



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](mailto:siting.council@ct.gov)

Internet: [ct.gov/csc](http://ct.gov/csc)

January 31, 2011

Kenneth C. Baldwin, Esq.  
Robinson & Cole LLP  
280 Trumbull Street  
Hartford, CT 06103-3597

RE: **EM-VER-158-110110** - Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at Bayberry Lane, Westport, Connecticut.

Dear Attorney Baldwin:

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 with the following conditions:

- Any deviation from the proposed modification as specified in this notice and supporting materials with Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Not less than 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration;

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated January 10, 2011. 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. Thank you for your attention and cooperation.

Very truly yours,

*Linda Roberts* <sup>NH#3</sup>

Linda Roberts  
Executive Director

LR/CDM/laf

- c: The Honorable Gordon F. Joseloff, First Selectman, Town of Westport
- Laurence Bradley, Director, Planning & Zoning, Town of Westport
- American Tower Corporation



*Daniel F. Caruso*  
Chairman

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

E-Mail: [siting.council@ct.gov](mailto:siting.council@ct.gov)

Internet: [ct.gov/csc](http://ct.gov/csc)

January 18, 2011

The Honorable Gordon F. Joseloff  
First Selectman  
Town of Westport  
Town Hall  
110 Myrtle Avenue  
Westport, CT 06880

RE: **EM-VER-158-110110** - Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at Bayberry Lane, Westport, Connecticut.

Dear First Selectman Joseloff:

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.

If you have any questions or comments regarding this proposal, please call me or inform the Council by February 1, 2011.

Thank you for your cooperation and consideration.

Very truly yours,

Linda Roberts  
Executive Director

LR/jbw

Enclosure: Notice of Intent

c: Laurence Bradley, Director, Planning & Zoning, Town of Westport

280 Trumbull Street  
Hartford, CT 06103-3597  
Main (860) 275-8200  
Fax (860) 275-8299  
kbaldwin@rc.com  
Direct (860) 275-8345

ORIGINAL

January 10, 2011

*Via Hand Delivery*

Linda Roberts  
Executive Director  
Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051

RECEIVED  
JAN 10 2011  
CONNECTICUT  
SITING COUNCIL

Re: **Notice of Exempt Modification – Antenna Swap  
Bayberry Lane, Westport, Connecticut**

Dear Ms. Roberts:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains wireless telecommunications antennas at the 76-foot level on the existing 140-foot tower at the above-referenced address. The tower is owned by American Tower Corporation. The Council approved Cellco’s use of the existing tower in 1998. Cellco now intends to modify its installation by replacing two (2) of its cellular antennas with two (2) model LPA-80080/6CF cellular antennas at the same 76-foot level on the tower. Attached behind Tab 1 are the specifications for the proposed replacement antennas.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Gordon F. Joseloff, First Selectman for the Town of Westport. The Town of Westport is the owner of the property on which the tower is located.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in any increase in the height of the existing tower. Cellco’s antennas will be located at the same 76-foot level on the existing 140-foot tower.



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# ROBINSON & COLE LLP

Linda Roberts  
January 10, 2011  
Page 2

2. The proposed modifications will not involve any modifications to ground-mounted equipment and, therefore, will not require the extension of the site boundaries.

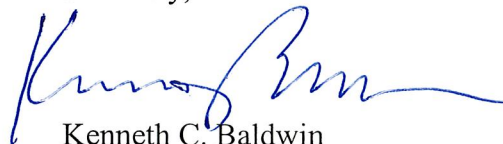
3. The proposed modifications will not increase noise levels at the site by six decibels or more.

4. The operation of the replacement antennas will not increase radio frequency (RF) power density levels at the facility to a level at or above the Federal Communications Commission (FCC) adopted safety standard. A worst-case cumulative power density table for Cellco's modified facility is included behind Tab 2.

Also attached is a Structural Analysis Report confirming that the tower and foundation can support Cellco's proposed antennas modification. (See Tab 3).

For the foregoing reasons, Cellco respectfully submits that the proposed modifications to the above-referenced telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,



Kenneth C. Baldwin

Enclosures

Copy to:

Gordon F. Joseloff, Westport First Selectman  
Sandy M. Carter



### Mechanical specifications

Length	1800 mm	70.9 in
Width	140 mm	5.5 in
Depth	335 mm	13.2 in
Depth with z-bracket	375 mm	14.8 in
Weight <sup>4)</sup>	9.5 kg	21.0 lbs
Wind Area Fore/Aft <sup>6)</sup>	0.25 m <sup>2</sup>	2.7 ft <sup>2</sup>
Wind Area Side <sup>6)</sup>	0.61 m <sup>2</sup>	6.6 ft <sup>2</sup>
Max Wind Survivability <sup>6)</sup>	>201 km/hr	>125 mph
Wind Load @ 100 mph (161 km/hr) <sup>6)</sup>		
Fore/Aft	415 N	93 lbf
Side	878 N	198 lbf

Antenna consisting of aluminum alloy with brass feedlines covered by a gray, UV safe fiberglass radome. RoHS compliant.

### Mounting & Downtilting

Mounting hardware attaches to pipe diameter Ø50-102 mm; Ø2.0-4.0 in. If the lock-down brace is used, the maximum diameter is Ø88.9 mm (3.5 in).

Mechanical downtilt angle 0-22°

Mounting & Downtilt Bracket Kit 21700000

### Electrical specifications

Frequency Range	806-960 MHz
Impedance	50Ω
Connector <sup>3)</sup>	NE or E-DIN Female 1 port / Center
VSWR <sup>1)</sup>	≤ 1.4:1
Polarization	Vertical
Gain <sup>1)</sup>	14 dBd
Power Rating <sup>2)</sup>	500 W
Half Power Angle <sup>1)</sup>	
Horizontal Beamwidth	80°
Vertical Beamwidth	10°
Electrical downtilt <sup>5)</sup>	0°
Null fill <sup>1)</sup>	10%
Lightning protection	Direct ground

1) Typical values.

2) Power rating limited by connector only.

3) NE indicates an elongated N connector.  
E-DIN indicates an elongated DIN connector.

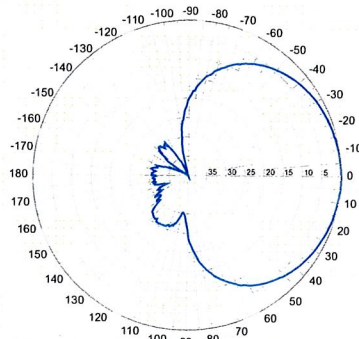
4) Antenna weight does not include brackets.

5) Add'l downtilts may be available. Check website for details.

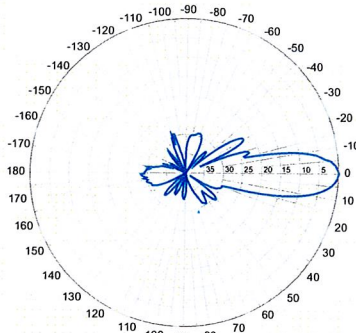
6) Values reflect installation with all three brackets utilized.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

### Radiation-pattern<sup>6)</sup>



Horizontal



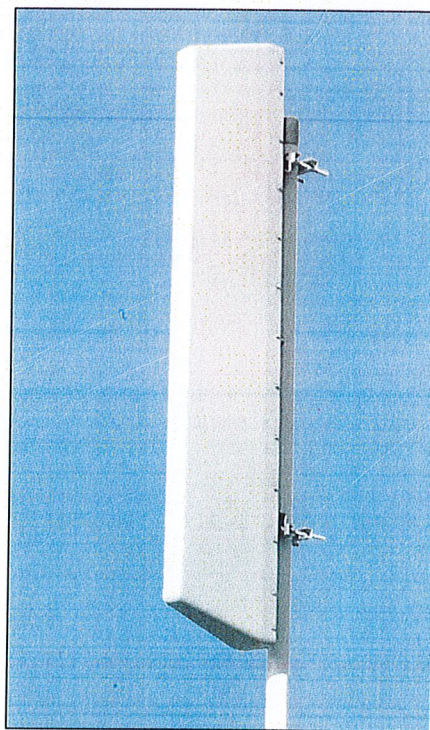
Vertical

Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the front-to-back ratio.

### LPA-80080/6CF \_\_\_\_\_

When ordering replace "\_\_\_\_\_" with connector type.



Featuring our Exclusive  
3T Technology™  
Antenna Design:

- True log-periodic design allows for superior front-to-side characteristics to minimize sector overlap.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad bandwidth and superior performance.
- Air as insulation for virtually no internal signal loss.

#### Warranty:

This antenna is under a five-year limited warranty for repair or replacement.

Revision Date 08/18/08

806-960 MHz



**AMERICAN TOWER®**  
CORPORATION

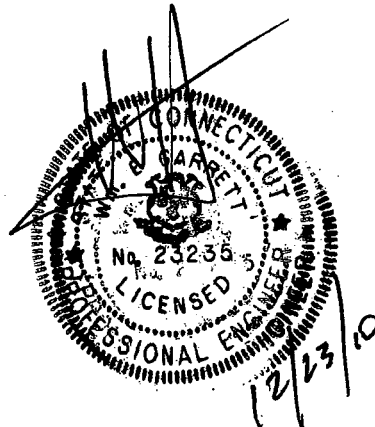
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## Structural Analysis Report

**Structure** : 140 ft PennSummit Monopole  
**ATC Site Name** : WSPT-Westport Rebuild CT, CT  
**ATC Site Number** : 310968  
**Proposed Carrier** : Verizon  
**Carrier Site Name** : Westport 2  
**Carrier Site Number** : N/A  
**County** : Fairfield  
**Eng. Number** : 46304121  
**Date** : December 23, 2010\*  
**Usage** : 94%  
**Portholes Required** : No

Submitted by:  
Christina Minor  
Project Engineer

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 140 ft PennSummit Monopole located east of the intersection of Merritt Parkway and Bayberry Lane, Westport, CT 06880, Fairfield County (ATC site #310968). The tower was originally designed and manufactured by PennSummit (PJF Job #29204-0171, dated July 1, 2004).

**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: 90 mph (Fastest Mile)

Radial Ice: 78 mph (Fastest Mile) w/ 1/2" ice

Code: TIA/EIA-222-F / 2003 IBC Criteria per Section 1609.1.1, Exception (5) and Section 3108.4 w/ 2005 CT Supplement and 2008 CT Amendments

**Antenna Loads**

The following antenna loads were used in the tower analysis.

**Existing Antennas**

Elev. (ft)	Qty	Antennas	Mount	Coax	Carrier
140.0	1	Andrew DB589		(1) 1 1/4"	American Messaging
138.0	1	8' Omni (inverted)	Platform w/ Handrails	(2) 7/8"	US Treasury
	2	8' Omni			
	1	Andrew VHL2.5-10W		(1) EW90 (3) 1 5/8" (7) 7/8"	Town of Westport
	7	6' Omni			
	2	8' Omni			
	1	6' FM Antenna			
	1	6' Dipole			
131.0	12	Decibel 980F65E-M	Low Profile Platform	(12) 1 5/8"	Sprint Nextel
120.0	12	48" x 8" Panel	Low Profile Platform	(12) 1 1/4"	
100.0	12	14" x 9" TTA	Low Profile Platform	(12) 1 5/8" (1) 0.315"	AT&T Mobility
	6	Diplexer			
	6	56" x 6" Panel			
87.0	3	RFS ATMAA1412D-1A20	Low Profile Platform	(12) 1 5/8"	T-Mobile
	3	Andrew ETW190VS12UB			
	3	RFS APX16DWV-16DWV-S-E-ACU			
76.0	4	Andrew DB844H80E-XY	Low Profile Platform	(10) 1 5/8"	Verizon
	3	Andrew 932DG65T2E-M			
	3	Powerwave P65-16-XL-2			



**Antenna Loads (continued)****Proposed Antennas**

Elev. (ft)	Qty	Antennas	Mount	Coax	Carrier
76.0	2	Antel LPA-80080/6CF	Low Profile Platform	(2) 1 5/8"	Verizon

Install proposed coax inside monopole.

**Results**

The maximum structure usage is: 94%

Additional exit and/or entry ports may be required to accommodate the running of the proposed lines to the proposed antennas. These additional ports **may not** be installed without installation drawings providing the location, size and welding requirements of each port.

To ensure compliance with all conditions of this structural analysis, port installation drawings shall be provided by American Tower's Engineering Department under a subsequent project.

Pole Reactions	Original Design Reactions	Current Analysis Reactions	% Of Design
Moment (ft-kips)	3,550.0	3,057.8	86
Shear (kips)	35.0	30.6	88

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.

The structure's base plate and anchor bolts also have sufficient strength to resist the base reactions from the analysis. Factor of safety exceeding two was noted for the base plate and anchor bolts. Detailed calculation is shown at the end of the analysis.

**Conclusion**

Based on the analysis results, the structure meets the requirements per TIA/EIA-222-F and 2003 IBC standards with 2005 CT supplement and 2008 CT amendments.

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 919-466-5006.

## **Standard Conditions**

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

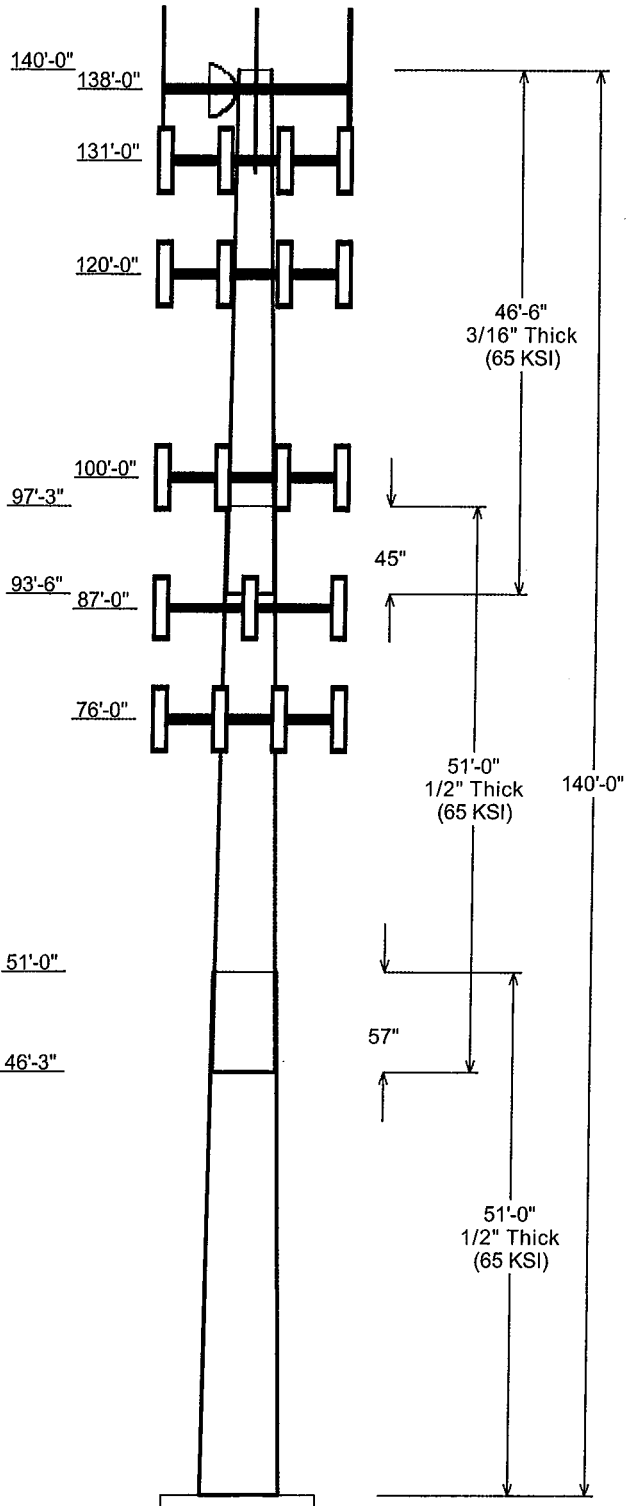
- Information supplied by the client regarding the structure itself, the antenna and feed line loading on the structure and its components, or other relevant information.
- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to ATC Engineering Services and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and are in an un-corroded condition and have not deteriorated; and we, therefore, assume that their capacity has not significantly changed from the "as new" condition.

