STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

Internet: ct.gov/csc

Daniel F. Caruso
Chairman

July 25, 2008

Steven Levine
New Cingular Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, CT 06067-3900

RE: **EM-CING-078-080612** – New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 230 Clover Mill Road, Mansfield, Connecticut.

Dear Mr. Levine:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated June 12, 2008, including the placement of all necessary equipment and shelters within the tower compound. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/MP/cm

c: The Honorable Elizabeth Patterson, Mayor, Town of Mansfield
Gregory Padick, Town Planner, Town of Mansfield
Crown Castle

EM-CING-078-080612

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

Steven L. Levine
Real Estate Consultant

ORIGINAL

HAND DELIVERED

June 12, 2008

Honorable Daniel F. Caruso, Chairman,
and Members of the Connecticut Siting Council
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 230 Clover Mill Road. Mansfield (owner, Crown Castle)

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 the municipality in which the affected cell site is located.

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

Attached is a summary of the planned modifications, including power density calculations reflecting the change in Cingular's operations at the site. Also included is documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

The changes to the facility do not constitute modifications as defined in Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facility

will not be significantly changed or altered. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for in R.C.S.A. Section 16-50j-72(b)(2).

1. The height of the overall structure will be unaffected. Modifications to the existing site include all or some of the following as necessary to bring the 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 may be noted in the attachments.

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

4. Radio frequency power density may increase due to use of one 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 site constitute exempt modifications under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (860) 513-7636 with questions concerning this matter. Thank you for your consideration.

Sincerely,

Steven L. Levine
Real Estate Consultant

Attachments

CINGULAR WIRELESS
Equipment Modification

230 Clover Mill Road, Mansfield
Site Number 5858
Former AT&T Cell Site
Tower Sharing approved 10/03

Tower Owner/Manager: Crown Castle

Equipment configuration: Monopole

Current and/or approved: Three Allgon 7250 panel antennas @ 168 ft c.l. (6 approved)
Six runs 1 5/8 inch coax

Planned Modifications: Remove all three existing antennas
Install three Powerwave 7770 antennas @ 168 ft c.l.
Install six TMA's @ 168 ft
Remove one existing outdoor equipment cabinet
Install one equipment cabinet on existing concrete pad

Power Density:

Calculations for Cingular's current operations at the site indicate a radio frequency electromagnetic radiation power density, measured at the tower base, of approximately 21 % of the standard adopted by the FCC. As depicted in the second table below, the total radio frequency electromagnetic radiation power density for Cingular's planned operations would be approximately 24.4 % 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 *							19.68
Cingular GSM *	168	1900 Band	4	250	0.0127	1.0000	1.27
Total							**21.0%**

* 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 *							19.68
Cingular GSM	168	880 - 894	4	296	0.0151	0.5867	2.57
Cingular GSM	168	1900 Band	2	427	0.0109	1.0000	1.09
Cingular UMTS	168	880 - 894	1	500	0.0064	0.5867	1.09
Total							**24.4%**

* Per CSC records.

Structural information:

The attached structural analysis demonstrates that the tower and foundation have adequate structural capacity to accommodate the proposed modifications. (Paul J. Ford & Company, dated 6/10/08)

