

CONN

EM-T-MOBILE-007-090406

In re:

T-Mobile USA, Inc. Notice to Make an Exempt : EXEMPT MODIFICATION NO. _____
Modification to an Existing Facility at 260 Beckley :
Road, Berlin, Connecticut. : April 6, 2009

ORIGINAL

RECEIVED
APR - 6 2009

NOTICE OF EXEMPT MODIFICATION CONNECTICUT
SITING COUNCIL

Pursuant to Conn. Agencies Regs. §§ 16-50j-73 and 16-50j-72(b), T-Mobile USA, Inc. ("T-Mobile") hereby gives notice to the Connecticut Siting Council ("Council") and the Town of Berlin of T-Mobile's intent to make an exempt modification to an existing monopole (the "Tower") located at 260 Beckley Road in Berlin, Connecticut. Specifically, T-Mobile plans to upgrade its wireless system in Connecticut by implementing its Universal Mobile Telecommunications System ("UMTS"). UMTS is a third-generation ("3G") technology that utilizes a code division multiple access ("CDMA") base to allow for fast and large data transfers. To accomplish this upgrade, T-Mobile must modify its antenna and equipment configurations at many of its existing sites.

Once the UMTS upgrade is complete, T-Mobile will operate on a more unified communication system, allowing international wireless telephones to function world-wide. Furthermore, UMTS will enhance Global Positioning System ("GPS") navigation capabilities and provide emergency responders with more advanced tracking capabilities. The proposed UMTS technology is compatible with the existing second-generation ("2G") Global System for Mobile Communication ("GSM") currently on the Tower and the proposed upgrade is expected to enhance the existing 2G system. In order to accomplish the upgrade at this site, T-Mobile

plans to add UMTS technology, update existing GMS technology and install associated equipment at the base of the tower.

Under the Council's regulations (Conn. Agencies Regs. § 16-50j-72(b)), T-Mobile's plans do not constitute a modification subject to the Council's review because T-Mobile will not change the height of the Tower, will not extend the boundaries of the compound, will not increase the noise levels at the site, and will not increase the total radio frequency electromagnetic radiation power density at the site to levels above applicable standards.

The Tower is a 150-foot monopole located at 260 Beckley Road in Berlin, Connecticut (41.6317, -72.7299). There are multiple carriers on the Tower. The Tower is owned by the American Tower Company. Currently, T-Mobile has 3 antennas and 3 Tower Mounted Amplifiers ("TMA") located on the Tower with a centerline of 163 feet. A site plan with Tower specifications is attached.

T-Mobile plans to remove and replace its 3 existing antennas, remove and replace its 3 existing TMA and add 3 TMA to the Tower. The 3 existing antennas will be replaced with 3 Quad Pole antennas that will include UMTS and GMS technology on the same antenna. The 3 existing TMA will be replaced with 3 new GSM Twin TMA. The 3 additional TMA are UMTS Twin TMA. The proposed antennas and TMA will have the same centerline as the existing antennas and TMA – 163 feet. To confirm the Tower can support these changes, T-Mobile commissioned American Tower Engineering Services to perform a structural analysis of the Tower (attached¹). According to the structural analysis, dated March 16, 2009: "The tower and foundation can support the existing and proposed antennas" (Page 2, Structural Analysis Report).

¹ The Structural Analysis Report, dated March 16, 2009, incorrectly states the location of the site as Kensington, Connecticut on page 1 of the report. The correct address of the site is 260 Beckley Road in Berlin, Connecticut.

In addition, T-Mobile proposes to locate 6, 1 5/8 inch coax cables under the existing ice bridge. The existing ice bridge connects the proposed UMTS equipment cabinet and the proposed antennas. T-Mobile proposes to install the UMTS equipment cabinet on its existing 20-foot by 24-foot (approximately) concrete pad. The 2 existing 2G cabinets will be consolidated in order to provide sufficient space for the proposed UMTS cabinet. The UMTS equipment cabinet will be placed in the space that will be vacated by the consolidation of the 2G equipment cabinets. The 2G equipment cabinet will be re-located next to the proposed UMTS equipment cabinet on T-Mobile's existing concrete pad. Hence, no increase in the size of the concrete pad is necessary. T-Mobile proposes to install power wiring and telephone wiring to run inside the existing underground conduit to the proposed UMTS equipment cabinet. T-Mobile also proposes to install a new mount pipe to replace the existing mount pipe.

Therefore, excluding brief, minor, construction-related noise during the addition of the antennas and the installation of the equipment cabinet, T-Mobile's changes to the Tower will not increase noise levels at the site.

The proposed antennas and TMA will not adversely impact the health and safety of the surrounding community or the people working on the Tower. The total radio frequency exposure measured around the Tower will be well below the National Council on Radiation Protection and Measurements' ("NCRP") standard adopted by the Federal Communications Commission ("FCC"). The worst-case power density analysis measured at the base of the Tower indicates that T-Mobile's antennas will emit 4.04% of the NCRP's standard for maximum permissible exposure. A cumulative power density analysis indicates that together, all of the antennas on the Tower will emit only 36.35% of the NCRP's standard for maximum permissible exposure. Therefore, the power density levels will be well below the FCC mandated radio

frequency exposure limits in all locations around the Tower, even with extremely conservative assumptions. The power density analysis is attached.

In conclusion, T-Mobile's proposed plan to remove and replace 3 existing antennas, remove and replace 3 existing TMA and add 3 TMA at this site does not constitute a modification subject to the Council's jurisdiction because T-Mobile will not increase the height of the Tower, will not extend the boundaries of the site, will not increase the noise levels at the site, and the total radio frequency electromagnetic radiation power density will stay within all applicable standards. *See Conn. Agencies Regs. § 16-50j-72.*

T-Mobile USA, Inc.

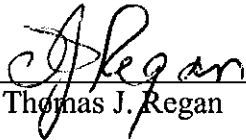
By: _____

Thomas J. Regan
Brown Rudnick LLP
185 Asylum Street, CityPlace I
Hartford, CT 06103-3402
Email - tregan@brownrudnick.com
Phone - 860.509.6522
Fax - 860.509.6622

Certificate of Service

This is to certify that on this 6th day of April, 2009, the foregoing Notice of Exempt Modification was sent, via first class mail, to the following:

Town of Berlin
Mayor Adam P. Salina
240 Kensington Road
Berlin, CT 06037

By: 
Thomas J. Regan

40258210 v1 - 025064/0016



ALL EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO APPROVAL BY LESSEE/LICENSEE'S STRUCTURAL & RF ENGINEERS. LOCATIONS OF POWER & TELEPHONE FACILITIES ARE SUBJECT TO APPROVAL BY UTILITY COMPANIES.

OVERALL SITE PLAN

N.T.S.

TRANSCEND WIRELESS

10 INDUSTRIAL AVENUE
MAHWAH, NJ 07430
OFFICE: 201-315-2085
FAX: 201-584-0055

FOR
**OMNIPONT
COMMUNICATIONS, INC.**

DBA T-MOBILE USA, INC.
35 GREEN ROAD SOUTH
BLOOMFIELD, CT 06002
OFFICE: (860) 892-7190
FAX: (860) 892-7159

**ATLANTIS
GROUP**

15 Cypress St., Suite 300
Newton Centre, MA 02459
Office: 617-965-0789
Fax: 617-663-6032

SITE NAME:

ATC # 302483

SITE NUMBER:

CT11182A

ADDRESS:

260 BECKLEY ROAD
BERLIN, CT 06037

NUMBER	REVISION	DATE
0:	FINAL LE	03-19-09
A:	REVIEW	01-29-09
DRAWN BY	REVISION	DATE

S.B.

DRAWING NO:

LE-1

APPROVALS

Site Owner

Date

Construction Manager

Date

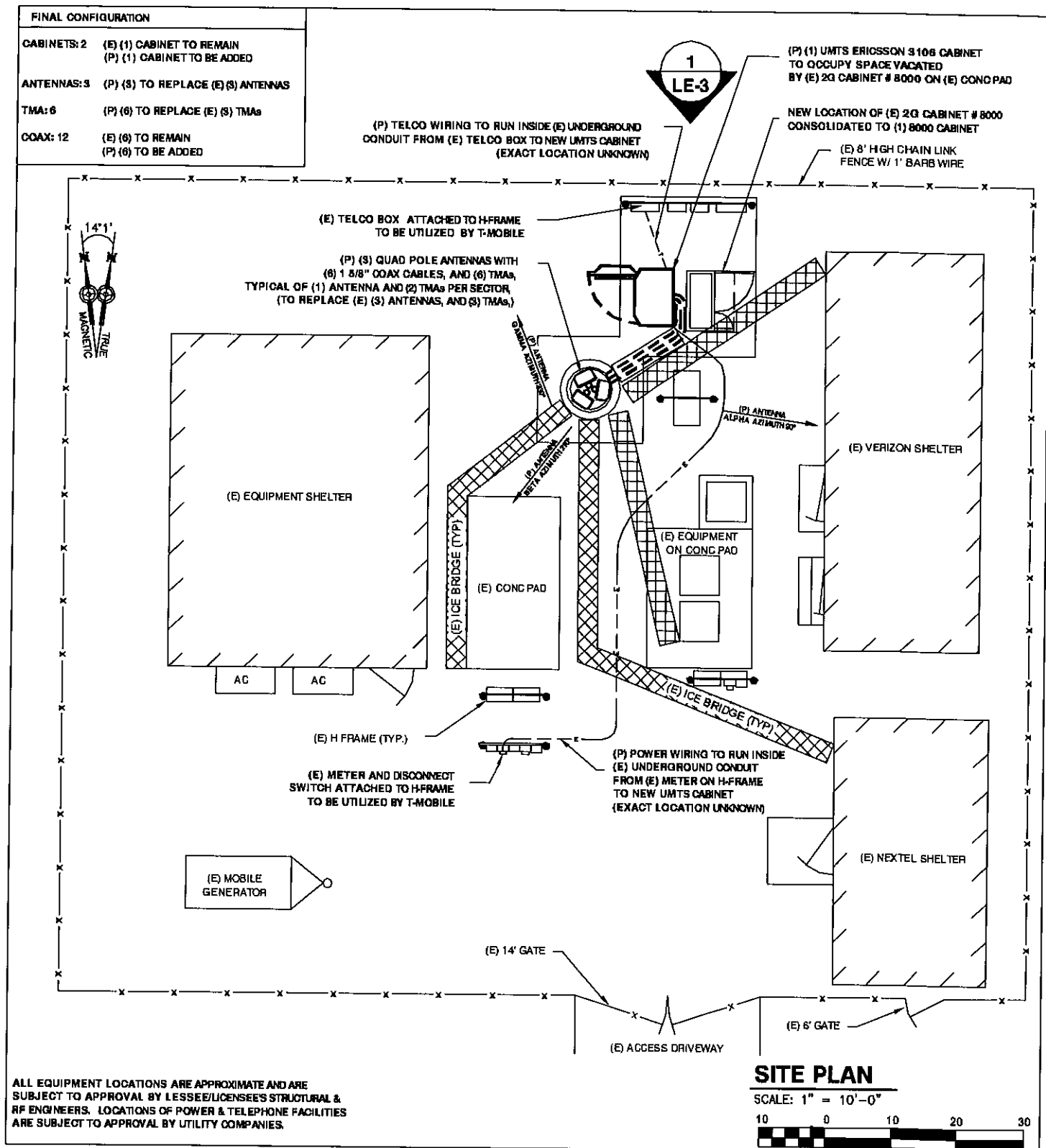
RF Engineer

Date

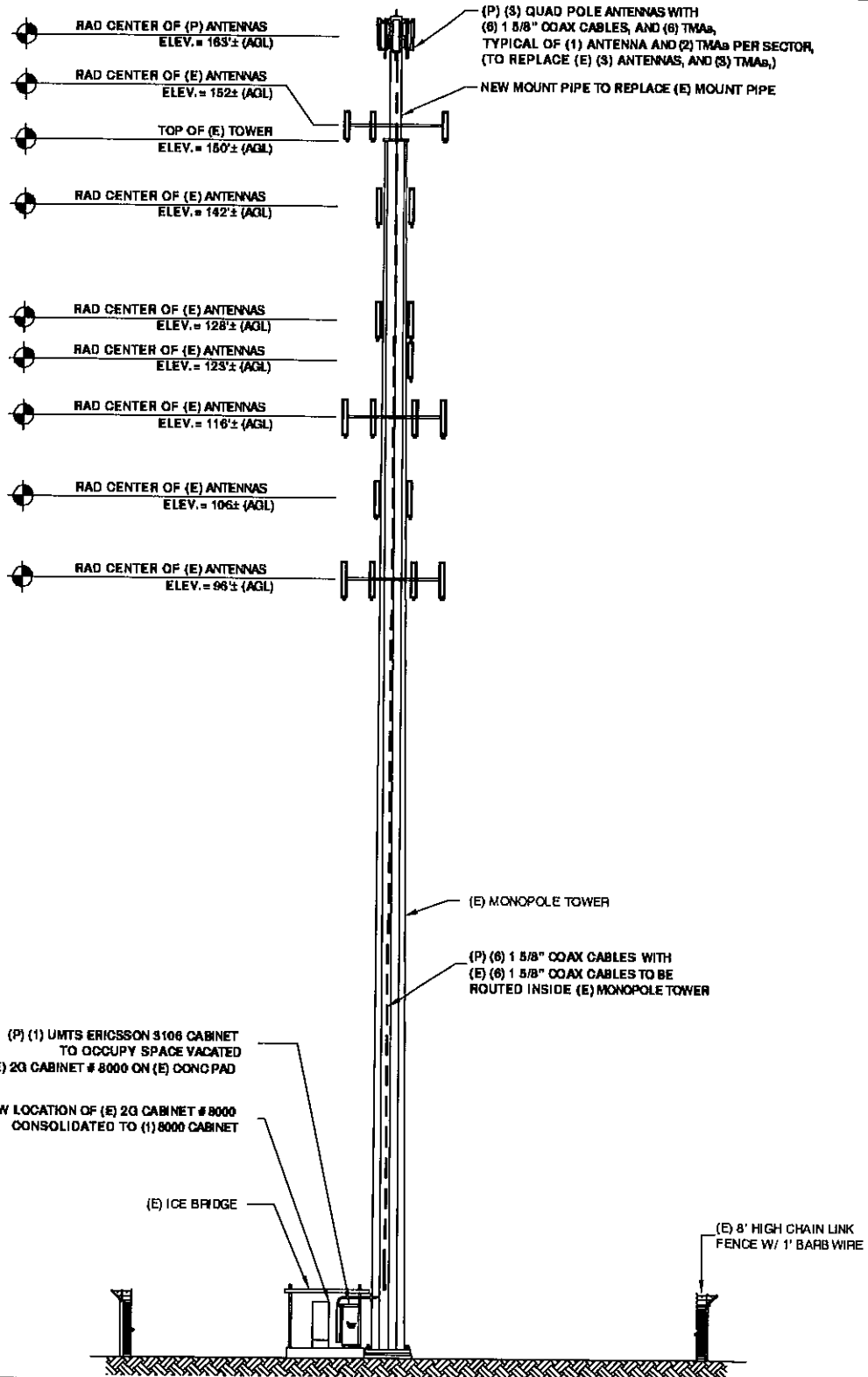
Site Acquisition

Date

The above parties hereby approve and accept these documents and authorize the contractor to proceed with the construction described herein, all construction documents are subject to review by the local building department and any changes or modifications they may impose.

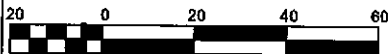


TRANSCEND WIRELESS 10 INDUSTRIAL AVENUE MAHWAH, NJ 07430 OFFICE: 201-315-2095 FAX: 201-584-0955 FOR OMNIPONT COMMUNICATIONS, INC. DBA T-MOBILE USA, INC. 35 GREEN ROAD SOUTH BLOOMFIELD, CT 06002 OFFICE: (860) 692-7100 FAX: (860) 692-7139	 ATLANTIS GROUP 15 Cypress St., Suite 300 Newton Centre, MA 02459 Office: 617-965-0789 Fax: 617-683-6032	SITE NAME: ATC # 302483	APPROVALS	
		SITE NUMBER: CT11182A	Site Owner _____ Date _____	
ADDRESS: 260 BECKLEY ROAD BERLIN, CT 06037		Construction Manager _____ Date _____		
		RF Engineer _____ Date _____		
		Site Acquisition _____ Date _____		
\$: FINAL LE 03-19-09 A: REVIEW 01-29-09 NUMBER REVISION DATE		The above parties hereby approve and accept these documents and authorize the contractor to proceed with the construction described herein, all construction documents are subject to review by the local building department and any changes or modifications they may impose.		
DRAWN BY S.B.	DRAWING NO. LE-2			



NORTH ELEVATION VIEW

SCALE: 1" = 20'-0"



TRANSCEND WIRELESS

10 INDUSTRIAL AVENUE
MAHWAJ, NJ 07430
OFFICE: 201-315-2005
FAX: 201-684-0065

FOR

OMNIPONT COMMUNICATIONS, INC.

DBA T-MOBILE USA, INC.
35 GRANT ROAD SOUTH
BRACKMILL, CT 06032
OFFICE: (860) 692-7100
FAX: (860) 692-7109

ATLANTIS GROUP

15 Cypress St., Suite 300
Newton Centre, MA 02459
Office: 617-965-0789
Fax: 617-863-6032

SITE NAME:

ATC # 302483

SITE NUMBER:

CT11182A

ADDRESS:

260 BECKLEY ROAD
BERLIN, CT 06037

0: FINAL

REVIEW

03-19-09

A: REVIEW

01-29-09

DATE

NUMBER

REVISION

DATE

DRAWN BY

S.B.

DRAWING NO:

LE-3

APPROVALS

Site Owner

Date

Construction Manager

Date

RF Engineer

Date

Site Acquisition

Date

The above parties hereby approve and accept these documents and authorize the contractor to proceed with the construction described herein, all construction documents are subject to review by the local building department and any changes or modifications they may impose.

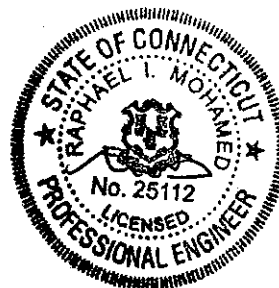


Structural Analysis Report

Structure : 150 ft ITT Meyer Monopole
ATC Site Name : Brln - Berlin, CT
ATC Site Number : 302483
Proposed Carrier : T-Mobile
Carrier Site Name : West Hartford/ I-84 & Rt4
Carrier Site Number : CT11182A
County : Hartford
Eng. Number : 43090721
Date : March 16, 2009*
Usage : 84%
Portholes Required : No

Submitted by:
Esha Shah, E.I.
Design Engineer

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



3/17/09

Introduction

The purpose of this report is to summarize results of the structural analysis performed on the 150 ft ITT Meyer Monopole located at 260 Beckley Road, Kensington, CT 06037, Hartford County (ATC site #302483). The tower was originally designed and manufactured by ITT Meyer to Type "B" specifications; this was verified in a field mapping by Smith Cullum, Inc. (Acq. # CT-0019, dated July 21, 2001). It has been modified per design by Scientel (Project Spectrasite Berlin-CT0019, dated July 30, 2002).

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: 80 mph (Fastest Mile)
 Radial Ice: 69 mph (Fastest Mile) w/ 1/2" ice
 Code: ANSI/TIA/EIA-222-F / 2003 International Building Code 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 (in)	Carrier	
152.0	6	Powerwave LGP21903	Platform w/ Handrails	(12) 1 5/8	AT&T Mobility	
	6	Powerwave LGP21401				
	6	Powerwave 7770.00				
142.0	3	RFS APXV18-206517LS-C	Flush	(6) 1 5/8	Youghiogheny	
130.0	3	Allgon 7184	Flush	(3) 1 5/8	Sprint Nextel	
127.0	3	Allgon 7184	Flush	(3) 1 5/8		
123.0	3	Allgon 7184	Flush	(3) 1 5/8		
121.0	1	GPS	Flush	(1) 1/2	Verizon	
118.0	6	Andrew DB948F85E-M	Low Profile Platform	(12) 1 5/8		
	6	Antel RWA-80014				
106.0	9	14" x 9" TTA	Low Profile Platform	(12) 1 5/8	AT&T Mobility	
	9	72" x 12" Panel	Low Profile Platform			
	3	36" x 8" x 6" Panel	Low Profile Platform			
96.0	12	Decibel 844G65VTZASX	Low Profile Platform	(15) 1 5/8	Sprint Nextel	

Proposed Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax (in)	Carrier
163.0	3	RFS APX16DWV-16DWV-S-E-ACU	Platform w/ Handrails	(12) 1 5/8	T-Mobile
	6	Andrew ETW200VS12UB			

Install proposed coax inside monopole.