All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/EIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. ATC Engineering Services is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

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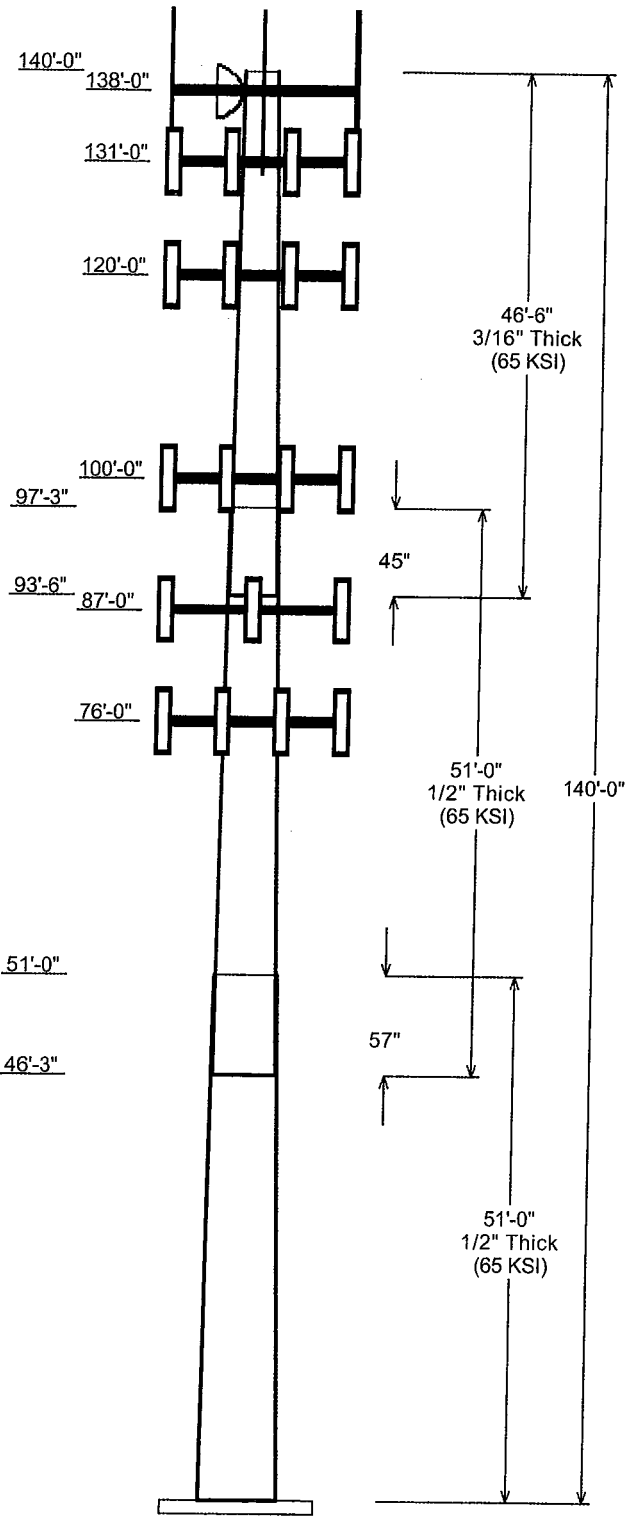
Job Information			
Pole :	310968	Code:	TIA/EIA-222 Rev F
Description :	140 ft PennSummit Monopole		
Client :	Verizon		
Location :	WSPT-Westport Rebuild CT, CT		
Shape :	18 Sides	Base Elev (ft):	0.00
Height :	140.00 (ft)	Taper:	0.200036(in/ft)

Sections Properties							
Shaft Section	Length (ft)	Diameter (in)		Thick (in)	Joint Type	Overlap Length (in)	Steel Taper (in/ft) Grade (ksi)
		Across Top	Flats Bottom				
1	51.000	36.92	47.13	0.500		0.000	0.200036 65
2	51.000	28.67	38.87	0.500	Slip Joint	57.000	0.200036 65
3	46.500	20.50	29.80	0.188	Slip Joint	45.000	0.200036 65

Discrete Appurtenance				
Attach Elev (ft)	Force Elev (ft)	Qty	Description	
138.000	134.000	1	8' Omni (Inverted)	
138.000	138.000	1	Andrew VHLP2.5-10W	
138.000	144.250	1	Andrew DB589	
138.000	138.000	1	Flat Platform w/ Handrails	
138.000	138.000	7	6' Omni	
138.000	138.000	2	8' Omni	
138.000	142.000	2	8' Omni	
138.000	142.000	1	6' FM Antenna	
138.000	138.000	1	6' Dipole	
131.000	131.000	1	Flat Low Profile Platform	
131.000	131.000	12	Decibel 980F65E-M	
120.000	120.000	1	Flat Low Profile Platform	
120.000	120.000	12	48" x 8" Panel	
100.000	100.000	12	14" x 9" TTA	
100.000	100.000	6	Diplexer	
100.000	100.000	1	Flat Low Profile Platform	
100.000	100.000	6	56" x 6" Panel	
87.000	87.000	3	RFS ATMAA1412D-1A20	
87.000	87.000	3	Andrew ETW190VS12UB	
87.000	87.000	3	RFS APX16DWV-16DWV-S-E	
87.000	87.000	1	Flat Low Profile Platform	
76.000	76.000	2	Antel LPA-80080/6CF	
76.000	76.000	4	Andrew DB844H80E-XY	
76.000	76.000	3	Andrew 932DG65T2E-M	
76.000	76.000	3	Powerwave P65-16-XL-2	
76.000	76.000	1	Flat Low Profile Platform	

Linear Appurtenance			
Elev (ft)		Description	Exposed To Wind
From	To		
0.000	76.000	1 5/8" Coax	No
0.000	87.000	1 5/8" Coax	No
0.000	100.0	0.315" Coax	No
0.000	100.0	1 5/8" Coax	No
0.000	120.0	1 1/4" Coax	No
0.000	131.0	1 5/8" Coax	No
0.000	138.0	1 1/4" Coax	No
0.000	138.0	1 5/8" Coax	No
0.000	138.0	7/8" Coax	No
0.000	138.0	7/8" Coax	No
0.000	138.0	EW90	No

Load Cases	
No Ice	90.00 mph Wind with No Ice
Ice	77.94 mph Wind with Ice

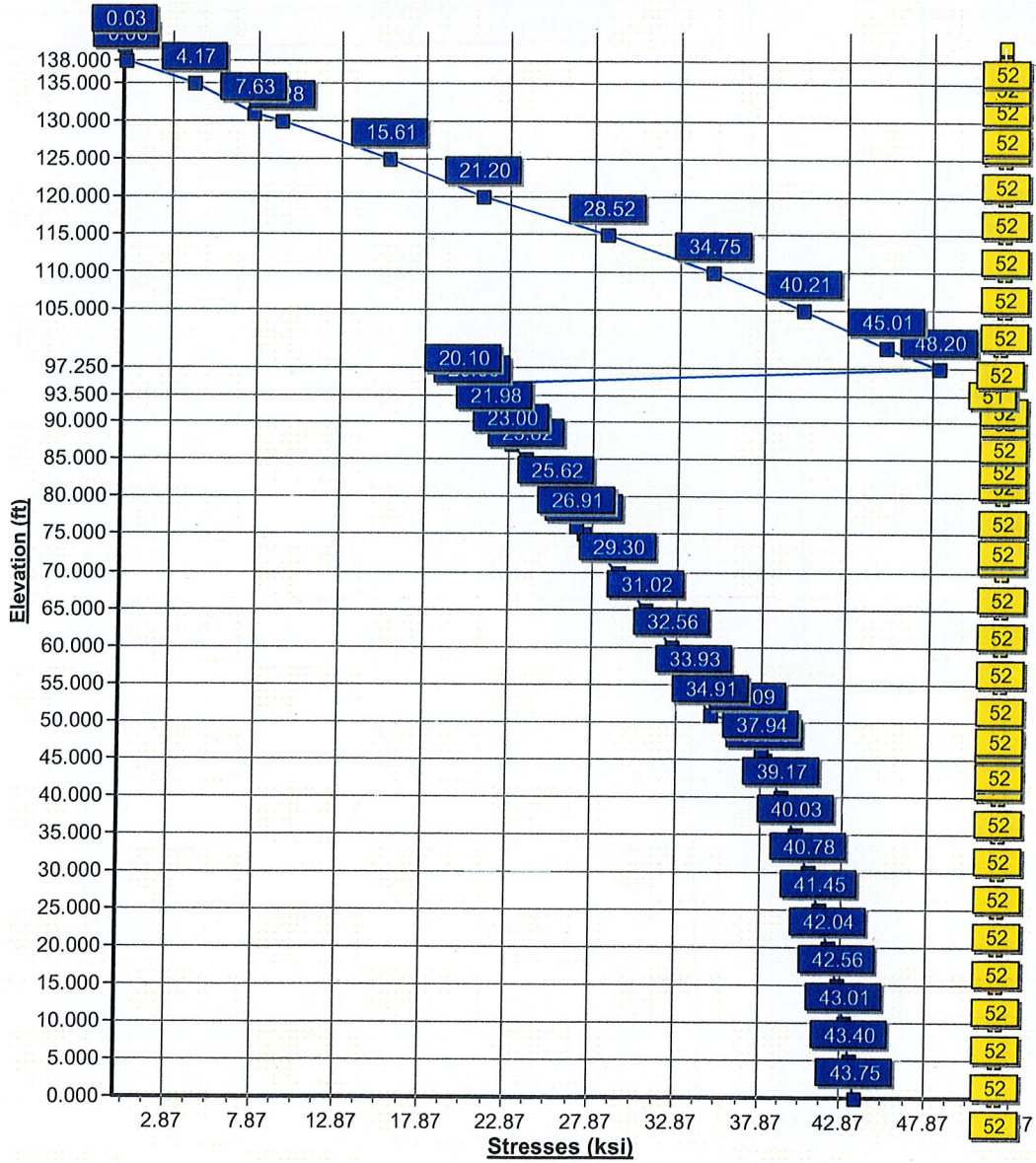


**Twist/Sway** 50.00 mph Wind with No Ice

Reactions			
Load Case	Moment (Kip-ft)	Shear (Kips)	Axial (Kips)
No Ice	3057.77	30.63	39.51
Ice	2633.23	25.79	45.59
Twist/Sway	944.71	9.45	39.56

Dish Deflections			
Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
Twist/Sway	138.00	25.935	1.695

**Load Case : No Ice**  
**Max Stress 93.9% at 97.3ft**



Pole : 310968  
 Location : WSPT-Westport Rebuild CT, CT  
 Height : 140.0 (ft)  
 Shape : 18 Sides  
 Base Dia : 47.13 (in)  
 Top Dia : 20.50 (in)  
 Taper : 0.200036 (in/ft)

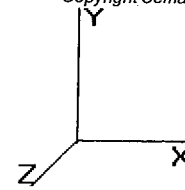
Code: TIA/EIA-222 Rev F

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Page: 1

Base Elev : 0.000 (ft)



**Shaft Section Properties**

Sect Num	Length (ft)	Thick (in)	Fv (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom				Top				Taber (in/ft)				
							Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)		Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio
1	51.000	0.5000	65		0.00	11,437	47.13	0.000	74.00	20328.7	14.86	94.26	36.92	51.00	57.81	9692.3	11.26	73.86	0.20004
2	51.000	0.5000	65	Slip Joint	57.00	9,165	38.87	46.25	60.90	11333.7	11.95	77.76	28.67	97.25	44.71	4485.1	8.35	57.35	0.20004
3	46.500	0.1875	65	Slip Joint	45.00	2,351	29.80	93.50	17.62	1952.7	26.26	158.9	20.50	140.0	12.09	630.1	17.52	109.33	0.20004
Shaft Weight						22,952													

**Discrete Appurtenance Properties**

Attach Elev (ft)	Description	Qty	Weight (lb)	No Ice CaAa (sf)	CaAa Factor	Weight (lb)	Ice CaAa (sf)	CaAa Factor	Distance From Face (ft)	Vert Ecc (ft)
138.0	8' Omni (inverted)	1	40.00	2.400	1.00	62.00	3.230	1.00	0.000	-4.000
138.0	Andrew VHLP2.5-10W	1	47.60	8.430	1.00	97.03	8.910	1.00	0.000	0.000
138.0	Andrew DB589	1	11.50	1.380	1.00	20.00	2.200	1.00	0.000	6.250
138.0	Flat Platform w/ Handrails	1	2000.00	42.400	1.00	2450.00	48.400	1.00	0.000	0.000
138.0	6' Omni	7	25.00	1.760	1.00	38.24	2.130	1.00	0.000	0.000
138.0	8' Omni	2	40.00	2.400	1.00	62.00	3.230	1.00	0.000	0.000
138.0	8' Omni	2	40.00	2.400	1.00	62.00	3.230	1.00	0.000	4.000
138.0	6' FM Antenna	1	30.00	13.450	1.00	112.70	14.770	1.00	0.000	4.000
138.0	6' Dipole	1	30.00	4.000	1.00	50.00	5.500	1.00	0.000	0.000
131.0	Flat Low Profile Platform	1	1500.00	26.100	1.00	1700.00	31.600	1.00	0.000	0.000
131.0	Decibel 980F65E-M	12	9.50	3.750	0.81	29.85	4.320	0.81	0.000	0.000
120.0	Flat Low Profile Platform	1	1500.00	26.100	1.00	1700.00	31.600	1.00	0.000	0.000
120.0	48" x 8" Panel	12	14.00	3.730	0.91	40.30	4.290	0.91	0.000	0.000
100.0	14" x 9" TTA	12	10.00	1.230	0.50	18.00	1.460	0.50	0.000	0.000
100.0	Diplexer	6	5.00	0.700	0.50	9.80	0.880	0.50	0.000	0.000
100.0	Flat Low Profile Platform	1	1500.00	26.100	1.00	1700.00	31.600	1.00	0.000	0.000
100.0	56" x 6" Panel	6	20.00	3.450	0.75	38.03	3.980	0.75	0.000	0.000
87.00	RFS ATMAA1412D-1A20	3	13.00	1.170	0.50	20.60	1.390	0.50	0.000	0.000
87.00	Andrew ETW190VS12UB	3	11.00	0.760	0.50	16.30	0.950	0.50	0.000	0.000
87.00	RFS APX16DWV-16DWV-S-E-	3	39.60	6.700	0.67	69.38	7.350	0.67	0.000	0.000
87.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	1700.00	31.600	1.00	0.000	0.000
76.00	Antel LPA-80080/6CF	2	21.00	9.100	1.00	69.26	9.930	1.00	0.000	0.000
76.00	Andrew DB844H80E-XY	4	10.00	3.730	0.88	35.38	4.290	0.88	0.000	0.000
76.00	Andrew 932DG65T2E-M	3	9.50	3.490	0.76	28.72	4.040	0.76	0.000	0.000
76.00	Powerwave P65-16-XL-2	3	33.00	8.400	0.75	77.53	9.230	0.75	0.000	0.000
76.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	1700.00	31.600	1.00	0.000	0.000
Totals		91	10946.40			14069.81			Number of Loadings :	26

