



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

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

E-Mail: siting.council@po.state.ct.us

Web Site: www.ct.gov/csc

February 4, 2004

Michele G. Briggs
Manager of Real Estate
Southwestern Bell Mobile Systems, LLC
500 Enterprise Drive
Rocky Hill, CT 06067-3900

RE: **EM-CING-166-040121** - Southwestern Bell Mobile Systems, LLC notice of intent to modify an existing telecommunications facility located at 1233 Wolcott Road, Wolcott, Connecticut.

Dear Ms. Briggs:

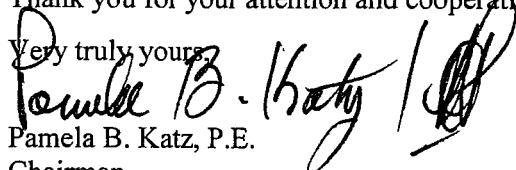
At a public meeting held on February 3, 2004, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated January 20, 2004. 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. 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,


Pamela B. Katz, P.E.
Chairman

PBK/laf

c: Honorable Thomas G. Dunn, Mayor, Town of Wolcott
George Leggio, Zoning Enforcement Officer, Town of Wolcott
AAT Communications Corporation
Thomas F. Flynn III, Nextel Communications, Inc.
Thomas J. Regan, Esq., Brown Rudnick Berlack Israels LLP
Christopher B. Fisher, Esq., Cuddy & Feder LLP
Stephen Marcus, The Marcus Group



Sout
5001 EM-CING-166-040121
Rock
Phon
Fax: (800) 313-7190

Michele G. Briggs
Manager of Real Estate

January 20, 2004

RECEIVED
JAN 21 2004

CONNECTICUT
SITING COUNCIL

Ms. Pam Katz, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

**Re: Notice of Exempt Modification – Existing AAT Telecommunications Tower
Facility at 1233 Wolcott Road, Wolcott, Connecticut**

Dear Chairman Katz:

Southwestern Bell Mobile Systems, LLC ("SBMS") intends to install telecommunications antennas and associated equipment at an existing multicarrier telecommunications tower off Wolcott Road in Wolcott, Connecticut.

The AAT Wolcott facility is located at 1233 Wolcott Road (west side of CT Rte 69), approximately 1½ miles north of the intersection of Routes 69 and 322. Tower coordinates (NAD 83) are N 41° 37' 16.2" and W 72° 58' 24.6". The facility is owned and operated by AAT Communications Corporation ("AAT"), with offices at 517 Route 1 South, 5th Floor, Iselin, NJ 08830. AAT leases the land from Edward F. Cleary.

Please accept this letter as notification to the Council, 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 is being sent to the Mayor of Wolcott.

SBMS, the local component of the nationwide Cingular Wireless network, is licensed by the Federal Communications Commission ("FCC") to provide cellular mobile telephone service in the New Haven, CT Metropolitan Statistical Area, which includes the area to be served by SBMS' proposed installation. The public need for cellular service has been predetermined by the FCC.

AAT has agreed to plans put forth by SBMS pursuant to mutually acceptable terms and conditions and has also authorized SBMS to obtain necessary government approvals. Attached to this Notice are a site location map, a proposed site plan, the proposed tower profile, and a structural analysis report that shows the tower is structurally capable of supporting the proposed SBMS telecommunications equipment.

The AAT facility was approved by local zoning authorities in 1991, which was prior to the November 2000 Covello decision concerning Council and Town jurisdiction for tower siting. The tower came under Council jurisdiction with Nextel's application to co-locate in EM-NEXTEL-166-010723, which was approved on August 8, 2001.

The Wolcott Road facility consists of a 350-foot self-supported lattice tower within a truncated rectangular compound measuring approximately 75 ft and 62 ft on the SW and SE sides, respectively. The compound is surrounded by 8-ft high chain link fence topped with barbed wire. A number of commercial and public safety entities utilize the tower, including Sprint, Nextel, AT&T, Marcus Communications, Weblink, and the Wolcott Volunteer Ambulance.

As shown on the attached drawings and as further described below, SBMS proposes to install up to nine CSS DUO 1417-8686 panel antennas, approximately 48 inches in height, with the center of radiation approximately 185 feet above ground level. Associated equipment to be installed on the tower are up to six ADC Co. dual-band tower top amplifiers ("TTA's"; small metal boxes approximately 26 pounds apiece) immediately behind the antennas, and up to three very small (5 pounds apiece) CSS dual-band "combiners." SBMS also proposes to place equipment cabinets in an existing AAT equipment shelter.

With the "GSM-only" configuration, SBMS will broadcast up to:

- 2 channels, 296 Watts ERP, 880 – 894 MHz; and
- 2 channels, 427 Watts ERP, 1930 – 1935 MHz.

Statutory Considerations

The changes to the Wolcott tower facility do not constitute a modification 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) because they will not result in any substantial adverse environmental effect.

1. The height of the overall structure will be unaffected.
2. The proposed changes will not affect the property boundaries. All new construction will take place on property leased by AAT and within the existing fenced compound. No new equipment building or pad will be constructed.
3. The proposed additions will not increase the noise level at the existing facility by six decibels or more.
4. Operation of the additional antennas will not increase the total radio frequency electromagnetic radiation power density, measured at the tower base, to or above the standard adopted by the State of Connecticut and the FCC. The "worst-case" exposure calculation in accordance with FCC OET Bulletin No. 65 (1997) for a point of interest at the

base of the tower in relation to the operation of the currently proposed antenna array is as follows:

Company	Centerline Height (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density [†] (mW/cm ²)	Standard Limits (mW/cm ²)	Percent of Limit
Lo Jack *	350	173.075	1	0.1	0.00000029	0.2000	0.0001
TSR Wireless *	350	929	1	1000	0.0029	0.6193	0.47
Weblink Wireless*	320	929	5	1000	0.0176	0.6193	2.83
Nextel *	200	851	9	100	0.0081	0.5673	1.43
Cingular GSM	185	880 - 894	2	296	0.0062	0.5867	1.06
Cingular GSM	185	1930 - 1935	2	427	0.0090	1.0000	0.90
Marcus Commun.*	various	various					2.64
Wolcott Ambulance *	150	463.475	1	100	0.0016	0.3090	0.52
AT&T *	140	D: 1945 E: 1985	12	250	0.0550	1.0000	5.50
Sprint *	130	1930	12	250	0.0638	1.0000	6.38
Total							21.74%

* Power density parameters taken from AT&T's application to the Council in EM-AT&T-166-020626; Marcus Communication's application to the Council in EM-MARCUS-166-020226; and Nextel's application to the Council in EM-NEXTEL-166-010723.

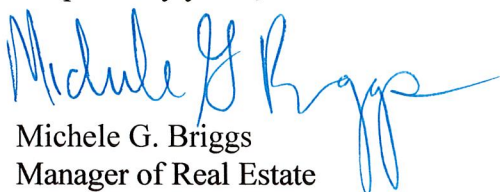
† Please note that the standard power density equation provided by the Council in its memo of January 22, 2001 incorporates a ground reflection factor of 2.56 (i.e., the square of 1.6) as described in FCC OET Bulletin No. 65.

As the table demonstrates, the cumulative "worst-case" exposure would be approximately 21.7 % of the ANSI/IEEE standard, as calculated for mixed frequency sites. Total power density levels resulting from SBMS' use of the tower facility would thus be within applicable standards.

For the foregoing reasons, SBMS respectfully submits that proposed changes to implement expanded shared use at the Wolcott site constitute an exempt modification under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (860) 513-7700 or Steve Levine at (860) 513-7636 with questions concerning this application. Thank you for your consideration in this matter.

