



**AMERICAN TOWER®**  
CORPORATION

---

## Structural Analysis Report

**Structure** : 149 ft Monopole  
**ATC Site Name** : Amagansett FD NY, NY  
**ATC Asset Number** : 274398  
**Engineering Number** : 13248277\_C3\_03  
**Proposed Carrier** : AT&T Mobility  
**Carrier Site Name** : East Amagansett (NYL01020)  
**Carrier Site Number** : 10105074  
**Site Location** : 439 Main St  
Amagansett, NY 11930-2330  
40.979900,-72.135500  
**County** : Suffolk  
**Date** : July 13, 2020  
**Max Usage** : 76%  
**Result** : Pass

Prepared By:  
Peter Giordano  
Structural Engineer II

*Peter J. Giordano*

Reviewed By:





**Table of Contents**

Introduction .....	1
Supporting Documents .....	1
Analysis .....	1
Conclusion.....	1
Existing and Reserved Equipment.....	2
Equipment to be Removed.....	3
Proposed Equipment .....	3
Structure Usages .....	4
Foundations .....	4
Deflection and Sway .....	4
Standard Conditions .....	5
Calculations .....	Attached



## Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 149 ft monopole to reflect the change in loading by AT&T Mobility.

## Supporting Documents

<b>Tower Drawings</b>	EI Drawing #GS55394, dated August 4, 2004
<b>Foundation Drawing</b>	EI Drawing #1282DD-150.0, dated August 3, 2004
<b>Geotechnical Report</b>	Soil Mechanics Drilling Job #04-407, dated July 7, 2004
<b>Modifications</b>	ATC Project #63400633, dated October 27, 2015

## Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

<b>Basic Wind Speed:</b>	131 mph (3-Second Gust)
<b>Basic Wind Speed w/ Ice:</b>	50 mph (3-Second Gust) w/ 1" radial ice concurrent
<b>Code:</b>	ANSI/TIA-222-H / 2018 IBC / 2020 New York Building Code
<b>Exposure Category:</b>	C
<b>Risk Category:</b>	II
<b>Topographic Factor Procedure:</b>	Method 1
<b>Topographic Category:</b>	1
<b>Crest Height (H):</b>	0 ft
<b>Spectral Response:</b>	$S_s = 0.16$ , $S_1 = 0.05$
<b>Site Class:</b>	D - Stiff Soil

## Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at [Engineering@americantower.com](mailto:Engineering@americantower.com). Please include the American Tower site name, site number, and engineering number in the subject line for any questions.



**Existing and Reserved Equipment**

Elev. <sup>1</sup> (ft)	Qty	Antenna	Mount Type	Lines	Carrier
157.0	1	Sinclair SC479-HF1LDF	Platform with Handrails	(1) 7/8" Coax	TOWN OF EAST HAMPTON
154.0	2	Generic 8' Omni		(3) 1 1/4" Coax	OTHER
150.0	1	Generic 20' Dipole		(1) 1/2" Coax	TOWN OF EAST HAMPTON
	1	Bird DS428E83I01T		(6) 1 1/4" Coax (3) 1 5/8" Hybriflex	VERIZON WIRELESS
	3	Nokia B5 RRH4x40-850			
	3	Commscope CBC78T-DS-43			
	4	RFS FDA3P5002-1C			
	6	RFS FDL85002/1C-3L			
	6	RFS FD9R6004/1C-3L			
	3	Alcatel-Lucent B13 RRH4x30-4R 700U			
	3	CSS X7CAP-480-VRO			
	9	Commscope NHH-65A-R2B			
	1	Raycap RRFDC-3315-PF-48 (32lbs)			
	2	Raycap RxxDC-3315-PF-48			
	1	Nokia AHBCC AirScale Dual RRH 4T4R B5/13 320W			
4	Nokia AHFIC AirScale Dual RRH 4T4R B2/66a 320W				
143.0	3	RFS APXVSP18-C-A20	Low Profile Platform	(3) 1 1/4" Hybriflex Cable	SPRINT NEXTEL
142.0	2	Raycap DC6-48-60-18-8F ("Squid")		(2) 0.39" (10mm) Fiber Trunk	AT&T MOBILITY
	3	Alcatel-Lucent RRH4X25-WCS		(3) 0.78" (19.7mm) 8 AWG 6 (6) 1 1/4" Coax	
130.0	3	Alcatel-Lucent 4X40W RRH	Platform with Handrails	(1) 7/8" Coax	SPRINT NEXTEL
	3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
	3	RFS APXV9TM14-ALU-I20*			
117.0	1	Sinclair SC479-HF1LDF	Flush	(1) 7/8" Coax	TOWN OF EAST HAMPTON
115.0	1	Generic 8' Omni	Flush	(3) 1 1/4" Coax	OTHER
112.0	1	Generic 56" Dipole		(1) 1/4" Coax	
110.0	3	Ericsson AIR 21, 1.3 M, B2A B4P	Platform with Handrails	(13) 1 5/8" Coax (1) 1 5/8" (1.63"-41.3mm) Fiber	T-MOBILE
	3	Ericsson AIR 21, 1.3M, B4A B2P			
	3	Ericsson KRY 112 144/1			
104.0	1	Generic 4' Dish w/ Radome	Flush	(1) EW90	OTHER
	1	RFS PAD6-W57BC w/ Radome	Flush	(1) EW63	TOWN OF EAST HAMPTON
83.0	1	Tycon ENC-DC	Stand-Off	(1) 0.24" (6mm) Cat 5	SENET, INC.
	1	L-com HG908U-PRO			



**Equipment to be Removed**

Elev. <sup>1</sup> (ft)	Qty	Antenna	Mount Type	Lines	Carrier
142.0	6	Andrew ETB19G8-12UB	-	(6) 1 1/4" Coax	AT&T MOBILITY
	3	Alcatel-Lucent B25 RRH4x30			
	2	Andrew SBNHH-1D65C			
	3	Andrew DBXLH-8585A-R2M			
	4	Andrew SBNHH-1D65A			
	3	Alcatel-Lucent RRH2X40-07-L-AT			

**Proposed Equipment**

Elev. <sup>1</sup> (ft)	Qty	Antenna	Mount Type	Lines	Carrier
142.0	3	Nokia AirScale RRH 4T4R B5 160W AHCA	Low Profile Platform	(1) 0.40" (10.3mm) Fiber (1) 0.82" (20.8mm) 8 AWG 6 (2) 3" conduit	AT&T MOBILITY
	3	Nokia AHFIB Dual Band 4T4R B25/B66 RRH			
	3	Nokia AHLBBA			
	1	Raycap DC9-48-60-24-8C-EV			
	9	Commscope NNHH-65A-R4-V2			

<sup>1</sup> Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed lines inside the pole shaft.

### Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	76%	Pass
Shaft	71%	Pass
Base Plate	36%	Pass

### Foundations

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	4,333.5	70%
Axial (Kips)	53.5	7%
Shear (Kips)	39.8	45%

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.

### Deflection and Sway\*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
142.0	Nokia AirScale RRH 4T4R B5 160W AHCA	AT&T MOBILITY	1.407	1.099
	Nokia AHFIB Dual Band 4T4R B25/B66 RRH			
	Nokia AHLBBA			
	Raycap DC9-48-60-24-8C-EV			
	Commscope NNHH-65A-R4-V2			
104.0	Generic 4' Dish w/ Radome	OTHER	0.747	0.839
	RFS PAD6-W57BC w/ Radome	TOWN OF EAST HAMPTON		

\*Deflection and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-H



## Standard Conditions

All engineering services performed by ATC Tower Services, Inc. are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of ATC Tower Services, Inc.

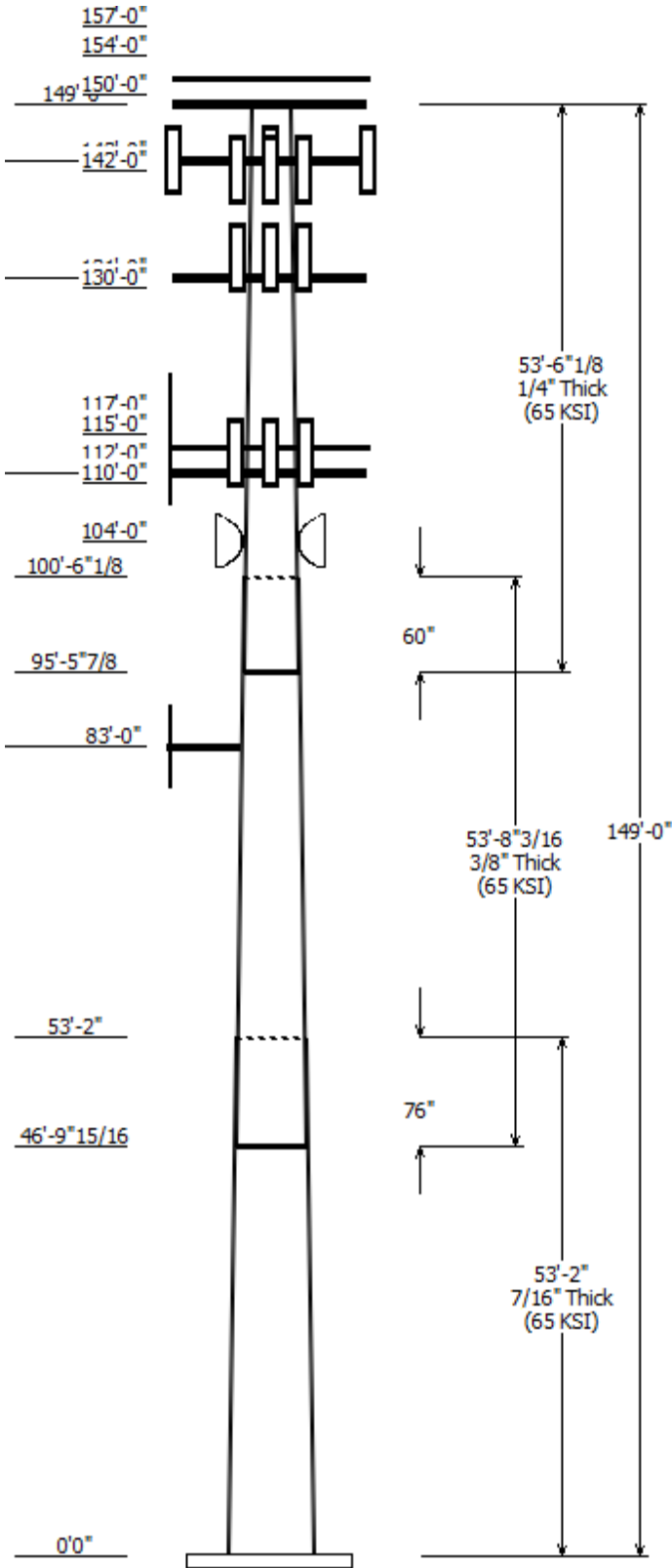
It is the responsibility of the client to ensure that the information provided to ATC Tower Services, Inc. and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and ATC Tower Services, Inc., all services will be performed in accordance with the current revision of ANSI/TIA-222.

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

© 2007 - 2020 by ATC IP LLC. All rights reserved.

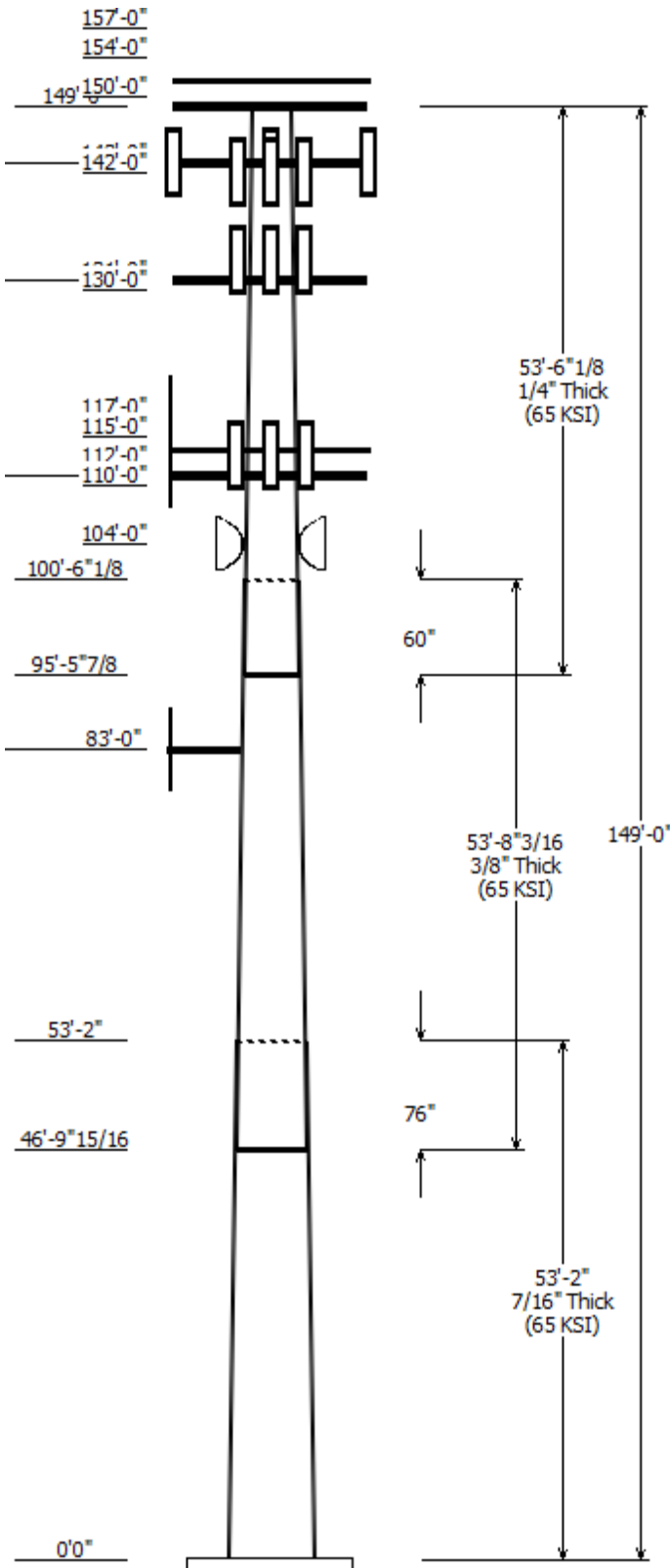


Job Information	
Client : AT&T MOBILITY	Code: ANSI/TIA-222-H
Pole : 274398	
Location : AMAGANSETT FD NY, NY	
Description : 149 ft EEI Monopole	Risk Category : II
Shape : 18 Sides	Exposure : C
Height : 149.00 (ft)	Topo Method : Method 1
Base Elev (ft): 0.00	Topographic Category : 1
Taper: 0.22651@in/ft)	