**Linear Appurtenance Properties**

Elev From (ft)	Elev To (ft)	Description	No Ice Weight (lb/ft)	No Ice CaAa (sf/ft)	Ice Weight (lb/ft)	Ice CaAa (sf/ft)	Exposed To Wind
0.00	138.00	(1) 1 1/4" Coax	0.63	0.00	0.00	0.00	N
0.00	138.00	(3) 1 5/8" Coax	2.46	0.00	0.00	0.00	N
0.00	138.00	(7) 7/8" Coax	2.31	0.00	0.00	0.00	N
0.00	138.00	(2) 7/8" Coax	0.66	0.00	0.00	0.00	N
0.00	138.00	(1) EW90	0.32	0.00	0.00	0.00	N
0.00	131.00	(12) 1 5/8" Coax	9.84	0.00	0.00	0.00	N
0.00	120.00	(12) 1 1/4" Coax	7.56	0.00	0.00	0.00	N
0.00	100.00	(1) 0.315" Coax	0.05	0.00	0.00	0.00	N
0.00	100.00	(12) 1 5/8" Coax	9.84	0.00	0.00	0.00	N
0.00	87.00	(12) 1 5/8" Coax	9.84	0.00	0.00	0.00	N

Pole : 310968  
Location : WSPT-Westport Rebuild CT, CT  
Height : 140.0 (ft)  
Shape : 18 Sides  
Base Dia : 47.13 (in)  
Top Dia : 20.50 (in)  
Taper : 0.200036 (in/ft)

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Base Elev : 0.000 (ft)



0.00	76.00	(12) 1 5/8" Coax	9.84	0.00	0.00	0.00	N
Total Weight			5,669.07 (lb)		0.00 (lb)		

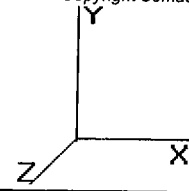


Pole : 310968  
 Location : WSPT-Westport Rebuild CT, CT  
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Base Elev : 0.000 (ft)



**Segment Properties** (Max Len : 5 ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)
0.00		0.5000	47.130	73.999	20,328.7	14.86	94.26	65	52	0.0
5.00		0.5000	46.130	72.412	19,048.5	14.50	92.26	65	52	1,245.5
10.00		0.5000	45.130	70.825	17,823.2	14.15	90.26	65	52	1,218.5
15.00		0.5000	44.129	69.237	16,651.5	13.80	88.26	65	52	1,191.5
20.00		0.5000	43.129	67.650	15,532.4	13.45	86.26	65	52	1,164.5
25.00		0.5000	42.129	66.063	14,464.6	13.09	84.26	65	52	1,137.5
30.00		0.5000	41.129	64.476	13,446.8	12.74	82.26	65	52	1,110.5
35.00		0.5000	40.129	62.889	12,478.0	12.39	80.26	65	52	1,083.5
40.00		0.5000	39.129	61.301	11,556.9	12.04	78.26	65	52	1,056.5
45.00		0.5000	38.128	59.714	10,682.2	11.68	76.26	65	52	1,029.5
46.25	Bot - Section 2	0.5000	37.878	59.317	10,470.7	11.59	75.76	65	52	253.1
50.00		0.5000	37.128	58.127	9,852.8	11.33	74.26	65	52	1,518.9
51.00	Top - Section 1	0.5000	37.928	59.396	10,512.6	11.61	75.86	65	52	399.9
55.00		0.5000	37.128	58.127	9,852.7	11.33	74.26	65	52	799.8
60.00		0.5000	36.128	56.539	9,067.4	10.98	72.26	65	52	975.5
65.00		0.5000	35.128	54.952	8,325.0	10.62	70.26	65	52	948.5
70.00		0.5000	34.128	53.365	7,624.3	10.27	68.26	65	52	921.4
75.00		0.5000	33.127	51.778	6,964.0	9.92	66.25	65	52	894.4
76.00		0.5000	32.927	51.460	6,836.7	9.85	65.85	65	52	175.6
80.00		0.5000	32.127	50.190	6,343.0	9.57	64.25	65	52	691.8
85.00		0.5000	31.127	48.603	5,760.0	9.21	62.25	65	52	840.4
87.00		0.5000	30.727	47.968	5,537.3	9.07	61.45	65	52	328.6
90.00		0.5000	30.127	47.016	5,214.0	8.86	60.25	65	52	484.8
93.50	Bot - Section 3	0.5000	29.427	45.905	4,853.0	8.61	58.85	65	52	553.3
95.00		0.5000	29.127	45.429	4,703.5	8.51	58.25	65	52	322.6
97.25	Top - Section 2	0.1875	29.052	17.177	1,808.1	25.56	154.94	65	51	477.6
100.0		0.1875	28.501	16.850	1,706.7	25.04	152.01	65	52	159.2
105.0		0.1875	27.501	16.255	1,532.1	24.10	146.67	65	52	281.6
110.0		0.1875	26.501	15.659	1,369.9	23.16	141.34	65	52	271.5
115.0		0.1875	25.501	15.064	1,219.5	22.22	136.00	65	52	261.4
120.0		0.1875	24.501	14.469	1,080.6	21.28	130.67	65	52	251.2
125.0		0.1875	23.501	13.874	952.7	20.34	125.34	65	52	241.1
130.0		0.1875	22.500	13.278	835.2	19.40	120.00	65	52	231.0
131.0		0.1875	22.300	13.159	813.0	19.21	118.94	65	52	45.0
135.0		0.1875	21.500	12.683	727.9	18.46	114.67	65	52	175.9
138.0		0.1875	20.900	12.326	668.1	17.89	111.47	65	52	127.7
140.0		0.1875	20.500	12.088	630.1	17.52	109.33	65	52	83.1
										22,952.4

Pole : 310968  
 Location : WSPT-Westport Rebuild CT, CT  
 Height : 140.0 (ft)  
 Shape : 18 Sides  
 Base Dia : 47.13 (in)  
 Top Dia : 20.50 (in)  
 Taper : 0.200036 (in/ft)

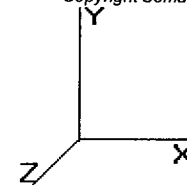
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Base Elev : 0.000 (ft)



<b>Load Case:</b> No Ice	90.00 mph Wind with No Ice	23 Iterations
Gust Response Factor: 1.69		
Dead Load Factor: 1.00		
Wind Load Factor: 1.00		

**Shaft Segment Forces**

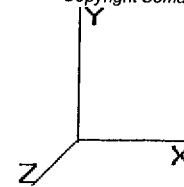
Seg Top Elev (ft)	Description	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)	
0.00		0.00	1.00	20.736	35.04	353.47	0.650	0.00	0.00	0.000	0.00	0.0	0.0	
5.00		0.00	1.00	20.736	35.04	345.97	0.650	0.00	5.00	19.429	12.63	442.6	0.0	1,245.5
10.00		0.00	1.00	20.736	35.04	338.47	0.650	0.00	5.00	19.012	12.36	433.1	0.0	1,218.5
15.00		0.00	1.00	20.736	35.04	330.97	0.650	0.00	5.00	18.596	12.09	423.6	0.0	1,191.5
20.00		0.00	1.00	20.736	35.04	323.47	0.650	0.00	5.00	18.179	11.82	414.1	0.0	1,164.5
25.00		0.00	1.00	20.736	35.04	315.96	0.650	0.00	5.00	17.762	11.55	404.6	0.0	1,137.5
30.00		0.00	1.00	20.736	35.04	308.46	0.650	0.00	5.00	17.345	11.27	395.1	0.0	1,110.5
35.00		0.00	1.01	21.088	35.63	303.50	0.650	0.00	5.00	16.929	11.00	392.1	0.0	1,083.5
40.00		0.00	1.05	21.908	37.02	301.64	0.650	0.00	5.00	16.512	10.73	397.4	0.0	1,056.5
45.00		0.00	1.09	22.657	38.29	298.91	0.650	0.00	5.00	16.095	10.46	400.6	0.0	1,029.5
46.25	Bot - Section 2	0.00	1.10	22.835	38.59	298.12	0.650	0.00	1.25	3.959	2.57	99.3	0.0	253.1
50.00		0.00	1.12	23.350	39.46	295.49	0.650	0.00	3.75	12.032	7.82	308.6	0.0	1,518.9
51.00	Top - Section 1	0.00	1.13	23.482	39.68	294.73	0.650	0.00	1.00	3.169	2.06	81.7	0.0	399.9
55.00		0.00	1.15	23.994	40.55	299.54	0.650	0.00	4.00	12.509	8.13	329.7	0.0	799.8
60.00		0.00	1.18	24.598	41.57	295.11	0.650	0.00	5.00	15.262	9.92	412.4	0.0	975.5
65.00		0.00	1.21	25.167	42.53	290.24	0.650	0.00	5.00	14.845	9.65	410.4	0.0	948.5
70.00		0.00	1.24	25.706	43.44	284.98	0.650	0.00	5.00	14.428	9.38	407.4	0.0	921.4
75.00		0.00	1.26	26.218	44.30	279.37	0.650	0.00	5.00	14.011	9.11	403.5	0.0	894.4
76.00	Appertunance(s)	0.00	1.26	26.317	44.47	278.21	0.650	0.00	1.00	2.752	1.79	79.6	0.0	175.6
80.00		0.00	1.28	26.706	45.13	273.44	0.650	0.00	4.00	10.842	7.05	318.1	0.0	691.8
85.00		0.00	1.31	27.172	45.92	267.23	0.650	0.00	5.00	13.178	8.57	393.3	0.0	840.4
87.00	Appertunance(s)	0.00	1.31	27.353	46.22	264.68	0.650	0.00	2.00	5.154	3.35	154.9	0.0	328.6
90.00		0.00	1.33	27.620	46.67	260.77	0.650	0.00	3.00	7.607	4.94	230.8	0.0	484.8
93.50	Bot - Section 3	0.00	1.34	27.922	47.18	256.10	0.650	0.00	3.50	8.685	5.65	266.4	0.0	553.3
95.00		0.00	1.35	28.050	47.40	254.07	0.650	0.00	1.50	3.706	2.41	114.2	0.0	322.6
97.25	Top - Section 2	0.00	1.36	28.238	47.72	250.98	0.650	0.00	2.25	5.489	3.57	170.3	0.0	477.6
100.0	Appertunance(s)	0.00	1.37	28.464	48.10	250.44	0.650	0.00	2.75	6.595	4.29	206.2	0.0	159.2
105.0		0.00	1.39	28.863	48.77	243.34	0.650	0.00	5.00	11.667	7.58	369.9	0.0	281.6
110.0		0.00	1.41	29.250	49.43	236.06	0.650	0.00	5.00	11.250	7.31	361.5	0.0	271.5
115.0		0.00	1.42	29.623	50.06	228.59	0.650	0.00	5.00	10.834	7.04	352.5	0.0	261.4
120.0	Appertunance(s)	0.00	1.44	29.986	50.67	220.97	0.650	0.00	5.00	10.417	6.77	343.1	0.0	251.2
125.0		0.00	1.46	30.338	51.27	213.19	0.650	0.00	5.00	10.000	6.50	333.3	0.0	241.1
130.0		0.00	1.48	30.679	51.84	205.26	0.650	0.00	5.00	9.584	6.23	323.0	0.0	231.0
131.0	Appertunance(s)	0.00	1.48	30.747	51.96	203.66	0.650	0.00	1.00	1.867	1.21	63.0	0.0	45.0
135.0		0.00	1.49	31.012	52.41	197.20	0.650	0.00	4.00	7.300	4.75	248.7	0.0	175.9
138.0	Appertunance(s)	0.00	1.50	31.207	52.74	192.29	0.650	0.00	3.00	5.300	3.45	181.7	0.0	127.7
140.0		0.00	1.51	31.336	52.95	189.00	0.650	0.00	2.00	3.450	2.24	118.8	0.0	83.1
<b>Totals:</b>								140.00				10,785.5	0.0	22,952.4

Pole : 310968  
 Location : WSPT-Westport Rebuild CT, CT  
 Height : 140.0 (ft)  
 Shape : 18 Sides  
 Base Dia : 47.13 (in)  
 Top Dia : 20.50 (in)  
 Taper : 0.200036 (in/ft)

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Base Elev : 0.000 (ft)



**Load Case:** No Ice                      90.00 mph Wind with No Ice                      23 Iterations  
 Gust Response Factor : 1.69  
 Dead Load Factor : 1.00  
 Wind Load Factor : 1.00

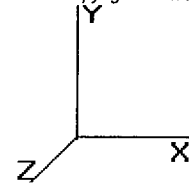
**Discrete Appurtenance Segment Forces**