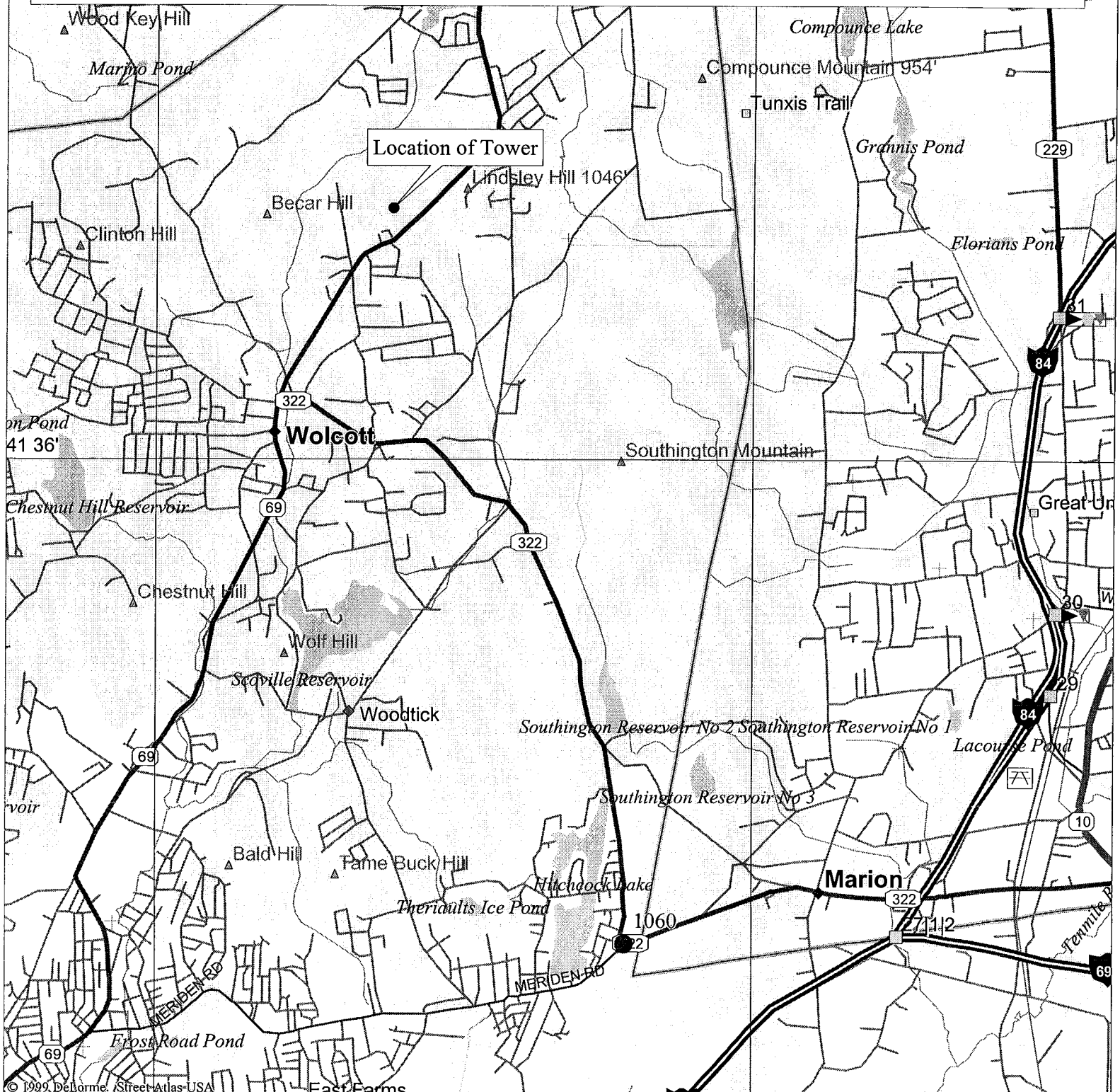
Respectfully yours,


Michele G. Briggs
Manager of Real Estate

Enclosures

cc: Honorable Michael A. DeNegris, Mayor, Town of Wolcott

Tower Location - Wolcott Rd, Wolcott



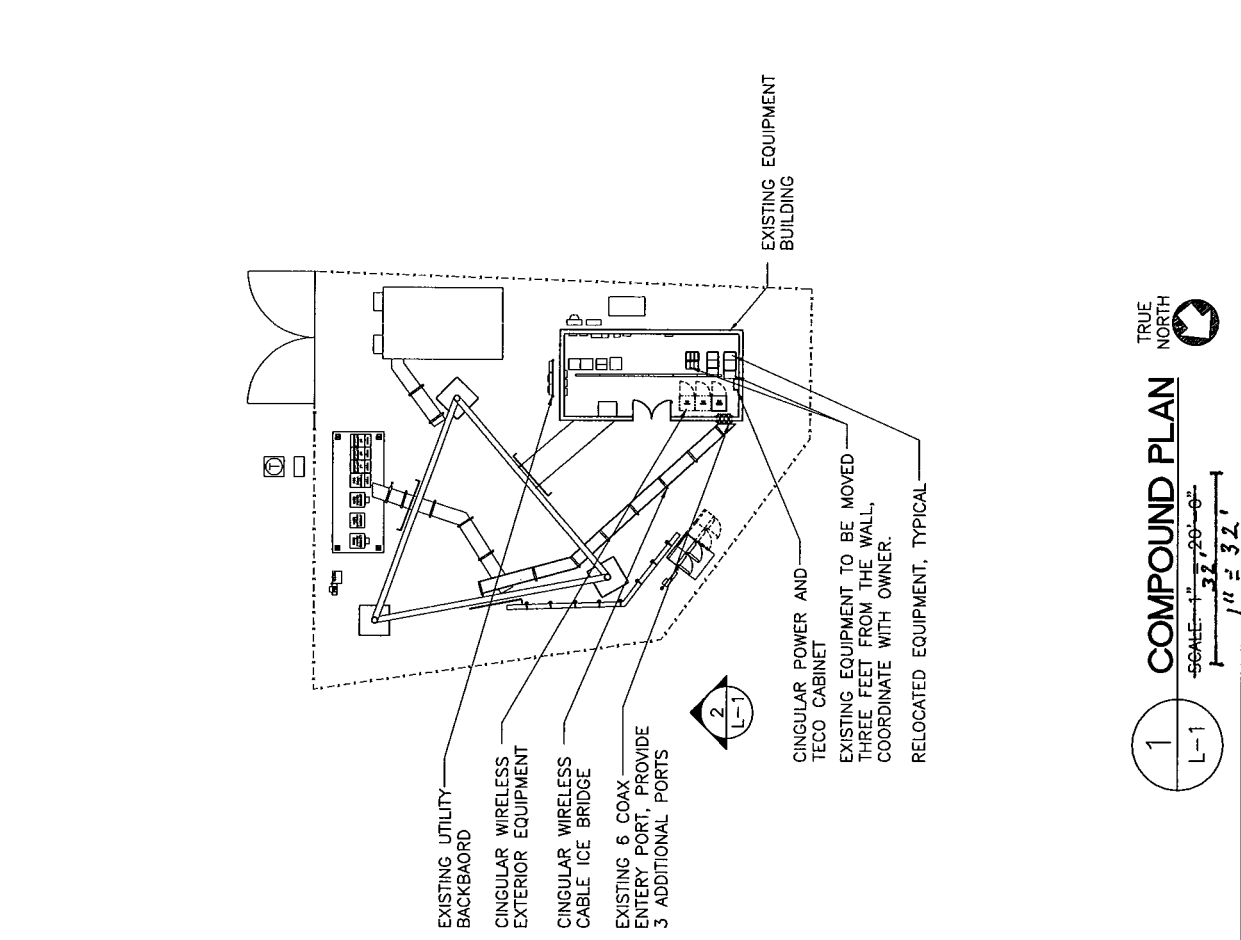
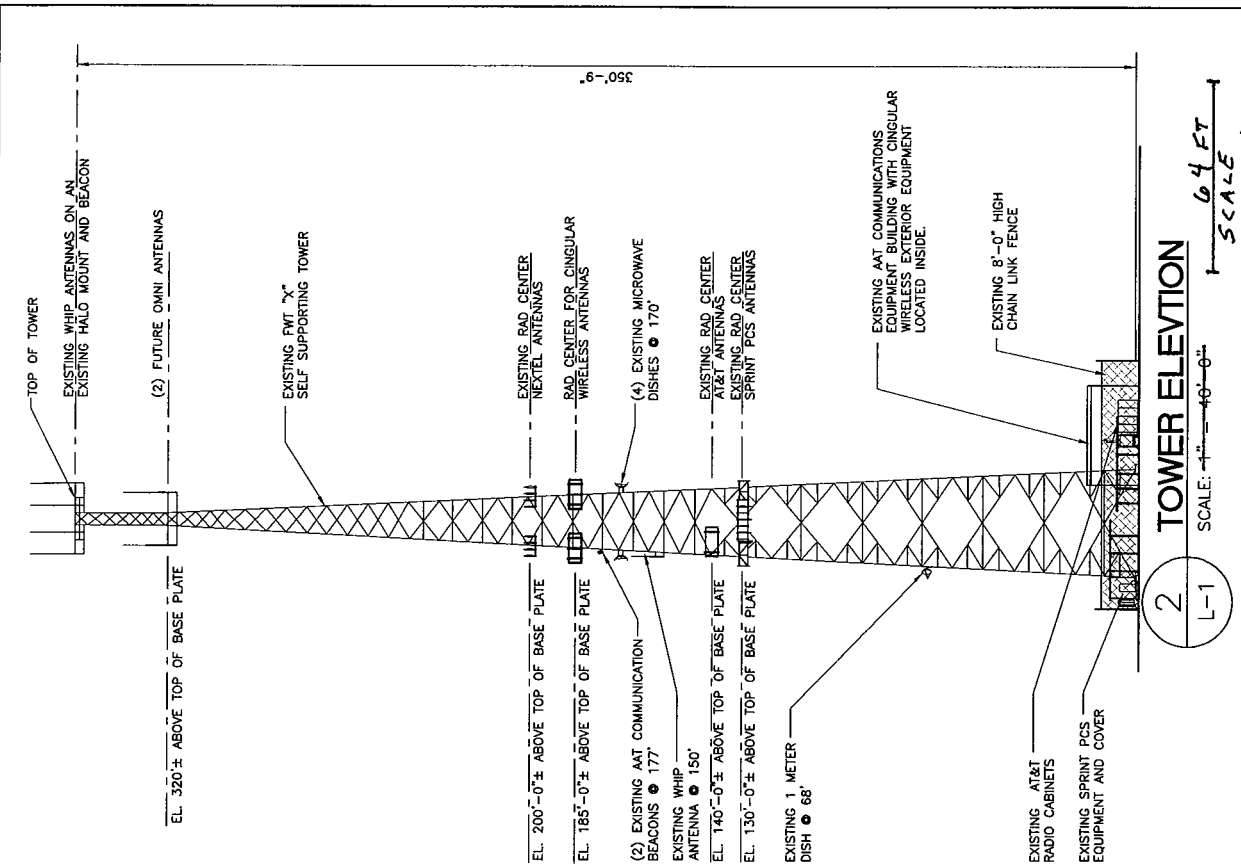
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Mag 13.00
 Mon Jan 19 13:53 2004

Scale 1:50,000 (at center)
 5000 Feet
 1000 Meters

- Local Road
- Major Connector
- State Route
- Primary State Route
- Trail
- Interstate/Limited Access

CINGULAR WIRELESS COMMUNICATIONS FACILITY 1233 WOLCOTT ROAD WOLCOTT, CONNECTICUT 06716		PROJECT NO. 0318 SHEET NO. 3 OF 3	
DATE:	12/24/04	SCALE:	AS NOTED
LEASE EXHIBIT L-1			



1
 L-1
COMPOUND PLAN
 SCALE: 1/8" = 32'
 1" = 32'

2
 L-1
TOWER ELEVATION
 SCALE: 1/4" = 64'
 1" = 64'



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

Structural Analysis Report

PJF Project No.: **A03-T143**

Structure: Existing 350-ft Self-Supporting Tower

Owner: AAT Communications
Manufacturer: FWT, Inc.
Year of Mfr: 1992
Location: Wolcott, Connecticut

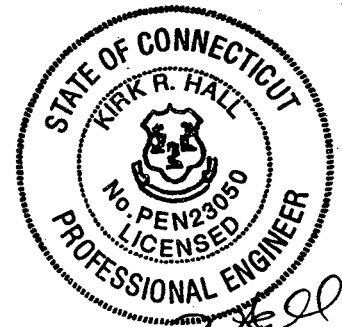
Prepared For:

AAT Communications

11 Middlesex Drive
Suite 10
Wilmington, MA 01887

ATTN: Mr. Rick Ripley

December 22, 2003



Analyzed by:
Jacques H. Kechichian
Project Engineer
jkechichian@pjfweb.com

Reviewed by:
Kirk R. Hall, P.E.
Project Manager
khall@pjfweb.com

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Executive Summary

Design Standard:

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

*85 mph Basic Wind Velocity without ice
74 mph Basic Wind Velocity with 0.5" radial ice
50 mph (Operational) Basic Wind Velocity without ice*

Antenna Loads:

The existing 350-ft self-supporting tower was analyzed for the following antenna and coax loading:

Status	Elev.	Antenna	Coax
Existing	350'	(3) 20' WHIPS	(3) 1 1/4", 1/2"
Existing	350'	(1) 10' WHIP	(1) 1 1/4"
Existing	350'	(1) 12' WHIP	(2) 1 1/4", 7/8"
Remove	325'	(1) 10' WHIP	(1) 1 1/4"
Existing	315'	(2) 20' WHIPS	(2) 1 1/4"
Existing	200'	(12) DB844H65	(12) 1 5/8"
New	185'	(9) CSS DUO 1417-8686	(9) 1 5/8"
Existing	170'	(1) 2' DISH	(1) 1/2"
Existing	170'	(1) 3' DISH	(1) 1/2"
Existing	155'	(1) 6' WHIP	(1) 1/2"
Existing	140'	(6) DB980H90	(6) 1 5/8"
Existing	130'	(6) DB980H90	(6) 1 5/8"
Existing	70'	(1) 2' SAT. DISH	(1) 1/2"

Stresses:

When the existing tower is analyzed in accordance with the above mentioned code requirements to support the proposed antenna load it is stressed to 92% of its safe capacity. The tower meets the minimum code requirements as it now stands.

Existing Foundations:

We calculated the capacity of the existing foundations using the recommendations of the geotechnical report that we have on file for this site. Our calculations indicate that the existing foundations are adequate to support the revised foundation loads indicated in our structural analysis.



Tower History:

The Wolcott tower was originally designed by Paul J. Ford and Company and manufactured by FWT, Inc. in 1992. This self-supporting tower is FWT, Inc. job number 5554 and Paul J. Ford and Company job number 1992-46-R.

The 350-ft self-supporting tower was originally designed in accordance with Electronics Industry Association Standard EIA/TIA-222-E for 85 mph Basic Wind Velocity without ice and 74 mph Basic Wind Velocity with 0.5" radial ice supporting the following loads:

Elev.	Antenna	Coax
350'	(9) PD-220	(9) 1 5/8"
330'	(9) PD-220	(9) 1 5/8"
310'	(9) PD-220	(9) 1 5/8"
290'	(9) PD-220	(9) 1 5/8"
270'	(3) PD-220	(3) 1 5/8"
230'	(1) HP-8	(1) EW20
230'	(1) HP-8	(1) EW20
200'	(1) HP-8	(1) EW20
200'	(1) HP-8	(1) EW20

Project Description:

AAT Communications has asked Paul J. Ford and Company to provide a structural analysis of the existing 350-ft self-supporting tower located in Wolcott, Connecticut. In this analysis, we considered the addition of nine CSS DUO 1417-8686, six amplifiers, and a total of nine 1 5/8" runs of coax. We also considered the removal of the antenna at 325-ft.

Structural Analysis:

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. The self-supporting tower was analyzed as a three-dimensional space truss using finite element software.