Results

The maximum structure usage is: 84%

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)	3,291.0	3,242.9	99
Shear (kips)	33.9	34.4	102

The structure base reactions resulting from this analysis are acceptable when compared to the reactions shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Conclusion

Based on the analysis results, the structure meets the requirements per ANSI/TIA/EIA-222-F and 2003 IBC w/ 2005 CT Supplement and 2008 CT Amendments standards. The tower and foundation can support the existing and proposed antennas with the TX line distribution as described in this report.

If you have any questions or require additional information, please call 919-463-6280.

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:

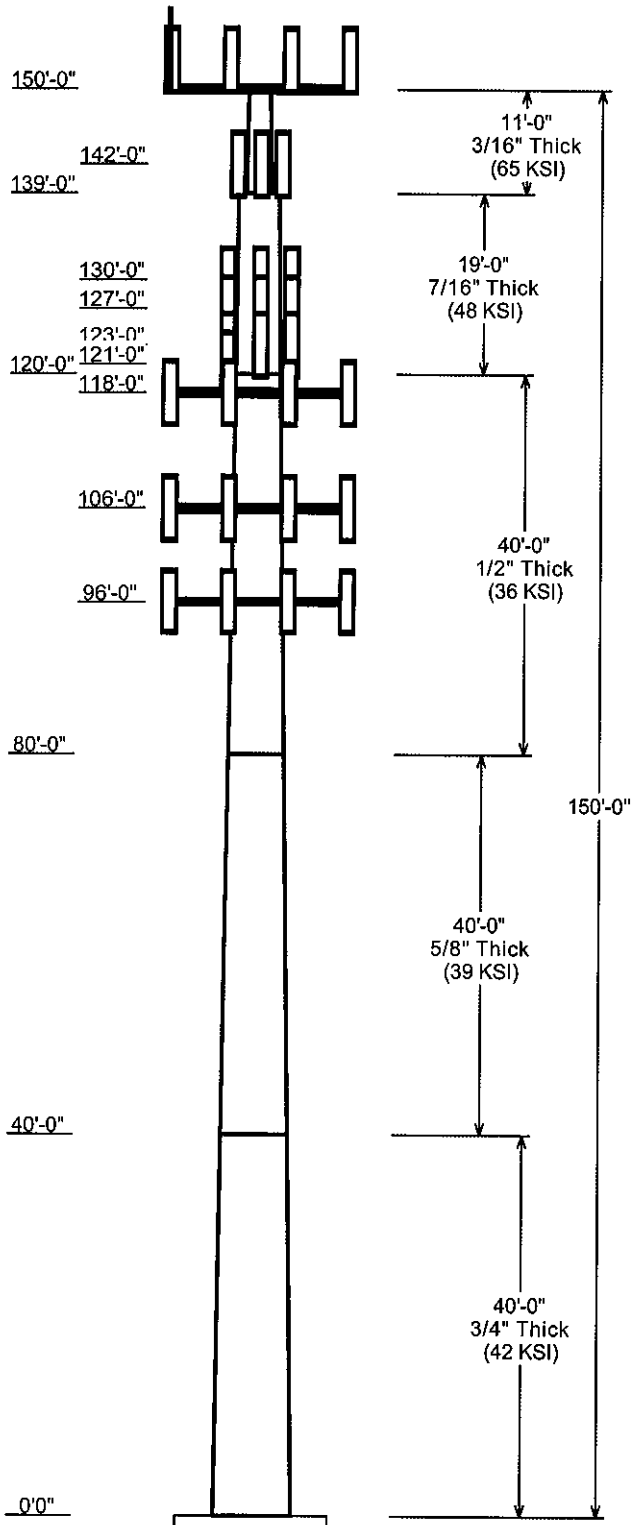
- Information supplied by the client regarding the structure itself, the antenna and feed line loading on the structure and its components, or other relevant information.
- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of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

Copyright Semaan Engineering Solutions, Inc



Job Information			
Pole :	302483	Code :	TIA/EIA-222 Rev F
Description :	150 ft ITT Meyer Monopole		
Client :	T-Mobile		
Location :	Brln - Berlin, CT		
Shape :	12 Sides	Base Elev (ft):	0.00
Height :	150.00 (ft)	Taper:	0.189701(in/ft)

Sections Properties								
Shaft Section	Length (ft)	Diameter (in)		Thick Joint (in)	Type	Overlap Length (in)	Taper (in/ft)	Steel Grade (ksi)
		Across Flats Top	Across Flats Bottom					
1	40.000	43.71	51.30	0.750		0.000	0.189701	42
2	40.000	36.09	43.68	0.625	Butt Joint	0.000	0.189701	39
3	40.000	28.50	36.09	0.500	Butt Joint	0.000	0.189701	36
4	19.000	24.90	28.50	0.438	Butt Joint	0.000	0.189701	48
5	11.000	15.00	16.72	0.188	Butt Joint	0.000	0.156364	65

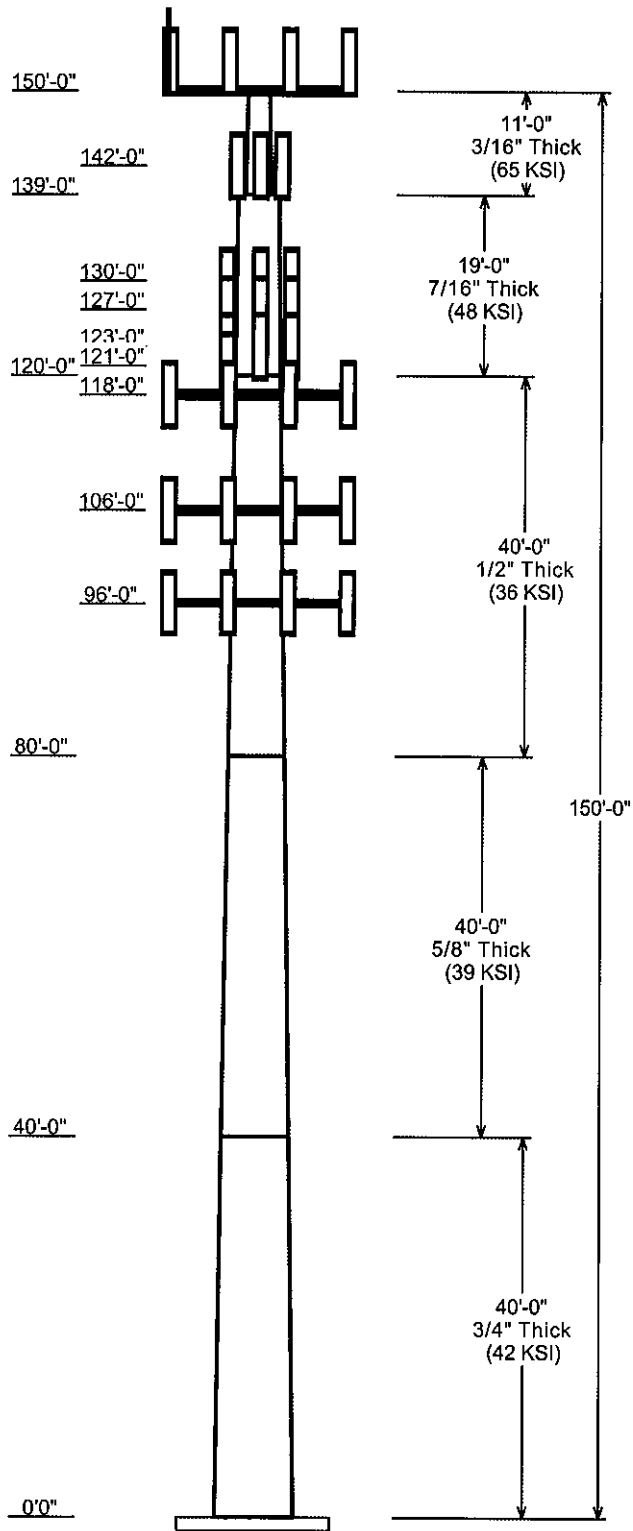
Discrete Appurtenance			
Attach Elev (ft)	Force Elev (ft)	Qty	Description
150.000	163.000	3	RFS APX16DWV-16DWV-S-E-
150.000	163.000	6	Andrew ETW200VS12UB
150.000	152.000	6	Powerwave LGP21903
150.000	152.000	6	Powerwave LGP21401
150.000	152.000	6	Powerwave 7770.00
150.000	150.000	1	Flat Platform w/ Handrails
150.000	156.500	1	Concealment Canister
142.000	142.000	3	RFS APXV18-206517LS-C
130.000	130.000	3	Allgon 7184
127.000	127.000	3	Allgon 7184
123.000	123.000	3	Allgon 7184
121.000	121.000	1	GPS
118.000	118.000	1	Round Low Profile Platform
118.000	118.000	6	Andrew DB948F85E-M
118.000	118.000	6	Antel RWA-80014
106.000	106.000	1	Low Profile Platform
106.000	106.000	9	14" x 9" TTA
106.000	106.000	9	72" x 12" Panel
106.000	106.000	3	36" x 8" x 6" Panel
96.000	96.000	1	Flat Low Profile Platform
96.000	96.000	12	Decibel 844G65VTZASX

Linear Appurtenance			
Elev (ft)	Description	Exposed To Wind	
From To			
0.000 96.000	1 5/8" Coax	Yes	
0.000 96.000	1 5/8" Coax	No	
0.000 106.0	1 5/8" Coax	No	
0.000 118.0	1 5/8" Coax	Yes	
0.000 121.0	1 1/2" Coax	Yes	
0.000 123.0	1 5/8" Coax	Yes	
0.000 127.0	1 5/8" Coax	No	
0.000 130.0	1 5/8" Coax	No	
0.000 142.0	1 5/8" Coax	Yes	
0.000 150.0	1 5/8" Coax	No	
0.000 152.0	1 1/4" Coax	No	

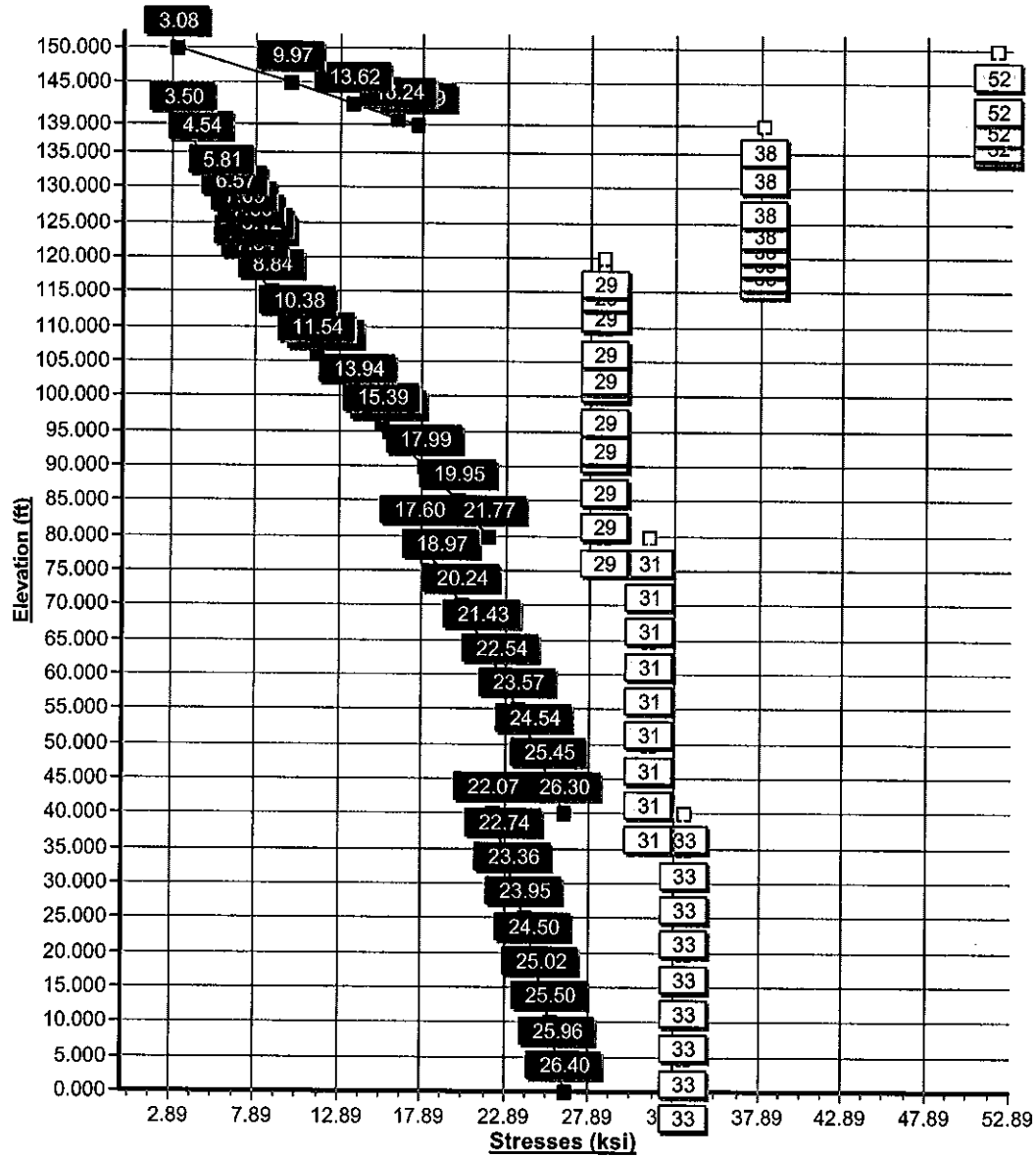
Load Cases	
No Ice	80.00 mph Wind with No Ice
Ice	69.28 mph Wind with Ice
Twist/Sway	50.00 mph Wind with No Ice

Reactions			
Load Case	Moment (Kip-ft)	Shear (Kips)	Axial (Kips)
No Ice	3242.93	34.43	51.73
Ice	2753.60	28.73	60.71
Twist/Sway	1267.06	13.45	51.76

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



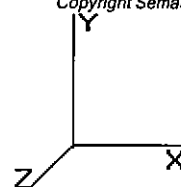
Load Case : No Ice
Max Stress 83.9% at 40.0ft



Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Copyright Semaan Engineering Solutions, Inc
 3/16/2009 11:27:18 A
 Page: 1



Base Elev : 0.000 (ft)

Shaft Section Properties

Shaft Section Properties																			
Sect Num	Length (ft)	Thick (in)	Fv (ksi)	Joint Type	Slip		Bottom						Top						
					Joint Len (in)	Weight (lb)	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	Taber (in/ft)
1	40.000	0.7500	42		0.00	15,369	51.30	0.000	122.	39816.6	16.18	68.40	43.71	40.00	103.	24442.9	13.47	58.28	0.18970
2	40.000	0.6250	39	Butt Joint	0.00	10,755	43.68	40.00	86.65	20501.8	16.58	69.89	36.09	80.00	71.38	11460.3	13.33	57.75	0.18970
3	40.000	0.5000	36	Butt Joint	0.00	6,968	36.09	80.00	57.30	9265.7	17.20	72.18	28.50	120.0	45.09	4513.2	13.13	57.01	0.18970
4	19.000	0.4375	48	Butt Joint	0.00	2,392	28.50	120.0	39.54	3975.5	15.31	65.15	24.90	139.0	34.46	2632.2	13.11	56.91	0.18970
5	11.000	0.1875	65	Butt Joint	0.00	354	16.72	139.0	9.98	348.2	21.75	89.17	15.00	150.0	8.94	250.4	19.29	80.00	0.15636
Shaft Weight						35,838													

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)
150.0	RFS APX16DWV-16DWV-S-E-	3	39.60	0.000	0.00	69.38	0.000	0.00	0.000	13.000
150.0	Andrew ETW200VS12UB	6	11.00	0.000	0.00	14.52	0.000	0.00	0.000	13.000
150.0	Powerwave LGP21903	6	5.50	0.270	0.67	7.90	0.380	0.67	0.000	2.000
150.0	Powerwave LGP21401	6	14.10	1.290	0.67	21.26	1.530	0.67	0.000	2.000
150.0	Powerwave 7770.00	6	35.00	5.880	0.75	67.75	6.530	0.76	0.000	2.000
150.0	Flat Platform w/ Handrails	1	2000.00	42.400	1.00	2450.00	48.400	1.00	0.000	0.000
150.0	Concealment Canister	1	200.00	15.000	1.00	300.00	20.000	1.00	0.000	6.500
142.0	RFS APXV18-206517LS-C	3	22.00	5.020	0.80	48.13	5.700	0.82	0.000	0.000
130.0	Allaon 7184	3	11.20	2.680	0.85	27.10	3.280	0.87	0.000	0.000
127.0	Allaon 7184	3	11.20	2.680	0.85	27.10	3.280	0.87	0.000	0.000
123.0	Allaon 7184	3	11.20	2.680	0.85	27.10	3.280	0.87	0.000	0.000
121.0	GPS	1	7.00	1.000	1.00	15.00	1.300	1.00	0.000	0.000
118.0	Round Low Profile Platform	1	1500.00	21.700	1.00	1700.00	27.200	1.00	0.000	0.000
118.0	Andrew DB948F85E-M	6	8.50	3.267	0.79	27.56	3.811	0.81	0.000	0.000
118.0	Antel RWA-80014	6	14.30	5.250	0.79	46.00	5.740	0.80	0.000	0.000
106.0	Low Profile Platform	1	1500.00	26.100	1.00	1700.00	31.600	1.00	0.000	0.000
106.0	14" x 9" TTA	9	10.00	1.230	0.67	18.00	1.460	0.67	0.000	0.000
106.0	72" x 12" Panel	9	45.00	8.400	0.75	92.28	9.230	0.75	0.000	0.000
106.0	36" x 8" x 6" Panel	3	25.00	2.800	0.88	40.00	3.240	0.89	0.000	0.000
96.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	1700.00	31.600	1.00	0.000	0.000
96.00	Decibel 844G65VTZASX	12	16.00	5.890	0.84	55.00	6.500	0.85	0.000	0.000
Totals		90	8285.00			11343.81			Number of Loadings : 21	

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	152.00	(12) 1 1/4" Coax	7.56	0.00	0.00	0.00	N
0.00	150.00	(12) 1 5/8" Coax	9.84	0.00	0.00	0.00	N
0.00	142.00	(6) 1 5/8" Coax	4.92	0.20	9.46	0.25	Y
0.00	130.00	(3) 1 5/8" Coax	2.46	0.00	0.00	0.00	N
0.00	127.00	(3) 1 5/8" Coax	2.46	0.00	0.00	0.00	N
0.00	123.00	(3) 1 5/8" Coax	2.46	0.20	4.73	0.25	Y
0.00	121.00	(1) 1/2" Coax	0.15	0.00	0.50	0.00	Y
0.00	118.00	(12) 1 5/8" Coax	9.84	0.40	18.93	0.50	Y
0.00	106.00	(12) 1 5/8" Coax	9.84	0.00	0.00	0.00	N
0.00	96.00	(6) 1 5/8" Coax	4.92	0.20	9.46	0.25	Y
0.00	96.00	(9) 1 5/8" Coax	7.38	0.00	0.00	0.00	N

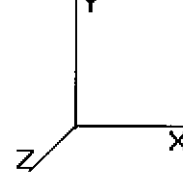
Pole : 302483
Location : Brln - Berlin, CT
Height : 150.0 (ft)
Shape : 12 Sides
Base Dia : 51.30 (in)
Top Dia : 15.00 (in)
Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

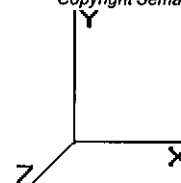
Copyright Semaan Engineering Solutions, Inc