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
76.00	Antel LPA-80080/6CF	2	26.317	44.476	1.00	18.20	0.000	0.000	809.46	0.00	0.00	42.00
76.00	Andrew DB844H80E-	4	26.317	44.476	0.88	13.13	0.000	0.000	583.95	0.00	0.00	40.00
76.00	Andrew 932DG65T2E-	3	26.317	44.476	0.76	7.96	0.000	0.000	353.90	0.00	0.00	28.50
76.00	Powerwave P65-16-	3	26.317	44.476	0.75	18.90	0.000	0.000	840.60	0.00	0.00	99.00
76.00	Flat Low Profile Pla	1	26.317	44.476	1.00	26.10	0.000	0.000	1,160.82	0.00	0.00	1,500.00
87.00	RFS ATMAA1412D-	3	27.353	46.227	0.50	1.75	0.000	0.000	81.13	0.00	0.00	39.00
87.00	Andrew	3	27.353	46.227	0.50	1.14	0.000	0.000	52.70	0.00	0.00	33.00
87.00	RFS APX16DWV-	3	27.353	46.227	0.67	13.47	0.000	0.000	622.54	0.00	0.00	118.80
87.00	Flat Low Profile Pla	1	27.353	46.227	1.00	26.10	0.000	0.000	1,206.53	0.00	0.00	1,500.00
100.0	14" x 9" TTA	12	28.464	48.104	0.50	7.38	0.000	0.000	355.01	0.00	0.00	120.00
100.0	Diplexer	6	28.464	48.104	0.50	2.10	0.000	0.000	101.02	0.00	0.00	30.00
100.0	Flat Low Profile Pla	1	28.464	48.104	1.00	26.10	0.000	0.000	1,255.51	0.00	0.00	1,500.00
100.0	56" x 6" Panel	6	28.464	48.104	0.75	15.53	0.000	0.000	746.81	0.00	0.00	120.00
120.0	Flat Low Profile Pla	1	29.986	50.676	1.00	26.10	0.000	0.000	1,322.64	0.00	0.00	1,500.00
120.0	48" x 8" Panel	12	29.986	50.676	0.91	40.73	0.000	0.000	2,064.11	0.00	0.00	168.00
131.0	Flat Low Profile Pla	1	30.747	51.962	1.00	26.10	0.000	0.000	1,356.21	0.00	0.00	1,500.00
131.0	Decibel 980F65E-M	12	30.747	51.962	0.81	36.45	0.000	0.000	1,894.01	0.00	0.00	114.00
138.0	8' Omni (inverted)	1	30.946	52.299	1.00	2.40	0.000	-4.000	125.52	0.00	-502.07	40.00
138.0	Andrew VHLP2.5-10W	1	31.207	52.741	1.00	8.43	0.000	0.000	444.60	0.00	0.00	47.60
138.0	Andrew DB589	1	31.605	53.412	1.00	1.38	0.000	6.250	73.71	0.00	460.68	11.50
138.0	Flat Platform w/ Han	1	31.207	52.741	1.00	42.40	0.000	0.000	2,236.19	0.00	0.00	2,000.00
138.0	6' Omni	7	31.207	52.741	1.00	12.32	0.000	0.000	649.73	0.00	0.00	175.00
138.0	8' Omni	2	31.207	52.741	1.00	4.80	0.000	0.000	253.15	0.00	0.00	80.00
138.0	8' Omni	2	31.463	53.173	1.00	4.80	0.000	4.000	255.23	0.00	1,020.92	80.00
138.0	6' FM Antenna	1	31.463	53.173	1.00	13.45	0.000	4.000	715.17	0.00	2,860.68	30.00
138.0	6' Dipole	1	31.207	52.741	1.00	4.00	0.000	0.000	210.96	0.00	0.00	30.00
									19,771.23			10,946.40

Pole : 310968  
 Location : WSPT-Westport Rebuild CT, CT  
 Height : 140.0 (ft)  
 Shape : 18 Sides  
 Base Dia : 47.13 (in)  
 Top Dia : 20.50 (in)  
 Taper : 0.200036 (in/ft)

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Base Elev : 0.000 (ft)

**Load Case:** No Ice                      90.00 mph Wind with No Ice                      23 Iterations  
 Gust Response Factor : 1.69  
 Dead Load Factor : 1.00  
 Wind Load Factor : 1.00

**Applied Segment Forces Summary**

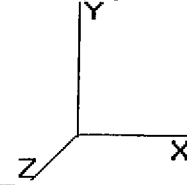
Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	442.57	1,512.23	0.00	0.00
10.00	433.07	1,485.23	0.00	0.00
15.00	423.58	1,458.23	0.00	0.00
20.00	414.09	1,431.22	0.00	0.00
25.00	404.60	1,404.22	0.00	0.00
30.00	395.10	1,377.21	0.00	0.00
35.00	392.15	1,350.21	0.00	0.00
40.00	397.37	1,323.20	0.00	0.00
45.00	400.60	1,296.20	0.00	0.00
46.25	99.30	319.83	0.00	0.00
50.00	308.63	1,718.93	0.00	0.00
51.00	81.75	453.25	0.00	0.00
55.00	329.72	1,013.19	0.00	0.00
60.00	412.39	1,242.18	0.00	0.00
65.00	410.41	1,215.18	0.00	0.00
70.00	407.42	1,188.17	0.00	0.00
75.00	403.53	1,161.17	0.00	0.00
76.00	3,828.31	1,938.49	0.00	0.00
80.00	318.07	865.81	0.00	0.00
85.00	393.35	1,057.96	0.00	0.00
87.00	2,117.79	2,106.42	0.00	0.00
90.00	230.79	585.81	0.00	0.00
93.50	266.39	671.16	0.00	0.00
95.00	114.21	373.09	0.00	0.00
97.25	170.28	553.36	0.00	0.00
100.0	2,664.54	2,021.78	0.00	0.00
105.0	369.93	400.51	0.00	0.00
110.0	361.48	390.39	0.00	0.00
115.0	352.54	380.26	0.00	0.00
120.0	3,729.89	2,038.13	0.00	0.00
125.0	333.27	322.21	0.00	0.00
130.0	322.98	312.08	0.00	0.00
131.0	3,313.27	1,675.20	0.00	0.00
135.0	248.69	201.39	0.00	0.00
138.0	5,145.96	2,640.89	0.00	3,840.21
140.0	118.76	83.08	0.00	0.00
<b>Totals:</b>	<b>30,556.74</b>	<b>39,567.86</b>	<b>0.00</b>	<b>3,840.21</b>

Pole : 310968  
 Location : WSPT-Westport Rebuild CT, CT  
 Height : 140.0 (ft)  
 Shape : 18 Sides  
 Base Dia : 47.13 (in)  
 Top Dia : 20.50 (in)  
 Taper : 0.200036 (in/ft)

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Base Elev : 0.000 (ft)



**Load Case:** No Ice                      90.00 mph Wind with No Ice                      23 Iterations

Gust Response Factor : 1.69  
 Dead Load Factor : 1.00  
 Wind Load Factor : 1.00

**Calculated Shaft Forces and Deflections**

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-30.630	-39.511	0.000	0.000	0.000	-3,057.774	0.000	0.000	0.000	0.000
5.00	-30.323	-37.888	0.000	0.000	0.000	-2,904.629	-0.112	0.000	0.112	-0.209
10.00	-30.017	-36.295	0.000	0.000	0.000	-2,753.015	-0.444	0.000	0.444	-0.420
15.00	-29.710	-34.729	0.000	0.000	0.000	-2,602.933	-0.998	0.000	0.998	-0.634
20.00	-29.404	-33.192	0.000	0.000	0.000	-2,454.383	-1.777	0.000	1.777	-0.850
25.00	-29.097	-31.684	0.000	0.000	0.000	-2,307.367	-2.784	0.000	2.784	-1.068
30.00	-28.790	-30.205	0.000	0.000	0.000	-2,161.885	-4.020	0.000	4.020	-1.287
35.00	-28.476	-28.755	0.000	0.000	0.000	-2,017.937	-5.487	0.000	5.487	-1.509
40.00	-28.148	-27.334	0.000	0.000	0.000	-1,875.557	-7.186	0.000	7.186	-1.730
45.00	-27.769	-25.985	0.000	0.000	0.000	-1,734.819	-9.118	0.000	9.118	-1.953
46.25	-27.709	-25.614	0.000	0.000	0.000	-1,700.109	-9.637	0.000	9.637	-2.010
50.00	-27.382	-23.856	0.000	0.000	0.000	-1,596.201	-11.283	0.000	11.283	-2.178
51.00	-27.329	-23.353	0.000	0.000	0.000	-1,568.820	-11.744	0.000	11.744	-2.223
55.00	-27.032	-22.264	0.000	0.000	0.000	-1,459.506	-13.683	0.000	13.683	-2.401
60.00	-26.639	-20.949	0.000	0.000	0.000	-1,324.345	-16.306	0.000	16.306	-2.602
65.00	-26.239	-19.665	0.000	0.000	0.000	-1,191.151	-19.137	0.000	19.137	-2.800
70.00	-25.833	-18.414	0.000	0.000	0.000	-1,059.957	-22.172	0.000	22.172	-2.992
75.00	-25.401	-17.228	0.000	0.000	0.000	-930.794	-25.405	0.000	25.405	-3.178
76.00	-21.495	-15.472	0.000	0.000	0.000	-905.394	-26.074	0.000	26.074	-3.215
80.00	-21.168	-14.567	0.000	0.000	0.000	-819.416	-28.829	0.000	28.829	-3.359
85.00	-20.740	-13.492	0.000	0.000	0.000	-713.577	-32.437	0.000	32.437	-3.531
87.00	-18.512	-11.494	0.000	0.000	0.000	-672.098	-33.930	0.000	33.930	-3.599
90.00	-18.264	-10.890	0.000	0.000	0.000	-616.563	-36.223	0.000	36.223	-3.698
93.50	-17.969	-10.213	0.000	0.000	0.000	-552.639	-38.975	0.000	38.975	-3.810
95.00	-17.840	-9.831	0.000	0.000	0.000	-525.686	-40.179	0.000	40.179	-3.857
97.25	-17.644	-9.267	0.000	0.000	0.000	-485.547	-42.012	0.000	42.012	-3.926
100.0	-14.874	-7.379	0.000	0.000	0.000	-437.025	-44.296	0.000	44.296	-4.007
105.0	-14.515	-6.926	0.000	0.000	0.000	-362.656	-48.671	0.000	48.671	-4.340
110.0	-14.156	-6.495	0.000	0.000	0.000	-290.084	-53.379	0.000	53.379	-4.643
115.0	-13.799	-6.088	0.000	0.000	0.000	-219.305	-58.384	0.000	58.384	-4.907
120.0	-9.919	-4.352	0.000	0.000	0.000	-150.312	-63.640	0.000	63.640	-5.123
125.0	-9.568	-4.038	0.000	0.000	0.000	-100.717	-69.092	0.000	69.092	-5.288
130.0	-9.221	-3.747	0.000	0.000	0.000	-52.879	-74.691	0.000	74.691	-5.403
131.0	-5.766	-2.389	0.000	0.000	0.000	-43.658	-75.823	0.000	75.823	-5.419
135.0	-5.500	-2.209	0.000	0.000	0.000	-20.594	-80.379	0.000	80.379	-5.464
138.0	-0.126	-0.071	0.000	0.000	0.000	-0.252	-83.814	0.000	83.814	-5.479
140.0	-0.119	0.000	0.000	0.000	0.000	0.000	-86.105	0.000	86.105	-5.479

Pole : 310968  
 Location : WSPT-Westport Rebuild CT, CT  
 Height : 140.0 (ft)  
 Shape : 18 Sides  
 Base Dia : 47.13 (in)  
 Top Dia : 20.50 (in)  
 Taper : 0.200036 (in/ft)

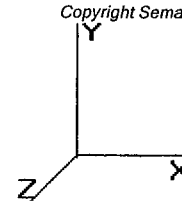
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Base Elev : 0.000 (ft)



**Load Case:** No Ice                      90.00 mph Wind with No Ice                      23 Iterations  
 Gust Response Factor : 1.69  
 Dead Load Factor : 1.00  
 Wind Load Factor : 1.00

**Calculated Stresses**

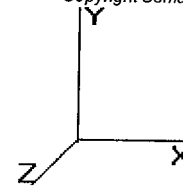
Seg Elev (ft)	Applied Stresses							Allowable Stress (Fb) (ksi)	Stress Ratio	
	Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)			
0.00	0.53	0.83	0.00	0.00	0.00	43.19	43.75	52.0	0.0	0.842
5.00	0.52	0.84	0.00	0.00	0.00	42.86	43.40	52.0	0.0	0.835
10.00	0.51	0.85	0.00	0.00	0.00	42.47	43.01	52.0	0.0	0.827
15.00	0.50	0.86	0.00	0.00	0.00	42.03	42.56	52.0	0.0	0.819
20.00	0.49	0.88	0.00	0.00	0.00	41.52	42.04	52.0	0.0	0.809
25.00	0.48	0.89	0.00	0.00	0.00	40.94	41.45	52.0	0.0	0.798
30.00	0.47	0.90	0.00	0.00	0.00	40.29	40.78	52.0	0.0	0.785
35.00	0.46	0.91	0.00	0.00	0.00	39.54	40.03	52.0	0.0	0.770
40.00	0.45	0.93	0.00	0.00	0.00	38.69	39.17	52.0	0.0	0.754
45.00	0.44	0.94	0.00	0.00	0.00	37.73	38.20	52.0	0.0	0.735
46.25	0.43	0.94	0.00	0.00	0.00	37.47	37.94	52.0	0.0	0.730
50.00	0.41	0.95	0.00	0.00	0.00	36.65	37.09	52.0	0.0	0.714
51.00	0.39	0.93	0.00	0.00	0.00	34.48	34.91	52.0	0.0	0.672
55.00	0.38	0.94	0.00	0.00	0.00	33.51	33.93	52.0	0.0	0.653
60.00	0.37	0.95	0.00	0.00	0.00	32.15	32.56	52.0	0.0	0.626
65.00	0.36	0.96	0.00	0.00	0.00	30.62	31.02	52.0	0.0	0.597
70.00	0.35	0.98	0.00	0.00	0.00	28.91	29.30	52.0	0.0	0.564
75.00	0.33	0.99	0.00	0.00	0.00	26.98	27.36	52.0	0.0	0.526
76.00	0.30	0.84	0.00	0.00	0.00	26.57	26.91	52.0	0.0	0.518
80.00	0.29	0.85	0.00	0.00	0.00	25.29	25.62	52.0	0.0	0.493
85.00	0.28	0.86	0.00	0.00	0.00	23.49	23.82	52.0	0.0	0.458
87.00	0.24	0.78	0.00	0.00	0.00	22.72	23.00	52.0	0.0	0.443
90.00	0.23	0.78	0.00	0.00	0.00	21.71	21.98	52.0	0.0	0.423
93.50	0.22	0.79	0.00	0.00	0.00	20.42	20.68	52.0	0.0	0.398
95.00	0.22	0.79	0.00	0.00	0.00	19.83	20.10	52.0	0.0	0.387
97.25	0.54	2.07	0.00	0.00	0.00	47.53	48.20	51.3	0.0	0.939
100.00	0.44	1.78	0.00	0.00	0.00	44.47	45.01	51.8	0.0	0.869
105.00	0.43	1.80	0.00	0.00	0.00	39.66	40.21	52.0	0.0	0.774
110.00	0.41	1.82	0.00	0.00	0.00	34.19	34.75	52.0	0.0	0.669
115.00	0.40	1.85	0.00	0.00	0.00	27.94	28.52	52.0	0.0	0.549
120.00	0.30	1.38	0.00	0.00	0.00	20.76	21.20	52.0	0.0	0.408
125.00	0.29	1.39	0.00	0.00	0.00	15.14	15.61	52.0	0.0	0.300
130.00	0.28	1.40	0.00	0.00	0.00	8.68	9.28	52.0	0.0	0.179
131.00	0.18	0.88	0.00	0.00	0.00	7.30	7.63	52.0	0.0	0.147
135.00	0.17	0.87	0.00	0.00	0.00	3.71	4.17	52.0	0.0	0.080
138.00	0.01	0.02	0.00	0.00	0.00	0.05	0.06	52.0	0.0	0.001
140.00	0.00	0.02	0.00	0.00	0.00	0.00	0.03	52.0	0.0	0.001