Proposed Antenna and Feedline Loading:

Our structural analysis was completed considering the following antenna and feedline loading:



Status	Elev.	Antenna	Coax
Existing	350'	(3) 20' WHIPS	(3) 1 1/4", 1/2"
Existing	350'	(1) 10' WHIP	(1) 1 1/4"
Existing	350'	(1) 12' WHIP	(2) 1 1/4", 7/8"
Remove	325'	(1) 10' WHIP	(1) 1 1/4"
Existing	315'	(2) 20' WHIPS	(2) 1 1/4"
Existing	200'	(12) DB844H65	(12) 1 5/8"
New	185'	(9) CSS DUO 1417-8686	(9) 1 5/8"
Existing	170'	(1) 2' DISH	(1) 1/2"
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Existing	155'	(1) 6' WHIP	(1) 1/2"
Existing	140'	(6) DB980H90	(6) 1 5/8"
Existing	130'	(6) DB980H90	(6) 1 5/8"
Existing	70'	(1) 2' SAT. DISH	(1) 1/2"

Note: The existing antenna coax is assumed to be placed on the tower in the position indicated in the field report. The new coax to elevation 185-ft can be placed on any tower face such that no more than 23 total coax are located on any one face.

Results:

Our structural analysis of the existing Wolcott tower indicates that the tower is adequate as it now stands to safely support the proposed antenna loading. A maximum stress ratio of 91.5% was calculated in the tower members. Please refer to the attached calculations for an itemized listing of all member stress ratios.

Paul J. Ford and Company designed the foundation system for this tower in 1992. A comparison of the design load and the new load on the foundation is shown in the chart below:

Base Reactions	Design Load (k)	New Load (k)	Stress Ratio
Compression	751	613	82%
Uplift	631	467	74%

As you can see the existing foundations are adequate to support the revised foundation loads indicated in our structural analysis.

Conclusion:

Paul J. Ford and Company performed a structural analysis of the existing Wolcott tower in accordance with the Telecommunications Industry Association Standard TIA/EIA-222-F. Our analysis indicates that the tower is adequate as it now stands to safely support the proposed antenna loading without the need for any modifications.



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

Page 5 of 6
December 22, 2003
PJF# A03-T143
Wolcott, Connecticut
AAT Communications

We calculated the capacity of the existing foundations using the recommendations of the geotechnical report by Osman Pekin dated December 12, 1991. Our calculations indicate that the existing foundations are adequate to support the revised foundation loads indicated in our structural analysis.

We hope that this analysis satisfies your current needs. 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

Jacques H. Kechichian
Project Engineer



Southwestern Bell Mobile Systems, LLC
500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 513-7700
Fax: (860) 513-7190

Michele G. Briggs
Manager of Real Estate

January 20, 2004

Honorable Michael A. DeNegriss, Mayor
Town of Wolcott
Town Hall, 10 Kenea Avenue
Wolcott, Connecticut 06716

**Re: Notice of Exempt Modification – Existing AAT Telecommunications Tower Facility at
1233 Wolcott Road, Wolcott, Connecticut**

Dear Mayor DeNegriss:

Southwestern Bell Mobile Systems, LLC (“SBMS”) intends to install telecommunications antennas and associated equipment at an existing multicarrier telecommunications tower at 1233 Wolcott Road in Wolcott, Connecticut.

The facility is owned and operated by AAT Communications Corporation (“AAT”), with offices at 517 Route 1 South, 5th Floor, Iselin, NJ 08830. AAT leases the land from Edward F. Cleary.

A Notice of Exempt Modification has been filed with the Connecticut Siting Council as required by Regulations of Connecticut State Agencies (“R.C.S.A.”) Section 16-50j-73. Please accept this letter as notification to the Town of Wolcott 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 attached letter fully sets forth the SBMS proposal. However, if you have any questions or require any further information on the plans for the site or the Siting Council’s procedures, please contact the undersigned or Mr. Derek Phelps, Executive Director of the Connecticut Siting Council, at (860) 827-2935.

Sincerely,

Michele G. Briggs
Manager of Real Estate

Enclosure



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STRUCTURAL ENGINEERS
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EM-CING-166-040121

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CONNECTICUT
SITING COUNCIL

Structural Analysis Report

PJF Project No.: **A03-T143**

Structure: Existing 350-ft Self-Supporting Tower

Owner: AAT Communications

Manufacturer: FWT, Inc.

Year of Mfr: 1992

Location: Wolcott, Connecticut

Prepared For:

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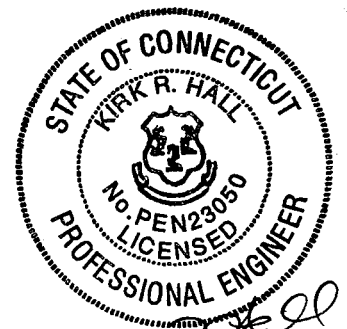
11 Middlesex Drive

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ATTN: Mr. Rick Ripley

December 22, 2003



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Structural Analysis:

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Paul J. Ford and Company performed a structural analysis of the existing Wolcott tower in accordance with the Telecommunications Industry Association Standard TIA/EIA-222-F. Our analysis indicates that the tower is adequate as it now stands to safely support the proposed antenna loading without the need for any modifications.



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

Page 5 of 6
December 22, 2003
PJF# A03-T143
Wolcott, Connecticut
AAT Communications

We calculated the capacity of the existing foundations using the recommendations of the geotechnical report by Osman Pekin dated December 12, 1991. Our calculations indicate that the existing foundations are adequate to support the revised foundation loads indicated in our structural analysis.

We hope that this analysis satisfies your current needs. 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

Jacques H. Kechichian
Project Engineer

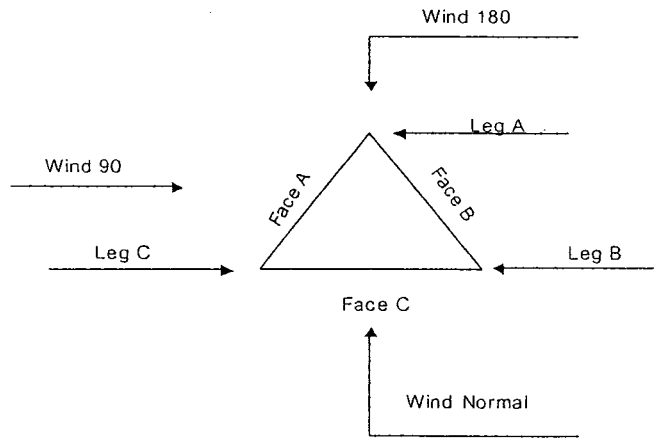
ERITower Paul J. Ford & Company 250 E. Broad Street Columbus, Ohio 43215 Phone: 614-221-6679 FAX: 614-448-4105	Job Existing 350 self-supporting tower	Page 1 of 31
	Project Wolcott, Connecticut	Date 16:01:50 12/19/03
	Client AAT Communications	Designed by JHK

Tower Input Data

The main tower is a 3x free standing tower with an overall height of 350.00 ft above the ground line. The base of the tower is set at an elevation of 0.00 ft above the ground line. The face width of the tower is 4.00 ft at the top and 36.00 ft at the base. This tower is designed using the TIA/EIA-222-F standard.

The following design criteria apply:

- Basic wind speed of 85.00 mph.
- Nominal ice thickness of 0.500 in.
- Ice density of 56 pcf.
- A wind speed of 73.61 mph is used in combination with ice.
- Temperature drop of 30 F.
- Deflections calculated using a wind speed of 50.00 mph.
- A non-linear (P-delta) analysis was used.
- Pressures are calculated at each section.
- Stress ratio used in tower member design is 1.333.
- Local bending stresses due to climbing loads and feedline supports are not considered.



Triangular Tower

Tower Section Geometry

ERITower Paul J. Ford & Company 250 E. Broad Street Columbus, Ohio 43215 Phone: 614-221-6679 FAX: 614-448-4105	Job	Existing 350 self-supporting tower	Page	3 of 31
	Project	Wolcott, Connecticut	Date	16:01:50 12/19/03
	Client	AAT Communications	Designed by	JHK

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
320.00			(50 ksi)			(36 ksi)
T3 320.00-300.00	Solid Round	2 1/2" solid	A572-50 (50 ksi)	Single Angle	L 2 x 2 x 3/16	A36 (36 ksi)
T4 300.00-280.00	Solid Round	3 1/4" solid	A572-50 (50 ksi)	Single Angle	L 2.5 x 2.5 x 3/16	A36 (36 ksi)
T5 280.00-260.00	Solid Round	3 1/4" solid	A572-50 (50 ksi)	Single Angle	L 2.5 x 2.5 x 3/16	A36 (36 ksi)
T6 260.00-240.00	Solid Round	3 1/2" solid	A572-50 (50 ksi)	Single Angle	L 3 x 3 x 3/16	A36 (36 ksi)
T7 240.00-220.00	Solid Round	3 1/2" solid	A572-50 (50 ksi)	Double Angle	2L 2.5 x 2.5 x 3/16 (3/8)	A36 (36 ksi)
T8 220.00-200.00	Solid Round	3 3/4" solid	A572-50 (50 ksi)	Double Angle	2L 2.5 x 2.5 x 3/16 (3/8)	A36 (36 ksi)
T9 200.00-180.00	Solid Round	4" solid	A572-50 (50 ksi)	Double Angle	2L 3 x 3 x 3/16 (3/8)	A36 (36 ksi)
T10 180.00-160.00	Solid Round	4 1/4" solid	A572-50 (50 ksi)	Double Angle	2L 3 x 3 x 3/16 (3/8)	A36 (36 ksi)
T11 160.00-140.00	Solid Round	4 1/4" solid	A572-50 (50 ksi)	Double Angle	2L 3 x 3 x 3/16 (3/8)	A36 (36 ksi)
T12 140.00-120.00	Solid Round	4 1/2" solid	A572-50 (50 ksi)	Double Angle	2L 3 x 3 x 1/4 (3/8)	A36 (36 ksi)
T13 120.00-100.00	Solid Round	4 3/4" solid	A572-50 (50 ksi)	Double Angle	2L 3 x 3 x 1/4 (3/8)	A36 (36 ksi)
T14 100.00-80.00	Solid Round	4 3/4" solid	A572-50 (50 ksi)	Double Angle	2L 3 x 3 x 1/4 (3/8)	A36 (36 ksi)
T15 80.00-60.00	Solid Round	5" solid	A572-50 (50 ksi)	Double Angle	2L 3.5 x 3.5 x 1/4 (3/8)	A36 (36 ksi)
T16 60.00-40.00	Solid Round	5 1/4" solid	A572-50 (50 ksi)	Double Angle	2L 3.5 x 3.5 x 1/4 (3/8)	A36 (36 ksi)
T17 40.00-20.00	Solid Round	5 1/4" solid	A572-50 (50 ksi)	Double Angle	2L 3.5 x 3.5 x 1/4 (3/8)	A36 (36 ksi)
T18 20.00-0.00	Solid Round	5 1/2" solid	A572-50 (50 ksi)	Double Angle	2L 3.5 x 3.5 x 1/4 (3/8)	A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 350.00-340.00	Single Angle	L 2 x 1.5 x 3/16 LLV	A36 (36 ksi)	Single Angle		A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T7 240.00-220.00	None	Single Angle		A36 (36 ksi)	Single Angle	L 2.5 x 2.5 x 3/16	A36 (36 ksi)
T8 220.00-	None	Single Angle		A36	Single Angle	L 2.5 x 2.5 x 3/16	A36

ERITower Paul J. Ford & Company 250 E. Broad Street Columbus, Ohio 43215 Phone: 614-221-6679 FAX: 614-448-4105	Job	Existing 350 self-supporting tower	Page	5 of 31
	Project	Wolcott, Connecticut	Date	16:01:50 12/19/03
	Client	AAT Communications	Designed by	JHK

Tower Section Geometry (cont'd)

