427	0.1228	1.0000	12.28
Total							68.4%

* Per CSC records; typical conservative parameters for Cingular.

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 *							2.40
Cingular GSM	52	880 - 894	3	296	0.1181	0.5867	20.13
Cingular GSM	52	1900 Band	1	427	0.0568	1.0000	5.68
Cingular UMTS	52	880 - 894	1	500	0.0665	0.5867	11.33
Total							39.5%

* Per CSC records.

Structural information:

The attached structural analysis demonstrates that the tower and foundation have sufficient structural capacity for Cingular's proposed modifications. (American Tower, Job No. 40464821, dated 5/21/07)



BOROUGH OF NAUGATUCK

PLANNING AND ZONING COMMISSION
213 CHURCH STREET
NAUGATUCK, CT 06770
203 / 729-4571

LAND USE OFFICE
213 CHURCH STREET
NAUGATUCK, CT 06770
203 / 729-4571

ZONING PERMIT

PERMIT NO. 95-229

DATE August 15 1995

PERMISSION TO: (BUILD) (MAKE ALTERATIONS) (BUILD ON ADDITION)

A FAMILY DWELLING, OR OTHER pre fab - single story
portable structure. 12' x 16'

DESCRIPTION OF PREMISES: ZONE RA-1 VALUE _____

Christopher Columbus Club

585 South Main St.

Naugatuck, CT

☒ ZONING
☐ PLANNING
☐ WETLANDS

☐ FLOOD PLAIN
☐ ZONING BOARD OF APPEALS

THE APPLICANT STATES THAT THIS
PROPOSED STRUCTURE IS:

1. NOT IN A WETLANDS OR WATERCOURSE AREA,
2. DOES NOT HAVE A STREAM OR WETLANDS AREA WITHIN 50 FEET,
3. IS NOT IN A STREAM ENCROACHMENT AREA,
4. IS NOT IN A FLOOD PLAIN AREA.

GRANTED, DATE 8-15-95

Michael Moxmiller
ZONING ENFORCEMENT OFFICER

Michael A. Carlo (SNET)
SIGNATURE OF APPLICANT-I HEREBY
CERTIFY THAT THE INFORMATION HEREIN
AND THE ATTACHED PLOT PLAN IS
ACCURATE.

Michael A. Carlo (for SNET)
NAME OF APPLICANT (PRINT)
555 Longview Dr., 8th Flr.
ADDRESS AND PHONE Newtown

THIS APPROVAL IS SUBJECT TO COMPLIANCE (PRIOR TO OCCUPANCY) WITH THE PROVISIONS OF THE ZONING REGULATIONS AND THE SUBDIVISION REGULATIONS OF THE BOROUGH OF NAUGATUCK (WHERE APPLICABLE) AND AS AUTHORIZED UNDER SECTION 8 OF THE CONNECTICUT GENERAL STATUTES, AS AMENDED. THIS PERMIT IS BASED UPON THE PLOT PLAN SUBMITTED. FALSIFICATION BY MISREPRESENTATION OR OMISSION SHALL CONSTITUTE A VIOLATION OF THE BOROUGH ZONING REGULATIONS.

585 South Main Street (CHRISTOFORO

COLOMBO CLUB)

DATE 8/21 19 95

No. 15825

BOROUGH OF NAUGATUCK
DEPARTMENT OF BUILDING INSPECTIONS
BUILDING PERMIT

PERMISSION IS GRANTED TO S N E TTO ERECT pre-fab structure ON 585 South Main STREETAS FOLLOWS: SIZE 12x16 NO. FAMILIES _____ NO. STORIES _____ NO. ROOMS _____TO BE USED AS sameUSE GROUP TYPE OF CONST. BOWNER C.Colombo Society ADDRESS same TEL. _____AGENT as above ADDRESS 555 Long Wharf Dr. TEL. 553-7700
New HavenUPON COMPLETION NO. 95-229 CERTIFICATE OF ZONING COMPLIANCE \$ 25.00AND BEFORE NO. _____ CERT. OF OCCUPANCY \$ 10.00USING, NOTIFY NO. _____ BUILDING PERMIT \$ 327.00

BUILDING INSPECTOR'S OFFICE

Permit Expiration 6 Months From Issue Date TOTAL \$ 362.00

THIS PERMIT IS GRANTED, SUBJECT TO COMPLIANCE WITH THE LAWS OF THE STATE
OF CONNECTICUT AND THE ZONING ORDINANCES OF THE BOROUGH OF NAUGATUCK.


BUILDING OFFICIAL



AMERICAN TOWER

Structural Analysis Report

Structure : 49 ft EEI Monopole
ATC Site Name : Naugatuck (Telephone Pole), CT
ATC Site Number : 302526
Proposed Carrier : Cingular
Carrier Site Name : Naugatuck
Carrier Site Number : 1005 2166
County : New Haven
Eng. Number : 40464821
Date : May 21, 2007
Usage : 104%
Portholes Required : No

Submitted by:
Michael Davenport, E.I.
Design Engineer



5/22/07

American Tower Engineering Services
400 Regency Forest Drive
Cary, NC 27518
Phone: 919-468-0112

Introduction

The purpose of this report is to summarize results of the structural analysis performed on the 49 ft. EEI Monopole located at 585 South Main St., Naugatuck, CT 06770, New Haven County (ATC site #302526). The tower was originally designed and manufactured by EEI (Job #11696-P01, dated June 5, 2003).

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.

Basic Wind Speed: 85.0 mph (Fastest Mile) / 105.0 mph (3-second gust)
Radial Ice: 73.6 mph (Fastest Mile) w/ ½" ice
Code: TIA/EIA-222-F / 2003 International Building Code

Antenna Loads

The following antenna loads were used in the tower analysis.

Existing Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax	Carrier
52.0	3	Powerwave 12519	Low Profile Platform	(10) 1 5/8"	Cingular
	6	ADC Cleargain			
	10	CSS DUO1417-8686			
44.0	1	GPS	Flush	(2) ½"	Verizon
40.0	12	Decibel DB844H80E-XY	Low Profile Platform	(12) 1 5/8"	

Proposed Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax	Carrier
52.0	2	Powerwave 7770-1	Low Profile Platform	(2) 1 5/8"	Cingular

Install proposed coax inside monopole.