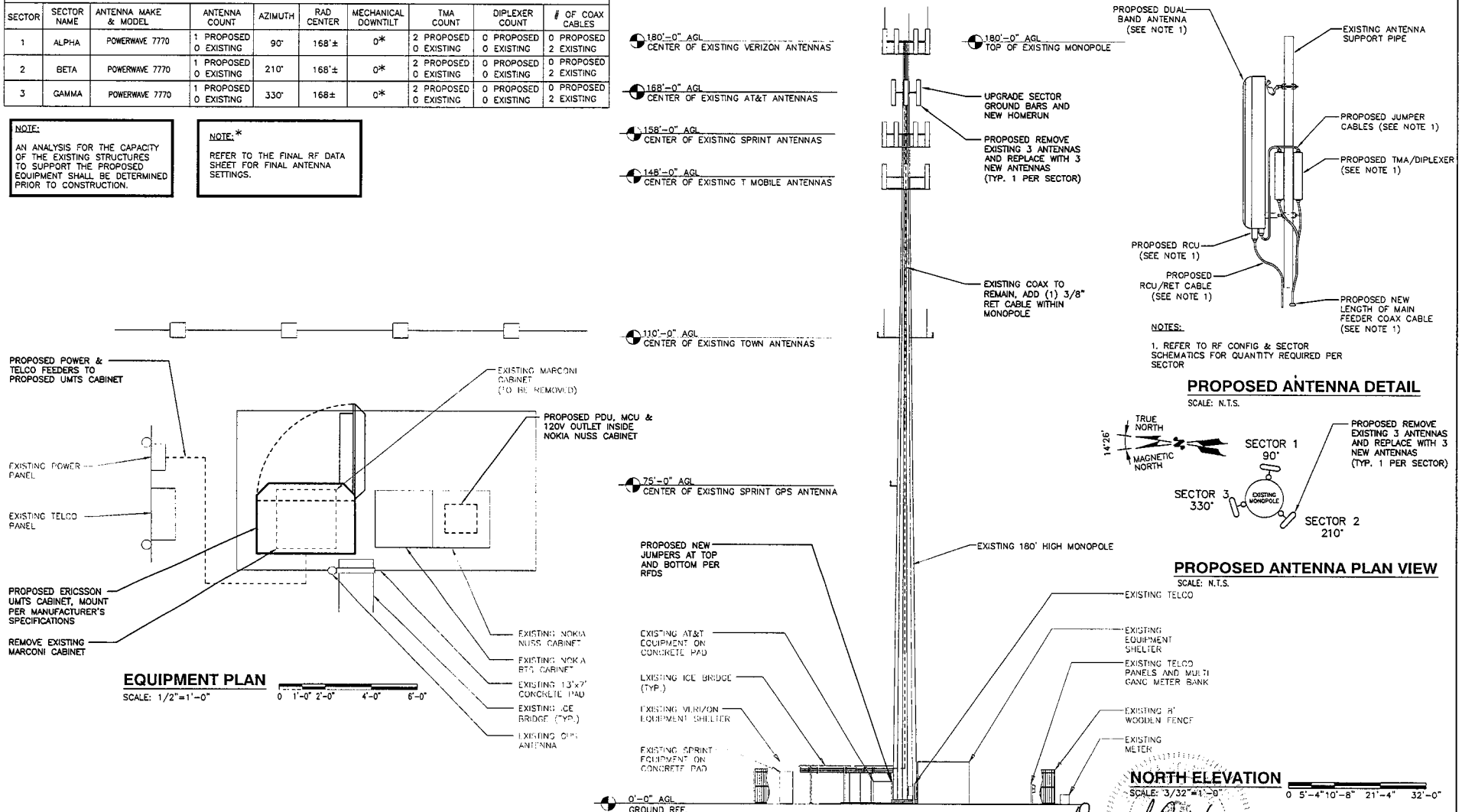
RF TABLE										
SECTOR	SECTOR NAME	ANTENNA MAKE & MODEL	ANTENNA COUNT	AZIMUTH	RAD CENTER	MECHANICAL DOWNTILT	TMA COUNT	DIPLEXER COUNT	# OF COAX CABLES
1	ALPHA	POWERWAVE 7770	1 PROPOSED 0 EXISTING	90°	168'±	0*	2 PROPOSED 0 EXISTING	0 PROPOSED 0 EXISTING	0 PROPOSED 2 EXISTING
2	BETA	POWERWAVE 7770	1 PROPOSED 0 EXISTING	210°	168'±	0*	2 PROPOSED 0 EXISTING	0 PROPOSED 0 EXISTING	0 PROPOSED 2 EXISTING
3	GAMMA	POWERWAVE 7770	1 PROPOSED 0 EXISTING	330°	168±	0*	2 PROPOSED 0 EXISTING	0 PROPOSED 0 EXISTING	0 PROPOSED 2 EXISTING

NOTE:

AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.