Tower Elevation	Redundant Bracing Grade	Redundant Type	Redundant Size	K Factor	
<i>ft</i>					
T12 140.00-120.00	A36 (36 ksi)	Horizontal (1) Diagonal (1)	Single Angle Single Angle	L 2 x 2 x 3/16 L 2.5 x 2.5 x 3/16	1 1
T13 120.00-100.00	A36 (36 ksi)	Horizontal (1) Diagonal (1)	Single Angle Single Angle	L 2 x 2 x 3/16 L 2.5 x 2.5 x 3/16	1 1
T14 100.00-80.00	A36 (36 ksi)	Horizontal (1) Diagonal (1)	Single Angle Single Angle	L 2 x 2 x 3/16 L 2.5 x 2.5 x 3/16	1 1
T15 80.00-60.00	A36 (36 ksi)	Horizontal (1) Diagonal (1)	Single Angle Single Angle	L 2.5 x 2.5 x 3/16 L 3 x 3 x 3/16	1 1
T16 60.00-40.00	A36 (36 ksi)	Horizontal (1) Diagonal (1)	Single Angle Single Angle	L 2.5 x 2.5 x 3/16 L 3 x 3 x 3/16	1 1
T17 40.00-20.00	A36 (36 ksi)	Horizontal (1) Diagonal (1)	Single Angle Single Angle	L 2.5 x 2.5 x 3/16 L 3 x 3 x 3/16	1 1
T18 20.00-0.00	A36 (36 ksi)	Horizontal (1) Diagonal (1)	Single Angle Single Angle	L 3 x 3 x 3/16 L 3 x 3 x 3/16	1 1

Tower Section Geometry (cont'd)

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stich Bolt Spacing Diagonals in	Double Angle Stich Bolt Spacing Horizontals in
<i>ft</i>		<i>ft²</i>		<i>in</i>				
T1 350.00-340.00	0.00	0.250	A36 (36 ksi)	1	1	1.1	24.000	24.000
T2 340.00-320.00	0.00	0.250	A36 (36 ksi)	1	1	1.1	24.000	24.000
T3 320.00-300.00	0.00	0.250	A36 (36 ksi)	1	1	1.1	24.000	24.000
T4 300.00-280.00	0.00	0.250	A36 (36 ksi)	1	1	1.1	24.000	24.000
T5 280.00-260.00	0.00	0.375	A36 (36 ksi)	1	1	1.1	24.000	24.000
T6 260.00-240.00	0.00	0.375	A36 (36 ksi)	1	1	1.1	24.000	24.000
T7 240.00-220.00	0.00	0.375	A36 (36 ksi)	1	1	1.1	24.000	24.000
T8 220.00-200.00	0.00	0.375	A36 (36 ksi)	1	1	1.1	24.000	24.000
T9 200.00-180.00	0.00	0.375	A36 (36 ksi)	1	1	1.1	24.000	24.000
T10 180.00-160.00	0.00	0.375	A36 (36 ksi)	1	1	1.1	24.000	24.000
T11 160.00-140.00	0.00	0.375	A36 (36 ksi)	1	1	1.2	24.000	24.000
T12 140.00-120.00	0.00	0.375	A36 (36 ksi)	1	1	1.2	24.000	24.000
T13 120.00-100.00	0.00	0.375	A36 (36 ksi)	1	1	1.2	24.000	24.000
T14 100.00-80.00	0.00	0.375	A36 (36 ksi)	1	1	1.2	24.000	24.000
T15 80.00-60.00	0.00	0.375	A36 (36 ksi)	1	1	1.2	24.000	24.000
T16 60.00-0.00	0.00	0.375	A36	1	1	1.2	24.000	24.000

ERITower Paul J. Ford & Company 250 E. Broad Street Columbus, Ohio 43215 Phone: 614-221-6679 FAX: 614-448-4105	Job	Existing 350 self-supporting tower	Page	7 of 31
	Project	Wolcott, Connecticut	Date	16:01:50 12/19/03
	Client	AAT Communications	Designed by	JHK

Tower Section Geometry (cont'd)

Tower Elevation ft	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T1 350.00-340.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T2 340.00-320.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T3 320.00-300.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T4 300.00-280.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T5 280.00-260.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T6 260.00-240.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T7 240.00-220.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T8 220.00-200.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T9 200.00-180.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T10 180.00-160.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T11 160.00-140.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T12 140.00-120.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T13 120.00-100.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T14 100.00-80.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T15 80.00-60.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T16 60.00-40.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T17 40.00-20.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T18 20.00-0.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75

Tower Section Geometry (cont'd)

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T1 350.00-340.00	Flange	0.625	4	0.625	1	0.625	1	0.625	0	0.625	0	0.625	0	0.625	0
T2 340.00-320.00	Flange	0.625	4	0.625	1	0.625	0	0.625	0	0.625	0	0.625	0	0.625	0
T3 320.00-300.00	Flange	0.750	4	0.625	1	0.625	0	0.625	0	0.625	0	0.625	0	0.625	0

ERITower Paul J. Ford & Company 250 E. Broad Street Columbus, Ohio 43215 Phone: 614-221-6679 FAX: 614-448-4105	Job	Existing 350 self-supporting tower	Page	9 of 31
	Project	Wolcott, Connecticut	Date	16:01:50 12/19/03
	Client	AAT Communications	Designed by	JHK

Description	Face	Allow Shield	Component Type	Placement ft	Total Number	C _{AA}		Weight plf
						ft ² /ft		
Climbing Ladder	A	No	CaAa (In Face)	0.00 - 350.00	1	1/2" Ice	0.20	2.9
						1" Ice	0.30	4.4
						2" Ice	0.50	9.3
						4" Ice	0.90	26.4
						No Ice	0.56	4.6
						1/2" Ice	0.86	8.6
						1" Ice	1.16	12.5
LDF6-50 (1 1/4" foam)	C	No	CaAa (In Face)	200.00 - 350.00	3	2" Ice	1.76	20.4
						4" Ice	2.96	36.2
						No Ice	0.16	0.7
						1/2" Ice	0.25	1.9
						1" Ice	0.35	3.8
						2" Ice	0.55	9.3
						4" Ice	0.95	27.8
LDF7-50A (1 5/8" foam)	A	No	CaAa (In Face)	185.00 - 200.00	9	No Ice	0.20	0.9
						1/2" Ice	0.30	2.4
						1" Ice	0.40	4.6
						2" Ice	0.60	10.6
						4" Ice	1.00	30.1
						No Ice	0.16	0.7
						1/2" Ice	0.25	1.9
LDF6-50 (1 1/4" foam)	C	No	CaAa (In Face)	8.00 - 350.00	2	1" Ice	0.35	3.8
						2" Ice	0.55	9.3
						4" Ice	0.95	27.8
						No Ice	0.11	0.3
						1/2" Ice	0.21	1.3
						1" Ice	0.31	2.9
						2" Ice	0.51	7.9
LDF5-50A (7/8" foam)	C	No	CaAa (In Face)	8.00 - 350.00	1	4" Ice	0.91	25.2
						No Ice	0.06	0.1
						1/2" Ice	0.16	0.8
						1" Ice	0.26	2.1
						2" Ice	0.46	6.6
						4" Ice	0.86	22.8
						No Ice	0.16	0.7
LDF4-50A (1/2" foam)	C	No	CaAa (In Face)	8.00 - 315.00	2	1/2" Ice	0.25	1.9
						1" Ice	0.35	3.8
						2" Ice	0.55	9.3
						4" Ice	0.95	27.8
						No Ice	0.06	0.1
						1/2" Ice	0.16	0.8
						1" Ice	0.26	2.1
LDF4-50A (1/2" foam)	C	No	CaAa (In Face)	8.00 - 175.00	1	2" Ice	0.46	6.6
						4" Ice	0.86	22.8
						No Ice	0.06	0.1
						1/2" Ice	0.16	0.8
						1" Ice	0.26	2.1
						2" Ice	0.46	6.6
						4" Ice	0.86	22.8
LDF4-50A (1/2" foam)	C	No	CaAa (In Face)	8.00 - 170.00	2	No Ice	0.06	0.1
						1/2" Ice	0.16	0.8
						1" Ice	0.26	2.1
						2" Ice	0.46	6.6
						4" Ice	0.86	22.8
						No Ice	0.06	0.1
						1/2" Ice	0.16	0.8
LDF4-50A (1/2" foam)	C	No	CaAa (In Face)	8.00 - 155.00	1	1" Ice	0.26	2.1
						2" Ice	0.46	6.6
						4" Ice	0.86	22.8
						No Ice	0.06	0.1
						1/2" Ice	0.16	0.8
						1" Ice	0.26	2.1
						2" Ice	0.46	6.6
LDF4-50A (1/2" foam)	C	No	CaAa (In Face)	8.00 - 70.00	1	4" Ice	0.86	22.8
						No Ice	0.06	0.1
						1/2" Ice	0.16	0.8
						1" Ice	0.26	2.1
						2" Ice	0.46	6.6
						4" Ice	0.86	22.8
						No Ice	0.06	0.1

ERITower Paul J. Ford & Company 250 E. Broad Street Columbus, Ohio 43215 Phone: 614-221-6679 FAX: 614-448-4105	Job	Page
	Existing 350 self-supporting tower	11 of 31
	Project	Date
	Wolcott, Connecticut	16:01:50 12/19/03
	Client	Designed by
	AAT Communications	JHK

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face	Ice Thickness in	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
T1	350.00-340.00	A	0.500	0.000	1.806	10.600	0.000	0.15
		B		0.000	1.806	0.000	0.000	0.04
		C		0.000	1.806	16.470	0.000	0.15
T2	340.00-320.00	A	0.500	0.000	3.611	21.200	0.000	0.30
		B		0.000	3.611	0.000	0.000	0.07
		C		0.000	3.611	32.940	0.000	0.30
T3	320.00-300.00	A	0.500	0.000	3.611	21.200	0.000	0.30
		B		0.000	3.611	0.000	0.000	0.07
		C		0.000	3.611	40.590	0.000	0.36
T4	300.00-280.00	A	0.500	0.000	3.611	21.200	0.000	0.30
		B		0.000	3.611	0.000	0.000	0.07
		C		0.000	3.611	43.140	0.000	0.38
T5	280.00-260.00	A	0.500	0.000	3.611	21.200	0.000	0.30
		B		0.000	3.611	0.000	0.000	0.07
		C		0.000	3.611	43.140	0.000	0.38
T6	260.00-240.00	A	0.500	0.000	3.611	21.200	0.000	0.30
		B		0.000	3.611	0.000	0.000	0.07
		C		0.000	3.611	43.140	0.000	0.38
T7	240.00-220.00	A	0.500	0.000	3.611	21.200	0.000	0.30
		B		0.000	3.611	0.000	0.000	0.07
		C		0.000	3.611	43.140	0.000	0.38
T8	220.00-200.00	A	0.500	0.000	3.611	21.200	0.000	0.30
		B		0.000	3.611	0.000	0.000	0.07
		C		0.000	3.611	43.140	0.000	0.38
T9	200.00-180.00	A	0.500	26.075	3.611	61.430	0.000	0.89
		B		0.000	3.611	0.000	0.000	0.07
		C		23.925	3.611	27.840	0.000	0.49
T10	180.00-160.00	A	0.500	59.600	3.611	21.200	0.000	0.89
		B		0.000	3.611	0.000	0.000	0.07
		C		57.450	3.611	33.545	0.000	0.85
T11	160.00-140.00	A	0.500	59.600	3.611	21.200	0.000	0.89
		B		0.000	3.611	0.000	0.000	0.07
		C		57.450	3.611	40.065	0.000	0.88
T12	140.00-120.00	A	0.500	59.600	3.611	21.200	0.000	0.89
		B		44.700	3.611	0.000	0.000	0.51
		C		57.450	3.611	40.880	0.000	0.89
T13	120.00-100.00	A	0.500	59.600	3.611	21.200	0.000	0.89
		B		59.600	3.611	0.000	0.000	0.66
		C		57.450	3.611	40.880	0.000	0.89
T14	100.00-80.00	A	0.500	59.600	3.611	21.200	0.000	0.89
		B		59.600	3.611	0.000	0.000	0.66
		C		57.450	3.611	40.880	0.000	0.89
T15	80.00-60.00	A	0.500	59.600	3.611	21.200	0.000	0.89
		B		59.600	3.611	0.000	0.000	0.66
		C		57.450	3.611	42.510	0.000	0.90
T16	60.00-40.00	A	0.500	59.600	3.611	21.200	0.000	0.89
		B		59.600	3.611	0.000	0.000	0.66
		C		57.450	3.611	44.140	0.000	0.90
T17	40.00-20.00	A	0.500	59.600	3.611	21.200	0.000	0.89
		B		59.600	3.611	0.000	0.000	0.66
		C		57.450	3.611	44.140	0.000	0.90
T18	20.00-0.00	A	0.500	35.760	2.167	19.600	0.000	0.60
		B		35.760	2.167	0.000	0.000	0.39
		C		34.470	2.167	26.484	0.000	0.54