Sections Properties						
Shaft Section	Length (ft)	Diameter (in)		Thick Joint (in)	Overlap Length (in)	Steel Grade
		Accross Top	Flats Bottom			
1	53.169	44.45	56.50	0.438	0.000	18 Sides 65
2	53.682	34.48	46.64	0.375	76.063	18 Sides 65
3	53.513	24.00	36.12	0.250	60.313	18 Sides 65

Discrete Appurtenance			
Attach Elev (ft)	Force Elev (ft)	Qty	Description
157.000	157.000	1	Sinclair SC479-HF1LDF
154.000	154.000	2	Generic 8' Omni
150.000	151.000	3	CSS X7CAP-480-VR0
150.000	151.000	9	Commscope NHH-65A-R2B
150.000	151.000	1	Raycap RRFDC-3315-PF-48
150.000	151.000	2	Raycap RxxDC-3315-PF-48
150.000	150.000	1	Nokia AHBCC AirScale Dual
150.000	150.000	4	Nokia AHFIC AirScale Dual RRH
150.000	151.000	3	Alcatel-Lucent B13 RRH4x30-
150.000	150.000	3	Nokia B5 RRH4x40-850
150.000	150.000	4	RFS FDA3P5002-1C
150.000	150.000	3	Commscope CBC78T-DS-43
150.000	150.000	6	RFS FDL85002/1C-3L
150.000	151.000	6	RFS FD9R6004/1C-3L
150.000	150.000	1	Bird DS428E83101T
150.000	150.000	1	Generic 20' Dipole
149.000	149.000	1	Round Platform w/ Handrails
143.000	143.000	1	Round Low Profile Platform
143.000	143.000	3	RFS APXVSP18-C-A20
142.000	142.000	9	Commscope NNHH-65A-R4-V2
142.000	142.000	1	Raycap DC9-48-60-24-8C-EV
142.000	143.000	3	Alcatel-Lucent RRH4X25-WCS
142.000	142.000	3	Nokia AHLBBA
142.000	142.000	3	Nokia AHFIB Dual Band 4T4R
142.000	143.000	2	Raycap DC6-48-60-18-8F
142.000	142.000	3	Nokia AirScale RRH 4T4R B5 160
131.000	131.000	1	Round Platform w/ Handrails
130.000	131.000	3	RFS APXV9TM14-ALU-I20*
130.000	131.000	3	Alcatel-Lucent TD-RRH8x20-25
130.000	131.000	3	Alcatel-Lucent 4X40W RRH
117.000	117.000	1	Sinclair SC479-HF1LDF
115.000	115.000	1	Generic 8' Omni
112.000	112.000	1	Generic 56" Dipole
111.000	111.000	1	Round Platform w/ Handrails
110.000	111.000	3	Ericsson AIR 21, 1.3M, B4A B2P
110.000	111.000	3	Ericsson AIR 21, 1.3 M, B2A B4
110.000	111.000	3	Ericsson KRY 112 144/1
104.000	104.000	1	RFS PAD6-W57BC w/ Radome
104.000	104.000	1	Generic 4' Dish w/ Radome
83.000	83.000	1	Stand-Off
83.000	83.000	1	L-com HG908U-PRO
83.000	83.000	1	Tycon ENC-DC





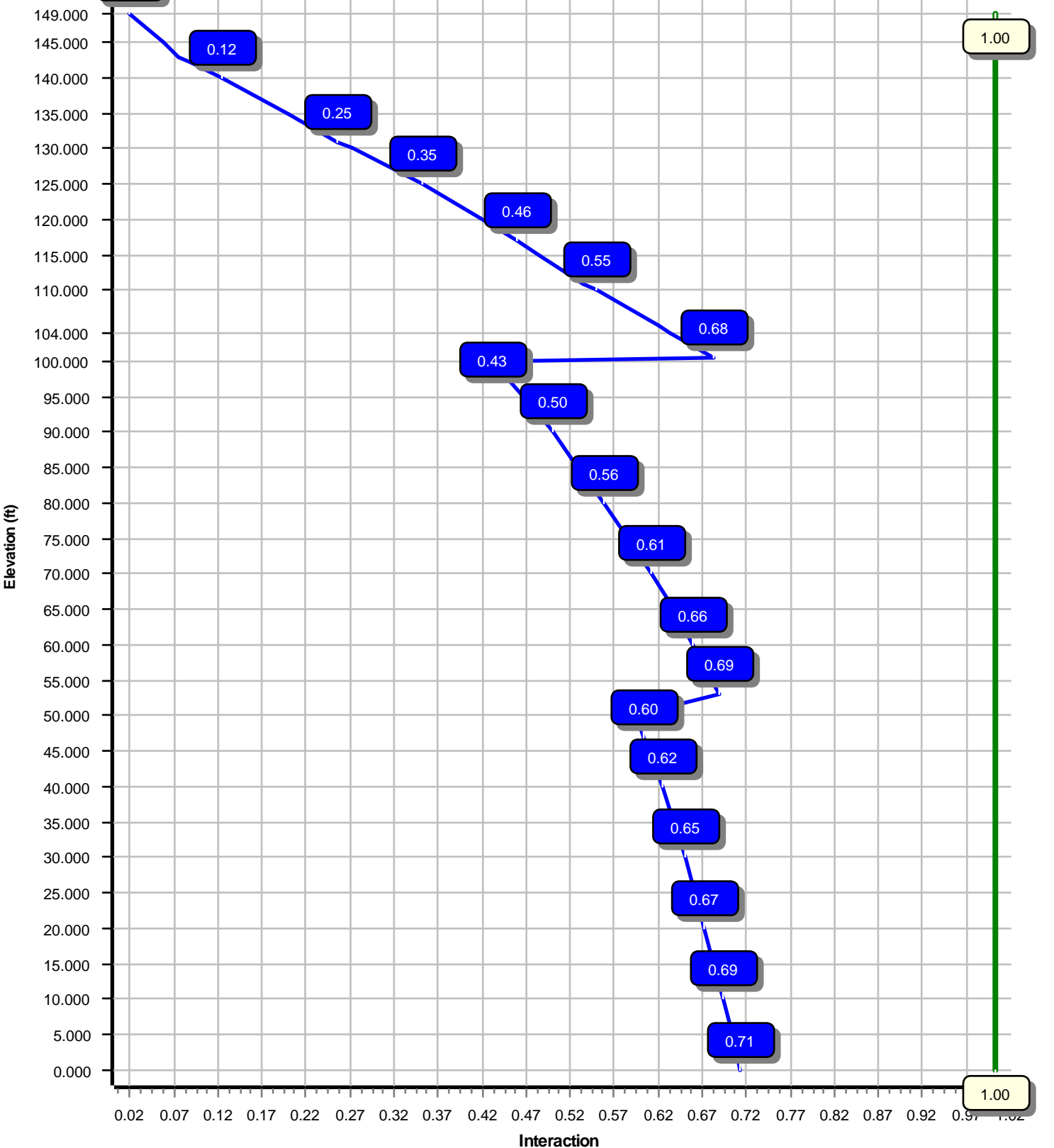
Linear Appurtenance			
Elev (ft)		Description	Exposed To Wind
From	To		
0.000	83.000	0.24" (6mm) Cat 5	No
0.000	104.0	EW63	No
0.000	104.0	EW90	No
0.000	110.0	1 5/8" (1.63"-	No
0.000	110.0	1 5/8" Coax	No
0.000	111.0	1 5/8" Coax	No
0.000	112.0	1/4" Coax	No
0.000	115.0	1 1/4" Coax	No
0.000	117.0	7/8" Coax	No
0.000	131.0	7/8" Coax	No
0.000	142.0	0.39" (10mm)	No
0.000	142.0	0.40" (10.3mm)	No
0.000	142.0	0.78" (19.7mm) 8	No
0.000	142.0	0.82" (20.8mm) 8	No
0.000	142.0	1 1/4" Coax	No
0.000	142.0	3" conduit	No
0.000	143.0	1 1/4" Hybriflex	No
0.000	150.0	1 1/4" Coax	No
0.000	150.0	1 5/8" Hybriflex	No
0.000	150.0	1/2" Coax	No
0.000	150.0	1/2" Coax	No
0.000	154.0	1 1/4" Coax	No
0.000	157.0	7/8" Coax	No

Load Cases	
1.2D + 1.0W	131 mph with No Ice
0.9D + 1.0W	131 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	Serviceability 60 mph

Reactions			
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.0W	4333.53	39.84	53.45
0.9D + 1.0W	4288.06	39.82	40.07
1.2D + 1.0Di + 1.0Wi	968.55	9.00	69.04
1.2D + 1.0Ev + 1.0Eh	166.48	1.34	53.13
0.9D - 1.0Ev + 1.0Eh	164.35	1.34	37.25
1.0D + 1.0W	808.76	7.47	44.60

Dish Deflections			
Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	104.00	8.945	0.838
1.0D + 1.0W	104.00	8.945	0.838

Load Case : 1.2D + 1.0W  
Max Ratio 70.99% at 0.0 ft



Site Number: 274398

Code: ANSI/TIA-222-H

© 2007 - 2020 by ATC IP LLC. All rights reserved.

Site Name: AMAGANSETT FD NY, NY

Engineering Number: 13248277\_C3\_03

7/13/2020 4:49:14 PM

Customer: AT&T MOBILITY

Analysis Parameters

Location :	Suffolk County, NY	Height (ft) :	149
Code :	ANSI/TIA-222-H	Base Diameter (in) :	56.50
Shape :	18 Sides	Top Diameter (in) :	24.00
Pole Type :	Taper	Taper (in/ft) :	0.227
Pole Manufacturer :	EEL	Rotation (deg) :	0.00
Kd (non-service) :	0.95	Ke :	1.00

Ice & Wind Parameters

Exposure Category:	C	Design Wind Speed Without Ice:	131 mph
Risk Category:	II	Design Wind Speed With Ice:	50 mph
Topographic Factor Procedure:	Method 1	Operational Wind Speed:	60 mph
Topographic Category:	1	Design Ice Thickness:	1.00 in
Crest Height:	0 ft	HMSL:	52.00 ft

Seismic Parameters

Analysis Method:	Equivalent Lateral Force Method		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	2.27		
T <sub>L</sub> (sec):	6	p:	1
S <sub>s</sub> :	0.162	S <sub>1</sub> :	0.048
F <sub>a</sub> :	1.600	F <sub>v</sub> :	2.400
S <sub>ds</sub> :	0.173	S <sub>d1</sub> :	0.077
		C <sub>s</sub> :	0.030
		C <sub>s</sub> Max:	0.030
		C <sub>s</sub> Min:	0.030

Load Cases

1.2D + 1.0W	131 mph with No Ice
0.9D + 1.0W	131 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	Serviceability 60 mph

Site Number: 274398

Code: ANSI/TIA-222-H

© 2007 - 2020 by ATC IP LLC. All rights reserved.

Site Name: AMAGANSETT FD NY, NY

Engineering Number: 13248277\_C3\_03

7/13/2020 4:49:14 PM

Customer: AT&T MOBILITY

**Shaft Section Properties**

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom						Top						
							Dia (in)	Elev (ft)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Taper (in/ft)
1-18	53.169	0.4375	65		0.00	12,572	56.50	0.00	77.85	30912.9	21.01	129.14	44.45	53.17	61.12	14964.0	16.15	101.62	0.226510
2-18	53.682	0.3750	65	Slip	76.06	8,737	46.64	46.83	55.07	14893.6	20.17	124.38	34.48	100.51	40.60	5966.7	14.45	91.95	0.226510
3-18	53.513	0.2500	65	Slip	60.31	4,307	36.12	95.49	28.46	4627.3	23.71	144.48	24.00	149.00	18.84	1343.0	15.16	96.00	0.226510
Shaft Weight						25,616													