Results

The maximum structure usage is: 104% (Acceptable Overstress)

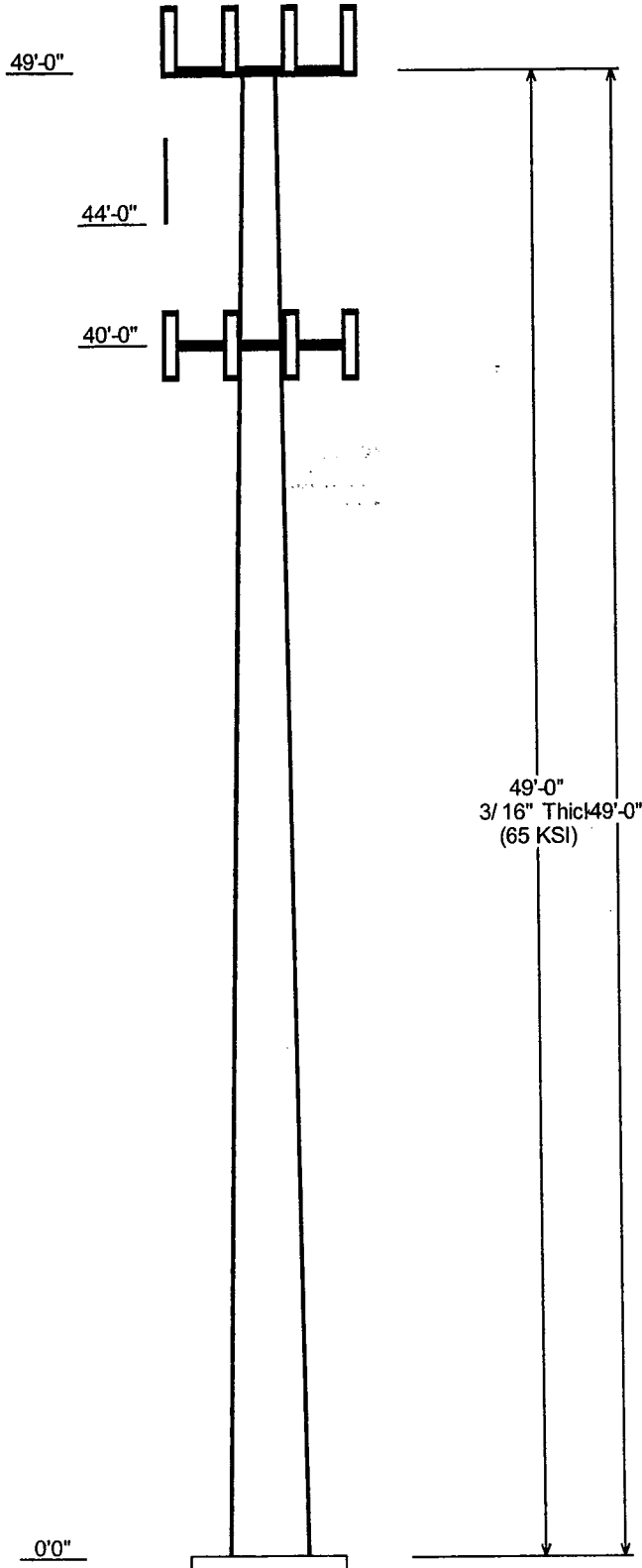
Pole Reactions	Original Design Reactions	Current Analysis Reactions	% Of Design
Moment (ft-kips)	288.5	315.4	109
Shear (kips)	7.0	7.3	105
Axial (kips)	6.7	8.9	133

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.

Conclusion

Based on the analysis results, the structure meets the requirements per TIA/EIA-222-F and 2003 IBC standards. The tower and foundation can support the existing and proposed antennas with the TX line distribution as described in this report.

If you have any questions or require additional information, please call 919-466-5147.



Job Information

Pole : 302526 Code: TIA/EIA-222 Rev F
 Description : 49' EEL Monopole
 Client : Cingular
 Location : Naugatuck, CT
 Shape : 18 Sides Base Elev (ft): 0.00
 Height : 49.00 (ft) Taper: 0.183673(in/ft)

Sections Properties

Shaft Section	Length (ft)	Diameter (in)		Thick (in)	Joint Type	Overlap Length (in)	Taper (in/ft)	Steel Grade (ksi)
		Across	Flats					
1	49.000	14.000	23.000	0.188		0.000	0.183673	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
49.000	52.000	3	Powerwave 12519
49.000	52.000	6	ADC Cleargain
49.000	49.000	1	Low Profile Platform
49.000	52.000	2	Powerwave 7770-1
49.000	52.000	10	CSS DUO1417-8686
44.000	44.250	1	GPS
40.000	40.000	1	Low Profile Platform
40.000	40.000	12	Decibel DB844H80E-XY

Linear Appurtenance

Elev (ft)		Description	Exposed To Wind
From	To		
0.000	40.000	1 5/8" Coax	No
0.000	44.000	1/2" Coax	No
0.000	49.000	1 5/8" Coax	No
0.000	49.000	1 5/8" Coax	No

Load Cases

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

Reactions

Load Case	Moment (Kip-ft)	Shear (Kips)	Axial (Kips)
No Ice	315.39	7.31	6.52
Ice	278.85	6.36	8.89
Twist/Sway	109.19	2.53	6.55

Dish Deflections

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



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

June 12, 2007

Honorable Ronald S. San Angelo, Mayor
Town of Naugatuck
Town Hall 229 Church St.
Naugatuck, CT 06770

Re: Telecommunications Facility – 585 South Main St., Naugatuck

Dear Mayor San Angelo:

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

126 Pioneer Heights Road, Somers, CT
 Site Number 1079
 Exempt Modifications 5/31/95 and 8/1/02

Tower Owner/Manager: Crown Castle

Equipment configuration: Self-supporting lattice tower

Current and/or approved: Nine CSS DUO1417 antennas @ 134 ft c.l.
 Nine runs 1 1/4 inch coax
 Six TMA's / diplexers

Planned Modifications: Remove three existing antennas
 Install three Powerwave 7770 antennas at 134 ft c.l.
 Install three additional diplexers @ 134 ft (total of 6)
 Install three additional 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 20.1 % 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 16.5 % 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 *							11.07
Cingular TDMA *	135	880 - 894	16	100	0.0316	0.5867	5.38
Cingular GSM *	135	880 - 894	2	296	0.0117	0.5867	1.99
Cingular GSM *	135	1900 Band	2	427	0.0168	1.0000	1.68
Total							20.1%

* 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 *							11.07
Cingular GSM	134	880 - 894	2	296	0.0119	0.5867	2.02
Cingular GSM	134	1900 Band	2	427	0.0171	1.0000	1.71
Cingular UMTS	134	880 - 894	1	500	0.0100	0.5867	1.71
Total							16.5%

* Per CSC Records

Structural information:

Per the attached Vertical Structures, Inc. structural analysis 2007-004-050 dated 5/15/07, the Pioneer Heights monopole has sufficient capacity to accommodate the proposed modifications. (We also attach an email from Crown Castle confirming that structural upgrades described in prior analysis 2006-004-066 have been completed.)

Levine, Steven

From: Morales, Marco [Marco.Morales@crowncastle.com]
Sent: Tuesday, June 12, 2007 10:22 AM
To: Steven.Levine@ATT.com
Cc: Harris, Veronica; Datino, Charles
Subject: BU 806378: Somers, CT
Importance: High

Steven,

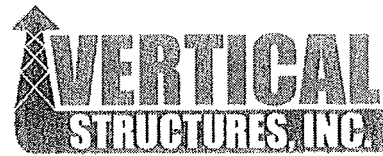
Good morning. I will be your point of contact regarding the work proposed on this site, so feel free to contact me at your convenience (contact information listed below).

Per our conversation this morning, I have verified that the structure modifications have been completed as referenced in the Structural Analysis prepared by Vertical Solutions (*VSI Job No. 2007-004-050*). We are awaiting receipt of the Post-Modification report and expect to receive that shortly.