ERITower Paul J. Ford & Company 250 E. Broad Street Columbus, Ohio 43215 Phone: 614-221-6679 FAX: 614-448-4105	Job	Existing 350 self-supporting tower	Page	13 of 31
	Project	Wolcott, Connecticut	Date	16:01:50 12/19/03
	Client	AAT Communications	Designed by	JHK

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets:			Azimuth Adjustment deg	Placement ft	C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K	
			Horz ft	Lateral ft	Vert ft						
Beacon	C	None			0.000	350.00	No Ice	3.60	3.60	0.10	
							1/2" Ice	4.00	4.00	0.15	
							1" Ice	4.40	4.40	0.20	
							2" Ice	5.20	5.20	0.30	
							4" Ice	6.80	6.80	0.50	
STROBE W/ ICE SHIELD	C	None			0.000	175.00	No Ice	4.00	4.00	0.20	
							1/2" Ice	5.00	5.00	0.25	
							1" Ice	6.00	6.00	0.30	
							2" Ice	8.00	8.00	0.40	
							4" Ice	12.00	12.00	0.60	
STROBE W/ ICE SHIELD	B	None			0.000	175.00	No Ice	4.00	4.00	0.20	
							1/2" Ice	5.00	5.00	0.25	
							1" Ice	6.00	6.00	0.30	
							2" Ice	8.00	8.00	0.40	
							4" Ice	12.00	12.00	0.60	
20 ft whip	C	From Leg	6.00	0.000	350.00	No Ice	5.75	5.75	0.10		
			0.00			1/2" Ice	7.78	7.78	0.14		
			0.00			1" Ice	9.83	9.83	0.20		
						2" Ice	13.98	13.98	0.34		
						4" Ice	21.56	21.56	0.80		
20 ft whip	C	From Leg	6.00	0.000	350.00	No Ice	5.75	5.75	0.10		
			0.00			1/2" Ice	7.78	7.78	0.14		
			0.00			1" Ice	9.83	9.83	0.20		
						2" Ice	13.98	13.98	0.34		
						4" Ice	21.56	21.56	0.80		
10 ft whip	B	From Leg	6.00	0.000	350.00	No Ice	2.88	2.88	0.05		
			0.00			1/2" Ice	3.91	3.91	0.07		
			0.00			1" Ice	4.96	4.96	0.10		
						2" Ice	6.19	6.19	0.17		
						4" Ice	8.76	8.76	0.41		
20 ft whip	B	From Leg	6.00	0.000	350.00	No Ice	5.75	5.75	0.10		
			0.00			1/2" Ice	7.78	7.78	0.14		
			0.00			1" Ice	9.83	9.83	0.20		
						2" Ice	13.98	13.98	0.34		
						4" Ice	21.56	21.56	0.80		
12 ft whip	A	From Leg	6.00	0.000	350.00	No Ice	3.45	3.45	0.06		
			0.00			1/2" Ice	4.68	4.68	0.09		
			0.00			1" Ice	5.93	5.93	0.12		
						2" Ice	7.93	7.93	0.21		
						4" Ice	10.96	10.96	0.49		
HALO MOUNT (9-ARM)	C	None			0.000	350.00	No Ice	91.00	91.00	2.27	
								1/2" Ice	131.00	131.00	3.33
								1" Ice	171.00	171.00	4.39
								2" Ice	251.00	251.00	6.51
								4" Ice	411.00	411.00	10.75
20 ft whip	C	From Leg	3.00	0.000	315.00	No Ice	5.75	5.75	0.10		
			0.00			1/2" Ice	7.78	7.78	0.14		
			0.00			1" Ice	9.83	9.83	0.20		
						2" Ice	13.98	13.98	0.34		
						4" Ice	21.56	21.56	0.80		
3' Side Mount	C	None			0.000	315.00	No Ice	2.72	2.72	0.05	
								1/2" Ice	4.91	4.91	0.09
								1" Ice	7.10	7.10	0.13
								2" Ice	11.48	11.48	0.21

ERITower Paul J. Ford & Company 250 E. Broad Street Columbus, Ohio 43215 Phone: 614-221-6679 FAX: 614-448-4105	Job	Page
	Existing 350 self-supporting tower	15 of 31
	Project	Date
	Wolcott, Connecticut	16:01:50 12/19/03
Client	AAT Communications	Designed by
		JHK

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _A A _A Front	C _A A _A Side	Weight
			Horz	Vert					
			ft	ft	deg	ft	ft ²	ft ²	K
			0.00						
			0.00						
						1/2" Ice	1.44	0.42	0.02
						1" Ice	1.60	0.52	0.03
						2" Ice	1.95	0.76	0.06
						4" Ice	2.75	1.35	0.14
(2) DD1900	B	From Leg	4.00	0.000	185.00	No Ice	1.29	0.32	0.02
			0.00			1/2" Ice	1.44	0.42	0.02
			0.00			1" Ice	1.60	0.52	0.03
						2" Ice	1.95	0.76	0.06
						4" Ice	2.75	1.35	0.14
(2) DD1900	A	From Leg	4.00	0.000	185.00	No Ice	1.29	0.32	0.02
			0.00			1/2" Ice	1.44	0.42	0.02
			0.00			1" Ice	1.60	0.52	0.03
						2" Ice	1.95	0.76	0.06
						4" Ice	2.75	1.35	0.14
Generic Sector Frame	C	From Leg	4.00	0.000	185.00	No Ice	15.00	10.00	0.60
			0.00			1/2" Ice	17.50	12.50	0.80
			0.00			1" Ice	20.00	15.00	1.00
						2" Ice	25.00	20.00	1.40
						4" Ice	30.00	25.00	2.20
Generic Sector Frame	B	From Leg	4.00	0.000	185.00	No Ice	15.00	10.00	0.60
			0.00			1/2" Ice	17.50	12.50	0.80
			0.00			1" Ice	20.00	15.00	1.00
						2" Ice	25.00	20.00	1.40
						4" Ice	30.00	25.00	2.20
Generic Sector Frame	A	From Leg	4.00	0.000	185.00	No Ice	15.00	10.00	0.60
			0.00			1/2" Ice	17.50	12.50	0.80
			0.00			1" Ice	20.00	15.00	1.00
						2" Ice	25.00	20.00	1.40
						4" Ice	30.00	25.00	2.20
Unused Mount	C	None		0.000	170.00	No Ice	0.75	0.75	0.03
						1/2" Ice	0.95	0.95	0.04
						1" Ice	1.16	1.16	0.05
						2" Ice	1.61	1.61	0.07
						4" Ice	2.64	2.64	0.16
6 ft whip	C	From Leg	2.00	0.000	155.00	No Ice	1.73	1.73	0.03
			0.00			1/2" Ice	2.09	2.09	0.04
			0.00			1" Ice	2.46	2.46	0.06
						2" Ice	3.23	3.23	0.11
						4" Ice	4.88	4.88	0.26
2' Side Mount	C	From Leg	2.00	0.000	155.00	No Ice	1.50	1.50	0.05
			0.00			1/2" Ice	2.50	2.50	0.09
			0.00			1" Ice	3.50	3.50	0.13
						2" Ice	5.50	5.50	0.21
						4" Ice	9.50	9.50	0.36
(2) DB980H90	C	From Leg	4.00	0.000	140.00	No Ice	3.75	2.17	0.01
			0.00			1/2" Ice	4.13	2.53	0.03
			0.00			1" Ice	4.51	2.90	0.05
						2" Ice	5.31	3.66	0.12
						4" Ice	7.20	5.27	0.31
(2) DB980H90	B	From Leg	4.00	0.000	140.00	No Ice	3.75	2.17	0.01
			0.00			1/2" Ice	4.13	2.53	0.03
			0.00			1" Ice	4.51	2.90	0.05
						2" Ice	5.31	3.66	0.12
						4" Ice	7.20	5.27	0.31
(2) DB980H90	A	From Leg	4.00	0.000	140.00	No Ice	3.75	2.17	0.01
			0.00			1/2" Ice	4.13	2.53	0.03
			0.00			1" Ice	4.51	2.90	0.05

ERITower Paul J. Ford & Company 250 E. Broad Street Columbus, Ohio 43215 Phone: 614-221-6679 FAX: 614-448-4105	Job	Page	
	Existing 350 self-supporting tower		17 of 31
	Project	Wolcott, Connecticut	Date
	Client	AAT Communications	16:01:50 12/19/03
			Designed by
			JHK

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment deg	Elevation ft	Outside Diameter ft	Aperture Area ft ²	Weight K	
2 ft standard	C	Paraboloid w/o Radome	From Leg	0.50	Worst	170.00	2.00	No Ice	3.14	0.01
				0.00				1/2" Ice	3.41	0.06
				0.00				1" Ice	3.68	0.10
								2" Ice	4.21	0.19
								4" Ice	5.28	0.37
3 ft standard	B	Paraboloid w/o Radome	From Leg	0.50	Worst	170.00	3.00	No Ice	7.06	0.10
				0.00				1/2" Ice	7.47	0.18
				0.00				1" Ice	7.88	0.25
								2" Ice	8.73	0.39
								4" Ice	10.56	0.67
2 ft standard	C	Paraboloid w/o Radome	From Leg	0.50	Worst	70.00	2.00	No Ice	3.14	0.01
				0.00				1/2" Ice	3.41	0.06
				0.00				1" Ice	3.68	0.10
								2" Ice	4.21	0.19
								4" Ice	5.28	0.37

Load Combinations

Comb. No.	Description
1	Dead Only
2	Dead+Wind 0 deg - No Ice
3	Dead+Wind 30 deg - No Ice
4	Dead+Wind 60 deg - No Ice
5	Dead+Wind 90 deg - No Ice
6	Dead+Wind 120 deg - No Ice
7	Dead+Wind 150 deg - No Ice
8	Dead+Wind 180 deg - No Ice
9	Dead+Wind 210 deg - No Ice
10	Dead+Wind 240 deg - No Ice
11	Dead+Wind 270 deg - No Ice
12	Dead+Wind 300 deg - No Ice
13	Dead+Wind 330 deg - No Ice
14	Dead+Ice+Temp
15	Dead+Wind 0 deg+Ice+Temp
16	Dead+Wind 30 deg+Ice+Temp
17	Dead+Wind 60 deg+Ice+Temp
18	Dead+Wind 90 deg+Ice+Temp
19	Dead+Wind 120 deg+Ice+Temp
20	Dead+Wind 150 deg+Ice+Temp
21	Dead+Wind 180 deg+Ice+Temp
22	Dead+Wind 210 deg+Ice+Temp
23	Dead+Wind 240 deg+Ice+Temp
24	Dead+Wind 270 deg+Ice+Temp
25	Dead+Wind 300 deg+Ice+Temp
26	Dead+Wind 330 deg+Ice+Temp
27	Dead+Wind 0 deg - Service
28	Dead+Wind 30 deg - Service
29	Dead+Wind 60 deg - Service
30	Dead+Wind 90 deg - Service
31	Dead+Wind 120 deg - Service
32	Dead+Wind 150 deg - Service
33	Dead+Wind 180 deg - Service
34	Dead+Wind 210 deg - Service
35	Dead+Wind 240 deg - Service
36	Dead+Wind 270 deg - Service

ERITower Paul J. Ford & Company 250 E. Broad Street Columbus, Ohio 43215 Phone: 614-221-6679 FAX: 614-448-4105	Job	Existing 350 self-supporting tower	Page	19 of 31
	Project	Wolcott, Connecticut	Date	16:01:50 12/19/03
	Client	AAT Communications	Designed by	JHK