**Discrete Appurtenance Properties**

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	Weight (lb)	No Ice EPAa (sf)	Orientation Factor	Weight (lb)	Ice EPAa (sf)	Orientation Factor
157.00	Sinclair SC479-HF1LDF	1	1.00	0.000	34.00	5.030	1.00	116.76	8.455	1.00
154.00	Generic 8' Omni	2	1.00	0.000	25.00	2.400	1.00	65.66	4.231	1.00
150.00	RFS FD9R6004/1C-3L	6	0.75	1.000	3.10	0.314	0.50	8.44	0.571	0.50
150.00	RFS FDL85002/1C-3L	6	0.75	0.000	7.00	0.337	0.50	15.01	0.613	0.50
150.00	Commscope CBC78T-DS-43	3	0.75	0.000	10.60	0.368	0.50	20.15	0.645	0.50
150.00	RFS FDA3P5002-1C	4	0.75	0.000	6.40	0.450	0.50	15.57	0.756	0.50
150.00	Bird DS428E83I01T	1	1.00	0.000	8.90	0.465	1.00	20.54	0.781	1.00
150.00	Nokia B5 RRH4x40-850	3	0.75	0.000	48.50	1.322	0.50	76.00	1.829	0.50
150.00	Alcatel-Lucent B13 RRH4x30-4R	3	0.75	1.000	57.20	2.170	0.67	103.00	2.841	0.67
150.00	Nokia AHFIC AirScale Dual RRH	4	0.75	0.000	79.40	2.218	0.67	121.03	2.896	0.67
150.00	Nokia AHBCC AirScale Dual RRH	1	0.75	0.000	83.80	2.218	1.00	126.03	2.897	1.00
150.00	Raycap RxxDC-3315-PF-48	2	0.75	1.000	21.40	2.512	0.67	74.51	3.206	0.67
150.00	Raycap RRFDC-3315-PF-48	1	0.75	1.000	32.00	2.798	1.00	92.33	3.599	1.00
150.00	Commscope NHH-65A-R2B	9	0.75	1.000	35.10	5.957	0.69	126.51	7.393	0.69
150.00	CSS X7CAP-480-VR0	3	0.75	1.000	35.20	6.362	0.67	135.96	7.686	0.67
150.00	Generic 20' Dipole	1	1.00	0.000	60.00	7.520	1.00	207.53	15.427	1.00
149.00	Round Platform w/ Handrails	1	1.00	0.000	2,000.00	27.200	1.00	2,863.88	43.497	1.00
143.00	RFS APXVSP18-C-A20	3	0.80	0.000	57.00	8.024	0.69	171.64	9.878	0.69
143.00	Round Low Profile Platform	1	1.00	0.000	1,500.00	21.700	1.00	1,930.60	34.460	1.00
142.00	Nokia AirScale RRH 4T4R B5	3	0.80	0.000	35.30	1.286	0.50	61.41	1.786	0.50
142.00	Raycap DC6-48-60-18-8F	2	0.80	1.000	31.80	1.470	1.00	72.76	1.934	1.00
142.00	Nokia AHFIB Dual Band 4T4R	3	0.80	0.000	66.10	2.793	0.50	113.82	3.568	0.50
142.00	Nokia AHLBBA	3	0.80	0.000	94.80	2.820	0.50	146.06	3.574	0.50
142.00	Alcatel-Lucent RRH4X25-WCS	3	0.80	1.000	70.00	3.165	0.50	130.67	4.027	0.50
142.00	Raycap DC9-48-60-24-8C-EV	1	0.80	0.000	16.00	4.788	1.00	101.71	5.765	1.00
142.00	Commscope NNHH-65A-R4-V2	9	0.80	0.000	68.30	9.819	0.63	207.17	11.381	0.63
131.00	Round Platform w/ Handrails	1	1.00	0.000	2,000.00	27.200	1.00	2,853.66	43.304	1.00
130.00	Alcatel-Lucent 4X40W RRH	3	0.75	1.000	59.50	2.322	0.50	112.44	3.032	0.50
130.00	Alcatel-Lucent TD-RRH8x20-25	3	0.75	1.000	70.00	4.046	0.50	132.12	4.919	0.50
130.00	RFS APXV9TM14-ALU-I20*	3	0.75	1.000	55.10	6.342	0.66	145.60	7.774	0.66
117.00	Sinclair SC479-HF1LDF	1	1.00	0.000	34.00	5.030	1.00	114.83	8.375	1.00
115.00	Generic 8' Omni	1	1.00	0.000	25.00	2.400	1.00	64.62	4.185	1.00
112.00	Generic 56" Dipole	1	1.00	0.000	35.00	3.560	1.00	114.46	10.754	1.00
111.00	Round Platform w/ Handrails	1	1.00	0.000	2,000.00	27.200	1.00	2,839.57	43.038	1.00
110.00	Ericsson KRY 112 144/1	3	0.75	1.000	11.00	0.351	0.50	17.95	0.613	0.50
110.00	Ericsson AIR 21, 1.3 M, B2A B4P	3	0.75	1.000	83.00	6.049	0.67	177.30	7.446	0.67
110.00	Ericsson AIR 21, 1.3M, B4A B2P	3	0.75	1.000	81.50	6.092	0.67	175.45	7.491	0.67
104.00	Generic 4' Dish w/ Radome	1	1.00	0.000	120.00	10.849	1.00	325.26	11.874	1.00
104.00	RFS PAD6-W57BC w/ Radome	1	1.00	0.000	181.00	29.386	1.00	728.14	31.044	1.00
83.00	Tycon ENC-DC	1	1.00	0.000	4.00	0.779	1.00	16.45	1.153	1.00
83.00	L-com HG908U-PRO	1	1.00	0.000	3.80	0.788	1.00	18.19	1.984	1.00
83.00	Stand-Off	1	1.00	0.000	100.00	3.000	1.00	130.65	3.985	1.00
Totals	Num Loadings:42									
		107			12,232.70			21,940.01		

Linear Appurtenance Properties Load Case Azimuth (deg) :

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Dia (in)	Coax Wt (lb/ft)	Max Coax / Flat Row	Dist Between Rows (in)	Dist Between Cols (in)	Azimuth (deg)	Dist From Face (in)	Exposed To Wind Carrier
0.00	157.00	1	7/8" Coax	1.09	0.33	N 0	0.00	0.00	0	0.00	N TOWN OF EAST
0.00	154.00	3	1 1/4" Coax	1.55	0.63	N 0	0.00	0.00	0	0.00	N OTHER
0.00	150.00	6	1 1/4" Coax	1.55	0.63	N 0	0.00	0.00	0	0.00	N VERIZON WIRELESS
0.00	150.00	3	1 5/8" Hybriflex	1.98	1.30	N 0	0.00	0.00	0	0.00	N VERIZON WIRELESS
0.00	150.00	1	1/2" Coax	0.63	0.15	N 0	0.00	0.00	0	0.00	N OTHER
0.00	150.00	1	1/2" Coax	0.63	0.15	N 0	0.00	0.00	0	0.00	N TOWN OF EAST
0.00	143.00	3	1 1/4" Hybriflex Cable	1.54	1.00	N 0	0.00	0.00	0	0.00	N SPRINT NEXTEL
0.00	142.00	2	0.39" (10mm) Fiber	0.39	0.06	N 0	0.00	0.00	0	0.00	N AT&T MOBILITY
0.00	142.00	1	0.40" (10.3mm) Fiber	0.40	0.09	N 0	0.00	0.00	0	0.00	N AT&T MOBILITY
0.00	142.00	3	0.78" (19.7mm) 8 AWG	0.78	0.59	N 0	0.00	0.00	0	0.00	N AT&T MOBILITY
0.00	142.00	1	0.82" (20.8mm) 8 AWG	0.82	0.62	N 0	0.00	0.00	0	0.00	N AT&T MOBILITY
0.00	142.00	6	1 1/4" Coax	1.55	0.63	N 0	0.00	0.00	0	0.00	N AT&T MOBILITY
0.00	142.00	2	3" conduit	3.50	7.58	N 0	0.00	0.00	0	0.00	N AT&T MOBILITY
0.00	131.00	1	7/8" Coax	1.09	0.33	N 0	0.00	0.00	0	0.00	N SPRINT NEXTEL
0.00	117.00	1	7/8" Coax	1.09	0.33	N 0	0.00	0.00	0	0.00	N TOWN OF EAST
0.00	115.00	3	1 1/4" Coax	1.55	0.63	N 0	0.00	0.00	0	0.00	N OTHER
0.00	112.00	1	1/4" Coax	0.34	0.06	N 0	0.00	0.00	0	0.00	N OTHER
0.00	111.00	1	1 5/8" Coax	1.98	0.82	N 0	0.00	0.00	0	0.00	N T-MOBILE
0.00	110.00	1	1 5/8" (1.63"-41.3mm)	1.63	1.61	N 0	0.00	0.00	0	0.00	N T-MOBILE
0.00	110.00	12	1 5/8" Coax	1.98	0.82	N 0	0.00	0.00	0	0.00	N T-MOBILE
0.00	104.00	1	EW63	2.01	0.51	N 0	0.00	0.00	0	0.00	N TOWN OF EAST
0.00	104.00	1	EW90	1.32	0.32	N 0	0.00	0.00	0	0.00	N OTHER
0.00	83.00	1	0.24" (6mm) Cat 5	0.24	0.04	N 0	0.00	0.00	0	0.00	N SENET, INC.

Segment Properties (Max Len : 5. ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	F'y (ksi)	S (in <sup>3</sup> )	Z (in <sup>3</sup> )	Weight (lb)
0.00		0.4375	56.500	77.847	30,912.9	21.01	129.14	76.7	1077.	0.0	0.0
5.00		0.4375	55.367	76.274	29,077.0	20.55	126.55	77.2	1034.	0.0	1,311.1
10.00		0.4375	54.235	74.702	27,315.3	20.10	123.97	77.8	992.0	0.0	1,284.3
15.00		0.4375	53.102	73.129	25,626.2	19.64	121.38	78.3	950.5	0.0	1,257.6
20.00		0.4375	51.970	71.556	24,008.3	19.18	118.79	78.8	909.9	0.0	1,230.8
25.00		0.4375	50.837	69.984	22,459.9	18.73	116.20	79.4	870.2	0.0	1,204.1
30.00		0.4375	49.705	68.411	20,979.5	18.27	113.61	79.9	831.3	0.0	1,177.3
35.00		0.4375	48.572	66.839	19,565.7	17.81	111.02	80.4	793.4	0.0	1,150.6
40.00		0.4375	47.440	65.266	18,216.9	17.36	108.43	81.0	756.3	0.0	1,123.8
45.00		0.4375	46.307	63.693	16,931.5	16.90	105.84	81.5	720.2	0.0	1,097.0
46.83	Bot - Section 2	0.4375	45.892	63.117	16,476.4	16.73	104.90	81.7	707.1	0.0	395.0
50.00		0.4375	45.174	62.121	15,708.1	16.44	103.26	82.1	684.9	0.0	1,264.6
53.17	Top - Section 1	0.3750	45.207	53.359	13,549.7	19.49	120.55	78.5	590.3	0.0	1,244.6
55.00		0.3750	44.792	52.865	13,177.2	19.30	119.45	78.7	579.4	0.0	330.9
60.00		0.3750	43.659	51.517	12,194.7	18.77	116.43	79.3	550.1	0.0	888.0
65.00		0.3750	42.527	50.169	11,262.3	18.23	113.40	80.0	521.6	0.0	865.0
70.00		0.3750	41.394	48.821	10,378.6	17.70	110.38	80.6	493.8	0.0	842.1
75.00		0.3750	40.262	47.473	9,542.5	17.17	107.36	81.2	466.8	0.0	819.2
80.00		0.3750	39.129	46.126	8,752.5	16.64	104.34	81.8	440.6	0.0	796.2
83.00		0.3750	38.450	45.317	8,300.1	16.32	102.53	82.2	425.2	0.0	466.7
85.00		0.3750	37.997	44.778	8,007.4	16.10	101.32	82.5	415.1	0.0	306.6
90.00		0.3750	36.864	43.430	7,305.8	15.57	98.30	82.6	390.3	0.0	750.4
95.00		0.3750	35.732	42.082	6,646.4	15.04	95.28	82.6	366.4	0.0	727.4
95.49	Bot - Section 3	0.3750	35.621	41.950	6,584.4	14.99	94.99	82.6	364.1	0.0	69.6
100.0		0.3750	34.599	40.734	6,027.9	14.51	92.26	82.6	343.2	0.0	1,065.7
100.5	Top - Section 2	0.2500	34.983	27.559	4,200.5	22.91	139.93	74.5	236.5	0.0	119.2
104.0		0.2500	34.193	26.933	3,920.4	22.35	136.77	75.1	225.8	0.0	323.3
105.0		0.2500	33.966	26.753	3,842.5	22.19	135.87	75.3	222.8	0.0	91.3
110.0		0.2500	32.834	25.854	3,468.1	21.39	131.34	76.2	208.0	0.0	447.5
111.0		0.2500	32.607	25.675	3,396.3	21.23	130.43	76.4	205.1	0.0	87.7
112.0		0.2500	32.381	25.495	3,325.5	21.08	129.52	76.6	202.3	0.0	87.1
115.0		0.2500	31.701	24.956	3,118.9	20.60	126.81	77.2	193.8	0.0	257.5
117.0		0.2500	31.248	24.596	2,986.1	20.28	124.99	77.6	188.2	0.0	168.6
120.0		0.2500	30.569	24.057	2,794.0	19.80	122.28	78.1	180.0	0.0	248.3
125.0		0.2500	29.436	23.158	2,492.4	19.00	117.74	79.1	166.8	0.0	401.7
130.0		0.2500	28.304	22.260	2,213.4	18.20	113.21	80.0	154.0	0.0	386.4
131.0		0.2500	28.077	22.080	2,160.2	18.04	112.31	80.2	151.5	0.0	75.4
135.0		0.2500	27.171	21.361	1,956.0	17.40	108.68	80.9	141.8	0.0	295.6
140.0		0.2500	26.039	20.463	1,719.4	16.60	104.15	81.9	130.1	0.0	355.8
142.0		0.2500	25.586	20.103	1,630.3	16.28	102.34	82.2	125.5	0.0	138.0
143.0		0.2500	25.359	19.923	1,587.0	16.12	101.44	82.4	123.3	0.0	68.1
145.0		0.2500	24.906	19.564	1,502.6	15.80	99.62	82.6	118.8	0.0	134.4
149.0		0.2500	24.000	18.845	1,343.0	15.16	96.00	82.6	110.2	0.0	261.4
											25,616.1