NOTE:*

REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.



NORTH ELEVATION

SCALE: 3/32"=1'-0"

0 5'-4" 10'-8" 21'-4" 32'-0"

EQUIPMENT PLAN

SCALE: 1/2"=1'-0"

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

NOTES:

1. REFER TO RF CONFIG & SECTOR SCHEMATICS FOR QUANTITY REQUIRED PER SECTOR

PROPOSED ANTENNA DETAIL

SCALE: N.T.S.

PROPOSED ANTENNA PLAN VIEW

SCALE: N.T.S.

Hudson Design Groups
1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 2-101
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

SAI communications
184 ROCKINGHAM ROAD, UNIT A
LONDONDERRY, NH 03053

SITE NUMBER: 5858
SITE NAME: MANSFIELD CENTRAL
230 CLOVER MILL ROAD
MANSFIELD, CT 06268
TOLLAND COUNTY

at&t
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	05/07/08	CONSTRUCTION FINAL	PG	AT	DPH
0	04/14/08	ISSUED FOR CONSTRUCTION	AP	AT	DPH

SCALE: AS SHOWN | DESIGNED BY: AP | DRAWN BY: AP

Daniel P. Hamm

AT&T

ANTENNA LAYOUT AND ELEVATION

JOB NUMBER	DRAWING NUMBER	REV
5858	A-2	1

The new at&t Your world. Delivered. cingular raising the bar

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, 2008

Mr. Matthew W. Hart
Town Manager, Town of Mansfield
Town Hall Four South Eagleville Rd.
Mansfield, CT 06268

Re: Telecommunications Facility – 230 Clover Mill Road, Mansfield

Dear Mr. Hart:

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

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

Structural Analysis Report

PJF Project No.: **A00008-T076**
Structure: Existing 178-ft Monopole

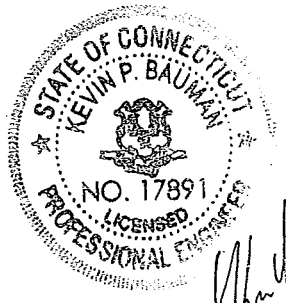
Manufacturer: PennSummit Communications
Location: Mansfield, CT
Site Number: 5858
Site Name: Mansfield Central

Prepared For:

Hudson Design Group, LLC.

1600 Osgood St. Building 20 North, Suite 2-101
North Andover, MA 01845
Attn: Derek Creaser

June 10, 2008



6-11-08

Analyzed by:
Thomas J. Dehnke
Structural Engineer
tdehnke@pjfweb.com

Reviewed by:
Kevin Bauman, P.E.
Department Manager

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

Executive Summary

Design Standard:

Paul J. Ford and Company has analyzed the existing monopole in accordance with the Telecommunications Industry Association Standard TIA/EIA-222-F for the following *fastest mile* design wind velocities:

85 mph Basic Wind Velocity without ice
74 mph Basic Wind Velocity with 1/2" radial ice
50 mph (Operational) Basic Wind Velocity without ice

Antenna Loads:

The existing monopole was analyzed for the following antenna loading:

Elevation	Description	Owner
180'	(1) 6' Whip, (2) 10' Whips, (3) 18' Whips (12) DB848H80 14' Platform w/ Handrails	Verizon / Town of Mansfield
168'	(3) Powerwave 7770.00, (6) LGP2140x TMA (3) Flush Mounts	AT&T
158'	(9) Decibel DB980F90E-M 14' Low Profile Platfrom	Sprint
148'	(9) EMS DR65-19-00DPQ (12) Decibel Pcs 1900 14' Low Profile Platfrom	T-Mobile
110'	(2) Celwave PD128, (2) Decibel DB264 (2) Db224, (2) DB 212-2, (4) DB420 (3) 12' T-Arm Mounts	Town of Mansfield
75'	(1) GPS, (1) 3' Side Arm Mount	
	(1) NAIS VIC100, (1) 3' Side Arm Mounts	T-Mobile

Existing antenna and coax information taken from previous structural analysis performed by Paul J. Ford and Company, ref 31205-0039.