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt deg	Twist deg
T4	300 - 280	27.80	23	1.022	0.046
T5	280 - 260	23.70	23	0.908	0.028
T6	260 - 240	20.06	23	0.800	0.018
T7	240 - 220	16.83	23	0.710	0.013
T8	220 - 200	13.99	23	0.620	0.010
T9	200 - 180	11.49	23	0.543	0.009
T10	180 - 160	9.28	23	0.476	0.008
T11	160 - 140	7.32	23	0.415	0.006
T12	140 - 120	5.59	23	0.352	0.005
T13	120 - 100	4.13	23	0.294	0.004
T14	100 - 80	2.92	23	0.240	0.003
T15	80 - 60	1.91	23	0.186	0.002
T16	60 - 40	1.15	23	0.136	0.001
T17	40 - 20	0.58	23	0.089	0.001
T18	20 - 0	0.18	2	0.042	0.000

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt deg	Twist deg	Radius of Curvature ft
350.00	Beacon	23	41.42	1.462	0.168	24241
315.00	20 ft whip	23	31.28	1.168	0.075	4395
200.00	(4) 844H65T6E-XY	23	11.49	0.543	0.009	16912
185.00	(3) DUO1417-8686	23	9.81	0.492	0.008	19076
175.00	STROBE W/ ICE SHIELD	23	8.77	0.460	0.007	20030
170.00	2 ft standard	23	8.27	0.445	0.007	20151
155.00	6 ft whip	23	6.86	0.399	0.006	19781
140.00	(2) DB980H90	23	5.59	0.352	0.005	18211
130.00	(2) DB980H90	23	4.83	0.322	0.004	17991
70.00	2 ft standard	23	1.50	0.160	0.002	20720

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load K	Ratio Load Allowable	Allowable Ratio	Criteria
T1	350	Leg	A325N	0.625	4	2.72	13.50	0.201 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.625	1	3.80	6.44	0.590 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.625	1	0.92	6.44	0.143 ✓	1.333	Bolt Shear
T2	340	Leg	A325N	0.625	4	13.59	13.50	1.007 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.625	1	4.83	6.44	0.749 ✓	1.333	Bolt Shear
T3	320	Leg	A325N	0.750	4	19.83	19.44	1.020 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.625	1	3.14	6.44	0.488 ✓	1.333	Bolt Shear
T4	300	Leg	A325N	0.750	6	16.47	19.44	0.847 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.625	1	3.60	6.44	0.559 ✓	1.333	Bolt Shear

ERITower Paul J. Ford & Company 250 E. Broad Street Columbus, Ohio 43215 Phone: 614-221-6679 FAX: 614-448-4105	Job	Existing 350 self-supporting tower	Page	21 of 31
	Project	Wolcott, Connecticut	Date	16:01:50 12/19/03
	Client	AAT Communications	Designed by	JHK

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load K	Ratio Load Allowable	Allowable Ratio	Criteria
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Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	F _a ksi	A in ²	Actual P K	Allow. P _a K	Ratio P P _a
T1	350 - 340	2" solid	10.00	5.00	120.0 K=1.00	10.370	3.142	-14.12	32.58	0.433
T2	340 - 320	2" solid	20.00	4.00	96.0 K=1.00	15.618	3.142	-59.86	49.07	1.220
T3	320 - 300	2 1/2" solid	20.03	5.01	96.2 K=1.00	15.583	4.909	-88.15	76.49	1.152
T4	300 - 280	3 1/4" solid	20.03	6.68	98.6 K=1.00	15.023	8.296	-111.02	124.62	0.891
T5	280 - 260	3 1/4" solid	20.03	6.68	98.6 K=1.00	15.023	8.296	-134.76	124.62	1.081
T6	260 - 240	3 1/2" solid	20.03	6.68	91.6 K=1.00	16.596	9.621	-158.85	159.67	0.995
T7	240 - 220	3 1/2" solid	20.03	5.01	68.7 K=1.00	21.180	9.621	-181.73	203.78	0.892
T8	220 - 200	3 3/4" solid	20.03	5.01	64.1 K=1.00	22.004	11.045	-207.29	243.03	0.853
T9	200 - 180	4" solid	20.03	5.01	60.1 K=1.00	22.700	12.566	-240.35	285.26	0.843
T10	180 - 160	4 1/4" solid	20.03	5.01	56.6 K=1.00	23.295	14.186	-277.35	330.47	0.839
T11	160 - 140	4 1/4" solid	20.03	5.01	56.6 K=1.00	23.295	14.186	-315.68	330.47	0.955
T12	140 - 120	4 1/2" solid	20.03	5.01	53.4 K=1.00	23.808	15.904	-346.78	378.66	0.916
T13	120 - 100	4 3/4" solid	20.03	5.01	50.6 K=1.00	24.255	17.721	-389.05	429.82	0.905
T14	100 - 80	4 3/4" solid	20.03	5.01	50.6 K=1.00	24.255	17.721	-430.11	429.82	1.001
T15	80 - 60	5" solid	20.03	5.01	48.1 K=1.00	24.647	19.635	-471.53	483.94	0.974
T16	60 - 40	5 1/4" solid	20.03	5.01	45.8 K=1.00	24.993	21.647	-513.16	541.04	0.948
T17	40 - 20	5 1/4" solid	20.03	5.01	45.8 K=1.00	24.993	21.647	-554.00	541.04	1.024
T18	20 - 0	5 1/2" solid	20.03	5.01	43.7 K=1.00	25.301	23.758	-595.87	601.10	0.991

ERITower Paul J. Ford & Company 250 E. Broad Street Columbus, Ohio 43215 Phone: 614-221-6679 FAX: 614-448-4105	Job	Page	
	Existing 350 self-supporting tower		23 of 31
	Project	Wolcott, Connecticut	Date 16:01:50 12/19/03
Client	AAT Communications	Designed by JHK	

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	F _a ksi	A in ²	Actual P K	Allow. P _a K	Ratio P P _a
T9	200 - 180	L 3 x 3 x 3/16	17.50	8.58	172.7 K=1.00	5.005	1.090	-1.13	5.45	0.207
T10	180 - 160	L 3 x 3 x 3/16	19.50	9.57	192.6 K=1.00	4.024	1.090	-0.45	4.39	0.104
T11	160 - 140	L 3.5 x 3.5 x 1/4	21.50	10.57	182.8 K=1.00	4.468	1.690	-0.61	7.55	0.081
T12	140 - 120	2L 2.5 x 2.5 x 3/16 (3/8)	23.00	11.31	174.4 K=1.00	4.908	1.805	-0.95	8.86	0.107
T13	120 - 100	2L 2.5 x 2.5 x 3/16 (3/8)	25.00	12.30	189.7 K=1.00	4.150	1.805	-0.55	7.49	0.074
T14	100 - 80	2L 2.5 x 2.5 x 3/16 (3/8)	27.00	13.30	205.1 K=1.00	3.550	1.805	-0.55	6.41	0.085
T15	80 - 60	2L 3 x 3 x 3/16 (3/8)	29.00	14.29	182.6 K=1.00	4.477	2.180	-0.66	9.76	0.068
T16	60 - 40	2L 3 x 3 x 3/16 (3/8)	31.00	15.28	195.3 K=1.00	3.916	2.180	-0.59	8.54	0.069
T17	40 - 20	2L 3.5 x 3.5 x 1/4 (3/8)	33.00	16.28	179.2 K=1.00	4.648	3.380	-0.70	15.71	0.045
T18	20 - 0	2L 3.5 x 3.5 x 1/4 (3/8)	35.00	17.27	190.1 K=1.00	4.131	3.380	-0.53	13.96	0.038

Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	F _a ksi	A in ²	Actual P K	Allow. P _a K	Ratio P P _a
T1	350 - 340	L 2 x 1.5 x 3/16 LLV	4.00	3.56	132.8 K=1.00	8.470	0.621	-0.88	5.26	0.167

Redundant Horizontal (1) Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	F _a ksi	A in ²	Actual P K	Allow. P _a K	Ratio P P _a
T12	140 - 120	L 2 x 2 x 3/16	5.75	5.56	169.4 K=1.00	5.203	0.715	-1.06	3.72	0.286
T13	120 - 100	L 2 x 2 x 3/16	6.25	6.05	184.3 K=1.00	4.395	0.715	-1.27	3.14	0.404
T14	100 - 80	L 2 x 2 x 3/16	6.75	6.55	199.6 K=1.00	3.750	0.715	-1.35	2.68	0.503
T15	80 - 60	L 2.5 x 2.5 x 3/16	7.25	7.04	170.7 K=1.00	5.124	0.902	-1.39	4.62	0.300
T16	60 - 40	L 2.5 x 2.5 x 3/16	7.75	7.53	182.6 K=1.00	4.480	0.902	-1.60	4.04	0.396
T17	40 - 20	L 2.5 x 2.5 x 3/16	8.25	8.03	194.7 K=1.00	3.939	0.902	-1.51	3.55	0.424
T18	20 - 0	L 3 x 3 x 3/16	8.75	8.52	171.5	5.079	1.090	-1.84	5.54	0.332

ERITower Paul J. Ford & Company 250 E. Broad Street Columbus, Ohio 43215 Phone: 614-221-6679 FAX: 614-448-4105	Job	Existing 350 self-supporting tower	Page	25 of 31
	Project	Wolcott, Connecticut	Date	16:01:50 12/19/03
	Client	AAT Communications	Designed by	JHK

Section No.	Elevation ft	Size	L ft	L _w ft	Kl/r	F _a ksi	A in ²	Actual P K	Allow. P _a K	Ratio P P _a
T17	40 - 20	2L 3.5 x 3.5 x 1/4 (3/8)	16.50	16.50	181.7 K=1.00	4.526	3.380	-0.03	15.30	0.002 [*] ✓
T18	20 - 0	2L 3.5 x 3.5 x 1/4 (3/8)	17.50	17.50	192.7 K=1.00	4.023	3.380	-0.03	13.60	0.002 [*] ✓

* DL controls

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _w ft	Kl/r	F _a ksi	A in ²	Actual P K	Allow. P _a K	Ratio P P _a
T1	350 - 340	2" solid	10.00	5.00	120.0	30.000	3.142	10.87	94.25	0.115
T2	340 - 320	2" solid	20.00	4.00	96.0	30.000	3.142	54.36	94.25	0.577
T3	320 - 300	2 1/2" solid	20.03	5.01	96.2	30.000	4.909	79.33	147.26	0.539
T4	300 - 280	3 1/4" solid	20.03	6.68	98.6	30.000	8.296	98.80	248.87	0.397
T5	280 - 260	3 1/4" solid	20.03	6.68	98.6	30.000	8.296	118.48	248.87	0.476
T6	260 - 240	3 1/2" solid	20.03	6.68	91.6	30.000	9.621	138.16	288.63	0.479
T7	240 - 220	3 1/2" solid	20.03	5.01	68.7	30.000	9.621	156.08	288.63	0.541
T8	220 - 200	3 3/4" solid	20.03	5.01	64.1	30.000	11.045	175.66	331.34	0.530
T9	200 - 180	4" solid	20.03	5.01	60.1	30.000	12.566	198.19	376.99	0.526
T10	180 - 160	4 1/4" solid	20.03	5.01	56.6	30.000	14.186	225.45	425.59	0.530
T11	160 - 140	4 1/4" solid	20.03	5.01	56.6	30.000	14.186	254.38	425.59	0.598
T12	140 - 120	4 1/2" solid	20.03	5.01	53.4	30.000	15.904	275.38	477.13	0.577
T13	120 - 100	4 3/4" solid	20.03	5.01	50.6	30.000	17.721	307.24	531.62	0.578
T14	100 - 80	4 3/4" solid	20.03	5.01	50.6	30.000	17.721	335.77	531.62	0.632
T15	80 - 60	5" solid	20.03	5.01	48.1	30.000	19.635	367.98	589.05	0.625
T16	60 - 40	5 1/4" solid	20.03	5.01	45.8	30.000	21.647	395.72	649.43	0.609
T17	40 - 20	5 1/4" solid	20.03	5.01	45.8	30.000	21.647	426.13	649.43	0.656