<b>Load Case: 1.2D + 1.0W</b>	<b>131 mph with No Ice</b>	<b>24 Iterations</b>
Gust Response Factor :1.10		
Dead Load Factor :1.20		
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		336.4	0.0					0.0	0.0	336.4	0.0	0.0	0.0
5.00		666.1	1,573.3					0.0	302.9	666.1	1,876.3	0.0	0.0
10.00		652.4	1,541.2					0.0	302.9	652.4	1,844.2	0.0	0.0
15.00		648.8	1,509.1					0.0	302.9	648.8	1,812.0	0.0	0.0
20.00		662.3	1,477.0					0.0	302.9	662.3	1,779.9	0.0	0.0
25.00		679.4	1,444.9					0.0	302.9	679.4	1,747.8	0.0	0.0
30.00		690.4	1,412.8					0.0	302.9	690.4	1,715.7	0.0	0.0
35.00		697.1	1,380.7					0.0	302.9	697.1	1,683.6	0.0	0.0
40.00		700.3	1,348.6					0.0	302.9	700.3	1,651.5	0.0	0.0
45.00		478.9	1,316.5					0.0	302.9	478.9	1,619.4	0.0	0.0
46.83	Bot - Section 2	353.9	474.0					0.0	110.9	353.9	584.9	0.0	0.0
50.00		450.6	1,517.5					0.0	192.0	450.6	1,709.5	0.0	0.0
53.17	Top - Section 1	354.7	1,493.5					0.0	192.0	354.7	1,685.5	0.0	0.0
55.00		482.2	397.0					0.0	110.9	482.2	508.0	0.0	0.0
60.00		702.1	1,065.6					0.0	302.9	702.1	1,368.5	0.0	0.0
65.00		695.5	1,038.1					0.0	302.9	695.5	1,341.0	0.0	0.0
70.00		687.7	1,010.5					0.0	302.9	687.7	1,313.5	0.0	0.0
75.00		678.7	983.0					0.0	302.9	678.7	1,286.0	0.0	0.0
80.00		536.6	955.5					0.0	302.9	536.6	1,258.4	0.0	0.0
83.00	Appurtenance(s)	331.6	560.1	254.7	0.0	0.0	129.4	0.0	181.8	586.3	871.2	0.0	0.0
85.00		457.9	367.9					0.0	121.1	457.9	489.0	0.0	0.0
90.00		645.7	900.4					0.0	302.7	645.7	1,203.1	0.0	0.0
95.00		350.6	872.9					0.0	302.7	350.6	1,175.6	0.0	0.0
95.49	Bot - Section 3	317.3	83.5					0.0	29.5	317.3	113.0	0.0	0.0
100.00		318.7	1,278.9					0.0	273.2	318.7	1,552.1	0.0	0.0
100.51	Top - Section 2	249.3	143.0					0.0	31.1	249.3	174.1	0.0	0.0
104.00	Appurtenance(s)	278.7	387.9	2,352.7	0.0	0.0	361.2	0.0	211.1	2,631.4	960.2	0.0	0.0
105.00		365.3	109.6					0.0	59.5	365.3	169.2	0.0	0.0
110.00	Appurtenance(s)	363.6	537.0	1,108.4	0.0	1,108.4	631.8	0.0	297.7	1,472.0	1,466.6	0.0	0.0
111.00	Appurtenance(s)	119.4	105.2	1,612.5	0.0	0.0	2,400.0	0.0	45.8	1,731.9	2,551.0	0.0	0.0
112.00	Appurtenance(s)	236.4	104.5	211.4	0.0	0.0	42.0	0.0	44.8	447.8	191.3	0.0	0.0
115.00	Appurtenance(s)	293.2	309.0	143.3	0.0	0.0	30.0	0.0	134.2	436.5	473.3	0.0	0.0
117.00	Appurtenance(s)	288.5	202.3	301.5	0.0	0.0	40.8	0.0	85.0	590.0	328.1	0.0	0.0
120.00		452.6	298.0					0.0	126.3	452.6	424.3	0.0	0.0
125.00		552.6	482.0					0.0	210.4	552.6	692.4	0.0	0.0
130.00	Appurtenance(s)	325.5	463.6	1,017.9	0.0	1,017.9	664.6	0.0	210.4	1,343.4	1,338.6	0.0	0.0
131.00	Appurtenance(s)	263.6	90.5	1,669.7	0.0	0.0	2,400.0	0.0	42.1	1,933.3	2,532.6	0.0	0.0
135.00		465.0	354.8					0.0	166.8	465.0	521.5	0.0	0.0
140.00		354.2	427.0					0.0	208.4	354.2	635.4	0.0	0.0
142.00	Appurtenance(s)	148.6	165.6	3,921.5	0.0	384.6	1,791.5	0.0	83.4	4,070.1	2,040.5	0.0	0.0
143.00	Appurtenance(s)	146.4	81.7	2,187.8	0.0	0.0	2,005.2	0.0	15.8	2,334.2	2,102.8	0.0	0.0
145.00		287.2	161.2					0.0	24.5	287.2	185.7	0.0	0.0
149.00	Appurtenance(s)	190.0	313.7	1,715.6	0.0	0.0	2,400.0	0.0	49.0	1,905.6	2,762.6	0.0	0.0
<b>Totals:</b>										<b>35,452.8</b>	<b>51,739.9</b>	<b>0.00</b>	<b>0.00</b>

**Load Case: 1.2D + 1.0W**

131 mph with No Ice

24 Iterations

Gust Response Factor :1.10

Dead Load Factor :1.20

Wind Load Factor :1.00

**Calculated Forces**

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-53.45	-39.84	0.00	-4,333.53	0.00	4,333.53	5,373.17	1,366.21	6,918.10	6,198.41	0.00	0.00	0.710
5.00	-51.44	-39.35	0.00	-4,134.32	0.00	4,134.32	5,301.48	1,338.61	6,641.45	5,991.21	0.10	-0.19	0.701
10.00	-49.47	-38.86	0.00	-3,937.58	0.00	3,937.58	5,228.27	1,311.02	6,370.43	5,785.69	0.42	-0.39	0.691
15.00	-47.53	-38.36	0.00	-3,743.29	0.00	3,743.29	5,153.54	1,283.42	6,105.07	5,581.96	0.93	-0.59	0.681
20.00	-45.62	-37.84	0.00	-3,551.48	0.00	3,551.48	5,077.28	1,255.82	5,845.35	5,380.13	1.66	-0.79	0.670
25.00	-43.75	-37.29	0.00	-3,362.28	0.00	3,362.28	4,999.51	1,228.22	5,591.27	5,180.31	2.61	-1.00	0.659
30.00	-41.92	-36.72	0.00	-3,175.83	0.00	3,175.83	4,920.22	1,200.62	5,342.84	4,982.60	3.76	-1.21	0.647
35.00	-40.12	-36.13	0.00	-2,992.23	0.00	2,992.23	4,839.41	1,173.02	5,100.05	4,787.12	5.14	-1.42	0.634
40.00	-38.35	-35.53	0.00	-2,811.57	0.00	2,811.57	4,757.08	1,145.42	4,862.91	4,593.96	6.74	-1.63	0.621
45.00	-36.66	-35.10	0.00	-2,633.93	0.00	2,633.93	4,673.23	1,117.82	4,631.42	4,403.24	8.55	-1.84	0.607
46.83	-36.02	-34.79	0.00	-2,569.68	0.00	2,569.68	4,642.15	1,107.71	4,548.07	4,334.04	9.28	-1.92	0.602
50.00	-34.25	-34.36	0.00	-2,459.42	0.00	2,459.42	4,587.86	1,090.22	4,405.57	4,215.06	10.60	-2.06	0.592
53.17	-32.51	-34.01	0.00	-2,350.51	0.00	2,350.51	3,768.52	936.45	3,792.03	3,474.49	12.01	-2.20	0.686
55.00	-31.93	-33.60	0.00	-2,288.25	0.00	2,288.25	3,744.58	927.79	3,722.21	3,420.21	12.87	-2.28	0.679
60.00	-30.45	-32.97	0.00	-2,120.26	0.00	2,120.26	3,678.14	904.13	3,534.84	3,273.15	15.38	-2.51	0.657
65.00	-29.01	-32.33	0.00	-1,955.44	0.00	1,955.44	3,610.18	880.47	3,352.30	3,127.89	18.14	-2.75	0.635
70.00	-27.60	-31.69	0.00	-1,793.80	0.00	1,793.80	3,540.70	856.82	3,174.60	2,984.54	21.15	-2.99	0.610
75.00	-26.23	-31.05	0.00	-1,635.35	0.00	1,635.35	3,469.70	833.16	3,001.74	2,843.22	24.40	-3.22	0.584
80.00	-24.91	-30.52	0.00	-1,480.10	0.00	1,480.10	3,397.18	809.50	2,833.72	2,704.01	27.90	-3.46	0.556
83.00	-24.01	-29.93	0.00	-1,388.53	0.00	1,388.53	3,352.94	795.31	2,735.23	2,621.55	30.12	-3.60	0.538
85.00	-23.47	-29.51	0.00	-1,328.67	0.00	1,328.67	3,323.14	785.85	2,670.54	2,567.04	31.64	-3.69	0.526
90.00	-22.20	-28.87	0.00	-1,181.12	0.00	1,181.12	3,226.60	762.19	2,512.20	2,416.69	35.62	-3.91	0.497
95.00	-21.00	-28.48	0.00	-1,036.77	0.00	1,036.77	3,126.45	738.53	2,358.70	2,268.26	39.84	-4.13	0.465
95.49	-20.85	-28.20	0.00	-1,022.90	0.00	1,022.90	3,116.70	736.23	2,344.00	2,254.06	40.26	-4.15	0.462
100.00	-19.28	-27.80	0.00	-895.66	0.00	895.66	3,026.31	714.88	2,210.03	2,124.54	44.27	-4.34	0.429
100.51	-19.09	-27.56	0.00	-881.40	0.00	881.40	1,846.72	483.67	1,517.31	1,320.63	44.73	-4.36	0.681
104.00	-18.29	-24.90	0.00	-785.29	0.00	785.29	1,820.61	472.67	1,449.10	1,272.13	47.97	-4.50	0.630
105.00	-18.08	-24.57	0.00	-760.40	0.00	760.40	1,812.98	469.52	1,429.82	1,258.29	48.91	-4.55	0.617
110.00	-16.68	-23.03	0.00	-636.45	0.00	636.45	1,773.95	453.74	1,335.39	1,189.54	53.82	-4.81	0.547
111.00	-14.27	-21.10	0.00	-613.42	0.00	613.42	1,765.96	450.59	1,316.89	1,175.88	54.83	-4.86	0.532
112.00	-14.08	-20.66	0.00	-592.32	0.00	592.32	1,757.91	447.44	1,298.52	1,162.27	55.85	-4.91	0.520
115.00	-13.60	-20.21	0.00	-530.35	0.00	530.35	1,733.39	437.97	1,244.18	1,121.63	58.98	-5.06	0.483
117.00	-13.29	-19.62	0.00	-489.92	0.00	489.92	1,716.74	431.66	1,208.60	1,094.73	61.12	-5.15	0.457
120.00	-12.85	-19.17	0.00	-431.06	0.00	431.06	1,691.31	422.20	1,156.20	1,054.68	64.40	-5.28	0.418
125.00	-12.16	-18.59	0.00	-335.22	0.00	335.22	1,647.72	406.43	1,071.45	988.80	70.03	-5.48	0.348
130.00	-10.93	-17.14	0.00	-241.24	0.00	241.24	1,602.60	390.66	989.92	924.09	75.85	-5.64	0.270
131.00	-8.58	-14.98	0.00	-224.10	0.00	224.10	1,593.39	387.51	974.00	911.30	77.03	-5.67	0.253
135.00	-8.08	-14.48	0.00	-164.18	0.00	164.18	1,555.96	374.89	911.61	860.66	81.82	-5.77	0.197
140.00	-7.47	-14.07	0.00	-91.78	0.00	91.78	1,507.81	359.12	836.54	798.61	87.91	-5.87	0.121
142.00	-5.86	-9.81	0.00	-63.26	0.00	63.26	1,488.12	352.81	807.41	774.21	90.37	-5.89	0.086
143.00	-4.00	-7.28	0.00	-53.45	0.00	53.45	1,478.18	349.65	793.04	762.10	91.61	-5.90	0.073
145.00	-3.85	-6.97	0.00	-38.90	0.00	38.90	1,453.50	343.35	764.68	735.72	94.08	-5.92	0.056
149.00	0.00	-6.54	0.00	-11.00	0.00	11.00	1,400.09	330.73	709.52	682.38	99.04	-5.94	0.017



**Load Case: 0.9D + 1.0W**

131 mph with No Ice (Reduced DL)