Pole : 310968  
 Location : WSPT-Westport Rebuild CT, CT  
 Height : 140.0 (ft)  
 Shape : 18 Sides  
 Base Dia : 47.13 (in)  
 Top Dia : 20.50 (in)  
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Base Elev : 0.000 (ft)



**Load Case:** Ice

77.94 mph Wind with Ice

23 Iterations

Gust Response Factor : 1.69  
 Dead Load Factor : 1.00  
 Wind Load Factor : 1.00

**Shaft Segment Forces**

Seg Top Elev (ft)	Description	Kz	az (psf)	azGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)	
0.00		0.00	1.00 15.551	26.28 306.10	0.650	0.50	0.00	0.000	0.00	0.00	0.0	0.0	0.0	
5.00		0.00	1.00 15.551	26.28 299.61	0.650	0.50	5.00	19.846	12.90	339.0	143.9	1,389.4	1,389.4	
10.00		0.00	1.00 15.551	26.28 293.11	0.650	0.50	5.00	19.429	12.63	331.9	140.8	1,359.3	1,359.3	
15.00		0.00	1.00 15.551	26.28 286.62	0.650	0.50	5.00	19.012	12.36	324.8	137.7	1,329.2	1,329.2	
20.00		0.00	1.00 15.551	26.28 280.12	0.650	0.50	5.00	18.596	12.09	317.7	134.6	1,299.1	1,299.1	
25.00		0.00	1.00 15.551	26.28 273.62	0.650	0.50	5.00	18.179	11.82	310.5	131.5	1,269.0	1,269.0	
30.00		0.00	1.00 15.551	26.28 267.13	0.650	0.50	5.00	17.762	11.55	303.4	128.5	1,238.9	1,238.9	
35.00		0.00	1.01 15.815	26.72 262.83	0.650	0.50	5.00	17.345	11.27	301.3	125.4	1,208.9	1,208.9	
40.00		0.00	1.05 16.430	27.76 261.22	0.650	0.50	5.00	16.929	11.00	305.5	122.3	1,178.8	1,178.8	
45.00		0.00	1.09 16.992	28.71 258.86	0.650	0.50	5.00	16.512	10.73	308.2	119.2	1,148.7	1,148.7	
46.25	Bot - Section 2	0.00	1.10 17.126	28.94 258.17	0.650	0.50	1.25	4.063	2.64	76.4	29.6	282.8	282.8	
50.00		0.00	1.12 17.511	29.59 255.89	0.650	0.50	3.75	12.345	8.02	237.5	89.4	1,608.3	1,608.3	
51.00	Top - Section 1	0.00	1.13 17.611	29.76 255.23	0.650	0.50	1.00	3.252	2.11	62.9	23.7	423.6	423.6	
55.00		0.00	1.15 17.995	30.41 259.40	0.650	0.50	4.00	12.843	8.35	253.9	92.9	892.7	892.7	
60.00		0.00	1.18 18.448	31.17 255.57	0.650	0.50	5.00	15.678	10.19	317.7	113.0	1,088.5	1,088.5	
65.00		0.00	1.21 18.874	31.89 251.35	0.650	0.50	5.00	15.262	9.92	316.4	109.9	1,058.4	1,058.4	
70.00		0.00	1.24 19.278	32.58 246.79	0.650	0.50	5.00	14.845	9.65	314.4	106.9	1,028.3	1,028.3	
75.00		0.00	1.26 19.662	33.22 241.93	0.650	0.50	5.00	14.428	9.38	311.6	103.8	998.2	998.2	
76.00	Appertunance(s)	0.00	1.26 19.737	33.35 240.93	0.650	0.50	1.00	2.836	1.84	61.5	20.6	196.3	196.3	
80.00		0.00	1.28 20.028	33.84 236.80	0.650	0.50	4.00	11.176	7.26	245.9	80.5	772.3	772.3	
85.00		0.00	1.31 20.378	34.43 231.42	0.650	0.50	5.00	13.595	8.84	304.3	97.6	938.0	938.0	
87.00	Appertunance(s)	0.00	1.31 20.514	34.66 229.21	0.650	0.50	2.00	5.321	3.46	119.9	38.5	367.2	367.2	
90.00		0.00	1.33 20.714	35.00 225.82	0.650	0.50	3.00	7.857	5.11	178.8	56.7	541.5	541.5	
93.50	Bot - Section 3	0.00	1.34 20.941	35.38 221.78	0.650	0.50	3.50	8.977	5.83	206.5	64.6	618.0	618.0	
95.00		0.00	1.35 21.036	35.55 220.02	0.650	0.50	1.50	3.831	2.49	88.5	27.8	350.4	350.4	
97.25	Top - Section 2	0.00	1.36 21.177	35.78 217.35	0.650	0.50	2.25	5.677	3.69	132.1	41.0	518.7	518.7	
100.0	Appertunance(s)	0.00	1.37 21.347	36.07 216.88	0.650	0.50	2.75	6.824	4.44	160.0	49.2	208.4	208.4	
105.0		0.00	1.39 21.646	36.58 210.73	0.650	0.50	5.00	12.084	7.85	287.3	86.4	368.0	368.0	
110.0		0.00	1.41 21.936	37.07 204.42	0.650	0.50	5.00	11.667	7.58	281.1	83.3	354.8	354.8	
115.0		0.00	1.42 22.216	37.54 197.96	0.650	0.50	5.00	11.250	7.31	274.6	80.2	341.6	341.6	
120.0	Appertunance(s)	0.00	1.44 22.488	38.00 191.36	0.650	0.50	5.00	10.834	7.04	267.6	77.1	328.4	328.4	
125.0		0.00	1.46 22.752	38.45 184.62	0.650	0.50	5.00	10.417	6.77	260.3	74.1	315.2	315.2	
130.0		0.00	1.48 23.008	38.88 177.75	0.650	0.50	5.00	10.000	6.50	252.7	71.0	302.0	302.0	
131.0	Appertunance(s)	0.00	1.48 23.059	38.96 176.37	0.650	0.50	1.00	1.950	1.27	49.4	14.1	59.1	59.1	
135.0		0.00	1.49 23.258	39.30 170.77	0.650	0.50	4.00	7.633	4.96	195.0	54.3	230.2	230.2	
138.0	Appertunance(s)	0.00	1.50 23.404	39.55 166.53	0.650	0.50	3.00	5.550	3.61	142.7	39.6	167.3	167.3	
140.0		0.00	1.51 23.501	39.71 163.67	0.650	0.50	2.00	3.617	2.35	93.4	25.9	109.0	109.0	
Totals:							140.00				8,334.9	2,935.8	25,888.2	

Pole : 310968  
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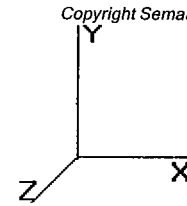
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Base Elev : 0.000 (ft)



**Load Case:** Ice

77.94 mph Wind with Ice

23 Iterations

Gust Response Factor : 1.69  
 Dead Load Factor : 1.00  
 Wind Load Factor : 1.00

**Discrete Appurtenance Segment Forces**

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
76.00	Antel LPA-80080/6CF	2	19.737	33.355	1.00	19.86	0.000	0.000	662.43	0.00	0.00	138.52
76.00	Andrew DB844H80E-	4	19.737	33.355	0.88	15.10	0.000	0.000	503.69	0.00	0.00	141.52
76.00	Andrew 932DG65T2E-	3	19.737	33.355	0.76	9.21	0.000	0.000	307.24	0.00	0.00	86.16
76.00	Powerwave P65-16-	3	19.737	33.355	0.75	20.77	0.000	0.000	692.70	0.00	0.00	232.59
76.00	Flat Low Profile Pla	1	19.737	33.355	1.00	31.60	0.000	0.000	1,054.02	0.00	0.00	1,700.00
87.00	RFS ATMAA1412D-	3	20.514	34.668	0.50	2.09	0.000	0.000	72.28	0.00	0.00	61.80
87.00	Andrew	3	20.514	34.668	0.50	1.42	0.000	0.000	49.40	0.00	0.00	48.90
87.00	RFS APX16DWV-	3	20.514	34.668	0.67	14.77	0.000	0.000	512.17	0.00	0.00	208.14
87.00	Flat Low Profile Pla	1	20.514	34.668	1.00	31.60	0.000	0.000	1,095.52	0.00	0.00	1,700.00
100.0	14" x 9" TTA	12	21.347	36.076	0.50	8.76	0.000	0.000	316.02	0.00	0.00	216.00
100.0	Diplexer	6	21.347	36.076	0.50	2.64	0.000	0.000	95.24	0.00	0.00	58.80
100.0	Flat Low Profile Pla	1	21.347	36.076	1.00	31.60	0.000	0.000	1,139.99	0.00	0.00	1,700.00
100.0	56" x 6" Panel	6	21.347	36.076	0.75	17.91	0.000	0.000	646.11	0.00	0.00	228.18
120.0	Flat Low Profile Pla	1	22.488	38.005	1.00	31.60	0.000	0.000	1,200.95	0.00	0.00	1,700.00
120.0	48" x 8" Panel	12	22.488	38.005	0.91	46.85	0.000	0.000	1,780.40	0.00	0.00	483.59
131.0	Flat Low Profile Pla	1	23.059	38.969	1.00	31.60	0.000	0.000	1,231.42	0.00	0.00	1,700.00
131.0	Decibel 980F65E-M	12	23.059	38.969	0.81	41.99	0.000	0.000	1,636.33	0.00	0.00	358.20
138.0	8' Omni (inverted)	1	23.208	39.222	1.00	3.23	0.000	-4.000	126.69	0.00	-506.75	62.00
138.0	Andrew VHL2.5-10W	1	23.404	39.553	1.00	8.91	0.000	0.000	352.42	0.00	0.00	97.03
138.0	Andrew DB589	1	23.702	40.057	1.00	2.20	0.000	6.250	88.12	0.00	550.78	20.00
138.0	Flat Platform w/ Han	1	23.404	39.553	1.00	48.40	0.000	0.000	1,914.36	0.00	0.00	2,450.00
138.0	6' Omni	7	23.404	39.553	1.00	14.91	0.000	0.000	589.74	0.00	0.00	267.68
138.0	8' Omni	2	23.404	39.553	1.00	6.46	0.000	0.000	255.51	0.00	0.00	124.00
138.0	8' Omni	2	23.596	39.877	1.00	6.46	0.000	4.000	257.61	0.00	1,030.43	124.00
138.0	6' FM Antenna	1	23.596	39.877	1.00	14.77	0.000	4.000	588.99	0.00	2,355.95	112.70
138.0	6' Dipole	1	23.404	39.553	1.00	5.50	0.000	0.000	217.54	0.00	0.00	50.00
									17,386.89			14,069.81



Pole : 310968  
 Location : WSPT-Westport Rebuild CT, CT  
 Height : 140.0 (ft)  
 Shape : 18 Sides  
 Base Dia : 47.13 (in)  
 Top Dia : 20.50 (in)  
 Taper : 0.200036 (in/ft)

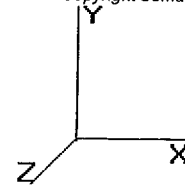
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Base Elev : 0.000 (ft)



**Load Case:** Ice

77.94 mph Wind with Ice

23 Iterations

Gust Response Factor : 1.69  
 Dead Load Factor : 1.00  
 Wind Load Factor : 1.00

**Applied Segment Forces Summary**

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	339.02	1,656.12	0.00	0.00
10.00	331.90	1,626.03	0.00	0.00
15.00	324.78	1,595.94	0.00	0.00
20.00	317.66	1,565.85	0.00	0.00
25.00	310.55	1,535.76	0.00	0.00
30.00	303.43	1,505.67	0.00	0.00
35.00	301.33	1,475.57	0.00	0.00
40.00	305.53	1,445.48	0.00	0.00
45.00	308.21	1,415.39	0.00	0.00
46.25	76.43	349.44	0.00	0.00
50.00	237.47	1,808.33	0.00	0.00
51.00	62.92	476.97	0.00	0.00
55.00	253.86	1,106.08	0.00	0.00
60.00	317.72	1,355.20	0.00	0.00
65.00	316.43	1,325.11	0.00	0.00
70.00	314.37	1,295.02	0.00	0.00
75.00	311.63	1,264.93	0.00	0.00
76.00	3,281.55	2,548.41	0.00	0.00
80.00	245.88	946.35	0.00	0.00
85.00	304.32	1,155.55	0.00	0.00
87.00	1,849.29	2,473.00	0.00	0.00
90.00	178.77	642.51	0.00	0.00
93.50	206.49	735.80	0.00	0.00
95.00	88.54	400.86	0.00	0.00
97.25	132.06	594.40	0.00	0.00
100.0	2,357.38	2,503.98	0.00	0.00
105.0	287.33	486.92	0.00	0.00
110.0	281.14	473.71	0.00	0.00
115.0	274.56	460.49	0.00	0.00
120.0	3,248.97	2,630.87	0.00	0.00
125.0	260.35	396.27	0.00	0.00
130.0	252.75	383.05	0.00	0.00
131.0	2,917.14	2,133.47	0.00	0.00
135.0	195.02	255.70	0.00	0.00
138.0	4,533.66	3,493.82	0.00	3,430.41
140.0	93.37	109.00	0.00	0.00
Totals:	25,721.80	45,627.05	0.00	3,430.41

Pole : 310968  
 Location : WSPT-Westport Rebuild CT, CT  
 Height : 140.0 (ft)  
 Shape : 18 Sides  
 Base Dia : 47.13 (in)  
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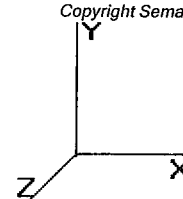
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Base Elev : 0.000 (ft)



**Load Case:** Ice

77.94 mph Wind with Ice

23 Iterations

Gust Response Factor : 1.69  
 Dead Load Factor : 1.00  
 Wind Load Factor : 1.00