ERITower Paul J. Ford & Company 250 E. Broad Street Columbus, Ohio 43215 Phone: 614-221-6679 FAX: 614-448-4105	Job	Existing 350 self-supporting tower	Page	27 of 31
	Project	Wolcott, Connecticut	Date	16:01:50 12/19/03
	Client	AAT Communications	Designed by	JHK

Section No.	Elevation ft	Size	L ft	L _u ft	KI/r	F _a ksi	A in ²	Actual P K	Allow. P _a K	Ratio P P _a
T7	240 - 220	L 2.5 x 2.5 x 3/16	13.50	6.47	101.8	29.000	0.571	0.26	16.56	0.016
T8	220 - 200	L 2.5 x 2.5 x 3/16	14.50	7.09	109.3	29.000	0.571	0.30	16.56	0.018
T9	200 - 180	L 3 x 3 x 3/16	17.50	8.58	109.7	29.000	0.712	1.05	20.65	0.051
T10	180 - 160	L 3 x 3 x 3/16	19.50	9.57	122.3	29.000	0.712	0.40	20.65	0.019
T11	160 - 140	L 3.5 x 3.5 x 1/4	21.50	10.57	116.3	29.000	1.127	0.56	32.68	0.017
T12	140 - 120	2L 2.5 x 2.5 x 3/16 (3/8)	23.00	11.31	174.4	29.000	1.107	0.65	32.12	0.020
T13	120 - 100	2L 2.5 x 2.5 x 3/16 (3/8)	25.00	12.30	189.7	29.000	1.107	0.17	32.12	0.005
T14	100 - 80	2L 2.5 x 2.5 x 3/16 (3/8)	27.00	13.30	205.1	29.000	1.107	0.19	32.12	0.006
T15	80 - 60	2L 3 x 3 x 3/16 (3/8)	29.00	14.29	182.6	29.000	1.389	0.25	40.28	0.006
T16	60 - 40	2L 3 x 3 x 3/16 (3/8)	31.00	15.28	195.3	29.000	1.389	0.24	40.28	0.006
T17	40 - 20	2L 3.5 x 3.5 x 1/4 (3/8)	33.00	16.28	179.2	29.000	2.207	0.31	64.00	0.005
T18	20 - 0	2L 3.5 x 3.5 x 1/4 (3/8)	35.00	17.27	190.1	29.000	2.207	0.12	64.00	0.002

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	KI/r	F _a ksi	A in ²	Actual P K	Allow. P _a K	Ratio P P _a
T1	350 - 340	L 2 x 1.5 x 3/16 LLV	4.00	3.56	104.6	29.000	0.360	0.92	10.45	0.088

Redundant Horizontal (1) Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	KI/r	F _a ksi	A in ²	Actual P K	Allow. P _a K	Ratio P P _a
T12	140 - 120	L 2 x 2 x 3/16	5.75	5.56	108.2	21.600	0.715	1.11	15.44	0.072
T13	120 - 100	L 2 x 2 x 3/16	6.25	6.05	117.7	21.600	0.715	1.15	15.44	0.075
T14	100 - 80	L 2 x 2 x 3/16	6.75	6.55	127.4	21.600	0.715	1.20	15.44	0.078
T15	80 - 60	L 2.5 x 2.5 x 3/16	7.25	7.04	108.5	21.600	0.902	1.29	19.48	0.066
T16	60 - 40	L 2.5 x 2.5 x 3/16	7.75	7.53	116.1	21.600	0.902	1.36	19.48	0.070

ERITower Paul J. Ford & Company 250 E. Broad Street Columbus, Ohio 43215 Phone: 614-221-6679 FAX: 614-448-4105	Job	Existing 350 self-supporting tower	Page	29 of 31
	Project	Wolcott, Connecticut	Date	16:01:50 12/19/03
	Client	AAT Communications	Designed by	JHK

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	SF*P _{allow} K	% Capacity	Pass Fail
T3	320 - 300	Leg	2 1/2" solid	52	-88.15	101.96	86.5	Pass
		Diagonal	L 2 x 2 x 3/16	56	-3.02	10.53	28.7	Pass
T4	300 - 280	Leg	3 1/4" solid	79	-111.02	166.12	66.8	Pass
		Diagonal	L 2.5 x 2.5 x 3/16	83	-3.60	12.21	29.5	Pass
T5	280 - 260	Leg	3 1/4" solid	100	-134.76	166.12	81.1	Pass
		Diagonal	L 2.5 x 2.5 x 3/16	104	-3.94	9.16	43.0	Pass
T6	260 - 240	Leg	3 1/2" solid	121	-158.85	212.84	74.6	Pass
		Diagonal	L 3 x 3 x 3/16	125	-4.57	12.27	37.3	Pass
T7	240 - 220	Leg	3 1/2" solid	142	-181.73	271.63	66.9	Pass
		Diagonal	2L 2.5 x 2.5 x 3/16 (3/8)	147	-5.82	22.73	25.6	Pass
T8	220 - 200	Horizontal	L 2.5 x 2.5 x 3/16	148	-0.37	7.30	5.0	Pass
		Inner Bracing	L 2.5 x 2.5 x 3/16	155	-0.01	6.71	0.2	Pass
		Leg	3 3/4" solid	181	-207.29	323.96	64.0	Pass
		Diagonal	2L 2.5 x 2.5 x 3/16 (3/8)	186	-6.52	17.66	36.9	Pass
T9	200 - 180	Horizontal	L 2.5 x 2.5 x 3/16	187	-0.38	5.30	7.2	Pass
		Inner Bracing	L 2.5 x 2.5 x 3/16	193	-0.01	5.09	0.2	Pass
		Leg	4" solid	220	-240.35	380.25	63.2	Pass
		Diagonal	2L 3 x 3 x 3/16 (3/8)	225	-9.73	26.02	37.4	Pass
T10	180 - 160	Horizontal	L 3 x 3 x 3/16	226	-1.13	7.27	15.5	Pass
		Inner Bracing	L 3 x 3 x 3/16	232	-0.01	7.00	0.3	Pass
		Leg	4 1/4" solid	260	-277.35	440.52	63.0	Pass
		Diagonal	2L 3 x 3 x 3/16 (3/8)	263	-11.12	22.03	50.5	Pass
T11	160 - 140	Horizontal	L 3 x 3 x 3/16	265	-0.45	5.85	7.8	Pass
		Inner Bracing	L 3 x 3 x 3/16	271	-0.01	5.64	0.3	Pass
		Leg	4 1/4" solid	298	-315.68	440.52	71.7	Pass
		Diagonal	2L 3 x 3 x 3/16 (3/8)	303	-12.42	18.80	66.1	Pass
T12	140 - 120	Horizontal	L 3.5 x 3.5 x 1/4	304	-0.61	10.07	6.1	Pass
		Inner Bracing	L 3.5 x 3.5 x 1/4	311	-0.02	9.74	0.3	Pass
		Leg	4 1/2" solid	337	-346.78	504.75	68.7	Pass
		Diagonal	2L 3 x 3 x 1/4 (3/8)	344	-17.19	29.75	57.8	Pass
T13	120 - 100	Horizontal	2L 2.5 x 2.5 x 3/16 (3/8)	347	-0.95	11.81	8.0	Pass
		Redund Horiz 1 Bracing	L 2 x 2 x 3/16	368	-1.06	4.96	21.4	Pass
		Redund Diag 1 Bracing	L 2.5 x 2.5 x 3/16	369	-0.69	5.35	12.9	Pass
		Inner Bracing	L 3.5 x 3.5 x 1/4	362	-0.02	8.51	0.3	Pass
T14	100 - 80	Leg	4 3/4" solid	382	-389.05	572.94	67.9	Pass
		Diagonal	2L 3 x 3 x 1/4 (3/8)	389	-17.92	27.18	65.9	Pass
		Horizontal	2L 2.5 x 2.5 x 3/16 (3/8)	392	-0.55	9.98	5.5	Pass
		Redund Horiz 1 Bracing	L 2 x 2 x 3/16	413	-1.27	4.19	30.3	Pass
T14	100 - 80	Redund Diag 1 Bracing	L 2.5 x 2.5 x 3/16	414	-0.99	4.84	20.4	Pass
		Inner Bracing	L 4 x 4 x 1/4	406	-0.02	8.14	0.5	Pass
		Leg	4 3/4" solid	427	-430.11	572.94	75.1	Pass
		Diagonal	2L 3 x 3 x 1/4 (3/8)	434	-18.22	24.83	73.4	Pass
T14	100 - 80	Horizontal	2L 2.5 x 2.5 x 3/16 (3/8)	437	-0.55	8.54	6.4	Pass
		Redund Horiz 1 Bracing	L 2 x 2 x 3/16	458	-1.35	3.57	37.7	Pass
		Redund Diag 1 Bracing	L 2.5 x 2.5 x 3/16	459	-0.87	4.38	19.9	Pass

ERITower Paul J. Ford & Company 250 E. Broad Street Westport, Ct 06880-4115 Phone: 614-221-6679 FAX: 614-448-4105	Job Existing 350 self-supporting tower	Page 31 of 31
	Project Wolcott, Connecticut	Date 16:01:50 12/19/03
Program Version: 0.0.0.0 12/19/2003 File: S:\POWER\0_Misc\2003\A03-T143.eri	Client AAT Communications	Designed by JHK



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

- 1) If the existing conditions are not as represented on PJF drawings, we should be contacted immediately to evaluate the significance of the deviation.
- 2) No allowance was made for any damaged, missing, or rusted members. The analysis of this tower assumes that no physical deterioration has occurred in any of the structural components of the tower and that all the tower members have the same load carrying capacity as the day the tower was erected.
- 3) It is not possible to have all the very detailed information to perform a very thorough analysis of every structural sub-component of an existing tower. The structural analysis by Paul J. Ford and Company verifies the adequacy of the main structural members of the tower. 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 owners responsibility to determine the amount of ice accumulation, if any, that should be considered in the structural analysis.
- 5) This tower has been analyzed according to the minimum design wind loads recommended by the Telecommunications Industry Association Standard TIA/EIA-222-F. If the owner or local or state agencies require a higher design wind load, Paul J. Ford and Company should be made aware of this requirement.
- 6) The attached sketches are a schematic representation of the tower and foundation that we have analyzed. If any material is fabricated from these sketches, the contractor shall be responsible for field verifying the existing conditions and for the proper fit and clearance in the field.
- 7) Miscellaneous items such as antenna mounts etc., have not been designed or detailed as a part of our work. We recommend that material of adequate size and strength be purchased from a reputable tower manufacturer.

COMMUNICATIONS

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PAUL J. FORD AND COMPANY
 STRUCTURAL ENGINEERS
 250 East Broad Street Suite 500 Columbus, Ohio 43215
 (614)-221-6679 FAX (614)-221-0166

Page 2 Of 2

By JHK Date 12-22-2003

Job No. A03-T143

Revision No. _____ Date _____

Tower 350 FT SELF SUPPORT

Location WOLCOTT, CONNECTICUT

Owner AAT COMMUNICATIONS CORP.