23 Iterations

Gust Response Factor :1.10

Dead Load Factor :0.90

Wind Load Factor :1.00

### Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		336.4	0.0					0.0	0.0	336.4	0.0	0.0	0.0
5.00		666.1	1,180.0					0.0	227.2	666.1	1,407.2	0.0	0.0
10.00		652.4	1,155.9					0.0	227.2	652.4	1,383.1	0.0	0.0
15.00		648.8	1,131.8					0.0	227.2	648.8	1,359.0	0.0	0.0
20.00		662.3	1,107.7					0.0	227.2	662.3	1,335.0	0.0	0.0
25.00		679.4	1,083.7					0.0	227.2	679.4	1,310.9	0.0	0.0
30.00		690.4	1,059.6					0.0	227.2	690.4	1,286.8	0.0	0.0
35.00		697.1	1,035.5					0.0	227.2	697.1	1,262.7	0.0	0.0
40.00		700.3	1,011.4					0.0	227.2	700.3	1,238.6	0.0	0.0
45.00		478.9	987.3					0.0	227.2	478.9	1,214.5	0.0	0.0
46.83	Bot - Section 2	353.9	355.5					0.0	83.2	353.9	438.7	0.0	0.0
50.00		450.6	1,138.1					0.0	144.0	450.6	1,282.1	0.0	0.0
53.17	Top - Section 1	354.7	1,120.1					0.0	144.0	354.7	1,264.2	0.0	0.0
55.00		482.2	297.8					0.0	83.2	482.2	381.0	0.0	0.0
60.00		702.1	799.2					0.0	227.2	702.1	1,026.4	0.0	0.0
65.00		695.5	778.5					0.0	227.2	695.5	1,005.7	0.0	0.0
70.00		687.7	757.9					0.0	227.2	687.7	985.1	0.0	0.0
75.00		678.7	737.3					0.0	227.2	678.7	964.5	0.0	0.0
80.00		536.6	716.6					0.0	227.2	536.6	943.8	0.0	0.0
83.00	Appurtenance(s)	331.6	420.1	254.7	0.0	0.0	97.0	0.0	136.3	586.3	653.4	0.0	0.0
85.00		457.9	275.9					0.0	90.8	457.9	366.7	0.0	0.0
90.00		645.7	675.3					0.0	227.0	645.7	902.4	0.0	0.0
95.00		350.6	654.7					0.0	227.0	350.6	881.7	0.0	0.0
95.49	Bot - Section 3	317.3	62.7					0.0	22.1	317.3	84.8	0.0	0.0
100.00		318.7	959.2					0.0	204.9	318.7	1,164.1	0.0	0.0
100.51	Top - Section 2	249.3	107.3					0.0	23.3	249.3	130.6	0.0	0.0
104.00	Appurtenance(s)	278.7	291.0	2,352.7	0.0	0.0	270.9	0.0	158.3	2,631.4	720.2	0.0	0.0
105.00		365.3	82.2					0.0	44.7	365.3	126.9	0.0	0.0
110.00	Appurtenance(s)	363.6	402.8	1,108.4	0.0	1,108.4	473.8	0.0	223.3	1,472.0	1,099.9	0.0	0.0
111.00	Appurtenance(s)	119.4	78.9	1,612.5	0.0	0.0	1,800.0	0.0	34.4	1,731.9	1,913.3	0.0	0.0
112.00	Appurtenance(s)	236.4	78.4	211.4	0.0	0.0	31.5	0.0	33.6	447.8	143.5	0.0	0.0
115.00	Appurtenance(s)	293.2	231.8	143.3	0.0	0.0	22.5	0.0	100.7	436.5	354.9	0.0	0.0
117.00	Appurtenance(s)	288.5	151.8	301.5	0.0	0.0	30.6	0.0	63.7	590.0	246.1	0.0	0.0
120.00		452.6	223.5					0.0	94.7	452.6	318.2	0.0	0.0
125.00		552.6	361.5					0.0	157.8	552.6	519.3	0.0	0.0
130.00	Appurtenance(s)	325.5	347.7	1,017.9	0.0	1,017.9	498.4	0.0	157.8	1,343.4	1,004.0	0.0	0.0
131.00	Appurtenance(s)	263.6	67.9	1,669.7	0.0	0.0	1,800.0	0.0	31.6	1,933.3	1,899.5	0.0	0.0
135.00		465.0	266.1					0.0	125.1	465.0	391.1	0.0	0.0
140.00		354.2	320.2					0.0	156.3	354.2	476.5	0.0	0.0
142.00	Appurtenance(s)	148.6	124.2	3,921.5	0.0	384.6	1,343.6	0.0	62.5	4,070.1	1,530.4	0.0	0.0
143.00	Appurtenance(s)	146.4	61.3	2,187.8	0.0	0.0	1,503.9	0.0	11.9	2,334.2	1,577.1	0.0	0.0
145.00		287.2	120.9					0.0	18.4	287.2	139.3	0.0	0.0
149.00	Appurtenance(s)	190.0	235.3	1,715.6	0.0	0.0	1,800.0	0.0	36.7	1,905.6	2,072.0	0.0	0.0
<b>Totals:</b>										35,452.8	38,804.9	0.00	0.00

Load Case: 0.9D + 1.0W

131 mph with No Ice (Reduced DL)

23 Iterations

Gust Response Factor :1.10

Dead Load Factor :0.90

Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-40.07	-39.82	0.00	-4,288.06	0.00	4,288.06	5,373.17	1,366.21	6,918.10	6,198.41	0.00	0.00	0.700
5.00	-38.53	-39.28	0.00	-4,088.98	0.00	4,088.98	5,301.48	1,338.61	6,641.45	5,991.21	0.10	-0.19	0.691
10.00	-37.02	-38.75	0.00	-3,892.58	0.00	3,892.58	5,228.27	1,311.02	6,370.43	5,785.69	0.41	-0.39	0.681
15.00	-35.54	-38.21	0.00	-3,698.85	0.00	3,698.85	5,153.54	1,283.42	6,105.07	5,581.96	0.92	-0.59	0.670
20.00	-34.08	-37.65	0.00	-3,507.80	0.00	3,507.80	5,077.28	1,255.82	5,845.35	5,380.13	1.64	-0.79	0.660
25.00	-32.65	-37.07	0.00	-3,319.55	0.00	3,319.55	4,999.51	1,228.22	5,591.27	5,180.31	2.58	-0.99	0.648
30.00	-31.24	-36.47	0.00	-3,134.21	0.00	3,134.21	4,920.22	1,200.62	5,342.84	4,982.60	3.72	-1.19	0.636
35.00	-29.87	-35.85	0.00	-2,951.88	0.00	2,951.88	4,839.41	1,173.02	5,100.05	4,787.12	5.08	-1.40	0.624
40.00	-28.52	-35.22	0.00	-2,772.64	0.00	2,772.64	4,757.08	1,145.42	4,862.91	4,593.96	6.66	-1.61	0.610
45.00	-27.23	-34.77	0.00	-2,596.55	0.00	2,596.55	4,673.23	1,117.82	4,631.42	4,403.24	8.45	-1.82	0.596
46.83	-26.74	-34.46	0.00	-2,532.89	0.00	2,532.89	4,642.15	1,107.71	4,548.07	4,334.04	9.17	-1.90	0.591
50.00	-25.39	-34.02	0.00	-2,423.69	0.00	2,423.69	4,587.86	1,090.22	4,405.57	4,215.06	10.47	-2.03	0.582
53.17	-24.08	-33.67	0.00	-2,315.87	0.00	2,315.87	3,768.52	936.45	3,792.03	3,474.49	11.86	-2.17	0.674
55.00	-23.63	-33.24	0.00	-2,254.23	0.00	2,254.23	3,744.58	927.79	3,722.21	3,420.21	12.71	-2.25	0.667
60.00	-22.50	-32.58	0.00	-2,088.06	0.00	2,088.06	3,678.14	904.13	3,534.84	3,273.15	15.19	-2.48	0.645
65.00	-21.39	-31.93	0.00	-1,925.15	0.00	1,925.15	3,610.18	880.47	3,352.30	3,127.89	17.91	-2.71	0.623
70.00	-20.32	-31.28	0.00	-1,765.50	0.00	1,765.50	3,540.70	856.82	3,174.60	2,984.54	20.88	-2.95	0.599
75.00	-19.27	-30.63	0.00	-1,609.11	0.00	1,609.11	3,469.70	833.16	3,001.74	2,843.22	24.09	-3.18	0.573
80.00	-18.26	-30.09	0.00	-1,455.98	0.00	1,455.98	3,397.18	809.50	2,833.72	2,704.01	27.55	-3.41	0.545
83.00	-17.58	-29.50	0.00	-1,365.70	0.00	1,365.70	3,352.94	795.31	2,735.23	2,621.55	29.73	-3.55	0.528
85.00	-17.17	-29.07	0.00	-1,306.69	0.00	1,306.69	3,323.14	785.85	2,670.54	2,567.04	31.23	-3.64	0.516
90.00	-16.20	-28.43	0.00	-1,161.34	0.00	1,161.34	3,226.60	762.19	2,512.20	2,416.69	35.16	-3.86	0.487
95.00	-15.29	-28.05	0.00	-1,019.19	0.00	1,019.19	3,126.45	738.53	2,358.70	2,268.26	39.31	-4.07	0.456
95.49	-15.18	-27.75	0.00	-1,005.53	0.00	1,005.53	3,116.70	736.23	2,344.00	2,254.06	39.73	-4.09	0.452
100.00	-13.99	-27.38	0.00	-880.28	0.00	880.28	3,026.31	714.88	2,210.03	2,124.54	43.68	-4.27	0.420
100.51	-13.84	-27.14	0.00	-866.23	0.00	866.23	1,846.72	483.67	1,517.31	1,320.63	44.14	-4.29	0.667
104.00	-13.28	-24.48	0.00	-771.61	0.00	771.61	1,820.61	472.67	1,449.10	1,272.13	47.33	-4.43	0.617
105.00	-13.12	-24.14	0.00	-747.13	0.00	747.13	1,812.98	469.52	1,429.82	1,258.29	48.26	-4.49	0.604
110.00	-12.08	-22.62	0.00	-625.30	0.00	625.30	1,773.95	453.74	1,335.39	1,189.54	53.09	-4.74	0.535
111.00	-10.30	-20.74	0.00	-602.68	0.00	602.68	1,765.96	450.59	1,316.89	1,175.88	54.09	-4.79	0.520
112.00	-10.16	-20.30	0.00	-581.94	0.00	581.94	1,757.91	447.44	1,298.52	1,162.27	55.10	-4.84	0.509
115.00	-9.81	-19.86	0.00	-521.04	0.00	521.04	1,733.39	437.97	1,244.18	1,121.63	58.18	-4.98	0.472
117.00	-9.58	-19.27	0.00	-481.32	0.00	481.32	1,716.74	431.66	1,208.60	1,094.73	60.29	-5.07	0.447
120.00	-9.25	-18.81	0.00	-423.53	0.00	423.53	1,691.31	422.20	1,156.20	1,054.68	63.51	-5.20	0.409
125.00	-8.72	-18.24	0.00	-329.46	0.00	329.46	1,647.72	406.43	1,071.45	988.80	69.06	-5.39	0.341
130.00	-7.83	-16.82	0.00	-237.23	0.00	237.23	1,602.60	390.66	989.92	924.09	74.79	-5.56	0.263
131.00	-6.11	-14.72	0.00	-220.41	0.00	220.41	1,593.39	387.51	974.00	911.30	75.96	-5.59	0.247
135.00	-5.74	-14.23	0.00	-161.53	0.00	161.53	1,555.96	374.89	911.61	860.66	80.68	-5.69	0.193
140.00	-5.29	-13.83	0.00	-90.39	0.00	90.39	1,507.81	359.12	836.54	798.61	86.68	-5.78	0.118
142.00	-4.17	-9.63	0.00	-62.34	0.00	62.34	1,488.12	352.81	807.41	774.21	89.10	-5.80	0.084
143.00	-2.84	-7.15	0.00	-52.71	0.00	52.71	1,478.18	349.65	793.04	762.10	90.31	-5.81	0.072
145.00	-2.73	-6.85	0.00	-38.41	0.00	38.41	1,453.50	343.35	764.68	735.72	92.75	-5.83	0.054
149.00	0.00	-6.54	0.00	-11.00	0.00	11.00	1,400.09	330.73	709.52	682.38	97.64	-5.85	0.017

<b>Load Case:</b> 1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice	23 Iterations
Gust Response Factor :1.10	Ice Dead Load Factor :1.00	
Dead Load Factor :1.20		Ice Importance Factor :1.00
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		82.8	0.0					0.0	0.0	82.8	0.0	0.0	0.0
5.00		164.1	1,845.1					0.0	302.9	164.1	2,148.0	0.0	0.0
10.00		161.3	1,838.9					0.0	302.9	161.3	2,141.8	0.0	0.0
15.00		160.7	1,816.2					0.0	302.9	160.7	2,119.1	0.0	0.0
20.00		164.3	1,788.1					0.0	302.9	164.3	2,091.0	0.0	0.0
25.00		168.8	1,757.2					0.0	302.9	168.8	2,060.2	0.0	0.0
30.00		171.8	1,724.6					0.0	302.9	171.8	2,027.5	0.0	0.0
35.00		173.7	1,690.7					0.0	302.9	173.7	1,993.7	0.0	0.0
40.00		174.8	1,656.0					0.0	302.9	174.8	1,959.0	0.0	0.0
45.00		119.7	1,620.6					0.0	302.9	119.7	1,923.5	0.0	0.0
46.83	Bot - Section 2	88.5	585.2					0.0	110.9	88.5	696.2	0.0	0.0
50.00		112.7	1,711.3					0.0	192.0	112.7	1,903.3	0.0	0.0
53.17	Top - Section 1	88.8	1,685.6					0.0	192.0	88.8	1,877.6	0.0	0.0
55.00		120.9	507.5					0.0	110.9	120.9	618.4	0.0	0.0
60.00		176.2	1,361.7					0.0	302.9	176.2	1,664.6	0.0	0.0
65.00		174.8	1,329.1					0.0	302.9	174.8	1,632.1	0.0	0.0
70.00		173.1	1,296.3					0.0	302.9	173.1	1,599.2	0.0	0.0
75.00		171.2	1,263.2					0.0	302.9	171.2	1,566.1	0.0	0.0
80.00		135.5	1,229.9					0.0	302.9	135.5	1,532.8	0.0	0.0
83.00	Appurtenance(s)	83.9	722.8	57.9	0.0	0.0	173.7	0.0	181.8	141.7	1,078.3	0.0	0.0
85.00		116.0	475.4					0.0	121.1	116.0	596.5	0.0	0.0
90.00		163.8	1,162.6					0.0	302.7	163.8	1,465.3	0.0	0.0
95.00		89.0	1,128.7					0.0	302.7	89.0	1,431.4	0.0	0.0
95.49	Bot - Section 3	80.7	108.5					0.0	29.5	80.7	137.9	0.0	0.0
100.00		81.0	1,507.1					0.0	273.2	81.0	1,780.3	0.0	0.0
100.51	Top - Section 2	63.5	168.9					0.0	31.1	63.5	200.0	0.0	0.0
104.00	Appurtenance(s)	71.0	560.7	365.6	0.0	0.0	945.6	0.0	211.1	436.6	1,717.4	0.0	0.0
105.00		93.3	158.9					0.0	59.5	93.3	218.5	0.0	0.0
110.00	Appurtenance(s)	92.9	776.4	200.4	0.0	200.4	1,087.3	0.0	297.7	293.3	2,161.4	0.0	0.0
111.00	Appurtenance(s)	30.5	152.9	371.7	0.0	0.0	3,053.6	0.0	45.8	402.2	3,252.3	0.0	0.0
112.00	Appurtenance(s)	60.5	151.9	93.1	0.0	0.0	103.9	0.0	44.8	153.6	300.6	0.0	0.0
115.00	Appurtenance(s)	75.1	448.6	36.4	0.0	0.0	60.9	0.0	134.2	111.5	643.7	0.0	0.0
117.00	Appurtenance(s)	74.0	294.3	73.1	0.0	0.0	103.8	0.0	85.0	147.2	483.1	0.0	0.0
120.00		116.4	433.4					0.0	126.3	116.4	559.6	0.0	0.0
125.00		142.4	700.3					0.0	210.4	142.4	910.8	0.0	0.0
130.00	Appurtenance(s)	84.1	674.8	183.2	0.0	183.2	1,146.5	0.0	210.4	267.3	2,031.7	0.0	0.0
131.00	Appurtenance(s)	68.3	132.5	387.3	0.0	0.0	3,067.7	0.0	42.1	455.5	3,242.3	0.0	0.0
135.00		120.7	517.9					0.0	166.8	120.7	684.6	0.0	0.0
140.00		92.1	623.4					0.0	208.4	92.1	831.8	0.0	0.0
142.00	Appurtenance(s)	38.7	243.1	681.2	0.0	72.2	3,339.3	0.0	83.4	719.9	3,665.8	0.0	0.0
143.00	Appurtenance(s)	38.2	120.2	462.9	0.0	0.0	2,612.5	0.0	15.8	501.1	2,748.5	0.0	0.0
145.00		75.2	236.9					0.0	24.5	75.2	261.4	0.0	0.0
149.00	Appurtenance(s)	49.8	460.0	399.7	0.0	0.0	3,077.9	0.0	49.0	449.4	3,586.9	0.0	0.0
<b>Totals:</b>										<b>8,097.14</b>	<b>65,544.2</b>	<b>0.00</b>	<b>0.00</b>