3/16/2009 11:27:18 A

Page: 2



Total Weight 7,661.67 (lb) 5,127.51 (lb)



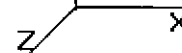
Seq	Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)
0.00			0.7500	51.300	122.078	39,816.6	16.18	68.40	42	33	0.0
5.00			0.7500	50.351	119.787	37,617.1	15.85	67.14	42	33	2,057.5
10.00			0.7500	49.403	117.497	35,500.1	15.51	65.87	42	33	2,018.6
15.00			0.7500	48.454	115.206	33,464.0	15.17	64.61	42	33	1,979.6
20.00			0.7500	47.506	112.915	31,507.4	14.83	63.34	42	33	1,940.6
25.00			0.7500	46.557	110.625	29,628.5	14.49	62.08	42	33	1,901.6
30.00			0.7500	45.609	108.334	27,825.8	14.15	60.81	42	33	1,862.7
35.00			0.7500	44.660	106.044	26,097.8	13.81	59.55	42	33	1,823.7
40.00	Top - Section 1		0.7500	43.712	103.753	24,442.9	13.47	58.28	42	33	1,784.7
40.00	Bot - Section 2		0.6250	43.680	86.648	20,501.8	16.58	69.89	39	31	
45.00			0.6250	42.731	84.739	19,176.5	16.18	68.37	39	31	1,458.0
50.00			0.6250	41.783	82.830	17,909.5	15.77	66.85	39	31	1,425.5
55.00			0.6250	40.834	80.922	16,699.7	15.36	65.34	39	31	1,393.0
60.00			0.6250	39.886	79.013	15,545.5	14.96	63.82	39	31	1,360.6
65.00			0.6250	38.937	77.104	14,445.8	14.55	62.30	39	31	1,328.1
70.00			0.6250	37.989	75.195	13,399.3	14.14	60.78	39	31	1,295.6
75.00			0.6250	37.040	73.286	12,404.5	13.74	59.26	39	31	1,263.1
80.00	Top - Section 2		0.6250	36.092	71.377	11,460.3	13.33	57.75	39	31	1,230.6
80.00	Bot - Section 3		0.5000	36.092	57.303	9,265.7	17.20	72.18	36	29	
85.00			0.5000	35.144	55.776	8,544.5	16.69	70.29	36	29	962.0
90.00			0.5000	34.195	54.249	7,861.7	16.18	68.39	36	29	936.0
95.00			0.5000	33.247	52.722	7,216.3	15.67	66.49	36	29	910.0
96.00			0.5000	33.057	52.417	7,091.6	15.57	66.11	36	29	178.9
100.0			0.5000	32.298	51.195	6,607.2	15.16	64.60	36	29	705.1
105.0			0.5000	31.350	49.668	6,033.4	14.66	62.70	36	29	858.0
106.0			0.5000	31.160	49.363	5,922.8	14.55	62.32	36	29	168.5
110.0			0.5000	30.401	48.141	5,493.9	14.15	60.80	36	29	663.6
115.0			0.5000	29.453	46.614	4,987.4	13.64	58.91	36	29	806.1
118.0			0.5000	28.884	45.698	4,699.1	13.34	57.77	36	29	471.2
120.0	Top - Section 3		0.5000	28.504	45.087	4,513.2	13.13	57.01	36	29	308.9
120.0	Bot - Section 4		0.4375	28.504	39.539	3,975.5	15.31	65.15	48	38	
121.0			0.4375	28.314	39.272	3,895.4	15.20	64.72	48	38	134.1
123.0			0.4375	27.935	38.737	3,738.5	14.97	63.85	48	38	265.4
125.0			0.4375	27.556	38.203	3,585.9	14.73	62.98	48	38	261.8
127.0			0.4375	27.176	37.668	3,437.5	14.50	62.12	48	38	258.2
130.0			0.4375	26.607	36.866	3,222.6	14.15	60.82	48	38	380.4
135.0			0.4375	25.659	35.530	2,884.8	13.57	58.65	48	38	615.9
139.0	Top - Section 4		0.4375	24.900	34.461	2,632.2	13.11	56.91	48	38	476.3
139.0	Bot - Section 5		0.1875	16.720	9.981	348.2	21.75	89.17	65	52	
140.0			0.1875	16.564	9.887	338.4	21.53	88.34	65	52	33.8
142.0			0.1875	16.251	9.698	319.4	21.08	86.67	65	52	66.6
145.0			0.1875	15.782	9.415	292.2	20.41	84.17	65	52	97.6
150.0			0.1875	15.000	8.943	250.4	19.29	80.00	65	52	156.2
											35,838.1

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Copyright Semaan Engineering Solutions, Inc
 3/16/2009 11:27:18 A
 Page: 4

Base Elev : 0.000 (ft)

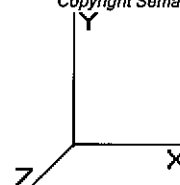


Load Case: No Ice 80.00 mph Wind with No Ice 22 Iterations

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 16.384	27.68 341.99	1.030		0.00	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00 16.384	27.68 335.67	1.030		0.00	5.00 21.177	21.81	604.0	0.0	2,057.5	
10.00		0.00	1.00 16.384	27.68 329.35	1.030		0.00	5.00 20.782	21.41	592.7	0.0	2,018.6	
15.00		0.00	1.00 16.384	27.68 323.02	1.030		0.00	5.00 20.387	21.00	581.4	0.0	1,979.6	
20.00		0.00	1.00 16.384	27.68 316.70	1.030		0.00	5.00 19.992	20.59	570.2	0.0	1,940.6	
25.00		0.00	1.00 16.384	27.68 310.38	1.030		0.00	5.00 19.597	20.18	558.9	0.0	1,901.6	
30.00		0.00	1.00 16.384	27.68 304.05	1.030		0.00	5.00 19.201	19.78	547.6	0.0	1,862.7	
35.00		0.00	1.01 16.662	28.15 300.24	1.030		0.00	5.00 18.806	19.37	545.4	0.0	1,823.7	
40.00	Top - Section 1	0.00	1.05 17.310	29.25 299.53	1.030		0.00	5.00 18.411	18.96	554.7	0.0	1,784.7	
45.00		0.00	1.09 17.902	30.25 297.78	1.030		0.00	5.00 18.002	18.54	561.0	0.0	1,458.0	
50.00		0.00	1.12 18.449	31.17 295.58	1.030		0.00	5.00 17.607	18.14	565.4	0.0	1,425.5	
55.00		0.00	1.15 18.959	32.04 292.83	1.030		0.00	5.00 17.212	17.73	568.0	0.0	1,393.0	
60.00		0.00	1.18 19.436	32.84 289.61	1.030		0.00	5.00 16.817	17.32	568.9	0.0	1,360.6	
65.00		0.00	1.21 19.885	33.60 285.97	1.030		0.00	5.00 16.422	16.91	568.4	0.0	1,328.1	
70.00		0.00	1.24 20.311	34.32 281.98	1.030		0.00	5.00 16.026	16.51	566.6	0.0	1,295.6	
75.00		0.00	1.26 20.715	35.00 277.66	1.030		0.00	5.00 15.631	16.10	563.6	0.0	1,263.1	
80.00	Top - Section 2	0.00	1.28 21.101	35.66 273.06	1.030		0.00	5.00 15.236	15.69	559.6	0.0	1,230.6	
85.00		0.00	1.31 21.469	36.28 268.19	1.030		0.00	5.00 14.841	15.29	554.6	0.0	962.0	
90.00		0.00	1.33 21.823	36.88 263.10	1.030		0.00	5.00 14.446	14.88	548.7	0.0	936.0	
95.00		0.00	1.35 22.163	37.45 257.78	1.030		0.00	5.00 14.050	14.47	542.0	0.0	910.0	
96.00	Appertunance(s)	0.00	1.35 22.229	37.56 256.69	1.030		0.00	1.00 2.763	2.85	106.9	0.0	178.9	
100.0		0.00	1.37 22.490	38.00 252.27	1.030		0.00	4.00 10.893	11.22	426.4	0.0	705.1	
105.0		0.00	1.39 22.806	38.54 246.57	1.030		0.00	5.00 13.260	13.66	526.4	0.0	858.0	
106.0	Appertunance(s)	0.00	1.39 22.867	38.64 245.41	1.030		0.00	1.00 2.605	2.68	103.7	0.0	168.5	
110.0		0.00	1.41 23.111	39.05 240.71	1.030		0.00	4.00 10.260	10.57	412.8	0.0	663.6	
115.0		0.00	1.42 23.406	39.55 234.68	1.030		0.00	5.00 12.470	12.84	508.0	0.0	806.1	
118.0	Appertunance(s)	0.00	1.43 23.579	39.84 231.00	1.030		0.00	3.00 7.292	7.51	299.3	0.0	471.2	
120.0	Top - Section 3	0.00	1.44 23.692	40.04 228.51	1.030		0.00	2.00 4.782	4.93	197.2	0.0	308.9	
121.0	Appertunance(s)	0.00	1.45 23.749	40.13 227.26	1.030		0.00	1.00 2.367	2.44	97.9	0.0	134.1	
123.0	Appertunance(s)	0.00	1.45 23.860	40.32 224.74	1.030		0.00	2.00 4.687	4.83	194.7	0.0	265.4	
125.0		0.00	1.46 23.970	40.51 222.20	1.030		0.00	2.00 4.624	4.76	192.9	0.0	261.8	
127.0	Appertunance(s)	0.00	1.47 24.079	40.69 219.63	1.030		0.00	2.00 4.561	4.70	191.2	0.0	258.2	
130.0	Appertunance(s)	0.00	1.48 24.241	40.96 215.75	1.030		0.00	3.00 6.723	6.92	283.7	0.0	380.4	
135.0		0.00	1.49 24.503	41.41 209.19	1.030		0.00	5.00 10.889	11.22	464.4	0.0	615.9	
139.0	Top - Section 4	0.00	1.50 24.709	41.75 203.85	1.030		0.00	4.00 8.426	8.68	362.4	0.0	476.3	
140.0		0.00	1.51 24.759	41.84 135.74	1.030		0.00	1.00 1.387	1.43	59.8	0.0	33.8	
142.0	Appertunance(s)	0.00	1.51 24.860	42.01 133.45	1.030		0.00	2.00 2.735	2.82	118.3	0.0	66.6	
145.0		0.00	1.52 25.009	42.26 129.98	1.030		0.00	3.00 4.004	4.12	174.3	0.0	97.6	
150.0	Appertunance(s)	0.00	1.54 25.252	42.67 124.14	1.030		0.00	5.00 6.413	6.61	281.9	0.0	156.2	
Totals:								150.00			15,724.3	0.0	35,838.1



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)
96.00	Flat Low Profile Pla	1	22.229	37.567	1.00	26.10	0.000	0.000	980.50	0.00	0.00	1,500.00
96.00	Decibel	12	22.229	37.567	0.84	59.37	0.000	0.000	2,230.41	0.00	0.00	192.00
106.0	Low Profile Platform	1	22.867	38.646	1.00	26.10	0.000	0.000	1,008.66	0.00	0.00	1,500.00
106.0	14" x 9" TTA	9	22.867	38.646	0.67	7.42	0.000	0.000	286.63	0.00	0.00	90.00
106.0	72" x 12" Panel	9	22.867	38.646	0.75	56.70	0.000	0.000	2,191.23	0.00	0.00	405.00
106.0	36" x 8" x 6" Panel	3	22.867	38.646	0.88	7.39	0.000	0.000	285.67	0.00	0.00	75.00
118.0	Round Low Profile Pl	1	23.579	39.848	1.00	21.70	0.000	0.000	864.71	0.00	0.00	1,500.00
118.0	Andrew DB948F85E-M	6	23.579	39.848	0.79	15.49	0.000	0.000	617.08	0.00	0.00	51.00
118.0	Antel RWA-80014	6	23.579	39.848	0.79	24.89	0.000	0.000	991.63	0.00	0.00	85.80
121.0	GPS	1	23.749	40.135	1.00	1.00	0.000	0.000	40.14	0.00	0.00	7.00
123.0	Allqon 7184	3	23.860	40.324	0.85	6.83	0.000	0.000	275.57	0.00	0.00	33.60
127.0	Allqon 7184	3	24.079	40.694	0.85	6.83	0.000	0.000	278.10	0.00	0.00	33.60
130.0	Allqon 7184	3	24.241	40.967	0.85	6.83	0.000	0.000	279.97	0.00	0.00	33.60
142.0	RFS APXV18-	3	24.860	42.013	0.80	12.05	0.000	0.000	506.17	0.00	0.00	66.00
150.0	RFS APX16DWW-	3	25.859	43.702	0.00	0.00	0.000	13.000	0.00	0.00	0.00	118.80
150.0	Andrew	6	25.859	43.702	0.00	0.00	0.000	13.000	0.00	0.00	0.00	66.00
150.0	Powerwave LGP21903	6	25.348	42.838	0.67	1.09	0.000	2.000	46.50	0.00	92.99	33.00
150.0	Powerwave LGP21401	6	25.348	42.838	0.67	5.19	0.000	2.000	222.15	0.00	444.30	84.60
150.0	Powerwave 7770.00	6	25.348	42.838	0.75	26.46	0.000	2.000	1,133.49	0.00	2,266.99	210.00
150.0	Flat Platform w/ Han	1	25.252	42.676	1.00	42.40	0.000	0.000	1,809.47	0.00	0.00	2,000.00
150.0	Concealment Canister	1	25.560	43.197	1.00	15.00	0.000	6.500	647.95	0.00	4,211.67	200.00
									14,696.03			8,285.00

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

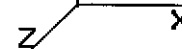
Code: TIA/EIA-222 Rev F

Copyright Sema Engineering Solutions, Inc

3/16/2009 11:27:18 A

Page: 6

Base Elev : 0.000 (ft)



Load Case: No Ice	80.00 mph Wind with No Ice	22 Iterations
Gust Response Factor : 1.69		
Dead Load Factor : 1.00		
Wind Load Factor : 1.00		

Linear Appurtenance Segment Forces

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Weight (lb/ft)	CaAa (sf/ft)	qz (psf)	FX (lb)	Dead Load (lb)
5.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	16.384	27.69	24.60
5.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	16.384	27.69	12.30
5.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	16.384	0.00	0.75
5.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	16.384	55.38	49.20
5.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	16.384	27.69	24.60
10.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	16.384	27.69	24.60
10.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	16.384	27.69	12.30
10.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	16.384	0.00	0.75
10.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	16.384	55.38	49.20
10.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	16.384	27.69	24.60
15.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	16.384	27.69	24.60
15.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	16.384	27.69	12.30
15.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	16.384	0.00	0.75
15.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	16.384	55.38	49.20
15.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	16.384	27.69	24.60
20.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	16.384	27.69	24.60
20.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	16.384	27.69	12.30
20.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	16.384	0.00	0.75
20.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	16.384	55.38	49.20
20.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	16.384	27.69	24.60
25.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	16.384	27.69	24.60
25.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	16.384	27.69	12.30
25.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	16.384	0.00	0.75
25.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	16.384	55.38	49.20
25.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	16.384	27.69	24.60
30.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	16.384	27.69	24.60
30.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	16.384	27.69	12.30
30.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	16.384	0.00	0.75
30.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	16.384	55.38	49.20
30.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	16.384	27.69	24.60
35.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	16.662	28.16	24.60
35.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	16.662	28.16	12.30
35.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	16.662	0.00	0.75
35.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	16.662	56.32	49.20
35.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	16.662	28.16	24.60
40.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	17.310	29.25	24.60
40.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	17.310	29.25	12.30
40.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	17.310	0.00	0.75
40.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	17.310	58.51	49.20
40.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	17.310	29.25	24.60
45.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	17.902	30.25	24.60
45.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	17.902	30.25	12.30
45.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	17.902	0.00	0.75
45.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	17.902	60.51	49.20
45.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	17.902	30.25	24.60
50.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	18.449	31.18	24.60
50.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	18.449	31.18	12.30
50.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	18.449	0.00	0.75
50.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	18.449	62.36	49.20
50.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	18.449	31.18	24.60
55.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	18.959	32.04	24.60

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

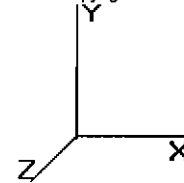
Code: TIA/EIA-222 Rev F

Copyright Semaan Engineering Solutions, Inc

3/16/2009 11:27:19 A

Page: 7

Base Elev : 0.000 (ft)



Load Case: No Ice	80.00 mph Wind with No Ice	22 Iterations
Gust Response Factor : 1.69		
Dead Load Factor : 1.00		
Wind Load Factor : 1.00		

55.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	18.959	32.04	12.30
55.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	18.959	0.00	0.75
55.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	18.959	64.08	49.20
55.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	18.959	32.04	24.60
60.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	19.436	32.85	24.60
60.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	19.436	32.85	12.30
60.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	19.436	0.00	0.75
60.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	19.436	65.69	49.20
60.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	19.436	32.85	24.60
65.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	19.885	33.61	24.60
65.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	19.885	33.61	12.30
65.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	19.885	0.00	0.75
65.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	19.885	67.21	49.20
65.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	19.885	33.61	24.60
70.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	20.311	34.33	24.60
70.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	20.311	34.33	12.30
70.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	20.311	0.00	0.75
70.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	20.311	68.65	49.20
70.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	20.311	34.33	24.60
75.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	20.715	35.01	24.60
75.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	20.715	35.01	12.30
75.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	20.715	0.00	0.75
75.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	20.715	70.02	49.20
75.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	20.715	35.01	24.60
80.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	21.101	35.66	24.60
80.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	21.101	35.66	12.30
80.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	21.101	0.00	0.75
80.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	21.101	71.32	49.20
80.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	21.101	35.66	24.60
85.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	21.469	36.28	24.60
85.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	21.469	36.28	12.30
85.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	21.469	0.00	0.75
85.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	21.469	72.57	49.20
85.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	21.469	36.28	24.60
90.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	21.823	36.88	24.60
90.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	21.823	36.88	12.30
90.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	21.823	0.00	0.75
90.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	21.823	73.76	49.20
90.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	21.823	36.88	24.60
95.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	22.163	37.45	24.60
95.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	22.163	37.45	12.30
95.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	22.163	0.00	0.75
95.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	22.163	74.91	49.20
95.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	22.163	37.45	24.60
96.00	(6) 1 5/8" Coax	Yes	1.00	4.92	0.20	22.229	7.51	4.92
96.00	(3) 1 5/8" Coax	Yes	1.00	2.46	0.20	22.229	7.51	2.46
96.00	(1) 1/2" Coax	Yes	1.00	0.15	0.00	22.229	0.00	0.15
96.00	(12) 1 5/8" Coax	Yes	1.00	9.84	0.40	22.229	15.03	9.84
96.00	(6) 1 5/8" Coax	Yes	1.00	4.92	0.20	22.229	7.51	4.92
100.0	(6) 1 5/8" Coax	Yes	4.00	4.92	0.20	22.490	30.41	19.68
100.0	(3) 1 5/8" Coax	Yes	4.00	2.46	0.20	22.490	30.41	9.84
100.0	(1) 1/2" Coax	Yes	4.00	0.15	0.00	22.490	0.00	0.60
100.0	(12) 1 5/8" Coax	Yes	4.00	9.84	0.40	22.490	60.81	39.36
105.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	22.806	38.54	24.60
105.0	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	22.806	38.54	12.30
105.0	(1) 1/2" Coax	Yes	5.00	0.15	0.00	22.806	0.00	0.75
105.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	22.806	77.08	49.20

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

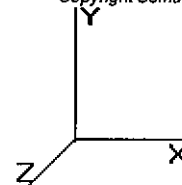
Code: TIA/EIA-222 Rev F

Copyright Semaen Engineering Solutions, Inc

3/16/2009 11:27:19 A

Page: 8

Base Elev : 0.000 (ft)