Coaxial cable for this analysis was assumed internally mounted and not exposed to the wind.

Results:

The monopole and foundation have sufficient capacity to support the above antenna loading while meeting the local minimum wind requirements.

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

Project Description:

Paul J. Ford and Company has analyzed the existing monopole for Hudson Design Group, LLC. in accordance with the Telecommunications Industry Association / Electronic Industry Association, TIA/EIA-222-F, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures." The TIA/EIA standard was developed by professional engineers experienced in the design of communication structures.

Pole History:

The monopole was manufactured by PennSummit Tubular, LLC. in 2003 for TCP Communications per job #20031. Paul J. Ford and Company designed the pole and foundation for PennSummit, reference PJF# 29203-0151. The monopole was originally designed in accordance with TIA/EIA-222-F for an 80 mph design wind for the following antenna loading:

Elevation	Description
180'	(1) 6' Whip, (2) 10' Whips, (3) 18' Whips (12) DB896H 14' Platform w/ Handrail
168'	(12) DB896H 14' Low Profile Platform
158'	(12) EMS RR65-19-00XP 14' Low Profile Platform
148'	(12) EMS RR65-19-00XP 14' Low Profile Platform
138'	(12) EMS RR65-19-00XP 14' Low Profile Platform
128'	(12) EMS RR65-19-00XP 14' Low Profile Platform
110'	(2) Celwave PD128, (2) Decibel DB264 (2) DB224, (2) Db212-2, (4) DB420 (3) 10' T-Arm Mounts

Structural Analysis:

Our analysis was completed according to the recommendations of the TIA/EIA-222-F 1996. This standard recommends a minimum design wind velocity of 85 mph (no ice) for Tolland County. If ice accumulation is considered, the TIA/EIA standard allows the design wind pressure reduced by 25% in conjunction with ½" radial ice. Our analysis was completed in compliance with the minimum wind requirements under the following load cases:

85 mph Basic Wind Velocity without ice
74 mph Basic Wind Velocity with 1/2" radial ice
50 mph (Operational) Basic Wind Velocity without ice

Existing & Proposed Antenna Loading:

Our analysis was completed using the following existing and proposed antenna loading:

Status	Elevation	Description	Coax	
Existing	180'	(1) 6' Whip, (2) 10' Whips, (3) 18' Whips (12) DB848H80 14' Platform w/ Handrails	(18)	1-5/8"
Proposed	168'	(3) Powerwave 7770.00, (6) LGP2140x TMA (3) Flush Mounts	(9)	1-5/8"
Existing	158'	(9) Decibel DB980F90E-M 14' Low Profile Platfrom	(9)	1-5/8"
Existing	148'	(9) EMS DR65-19-00DPQ (12) Decibel Pcs 1900 14' Low Profile Platfrom	(24)	1-5/8"
Existing	110'	(2) Celwave PD128, (2) Decibel DB264 (2) Db224, (2) DB 212-2, (4) DB420 (3) 12' T-Arm Mounts	(12)	1-5/8"
Existing	75'	(1) GPS, (1) 3' Side Arm Mount		
		(1) NAIS VIC100, (1) 3' Side Arm Mounts		

Existing antenna and coax information taken from previous structural analysis performed by Paul J. Ford and Company, ref 31205-0039.

Coaxial cable for this analysis was assumed internally mounted and not exposed to the wind.

Results:

When the new antenna configuration is considered, the monopole has sufficient capacity to safely support the new loading while maintaining the minimum wind rating:

Member	Elevation	Percent Capacity
Shaft #1	129.00'	59.2%
Shaft #2	88.75'	62.6%
Shaft #3	43.75'	76.0%
Shaft #4	0.00'	72.0%
Base Plate	0.00'	94.4%
Anchor Bolts	0.00'	64.6%

The existing drilled pier foundation has sufficient capacity to support the new loading while maintaining the minimum required safety factors. ☑

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

Conclusion:

The existing monopole and foundation have sufficient capacity to support the new antenna loading while meeting the minimum wind requirements of this analysis.