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 1.00 in Radial Ice

23 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-69.04	-9.00	0.00	-968.55	0.00	968.55	5,373.17	1,366.21	6,918.10	6,198.41	0.00	0.00	0.169
5.00	-66.89	-8.89	0.00	-923.56	0.00	923.56	5,301.48	1,338.61	6,641.45	5,991.21	0.02	-0.04	0.167
10.00	-64.74	-8.77	0.00	-879.13	0.00	879.13	5,228.27	1,311.02	6,370.43	5,785.69	0.09	-0.09	0.164
15.00	-62.61	-8.66	0.00	-835.28	0.00	835.28	5,153.54	1,283.42	6,105.07	5,581.96	0.21	-0.13	0.162
20.00	-60.52	-8.53	0.00	-792.00	0.00	792.00	5,077.28	1,255.82	5,845.35	5,380.13	0.37	-0.18	0.159
25.00	-58.45	-8.40	0.00	-749.33	0.00	749.33	4,999.51	1,228.22	5,591.27	5,180.31	0.58	-0.22	0.156
30.00	-56.42	-8.27	0.00	-707.31	0.00	707.31	4,920.22	1,200.62	5,342.84	4,982.60	0.84	-0.27	0.153
35.00	-54.42	-8.13	0.00	-665.96	0.00	665.96	4,839.41	1,173.02	5,100.05	4,787.12	1.15	-0.32	0.150
40.00	-52.45	-7.99	0.00	-625.31	0.00	625.31	4,757.08	1,145.42	4,862.91	4,593.96	1.50	-0.36	0.147
45.00	-50.52	-7.88	0.00	-585.37	0.00	585.37	4,673.23	1,117.82	4,631.42	4,403.24	1.91	-0.41	0.144
46.83	-49.83	-7.81	0.00	-570.94	0.00	570.94	4,642.15	1,107.71	4,548.07	4,334.04	2.07	-0.43	0.143
50.00	-47.92	-7.71	0.00	-546.19	0.00	546.19	4,587.86	1,090.22	4,405.57	4,215.06	2.36	-0.46	0.140
53.17	-46.04	-7.62	0.00	-521.76	0.00	521.76	3,768.52	936.45	3,792.03	3,474.49	2.68	-0.49	0.162
55.00	-45.42	-7.53	0.00	-507.80	0.00	507.80	3,744.58	927.79	3,722.21	3,420.21	2.87	-0.51	0.161
60.00	-43.75	-7.37	0.00	-470.17	0.00	470.17	3,678.14	904.13	3,534.84	3,273.15	3.43	-0.56	0.156
65.00	-42.11	-7.22	0.00	-433.30	0.00	433.30	3,610.18	880.47	3,352.30	3,127.89	4.04	-0.61	0.150
70.00	-40.51	-7.07	0.00	-397.20	0.00	397.20	3,540.70	856.82	3,174.60	2,984.54	4.71	-0.66	0.145
75.00	-38.94	-6.91	0.00	-361.86	0.00	361.86	3,469.70	833.16	3,001.74	2,843.22	5.44	-0.72	0.139
80.00	-37.40	-6.78	0.00	-327.30	0.00	327.30	3,397.18	809.50	2,833.72	2,704.01	6.22	-0.77	0.132
83.00	-36.32	-6.64	0.00	-306.94	0.00	306.94	3,352.94	795.31	2,735.23	2,621.55	6.71	-0.80	0.128
85.00	-35.72	-6.54	0.00	-293.66	0.00	293.66	3,323.14	785.85	2,670.54	2,567.04	7.05	-0.82	0.125
90.00	-34.25	-6.39	0.00	-260.95	0.00	260.95	3,226.60	762.19	2,512.20	2,416.69	7.93	-0.87	0.119
95.00	-32.82	-6.29	0.00	-229.03	0.00	229.03	3,126.45	738.53	2,358.70	2,268.26	8.87	-0.92	0.112
95.49	-32.68	-6.22	0.00	-225.97	0.00	225.97	3,116.70	736.23	2,344.00	2,254.06	8.96	-0.92	0.111
100.00	-30.90	-6.12	0.00	-197.90	0.00	197.90	3,026.31	714.88	2,210.03	2,124.54	9.86	-0.96	0.103
100.51	-30.70	-6.06	0.00	-194.76	0.00	194.76	1,846.72	483.67	1,517.31	1,320.63	9.96	-0.97	0.164
104.00	-28.99	-5.61	0.00	-173.62	0.00	173.62	1,820.61	472.67	1,449.10	1,272.13	10.68	-1.00	0.153
105.00	-28.77	-5.53	0.00	-168.01	0.00	168.01	1,812.98	469.52	1,429.82	1,258.29	10.89	-1.01	0.150
110.00	-26.61	-5.21	0.00	-140.16	0.00	140.16	1,773.95	453.74	1,335.39	1,189.54	11.98	-1.07	0.133
111.00	-23.37	-4.75	0.00	-134.95	0.00	134.95	1,765.96	450.59	1,316.89	1,175.88	12.20	-1.08	0.128
112.00	-23.07	-4.60	0.00	-130.20	0.00	130.20	1,757.91	447.44	1,298.52	1,162.27	12.43	-1.09	0.125
115.00	-22.42	-4.49	0.00	-116.39	0.00	116.39	1,733.39	437.97	1,244.18	1,121.63	13.13	-1.12	0.117
117.00	-21.94	-4.34	0.00	-107.41	0.00	107.41	1,716.74	431.66	1,208.60	1,094.73	13.60	-1.14	0.111
120.00	-21.38	-4.23	0.00	-94.38	0.00	94.38	1,691.31	422.20	1,156.20	1,054.68	14.33	-1.17	0.102
125.00	-20.47	-4.08	0.00	-73.24	0.00	73.24	1,647.72	406.43	1,071.45	988.80	15.58	-1.21	0.087
130.00	-18.44	-3.78	0.00	-52.66	0.00	52.66	1,602.60	390.66	989.92	924.09	16.87	-1.25	0.069
131.00	-15.21	-3.25	0.00	-48.88	0.00	48.88	1,593.39	387.51	974.00	911.30	17.13	-1.26	0.063
135.00	-14.53	-3.12	0.00	-35.87	0.00	35.87	1,555.96	374.89	911.61	860.66	18.19	-1.28	0.051
140.00	-13.70	-3.02	0.00	-20.25	0.00	20.25	1,507.81	359.12	836.54	798.61	19.54	-1.30	0.035
142.00	-10.05	-2.21	0.00	-14.14	0.00	14.14	1,488.12	352.81	807.41	774.21	20.09	-1.30	0.025
143.00	-7.31	-1.65	0.00	-11.93	0.00	11.93	1,478.18	349.65	793.04	762.10	20.36	-1.31	0.021
145.00	-7.05	-1.57	0.00	-8.63	0.00	8.63	1,453.50	343.35	764.68	735.72	20.91	-1.31	0.017
149.00	0.00	-1.41	0.00	-2.35	0.00	2.35	1,400.09	330.73	709.52	682.38	22.01	-1.31	0.003

<b>Load Case: 1.0D + 1.0W</b>	<b>Serviceability 60 mph</b>	<b>22 Iterations</b>
Gust Response Factor :1.10		
Dead Load Factor :1.00		
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		63.1	0.0					0.0	0.0	63.1	0.0	0.0	0.0
5.00		125.0	1,311.1					0.0	252.5	125.0	1,563.6	0.0	0.0
10.00		122.5	1,284.3					0.0	252.5	122.5	1,536.8	0.0	0.0
15.00		121.8	1,257.6					0.0	252.5	121.8	1,510.0	0.0	0.0
20.00		124.3	1,230.8					0.0	252.5	124.3	1,483.3	0.0	0.0
25.00		127.5	1,204.1					0.0	252.5	127.5	1,456.5	0.0	0.0
30.00		129.6	1,177.3					0.0	252.5	129.6	1,429.8	0.0	0.0
35.00		130.8	1,150.6					0.0	252.5	130.8	1,403.0	0.0	0.0
40.00		131.4	1,123.8					0.0	252.5	131.4	1,376.3	0.0	0.0
45.00		89.9	1,097.0					0.0	252.5	89.9	1,349.5	0.0	0.0
46.83	Bot - Section 2	66.4	395.0					0.0	92.4	66.4	487.4	0.0	0.0
50.00		84.6	1,264.6					0.0	160.0	84.6	1,424.6	0.0	0.0
53.17	Top - Section 1	66.6	1,244.6					0.0	160.0	66.6	1,404.6	0.0	0.0
55.00		90.5	330.9					0.0	92.4	90.5	423.3	0.0	0.0
60.00		131.8	888.0					0.0	252.5	131.8	1,140.4	0.0	0.0
65.00		130.5	865.0					0.0	252.5	130.5	1,117.5	0.0	0.0
70.00		129.1	842.1					0.0	252.5	129.1	1,094.6	0.0	0.0
75.00		127.4	819.2					0.0	252.5	127.4	1,071.6	0.0	0.0
80.00		100.7	796.2					0.0	252.5	100.7	1,048.7	0.0	0.0
83.00	Appurtenance(s)	62.2	466.7	47.8	0.0	0.0	107.8	0.0	151.5	110.0	726.0	0.0	0.0
85.00		86.0	306.6					0.0	100.9	86.0	407.5	0.0	0.0
90.00		121.2	750.4					0.0	252.3	121.2	1,002.6	0.0	0.0
95.00		65.8	727.4					0.0	252.3	65.8	979.7	0.0	0.0
95.49	Bot - Section 3	59.6	69.6					0.0	24.6	59.6	94.2	0.0	0.0
100.00		59.8	1,065.7					0.0	227.7	59.8	1,293.4	0.0	0.0
100.51	Top - Section 2	46.8	119.2					0.0	25.9	46.8	145.1	0.0	0.0
104.00	Appurtenance(s)	52.3	323.3	441.6	0.0	0.0	301.0	0.0	175.9	493.9	800.2	0.0	0.0
105.00		68.6	91.3					0.0	49.6	68.6	141.0	0.0	0.0
110.00	Appurtenance(s)	68.2	447.5	208.0	0.0	208.0	526.5	0.0	248.1	276.3	1,222.1	0.0	0.0
111.00	Appurtenance(s)	22.4	87.7	302.7	0.0	0.0	2,000.0	0.0	38.2	325.1	2,125.8	0.0	0.0
112.00	Appurtenance(s)	44.4	87.1	39.7	0.0	0.0	35.0	0.0	37.3	84.1	159.4	0.0	0.0
115.00	Appurtenance(s)	55.0	257.5	26.9	0.0	0.0	25.0	0.0	111.9	81.9	394.4	0.0	0.0
117.00	Appurtenance(s)	54.1	168.6	56.6	0.0	0.0	34.0	0.0	70.8	110.7	273.4	0.0	0.0
120.00		84.9	248.3					0.0	105.2	84.9	353.5	0.0	0.0
125.00		103.7	401.7					0.0	175.4	103.7	577.0	0.0	0.0
130.00	Appurtenance(s)	61.1	386.4	191.1	0.0	191.1	553.8	0.0	175.4	252.2	1,115.5	0.0	0.0
131.00	Appurtenance(s)	49.5	75.4	313.4	0.0	0.0	2,000.0	0.0	35.1	362.9	2,110.5	0.0	0.0
135.00		87.3	295.6					0.0	139.0	87.3	434.6	0.0	0.0
140.00		66.5	355.8					0.0	173.7	66.5	529.5	0.0	0.0
142.00	Appurtenance(s)	27.9	138.0	736.1	0.0	72.2	1,492.9	0.0	69.5	763.9	1,700.4	0.0	0.0
143.00	Appurtenance(s)	27.5	68.1	410.6	0.0	0.0	1,671.0	0.0	13.2	438.1	1,752.3	0.0	0.0
145.00		53.9	134.4					0.0	20.4	53.9	154.8	0.0	0.0
149.00	Appurtenance(s)	35.7	261.4	322.0	0.0	0.0	2,000.0	0.0	40.8	357.7	2,302.2	0.0	0.0
<b>Totals:</b>										<b>6,654.36</b>	<b>43,116.6</b>	<b>0.00</b>	<b>0.00</b>