Thank you,

Marco A. Morales
Crown Castle
1200 MacArthur Boulevard
Mahwah, New Jersey 07430
Office: (201) 236-9032
Mobile: (518) 265-8344

6/12/2007



May 14, 2007

Veronica Harris
Crown Castle International
1200 MacArthur Blvd.
Mahwah, NJ 07430
(201) 236-9094

Vertical Structures, Inc.
309 Spangler Drive, Suite E
Richmond, KY 40475
(859) 624-8360
kmeehan@verticalstructures.com

Subject: Structural Analysis Report

Carrier Designation Cingular Change-Out
Carrier Site Number: 1079
Carrier Site Name: Somers-Pioneer Heights Rd

Crown Castle Designation Crown Castle BU Number: 806378
Crown Castle Site Name: HRT 086
Crown Castle JDE Job Number: 87777

Engineering Firm Designation Vertical Structures Project Number: 2007-004-050

Site Data 126 Pioneer Heights Road, Somers, CT, Tolland County
Latitude 41°-59'-1.48", Longitude -72°-27'-55.87"
160' Rohn SSV Self-Supporting Tower

Dear Ms. Harris,

Vertical Structures is pleased to submit this structural analysis report to determine the structural integrity of the aforementioned tower. This analysis has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 238750, and Application Number 45185, Revision 1. The purpose of the analysis is to determine the suitability of the tower for the following load case:

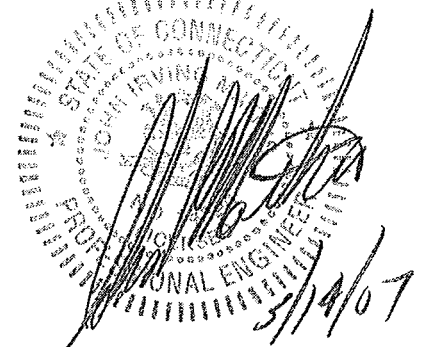
Load Case 1 (LC1): Proposed Equipment (Table 1) + Existing/Reserved Equipment (Table 2)

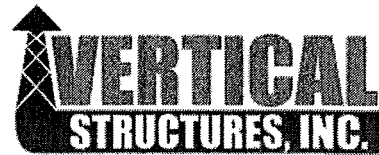
Based on our analysis we have determined the tower superstructure and foundation are sufficient for LC1 provided the modifications detailed in Vertical Structures Job No. 2006-004-066 are completed. This analysis has been performed in accordance with the TIA/EIA-222-F standard and local code requirements based upon an 85 MPH basic "fastest mile" wind speed, equivalent to a 105 MPH basic "3-second gust" wind speed per IBC Table 1609.3.1.

Vertical Structures appreciates the opportunity of providing our continuing professional services to you and Crown Castle International. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted,

Kyle Meehan
Project Engineer





May 14, 2007

Veronica Harris
Crown Castle International
1200 MacArthur Blvd.
Mahwah, NJ 07430
(201) 236-9094

Vertical Structures, Inc.
309 Spangler Drive, Suite E
Richmond, KY 40475
(859) 624-8360
kmeehan@verticalstructures.com

Subject: Structural Analysis Report

Carrier Designation

**Cingular Change-Out
Carrier Site Number: 1079
Carrier Site Name: Somers-Pioneer Heights Rd**

Crown Castle Designation

**Crown Castle BU Number: 806378
Crown Castle Site Name: HRT 086
Crown Castle JDE Job Number: 87777**

Engineering Firm Designation

Vertical Structures Project Number: 2007-004-050

Site Data

**126 Pioneer Heights Road, Somers, CT, Tolland County
Latitude 41°-59'-1.48", Longitude -72°-27'-55.87"
160' Rohn SSV Self-Supporting Tower**

Dear Ms. Harris,

Vertical Structures is pleased to submit this structural analysis report to determine the structural integrity of the aforementioned tower. This analysis has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 238750, and Application Number 45185, Revision 1. The purpose of the analysis is to determine the suitability of the tower for the following load case:

Load Case 1 (LC1): Proposed Equipment (Table 1) + Existing/Reserved Equipment (Table 2)

Based on our analysis we have determined the tower superstructure and foundation are sufficient for LC1 provided the modifications detailed in Vertical Structures Job No. 2006-004-066 are completed. This analysis has been performed in accordance with the TIA/EIA-222-F standard and local code requirements based upon an 85 MPH basic "fastest mile" wind speed, equivalent to a 105 MPH basic "3-second gust" wind speed per IBC Table 1609.3.1.

Vertical Structures appreciates the opportunity of providing our continuing professional services to you and Crown Castle International. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted,

Kyle Meehan
Project Engineer

1.) INTRODUCTION

The 160' tall self-supporting tower was designed and manufactured by Rohn for Motorola in 1986. The three (3) sided tower is constructed of pipe legs with angle x-bracing and is founded on three (3) 10' square by 2' thick spread footings buried 12' deep. The tower was reworked in 1999 and 2001 to accommodate additional loading. For the purposes of this analysis, the modifications detailed in Vertical Structures Job No. 2006-004-066 are considered complete.

2.) ANALYSIS CRITERIA

The HRT 086 tower was analyzed in accordance with the current EIA-222-F publication, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures." The proposed, existing and reserved antennas, cables and mounts considered in this analysis are listed in Tables 1 and 2. Applied forces in this study were derived from an 85 MPH basic "fastest mile" wind speed with no ice and a reduced 74 MPH basic "fastest mile" wind speed with a 1/2" of radial ice accumulation. The tower was originally designed for 30 PSF wind pressure with a 1/2" of radial ice accumulation in accordance with a previous EIA standard. The original design loads are listed in Table 3. All cables are assumed to be routed in accordance with the drawing in Appendix B.

Table 1 – Proposed Antenna and Cable Information

Mount Center Line Elevation (feet)	Number Of Antenna	Antenna Manufacturer	Antenna Model	Mount Manufacturer	Mount Model	Number Of Feed Lines	Feed Line Size (inches)
135	3	Powerwave Technologies	7770.00			3	1 1/4
	3	Powerwave Technologies	LGP13519 Diplexer				

Table 2 – Existing and Reserved Antenna and Cable Information

Mount Center Line Elevation (feet)	Number Of Antenna	Antenna Manufacturer	Antenna Model	Mount Manufacturer	Mount Model	Number Of Feed Lines	Feed Line Size (inches)
157	6*	Antel	LPA-80063/4CF	Rohn	(3) 12' Sector Frames	12*	1 5/8
	6*	Antel	LPA-185063/8CFx2				
145	12	Decibel	DB844H90-XY		(3) 12' T-Arms	12	1 5/8
135	6 + 3**	CSS	DUO4-8670	Rohn	(3) 12' Sector Frames	9	1 1/4
	6	ADC	800/1900 TMA				
125	6 + 3*	Decibel	DB978H90T2E-M		(3) 12' Knockdown T-Frames	6 + 3*	1 5/8
95	1	Andrew	HP8-59E		(1) Pipe Mount	1*	1 5/8
86	1	Andrew	HP8-59E		(1) Pipe Mount	1*	1 5/8
57	1		GPS		(1) 6' Sidearm	1	1/2
48	1		GPS		(1) 3' Sidearm	1	1/2

*Indicates reserved loading.