Load Case: No Ice

80.00 mph Wind with No Ice

22 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

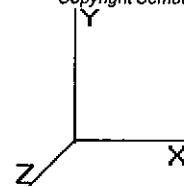
106.0	(6) 1 5/8" Coax	Yes	1.00	4.92	0.20	22.867	7.73	4.92
106.0	(3) 1 5/8" Coax	Yes	1.00	2.46	0.20	22.867	7.73	2.46
106.0	(1) 1/2" Coax	Yes	1.00	0.15	0.00	22.867	0.00	0.15
106.0	(12) 1 5/8" Coax	Yes	1.00	9.84	0.40	22.867	15.46	9.84
110.0	(6) 1 5/8" Coax	Yes	4.00	4.92	0.20	23.111	31.25	19.68
110.0	(3) 1 5/8" Coax	Yes	4.00	2.46	0.20	23.111	31.25	9.84
110.0	(1) 1/2" Coax	Yes	4.00	0.15	0.00	23.111	0.00	0.60
110.0	(12) 1 5/8" Coax	Yes	4.00	9.84	0.40	23.111	62.49	39.36
115.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	23.406	39.56	24.60
115.0	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	23.406	39.56	12.30
115.0	(1) 1/2" Coax	Yes	5.00	0.15	0.00	23.406	0.00	0.75
115.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	23.406	79.11	49.20
118.0	(6) 1 5/8" Coax	Yes	3.00	4.92	0.20	23.579	23.91	14.76
118.0	(3) 1 5/8" Coax	Yes	3.00	2.46	0.20	23.579	23.91	7.38
118.0	(1) 1/2" Coax	Yes	3.00	0.15	0.00	23.579	0.00	0.45
118.0	(12) 1 5/8" Coax	Yes	3.00	9.84	0.40	23.579	47.82	29.52
120.0	(6) 1 5/8" Coax	Yes	2.00	4.92	0.20	23.692	16.02	9.84
120.0	(3) 1 5/8" Coax	Yes	2.00	2.46	0.20	23.692	16.02	4.92
120.0	(1) 1/2" Coax	Yes	2.00	0.15	0.00	23.692	0.00	0.30
121.0	(6) 1 5/8" Coax	Yes	1.00	4.92	0.20	23.749	8.03	4.92
121.0	(3) 1 5/8" Coax	Yes	1.00	2.46	0.20	23.749	8.03	2.46
121.0	(1) 1/2" Coax	Yes	1.00	0.15	0.00	23.749	0.00	0.15
123.0	(6) 1 5/8" Coax	Yes	2.00	4.92	0.20	23.860	16.13	9.84
123.0	(3) 1 5/8" Coax	Yes	2.00	2.46	0.20	23.860	16.13	4.92
125.0	(6) 1 5/8" Coax	Yes	2.00	4.92	0.20	23.970	16.20	9.84
127.0	(6) 1 5/8" Coax	Yes	2.00	4.92	0.20	24.079	16.28	9.84
130.0	(6) 1 5/8" Coax	Yes	3.00	4.92	0.20	24.241	24.58	14.76
135.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	24.503	41.41	24.60
139.0	(6) 1 5/8" Coax	Yes	4.00	4.92	0.20	24.709	33.41	19.68
140.0	(6) 1 5/8" Coax	Yes	1.00	4.92	0.20	24.759	8.37	4.92
142.0	(6) 1 5/8" Coax	Yes	2.00	4.92	0.20	24.860	16.81	9.84
Totals:							3,955.95	2,652.81

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Copyright Semaan Engineering Solutions, Inc
 3/16/2009 11:27:20 A
 Page: 9

Base Elev : 0.000 (ft)



Load Case: No Ice 80.00 mph Wind with No Ice 22 Iterations

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

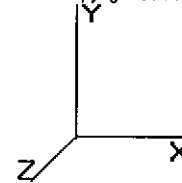
Applied Segment Forces Summary

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	742.42	2,366.69	0.00	0.00
10.00	731.14	2,327.71	0.00	0.00
15.00	719.87	2,288.74	0.00	0.00
20.00	708.60	2,249.77	0.00	0.00
25.00	697.33	2,210.79	0.00	0.00
30.00	686.06	2,171.82	0.00	0.00
35.00	686.23	2,132.85	0.00	0.00
40.00	701.01	2,093.88	0.00	0.00
45.00	712.27	1,767.13	0.00	0.00
50.00	721.34	1,734.66	0.00	0.00
55.00	728.22	1,702.18	0.00	0.00
60.00	733.17	1,669.70	0.00	0.00
65.00	736.46	1,637.23	0.00	0.00
70.00	738.24	1,604.75	0.00	0.00
75.00	738.69	1,572.27	0.00	0.00
80.00	737.92	1,539.79	0.00	0.00
85.00	736.05	1,271.11	0.00	0.00
90.00	733.15	1,245.13	0.00	0.00
95.00	729.32	1,219.15	0.00	0.00
96.00	3,355.38	1,932.71	0.00	0.00
100.0	548.05	903.26	0.00	0.00
105.0	680.56	1,105.69	0.00	0.00
106.0	3,906.78	2,288.02	0.00	0.00
110.0	537.74	822.33	0.00	0.00
115.0	666.27	1,004.52	0.00	0.00
118.0	2,868.34	2,227.04	0.00	0.00
120.0	229.26	368.62	0.00	0.00
121.0	154.06	170.94	0.00	0.00
123.0	502.52	358.45	0.00	0.00
125.0	209.15	316.29	0.00	0.00
127.0	485.56	346.25	0.00	0.00
130.0	588.22	488.38	0.00	0.00
135.0	505.85	727.47	0.00	0.00
139.0	395.83	565.61	0.00	0.00
140.0	68.14	56.12	0.00	0.00
142.0	641.31	177.28	0.00	0.00
145.0	174.31	149.76	0.00	0.00
150.0	4,141.44	2,955.57	0.00	7,015.95
Totals:	34,376.25	51,769.66	0.00	7,015.95

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Copyright Semaan Engineering Solutions, Inc
 3/16/2009 11:27:20 A
 Page: 10



Base Elev : 0.000 (ft)

Load Case: No Ice

80.00 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

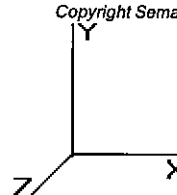
Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-34.428	-51.735	0.000	0.000	0.000	-3,242.935	0.000	0.000	0.000	0.000
5.00	-33.780	-49.302	0.000	0.000	0.000	-3,070.797	-0.061	0.000	0.061	-0.113
10.00	-33.135	-46.912	0.000	0.000	0.000	-2,901.897	-0.240	0.000	0.240	-0.226
15.00	-32.492	-44.563	0.000	0.000	0.000	-2,736.225	-0.537	0.000	0.537	-0.339
20.00	-31.851	-42.255	0.000	0.000	0.000	-2,573.769	-0.952	0.000	0.952	-0.452
25.00	-31.212	-39.989	0.000	0.000	0.000	-2,414.517	-1.486	0.000	1.486	-0.564
30.00	-30.576	-37.766	0.000	0.000	0.000	-2,258.458	-2.137	0.000	2.137	-0.676
35.00	-29.932	-35.584	0.000	0.000	0.000	-2,105.577	-2.906	0.000	2.906	-0.788
40.00	-29.265	-33.444	0.000	0.000	0.000	-1,955.919	-3.791	0.000	3.791	-0.899
45.00	-28.589	-31.630	0.000	0.000	0.000	-1,809.597	-4.791	0.000	4.791	-1.008
50.00	-27.902	-29.847	0.000	0.000	0.000	-1,666.653	-5.916	0.000	5.916	-1.137
55.00	-27.200	-28.100	0.000	0.000	0.000	-1,527.145	-7.176	0.000	7.176	-1.264
60.00	-26.485	-26.392	0.000	0.000	0.000	-1,391.147	-8.567	0.000	8.567	-1.388
65.00	-25.759	-24.720	0.000	0.000	0.000	-1,258.724	-10.086	0.000	10.086	-1.509
70.00	-25.023	-23.085	0.000	0.000	0.000	-1,129.931	-11.731	0.000	11.731	-1.627
75.00	-24.280	-21.489	0.000	0.000	0.000	-1,004.815	-13.496	0.000	13.496	-1.740
80.00	-23.531	-19.930	0.000	0.000	0.000	-883.414	-15.378	0.000	15.378	-1.849
85.00	-22.790	-18.640	0.000	0.000	0.000	-765.758	-17.369	0.000	17.369	-1.951
90.00	-22.048	-17.377	0.000	0.000	0.000	-651.812	-19.477	0.000	19.477	-2.069
95.00	-21.291	-16.163	0.000	0.000	0.000	-541.575	-21.703	0.000	21.703	-2.177
96.00	-17.877	-14.344	0.000	0.000	0.000	-520.284	-22.161	0.000	22.161	-2.198
100.0	-17.314	-13.438	0.000	0.000	0.000	-448.777	-24.037	0.000	24.037	-2.276
105.0	-16.600	-12.346	0.000	0.000	0.000	-362.210	-26.468	0.000	26.468	-2.363
106.0	-12.609	-10.213	0.000	0.000	0.000	-345.610	-26.965	0.000	26.965	-2.380
110.0	-12.048	-9.400	0.000	0.000	0.000	-295.176	-28.985	0.000	28.985	-2.441
115.0	-11.346	-8.415	0.000	0.000	0.000	-234.939	-31.579	0.000	31.579	-2.510
118.0	-8.386	-6.313	0.000	0.000	0.000	-200.901	-33.168	0.000	33.168	-2.547
120.0	-8.142	-5.952	0.000	0.000	0.000	-184.130	-34.240	0.000	34.240	-2.570
121.0	-7.982	-5.786	0.000	0.000	0.000	-175.988	-34.779	0.000	34.779	-2.582
123.0	-7.466	-5.447	0.000	0.000	0.000	-160.024	-35.866	0.000	35.866	-2.606
125.0	-7.245	-5.138	0.000	0.000	0.000	-145.091	-36.962	0.000	36.962	-2.630
127.0	-6.746	-4.811	0.000	0.000	0.000	-130.601	-38.069	0.000	38.069	-2.651
130.0	-6.139	-4.347	0.000	0.000	0.000	-110.363	-39.744	0.000	39.744	-2.681
135.0	-5.601	-3.641	0.000	0.000	0.000	-79.670	-42.575	0.000	42.575	-2.723
139.0	-5.180	-3.093	0.000	0.000	0.000	-57.266	-44.868	0.000	44.868	-2.750
140.0	-5.111	-3.037	0.000	0.000	0.000	-52.086	-45.444	0.000	45.444	-2.756
142.0	-4.467	-2.884	0.000	0.000	0.000	-41.863	-46.616	0.000	46.616	-2.835
145.0	-4.290	-2.736	0.000	0.000	0.000	-28.464	-48.429	0.000	48.429	-2.929
150.0	-4.141	0.000	0.000	0.000	0.000	-7.016	-51.551	0.000	51.551	-3.015

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Copyright Sema Engineering Solutions, Inc
 3/16/2009 11:27:20 A
 Page: 11

Base Elev : 0.000 (ft)



Load Case: No Ice	80.00 mph Wind with No Ice	22 Iterations
Gust Response Factor : 1.69		
Dead Load Factor : 1.00		
Wind Load Factor : 1.00		

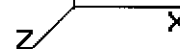
Calculated Stresses

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	0.42	0.57	0.00	0.00	0.00	25.95	26.40	33.4	0.0	0.789
5.00	0.41	0.57	0.00	0.00	0.00	25.53	25.96	33.4	0.0	0.776
10.00	0.40	0.57	0.00	0.00	0.00	25.08	25.50	33.4	0.0	0.763
15.00	0.39	0.57	0.00	0.00	0.00	24.61	25.02	33.4	0.0	0.748
20.00	0.37	0.57	0.00	0.00	0.00	24.11	24.50	33.4	0.0	0.733
25.00	0.36	0.57	0.00	0.00	0.00	23.57	23.95	33.4	0.0	0.716
30.00	0.35	0.57	0.00	0.00	0.00	22.99	23.36	33.4	0.0	0.699
35.00	0.34	0.57	0.00	0.00	0.00	22.38	22.74	33.4	0.0	0.680
40.00	0.32	0.57	0.00	0.00	0.00	21.73	22.07	33.4	0.0	0.660
40.00	0.39	0.69	0.00	0.00	0.00	25.89	26.30	33.4	0.0	0.786
45.00	0.37	0.69	0.00	0.00	0.00	25.05	25.45	31.4	0.0	0.812
50.00	0.36	0.68	0.00	0.00	0.00	24.15	24.54	31.4	0.0	0.783
55.00	0.35	0.68	0.00	0.00	0.00	23.20	23.57	31.4	0.0	0.752
60.00	0.33	0.68	0.00	0.00	0.00	22.17	22.54	31.4	0.0	0.719
65.00	0.32	0.68	0.00	0.00	0.00	21.07	21.43	31.4	0.0	0.683
70.00	0.31	0.68	0.00	0.00	0.00	19.90	20.24	31.4	0.0	0.645
75.00	0.29	0.67	0.00	0.00	0.00	18.64	18.97	31.4	0.0	0.605
80.00	0.28	0.67	0.00	0.00	0.00	17.28	17.60	31.4	0.0	0.561
80.00	0.35	0.83	0.00	0.00	0.00	21.38	21.77	31.4	0.0	0.694
85.00	0.33	0.83	0.00	0.00	0.00	19.56	19.95	28.7	0.0	0.695
90.00	0.32	0.83	0.00	0.00	0.00	17.61	17.99	28.7	0.0	0.626
95.00	0.31	0.82	0.00	0.00	0.00	15.50	15.87	28.7	0.0	0.553
96.00	0.27	0.69	0.00	0.00	0.00	15.06	15.39	28.7	0.0	0.536
100.00	0.26	0.69	0.00	0.00	0.00	13.63	13.94	28.7	0.0	0.485
105.00	0.25	0.68	0.00	0.00	0.00	11.69	12.00	28.7	0.0	0.418
106.00	0.21	0.52	0.00	0.00	0.00	11.29	11.54	28.7	0.0	0.402
110.00	0.20	0.51	0.00	0.00	0.00	10.15	10.38	28.7	0.0	0.361
115.00	0.18	0.49	0.00	0.00	0.00	8.62	8.84	28.7	0.0	0.308
118.00	0.14	0.37	0.00	0.00	0.00	7.67	7.84	28.7	0.0	0.273
120.00	0.13	0.37	0.00	0.00	0.00	7.22	7.38	28.7	0.0	0.257
120.00	0.15	0.42	0.00	0.00	0.00	8.20	8.38	28.7	0.0	0.292
121.00	0.15	0.41	0.00	0.00	0.00	7.95	8.12	38.1	0.0	0.213
123.00	0.14	0.39	0.00	0.00	0.00	7.43	7.60	38.1	0.0	0.200
125.00	0.13	0.39	0.00	0.00	0.00	6.93	7.09	38.1	0.0	0.186
127.00	0.13	0.36	0.00	0.00	0.00	6.41	6.57	38.1	0.0	0.173
130.00	0.12	0.34	0.00	0.00	0.00	5.66	5.81	38.1	0.0	0.153
135.00	0.10	0.32	0.00	0.00	0.00	4.40	4.54	38.1	0.0	0.119
139.00	0.09	0.31	0.00	0.00	0.00	3.37	3.50	38.1	0.0	0.092
139.00	0.31	1.05	0.00	0.00	0.00	17.08	17.49	38.1	0.0	0.459
140.00	0.31	1.05	0.00	0.00	0.00	15.83	16.24	52.0	0.0	0.312
142.00	0.30	0.94	0.00	0.00	0.00	13.23	13.62	52.0	0.0	0.262
145.00	0.29	0.93	0.00	0.00	0.00	9.55	9.97	52.0	0.0	0.192
150.00	0.00	0.94	0.00	0.00	0.00	2.61	3.08	52.0	0.0	0.059

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Copyright Semaan Engineering Solutions, Inc
 3/16/2009 11:27:20 A
 Page: 12



Base Elev : 0.000 (ft)

Load Case: Ice

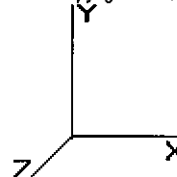
69.28 mph Wind with Ice

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 12.287	20.76 296.17	1.030		0.50	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00 12.287	20.76 290.69	1.030		0.50	5.00	21.594	22.24	461.9	159.2	2,216.7
10.00		0.00	1.00 12.287	20.76 285.21	1.030		0.50	5.00	21.199	21.83	453.4	156.2	2,174.8
15.00		0.00	1.00 12.287	20.76 279.74	1.030		0.50	5.00	20.804	21.43	445.0	153.3	2,132.8
20.00		0.00	1.00 12.287	20.76 274.26	1.030		0.50	5.00	20.408	21.02	436.5	150.3	2,090.9
25.00		0.00	1.00 12.287	20.76 268.79	1.030		0.50	5.00	20.013	20.61	428.1	147.3	2,049.0
30.00		0.00	1.00 12.287	20.76 263.31	1.030		0.50	5.00	19.618	20.21	419.6	144.3	2,007.0
35.00		0.00	1.01 12.496	21.11 260.01	1.030		0.50	5.00	19.223	19.80	418.1	141.4	1,965.1
40.00	Top - Section 1	0.00	1.05 12.982	21.93 259.39	1.030		0.50	5.00	18.828	19.39	425.4	138.4	1,923.1
45.00		0.00	1.09 13.426	22.69 257.88	1.030		0.50	5.00	18.419	18.97	430.5	135.3	1,593.3
50.00		0.00	1.12 13.836	23.38 255.98	1.030		0.50	5.00	18.024	18.56	434.1	132.4	1,557.9
55.00		0.00	1.15 14.218	24.02 253.59	1.030		0.50	5.00	17.629	18.16	436.3	129.4	1,522.4
60.00		0.00	1.18 14.576	24.63 250.80	1.030		0.50	5.00	17.233	17.75	437.3	126.4	1,487.0
65.00		0.00	1.21 14.913	25.20 247.65	1.030		0.50	5.00	16.838	17.34	437.1	123.5	1,451.5
70.00		0.00	1.24 15.232	25.74 244.19	1.030		0.50	5.00	16.443	16.94	436.0	120.5	1,416.1
75.00		0.00	1.26 15.536	26.25 240.45	1.030		0.50	5.00	16.048	16.53	434.0	117.5	1,380.6
80.00	Top - Section 2	0.00	1.28 15.825	26.74 236.47	1.030		0.50	5.00	15.653	16.12	431.2	114.6	1,345.2
85.00		0.00	1.31 16.101	27.21 232.26	1.030		0.50	5.00	15.257	15.72	427.6	111.6	1,073.5
90.00		0.00	1.33 16.366	27.65 227.84	1.030		0.50	5.00	14.862	15.31	423.4	108.6	1,044.6
95.00		0.00	1.35 16.621	28.09 223.24	1.030		0.50	5.00	14.467	14.90	418.6	105.6	1,015.6
96.00	Appertunance(s)	0.00	1.35 16.671	28.17 222.30	1.030		0.50	1.00	2.846	2.93	82.6	21.0	199.9
100.0		0.00	1.37 16.866	28.50 218.46	1.030		0.50	4.00	11.226	11.56	329.6	82.1	787.3
105.0		0.00	1.39 17.103	28.90 213.53	1.030		0.50	5.00	13.677	14.09	407.2	99.7	957.7
106.0	Appertunance(s)	0.00	1.39 17.150	28.98 212.53	1.030		0.50	1.00	2.688	2.77	80.2	19.8	188.3
110.0		0.00	1.41 17.332	29.29 208.45	1.030		0.50	4.00	10.594	10.91	319.6	77.4	741.0
115.0		0.00	1.42 17.554	29.66 203.23	1.030		0.50	5.00	12.886	13.27	393.7	93.8	899.8
118.0	Appertunance(s)	0.00	1.43 17.683	29.88 200.04	1.030		0.50	3.00	7.542	7.77	232.2	55.2	526.4
120.0	Top - Section 3	0.00	1.44 17.768	30.02 197.89	1.030		0.50	2.00	4.949	5.10	153.1	36.3	345.2
121.0	Appertunance(s)	0.00	1.45 17.811	30.10 196.80	1.030		0.50	1.00	2.451	2.52	76.0	18.0	152.1
123.0	Appertunance(s)	0.00	1.45 17.894	30.24 194.62	1.030		0.50	2.00	4.854	5.00	151.2	35.6	301.1
125.0		0.00	1.46 17.977	30.38 192.42	1.030		0.50	2.00	4.791	4.93	149.9	35.1	296.9
127.0	Appertunance(s)	0.00	1.47 18.058	30.51 190.20	1.030		0.50	2.00	4.728	4.87	148.6	34.7	292.8
130.0	Appertunance(s)	0.00	1.48 18.179	30.72 186.84	1.030		0.50	3.00	6.973	7.18	220.7	50.9	431.4
135.0		0.00	1.49 18.376	31.05 181.16	1.030		0.50	5.00	11.305	11.64	361.6	81.9	697.8
139.0	Top - Section 4	0.00	1.50 18.530	31.31 176.53	1.030		0.50	4.00	8.760	9.02	282.6	63.6	539.9
140.0		0.00	1.51 18.568	31.38 117.55	1.030		0.50	1.00	1.470	1.51	47.5	10.7	44.5
142.0	Appertunance(s)	0.00	1.51 18.644	31.50 115.56	1.030		0.50	2.00	2.901	2.99	94.2	21.0	87.6
145.0		0.00	1.52 18.755	31.69 112.56	1.030		0.50	3.00	4.254	4.38	138.9	30.6	128.1
150.0	Appertunance(s)	0.00	1.54 18.938	32.00 107.51	1.030		0.50	5.00	6.830	7.03	225.1	48.5	204.7
Totals:							150.00				12,128.3	3,431.8	39,269.9