**Calculated Shaft Forces and Deflections**

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-25.794	-45.586	0.000	0.000	0.000	-2,633.228	0.000	0.000	0.000	0.000
5.00	-25.591	-43.849	0.000	0.000	0.000	-2,504.259	-0.096	0.000	0.096	-0.180
10.00	-25.387	-42.144	0.000	0.000	0.000	-2,376.305	-0.382	0.000	0.382	-0.362
15.00	-25.181	-40.469	0.000	0.000	0.000	-2,249.374	-0.860	0.000	0.860	-0.547
20.00	-24.973	-38.825	0.000	0.000	0.000	-2,123.474	-1.533	0.000	1.533	-0.733
25.00	-24.763	-37.212	0.000	0.000	0.000	-1,998.612	-2.402	0.000	2.402	-0.922
30.00	-24.552	-35.631	0.000	0.000	0.000	-1,874.797	-3.470	0.000	3.470	-1.113
35.00	-24.334	-34.080	0.000	0.000	0.000	-1,752.038	-4.738	0.000	4.738	-1.304
40.00	-24.104	-32.562	0.000	0.000	0.000	-1,630.369	-6.208	0.000	6.208	-1.497
45.00	-23.821	-31.105	0.000	0.000	0.000	-1,509.853	-7.880	0.000	7.880	-1.690
46.25	-23.788	-30.718	0.000	0.000	0.000	-1,480.077	-8.329	0.000	8.329	-1.740
50.00	-23.539	-28.880	0.000	0.000	0.000	-1,390.876	-9.755	0.000	9.755	-1.887
51.00	-23.509	-28.365	0.000	0.000	0.000	-1,367.337	-10.154	0.000	10.154	-1.926
55.00	-23.296	-27.201	0.000	0.000	0.000	-1,273.301	-11.835	0.000	11.835	-2.081
60.00	-23.005	-25.789	0.000	0.000	0.000	-1,156.824	-14.109	0.000	14.109	-2.257
65.00	-22.708	-24.411	0.000	0.000	0.000	-1,041.800	-16.565	0.000	16.565	-2.429
70.00	-22.404	-23.066	0.000	0.000	0.000	-928.263	-19.200	0.000	19.200	-2.598
75.00	-22.070	-21.780	0.000	0.000	0.000	-816.247	-22.007	0.000	22.007	-2.760
76.00	-18.696	-19.367	0.000	0.000	0.000	-794.178	-22.589	0.000	22.589	-2.793
80.00	-18.448	-18.390	0.000	0.000	0.000	-719.397	-24.983	0.000	24.983	-2.919
85.00	-18.115	-17.219	0.000	0.000	0.000	-627.160	-28.121	0.000	28.121	-3.070
87.00	-16.153	-14.829	0.000	0.000	0.000	-590.932	-29.420	0.000	29.420	-3.130
90.00	-15.962	-14.171	0.000	0.000	0.000	-542.472	-31.414	0.000	31.414	-3.218
93.50	-15.730	-13.429	0.000	0.000	0.000	-486.605	-33.809	0.000	33.809	-3.316
95.00	-15.630	-13.020	0.000	0.000	0.000	-463.009	-34.857	0.000	34.857	-3.358
97.25	-15.478	-12.417	0.000	0.000	0.000	-427.841	-36.454	0.000	36.454	-3.418
100.0	-13.007	-10.017	0.000	0.000	0.000	-385.278	-38.443	0.000	38.443	-3.489
105.0	-12.736	-9.487	0.000	0.000	0.000	-320.245	-42.256	0.000	42.256	-3.783
110.0	-12.462	-8.979	0.000	0.000	0.000	-256.567	-46.363	0.000	46.363	-4.051
115.0	-12.187	-8.494	0.000	0.000	0.000	-194.256	-50.733	0.000	50.733	-4.285
120.0	-8.764	-6.094	0.000	0.000	0.000	-133.323	-55.325	0.000	55.325	-4.476
125.0	-8.485	-5.702	0.000	0.000	0.000	-89.505	-60.092	0.000	60.092	-4.623
130.0	-8.207	-5.333	0.000	0.000	0.000	-47.079	-64.989	0.000	64.989	-4.725
131.0	-5.126	-3.445	0.000	0.000	0.000	-38.872	-65.980	0.000	65.980	-4.739
135.0	-4.912	-3.204	0.000	0.000	0.000	-18.369	-69.966	0.000	69.966	-4.780
138.0	-0.102	-0.101	0.000	0.000	0.000	-0.204	-72.971	0.000	72.971	-4.792
140.0	-0.093	0.000	0.000	0.000	0.000	0.000	-74.976	0.000	74.976	-4.793

Pole : 310968  
 Location : WSPT-Westport Rebuild CT, CT  
 Height : 140.0 (ft)  
 Shape : 18 Sides  
 Base Dia : 47.13 (in)  
 Top Dia : 20.50 (in)  
 Taper : 0.200036 (in/ft)

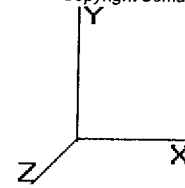
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Base Elev : 0.000 (ft)



**Load Case:** Ice

77.94 mph Wind with Ice

23 Iterations

Gust Response Factor : 1.69  
 Dead Load Factor : 1.00  
 Wind Load Factor : 1.00

**Calculated Stresses**

Seg Elev (ft)	Applied Stresses							Allowable Stress (Fb) (ksi)	Stress Ratio	
	Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)			
0.00	0.62	0.70	0.00	0.00	0.00	37.19	37.83	52.0	0.0	0.728
5.00	0.61	0.71	0.00	0.00	0.00	36.95	37.57	52.0	0.0	0.723
10.00	0.60	0.72	0.00	0.00	0.00	36.66	37.27	52.0	0.0	0.717
15.00	0.58	0.73	0.00	0.00	0.00	36.32	36.93	52.0	0.0	0.710
20.00	0.57	0.74	0.00	0.00	0.00	35.92	36.52	52.0	0.0	0.703
25.00	0.56	0.76	0.00	0.00	0.00	35.47	36.05	52.0	0.0	0.694
30.00	0.55	0.77	0.00	0.00	0.00	34.94	35.51	52.0	0.0	0.683
35.00	0.54	0.78	0.00	0.00	0.00	34.33	34.90	52.0	0.0	0.671
40.00	0.53	0.79	0.00	0.00	0.00	33.63	34.19	52.0	0.0	0.658
45.00	0.52	0.80	0.00	0.00	0.00	32.83	33.38	52.0	0.0	0.642
46.25	0.52	0.81	0.00	0.00	0.00	32.62	33.17	52.0	0.0	0.638
50.00	0.50	0.82	0.00	0.00	0.00	31.93	32.46	52.0	0.0	0.625
51.00	0.48	0.80	0.00	0.00	0.00	30.06	30.56	52.0	0.0	0.588
55.00	0.47	0.81	0.00	0.00	0.00	29.23	29.73	52.0	0.0	0.572
60.00	0.46	0.82	0.00	0.00	0.00	28.08	28.57	52.0	0.0	0.550
65.00	0.44	0.83	0.00	0.00	0.00	26.78	27.26	52.0	0.0	0.525
70.00	0.43	0.85	0.00	0.00	0.00	25.31	25.79	52.0	0.0	0.496
75.00	0.42	0.86	0.00	0.00	0.00	23.66	24.12	52.0	0.0	0.464
76.00	0.38	0.73	0.00	0.00	0.00	23.30	23.71	52.0	0.0	0.456
80.00	0.37	0.74	0.00	0.00	0.00	22.20	22.60	52.0	0.0	0.435
85.00	0.35	0.75	0.00	0.00	0.00	20.65	21.04	52.0	0.0	0.405
87.00	0.31	0.68	0.00	0.00	0.00	19.98	20.32	52.0	0.0	0.391
90.00	0.30	0.68	0.00	0.00	0.00	19.10	19.43	52.0	0.0	0.374
93.50	0.29	0.69	0.00	0.00	0.00	17.98	18.31	52.0	0.0	0.352
95.00	0.29	0.69	0.00	0.00	0.00	17.47	17.80	52.0	0.0	0.342
97.25	0.72	1.82	0.00	0.00	0.00	41.88	42.72	51.3	0.0	0.832
100.00	0.59	1.56	0.00	0.00	0.00	39.20	39.89	51.8	0.0	0.770
105.00	0.58	1.58	0.00	0.00	0.00	35.02	35.71	52.0	0.0	0.687
110.00	0.57	1.60	0.00	0.00	0.00	30.24	30.94	52.0	0.0	0.595
115.00	0.56	1.63	0.00	0.00	0.00	24.75	25.47	52.0	0.0	0.490
120.00	0.42	1.22	0.00	0.00	0.00	18.42	18.96	52.0	0.0	0.365
125.00	0.41	1.23	0.00	0.00	0.00	13.45	14.03	52.0	0.0	0.270
130.00	0.40	1.25	0.00	0.00	0.00	7.73	8.41	52.0	0.0	0.162
131.00	0.26	0.79	0.00	0.00	0.00	6.50	6.89	52.0	0.0	0.133
135.00	0.25	0.78	0.00	0.00	0.00	3.31	3.81	52.0	0.0	0.073
138.00	0.01	0.02	0.00	0.00	0.00	0.04	0.06	52.0	0.0	0.001
140.00	0.00	0.02	0.00	0.00	0.00	0.00	0.03	52.0	0.0	0.001

Pole : 310968  
 Location : WSPT-Westport Rebuild CT, CT  
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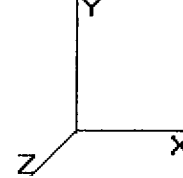
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Base Elev : 0.000 (ft)



**Load Case:** Twist/Sway

50.00 mph Wind with No Ice

22 Iterations

Gust Response Factor : 1.69  
 Dead Load Factor : 1.00  
 Wind Load Factor : 1.00

**Shaft Segment Forces**

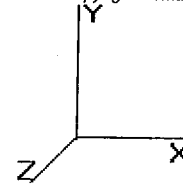
Seg Top Elev (ft)	Description	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)	
0.00		0.00	1.00	6.400	10.81	196.37	0.650	0.00	0.00	0.000	0.00	0.0	0.0	
5.00		0.00	1.00	6.400	10.81	192.20	0.650	0.00	5.00	19.429	12.63	136.6	0.0	1,245.5
10.00		0.00	1.00	6.400	10.81	188.04	0.650	0.00	5.00	19.012	12.36	133.7	0.0	1,218.5
15.00		0.00	1.00	6.400	10.81	183.87	0.650	0.00	5.00	18.596	12.09	130.7	0.0	1,191.5
20.00		0.00	1.00	6.400	10.81	179.70	0.650	0.00	5.00	18.179	11.82	127.8	0.0	1,164.5
25.00		0.00	1.00	6.400	10.81	175.53	0.650	0.00	5.00	17.762	11.55	124.9	0.0	1,137.5
30.00		0.00	1.00	6.400	10.81	171.37	0.650	0.00	5.00	17.345	11.27	121.9	0.0	1,110.5
35.00		0.00	1.01	6.509	10.99	168.61	0.650	0.00	5.00	16.929	11.00	121.0	0.0	1,083.5
40.00		0.00	1.05	6.762	11.42	167.57	0.650	0.00	5.00	16.512	10.73	122.6	0.0	1,056.5
45.00		0.00	1.09	6.993	11.81	166.06	0.650	0.00	5.00	16.095	10.46	123.6	0.0	1,029.5
46.25	Bot - Section 2	0.00	1.10	7.048	11.91	165.62	0.650	0.00	1.25	3.959	2.57	30.6	0.0	253.1
50.00		0.00	1.12	7.207	12.17	164.16	0.650	0.00	3.75	12.032	7.82	95.3	0.0	1,518.9
51.00	Top - Section 1	0.00	1.13	7.248	12.24	163.74	0.650	0.00	1.00	3.169	2.06	25.2	0.0	399.9
55.00		0.00	1.15	7.406	12.51	166.41	0.650	0.00	4.00	12.509	8.13	101.8	0.0	799.8
60.00		0.00	1.18	7.592	12.83	163.95	0.650	0.00	5.00	15.262	9.92	127.3	0.0	975.5
65.00		0.00	1.21	7.768	13.12	161.24	0.650	0.00	5.00	14.845	9.65	126.7	0.0	948.5
70.00		0.00	1.24	7.934	13.40	158.32	0.650	0.00	5.00	14.428	9.38	125.7	0.0	921.4
75.00		0.00	1.26	8.092	13.67	155.20	0.650	0.00	5.00	14.011	9.11	124.5	0.0	894.4
76.00	Appertunance(s)	0.00	1.26	8.123	13.72	154.56	0.650	0.00	1.00	2.752	1.79	24.6	0.0	175.6
80.00		0.00	1.28	8.242	13.93	151.91	0.650	0.00	4.00	10.842	7.05	98.2	0.0	691.8
85.00		0.00	1.31	8.387	14.17	148.46	0.650	0.00	5.00	13.178	8.57	121.4	0.0	840.4
87.00	Appertunance(s)	0.00	1.31	8.442	14.26	147.04	0.650	0.00	2.00	5.154	3.35	47.8	0.0	328.6
90.00		0.00	1.33	8.525	14.40	144.87	0.650	0.00	3.00	7.607	4.94	71.2	0.0	484.8
93.50	Bot - Section 3	0.00	1.34	8.618	14.56	142.28	0.650	0.00	3.50	8.685	5.65	82.2	0.0	553.3
95.00		0.00	1.35	8.657	14.63	141.15	0.650	0.00	1.50	3.706	2.41	35.2	0.0	322.6
97.25	Top - Section 2	0.00	1.36	8.715	14.72	139.43	0.650	0.00	2.25	5.489	3.57	52.6	0.0	477.6
100.0	Appertunance(s)	0.00	1.37	8.785	14.84	139.13	0.650	0.00	2.75	6.595	4.29	63.6	0.0	159.2
105.0		0.00	1.39	8.908	15.05	135.19	0.650	0.00	5.00	11.667	7.58	114.2	0.0	281.6
110.0		0.00	1.41	9.028	15.25	131.14	0.650	0.00	5.00	11.250	7.31	111.6	0.0	271.5
115.0		0.00	1.42	9.143	15.45	126.99	0.650	0.00	5.00	10.834	7.04	108.8	0.0	261.4
120.0	Appertunance(s)	0.00	1.44	9.255	15.64	122.76	0.650	0.00	5.00	10.417	6.77	105.9	0.0	251.2
125.0		0.00	1.46	9.363	15.82	118.43	0.650	0.00	5.00	10.000	6.50	102.9	0.0	241.1
130.0		0.00	1.48	9.469	16.00	114.03	0.650	0.00	5.00	9.584	6.23	99.7	0.0	231.0
131.0	Appertunance(s)	0.00	1.48	9.490	16.03	113.14	0.650	0.00	1.00	1.867	1.21	19.5	0.0	45.0
135.0		0.00	1.49	9.572	16.17	109.55	0.650	0.00	4.00	7.300	4.75	76.8	0.0	175.9
138.0	Appertunance(s)	0.00	1.50	9.632	16.27	106.83	0.650	0.00	3.00	5.300	3.45	56.1	0.0	127.7
140.0		0.00	1.51	9.672	16.34	105.00	0.650	0.00	2.00	3.450	2.24	36.7	0.0	83.1
Totals:								140.00			3,328.9	0.0	22,952.4	

Pole : 310968  
 Location : WSPT-Westport Rebuild CT, CT  
 Height : 140.0 (ft)  
 Shape : 18 Sides  
 Base Dia : 47.13 (in)  
 Top Dia : 20.50 (in)  
 Taper : 0.200036 (in/ft)

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Base Elev : 0.000 (ft)



<b>Load Case:</b> Twist/Sway	50.00 mph Wind with No Ice	22 Iterations
Gust Response Factor : 1.69		
Dead Load Factor : 1.00		
Wind Load Factor : 1.00		