**Indicates equipment to be removed.

Table 3 – Design Antenna and Cable Information

Mount Center Line Elevation (feet)	Number Of Antenna	Antenna Manufacturer	Antenna Model	Mount Manufacturer	Mount Model	Number Of Feed Lines	Feed Line Size (inches)
160	4	Celwave	PD10017	Rohn	(4) 3' Sidearms		
151	6	Celwave	PD1132	Rohn	(3) 6' Sidearms		
141	2		6' Std. Dish		(2) Pipe Mounts		
100	1	Celwave	PD1109	Rohn	(1) 6' Sidearm		

3.) ANALYSIS PROCEDURE

Table 4 – Documents Provided

Document	Remarks	Reference	Source
Online Application	Cingular Change-Out Revision #1	45185	CCI iSite
Tower Drawing	Rohn Drawing No. A861589-1	1918334	CCI iSite
Foundation Drawing	Rohn Drawing No. C820155	1918334	CCI iSite
Tower Leg Information	HEB September 3, 1999 Letter	821786	CCI iSite
Rework Design	HEB Engineers Project No. 97010	866858	CCI iSite
Rework Design	All-Points Technology Job #CT105160	262063	CCI iSite
Rework Drawings	Vertical Structures Job No. 2006-004-066	1278690	CCI iSite

3.1) Analysis Methods

RISA Tower (Version 4.7), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various dead, live, wind, and ice load cases. All loads were computed in accordance with the ANSI/EIA/TIA-222-F or the local building code requirements. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

1. Tower and structures were built in accordance with the manufacturer's specifications.
2. The tower and structures have been maintained in accordance with manufacturer's specifications.
3. The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and any referenced drawings.
4. When applicable, transmission cables are considered to be structural components for calculating wind loads, as allowed by TIA/EIA-222-F.

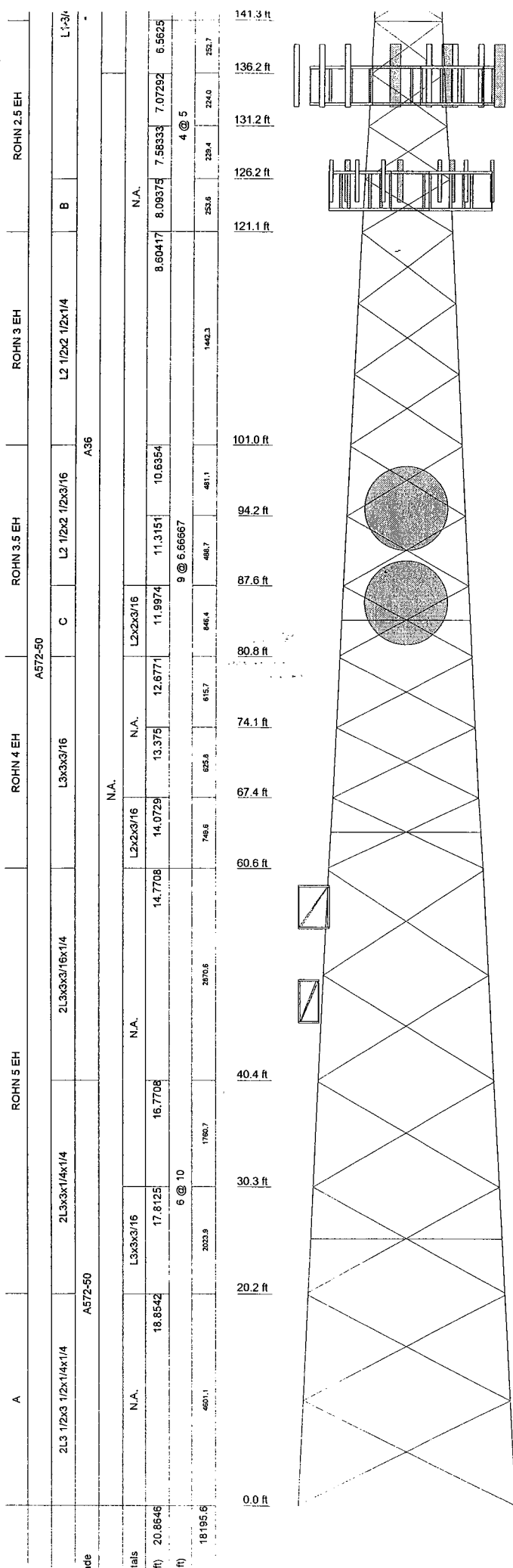
If any of these assumptions are not valid or have been made in error, this analysis may be affected, and Vertical Structures should be allowed to review any new information to determine its effect on the structural integrity of the tower.

4.) ANALYSIS RESULTS

Table 5 – Tower Component Stresses vs. Modified Capacity (LC1)

Notes	Component	Elevation (feet)	% Capacity	Pass/Fail
RISA Tower Analysis Summary:				
1	Leg (T14)	40.4 – 30.3	101.4	Pass
	Diagonal (T5)	128.2 – 121.1	96.6	Pass
	Secondary Horizontal (T12)	67.4 – 60.6	85.3	Pass
	Top Girt (T2)	141.3 – 136.2	21.8	Pass
	Bolt Checks	128.2 – 121.1	96.6	Pass
Additional Component Analysis Summary:				
2	Anchor Bolts (Tension)		75.9	Pass
2	Foundation (Compared to Allowable Loads)		<100	Pass
Structure Rating =			101.4	Pass

- 1) Indicates overstress of less than 5% and is considered acceptable based on the analysis procedure used.
 2) Indicates calculations supporting % capacity are included in Appendix C.