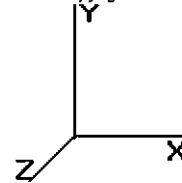


Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
96.00	Flat Low Profile Pla	1	16.671	28.174	1.00	31.60	0.000	0.000	890.29	0.00	0.00	1,700.00
96.00	Decibel	12	16.671	28.174	0.85	66.30	0.000	0.000	1,867.92	0.00	0.00	660.00
106.0	Low Profile Platform	1	17.150	28.983	1.00	31.60	0.000	0.000	915.86	0.00	0.00	1,700.00
106.0	14" x 9" TTA	9	17.150	28.983	0.67	8.80	0.000	0.000	255.16	0.00	0.00	162.00
106.0	72" x 12" Panel	9	17.150	28.983	0.75	62.30	0.000	0.000	1,805.70	0.00	0.00	830.52
106.0	36" x 8" x 6" Panel	3	17.150	28.983	0.89	8.65	0.000	0.000	250.72	0.00	0.00	120.00
118.0	Round Low Profile PI	1	17.683	29.885	1.00	27.20	0.000	0.000	812.86	0.00	0.00	1,700.00
118.0	Andrew DB948F85E-M	6	17.683	29.885	0.81	18.52	0.000	0.000	553.51	0.00	0.00	165.34
118.0	Antel RWA-80014	6	17.683	29.885	0.80	27.55	0.000	0.000	823.38	0.00	0.00	276.00
121.0	GPS	1	17.811	30.100	1.00	1.30	0.000	0.000	39.13	0.00	0.00	15.00
123.0	Allgon 7184	3	17.894	30.241	0.87	8.56	0.000	0.000	258.88	0.00	0.00	81.29
127.0	Allgon 7184	3	18.058	30.519	0.87	8.56	0.000	0.000	261.26	0.00	0.00	81.29
130.0	Allgon 7184	3	18.179	30.723	0.87	8.56	0.000	0.000	263.01	0.00	0.00	81.29
142.0	RFS APXV18-	3	18.644	31.508	0.82	14.02	0.000	0.000	441.81	0.00	0.00	144.39
150.0	RFS APX16DWV-	3	19.393	32.774	0.00	0.00	0.000	13.000	0.00	0.00	0.00	208.14
150.0	Andrew	6	19.393	32.774	0.00	0.00	0.000	13.000	0.00	0.00	0.00	87.12
150.0	Powerwave LGP21903	6	19.010	32.127	0.67	1.53	0.000	2.000	49.08	0.00	98.15	47.40
150.0	Powerwave LGP21401	6	19.010	32.127	0.67	6.15	0.000	2.000	197.60	0.00	395.20	127.56
150.0	Powerwave 7770.00	6	19.010	32.127	0.76	29.78	0.000	2.000	956.63	0.00	1,913.26	406.48
150.0	Flat Platform w/ Han	1	18.938	32.005	1.00	48.40	0.000	0.000	1,549.05	0.00	0.00	2,450.00
150.0	Concealment Canister	1	19.169	32.396	1.00	20.00	0.000	6.500	647.91	0.00	4,211.42	300.00
									12,839.75			11,343.81

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Copyright Sema Engineering Solutions, Inc
 3/16/2009 11:27:21 A
 Page: 14



Base Elev : 0.000 (ft)

Load Case: Ice

69.28 mph Wind with Ice

22 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

Linear Appurtenance Segment Forces

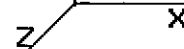
Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Weight (lb/ft)	CaAa (sf/ft)	qz (psf)	FX (lb)	Dead Load (lb)
5.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.287	25.96	47.30
5.00	(3) 1 5/8" Coax	Yes	5.00	4.73	0.25	12.287	25.96	23.65
5.00	(1) 1/2" Coax	Yes	5.00	0.50	0.00	12.287	0.00	2.50
5.00	(12) 1 5/8" Coax	Yes	5.00	18.93	0.50	12.287	51.91	94.65
5.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.287	25.96	47.30
10.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.287	25.96	47.30
10.00	(3) 1 5/8" Coax	Yes	5.00	4.73	0.25	12.287	25.96	23.65
10.00	(1) 1/2" Coax	Yes	5.00	0.50	0.00	12.287	0.00	2.50
10.00	(12) 1 5/8" Coax	Yes	5.00	18.93	0.50	12.287	51.91	94.65
10.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.287	25.96	47.30
15.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.287	25.96	47.30
15.00	(3) 1 5/8" Coax	Yes	5.00	4.73	0.25	12.287	25.96	23.65
15.00	(1) 1/2" Coax	Yes	5.00	0.50	0.00	12.287	0.00	2.50
15.00	(12) 1 5/8" Coax	Yes	5.00	18.93	0.50	12.287	51.91	94.65
15.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.287	25.96	47.30
20.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.287	25.96	47.30
20.00	(3) 1 5/8" Coax	Yes	5.00	4.73	0.25	12.287	25.96	23.65
20.00	(1) 1/2" Coax	Yes	5.00	0.50	0.00	12.287	0.00	2.50
20.00	(12) 1 5/8" Coax	Yes	5.00	18.93	0.50	12.287	51.91	94.65
20.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.287	25.96	47.30
25.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.287	25.96	47.30
25.00	(3) 1 5/8" Coax	Yes	5.00	4.73	0.25	12.287	25.96	23.65
25.00	(1) 1/2" Coax	Yes	5.00	0.50	0.00	12.287	0.00	2.50
25.00	(12) 1 5/8" Coax	Yes	5.00	18.93	0.50	12.287	51.91	94.65
25.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.287	25.96	47.30
30.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.287	25.96	47.30
30.00	(3) 1 5/8" Coax	Yes	5.00	4.73	0.25	12.287	25.96	23.65
30.00	(1) 1/2" Coax	Yes	5.00	0.50	0.00	12.287	0.00	2.50
30.00	(12) 1 5/8" Coax	Yes	5.00	18.93	0.50	12.287	51.91	94.65
30.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.287	25.96	47.30
35.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.496	26.40	47.30
35.00	(3) 1 5/8" Coax	Yes	5.00	4.73	0.25	12.496	26.40	23.65
35.00	(1) 1/2" Coax	Yes	5.00	0.50	0.00	12.496	0.00	2.50
35.00	(12) 1 5/8" Coax	Yes	5.00	18.93	0.50	12.496	52.79	94.65
35.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.496	26.40	47.30
40.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.982	27.42	47.30
40.00	(3) 1 5/8" Coax	Yes	5.00	4.73	0.25	12.982	27.42	23.65
40.00	(1) 1/2" Coax	Yes	5.00	0.50	0.00	12.982	0.00	2.50
40.00	(12) 1 5/8" Coax	Yes	5.00	18.93	0.50	12.982	54.85	94.65
40.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.982	27.42	47.30
45.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	13.426	28.36	47.30
45.00	(3) 1 5/8" Coax	Yes	5.00	4.73	0.25	13.426	28.36	23.65
45.00	(1) 1/2" Coax	Yes	5.00	0.50	0.00	13.426	0.00	2.50
45.00	(12) 1 5/8" Coax	Yes	5.00	18.93	0.50	13.426	56.72	94.65
45.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	13.426	28.36	47.30
50.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	13.836	29.23	47.30
50.00	(3) 1 5/8" Coax	Yes	5.00	4.73	0.25	13.836	29.23	23.65
50.00	(1) 1/2" Coax	Yes	5.00	0.50	0.00	13.836	0.00	2.50
50.00	(12) 1 5/8" Coax	Yes	5.00	18.93	0.50	13.836	58.46	94.65
50.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	13.836	29.23	47.30
55.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	14.218	30.04	47.30

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Copyright Semaan Engineering Solutions, Inc
 3/16/2009 11:27:21 A
 Page: 15

Base Elev : 0.000 (ft)



Load Case: Ice

69.28 mph Wind with Ice

22 Iterations

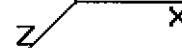
Gust Response Factor : 1.69
 Dead Load Factor : 1.00
 Wind Load Factor : 1.00

55.00	(3) 1 5/8" Coax	Yes	5.00	4.73	0.25	14.218	30.04	23.65
55.00	(1) 1/2" Coax	Yes	5.00	0.50	0.00	14.218	0.00	2.50
55.00	(12) 1 5/8" Coax	Yes	5.00	18.93	0.50	14.218	60.07	94.65
55.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	14.218	30.04	47.30
60.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	14.576	30.79	47.30
60.00	(3) 1 5/8" Coax	Yes	5.00	4.73	0.25	14.576	30.79	23.65
60.00	(1) 1/2" Coax	Yes	5.00	0.50	0.00	14.576	0.00	2.50
60.00	(12) 1 5/8" Coax	Yes	5.00	18.93	0.50	14.576	61.58	94.65
60.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	14.576	30.79	47.30
65.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	14.913	31.50	47.30
65.00	(3) 1 5/8" Coax	Yes	5.00	4.73	0.25	14.913	31.50	23.65
65.00	(1) 1/2" Coax	Yes	5.00	0.50	0.00	14.913	0.00	2.50
65.00	(12) 1 5/8" Coax	Yes	5.00	18.93	0.50	14.913	63.01	94.65
65.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	14.913	31.50	47.30
70.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	15.232	32.18	47.30
70.00	(3) 1 5/8" Coax	Yes	5.00	4.73	0.25	15.232	32.18	23.65
70.00	(1) 1/2" Coax	Yes	5.00	0.50	0.00	15.232	0.00	2.50
70.00	(12) 1 5/8" Coax	Yes	5.00	18.93	0.50	15.232	64.36	94.65
70.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	15.232	32.18	47.30
75.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	15.536	32.82	47.30
75.00	(3) 1 5/8" Coax	Yes	5.00	4.73	0.25	15.536	32.82	23.65
75.00	(1) 1/2" Coax	Yes	5.00	0.50	0.00	15.536	0.00	2.50
75.00	(12) 1 5/8" Coax	Yes	5.00	18.93	0.50	15.536	65.64	94.65
75.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	15.536	32.82	47.30
80.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	15.825	33.43	47.30
80.00	(3) 1 5/8" Coax	Yes	5.00	4.73	0.25	15.825	33.43	23.65
80.00	(1) 1/2" Coax	Yes	5.00	0.50	0.00	15.825	0.00	2.50
80.00	(12) 1 5/8" Coax	Yes	5.00	18.93	0.50	15.825	66.86	94.65
80.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	15.825	33.43	47.30
85.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	16.101	34.01	47.30
85.00	(3) 1 5/8" Coax	Yes	5.00	4.73	0.25	16.101	34.01	23.65
85.00	(1) 1/2" Coax	Yes	5.00	0.50	0.00	16.101	0.00	2.50
85.00	(12) 1 5/8" Coax	Yes	5.00	18.93	0.50	16.101	68.03	94.65
85.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	16.101	34.01	47.30
90.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	16.366	34.57	47.30
90.00	(3) 1 5/8" Coax	Yes	5.00	4.73	0.25	16.366	34.57	23.65
90.00	(1) 1/2" Coax	Yes	5.00	0.50	0.00	16.366	0.00	2.50
90.00	(12) 1 5/8" Coax	Yes	5.00	18.93	0.50	16.366	69.15	94.65
90.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	16.366	34.57	47.30
95.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	16.621	35.11	47.30
95.00	(3) 1 5/8" Coax	Yes	5.00	4.73	0.25	16.621	35.11	23.65
95.00	(1) 1/2" Coax	Yes	5.00	0.50	0.00	16.621	0.00	2.50
95.00	(12) 1 5/8" Coax	Yes	5.00	18.93	0.50	16.621	70.22	94.65
95.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	16.621	35.11	47.30
96.00	(6) 1 5/8" Coax	Yes	1.00	9.46	0.25	16.671	7.04	9.46
96.00	(3) 1 5/8" Coax	Yes	1.00	4.73	0.25	16.671	7.04	4.73
96.00	(1) 1/2" Coax	Yes	1.00	0.50	0.00	16.671	0.00	0.50
96.00	(12) 1 5/8" Coax	Yes	1.00	18.93	0.50	16.671	14.09	18.93
96.00	(6) 1 5/8" Coax	Yes	1.00	9.46	0.25	16.671	7.04	9.46
100.0	(6) 1 5/8" Coax	Yes	4.00	9.46	0.25	16.866	28.50	37.84
100.0	(3) 1 5/8" Coax	Yes	4.00	4.73	0.25	16.866	28.50	18.92
100.0	(1) 1/2" Coax	Yes	4.00	0.50	0.00	16.866	0.00	2.00
100.0	(12) 1 5/8" Coax	Yes	4.00	18.93	0.50	16.866	57.01	75.72
105.0	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	17.103	36.13	47.30
105.0	(3) 1 5/8" Coax	Yes	5.00	4.73	0.25	17.103	36.13	23.65
105.0	(1) 1/2" Coax	Yes	5.00	0.50	0.00	17.103	0.00	2.50
105.0	(12) 1 5/8" Coax	Yes	5.00	18.93	0.50	17.103	72.26	94.65

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Copyright Semaan Engineering Solutions, Inc
 3/16/2009 11:27:21 A
 Page: 16



Base Elev : 0.000 (ft)

Load Case: Ice

69.28 mph Wind with Ice

22 Iterations

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

106.0	(6) 1 5/8" Coax	Yes	1.00	9.46	0.25	17.150	7.25	9.46
106.0	(3) 1 5/8" Coax	Yes	1.00	4.73	0.25	17.150	7.25	4.73
106.0	(1) 1/2" Coax	Yes	1.00	0.50	0.00	17.150	0.00	0.50
106.0	(12) 1 5/8" Coax	Yes	1.00	18.93	0.50	17.150	14.49	18.93
110.0	(6) 1 5/8" Coax	Yes	4.00	9.46	0.25	17.332	29.29	37.84
110.0	(3) 1 5/8" Coax	Yes	4.00	4.73	0.25	17.332	29.29	18.92
110.0	(1) 1/2" Coax	Yes	4.00	0.50	0.00	17.332	0.00	2.00
110.0	(12) 1 5/8" Coax	Yes	4.00	18.93	0.50	17.332	58.58	75.72
115.0	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	17.554	37.08	47.30
115.0	(3) 1 5/8" Coax	Yes	5.00	4.73	0.25	17.554	37.08	23.65
115.0	(1) 1/2" Coax	Yes	5.00	0.50	0.00	17.554	0.00	2.50
115.0	(12) 1 5/8" Coax	Yes	5.00	18.93	0.50	17.554	74.16	94.65
118.0	(6) 1 5/8" Coax	Yes	3.00	9.46	0.25	17.683	22.41	28.38
118.0	(3) 1 5/8" Coax	Yes	3.00	4.73	0.25	17.683	22.41	14.19
118.0	(1) 1/2" Coax	Yes	3.00	0.50	0.00	17.683	0.00	1.50
118.0	(12) 1 5/8" Coax	Yes	3.00	18.93	0.50	17.683	44.83	56.79
120.0	(6) 1 5/8" Coax	Yes	2.00	9.46	0.25	17.768	15.01	18.92
120.0	(3) 1 5/8" Coax	Yes	2.00	4.73	0.25	17.768	15.01	9.46
120.0	(1) 1/2" Coax	Yes	2.00	0.50	0.00	17.768	0.00	1.00
121.0	(6) 1 5/8" Coax	Yes	1.00	9.46	0.25	17.811	7.52	9.46
121.0	(3) 1 5/8" Coax	Yes	1.00	4.73	0.25	17.811	7.52	4.73
121.0	(1) 1/2" Coax	Yes	1.00	0.50	0.00	17.811	0.00	0.50
123.0	(6) 1 5/8" Coax	Yes	2.00	9.46	0.25	17.894	15.12	18.92
123.0	(3) 1 5/8" Coax	Yes	2.00	4.73	0.25	17.894	15.12	9.46
125.0	(6) 1 5/8" Coax	Yes	2.00	9.46	0.25	17.977	15.19	18.92
127.0	(6) 1 5/8" Coax	Yes	2.00	9.46	0.25	18.058	15.26	18.92
130.0	(6) 1 5/8" Coax	Yes	3.00	9.46	0.25	18.179	23.04	28.38
135.0	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	18.376	38.82	47.30
139.0	(6) 1 5/8" Coax	Yes	4.00	9.46	0.25	18.530	31.32	37.84
140.0	(6) 1 5/8" Coax	Yes	1.00	9.46	0.25	18.568	7.85	9.46
142.0	(6) 1 5/8" Coax	Yes	2.00	9.46	0.25	18.644	15.75	18.92
Totals:							3,708.48	5,127.51

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

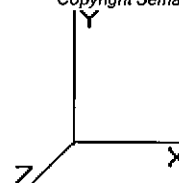
Code: TIA/EIA-222 Rev F

Copyright Semaan Engineering Solutions, Inc

3/16/2009 11:27:22 A

Page: 17

Base Elev : 0.000 (ft)



Load Case: Ice

69.28 mph Wind with Ice

22 Iteratlons

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	591.65	2,629.83	0.00	0.00
10.00	583.19	2,587.89	0.00	0.00
15.00	574.74	2,545.94	0.00	0.00
20.00	566.29	2,504.00	0.00	0.00
25.00	557.84	2,462.06	0.00	0.00
30.00	549.38	2,420.12	0.00	0.00
35.00	550.10	2,378.18	0.00	0.00
40.00	562.56	2,336.23	0.00	0.00
45.00	572.27	2,006.42	0.00	0.00
50.00	580.24	1,970.98	0.00	0.00
55.00	586.48	1,935.53	0.00	0.00
60.00	591.21	1,900.08	0.00	0.00
65.00	594.63	1,864.64	0.00	0.00
70.00	596.88	1,829.19	0.00	0.00
75.00	598.07	1,793.74	0.00	0.00
80.00	598.31	1,758.30	0.00	0.00
85.00	597.69	1,486.65	0.00	0.00
90.00	596.28	1,457.70	0.00	0.00
95.00	594.12	1,428.75	0.00	0.00
96.00	2,876.01	2,642.51	0.00	0.00
100.0	443.60	1,050.40	0.00	0.00
105.0	551.70	1,286.64	0.00	0.00
106.0	3,336.66	3,066.61	0.00	0.00
110.0	436.77	964.72	0.00	0.00
115.0	542.07	1,179.54	0.00	0.00
118.0	2,511.55	2,835.52	0.00	0.00
120.0	183.10	419.26	0.00	0.00
121.0	130.16	204.14	0.00	0.00
123.0	440.32	455.36	0.00	0.00
125.0	165.11	360.50	0.00	0.00
127.0	425.13	437.68	0.00	0.00
130.0	506.71	600.60	0.00	0.00
135.0	400.45	832.07	0.00	0.00
139.0	313.87	647.38	0.00	0.00
140.0	55.36	71.35	0.00	0.00
142.0	551.71	285.73	0.00	0.00
145.0	138.89	180.34	0.00	0.00
150.0	3,625.40	3,918.40	0.00	6,618.03
Totals:	28,676.52	60,734.96	0.00	6,618.03