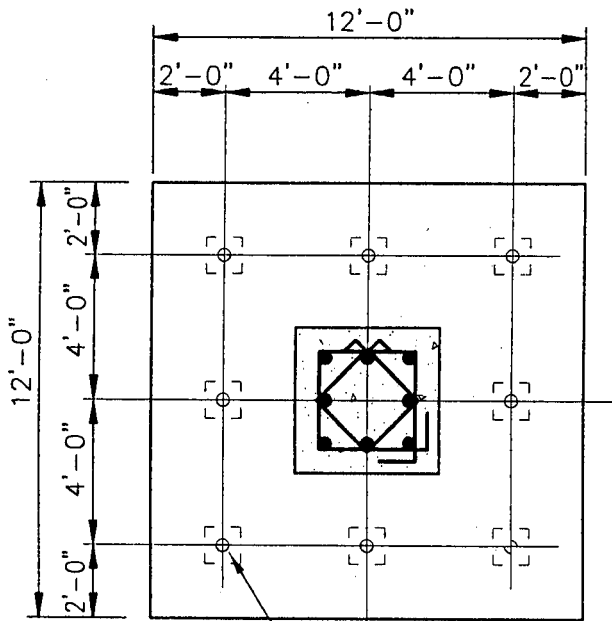
EIA Min 85 MPH/74 MPH + 1/2" RADIAL ICE

Stress Ratio 92%

According to ANSI/EIA 222-F 1996

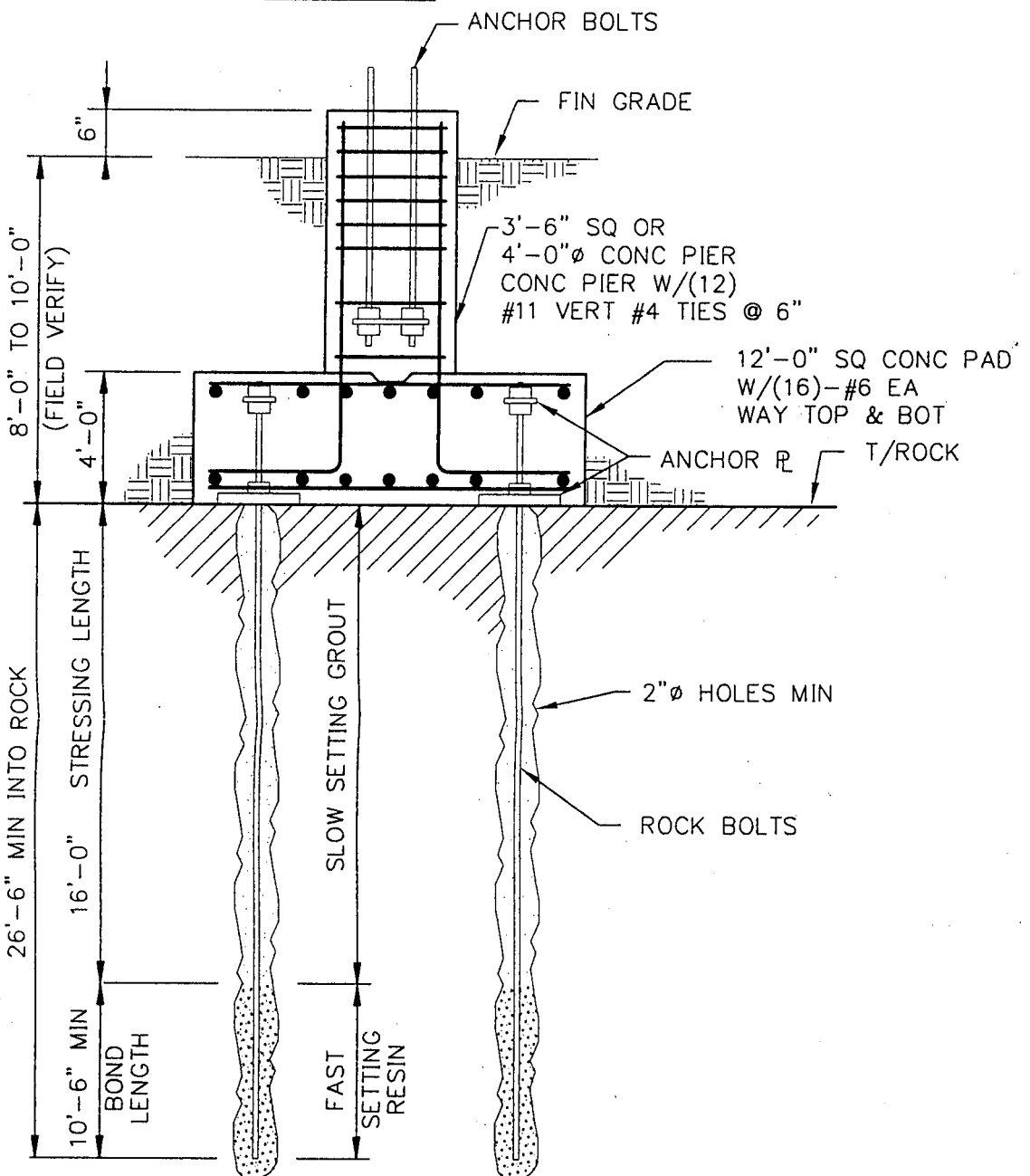
NOTES

1. ALL CONCRETE ASSUMED TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.
2. REINFORCING STEEL ASSUMED TO CONFORM TO ASTM A615 GRADE 60, EXCEPT PIER TIES MAY BE ASTM A615 GRADE 40.
3. ROCK BOLTS ASSUMED TO CONFORM TO ASTM A722 GRADE 150.
4. FOUNDATION DESIGN BASED UPON SOIL REPORT BY OSMAN PEKIN DATED DEC. 12, 1991.



(8) -1 1/4" ϕ ROCK BOLTS

PLAN



AAT COMMUNICATIONS

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PAUL J. FORD AND COMPANY
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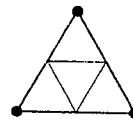
Page 1 Of 2
 By JHK Date 12-22-2003
 Job No. A03-T143
 Revision No. _____ Date _____
 Tower 350 FT SELF SUPPORT
 Location WOLCOTT, CONNECTICUT
 Owner AAT COMMUNICATIONS CORP.
 EIA Min 85 MPH/74 MPH + 1/2" RADIAL ICE
 Stress Ratio 92%
 According to ANSI/EIA 222-F 1996

ANTENNA LIST

NO.	EL	ANTENNA	COAX
	TOP	BEACON	1"
1	350'	20' WHIP	1 1/4"
2	350'	20' WHIP	1/2"
3	350'	10' WHIP	1 1/4"
4	350'	20' WHIP	(2) 1 1/4"
5	350'	12' WHIP	1 1/4", 7/8"
	350'	NINE ARM HALO MOUNT	
6	325'	10' WHIP W/ 3' SIDEARM	1 1/4"
7	315'	20' WHIP W/ 6' SIDEARM	1 1/4"
8-19	200'	(12) DB844H65	(12) 1 5/8"
	200'	(3) SECTOR MOUNTS	
NEW 20-22	185'	(3) CSS DUO 1417-8686	(3) 1 5/8"
NEW 23-25	185'	(3) CSS DUO 1417-8686	(3) 1 5/8"
NEW 26-28	185'	(3) CSS DUO 1417-8686	(3) 1 5/8"
NEW	185'	(6) ADC 1900	
NEW	185'	(3) SECTOR MOUNTS	
	175'	(2) STROBES W/ ICE SHIELDS	1/2"
29	170'	2' DISH	1/2"
30	170'	3' DISH	1/2"
	170'	UNUSED DISH MOUNT	
31	155'	6' WHIP W/ 2' SIDEARM	1/2"
32-37	140'	(6) DB980H90	(6) 1 5/8"
	140'	(3) SECTOR MOUNTS	
38-43	130'	(6) DB980H90 (ASSUMED)	(6) 1 5/8"
	130'	(3) SECTOR MOUNTS	
44	70'	2' SAT. DISH	1/2"

- FACE MOUNTED CLIMBING LADDER

- COAX ASSUMED TO BE DISTRIBUTED ON THREE FACES OF THE TOWER WITH NO MORE THAN 23 COAX ON EITHER FACE.

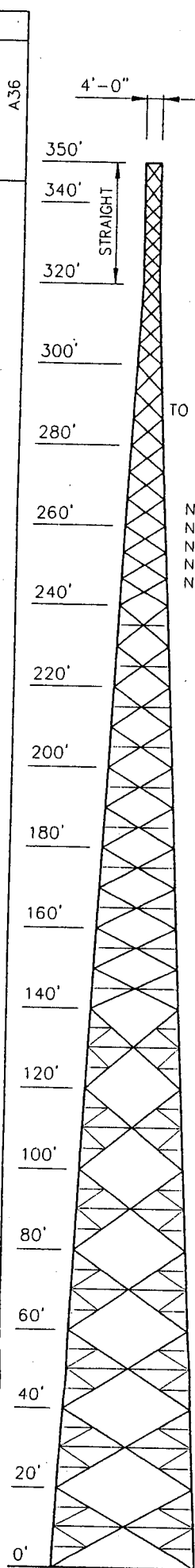


INTERIOR BRACING
 (EL 10' TO EL 235')
 (1)-5/8" BOLT EA END

FOUNDATION REACTIONS

UPLIFT: 467 KIPS MAX ONE LEG
 COMP: 613 KIPS MAX ONE LEG
 HORIZ: 63 KIPS MAX ONE LEG

ASTM		A36		A325		A36	
50 KSI							
LEGS	5 1/2"φ	5 1/4"φ	5"φ	4 3/4"φ	4 1/2"φ	4 1/4"φ	4"φ
DIAGONALS	2L3 1/2 x 3 1/2 x 1/4	2L3 1/2 x 3 1/2 x 1/4	2L3 x 3 x 1/4	2L3 x 3 x 3/16	2L2 1/2 x 2 1/2 x 3/16	2L3 x 3 x 3/16	2L2 1/2 x 2 1/2 x 3/16
GIRTS	2L3 1/2 x 3 1/2 x 1/4	2L3 x 3 x 3/16	2L3 x 3 x 3/16	2L2 1/2 x 2 1/2 x 3/16	2L3 x 3 x 3/16	2L2 1/2 x 2 1/2 x 3/16	2L2 1/2 x 2 1/2 x 3/16
INTERIOR	2L3 1/2 x 3 1/2 x 1/4	2L3 x 3 x 3/16	2L3 x 3 x 3/16	L4 x 4 x 1/4	L3 1/2 x 3 1/2 x 3/16	L3 x 3 x 3/16	L2 1/2 x 2 1/2 x 3/16
SUB DIAG	L3 x 3 x 3/16	L3 x 3 x 3/16	L2 1/2 x 2 1/2 x 3/16	L2 1/2 x 2 1/2 x 3/16	L2 1/2 x 2 1/2 x 3/16	L2 1/2 x 2 1/2 x 3/16	L2 1/2 x 2 1/2 x 3/16
SUB GIRT	L3x3x3/16	L2 1/2 x 2 1/2 x 3/16	L2 x 2 x 3/16	L2 x 2 x 3/16	L2 x 2 x 3/16	L2 x 2 x 3/16	L2 x 2 x 3/16
DIAG BOLTS	(1)-7/8"φ	(1)-7/8"φ	(1)-7/8"φ	(1)-3/4"φ	(1)-3/4"φ	(1)-3/4"φ	(1)-3/4"φ
GIRT BOLTS	(6)-1 1/2"φ	(6)-1 1/2"φ	(6)-1 1/2"φ	(6)-1 1/4"φ	(6)-1 1/4"φ	(6)-1 1/4"φ	(6)-1 1/4"φ
SPLICE BOLTS	(6)-2 1/2"φ	(6)-2 1/2"φ	(6)-2 1/2"φ	(6)-1 3/8"φ	(6)-1 3/8"φ	(6)-1 3/8"φ	(6)-1 3/8"φ
ANCHOR BOLTS	(6)-2 1/2"φ	(6)-2 1/2"φ	(6)-2 1/2"φ	(6)-1 1/8"φ	(6)-1 1/8"φ	(6)-1 1/8"φ	(6)-1 1/8"φ
	(1)-5/8"φ	(1)-5/8"φ	(1)-5/8"φ	(1)-5/8"φ	(1)-5/8"φ	(1)-5/8"φ	(1)-5/8"φ
	(4)-3/4"φ	(4)-3/4"φ	(4)-3/4"φ	(4)-3/4"φ	(4)-3/4"φ	(4)-3/4"φ	(4)-3/4"φ
	(4)-5/8"φ	(4)-5/8"φ	(4)-5/8"φ	(4)-5/8"φ	(4)-5/8"φ	(4)-5/8"φ	(4)-5/8"φ



36502001--PROFILE