(2) LPA-185063/8CFx2 w/ Mount Pipe (VSI)	157	(VSI) (Circular)	135
(2) LPA-185063/8CFx2 w/ Mount Pipe (VSI)	157	(2) DB 800/1900 Full Band Masthead (VSI) (Circular)	135
(2) LPA-185063/8CFx2 w/ Mount Pipe (VSI)	157	(2) DB 800/1900 Full Band Masthead (VSI) (Circular)	135
(2) LPA-80063/4CF w/ Mount Pipe (VSI)	157	LGP13519 Diplexer (Circular)	135
(2) LPA-80063/4CF w/ Mount Pipe (VSI)	157	LGP13519 Diplexer (Circular)	135
(2) LPA-80063/4CF w/ Mount Pipe (VSI)	157	LGP13519 Diplexer (Circular)	135
(2) LPA-80063/4CF w/ Mount Pipe (VSI)	157	6' x 2" Antenna Mount Pipe (VSI) (Circular)	135
(2) LPA-80063/4CF w/ Mount Pipe (VSI)	157	6' x 2" Antenna Mount Pipe (VSI) (Circular)	135
Rohn 6' Side-Arm Pipe (1) w/ 12' Horizontal mounting pipe(VSI)	145	6' x 2" Antenna Mount Pipe (VSI) (Circular)	135
Rohn 6' Side-Arm Pipe (1) w/ 12' Horizontal mounting pipe(VSI)	145	12' Knockdown T-Frame	125
Rohn 6' Side-Arm Pipe (1) w/ 12' Horizontal mounting pipe(VSI)	145	12' Knockdown T-Frame	125
(4) DB844H90-XY w/Mount Pipe	145	(3) DB978H90T2E-M w/Mount Pipe	125
(4) DB844H90-XY w/Mount Pipe	145	(3) DB978H90T2E-M w/Mount Pipe	125
(4) DB844H90-XY w/Mount Pipe	145	(3) DB978H90T2E-M w/Mount Pipe	125
Rohn 6'x12' Boom Gate (1) No Mount Pipes (VSI) (Circular)	135	4'x4" Pipe Mount	95
Rohn 6'x12' Boom Gate (1) No Mount Pipes (VSI) (Circular)	135	HP8-59E	95
Rohn 6'x12' Boom Gate (1) No Mount Pipes (VSI) (Circular)	135	4'x4" Pipe Mount	86
Rohn 6'x12' Boom Gate (1) No Mount Pipes (VSI) (Circular)	135	HP8-59E	86
(2) DU04-8670 w/Mount Pipe (Circular)	135	6' Sidearm (Pipe) (VSI)	57
(2) DU04-8670 w/Mount Pipe (Circular)	135	Generic GPS (VSI)	57
(2) DU04-8670 w/Mount Pipe (Circular)	135	Generic GPS (VSI)	48
(2) DU04-8670 w/Mount Pipe (Circular)	135	3' Sidearm (VSI)	48

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	ROHN 6 STD (10' Span) Reinforced w/ 1 3/4" B7 S.R. (33" Span)	C	2L2 1/2x2 1/2x3/16x3/8

MATERIAL STRENGTH

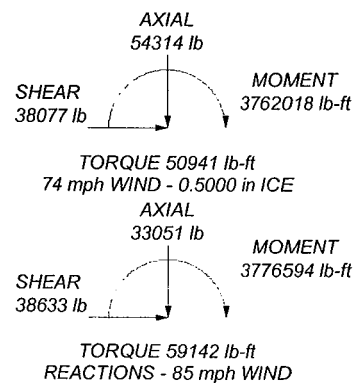
GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in Tolland 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. TOWER RATING: 101.4%



MAX. CORNER REACTIONS AT BASE:
DOWN: 226303 lb
UPLIFT: -188743 lb
SHEAR: 24053 lb





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

June 12, 2007

Honorable David A. Pinney
1st Selectman, Town of Somers
Town Hall 600 Main St.
Somers, CT 06071-0308

Re: Telecommunications Facility – 126 Pioneer Heights Road, Somers

Dear Mr. Pinney:

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

23 Holland Road, Union, CT
Site Number 1094 / 3126
Exempt Modification 4/12/00 and 8/1/02

Tower Owner/Manager: Crown Castle

Equipment configuration: Monopole

Current and/or approved: Sector 2 – facing Connecticut
Three CSS DUO1417 antennas @ 140 ft c.l.
Three runs 1 ¼ inch coax
Two TMA's @ 140 ft

Sector 1 – facing Massachusetts
Four Allgon 7824 antennas @ 140 ft c.l.
Four runs 7/8 inch coax

Planned Modifications: Sector 2 – facing Connecticut
Remove one CSS antenna
Install one Powerwave 7770 antennas @ 140 ft c.l.
Install two additional TMA's @ 140 ft (total of 4)
Install one additional run 1 ¼ inch coax (total of 4)

Sector 1 – facing Massachusetts
Remove all existing antennas
Install two Powerwave 7770 antennas @ 140 ft c.l.
Install two TMA's & two diplexers @ 140 ft
Remove all four runs 7/8 inch coax
Install four runs 1 5/8 inch coax

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 11.3% 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 7.9 % 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 *							2.88
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							11.3%

* 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 *							2.88
Cingular UMTS	140	880 - 894	1	500	0.0092	0.5867	1.56
Cingular GSM	140	1900 Band	2	427	0.0157	1.0000	1.57
Cingular GSM	140	880 - 894	2	296	0.0109	0.5867	1.85
Total							7.9%

* Per CSC Records

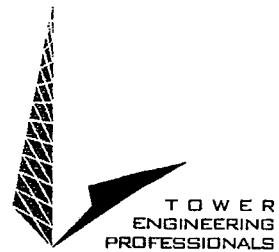
Structural information:

The attached structural analysis demonstrates that the tower and foundation have sufficient structural capacity to accommodate the proposed modifications. (Tower Engineering Professionals, Job No. 88299, dated 5/25/07)

Date: May 25, 2007

Mr. Benjamin Goodhart
Crown Castle International
9105 Monroe Road, Suite 150
Charlotte, NC 28270
(o) (704) 321-3845

Tower Engineering Professionals, Inc. (TEP)
3703 Junction Boulevard
Raleigh, NC 27603
(o) (919) 661-6351 Phone
jarthur@tepgroup.net



Subject: Analysis Structural Report

Carrier Designation:	Cingular Wireless Co-Locate	
	Carrier Site Number:	3126
	Carrier Site Name:	Union (CT)
Crown Castle Designation:	Crown Castle BU Number:	876346
	Crown Castle Site Name:	Union
	Crown Castle JDE Job Number:	88299
Engineering Firm Designation:	TEP Project Number:	070815
Site Data:	23 Holland Road, Stafford Springs, CT, Tolland County Latitude 42°-1'-44.4", Longitude -72°-8'-24.0" 150 Foot - Monopole Tower	

Dear Mr. Goodhart,

TEP is pleased to submit this "Structural Analysis Report" to determine the structural integrity of the aforementioned tower. This analysis has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 239961, in accordance with application 44382, revision 1.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

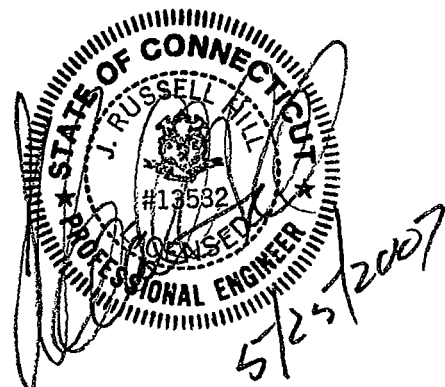
LC1: Existing + Reserved + Proposed Equipment Sufficient Capacity
Note: See Table I and Table II for the proposed and existing/reserved loading.

This analysis has been performed in accordance with the TIA/EIA-222-F standard based on a fastest-mile wind speed of 85 mph. This combination produces forces which exceed that required by the 2003 International Building Code with a 3-second gust wind speed of 100-mph.

We at TEP appreciate the opportunity of providing our continuing professional services to you and Crown Castle International. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted,

J. Russell Hill, P.E.



1) INTRODUCTION

The subject tower is a 150-foot monopole tower manufactured by Rohn Industries, Inc.