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

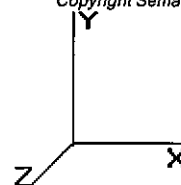
Code: TIA/EIA-222 Rev F

Copyright Semaan Engineering Solutions, Inc

3/16/2009 11:27:22 A

Page: 18

Base Elev : 0.000 (ft)



Load Case: Ice

69.28 mph Wind with 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	-28.728	-60.710	0.000	0.000	0.000	-2,753.603	0.000	0.000	0.000	0.000
5.00	-28.232	-58.034	0.000	0.000	0.000	-2,609.965	-0.052	0.000	0.052	-0.096
10.00	-27.735	-55.401	0.000	0.000	0.000	-2,468.809	-0.204	0.000	0.204	-0.192
15.00	-27.238	-52.812	0.000	0.000	0.000	-2,330.138	-0.456	0.000	0.456	-0.288
20.00	-26.741	-50.266	0.000	0.000	0.000	-2,193.950	-0.810	0.000	0.810	-0.384
25.00	-26.245	-47.765	0.000	0.000	0.000	-2,060.246	-1.264	0.000	1.264	-0.480
30.00	-25.749	-45.307	0.000	0.000	0.000	-1,929.024	-1.818	0.000	1.818	-0.576
35.00	-25.244	-42.893	0.000	0.000	0.000	-1,800.282	-2.473	0.000	2.473	-0.671
40.00	-24.719	-40.523	0.000	0.000	0.000	-1,674.064	-3.227	0.000	3.227	-0.766
45.00	-24.187	-38.482	0.000	0.000	0.000	-1,550.472	-4.080	0.000	4.080	-0.860
50.00	-23.645	-36.476	0.000	0.000	0.000	-1,429.540	-5.040	0.000	5.040	-0.970
55.00	-23.089	-34.507	0.000	0.000	0.000	-1,311.316	-6.115	0.000	6.115	-1.079
60.00	-22.520	-32.578	0.000	0.000	0.000	-1,195.872	-7.303	0.000	7.303	-1.186
65.00	-21.941	-30.687	0.000	0.000	0.000	-1,083.272	-8.601	0.000	8.601	-1.290
70.00	-21.351	-28.836	0.000	0.000	0.000	-973.570	-10.008	0.000	10.008	-1.392
75.00	-20.753	-27.023	0.000	0.000	0.000	-866.816	-11.518	0.000	11.518	-1.489
80.00	-20.148	-25.249	0.000	0.000	0.000	-763.051	-13.128	0.000	13.128	-1.583
85.00	-19.548	-23.748	0.000	0.000	0.000	-662.311	-14.834	0.000	14.834	-1.671
90.00	-18.946	-22.276	0.000	0.000	0.000	-564.572	-16.640	0.000	16.640	-1.773
95.00	-18.327	-20.850	0.000	0.000	0.000	-469.841	-18.548	0.000	18.548	-1.867
96.00	-15.380	-18.291	0.000	0.000	0.000	-451.514	-18.942	0.000	18.942	-1.885
100.0	-14.923	-17.237	0.000	0.000	0.000	-389.995	-20.550	0.000	20.550	-1.953
105.0	-14.339	-15.960	0.000	0.000	0.000	-315.381	-22.637	0.000	22.637	-2.028
106.0	-10.904	-13.007	0.000	0.000	0.000	-301.042	-23.063	0.000	23.063	-2.043
110.0	-10.444	-12.048	0.000	0.000	0.000	-257.428	-24.798	0.000	24.798	-2.097
115.0	-9.867	-10.882	0.000	0.000	0.000	-205.208	-27.027	0.000	27.027	-2.157
118.0	-7.254	-8.140	0.000	0.000	0.000	-175.606	-28.393	0.000	28.393	-2.189
120.0	-7.057	-7.727	0.000	0.000	0.000	-161.099	-29.314	0.000	29.314	-2.209
121.0	-6.921	-7.526	0.000	0.000	0.000	-154.042	-29.778	0.000	29.778	-2.219
123.0	-6.466	-7.085	0.000	0.000	0.000	-140.200	-30.712	0.000	30.712	-2.241
125.0	-6.289	-6.730	0.000	0.000	0.000	-127.269	-31.655	0.000	31.655	-2.261
127.0	-5.849	-6.307	0.000	0.000	0.000	-114.691	-32.606	0.000	32.606	-2.280
130.0	-5.322	-5.724	0.000	0.000	0.000	-97.143	-34.048	0.000	34.048	-2.307
135.0	-4.891	-4.906	0.000	0.000	0.000	-70.532	-36.484	0.000	36.484	-2.344
139.0	-4.552	-4.271	0.000	0.000	0.000	-50.968	-38.458	0.000	38.458	-2.368
140.0	-4.497	-4.199	0.000	0.000	0.000	-46.416	-38.954	0.000	38.954	-2.373
142.0	-3.939	-3.931	0.000	0.000	0.000	-37.423	-39.964	0.000	39.964	-2.443
145.0	-3.798	-3.751	0.000	0.000	0.000	-25.607	-41.528	0.000	41.528	-2.528
150.0	-3.625	0.000	0.000	0.000	0.000	-6.618	-44.224	0.000	44.224	-2.606

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

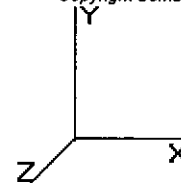
Code: TIA/EIA-222 Rev F

Copyright Semaan Engineering Solutions, Inc

3/16/2009 11:27:22 A

Page: 19

Base Elev : 0.000 (ft)



Load Case: Ice

69.28 mph Wind with 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	0.50	0.48	0.00	0.00	0.00	22.04	22.55	33.4	0.0	0.674
5.00	0.48	0.48	0.00	0.00	0.00	21.70	22.20	33.4	0.0	0.664
10.00	0.47	0.48	0.00	0.00	0.00	21.34	21.83	33.4	0.0	0.653
15.00	0.46	0.48	0.00	0.00	0.00	20.96	21.43	33.4	0.0	0.641
20.00	0.45	0.48	0.00	0.00	0.00	20.55	21.01	33.4	0.0	0.628
25.00	0.43	0.48	0.00	0.00	0.00	20.11	20.56	33.4	0.0	0.615
30.00	0.42	0.48	0.00	0.00	0.00	19.64	20.08	33.4	0.0	0.600
35.00	0.40	0.48	0.00	0.00	0.00	19.14	19.56	33.4	0.0	0.585
40.00	0.39	0.48	0.00	0.00	0.00	18.60	19.01	33.4	0.0	0.568
40.00	0.47	0.58	0.00	0.00	0.00	22.15	22.64	33.4	0.0	0.677
45.00	0.45	0.58	0.00	0.00	0.00	21.46	21.94	31.4	0.0	0.700
50.00	0.44	0.58	0.00	0.00	0.00	20.72	21.18	31.4	0.0	0.675
55.00	0.43	0.58	0.00	0.00	0.00	19.92	20.37	31.4	0.0	0.650
60.00	0.41	0.58	0.00	0.00	0.00	19.06	19.50	31.4	0.0	0.622
65.00	0.40	0.58	0.00	0.00	0.00	18.14	18.56	31.4	0.0	0.592
70.00	0.38	0.58	0.00	0.00	0.00	17.15	17.56	31.4	0.0	0.560
75.00	0.37	0.58	0.00	0.00	0.00	16.08	16.48	31.4	0.0	0.525
80.00	0.35	0.57	0.00	0.00	0.00	14.93	15.31	31.4	0.0	0.488
80.00	0.44	0.71	0.00	0.00	0.00	18.46	18.94	31.4	0.0	0.604
85.00	0.43	0.71	0.00	0.00	0.00	16.92	17.39	28.7	0.0	0.606
90.00	0.41	0.71	0.00	0.00	0.00	15.25	15.71	28.7	0.0	0.547
95.00	0.40	0.71	0.00	0.00	0.00	13.45	13.90	28.7	0.0	0.484
96.00	0.35	0.60	0.00	0.00	0.00	13.07	13.46	28.7	0.0	0.469
100.00	0.34	0.59	0.00	0.00	0.00	11.84	12.22	28.7	0.0	0.426
105.00	0.32	0.59	0.00	0.00	0.00	10.18	10.55	28.7	0.0	0.367
106.00	0.26	0.45	0.00	0.00	0.00	9.84	10.13	28.7	0.0	0.353
110.00	0.25	0.44	0.00	0.00	0.00	8.85	9.13	28.7	0.0	0.318
115.00	0.23	0.43	0.00	0.00	0.00	7.53	7.80	28.7	0.0	0.271
118.00	0.18	0.32	0.00	0.00	0.00	6.70	6.91	28.7	0.0	0.240
120.00	0.17	0.32	0.00	0.00	0.00	6.32	6.51	28.7	0.0	0.227
120.00	0.20	0.36	0.00	0.00	0.00	7.17	7.40	28.7	0.0	0.258
121.00	0.19	0.36	0.00	0.00	0.00	6.96	7.17	38.1	0.0	0.188
123.00	0.18	0.34	0.00	0.00	0.00	6.51	6.72	38.1	0.0	0.176
125.00	0.18	0.33	0.00	0.00	0.00	6.07	6.28	38.1	0.0	0.165
127.00	0.17	0.32	0.00	0.00	0.00	5.63	5.83	38.1	0.0	0.153
130.00	0.16	0.29	0.00	0.00	0.00	4.98	5.16	38.1	0.0	0.136
135.00	0.14	0.28	0.00	0.00	0.00	3.90	4.06	38.1	0.0	0.107
139.00	0.12	0.27	0.00	0.00	0.00	2.99	3.15	38.1	0.0	0.083
139.00	0.43	0.93	0.00	0.00	0.00	15.20	15.71	38.1	0.0	0.413
140.00	0.42	0.92	0.00	0.00	0.00	14.11	14.62	52.0	0.0	0.281
142.00	0.41	0.83	0.00	0.00	0.00	11.83	12.32	52.0	0.0	0.237
145.00	0.40	0.82	0.00	0.00	0.00	8.59	9.10	52.0	0.0	0.175
150.00	0.00	0.82	0.00	0.00	0.00	2.46	2.85	52.0	0.0	0.055

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

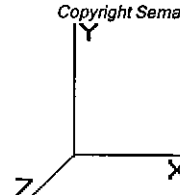
Code: TIA/EIA-222 Rev F

Copyright Semaan Engineering Solutions, Inc

3/16/2009 11:27:22 A

Page: 20

Base Elev : 0.000 (ft)



Load Case: Twist/Sway

50.00 mph Wind with No Ice

21 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

Shaft Segment Forces

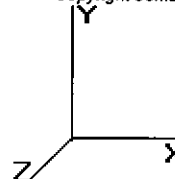
Seg Top														
Elev	Description		Kz	qz	qzGh	C	Cf	Ice Thick	Tributary	Aa	CfAa	Wind Force X	Dead Load Ice	Tot Dead Load
(ft)				(psf)	(psf)	(mph-ft)		(in)	(ft)	(sf)	(sf)	(lb)	(lb)	(lb)
0.00		0.00	1.00	6.400	10.81	213.75	1.030	0.00	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	6.400	10.81	209.79	1.030	0.00	5.00	21.177	21.81	235.9	0.0	2,057.5
10.00		0.00	1.00	6.400	10.81	205.84	1.030	0.00	5.00	20.782	21.41	231.5	0.0	2,018.6
15.00		0.00	1.00	6.400	10.81	201.89	1.030	0.00	5.00	20.387	21.00	227.1	0.0	1,979.6
20.00		0.00	1.00	6.400	10.81	197.94	1.030	0.00	5.00	19.992	20.59	222.7	0.0	1,940.6
25.00		0.00	1.00	6.400	10.81	193.98	1.030	0.00	5.00	19.597	20.18	218.3	0.0	1,901.6
30.00		0.00	1.00	6.400	10.81	190.03	1.030	0.00	5.00	19.201	19.78	213.9	0.0	1,862.7
35.00		0.00	1.01	6.509	10.99	187.65	1.030	0.00	5.00	18.806	19.37	213.1	0.0	1,823.7
40.00	Top - Section 1	0.00	1.05	6.762	11.42	187.20	1.030	0.00	5.00	18.411	18.96	216.7	0.0	1,784.7
45.00		0.00	1.09	6.993	11.81	186.11	1.030	0.00	5.00	18.002	18.54	219.1	0.0	1,458.0
50.00		0.00	1.12	7.207	12.17	184.74	1.030	0.00	5.00	17.607	18.14	220.9	0.0	1,425.5
55.00		0.00	1.15	7.406	12.51	183.02	1.030	0.00	5.00	17.212	17.73	221.9	0.0	1,393.0
60.00		0.00	1.18	7.592	12.83	181.00	1.030	0.00	5.00	16.817	17.32	222.2	0.0	1,360.6
65.00		0.00	1.21	7.768	13.12	178.73	1.030	0.00	5.00	16.422	16.91	222.0	0.0	1,328.1
70.00		0.00	1.24	7.934	13.40	176.23	1.030	0.00	5.00	16.026	16.51	221.3	0.0	1,295.6
75.00		0.00	1.26	8.092	13.67	173.54	1.030	0.00	5.00	15.631	16.10	220.2	0.0	1,263.1
80.00	Top - Section 2	0.00	1.28	8.242	13.93	170.66	1.030	0.00	5.00	15.236	15.69	218.6	0.0	1,230.6
85.00		0.00	1.31	8.387	14.17	167.62	1.030	0.00	5.00	14.841	15.29	216.7	0.0	962.0
90.00		0.00	1.33	8.525	14.40	164.43	1.030	0.00	5.00	14.446	14.88	214.4	0.0	936.0
95.00		0.00	1.35	8.657	14.63	161.11	1.030	0.00	5.00	14.050	14.47	211.7	0.0	910.0
96.00	Appertunance(s)	0.00	1.35	8.683	14.67	160.43	1.030	0.00	1.00	2.763	2.85	41.8	0.0	178.9
100.0		0.00	1.37	8.785	14.84	157.67	1.030	0.00	4.00	10.893	11.22	166.6	0.0	705.1
105.0		0.00	1.39	8.908	15.05	154.11	1.030	0.00	5.00	13.260	13.66	205.6	0.0	858.0
106.0	Appertunance(s)	0.00	1.39	8.933	15.09	153.38	1.030	0.00	1.00	2.605	2.68	40.5	0.0	168.5
110.0		0.00	1.41	9.028	15.25	150.44	1.030	0.00	4.00	10.260	10.57	161.2	0.0	663.6
115.0		0.00	1.42	9.143	15.45	146.67	1.030	0.00	5.00	12.470	12.84	198.5	0.0	806.1
118.0	Appertunance(s)	0.00	1.43	9.211	15.56	144.37	1.030	0.00	3.00	7.292	7.51	116.9	0.0	471.2
120.0	Top - Section 3	0.00	1.44	9.255	15.64	142.82	1.030	0.00	2.00	4.782	4.93	77.0	0.0	308.9
121.0	Appertunance(s)	0.00	1.45	9.277	15.67	142.03	1.030	0.00	1.00	2.367	2.44	38.2	0.0	134.1
123.0	Appertunance(s)	0.00	1.45	9.320	15.75	140.46	1.030	0.00	2.00	4.687	4.83	76.0	0.0	265.4
125.0		0.00	1.46	9.363	15.82	138.87	1.030	0.00	2.00	4.624	4.76	75.4	0.0	261.8
127.0	Appertunance(s)	0.00	1.47	9.406	15.89	137.27	1.030	0.00	2.00	4.561	4.70	74.7	0.0	258.2
130.0	Appertunance(s)	0.00	1.48	9.469	16.00	134.84	1.030	0.00	3.00	6.723	6.92	110.8	0.0	380.4
135.0		0.00	1.49	9.572	16.17	130.74	1.030	0.00	5.00	10.889	11.22	181.4	0.0	615.9
139.0	Top - Section 4	0.00	1.50	9.652	16.31	127.40	1.030	0.00	4.00	8.426	8.68	141.6	0.0	476.3
140.0		0.00	1.51	9.672	16.34	84.840	1.030	0.00	1.00	1.387	1.43	23.3	0.0	33.8
142.0	Appertunance(s)	0.00	1.51	9.711	16.41	83.407	1.030	0.00	2.00	2.735	2.82	46.2	0.0	66.6
145.0		0.00	1.52	9.769	16.51	81.242	1.030	0.00	3.00	4.004	4.12	68.1	0.0	97.6
150.0	Appertunance(s)	0.00	1.54	9.864	16.67	77.592	1.030	0.00	5.00	6.413	6.61	110.1	0.0	156.2
Totals:								150.00				6,142.3	0.0	35,838.1

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Copyright Semaan Engineering Solutions, Inc
 3/16/2009 11:27:22 A
 Page: 21

Base Elev : 0.000 (ft)



Load Case: Twist/Sway

50.00 mph Wind with No Ice

21 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)	
96.00	Flat Low Profile Pla	1	8.683	14.675	1.00	26.10	0.000	0.000	383.01	0.00	0.00	1,500.00	
96.00	Decibel	12	8.683	14.675	0.84	59.37	0.000	0.000	871.25	0.00	0.00	192.00	
106.0	Low Profile Platform	1	8.933	15.096	1.00	26.10	0.000	0.000	394.01	0.00	0.00	1,500.00	
106.0	14" x 9" TTA	9	8.933	15.096	0.67	7.42	0.000	0.000	111.97	0.00	0.00	90.00	
106.0	72" x 12" Panel	9	8.933	15.096	0.75	56.70	0.000	0.000	855.95	0.00	0.00	405.00	
106.0	36" x 8" x 6" Panel	3	8.933	15.096	0.88	7.39	0.000	0.000	111.59	0.00	0.00	75.00	
118.0	Round Low Profile Pl	1	9.211	15.566	1.00	21.70	0.000	0.000	337.78	0.00	0.00	1,500.00	
118.0	Andrew DB948F85E-M	6	9.211	15.566	0.79	15.49	0.000	0.000	241.05	0.00	0.00	51.00	
118.0	Antel RWA-80014	6	9.211	15.566	0.79	24.89	0.000	0.000	387.36	0.00	0.00	85.80	
121.0	GPS	1	9.277	15.678	1.00	1.00	0.000	0.000	15.68	0.00	0.00	7.00	
123.0	Allgon 7184	3	9.320	15.751	0.85	6.83	0.000	0.000	107.65	0.00	0.00	33.60	
127.0	Allgon 7184	3	9.406	15.896	0.85	6.83	0.000	0.000	108.63	0.00	0.00	33.60	
130.0	Allgon 7184	3	9.469	16.003	0.85	6.83	0.000	0.000	109.36	0.00	0.00	33.60	
142.0	RFS APXV18-	3	9.711	16.411	0.80	12.05	0.000	0.000	197.72	0.00	0.00	66.00	
150.0	RFS APX16DWV-	3	10.101	17.071	0.00	0.00	0.000	13.000	0.00	0.00	0.00	118.80	
150.0	Andrew	6	10.101	17.071	0.00	0.00	0.000	13.000	0.00	0.00	0.00	66.00	
150.0	Powerwave LGP21903	6	9.902	16.734	0.67	1.09	0.000	2.000	18.16	0.00	36.33	33.00	
150.0	Powerwave LGP21401	6	9.902	16.734	0.67	5.19	0.000	2.000	86.78	0.00	173.55	84.60	
150.0	Powerwave 7770.00	6	9.902	16.734	0.75	26.46	0.000	2.000	442.77	0.00	885.54	210.00	
150.0	Flat Platform w/ Han	1	9.864	16.670	1.00	42.40	0.000	0.000	706.82	0.00	0.00	2,000.00	
150.0	Concealment Canister	1	9.984	16.874	1.00	15.00	0.000	6.500	253.11	0.00	1,645.18	200.00	
									5,740.64				8,285.00

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

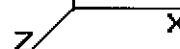
Code: TIA/EIA-222 Rev F

Copyright Sema Engineering Solutions, Inc

3/16/2009 11:27:23 A

Page: 22

Base Elev : 0.000 (ft)