**Load Case: 1.0D + 1.0W**

Serviceability 60 mph

22 Iterations

Gust Response Factor :1.10

Dead Load Factor :1.00

Wind Load Factor :1.00

**Calculated Forces**

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-44.60	-7.47	0.00	-808.76	0.00	808.76	5,373.17	1,366.21	6,918.10	6,198.41	0.00	0.00	0.139
5.00	-43.03	-7.38	0.00	-771.39	0.00	771.39	5,301.48	1,338.61	6,641.45	5,991.21	0.02	-0.04	0.137
10.00	-41.49	-7.28	0.00	-734.50	0.00	734.50	5,228.27	1,311.02	6,370.43	5,785.69	0.08	-0.07	0.135
15.00	-39.98	-7.18	0.00	-698.11	0.00	698.11	5,153.54	1,283.42	6,105.07	5,581.96	0.17	-0.11	0.133
20.00	-38.49	-7.08	0.00	-662.20	0.00	662.20	5,077.28	1,255.82	5,845.35	5,380.13	0.31	-0.15	0.131
25.00	-37.03	-6.97	0.00	-626.81	0.00	626.81	4,999.51	1,228.22	5,591.27	5,180.31	0.49	-0.19	0.128
30.00	-35.59	-6.86	0.00	-591.95	0.00	591.95	4,920.22	1,200.62	5,342.84	4,982.60	0.70	-0.23	0.126
35.00	-34.19	-6.75	0.00	-557.64	0.00	557.64	4,839.41	1,173.02	5,100.05	4,787.12	0.96	-0.26	0.124
40.00	-32.81	-6.63	0.00	-523.90	0.00	523.90	4,757.08	1,145.42	4,862.91	4,593.96	1.26	-0.30	0.121
45.00	-31.45	-6.55	0.00	-490.74	0.00	490.74	4,673.23	1,117.82	4,631.42	4,403.24	1.60	-0.34	0.118
46.83	-30.96	-6.49	0.00	-478.75	0.00	478.75	4,642.15	1,107.71	4,548.07	4,334.04	1.73	-0.36	0.117
50.00	-29.54	-6.41	0.00	-458.18	0.00	458.18	4,587.86	1,090.22	4,405.57	4,215.06	1.98	-0.38	0.115
53.17	-28.13	-6.34	0.00	-437.86	0.00	437.86	3,768.52	936.45	3,792.03	3,474.49	2.24	-0.41	0.134
55.00	-27.71	-6.27	0.00	-426.25	0.00	426.25	3,744.58	927.79	3,722.21	3,420.21	2.40	-0.42	0.132
60.00	-26.56	-6.15	0.00	-394.92	0.00	394.92	3,678.14	904.13	3,534.84	3,273.15	2.87	-0.47	0.128
65.00	-25.44	-6.02	0.00	-364.20	0.00	364.20	3,610.18	880.47	3,352.30	3,127.89	3.38	-0.51	0.124
70.00	-24.34	-5.90	0.00	-334.07	0.00	334.07	3,540.70	856.82	3,174.60	2,984.54	3.94	-0.56	0.119
75.00	-23.27	-5.78	0.00	-304.55	0.00	304.55	3,469.70	833.16	3,001.74	2,843.22	4.55	-0.60	0.114
80.00	-22.22	-5.68	0.00	-275.64	0.00	275.64	3,397.18	809.50	2,833.72	2,704.01	5.20	-0.64	0.109
83.00	-21.49	-5.57	0.00	-258.58	0.00	258.58	3,352.94	795.31	2,735.23	2,621.55	5.62	-0.67	0.105
85.00	-21.08	-5.49	0.00	-247.43	0.00	247.43	3,323.14	785.85	2,670.54	2,567.04	5.90	-0.69	0.103
90.00	-20.08	-5.38	0.00	-219.96	0.00	219.96	3,226.60	762.19	2,512.20	2,416.69	6.64	-0.73	0.097
95.00	-19.10	-5.30	0.00	-193.08	0.00	193.08	3,126.45	738.53	2,358.70	2,268.26	7.43	-0.77	0.091
95.49	-19.00	-5.25	0.00	-190.50	0.00	190.50	3,116.70	736.23	2,344.00	2,254.06	7.51	-0.77	0.091
100.00	-17.71	-5.18	0.00	-166.81	0.00	166.81	3,026.31	714.88	2,210.03	2,124.54	8.26	-0.81	0.084
100.51	-17.56	-5.13	0.00	-164.15	0.00	164.15	1,846.72	483.67	1,517.31	1,320.63	8.34	-0.81	0.134
104.00	-16.77	-4.63	0.00	-146.25	0.00	146.25	1,820.61	472.67	1,449.10	1,272.13	8.95	-0.84	0.124
105.00	-16.62	-4.57	0.00	-141.61	0.00	141.61	1,812.98	469.52	1,429.82	1,258.29	9.12	-0.85	0.122
110.00	-15.40	-4.28	0.00	-118.55	0.00	118.55	1,773.95	453.74	1,335.39	1,189.54	10.04	-0.90	0.108
111.00	-13.28	-3.93	0.00	-114.26	0.00	114.26	1,765.96	450.59	1,316.89	1,175.88	10.23	-0.91	0.105
112.00	-13.12	-3.85	0.00	-110.33	0.00	110.33	1,757.91	447.44	1,298.52	1,162.27	10.42	-0.92	0.102
115.00	-12.73	-3.76	0.00	-98.79	0.00	98.79	1,733.39	437.97	1,244.18	1,121.63	11.00	-0.94	0.095
117.00	-12.46	-3.65	0.00	-91.27	0.00	91.27	1,716.74	431.66	1,208.60	1,094.73	11.40	-0.96	0.091
120.00	-12.10	-3.57	0.00	-80.31	0.00	80.31	1,691.31	422.20	1,156.20	1,054.68	12.01	-0.98	0.083
125.00	-11.52	-3.46	0.00	-62.47	0.00	62.47	1,647.72	406.43	1,071.45	988.80	13.06	-1.02	0.070
130.00	-10.41	-3.19	0.00	-44.98	0.00	44.98	1,602.60	390.66	989.92	924.09	14.15	-1.05	0.055
131.00	-8.31	-2.79	0.00	-41.79	0.00	41.79	1,593.39	387.51	974.00	911.30	14.37	-1.06	0.051
135.00	-7.88	-2.70	0.00	-30.62	0.00	30.62	1,555.96	374.89	911.61	860.66	15.26	-1.08	0.041
140.00	-7.35	-2.62	0.00	-17.13	0.00	17.13	1,507.81	359.12	836.54	798.61	16.40	-1.09	0.026
142.00	-5.66	-1.83	0.00	-11.81	0.00	11.81	1,488.12	352.81	807.41	774.21	16.86	-1.10	0.019
143.00	-3.92	-1.36	0.00	-9.98	0.00	9.98	1,478.18	349.65	793.04	762.10	17.09	-1.10	0.016
145.00	-3.76	-1.30	0.00	-7.27	0.00	7.27	1,453.50	343.35	764.68	735.72	17.55	-1.10	0.012
149.00	0.00	-1.23	0.00	-2.07	0.00	2.07	1,400.09	330.73	709.52	682.38	18.48	-1.11	0.003

### Equivalent Lateral Forces Method Analysis

Spectral Response Acceleration for Short Period ( $S_s$ ):	0.16
Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.05
Long-Period Transition Period ( $T_L$ ):	6
Importance Factor ( $I_E$ ):	1.00
Site Coefficient $F_a$ :	1.60
Site Coefficient $F_v$ :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period ( $S_{ds}$ ):	0.17
Design Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.08
Seismic Response Coefficient ( $C_s$ ):	0.03
Upper Limit $C_s$	0.03
Lower Limit $C_s$	0.03
Period based on Rayleigh Method (sec):	2.27
Redundancy Factor ( $\rho$ ):	1.00
Seismic Force Distribution Exponent (k):	1.88
Total Unfactored Dead Load:	44.60 k
Seismic Base Shear (E):	1.34 k

Load Case 1.2D + 1.0Ev + 1.0Eh

Seismic

Segment	Height Above Base (ft)	Weight (lb)	$W_z$ (lb-ft)	$C_{vx}$	Horizontal Force (lb)	Vertical Force (lb)
42	147.00	302	3,640	0.016	22	373
41	144.00	155	1,793	0.008	11	191
40	142.50	81	924	0.004	6	100
39	141.00	208	2,311	0.010	14	256
38	137.50	529	5,623	0.025	34	654
37	133.00	435	4,335	0.020	26	537
36	130.50	111	1,064	0.005	6	136
35	127.50	562	5,175	0.023	31	693
34	122.50	577	4,930	0.022	30	712
33	118.50	354	2,838	0.013	17	436
32	116.00	239	1,846	0.008	11	296
31	113.50	369	2,734	0.012	17	456
30	111.50	124	890	0.004	5	154
29	110.50	126	886	0.004	5	155
28	107.50	696	4,648	0.021	28	859
27	104.50	141	893	0.004	5	174
26	102.26	499	3,036	0.014	18	616
25	100.26	145	850	0.004	5	179
24	97.74	1,293	7,225	0.033	44	1,597
23	95.24	94	501	0.002	3	116
22	92.50	980	4,933	0.022	30	1,209
21	87.50	1,003	4,547	0.021	28	1,238
20	84.00	407	1,711	0.008	10	503
19	81.50	618	2,452	0.011	15	763
18	77.50	1,049	3,784	0.017	23	1,295

17	72.50	1,072	3,410	0.015	21	1,323
16	67.50	1,095	3,045	0.014	18	1,351
15	62.50	1,117	2,689	0.012	16	1,380
14	57.50	1,140	2,346	0.011	14	1,408
13	54.08	423	776	0.004	5	523
12	51.58	1,405	2,355	0.011	14	1,734
11	48.42	1,425	2,120	0.010	13	1,759
10	45.92	487	656	0.003	4	602
9	42.50	1,349	1,571	0.007	10	1,666
8	37.50	1,376	1,266	0.006	8	1,699
7	32.50	1,403	986	0.004	6	1,732
6	27.50	1,430	733	0.003	4	1,765
5	22.50	1,457	512	0.002	3	1,798
4	17.50	1,483	325	0.001	2	1,831
3	12.50	1,510	176	0.001	1	1,864
2	7.50	1,537	68	0.000	0	1,897
1	2.50	1,564	9	0.000	0	1,930
Sinclair SC479-HF1LD	149.00	34	420	0.002	3	42
Generic 8' Omni	149.00	50	618	0.003	4	62
RFS FD9R6004/1C-3L	149.00	19	230	0.001	1	23
RFS FDL85002/1C-3L	149.00	42	519	0.002	3	52
Commscope CBC78T-DS-	149.00	32	393	0.002	2	39
RFS FDA3P5002-1C	149.00	26	316	0.001	2	32
Bird DS428E83I01T	149.00	9	110	0.000	1	11
Nokia B5 RRH4x40-850	149.00	146	1,798	0.008	11	180
Alcatel-Lucent B13 R	149.00	172	2,120	0.010	13	212
Nokia AHFIC AirScale	149.00	318	3,924	0.018	24	392
Nokia AHBCC AirScale	149.00	84	1,035	0.005	6	103
Raycap RxxDC-3315-PF	149.00	43	529	0.002	3	53
Raycap RRFDC-3315-PF	149.00	32	395	0.002	2	40
Commscope NHH-65A-R2	149.00	316	3,903	0.018	24	390
CSS X7CAP-480-VR0	149.00	106	1,305	0.006	8	130
Generic 20' Dipole	149.00	60	741	0.003	4	74
Round Platform w/ Ha	149.00	2,000	24,709	0.112	149	2,469
RFS APXVSP18-C-A20	143.00	171	1,955	0.009	12	211
Round Low Profile PI	143.00	1,500	17,151	0.078	104	1,852
Nokia AirScale RRH 4	142.00	106	1,195	0.005	7	131
Raycap DC6-48-60-18-	142.00	64	718	0.003	4	79
Nokia AHFIB Dual Ban	142.00	198	2,238	0.010	14	245
Nokia AHLBBA	142.00	284	3,209	0.015	19	351
Alcatel-Lucent RRH4X	142.00	210	2,370	0.011	14	259
Raycap DC9-48-60-24-	142.00	16	181	0.001	1	20
Commscope NNHH-65A-R	142.00	615	6,936	0.031	42	759
Round Platform w/ Ha	131.00	2,000	19,390	0.088	117	2,469
Alcatel-Lucent 4X40W	130.00	178	1,706	0.008	10	220
Alcatel-Lucent TD-RR	130.00	210	2,007	0.009	12	259
RFS APXV9TM14-ALU-I2	130.00	165	1,580	0.007	10	204
Sinclair SC479-HF1LD	117.00	34	266	0.001	2	42
Generic 8' Omni	115.00	25	190	0.001	1	31
Generic 56" Dipole	112.00	35	253	0.001	2	43
Round Platform w/ Ha	111.00	2,000	14,194	0.064	86	2,469
Ericsson KRY 112 144	110.00	33	230	0.001	1	41
Ericsson AIR 21, 1.3	110.00	249	1,737	0.008	11	307
Ericsson AIR 21, 1.3	110.00	244	1,706	0.008	10	302
Generic 4' Dish w/ R	104.00	120	753	0.003	5	148
RFS PAD6-W57BC w/ Ra	104.00	181	1,136	0.005	7	223
Tycon ENC-DC	83.00	4	16	0.000	0	5
L-com HG908U-PRO	83.00	4	16	0.000	0	5
Stand-Off	83.00	100	411	0.002	2	123
		44,602	221,216	1.000	1,338	55,064