2) ANALYSIS CRITERIA

The existing, reserved, and proposed antennas, transmission lines, and mountings are shown in the following tables. The site is in Tolland County. The structural analysis was performed in accordance with the ANSI/TIA/EIA-222-F-1996 (TIA), Structural Standards for Steel Antenna Towers and Antenna Supporting Structures dated June 1996. The governing wind forces are derived from the TIA Standard using a fastest-mile wind speed of 85 mph with ice (74 mph with a 1/2" radial ice) for an Exposure C and Importance Factor of 1.00.

Table 1 – Proposed Antenna and Cable Information

Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount	Number of Feed Lines	Feed Line Size (in)
140 (Proposed)	3	Powerwave Tech	7770.00	Existing	4	1-1/4
	2	CSS	DUO1417-8686-40i		4	1-5/8
140 (Proposed TMA)	4	Powerwave Tech	LGP21401	-	-	-
	2	Kathrein	782-10250			
	2	ADC	DB Full Band MH			

Table 2 – Existing and Reserved Antenna and Cable Information

Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount	Number of Feed Lines	Feed Line Size (in)
150 (Existing)	4	EMS Wireless	RR90-18	13-ft Platform w/ Handrails	4	1-5/8
150 (MLA)	9	EMS	RR90-18	-	9	1-5/8
140 (Existing) ¹	7	CSS	DUO1417-8686-40i	13-ft Low-Profile Platform	3 4	1-1/4 7/8
140 (Existing TMA) ¹	3 4	ADC Powerwave Tech	DB Full Band MH LGP21401	-	-	-
140 (SLA) ²	9	CSS	DU04-8670	-	9	7/8
140 (SLA TMA) ²	6	ADC	Dual Band 800/1900 Full Band Masthead	-	-	-
60 (Reserved)	1	Kathrein	738449	(1) Pipe Mount	1	1/2"
60 (Reserved)	1	Unknown	GPS Antenna	(1) Sidearm Mount	1	1/2"

¹ – To be removed and replaced by proposed appurtenances.

² – The SLA loading was used in place of the existing and proposed antennas and tower mounted amplifiers only. The proposed coax was used in place of the SLA loading.

3) ANALYSIS PROCEDURE

Table 3 – Documents Provided

Document	Remarks	Crown Document ID
Geotechnical Investigation	SEA Consultants, Inc., Ref. No. 96337.01H, dated September 25, 1996, provided by Crown	1531882
Tower Foundation Drawings	Rohn Industries, Inc., Eng. No. 34738SW , dated October 18, 1996, provided by Crown	1447038
Previous Structural Analysis	URS Corporation, Report no. F300002292.53, dated July 2, 2002, provided by Crown	1952471

3.1) Analysis Method

RISA Tower (version 4.7.2.1), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various dead, live, wind, and ice load cases. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

1. Base plate, anchor bolt, and flange bolt information was not given and assumed not to control the design.
2. When applicable, feed lines were considered to be structural components for calculating wind loads, as allowed by the industry standard.
3. Information in the original design drawings and specifications that could not be verified by TEP is assumed to be correct. For this analysis, TEP will assume conformance with the original design drawings and specifications.
4. TEP shall assume that all tower components are in sufficient condition to carry their full design capacity.
5. Serviceability with respect to antenna twist, tilt, roll, or lateral translation, is not checked and is left to the carrier or tower owner to ensure conformance.

4) ANALYSIS RESULTS

Table 4 – Tower Component Stresses vs. Capacity

LC1: Existing + Reserved + Proposed Equipment

Notes	Component	Elevation (ft)	% Capacity	Pass/Fail
RISA Tower Analysis Summary:(Monopole)				
			Summary	
Notes:	Component	Elevation	% Capacity	Pass/Fail
1	L1	150 - 120	57.9	Pass
1	L2	120 - 90	59.4	Pass
1	L3	90 - 60	72.3	Pass
1	L4	60 - 30	80.7	Pass
1	L5	30 - 0	80.7	Pass
	TOWER RATING =		80.7	Pass
Individual Components:				
Notes:	Component	Elevation	% Capacity	Pass/Fail
2	Base Foundation (Compared w/Design Loads)	-	43.8	Pass
Structure Rating (max from all components) =				80.7%

* Notes:

- 1) The following components listed in the RISA Tower Analysis Summary were analyzed separately to determine the percent capacity consumed (see attached calculations):
- Pole Section
- 2) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity listed.

4.1) Recommendations

It should be noted that in order for the tower to pass in the current load scenario, the proposed and reserved coax must be configured as shown in Appendix B. TEP also recommends a tower mapping to determine the baseplate, anchor bolt, and flange bolt capacity of the tower.



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

June 12, 2007

Honorable Thomas L. Fitzgerald
1st Selectman, Town of Union
Town Hall 1043 Buckley Highway
Union, CT 06076-9520

Re: Telecommunications Facility – 23 Holland Road, Union

Dear Mr. Fitzgerald:

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

347 East Street, Wolcott, CT
Site Number 1060
Exempt Modifications 2/8/97 and 8/15/02

Tower Owner/Manager: Crown Castle

Equipment configuration: Self-Supporting Lattice Tower

Current and/or approved: Nine CSS DUO1417 antennas @ 158 ft c.l.
Nine runs 1 1/4 inch coax
Six TMA's @ 158 ft

Planned Modifications: Remove three existing antennas
Install three Powerwave 7770 antennas @ 158 ft c.l.
Install three runs 1 1/4 inch coax (total of 12)
Install three diplexers @ 158 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 20.1 % 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 / 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 *							13.80
Cingular TDMA*	162	880 - 894	16	100	0.0219	0.5867	3.74
Cingular GSM *	162	880 - 894	2	296	0.0081	0.5867	1.38
Cingular GSM *	162	1900 Band	2	427	0.0117	1.0000	1.17
Total							20.1%

* 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 *							13.80
Cingular GSM	158	880 - 894	8	296	0.0341	0.5867	5.81
Cingular GSM	158	1900 Band	2	427	0.0123	1.0000	1.23
Cingular UMTS	158	880 - 894	1	500	0.0072	0.5867	1.23
Total							22.1%

* Per CSC records.