Load Case: Twist/Sway

50.00 mph Wind with No Ice

21 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

Linear Appurtenance Segment Forces

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Weight (lb/ft)	CaAa (sf/ft)	qz (psf)	F X (lb)	Dead Load (lb)
5.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.400	10.82	24.60
5.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	6.400	10.82	12.30
5.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	6.400	0.00	0.75
5.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.400	21.63	49.20
5.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.400	10.82	24.60
10.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.400	10.82	24.60
10.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	6.400	10.82	12.30
10.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	6.400	0.00	0.75
10.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.400	21.63	49.20
10.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.400	10.82	24.60
15.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.400	10.82	24.60
15.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	6.400	10.82	12.30
15.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	6.400	0.00	0.75
15.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.400	21.63	49.20
15.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.400	10.82	24.60
20.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.400	10.82	24.60
20.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	6.400	10.82	12.30
20.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	6.400	0.00	0.75
20.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.400	21.63	49.20
20.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.400	10.82	24.60
25.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.400	10.82	24.60
25.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	6.400	10.82	12.30
25.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	6.400	0.00	0.75
25.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.400	21.63	49.20
25.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.400	10.82	24.60
30.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.400	10.82	24.60
30.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	6.400	10.82	12.30
30.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	6.400	0.00	0.75
30.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.400	21.63	49.20
30.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.400	10.82	24.60
35.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.509	11.00	24.60
35.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	6.509	11.00	12.30
35.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	6.509	0.00	0.75
35.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.509	22.00	49.20
35.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.509	11.00	24.60
40.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.762	11.43	24.60
40.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	6.762	11.43	12.30
40.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	6.762	0.00	0.75
40.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.762	22.85	49.20
40.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.762	11.43	24.60
45.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.993	11.82	24.60
45.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	6.993	11.82	12.30
45.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	6.993	0.00	0.75
45.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	6.993	23.64	49.20
45.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.993	11.82	24.60
50.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	7.207	12.18	24.60
50.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	7.207	12.18	12.30
50.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	7.207	0.00	0.75
50.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	7.207	24.36	49.20
50.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	7.207	12.18	24.60
55.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	7.406	12.52	24.60

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

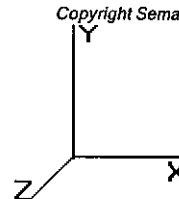
Code: TIA/EIA-222 Rev F

Copyright Sema Engineering Solutions, Inc

3/16/2009 11:27:23 A

Page: 23

Base Elev : 0.000 (ft)



Load Case: Twist/Sway

50.00 mph Wind with No Ice

21 Iteratlons

Gust Response Factor : 1.69

Dead Load Factor : 1.00

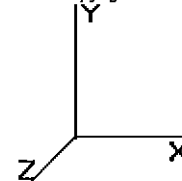
Wind Load Factor : 1.00

55.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	7.406	12.52	12.30
55.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	7.406	0.00	0.75
55.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	7.406	25.03	49.20
55.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	7.406	12.52	24.60
60.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	7.592	12.83	24.60
60.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	7.592	12.83	12.30
60.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	7.592	0.00	0.75
60.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	7.592	25.66	49.20
60.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	7.592	12.83	24.60
65.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	7.768	13.13	24.60
65.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	7.768	13.13	12.30
65.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	7.768	0.00	0.75
65.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	7.768	26.25	49.20
65.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	7.768	13.13	24.60
70.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	7.934	13.41	24.60
70.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	7.934	13.41	12.30
70.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	7.934	0.00	0.75
70.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	7.934	26.82	49.20
70.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	7.934	13.41	24.60
75.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	8.092	13.68	24.60
75.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	8.092	13.68	12.30
75.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	8.092	0.00	0.75
75.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	8.092	27.35	49.20
75.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	8.092	13.68	24.60
80.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	8.242	13.93	24.60
80.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	8.242	13.93	12.30
80.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	8.242	0.00	0.75
80.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	8.242	27.86	49.20
80.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	8.242	13.93	24.60
85.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	8.387	14.17	24.60
85.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	8.387	14.17	12.30
85.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	8.387	0.00	0.75
85.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	8.387	28.35	49.20
85.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	8.387	14.17	24.60
90.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	8.525	14.41	24.60
90.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	8.525	14.41	12.30
90.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	8.525	0.00	0.75
90.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	8.525	28.81	49.20
90.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	8.525	14.41	24.60
95.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	8.657	14.63	24.60
95.00	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	8.657	14.63	12.30
95.00	(1) 1/2" Coax	Yes	5.00	0.15	0.00	8.657	0.00	0.75
95.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	8.657	29.26	49.20
95.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	8.657	14.63	24.60
96.00	(6) 1 5/8" Coax	Yes	1.00	4.92	0.20	8.683	2.93	4.92
96.00	(3) 1 5/8" Coax	Yes	1.00	2.46	0.20	8.683	2.93	2.46
96.00	(1) 1/2" Coax	Yes	1.00	0.15	0.00	8.683	0.00	0.15
96.00	(12) 1 5/8" Coax	Yes	1.00	9.84	0.40	8.683	5.87	9.84
96.00	(6) 1 5/8" Coax	Yes	1.00	4.92	0.20	8.683	2.93	4.92
100.0	(6) 1 5/8" Coax	Yes	4.00	4.92	0.20	8.785	11.88	19.68
100.0	(3) 1 5/8" Coax	Yes	4.00	2.46	0.20	8.785	11.88	9.84
100.0	(1) 1/2" Coax	Yes	4.00	0.15	0.00	8.785	0.00	0.60
100.0	(12) 1 5/8" Coax	Yes	4.00	9.84	0.40	8.785	23.75	39.36
105.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	8.908	15.06	24.60
105.0	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	8.908	15.06	12.30
105.0	(1) 1/2" Coax	Yes	5.00	0.15	0.00	8.908	0.00	0.75
105.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	8.908	30.11	49.20

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Copyright Semaan Engineering Solutions, Inc
 3/16/2009 11:27:23 A
 Page: 24



Base Elev : 0.000 (ft)

Load Case: Twist/Sway

50.00 mph Wind with No Ice

21 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

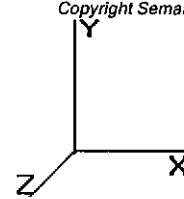
Wind Load Factor : 1.00

106.0	(6) 1 5/8" Coax	Yes	1.00	4.92	0.20	8.933	3.02	4.92
106.0	(3) 1 5/8" Coax	Yes	1.00	2.46	0.20	8.933	3.02	2.46
106.0	(1) 1/2" Coax	Yes	1.00	0.15	0.00	8.933	0.00	0.15
106.0	(12) 1 5/8" Coax	Yes	1.00	9.84	0.40	8.933	6.04	9.84
110.0	(6) 1 5/8" Coax	Yes	4.00	4.92	0.20	9.028	12.21	19.68
110.0	(3) 1 5/8" Coax	Yes	4.00	2.46	0.20	9.028	12.21	9.84
110.0	(1) 1/2" Coax	Yes	4.00	0.15	0.00	9.028	0.00	0.60
110.0	(12) 1 5/8" Coax	Yes	4.00	9.84	0.40	9.028	24.41	39.36
115.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	9.143	15.45	24.60
115.0	(3) 1 5/8" Coax	Yes	5.00	2.46	0.20	9.143	15.45	12.30
115.0	(1) 1/2" Coax	Yes	5.00	0.15	0.00	9.143	0.00	0.75
115.0	(12) 1 5/8" Coax	Yes	5.00	9.84	0.40	9.143	30.90	49.20
118.0	(6) 1 5/8" Coax	Yes	3.00	4.92	0.20	9.211	9.34	14.76
118.0	(3) 1 5/8" Coax	Yes	3.00	2.46	0.20	9.211	9.34	7.38
118.0	(1) 1/2" Coax	Yes	3.00	0.15	0.00	9.211	0.00	0.45
118.0	(12) 1 5/8" Coax	Yes	3.00	9.84	0.40	9.211	18.68	29.52
120.0	(6) 1 5/8" Coax	Yes	2.00	4.92	0.20	9.255	6.26	9.84
120.0	(3) 1 5/8" Coax	Yes	2.00	2.46	0.20	9.255	6.26	4.92
120.0	(1) 1/2" Coax	Yes	2.00	0.15	0.00	9.255	0.00	0.30
121.0	(6) 1 5/8" Coax	Yes	1.00	4.92	0.20	9.277	3.14	4.92
121.0	(3) 1 5/8" Coax	Yes	1.00	2.46	0.20	9.277	3.14	2.46
121.0	(1) 1/2" Coax	Yes	1.00	0.15	0.00	9.277	0.00	0.15
123.0	(6) 1 5/8" Coax	Yes	2.00	4.92	0.20	9.320	6.30	9.84
123.0	(3) 1 5/8" Coax	Yes	2.00	2.46	0.20	9.320	6.30	4.92
125.0	(6) 1 5/8" Coax	Yes	2.00	4.92	0.20	9.363	6.33	9.84
127.0	(6) 1 5/8" Coax	Yes	2.00	4.92	0.20	9.406	6.36	9.84
130.0	(6) 1 5/8" Coax	Yes	3.00	4.92	0.20	9.469	9.60	14.76
135.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	9.572	16.18	24.60
139.0	(6) 1 5/8" Coax	Yes	4.00	4.92	0.20	9.652	13.05	19.68
140.0	(6) 1 5/8" Coax	Yes	1.00	4.92	0.20	9.672	3.27	4.92
142.0	(6) 1 5/8" Coax	Yes	2.00	4.92	0.20	9.711	6.56	9.84
Totals:							1,545.29	2,652.81

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Copyright Semaan Engineering Solutions, Inc
 3/16/2009 11:27:24 A
 Page: 25



Base Elev : 0.000 (ft)

Load Case: Twist/Sway

50.00 mph Wind with No Ice

21 Iterations

Gust Response Factor : 1.69

Dead Load Factor : 1.00

Wind Load Factor : 1.00

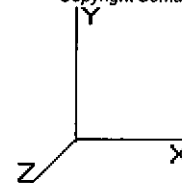
Applied Segment Forces Summary

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	290.01	2,366.69	0.00	0.00
10.00	285.60	2,327.71	0.00	0.00
15.00	281.20	2,288.74	0.00	0.00
20.00	276.80	2,249.77	0.00	0.00
25.00	272.39	2,210.79	0.00	0.00
30.00	267.99	2,171.82	0.00	0.00
35.00	268.06	2,132.85	0.00	0.00
40.00	273.83	2,093.88	0.00	0.00
45.00	278.23	1,767.13	0.00	0.00
50.00	281.78	1,734.66	0.00	0.00
55.00	284.46	1,702.18	0.00	0.00
60.00	286.40	1,669.70	0.00	0.00
65.00	287.68	1,637.23	0.00	0.00
70.00	288.38	1,604.75	0.00	0.00
75.00	288.55	1,572.27	0.00	0.00
80.00	288.25	1,539.79	0.00	0.00
85.00	287.52	1,271.11	0.00	0.00
90.00	286.39	1,245.13	0.00	0.00
95.00	284.89	1,219.15	0.00	0.00
96.00	1,310.69	1,932.71	0.00	0.00
100.0	214.08	903.26	0.00	0.00
105.0	265.84	1,105.69	0.00	0.00
106.0	1,526.09	2,288.02	0.00	0.00
110.0	210.05	822.33	0.00	0.00
115.0	260.26	1,004.52	0.00	0.00
118.0	1,120.45	2,227.04	0.00	0.00
120.0	89.56	368.62	0.00	0.00
121.0	60.18	170.94	0.00	0.00
123.0	196.30	358.45	0.00	0.00
125.0	81.70	316.29	0.00	0.00
127.0	189.67	346.25	0.00	0.00
130.0	229.77	488.38	0.00	0.00
135.0	197.60	727.47	0.00	0.00
139.0	154.62	565.61	0.00	0.00
140.0	26.62	56.12	0.00	0.00
142.0	250.51	177.28	0.00	0.00
145.0	68.09	149.76	0.00	0.00
150.0	1,617.75	2,955.57	0.00	2,740.60
Totals:	13,428.22	51,769.66	0.00	2,740.60

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Copyright Semaan Engineering Solutions, Inc
 3/16/2009 11:27:24 A
 Page: 26



Base Elev : 0.000 (ft)

Load Case: Twist/Sway

50.00 mph Wind with No Ice

21 Iterations

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

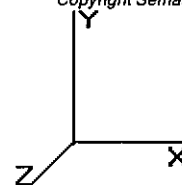
Calculated Shaft Forces and Deflections

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	-13.448	-51.764	0.000	0.000	0.000	-1,267.056	0.000	0.000	0.000	0.000
5.00	-13.195	-49.388	0.000	0.000	0.000	-1,199.818	-0.024	0.000	0.024	-0.044
10.00	-12.943	-47.050	0.000	0.000	0.000	-1,133.844	-0.094	0.000	0.094	-0.088
15.00	-12.692	-44.752	0.000	0.000	0.000	-1,069.131	-0.210	0.000	0.210	-0.132
20.00	-12.441	-42.494	0.000	0.000	0.000	-1,005.673	-0.372	0.000	0.372	-0.176
25.00	-12.192	-40.275	0.000	0.000	0.000	-943.467	-0.581	0.000	0.581	-0.220
30.00	-11.944	-38.095	0.000	0.000	0.000	-882.506	-0.835	0.000	0.835	-0.264
35.00	-11.693	-35.954	0.000	0.000	0.000	-822.786	-1.135	0.000	1.135	-0.308
40.00	-11.432	-33.854	0.000	0.000	0.000	-764.323	-1.481	0.000	1.481	-0.351
45.00	-11.169	-32.079	0.000	0.000	0.000	-707.163	-1.872	0.000	1.872	-0.394
50.00	-10.901	-30.337	0.000	0.000	0.000	-651.320	-2.312	0.000	2.312	-0.444
55.00	-10.627	-28.628	0.000	0.000	0.000	-596.817	-2.804	0.000	2.804	-0.494
60.00	-10.348	-26.953	0.000	0.000	0.000	-543.684	-3.347	0.000	3.347	-0.542
65.00	-10.065	-25.310	0.000	0.000	0.000	-491.945	-3.941	0.000	3.941	-0.590
70.00	-9.778	-23.701	0.000	0.000	0.000	-441.622	-4.584	0.000	4.584	-0.636
75.00	-9.488	-22.125	0.000	0.000	0.000	-392.734	-5.274	0.000	5.274	-0.680
80.00	-9.196	-20.582	0.000	0.000	0.000	-345.295	-6.009	0.000	6.009	-0.722
85.00	-8.906	-19.308	0.000	0.000	0.000	-299.317	-6.788	0.000	6.788	-0.762
90.00	-8.617	-18.060	0.000	0.000	0.000	-254.786	-7.612	0.000	7.612	-0.809
95.00	-8.322	-16.842	0.000	0.000	0.000	-211.703	-8.482	0.000	8.482	-0.851
96.00	-6.987	-14.927	0.000	0.000	0.000	-203.381	-8.661	0.000	8.661	-0.859
100.0	-6.767	-14.023	0.000	0.000	0.000	-175.433	-9.394	0.000	9.394	-0.889
105.0	-6.489	-12.919	0.000	0.000	0.000	-141.597	-10.344	0.000	10.344	-0.923
106.0	-4.928	-10.655	0.000	0.000	0.000	-135.108	-10.538	0.000	10.538	-0.930
110.0	-4.709	-9.834	0.000	0.000	0.000	-115.395	-11.328	0.000	11.328	-0.954
115.0	-4.435	-8.833	0.000	0.000	0.000	-91.848	-12.342	0.000	12.342	-0.981
118.0	-3.278	-6.625	0.000	0.000	0.000	-78.542	-12.963	0.000	12.963	-0.995
120.0	-3.183	-6.257	0.000	0.000	0.000	-71.986	-13.382	0.000	13.382	-1.005
121.0	-3.120	-6.087	0.000	0.000	0.000	-68.803	-13.593	0.000	13.593	-1.009
123.0	-2.919	-5.732	0.000	0.000	0.000	-62.563	-14.018	0.000	14.018	-1.019
125.0	-2.832	-5.416	0.000	0.000	0.000	-56.725	-14.447	0.000	14.447	-1.028
127.0	-2.637	-5.073	0.000	0.000	0.000	-51.061	-14.879	0.000	14.879	-1.036
130.0	-2.400	-4.588	0.000	0.000	0.000	-43.149	-15.534	0.000	15.534	-1.048
135.0	-2.190	-3.864	0.000	0.000	0.000	-31.149	-16.641	0.000	16.641	-1.064
139.0	-2.025	-3.301	0.000	0.000	0.000	-22.390	-17.537	0.000	17.537	-1.075
140.0	-1.999	-3.245	0.000	0.000	0.000	-20.365	-17.763	0.000	17.763	-1.077
142.0	-1.747	-3.072	0.000	0.000	0.000	-16.368	-18.221	0.000	18.221	-1.108
145.0	-1.677	-2.922	0.000	0.000	0.000	-11.128	-18.930	0.000	18.930	-1.145
150.0	-1.618	0.000	0.000	0.000	0.000	-2.741	-20.150	0.000	20.150	-1.179

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Copyright Sema Engineering Solutions, Inc
 3/16/2009 11:27:24 A
 Page: 27



Base Elev : 0.000 (ft)

Load Case: Twist/Sway

50.00 mph Wind with No Ice

21 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	0.42	0.22	0.00	0.00	0.00	10.14	10.57	33.4	0.0	0.316
5.00	0.41	0.22	0.00	0.00	0.00	9.98	10.40	33.4	0.0	0.311
10.00	0.40	0.22	0.00	0.00	0.00	9.80	10.21	33.4	0.0	0.305
15.00	0.39	0.22	0.00	0.00	0.00	9.62	10.01	33.4	0.0	0.299
20.00	0.38	0.22	0.00	0.00	0.00	9.42	9.80	33.4	0.0	0.293
25.00	0.36	0.22	0.00	0.00	0.00	9.21	9.58	33.4	0.0	0.287
30.00	0.35	0.22	0.00	0.00	0.00	8.99	9.34	33.4	0.0	0.279
35.00	0.34	0.22	0.00	0.00	0.00	8.75	9.09	33.4	0.0	0.272
40.00	0.33	0.22	0.00	0.00	0.00	8.49	8.83	33.4	0.0	0.264
40.00	0.39	0.27	0.00	0.00	0.00	10.12	10.52	33.4	0.0	0.315
45.00	0.38	0.27	0.00	0.00	0.00	9.79	10.18	31.4	0.0	0.325
50.00	0.37	0.27	0.00	0.00	0.00	9.44	9.82	31.4	0.0	0.313
55.00	0.35	0.27	0.00	0.00	0.00	9.07	9.43	31.4	0.0	0.301
60.00	0.34	0.27	0.00	0.00	0.00	8.67	9.02	31.4	0.0	0.288
65.00	0.33	0.27	0.00	0.00	0.00	8.24	8.58	31.4	0.0	0.274
70.00	0.32	0.26	0.00	0.00	0.00	7.78	8.11	31.4	0.0	0.258
75.00	0.30	0.26	0.00	0.00	0.00	7.28	7.60	31.4	0.0	0.242
80.00	0.29	0.26	0.00	0.00	0.00	6.75	7.06	31.4	0.0	0.225
80.00	0.36	0.33	0.00	0.00	0.00	8.35	8.73	31.4	0.0	0.278
85.00	0.35	0.32	0.00	0.00	0.00	7.65	8.01	28.7	0.0	0.279
90.00	0.33	0.32	0.00	0.00	0.00	6.88	7.24	28.7	0.0	0.252
95.00	0.32	0.32	0.00	0.00	0.00	6.06	6.40	28.7	0.0	0.223
96.00	0.28	0.27	0.00	0.00	0.00	5.89	6.19	28.7	0.0	0.216
100.00	0.27	0.27	0.00	0.00	0.00	5.33	5.62	28.7	0.0	0.196
105.00	0.26	0.27	0.00	0.00	0.00	4.57	4.85	28.7	0.0	0.169
106.00	0.22	0.20	0.00	0.00	0.00	4.42	4.64	28.7	0.0	0.162
110.00	0.20	0.20	0.00	0.00	0.00	3.97	4.18	28.7	0.0	0.146
115.00	0.19	0.19	0.00	0.00	0.00	3.37	3.57	28.7	0.0	0.124
118.00	0.14	0.15	0.00	0.00	0.00	3.00	3.15	28.7	0.0	0.110
120.00	0.14	0.14	0.00	0.00	0.00	2.82	2.97	28.7	0.0	0.104
120.00	0.16	0.16	0.00	0.00	0.00	3.21	3.38	28.7	0.0	0.118
121.00	0.15	0.16	0.00	0.00	0.00	3.11	3.27	38.1	0.0	0.086
123.00	0.15	0.15	0.00	0.00	0.00	2.90	3.06	38.1	0.0	0.080
125.00	0.14	0.15	0.00	0.00	0.00	2.71	2.86	38.1	0.0	0.075
127.00	0.13	0.14	0.00	0.00	0.00	2.51	2.65	38.1	0.0	0.070
130.00	0.12	0.13	0.00	0.00	0.00	2.21	2.35	38.1	0.0	0.062
135.00	0.11	0.13	0.00	0.00	0.00	1.72	1.84	38.1	0.0	0.048
139.00	0.10	0.12	0.00	0.00	0.00	1.32	1.43	38.1	0.0	0.037
139.00	0.33	0.41	0.00	0.00	0.00	6.68	7.04	38.1	0.0	0.185
140.00	0.33	0.41	0.00	0.00	0.00	6.19	6.56	52.0	0.0	0.126
142.00	0.32	0.37	0.00	0.00	0.00	5.17	5.53	52.0	0.0	0.106
145.00	0.31	0.36	0.00	0.00	0.00	3.73	4.09	52.0	0.0	0.079
150.00	0.00	0.37	0.00	0.00	0.00	1.02	1.20	52.0	0.0	0.023

Pole : 302483
 Location : Brln - Berlin, CT
 Height : 150.0 (ft)
 Shape : 12 Sides
 Base Dia : 51.30 (in)
 Top Dia : 15.00 (in)
 Taper : 0.189701 (in/ft)

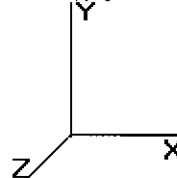
Code: TIA/EIA-222 Rev F

Copyright Semaan Engineering Solutions, Inc

3/16/2009 11:27:24 A

Page: 28

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	34.4	0.00	51.73	0.00	0.00	3242.93	26.30	31.4	40.00	0.839
Ice	28.7	0.00	60.71	0.00	0.00	2753.60	22.64	31.4	40.00	0.722
Twist/Sway	13.4	0.00	51.76	0.00	0.00	1267.06	10.52	31.4	40.00	0.335

Base/Flange Plate	Plate Type	Baseplate
	Pole Diameter	37.38 in
	Pole Thickness	in
	Plate Length	62 in
	Plate Thickness	2 in
	Plate Fy	60 ksi
	Weld Length	0.25 in
	Allowable	664.01 k-in
	Applied	479.39 k-in
Stiffeners	#	0

Code Rev.