If you have any questions concerning our analysis, or if we can be of further service to you, please feel free to contact us at (614) 221-6679.

Sincerely,

Paul J. Ford and Company

Thomas J. Dehnke
Structural Engineer

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

STANDARD CONDITIONS FOR FURNISHING OF PROFESSIONAL ENGINEERING SERVICES ON EXISTING STRUCTURES BY PAUL J. FORD AND COMPANY

1. Paul J. Ford and Company has not made a field inspection to verify the monopole dimensions or the antenna/coax loading. If the existing conditions are not as represented on these sketches, we should be contacted immediately to reevaluate any conclusions stated in this report.

2. No allowance was made for any damaged, missing, or rusted monopole parts. The analysis of this pole assumes that no physical deterioration has occurred in any of the structural components of the pole and that all the pole members have the same capacity as the day the pole was erected.

3. It is not possible to have all of the very detailed information to perform a thorough analysis of every structural sub-component of an existing monopole. The structural analysis provided by Paul J. Ford and Company verifies the adequacy of the main structural members of the monopole. Paul J. Ford and Company provides a limited scope of service in that we cannot verify the adequacy of every weld, plate, connection detail, etc.

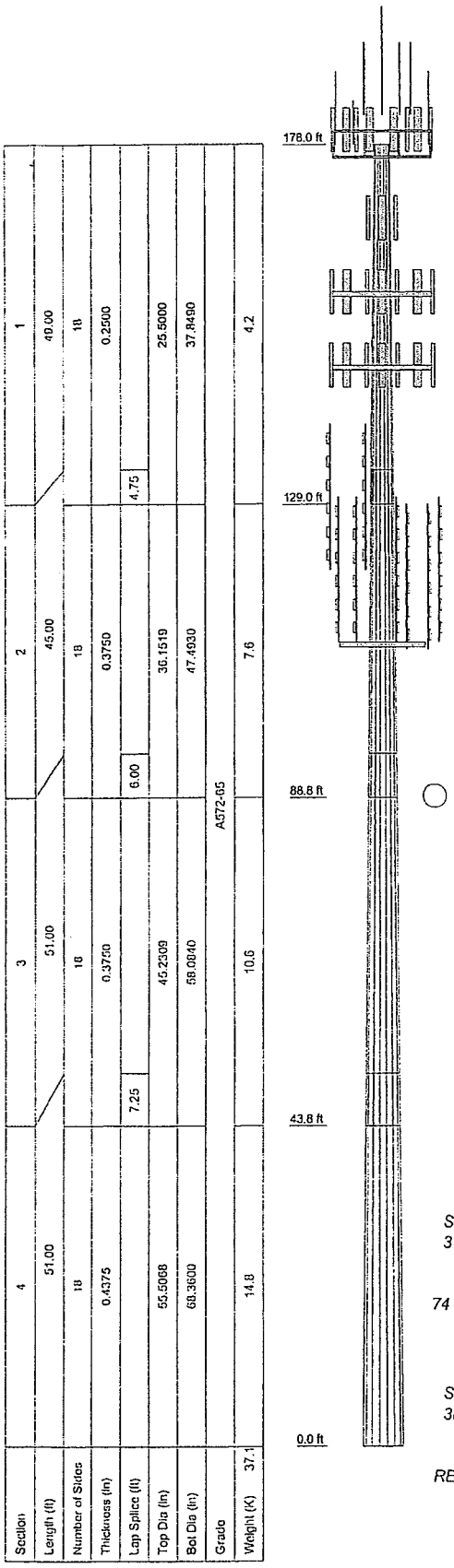
4. It is the owner's responsibility to determine the amount of ice accumulation, if any, that shall be used in the structural analysis.

5. The monopole has been analyzed according to the minimum basic design wind velocity recommended by the Electronics Industry Association Standard ANSI/EIA-222-F. If the owner or local or state agencies require a higher design wind velocity, Paul J. Ford and Company should be made aware of this requirement.