Structural information:

The attached structural analysis demonstrates that the tower and foundation have sufficient structural capacity for Cingular's proposed modifications. (Paul Ford & Company, Job No. 37507-0718, dated 5/26/07)



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

May 26, 2007

Tom Stevens
Crown Castle International
46 Broadway
Albany, NY 12204
(518) 433-6242

Paul J. Ford and Company
250 East Broad Street, Suite 1500
Columbus, Ohio 43215
(614) 221-6679
jjacobs@pjfweb.com

Subject: Structural Analysis Report

Carrier Designation

Cingular Wireless Co-Locate
Carrier Site Number: 1060
Carrier Site Name: Wolcott-East Street

Crown Castle Designation

Crown Castle BU Number: 806362
Crown Castle Site Name: NHV 108 943133
Crown Castle JDE Job Number: 87959

Engineering Firm Designation

Paul J. Ford and Company Project Number: 37507-0718

Site Data

Intersection of Rt 322/Meridian Rd, Wolcott, Connecticut, New
Haven County County
Latitude 41° 33' 34N", Longitude -72° 56' 51W"
180 Foot - Self-Supporting Tower

Dear Mr. Stevens,

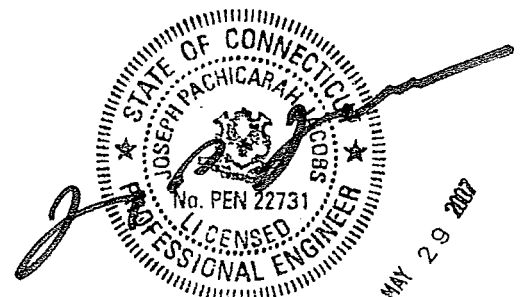
Paul J. Ford and Company is pleased to submit this "Structural Analysis Report" to determine the structural adequacy of the aforementioned tower. This analysis has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 239815. The purpose of the analysis is to determine the suitability of the tower with the addition of (6) Powerwave Tech LGP13519 at an elevation of 158 feet, combined with the existing and reserved equipment on the structure. This analysis has been performed in accordance with the Telecommunications Industry Association Standard TIA/EIA-222-F for the following wind design wind velocities; 85 mph Basic Wind Velocity without ice, 74 mph Basic Wind Velocity with 0.5" radial ice, and 50 mph (Operational) Basic Wind Velocity without ice.

Based on our analysis, we have determined that the tower structure and foundation are sufficient for the proposed loading and modifications to the existing structure are not required at this time.

We at Paul J. Ford and Company appreciate the opportunity of providing our continuing professional services to you and Crown Castle International. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted,

Joseph P. Jacobs, PE
Project Manager



INTRODUCTION

The NHV 108 943133 tower was originally designed and manufactured by Rohn Industries in 1986. This model SSMW self-supporting tower is Rohn Industries job number 21917JC. Paul J. Ford and Company was supplied with the original tower drawings.

The 180-ft self-supporting tower was originally designed in accordance with Electronics Industry Association Standard EIA RS-222-C.

We were provided with the following foundation information; Foundation Drawings by All-Points Technology Corp. P.C. dated 15 August 2002.

ANALYSIS CRITERIA

Crown Castle has asked Paul J. Ford and Company to provide a structural analysis of the existing 180-ft self-supporting tower located in Wolcott, Connecticut known as the NHV 108 943133 site. Our structural analysis of this tower was completed according to the recommendations of the "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures", TIA/EIA-222-F. This standard recommends a minimum basic design wind velocity of 85 mph (measured at 33-ft above grade) for New Haven County. If ice accumulation is considered, this standard allows a reduced design wind velocity of 74 mph with simultaneous 0.5" solid radial ice accumulation.

Table 1 – Proposed Antenna and Cable Information

Center Line Elevation (feet)	Carrier Name	Number Of Antenna	Antenna Manufacturer	Antenna Model	Azimuth (degrees)	Mount Model	Number of Feed Lines	Feed Line Size (inches)
158	Cingular	3 6	Powerwave Tech	7770 LGP13519	24, 140, 261	Existing	3	1-1/4

(3) proposed lines will be stacked as shown in appendix B.

Table 2 – Existing and Reserved Antenna and Cable Information

Center Line Elevation (feet)	Number Of Antenna	Antenna Manufacturer	Antenna Model	Azimuth (degrees)	Mount Model	Number of Feed Lines	Feed Line Size (inches)
188	3 6	RFS/Celwave Decibel	APX15PV-15PV-2 PCS 1900 TMA	0 0	Pipe Mount Pipe Mount	12	1 5/8"
179	6	Decibel	DB844G65ZAXY	30,150,270	T Frames	12	1 5/8"
179	6	Decibel	DB948F85T2E-M				
168	6	EMS	RR90-17-02DP	0, 140, 270	(3) side arms	12	1 5/8
158	9**	CSS**	DUO1417-8686**	24,140,261	(3) T-frames	9	1 1/4
158	6	ADC	DB800/1900				
123	1	Andrew	HP8-59E	200		1	EW52
112	1	Andrew	HP8-59E	200		2	EW63
70	1	Andrew	HP10-59E	100		1	WE61

** (3) Antennas will be removed and replaced with the proposed, therefore not considered in this analysis. Installed feedlines to be reused.

Note: The antenna feedlines are assumed to be placed as indicated on Appendix B.

Table 3 – Design Antenna and Cable Information

Center Line Elevation (feet)	Number Of Antenna	Antenna Manufacturer	Antenna Model	Mount Model	Number of Feed Lines	Feed Line Size (inches)
Top	4	Celwave	PD10017	3' Side arms		
170	3	Celwave	PD1132D	6' side arms		
160	2		6' Dia Dishes			

ANALYSIS PROCEDURE

Table 4 – Documents Provided

Document	Remarks	Reference	Source
Proposed antenna loading		806362	Crown Castle
Existing antenna loading		806362	Crown Castle
Original Tower Drawings		21917JC	Rohn
Foundation Drawings		# CT105680	All-Points Tech.

Analysis Methods

RISA Tower (Version 4.7), a commercially available software program, was used to create a three-dimensional model of the tower and calculate member stresses for various dead, live, wind, and ice load cases. The analysis was performed in accordance with the Telecommunications Industry Association Standard TIA/EIA-222-F. Selected output from the analysis is included in Appendix A.

Assumptions

1. Tower and structures were built in accordance with the manufacturer's specifications.
2. The tower and structures have been maintained in accordance with manufacturer's specifications.
3. The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
4. When applicable, transmission cables are considered to be structural components for calculating wind loads, as allowed by TIA/EIA-222-F. (See Appendix B)
5. The modifications indicated on All-Points Technology Corp. PC Drawing (job # CT105680) have been installed.

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and Paul J. Ford and Company should be allowed to review any new information to determine its effect on the structural integrity of the tower.