**Discrete Appurtenance Segment Forces**

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
76.00	Antel LPA-80080/6CF	2	8.123	13.727	1.00	18.20	0.000	0.000	249.83	0.00	0.00	42.00
76.00	Andrew DB844H80E-	4	8.123	13.727	0.88	13.13	0.000	0.000	180.23	0.00	0.00	40.00
76.00	Andrew 932DG65T2E-	3	8.123	13.727	0.76	7.96	0.000	0.000	109.23	0.00	0.00	28.50
76.00	Powerwave P65-16-	3	8.123	13.727	0.75	18.90	0.000	0.000	259.44	0.00	0.00	99.00
76.00	Flat Low Profile Pla	1	8.123	13.727	1.00	26.10	0.000	0.000	358.28	0.00	0.00	1,500.00
87.00	RFS ATMAA1412D-	3	8.442	14.268	0.50	1.75	0.000	0.000	25.04	0.00	0.00	39.00
87.00	Andrew	3	8.442	14.268	0.50	1.14	0.000	0.000	16.27	0.00	0.00	33.00
87.00	RFS APX16DWV-	3	8.442	14.268	0.67	13.47	0.000	0.000	192.14	0.00	0.00	118.80
87.00	Flat Low Profile Pla	1	8.442	14.268	1.00	26.10	0.000	0.000	372.39	0.00	0.00	1,500.00
100.0	14" x 9" TTA	12	8.785	14.847	0.50	7.38	0.000	0.000	109.57	0.00	0.00	120.00
100.0	Diplexer	6	8.785	14.847	0.50	2.10	0.000	0.000	31.18	0.00	0.00	30.00
100.0	Flat Low Profile Pla	1	8.785	14.847	1.00	26.10	0.000	0.000	387.50	0.00	0.00	1,500.00
100.0	56" x 6" Panel	6	8.785	14.847	0.75	15.53	0.000	0.000	230.50	0.00	0.00	120.00
120.0	Flat Low Profile Pla	1	9.255	15.641	1.00	26.10	0.000	0.000	408.22	0.00	0.00	1,500.00
120.0	48" x 8" Panel	12	9.255	15.641	0.91	40.73	0.000	0.000	637.07	0.00	0.00	168.00
131.0	Flat Low Profile Pla	1	9.490	16.038	1.00	26.10	0.000	0.000	418.58	0.00	0.00	1,500.00
131.0	Decibel 980F65E-M	12	9.490	16.038	0.81	36.45	0.000	0.000	584.57	0.00	0.00	114.00
138.0	8' Omni (inverted)	1	9.551	16.142	1.00	2.40	0.000	-4.000	38.74	0.00	-154.96	40.00
138.0	Andrew VHLP2.5-10W	1	9.632	16.278	1.00	8.43	0.000	0.000	137.22	0.00	0.00	47.60
138.0	Andrew DB589	1	9.755	16.485	1.00	1.38	0.000	6.250	22.75	0.00	142.19	11.50
138.0	Flat Platform w/ Han	1	9.632	16.278	1.00	42.40	0.000	0.000	690.18	0.00	0.00	2,000.00
138.0	6' Omni	7	9.632	16.278	1.00	12.32	0.000	0.000	200.53	0.00	0.00	175.00
138.0	8' Omni	2	9.632	16.278	1.00	4.80	0.000	0.000	78.13	0.00	0.00	80.00
138.0	8' Omni	2	9.711	16.411	1.00	4.80	0.000	4.000	78.77	0.00	315.10	80.00
138.0	6' FM Antenna	1	9.711	16.411	1.00	13.45	0.000	4.000	220.73	0.00	882.93	30.00
138.0	6' Dipole	1	9.632	16.278	1.00	4.00	0.000	0.000	65.11	0.00	0.00	30.00
									6,102.23			10,946.40

Pole : 310968  
 Location : WSPT-Westport Rebuild CT, CT  
 Height : 140.0 (ft)  
 Shape : 18 Sides  
 Base Dia : 47.13 (in)  
 Top Dia : 20.50 (in)  
 Taper : 0.200036 (in/ft)

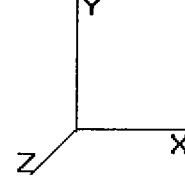
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Base Elev : 0.000 (ft)



**Load Case:** Twist/Sway

50.00 mph Wind with No Ice

22 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

**Applied Segment Forces Summary**

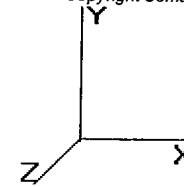
Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	136.59	1,512.23	0.00	0.00
10.00	133.66	1,485.23	0.00	0.00
15.00	130.73	1,458.23	0.00	0.00
20.00	127.80	1,431.22	0.00	0.00
25.00	124.88	1,404.22	0.00	0.00
30.00	121.95	1,377.21	0.00	0.00
35.00	121.03	1,350.21	0.00	0.00
40.00	122.64	1,323.20	0.00	0.00
45.00	123.64	1,296.20	0.00	0.00
46.25	30.65	319.83	0.00	0.00
50.00	95.25	1,718.93	0.00	0.00
51.00	25.23	453.25	0.00	0.00
55.00	101.77	1,013.19	0.00	0.00
60.00	127.28	1,242.18	0.00	0.00
65.00	126.67	1,215.18	0.00	0.00
70.00	125.75	1,188.17	0.00	0.00
75.00	124.55	1,161.17	0.00	0.00
76.00	1,181.58	1,938.49	0.00	0.00
80.00	98.17	865.81	0.00	0.00
85.00	121.40	1,057.96	0.00	0.00
87.00	653.64	2,106.42	0.00	0.00
90.00	71.23	585.81	0.00	0.00
93.50	82.22	671.16	0.00	0.00
95.00	35.25	373.09	0.00	0.00
97.25	52.55	553.36	0.00	0.00
100.0	822.39	2,021.78	0.00	0.00
105.0	114.17	400.51	0.00	0.00
110.0	111.57	390.39	0.00	0.00
115.0	108.81	380.26	0.00	0.00
120.0	1,151.20	2,038.13	0.00	0.00
125.0	102.86	322.21	0.00	0.00
130.0	99.68	312.08	0.00	0.00
131.0	1,022.61	1,675.20	0.00	0.00
135.0	76.76	201.39	0.00	0.00
138.0	1,588.26	2,640.89	0.00	1,185.25
140.0	36.65	83.08	0.00	0.00
<b>Totals:</b>	<b>9,431.09</b>	<b>39,567.86</b>	<b>0.00</b>	<b>1,185.25</b>

Pole : 310968  
 Location : WSPT-Westport Rebuild CT, CT  
 Height : 140.0 (ft)  
 Shape : 18 Sides  
 Base Dia : 47.13 (in)  
 Top Dia : 20.50 (in)  
 Taper : 0.200036 (in/ft)

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Base Elev : 0.000 (ft)



**Load Case:** Twist/Sway      50.00 mph Wind with No Ice      22 Iterations

Gust Response Factor : 1.69  
 Dead Load Factor : 1.00  
 Wind Load Factor : 1.00

**Calculated Shaft Forces and Deflections**

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-9.453	-39.562	0.000	0.000	0.000	-944.714	0.000	0.000	0.000	0.000
5.00	-9.359	-38.040	0.000	0.000	0.000	-897.450	-0.035	0.000	0.035	-0.064
10.00	-9.264	-36.544	0.000	0.000	0.000	-850.658	-0.137	0.000	0.137	-0.130
15.00	-9.170	-35.076	0.000	0.000	0.000	-804.338	-0.308	0.000	0.308	-0.196
20.00	-9.076	-33.634	0.000	0.000	0.000	-758.489	-0.549	0.000	0.549	-0.263
25.00	-8.982	-32.220	0.000	0.000	0.000	-713.110	-0.860	0.000	0.860	-0.330
30.00	-8.888	-30.833	0.000	0.000	0.000	-668.202	-1.242	0.000	1.242	-0.398
35.00	-8.792	-29.473	0.000	0.000	0.000	-623.764	-1.696	0.000	1.696	-0.466
40.00	-8.691	-28.141	0.000	0.000	0.000	-579.805	-2.221	0.000	2.221	-0.535
45.00	-8.575	-26.840	0.000	0.000	0.000	-536.349	-2.818	0.000	2.818	-0.603
46.25	-8.557	-26.515	0.000	0.000	0.000	-525.631	-2.978	0.000	2.978	-0.621
50.00	-8.457	-24.792	0.000	0.000	0.000	-493.543	-3.487	0.000	3.487	-0.673
51.00	-8.441	-24.334	0.000	0.000	0.000	-485.086	-3.630	0.000	3.630	-0.687
55.00	-8.350	-23.314	0.000	0.000	0.000	-451.324	-4.229	0.000	4.229	-0.742
60.00	-8.230	-22.065	0.000	0.000	0.000	-409.573	-5.040	0.000	5.040	-0.804
65.00	-8.108	-20.843	0.000	0.000	0.000	-368.424	-5.915	0.000	5.915	-0.865
70.00	-7.983	-19.649	0.000	0.000	0.000	-327.888	-6.854	0.000	6.854	-0.925
75.00	-7.850	-18.485	0.000	0.000	0.000	-287.972	-7.854	0.000	7.854	-0.982
76.00	-6.644	-16.564	0.000	0.000	0.000	-280.122	-8.061	0.000	8.061	-0.994
80.00	-6.544	-15.695	0.000	0.000	0.000	-253.547	-8.913	0.000	8.913	-1.038
85.00	-6.412	-14.635	0.000	0.000	0.000	-220.829	-10.029	0.000	10.029	-1.092
87.00	-5.724	-12.539	0.000	0.000	0.000	-208.006	-10.491	0.000	10.491	-1.113
90.00	-5.648	-11.951	0.000	0.000	0.000	-190.835	-11.200	0.000	11.200	-1.143
93.50	-5.557	-11.280	0.000	0.000	0.000	-171.068	-12.051	0.000	12.051	-1.178
95.00	-5.517	-10.906	0.000	0.000	0.000	-162.733	-12.424	0.000	12.424	-1.193
97.25	-5.457	-10.351	0.000	0.000	0.000	-150.319	-12.991	0.000	12.991	-1.214
100.0	-4.601	-8.342	0.000	0.000	0.000	-135.312	-13.698	0.000	13.698	-1.239
105.0	-4.492	-7.937	0.000	0.000	0.000	-112.305	-15.052	0.000	15.052	-1.342
110.0	-4.383	-7.543	0.000	0.000	0.000	-89.845	-16.509	0.000	16.509	-1.436
115.0	-4.273	-7.160	0.000	0.000	0.000	-67.933	-18.059	0.000	18.059	-1.518
120.0	-3.073	-5.150	0.000	0.000	0.000	-46.566	-19.686	0.000	19.686	-1.585
125.0	-2.964	-4.829	0.000	0.000	0.000	-31.203	-21.375	0.000	21.375	-1.636
130.0	-2.857	-4.519	0.000	0.000	0.000	-16.381	-23.109	0.000	23.109	-1.671
131.0	-1.787	-2.874	0.000	0.000	0.000	-13.524	-23.460	0.000	23.460	-1.676
135.0	-1.705	-2.675	0.000	0.000	0.000	-6.377	-24.871	0.000	24.871	-1.690
138.0	-0.039	-0.082	0.000	0.000	0.000	-0.078	-25.935	0.000	25.935	-1.695
140.0	-0.037	0.000	0.000	0.000	0.000	0.000	-26.645	0.000	26.645	-1.695

Pole : 310968  
 Location : WSPT-Westport Rebuild CT, CT  
 Height : 140.0 (ft)  
 Shape : 18 Sides  
 Base Dia : 47.13 (in)  
 Top Dia : 20.50 (in)  
 Taper : 0.200036 (in/ft)

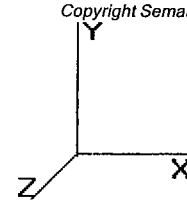
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Base Elev : 0.000 (ft)



**Load Case:** Twist/Sway      50.00 mph Wind with No Ice      22 Iterations

Gust Response Factor : 1.69  
 Dead Load Factor : 1.00  
 Wind Load Factor : 1.00

**Calculated Stresses**

Seg Elev (ft)	Applied Stresses							Allowable Stress (Fb) (ksi)	Stress Ratio	
	Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)			
0.00	0.53	0.26	0.00	0.00	0.00	13.34	13.89	52.0	0.0	0.267
5.00	0.53	0.26	0.00	0.00	0.00	13.24	13.77	52.0	0.0	0.265
10.00	0.52	0.26	0.00	0.00	0.00	13.12	13.65	52.0	0.0	0.263
15.00	0.51	0.27	0.00	0.00	0.00	12.99	13.50	52.0	0.0	0.260
20.00	0.50	0.27	0.00	0.00	0.00	12.83	13.34	52.0	0.0	0.257
25.00	0.49	0.27	0.00	0.00	0.00	12.65	13.15	52.0	0.0	0.253
30.00	0.48	0.28	0.00	0.00	0.00	12.45	12.94	52.0	0.0	0.249
35.00	0.47	0.28	0.00	0.00	0.00	12.22	12.70	52.0	0.0	0.244
40.00	0.46	0.29	0.00	0.00	0.00	11.96	12.43	52.0	0.0	0.239
45.00	0.45	0.29	0.00	0.00	0.00	11.66	12.12	52.0	0.0	0.233
46.25	0.45	0.29	0.00	0.00	0.00	11.59	12.04	52.0	0.0	0.232
50.00	0.43	0.29	0.00	0.00	0.00	11.33	11.77	52.0	0.0	0.226
51.00	0.41	0.29	0.00	0.00	0.00	10.66	11.08	52.0	0.0	0.213
55.00	0.40	0.29	0.00	0.00	0.00	10.36	10.77	52.0	0.0	0.207
60.00	0.39	0.29	0.00	0.00	0.00	9.94	10.35	52.0	0.0	0.199
65.00	0.38	0.30	0.00	0.00	0.00	9.47	9.86	52.0	0.0	0.190
70.00	0.37	0.30	0.00	0.00	0.00	8.94	9.32	52.0	0.0	0.179
75.00	0.36	0.31	0.00	0.00	0.00	8.35	8.72	52.0	0.0	0.168
76.00	0.32	0.26	0.00	0.00	0.00	8.22	8.55	52.0	0.0	0.165
80.00	0.31	0.26	0.00	0.00	0.00	7.82	8.15	52.0	0.0	0.157
85.00	0.30	0.27	0.00	0.00	0.00	7.27	7.59	52.0	0.0	0.146
87.00	0.26	0.24	0.00	0.00	0.00	7.03	7.31	52.0	0.0	0.141
90.00	0.25	0.24	0.00	0.00	0.00	6.72	6.98	52.0	0.0	0.134
93.50	0.25	0.24	0.00	0.00	0.00	6.32	6.58	52.0	0.0	0.127
95.00	0.24	0.24	0.00	0.00	0.00	6.14	6.39	52.0	0.0	0.123
97.25	0.60	0.64	0.00	0.00	0.00	14.72	15.36	51.3	0.0	0.299
100.00	0.50	0.55	0.00	0.00	0.00	13.77	14.29	51.8	0.0	0.276
105.00	0.49	0.56	0.00	0.00	0.00	12.28	12.81	52.0	0.0	0.246
110.00	0.48	0.56	0.00	0.00	0.00	10.59	11.11	52.0	0.0	0.214
115.00	0.48	0.57	0.00	0.00	0.00	8.65	9.18	52.0	0.0	0.177
120.00	0.36	0.43	0.00	0.00	0.00	6.43	6.83	52.0	0.0	0.131
125.00	0.35	0.43	0.00	0.00	0.00	4.69	5.09	52.0	0.0	0.098
130.00	0.34	0.43	0.00	0.00	0.00	2.69	3.12	52.0	0.0	0.060
131.00	0.22	0.27	0.00	0.00	0.00	2.26	2.52	52.0	0.0	0.049
135.00	0.21	0.27	0.00	0.00	0.00	1.15	1.44	52.0	0.0	0.028
138.00	0.01	0.01	0.00	0.00	0.00	0.01	0.02	52.0	0.0	0.000
140.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	52.0	0.0	0.000