6. The enclosed sketches are a schematic representation of the monopole we have analyzed. If any material is fabricated from these sketches, the fabricator shall be responsible for field verifying the existing conditions and for proper fit and clearance in the field.

7. Miscellaneous items such as antenna mounts, etc., have not been designed or detailed as part of our work. We recommend that material of adequate size and strength be purchased from a reputable tower manufacturer.

8. Installation of new hand hole ports and/or cable access ports will not reduce the structural capacity of the monopole shaft, if the hand hole frames and/or cable access ports are properly designed and installed in accordance to proper procedures. Paul J. Ford and Company recommends that new hand holes and/or cable access port hole frames be purchased from the original pole manufacturer. The new hand hole and/or cable access frames shall be installed per the original manufacturer's installation procedures. Paul J. Ford and Company will design and provide installation procedures for new hand holes and/or cable access ports if required, as an additional scope of services.



Section	1	2	3	4	
Length (ft)	40.00	45.00	51.00	51.00	
Number of Sides	18	18	18	18	
Thickness (in)	0.2500	0.3750	0.3750	0.4375	
Lap Splice (ft)	4.75	6.00	7.25		
Top Dia (in)	25.5000	36.1519	45.2309	55.5068	
Bot Dia (in)	37.8490	47.4930	58.0840	68.3600	
Grade	A572-65				
Weight (K)	4.2	7.6	10.6	14.8	37.1

DESIGNED APPURTENANCE LOADING

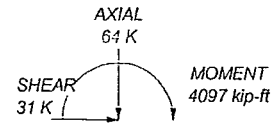
TYPE	ELEVATION	TYPE	ELEVATION
Lightning Rod 2" x 23'	189.5	(3) DR65-19-00DPQ	148
18 ft x 3" dia whip	187	(4) PCS 1900	148
18 ft x 3" dia whip	187	PennSummit 14' Low Profile Platform	148
18 ft x 3" dia whip	187	(3) DR65-19-00DPQ	148
10 ft x 2.5" dia whip	183	(4) PCS 1900	148
10 ft x 2.5" dia whip	183	(3) DR65-19-00DPQ	148
6 ft x 1.5" dia whip	181	DB212-2-A	130
(4) DB848H80E-XY	180	DB212-2-A	130
(4) DB848H80E-XY	180	DB224	120
(4) DB848H80E-XY	180	DB264-A	120
PennSummit 14' Platform w/ Handrail	178	DB264-A	120
Powerwave 7770	168	DB224	120
Powerwave 7770	168	DB420 (16-dipole)	119
Powerwave 7770	168	DB420 (16-dipole)	119
(2) Powerwave LGP2140X	168	DB420 (16-dipole)	119
(2) Powerwave LGP2140X	168	DB420 (16-dipole)	119
(2) Powerwave LGP2140X	168	PD128	114
(3) Flush Mounts	168	PD128	114
(3) DB980F90E-M	158	Valmont T-Arm (3)	110
(3) DB980F90E-M	158	GPS	75
(3) DB980F90E-M	158	3' Side Arm Mount	75
PennSummit 14' Low Profile Platform	158	NAIS VIC100	75
(4) PCS 1900	148	3' Side Arm Mount	75

MATERIAL STRENGTH

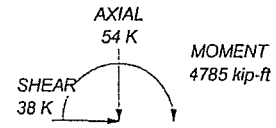
GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

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: 76%



TORQUE 1 kip-ft
74 mph WIND - 0.5000 in ICE



TORQUE 2 kip-ft
REACTIONS - 85 mph WIND

Paul Ford and Company
250 E. Broad Street Suite 1500
Columbus, OH 43215
Phone: 614.221.6679
FAX: 614.448.4108

Job: *Ex. 180-Ft. Monopole: Mansfield Central 5858*			
Project: *A00008-T076*			
Client: Hudson Design Group, LLC.	Drawn by: Thomas Dehnke	App'd:	
Code: TIA/EIA-222-F	Date: 06/10/08	Scale: NTS	
Path: T:\000_Misc\2008\A00008-T076.eri		Dwg No. E-1	