ANALYSIS RESULTS

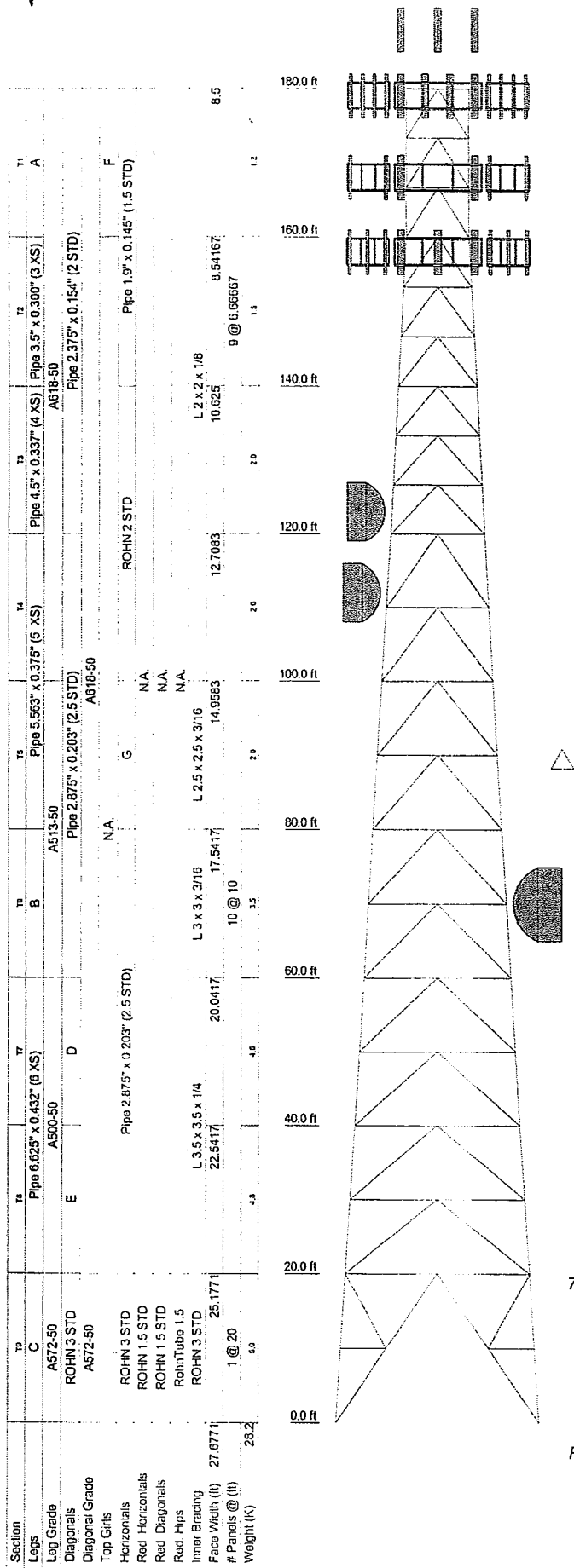
Our structural analysis of the existing NHV 108 943133 tower indicates that the tower is adequate as it now stands to safely support the proposed antenna loading.

Table 5 – Tower Component Stresses vs. Capacity

Notes	Component	Elevation (feet)	% Capacity	Pass/Fail
Risa Tower Analysis Summary:				
	Leg (T8)	20-40	72.6	Pass
	Diagonal (T6)	60-80	104.0	Pass
	Horizontal (T8)	20-40	55.7	Pass
	Top Girt (T1)	180	7.4	Pass
	Redund Horz 1 Bracing (T9)	0-20	7.0	Pass
	Redund Diag 1 Bracing (T9)	0-20	14.0	Pass
	Redund Hip 1 Bracing (T9)	0-20	1.1	Pass
	Redund Hip Diagonal Bracing (T9)	0-20	0.8	Pass
	Inner Bracing (T8)	20-40	0.4	Pass
	Bolt Checks		67.8	Pass
Individual Components:				
	Anchor Rods		51	Pass
	Foundation		83	Pass
Structure rating (max of all components) =				104. %

We were not able to calculate the capacity of the existing foundations without a site-specific geotechnical report. However, the foundation loads are indicated on the existing foundation reinforcement drawings. A comparison of these loads follows:

Foundation	Vector	Design Load from Foundation Modification Drwg Ref: All-Points Technology Corp. job# CT105680	Actual Load from this analysis	Ratio (Percent)
Base	Compression (Kips)	275	227	83
	Uplift (Kips)	236	189	80
	Shear (Kips)	36	29	81



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
(3) APX15PV-15PVL w/Mount Pipe	188	46"x3" Pipe Mount	159
8x2 1/2" Pipe Mount	188	46"x3" Pipe Mount	159
(3) Generic 1' x 2' sidearm	188	(2) ADC DD1900 Full Band Masthead	159
(6) Decibel PCS 1900	188	(2) ADC DD1900 Full Band Masthead	159
(2) DB844G65ZAXY w/Mount Pipe	179	(2) ADC DD1900 Full Band Masthead	159
Generic Sector Frame	179	(2) DUO1417-8686 w/Mount Pipe	159
(2) DB948F85T2E-M w/Mount Pipe	179	(2) DUO1417-8686 w/Mount Pipe	159
(2) DB948F85T2E-M w/Mount Pipe	179	(2) DUO1417-8686 w/Mount Pipe	159
(2) DB844G65ZAXY w/Mount Pipe	179	Generic Sector Frame	158
Generic Sector Frame	179	Powerwave Technologies 7770 w/Mount Pipe	158
(2) DB844G65ZAXY w/Mount Pipe	179	Generic Sector Frame	158
Generic Sector Frame	168	Generic Sector Frame	158
RR90-17-02DP w/Mount Pipe	168	Powerwave Technologies 7770 w/Mount Pipe	158
Generic 4' x 10' sidearm	168	Powerwave Technologies 7770 w/Mount Pipe	158
RR90-17-02DP w/Mount Pipe	168	HPB-59E	123
Generic 4' x 10' sidearm	168	HPB-59E	112
RR90-17-02DP w/Mount Pipe	168	Andrew HP10	70
(2) Powerwave LGP13519	159		
(2) Powerwave LGP13519	159		
46"x3" Pipe Mount	159		

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	Pipe 2.875" x 0.203" (2.5 STD)	E	Pipe 3.5" x 0.216" (3 STD)
B	Pipe 6.625" x 0.340" (6 EHS)	F	Pipe 1.9" x 0.145" (1.5 STD)
C	Pipe 8.75" x 0.375" (8 EHS)	G	Pipe 2.375" x 0.154" (2 STD)
D	Pipe 2.875" x 0.276" (2.5 XS)		

MATERIAL STRENGTH

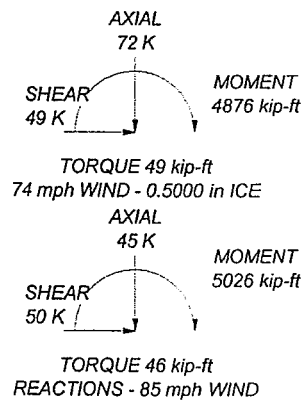
GRADE	Fy	Fu	GRADE	Fy	Fu
A618-50	50 ksi	70 ksi	A500-50	50 ksi	62 ksi
A513-50	50 ksi	66 ksi	A572-50	50 ksi	65 ksi

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. TOWER RATING: 104%

MAX. CORNER REACTIONS AT BASE:

DOWN: 227 K
 UPLIFT: -189 K
 SHEAR: 30 K



Paul J Ford and Company
 250 E. Broad Street Suite 1500
 Columbus, Ohio 43215
 Phone: 614.221.6679
 FAX: 614.448.4105

Job: Existing 180' Tower, Wolcott, CT
Project: 37507-0718 806362
Client: Crown Castle **Drawn by:** Joseph **App'd:**
Code: TIA/EIA-222-F **Date:** 05/26/07 **Scale:** NTS
Path: G:\TO\ER\375 Crown Castle\2007\37507-0718.ed **Dwg No.** E-1



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

June 12, 2007

Honorable Thomas G. Dunn, Mayor
Town of Wolcott
Town Hall, 10 Kenea Avenue
Wolcott, Connecticut 06716

Re: Telecommunications Facility – 347 East Street, Wolcott

Dear Mayor Dunn:

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