F

Date

3/16/2009

A.S.I.

1.33

Engineer

ESS

Site #

302483

Carrier

T-Mobile

Moment *

2107.9 k-ft

Axial *

33.6 k

* Factored by 0.65, see attached calcs

Bolts ●	#	8
	Bolt Circle	44 in
	(R)adial / (S)quare	S
	Bolt Gap	6 in
	Diameter	2.25 in
	Hole Diameter	2.375 in
	Type	#18J
	Fy	75 ksi
	Fu	100 ksi
	Allowable	194.86 k
Reinforcement ●	#	0
Extra Bolts O	#	12
	Bolt Circle	55.5 in
	(R)adial / (S)quare	S
	Bolt Gap	6 in
	Offset Angle	30 °
	Diameter	1.5 in
	Type	A325
	Fy	92 ksi
	Fu	120 ksi
	Allowable	103.67 k
	Applied	84.55 k

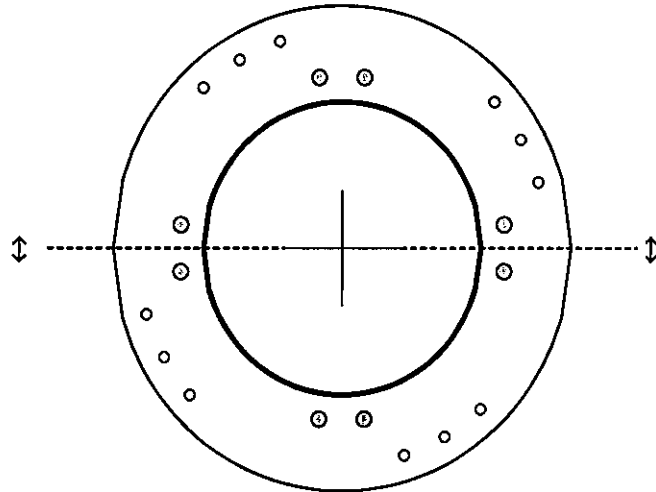


Plate Stress Ratio:

0.72

(Pass)

Bolt Stress Ratio:

0.66

(Pass)

Extra Bolt Stress Ratio:

0.82

(Pass)

Quick Calculation of Face Width, Area, Moment of Inertia & Radius of Gyration

of Sides: 12 E_M: 29000 ksi

				Original Tower					
Elevation	Diameter	Thickness	F _y	Area	Inertia	S _{min}	F _{cr}	M _{Capacity}	θ
(ft)	(in)	(in)	(ksi)	(in ²)	(in ⁴)	(in ³)	(ksi)	(k-in)	(radians)
0	37.38	0.375	65	44.6	7821.2	404.2	65.0	26274	0.000116
5	36.60	0.375	65	43.7	7339.9	387.4	65.0	25179	0.000118
10	35.83	0.375	65	42.8	6878.8	370.9	65.0	24108	0.000121
15	35.05	0.375	65	41.8	6437.5	354.8	65.0	23060	0.000124
20	34.28	0.375	65	40.9	6015.4	339.0	65.0	22035	0.000126
25	33.50	0.375	65	39.9	5612.2	323.6	65.0	21034	0.000129
30	32.73	0.375	65	39.0	5227.4	308.6	65.0	20056	0.000132
35	31.95	0.375	65	38.1	4860.7	293.9	65.0	19101	0.000136
40	31.77	0.3125	65	31.6	4005.6	243.5	65.0	15830	0.000136
45	30.99	0.3125	65	30.8	3715.1	231.6	65.0	15051	0.000140
50	30.21	0.3125	65	30.0	3439.0	219.9	65.0	14292	0.000143
55	29.44	0.3125	65	29.3	3176.9	208.5	65.0	13553	0.000147
60	28.66	0.3125	65	28.5	2928.5	197.4	65.0	12833	0.000151
65	27.88	0.3125	65	27.7	2693.4	186.7	65.0	12133	0.000155
70	27.10	0.3125	65	26.9	2471.3	176.2	65.0	11453	0.000160
75	26.82	0.25	65	21.4	1929.0	139.0	65.0	9033	0.000161
80	26.02	0.25	65	20.7	1760.9	130.7	65.0	8498	0.000166
85	25.23	0.25	65	20.1	1602.9	122.8	65.0	7979	0.000172
90	24.43	0.25	65	19.4	1454.7	115.0	65.0	7477	0.000177
95	23.64	0.25	65	18.8	1315.9	107.6	65.0	6991	0.000183
100	22.84	0.25	65	18.2	1186.2	100.3	65.0	6522	0.000190
105	22.05	0.25	65	17.5	1065.3	93.4	65.0	6068	0.000196
110	21.25	0.1875	65	12.7	721.1	65.6	64.5	4227	0.000202
115	20.47	0.1875	65	12.2	643.8	60.8	65.0	3949	0.000212
120	19.69	0.1875	65	11.8	572.2	56.1	65.0	3650	0.000220
125	18.91	0.1875	65	11.3	506.2	51.7	65.0	3362	0.000229
130	18.13	0.1875	65	10.8	445.4	47.5	65.0	3086	0.000239
135	17.34	0.1875	65	10.3	389.7	43.4	65.0	2821	0.000250
139	16.72	0.1875	65	10.0	348.6	40.3	65.0	2619	0.000259
140	16.56	0.1875	65	9.9	338.9	39.5	65.0	2569	0.000261
145	15.78	0.1875	65	9.4	292.6	35.8	65.0	2329	0.000274
150	15.00	0.1875	65	8.9	250.8	32.3	65.0	2100	0.000289

				Sleeve					
Elevation	Diameter	Thickness	F _y	Area	Inertia	S _{min}	F _{cr}	M _{Capacity}	θ
(ft)	(in)	(in)	(ksi)	(in ²)	(in ⁴)	(in ³)	(ksi)	(k-in)	(radians)
0	51.30	0.375	65	61.4	20382.8	767.6	58.3	44764	0.000076
5	50.55	0.375	65	60.5	19495.4	745.0	58.8	43842	0.000078
10	49.80	0.375	65	59.6	18634.2	722.9	59.4	42916	0.000079
15	49.05	0.375	65	58.7	17798.8	701.0	59.9	41987	0.000081
20	48.30	0.375	65	57.8	16988.7	679.5	60.4	41055	0.000083
25	47.55	0.375	65	56.9	16203.5	658.3	60.9	40121	0.000085
30	46.80	0.375	65	56.0	15443.0	637.5	61.5	39186	0.000087
35	46.05	0.375	65	55.1	14706.6	617.0	62.0	38249	0.000090
40	45.50	0.3125	65	45.4	11867.0	503.9	56.0	28220	0.000082
45	44.75	0.3125	65	44.7	11285.9	487.2	56.6	27595	0.000084
50	44.00	0.3125	65	43.9	10724.0	470.8	57.3	26965	0.000087
55	43.25	0.3125	65	43.1	10181.2	454.8	57.9	26330	0.000089
60	42.50	0.3125	65	42.4	9657.0	439.0	58.5	25692	0.000092
65	41.75	0.3125	65	41.6	9151.0	423.4	59.2	25050	0.000094
70	41.00	0.3125	65	40.9	8663.1	408.2	59.8	24406	0.000097
75	40.25	0.3125	65	40.1	8192.8	393.2	60.4	23759	0.000100
80	39.70	0.25	65	31.7	6317.0	307.4	52.5	16151	0.000088
85	38.94	0.25	65	31.1	5957.8	295.6	53.3	15767	0.000091
90	38.18	0.25	65	30.5	5612.4	284.0	54.1	15378	0.000094
95	37.41	0.25	65	29.9	5280.7	272.7	54.9	14982	0.000098
100	36.65	0.25	65	29.3	4962.3	261.6	55.7	14581	0.000101
105	35.89	0.25	65	28.6	4656.9	250.7	56.5	14175	0.000105
110	35.13	0.25	65	28.0	4364.4	240.0	57.3	13765	0.000109
115	34.36	0.25	65	27.4	4084.3	229.6	58.1	13352	0.000113
120	27.30	0.25	65	21.7	2036.5	144.1	65.0	9367	0.000159
125	26.67	0.25	65	21.2	1897.2	137.4	65.0	8933	0.000162
130	26.04	0.25	65	20.7	1764.4	130.9	65.0	8509	0.000166
135	25.41	0.25	65	20.2	1637.9	124.5	65.0	8096	0.000170
139	24.90	0.25	65	19.8	1541.2	119.6	65.0	7772	0.000174

Combined Section Strength Assuming Composite Strength

Elevation (ft)	Diameter (in)	Thickness (in)	F _y (ksi)	Area (in ²)	Inertia (in ⁴)	S _{min} (in ³)	F _{cr} (ksi)	M _{Capacity} (k-in)
0	51.30	0.75	65	121.9	39878.2	1501.7	65.0	97612
5	50.55	0.75	65	120.1	38129.6	1457.2	65.0	94717
10	49.80	0.75	65	118.3	36433.0	1413.3	65.0	91866
15	49.05	0.75	65	116.5	34787.4	1370.1	65.0	89057
20	48.30	0.75	65	114.7	33192.2	1327.6	65.0	86293
25	47.55	0.75	65	112.9	31646.5	1285.7	65.0	83572
30	46.80	0.75	65	111.1	30149.5	1244.5	65.0	80895
35	46.05	0.75	65	109.2	28700.5	1204.0	65.0	78261
40	45.30	0.625	65	90.2	23248.4	987.1	65.0	64161
45	44.75	0.625	65	88.7	22102.2	954.2	65.0	62020
50	44.00	0.625	65	87.2	20994.4	921.8	65.0	59915
55	43.25	0.625	65	85.7	19924.2	890.0	65.0	57847
60	42.50	0.625	65	84.2	18891.1	858.7	65.0	55815
65	41.75	0.625	65	82.6	17894.2	828.0	65.0	53820
70	41.00	0.625	65	81.1	16933.1	797.9	65.0	51861
75	40.25	0.5625	65	71.8	14473.9	694.7	65.0	45155
80	39.70	0.5	65	63.0	12396.9	603.2	65.0	39211
85	38.94	0.5	65	61.8	11687.6	579.9	65.0	37691
90	38.18	0.5	66	60.6	11005.8	556.9	66.0	36759
95	37.41	0.5	67	59.3	10351.1	534.5	67.0	35811
100	36.65	0.5	68	58.1	9722.8	512.5	68.0	34850
105	35.89	0.5	69	56.9	9120.6	491.0	69.0	33877
110	35.13	0.4375	70	48.8	7515.9	413.4	70.0	28936
115	34.36	0.4375	71	47.7	7031.1	395.3	71.0	28065
120	27.30	0.4375	72	37.8	3491.0	247.0	72.0	17787
125	26.67	0.4375	73	36.9	3250.5	235.5	73.0	17189
130	26.04	0.4375	74	36.0	3021.4	224.2	74.0	16589
135	25.41	0.4375	75	35.1	2803.3	213.2	75.0	15987
139	24.90	0.4375	76	34.4	2636.5	204.6	76.0	15546

Actual Combined Section Strength

Elevation (ft)	Σ M _{Capacity} (k-in)	Ori. Str. Red. Ratio	2 _{nd} Str. Red. Ratio	Eq. F _{cr} (ksi)	M _{Capacity} (k-in)	Average F _y (ksi)
0	61941	0.65	0.63	41.2	61941	
5	60348	0.66	0.64	41.4	60348	
10	58759	0.66	0.64	41.6	58759	
15	57173	0.66	0.64	41.7	57173	
20	55592	0.66	0.64	41.9	55592	
25	54018	0.66	0.65	42.0	54018	
30	52450	0.66	0.65	42.1	52450	
35	50891	0.66	0.65	42.3	50891	
40	37745	0.60	0.59	38.2	37745	41.8
45	36678	0.60	0.59	38.4	36678	
50	35612	0.61	0.59	38.6	35612	
55	34546	0.61	0.60	38.8	34546	
60	33483	0.61	0.60	39.0	33483	
65	32423	0.61	0.60	39.2	32423	
70	31368	0.61	0.60	39.3	31368	
75	29353	0.62	0.65	42.3	29353	
80	20653	0.53	0.53	34.2	20653	39.2
85	20010	0.53	0.53	34.5	20010	
90	19363	0.53	0.53	34.8	19363	
95	18715	0.53	0.52	35.0	18715	
100	18066	0.53	0.52	35.3	18066	
105	17418	0.53	0.51	35.5	17418	
110	16040	0.54	0.55	38.8	16040	
115	15457	0.53	0.55	39.1	15457	
120	11999	0.72	0.67	48.6	11999	35.9
125	11316	0.71	0.66	48.1	11316	
130	10657	0.70	0.64	47.5	10657	
135	10022	0.68	0.63	47.0	10022	
139	9530	0.67	0.61	46.6	9530	47.6

Technical Memo

To: Transcend
From: Farid Marbough - Radio Frequency Engineer
cc: Jason Overbey
Subject: Power Density Report for CT11182A
Date: March 27, 2009

1. Introduction:

This report is the result of an Electromagnetic Field Intensities (EMF - Power Densities) study for the T-Mobile antenna installation on a Self Support Tower at 260 Beckley Road, Berlin, CT. This study incorporates the most conservative consideration for determining the practical combined worst case power density levels that would be theoretically encountered from locations surrounding the transmitting location.

2. Discussion:

The following assumptions were used in the calculations:

- 1) The emissions from T-Mobile transmitters are in the (1935-1944.8), (2140-2145), (2110-2120)MHz frequency Band.
- 2) The antenna array consists of three sectors, with 1 antenna per sector.
- 3) The model number for GSM antenna is APX16DWV-16DWV.
- 3) The model number for UMTS antenna is APX16DWV-16DWV.
- 4) GSM antenna center line height is 162 ft.
- 4) UMTS antenna center line height is 162 ft.
- 5) The maximum transmit power from any GSM sector is 2244.5 Watts Effective Radiated Power (EIRP) assuming 8 channels per sector.
- 5) The maximum transmit power from any UMTS sector is 2239.19 Watts Effective Radiated Power (EIRP) assuming 2 channels per sector.
- 6) All the antennas are simultaneously transmitting and receiving, 24 hours a day.
- 7) Power levels emitting from the antennas are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 8) The average ground level of the studied area does not change significantly with respect to the transmitting location

Equations given in "FCC OET Bulletin 65, Edition 97-01" were then used with the above information to perform the calculations.

3. Conclusion:

Based on the above worst case assumptions, the power density calculation from the T-Mobile antenna installation on a Self Support Tower at 260 Beckley Road, Berlin, CT, is 0.04042 mW/cm². This value represents 4.042% of the Maximum Permissible Exposure (MPE) standard of 1 milliwatt per square centimeter (mW/cm²) set forth in the FCC/ANSI/IEEE C95.1-1991. Furthermore, the proposed antenna location for T-Mobile will not interfere with existing public safety communications, AM or FM radio broadcasts, TV, Police Communications, HAM Radio communications or any other signals in the area. The combined Power Density from other carriers is 32.31%. The combined Power Density for the site is 36.352% of the M.P.E. standard.

Connecticut Market**Worst Case Power Density**

Site: CT11182A
Site Address: 260 Beckley Road
Town: Berlin
Tower Height: 150 ft.
Tower Style: Self Support Tower

GSM Data

Base Station TX output 20 W
Number of channels 8
Antenna Model APX16DWV-16DWV
Cable Size 1 5/8 in.
Cable Length 175 ft.
Antenna Height 162.0 ft.
Ground Reflection 1.6
Frequency 1945.0 MHz
Jumper & Connector loss 4.50 dB
Antenna Gain 18.0 dBi
Cable Loss per foot 0.0116 dB
Total Cable Loss 2.0300 dB
Total Attenuation 6.5300 dB
Total EIRP per Channel (In Watts) 54.48 dBm
Total EIRP per Sector (In Watts) 63.51 dBm
nsg 2244.50 W
nsg 11.4700

UMTS Data

Base Station TX output 40 W
Number of channels 2
Antenna Model APX16DWV-16DWV
Cable Size 1 5/8 in.
Cable Length 175 ft.
Antenna Height 162.0 ft.
Ground Reflection 1.6
Frequency 2.1 GHz
Jumper & Connector loss 1.50 dB
Antenna Gain 18.0 dBi
Cable Loss per foot 0.0116 dB
Total Cable Loss 2.0300 dB
Total Attenuation 3.5300 dB
Total EIRP per Channel (In Watts) 60.49 dBm
Total EIRP per Sector (In Watts) 63.50 dBm
nsg 2239.19 W
nsg 14.4700

Power Density (S) = 0.020234 mW/cm²

Power Density (S) = 0.020187 mW/cm²

T-Mobile Worst Case % MPE = 4.0421%

Equation Used :

$$S = \frac{(1000(\text{grf})^2 (\text{Power})^{(n+10)})}{4\pi (R)^2}$$

Office of Engineering and Technology (OET) Bulletin 65, Edition 97-01, August 1997

Co-Location Total

Carrier	% of Standard
Verizon	9.9100 %
Cingular	9.7600 %
Sprint	3.0900 %
AT&T Wireless	
Nextel	9.3900 %
MetroPCS	
Other Antenna Systems	0.1600 %
Total Excluding T-Mobile	32.3100 %
T-Mobile	4.0421
Total % MPE for Site	36.3521%