**Pole :** 310968  
**Location :** WSPT-Westport Rebuild CT, CT  
**Height :** 140.0 (ft)  
**Shape :** 18 Sides  
**Base Dia :** 47.13 (in)  
**Top Dia :** 20.50 (in)  
**Taper :** 0.200036 (in/ft)

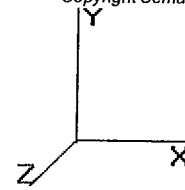
**Code:** TIA/EIA-222 Rev F

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12/23/2010 12:02:49

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**Base Elev :** 0.000 (ft)



### Analysis Summary

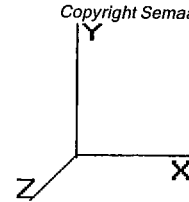
Load Case	Reactions						Max Stresses			
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Combined Stress (ksi)	Allowable Stress (ksi)	Elev (ft)	Stress Ratio
No Ice	30.6	0.00	39.51	0.00	0.00	3057.77	48.20	51.3	97.25	0.939
Ice	25.8	0.00	45.59	0.00	0.00	2633.23	42.72	51.3	97.25	0.832
Twist/Sway	9.5	0.00	39.56	0.00	0.00	944.71	15.36	51.3	97.25	0.299

Pole : 310968  
 Location : WSPT-Westport Rebuild CT, CT  
 Height : 140.0 (ft)  
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Base Elev : 0.000 (ft)



## Base Summary

### Reactions

Original Design			Analysis			
Moment (kip-ft)	Axial (kip)	Shear (kip)	Moment (kip-ft)	Axial (kip)	Shear (kip)	Moment Design %
3,550.00	37.00	35.00	3,057.77	45.59	30.63	86.13

### Base Plate

Yield (ksi)	Thick (in)	Width (in)	Style	Poly Sides	Clip Len (in)	Effective Len (in)	Moment (kip-in)	Allow Stress (ksi)	Applied Stress (ksi)	Stress Ratio
50.0	3.250	54.000	Clipped	0	12.00	9.349	355.99	49.99	21.63	0.43

### Anchor Bolts

Bolt Circle	Num Bolts	Bolt Type	Bolt Dia (in)	Yield (ksi)	Ultimate (ksi)	Cluster Arrange	Cluster Dist (in)	Start Angle (deg)	Compression			Tension		
									Force (kip)	Allow (kip)	Ratio	Force (kip)	Allow (kip)	Ratio
54.00	16	2.25" 18J	2.25	75.00	100.00	Clustered	6.00	45.0	172.73	194.98	0.89	167.03	194.98	0.86

Base/Flange Plate	Plate Type	<b>Baseplate</b>
	Pole Diameter	47.13 in
	Pole Thickness	0.5 in
	Plate Length	54 in
	Plate Thickness	3.25 in
	Plate Fy	50 ksi
	Weld Length	0.25 in
	$\phi_s$ Resistance	2529.50 k-in
	Applied	1242.08 k-in
	Stiffeners	#

Code Rev.	<b>F</b>
A.S.I.	1.33
Moment	3057.8 k-ft
Axial	45.6 k

Date	12/23/2010
Engineer	CM
Site #	310968
Carrier	Verizon

Bolts ●	#	<b>16</b>
	Bolt Circle (R)adial / (S)quare	54 in S
	Bolt Gap	6 in
	Bolt Diameter	2.25 in
	Hole Diameter	2.75 in
	Type	#18J
	Fy	75 ksi
	Fu	100 ksi
	$\phi_s$ Resistance	194.86 k
	Applied	171.56 k
Reinforcement ●	#	0
Extra Bolts ○	#	0

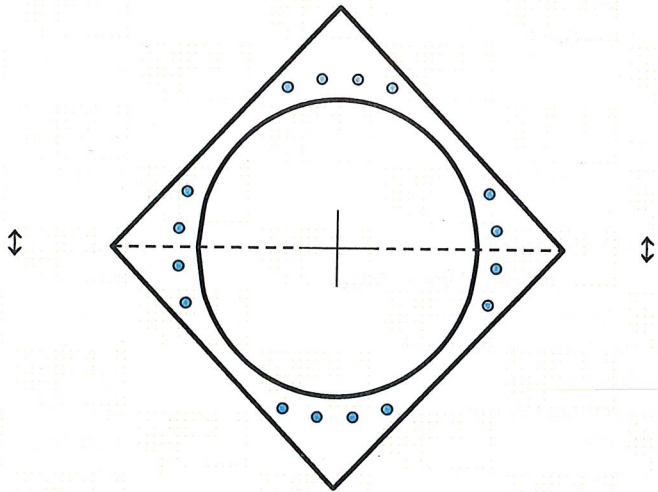
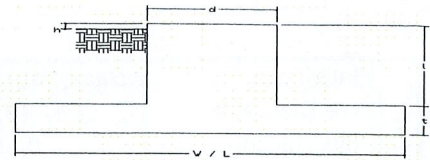


Plate Stress Ratio:  
 (Pass)

Bolt Stress Ratio:  
 (Pass)

Site Name: WSPT-Westport Rebuild CT, CT  
 Site Number: 310968  
 Engineering Number: 46304121  
 Engineer: C. Minor  
 Date: 12/23/10  
 Tower Type: MP

Program Last Updated: 8/30/2010



**Design Loads (Unfactored)**

Foundation Mapped:	N
Compression/Leg:	45.6 k
Uplift/Leg:	0.0 k
Total Shear:	30.6 k
Moment:	3057.8 k-ft
Tower + Appurtenance Weight:	45.6 k
Depth to Base of Foundation:	7.00 ft
Diameter of Pier (d):	6.77 ft
Height of Pier above Ground (h):	0.50
Width of Pad (W):	23.00 ft
Length of Pad (L):	23.00 ft
Thickness of Pad (t):	4.00 ft
Tower Leg Center to Center:	0.00 ft
Number of Tower Legs:	1.0 (1 if MP or GT)
Tower Center from Mat Center:	0.00 ft
Depth Below Ground Surface to Water Table:	100.00 ft
Unit Weight of Concrete:	150.0 pcf
Unit Weight of Soil Above Water Table:	115.0 pcf
Unit Weight of Water:	62.4 pcf
Unit Weight of Soil Below Water Table:	65.0 pcf
Friction Angle of Uplift:	31.00 Degrees
Ultimate Coefficient of Shear Friction:	0.34
Allowable Compressive Bearing Pressure:	10000.0 psf
Ultimate Passive Pressure on Pad Face:	10500.0 psf
Allowable Capacity Increase:	1.00

Concrete Strength ( $f'_c$ ):	3000 psi
Pad Tension Steel Depth:	44.00 in
Wind Load Factor:	1.3
$\phi_{\text{Shear}}$ :	0.75
$\phi_{\text{Flexure / Tension}}$ :	0.90
$\phi_{\text{Compression}}$ :	0.65
$\beta$ :	0.85
Bottom Pad Rebar Size #:	9
# of Bottom Pad Rebar:	25
Pad Bottom Steel Area:	25.00 in <sup>2</sup>
Pad Steel $F_y$ :	60000 psi
Top Pad Rebar Size #:	9
# of Top Pad Rebar:	25
Pad Top Steel Area:	25.00 in <sup>2</sup>
Pier Rebar Size #:	11
Pier Steel Area (Single Bar):	1.56 in <sup>2</sup>
# of Pier Rebar:	40
Pier Steel $F_y$ :	60000 psi
Pier Cage Diameter:	73.2 in
Rebar Strain Limit:	0.008
Steel Elastic Modulus:	29000 ksi
Tie Rebar Size #:	4
Tie Steel Area (Single Bar):	0.20 in <sup>2</sup>
Tie Spacing:	6 in
Tie Steel $F_y$ :	60000 psi

**Overturning Factor of Safety**

Design OTM:	3287.5 k-ft
OTM Resistance:	8689.9 k-ft
OTM Resistance / Design OTM Factor of Safety:	2.64 Result: OK

**Soil Bearing Pressure Usage:**

Total Weight (Foundation, Soil, Tower):	552.0 k
Net Bearing Pressure:	2962 psf
Allowable Bearing Pressure:	10000 psf
Net Bearing Pressure/Allowable Bearing Pressure:	0.30 Result: OK
Load Direction Controlling Design Bearing Pressure:	Diagonal to Pad Edge

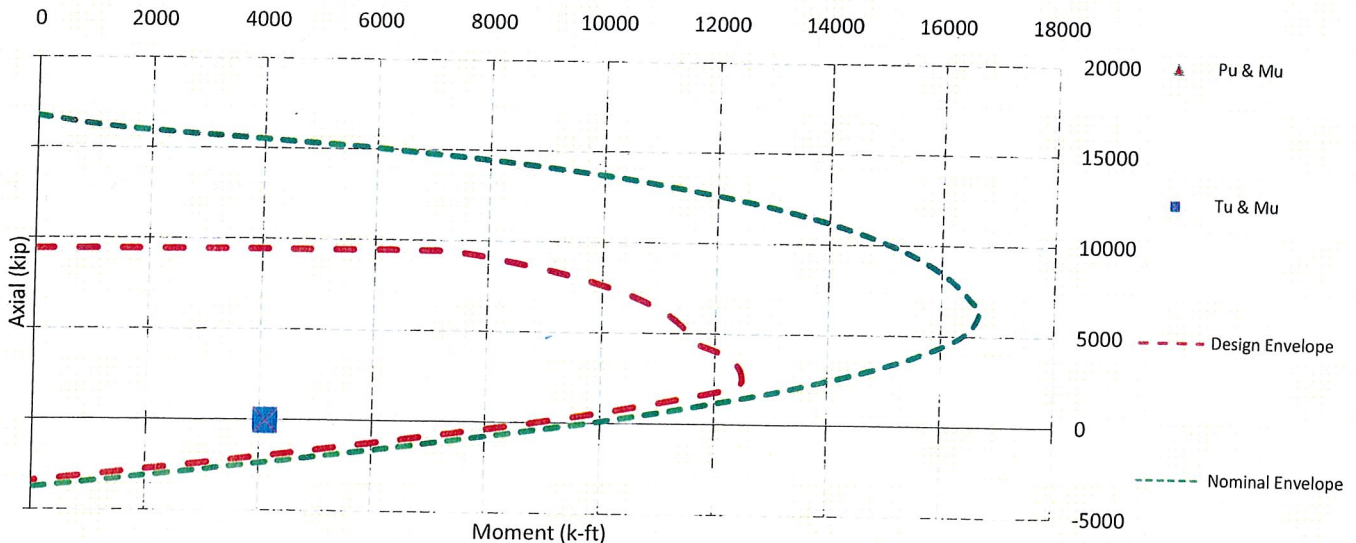
**Sliding Factor of Safety**

Total Ultimate Sliding Resistance:	1153.7 k
Sliding Resistance/Sliding Design Factor of Safety:	37.66 Result: OK

**One Way Shear, Flexural Capacity, and Punching Shear**

Factored One Way Shear ( $V_u$ ):	206.8 k
One Way Shear Capacity ( $\phi V_c$ ):	799.2 k - ACI11.3.1.1
$V_u / \phi V_c$ :	0.26 Result: OK
Load Direction Controlling Shear Capacity:	Diagonal to Pad Edge
Lower Pad Steel Factored Moment ( $M_u$ ):	1686.0 k-ft
Lower Steel Pad Moment Capacity ( $\phi M_n$ ):	5196.6 k-ft - ACI10.3
$M_u / \phi M_n$ :	0.32 Result: OK
Load Direction Controlling Flexural Capacity:	Diagonal to Pad Edge
Upper Steel Pad Factored Moment ( $M_u$ ):	1101.2 k-ft
Upper Steel Pad Moment Capacity ( $\phi M_n$ ):	4848.1 k-ft
$M_u / \phi M_n$ :	0.23 Result: OK
Lower Pad Flexural Reinforcement Ratio:	0.0021 OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Upper Pad Flexural Reinforcement Ratio:	0.0021 OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Lower Pad Reinforcement Spacing:	11 in - Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4
Upper Pad Reinforcement Spacing:	11 in - Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4
Factored Punching Shear ( $V_u$ ):	0.0 k
Nominal Punching Shear Capacity ( $\phi_c V_n$ ):	2844.6 k - ACI11.12.2.1
$V_u / \phi V_c$ :	0.00 Result: OK
Factored Moment in Pier ( $M_u$ ):	4114.5 k-ft
Pier Moment Capacity ( $\phi M_n$ ):	10058.4 k-ft
$M_u / \phi M_n$ :	0.41 Result: OK
Factored Shear in Pier ( $V_u$ ):	39.8 k
Pier Shear Capacity ( $\phi V_n$ ):	427.7 k
$V_u / \phi V_c$ :	0.09 Result: OK
Pier Shear Reinforcement Ratio:	0.0004 No Ties Necessary for Shear - ACI11.5.6.1
Factored Tension in Pier ( $T_u$ ):	0.0 k
Pier Tension Capacity ( $\phi T_n$ ):	3369.6 k
$T_u / \phi T_n$ :	0.00 Result: OK
Factored Compression in Pier ( $P_u$ ):	59.3 k
Pier Compression Capacity ( $\phi P_n$ ):	8737.6 k - ACI10.3.6.2
$P_u / \phi P_n$ :	0.01 Result: OK
Pier Compression Reinforcement Ratio:	0.012 OK - Reinforcement Ratio Met - ACI10.9.1 & 10.8.4
$M_u / \phi M_n + T_u / \phi T_n$ :	0.41 Result: OK

Nominal and Design Moment Capacity and Factored Design Loads



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Hartford, CT 06103-3597  
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kbaldwin@rc.com  
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CONNECTICUT  
SITING COUNCIL

February 7, 2011

ORIGINAL

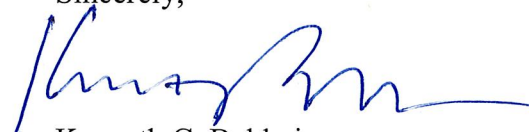
Linda Roberts  
Executive Director  
Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051

Re: **Notice of Construction Activity**  
**EM-VER-158-110110 – Bayberry Lane, Westport, Connecticut**

Dear Ms. Roberts:

The purpose of this letter is to notify you that construction activity associated with the above-referenced facility modifications has been completed. If you have any questions or need any additional information regarding this facility, please do not hesitate to contact me.

Sincerely,



Kenneth C. Baldwin



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