Load Case 0.9D - 1.0Ev + 1.0Eh

## Seismic (Reduced DL)

Segment	Height Above Base (ft)	Weight (lb)	$W_z$ (lb-ft)	$C_{vx}$	Horizontal Force (lb)	Vertical Force (lb)
42	147.00	302	3,640	0.016	22	262
41	144.00	155	1,793	0.008	11	134
40	142.50	81	924	0.004	6	70
39	141.00	208	2,311	0.010	14	180
38	137.50	529	5,623	0.025	34	458
37	133.00	435	4,335	0.020	26	376
36	130.50	111	1,064	0.005	6	96
35	127.50	562	5,175	0.023	31	486
34	122.50	577	4,930	0.022	30	499
33	118.50	354	2,838	0.013	17	306
32	116.00	239	1,846	0.008	11	207
31	113.50	369	2,734	0.012	17	320
30	111.50	124	890	0.004	5	108
29	110.50	126	886	0.004	5	109
28	107.50	696	4,648	0.021	28	602
27	104.50	141	893	0.004	5	122
26	102.26	499	3,036	0.014	18	432
25	100.26	145	850	0.004	5	126
24	97.74	1,293	7,225	0.033	44	1,119
23	95.24	94	501	0.002	3	82
22	92.50	980	4,933	0.022	30	848
21	87.50	1,003	4,547	0.021	28	868
20	84.00	407	1,711	0.008	10	353
19	81.50	618	2,452	0.011	15	535
18	77.50	1,049	3,784	0.017	23	908
17	72.50	1,072	3,410	0.015	21	927
16	67.50	1,095	3,045	0.014	18	947
15	62.50	1,117	2,689	0.012	16	967
14	57.50	1,140	2,346	0.011	14	987
13	54.08	423	776	0.004	5	366
12	51.58	1,405	2,355	0.011	14	1,216
11	48.42	1,425	2,120	0.010	13	1,233
10	45.92	487	656	0.003	4	422
9	42.50	1,349	1,571	0.007	10	1,168
8	37.50	1,376	1,266	0.006	8	1,191
7	32.50	1,403	986	0.004	6	1,214
6	27.50	1,430	733	0.003	4	1,237
5	22.50	1,457	512	0.002	3	1,261
4	17.50	1,483	325	0.001	2	1,284
3	12.50	1,510	176	0.001	1	1,307
2	7.50	1,537	68	0.000	0	1,330
1	2.50	1,564	9	0.000	0	1,353
Sinclair SC479-HF1LD	149.00	34	420	0.002	3	29
Generic 8' Omni	149.00	50	618	0.003	4	43
RFS FD9R6004/1C-3L	149.00	19	230	0.001	1	16
RFS FDL85002/1C-3L	149.00	42	519	0.002	3	36
Commscope CBC78T-DS-	149.00	32	393	0.002	2	28
RFS FDA3P5002-1C	149.00	26	316	0.001	2	22
Bird DS428E83I01T	149.00	9	110	0.000	1	8
Nokia B5 RRH4x40-850	149.00	146	1,798	0.008	11	126
Alcatel-Lucent B13 R	149.00	172	2,120	0.010	13	149
Nokia AHFIC AirScale	149.00	318	3,924	0.018	24	275
Nokia AHBCC AirScale	149.00	84	1,035	0.005	6	73
Raycap RxxDC-3315-PF	149.00	43	529	0.002	3	37
Raycap RRFC-3315-PF	149.00	32	395	0.002	2	28
Commscope NHH-65A-R2	149.00	316	3,903	0.018	24	273
CSS X7CAP-480-VR0	149.00	106	1,305	0.006	8	91

Site Number: 274398

Code: ANSI/TIA-222-H

© 2007 - 2020 by ATC IP LLC. All rights reserved.

Site Name: AMAGANSETT FD NY, NY

Engineering Number: 13248277\_C3\_03

7/13/2020 4:49:38 PM

Customer: AT&T MOBILITY

Generic 20' Dipole	149.00	60	741	0.003	4	52
Round Platform w/ Ha	149.00	2,000	24,709	0.112	149	1,731
RFS APXVSP18-C-A20	143.00	171	1,955	0.009	12	148
Round Low Profile PI	143.00	1,500	17,151	0.078	104	1,298
Nokia AirScale RRH 4	142.00	106	1,195	0.005	7	92
Raycap DC6-48-60-18-	142.00	64	718	0.003	4	55
Nokia AHFIB Dual Ban	142.00	198	2,238	0.010	14	172
Nokia AHLBBA	142.00	284	3,209	0.015	19	246
Alcatel-Lucent RRH4X	142.00	210	2,370	0.011	14	182
Raycap DC9-48-60-24-	142.00	16	181	0.001	1	14
Commscope NNHH-65A-R	142.00	615	6,936	0.031	42	532
Round Platform w/ Ha	131.00	2,000	19,390	0.088	117	1,731
Alcatel-Lucent 4X40W	130.00	178	1,706	0.008	10	154
Alcatel-Lucent TD-RR	130.00	210	2,007	0.009	12	182
RFS APXV9TM14-ALU-I2	130.00	165	1,580	0.007	10	143
Sinclair SC479-HF1LD	117.00	34	266	0.001	2	29
Generic 8' Omni	115.00	25	190	0.001	1	22
Generic 56" Dipole	112.00	35	253	0.001	2	30
Round Platform w/ Ha	111.00	2,000	14,194	0.064	86	1,731
Ericsson KRY 112 144	110.00	33	230	0.001	1	29
Ericsson AIR 21, 1.3	110.00	249	1,737	0.008	11	215
Ericsson AIR 21, 1.3	110.00	244	1,706	0.008	10	212
Generic 4' Dish w/ R	104.00	120	753	0.003	5	104
RFS PAD6-W57BC w/ Ra	104.00	181	1,136	0.005	7	157
Tycon ENC-DC	83.00	4	16	0.000	0	3
L-com HG908U-PRO	83.00	4	16	0.000	0	3
Stand-Off	83.00	100	411	0.002	2	87
		44,602	221,216	1.000	1,338	38,601

Load Case 1.2D + 1.0Ev + 1.0Eh

Seismic

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-53.13	-1.34	0.00	-166.48	0.00	166.48	5,373.17	1,366.21	6,918.10	6,198.41	0.00	0.00	0.037
5.00	-51.24	-1.35	0.00	-159.77	0.00	159.77	5,301.48	1,338.61	6,641.45	5,991.21	0.00	-0.01	0.036
10.00	-49.37	-1.35	0.00	-153.04	0.00	153.04	5,228.27	1,311.02	6,370.43	5,785.69	0.02	-0.02	0.036
15.00	-47.54	-1.36	0.00	-146.28	0.00	146.28	5,153.54	1,283.42	6,105.07	5,581.96	0.04	-0.02	0.035
20.00	-45.74	-1.36	0.00	-139.50	0.00	139.50	5,077.28	1,255.82	5,845.35	5,380.13	0.06	-0.03	0.035
25.00	-43.98	-1.36	0.00	-132.70	0.00	132.70	4,999.51	1,228.22	5,591.27	5,180.31	0.10	-0.04	0.034
30.00	-42.24	-1.36	0.00	-125.91	0.00	125.91	4,920.22	1,200.62	5,342.84	4,982.60	0.15	-0.05	0.034
35.00	-40.55	-1.36	0.00	-119.11	0.00	119.11	4,839.41	1,173.02	5,100.05	4,787.12	0.20	-0.06	0.033
40.00	-38.88	-1.35	0.00	-112.34	0.00	112.34	4,757.08	1,145.42	4,862.91	4,593.96	0.26	-0.06	0.033
45.00	-38.28	-1.35	0.00	-105.59	0.00	105.59	4,673.23	1,117.82	4,631.42	4,403.24	0.33	-0.07	0.032
46.83	-36.52	-1.34	0.00	-103.12	0.00	103.12	4,642.15	1,107.71	4,548.07	4,334.04	0.36	-0.08	0.032
50.00	-34.78	-1.32	0.00	-98.89	0.00	98.89	4,587.86	1,090.22	4,405.57	4,215.06	0.41	-0.08	0.031
53.17	-34.26	-1.32	0.00	-94.69	0.00	94.69	3,768.52	936.45	3,792.03	3,474.49	0.47	-0.09	0.036
55.00	-32.85	-1.31	0.00	-92.28	0.00	92.28	3,744.58	927.79	3,722.21	3,420.21	0.50	-0.09	0.036
60.00	-31.47	-1.29	0.00	-85.74	0.00	85.74	3,678.14	904.13	3,534.84	3,273.15	0.60	-0.10	0.035
65.00	-30.12	-1.28	0.00	-79.27	0.00	79.27	3,610.18	880.47	3,352.30	3,127.89	0.71	-0.11	0.034
70.00	-28.80	-1.26	0.00	-72.87	0.00	72.87	3,540.70	856.82	3,174.60	2,984.54	0.83	-0.12	0.033
75.00	-27.50	-1.24	0.00	-66.57	0.00	66.57	3,469.70	833.16	3,001.74	2,843.22	0.96	-0.13	0.031
80.00	-26.74	-1.23	0.00	-60.38	0.00	60.38	3,397.18	809.50	2,833.72	2,704.01	1.10	-0.14	0.030
83.00	-26.10	-1.21	0.00	-56.70	0.00	56.70	3,352.94	795.31	2,735.23	2,621.55	1.19	-0.14	0.029
85.00	-24.87	-1.19	0.00	-54.27	0.00	54.27	3,323.14	785.85	2,670.54	2,567.04	1.25	-0.15	0.029
90.00	-23.66	-1.16	0.00	-48.34	0.00	48.34	3,226.60	762.19	2,512.20	2,416.69	1.41	-0.16	0.027
95.00	-23.54	-1.16	0.00	-42.56	0.00	42.56	3,126.45	738.53	2,358.70	2,268.26	1.58	-0.17	0.026
95.49	-21.94	-1.11	0.00	-42.00	0.00	42.00	3,116.70	736.23	2,344.00	2,254.06	1.60	-0.17	0.026
100.00	-21.76	-1.10	0.00	-37.00	0.00	37.00	3,026.31	714.88	2,210.03	2,124.54	1.76	-0.17	0.025
100.51	-21.15	-1.09	0.00	-36.43	0.00	36.43	1,846.72	483.67	1,517.31	1,320.63	1.78	-0.17	0.039
104.00	-20.60	-1.07	0.00	-32.64	0.00	32.64	1,820.61	472.67	1,449.10	1,272.13	1.91	-0.18	0.037
105.00	-19.74	-1.04	0.00	-31.58	0.00	31.58	1,812.98	469.52	1,429.82	1,258.29	1.94	-0.18	0.036
110.00	-18.94	-1.01	0.00	-26.38	0.00	26.38	1,773.95	453.74	1,335.39	1,189.54	2.14	-0.19	0.033
111.00	-16.32	-0.91	0.00	-25.37	0.00	25.37	1,765.96	450.59	1,316.89	1,175.88	2.18	-0.20	0.031
112.00	-15.82	-0.89	0.00	-24.45	0.00	24.45	1,757.91	447.44	1,298.52	1,162.27	2.22	-0.20	0.030
115.00	-15.49	-0.88	0.00	-21.77	0.00	21.77	1,733.39	437.97	1,244.18	1,121.63	2.35	-0.20	0.028
117.00	-15.01	-0.86	0.00	-20.01	0.00	20.01	1,716.74	431.66	1,208.60	1,094.73	2.43	-0.21	0.027
120.00	-14.30	-0.83	0.00	-17.42	0.00	17.42	1,691.31	422.20	1,156.20	1,054.68	2.57	-0.21	0.025
125.00	-13.61	-0.80	0.00	-13.27	0.00	13.27	1,647.72	406.43	1,071.45	988.80	2.79	-0.22	0.022
130.00	-12.79	-0.76	0.00	-9.27	0.00	9.27	1,602.60	390.66	989.92	924.09	3.03	-0.23	0.018
131.00	-9.78	-0.60	0.00	-8.51	0.00	8.51	1,593.39	387.51	974.00	911.30	3.08	-0.23	0.015
135.00	-9.13	-0.57	0.00	-6.10	0.00	6.10	1,555.96	374.89	911.61	860.66	3.27	-0.23	0.013
140.00	-8.87	-0.55	0.00	-3.26	0.00	3.26	1,507.81	359.12	836.54	798.61	3.51	-0.24	0.010
142.00	-6.93	-0.44	0.00	-2.15	0.00	2.15	1,488.12	352.81	807.41	774.21	3.61	-0.24	0.007
143.00	-4.68	-0.30	0.00	-1.72	0.00	1.72	1,478.18	349.65	793.04	762.10	3.66	-0.24	0.005
145.00	-4.30	-0.28	0.00	-1.11	0.00	1.11	1,453.50	343.35	764.68	735.72	3.76	-0.24	0.004
149.00	0.00	-0.26	0.00	0.00	0.00	0.00	1,400.09	330.73	709.52	682.38	3.96	-0.24	0.000

Load Case 0.9D - 1.0Ev + 1.0Eh

Seismic (Reduced DL)

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-37.25	-1.34	0.00	-164.35	0.00	164.35	5,373.17	1,366.21	6,918.10	6,198.41	0.00	0.00	0.033
5.00	-35.92	-1.34	0.00	-157.65	0.00	157.65	5,301.48	1,338.61	6,641.45	5,991.21	0.00	-0.01	0.033
10.00	-34.61	-1.35	0.00	-150.93	0.00	150.93	5,228.27	1,311.02	6,370.43	5,785.69	0.02	-0.01	0.033
15.00	-33.33	-1.35	0.00	-144.20	0.00	144.20	5,153.54	1,283.42	6,105.07	5,581.96	0.04	-0.02	0.032
20.00	-32.07	-1.35	0.00	-137.45	0.00	137.45	5,077.28	1,255.82	5,845.35	5,380.13	0.06	-0.03	0.032
25.00	-30.83	-1.35	0.00	-130.70	0.00	130.70	4,999.51	1,228.22	5,591.27	5,180.31	0.10	-0.04	0.031
30.00	-29.61	-1.35	0.00	-123.95	0.00	123.95	4,920.22	1,200.62	5,342.84	4,982.60	0.14	-0.05	0.031
35.00	-28.42	-1.34	0.00	-117.22	0.00	117.22	4,839.41	1,173.02	5,100.05	4,787.12	0.20	-0.05	0.030
40.00	-27.25	-1.34	0.00	-110.51	0.00	110.51	4,757.08	1,145.42	4,862.91	4,593.96	0.26	-0.06	0.030
45.00	-26.83	-1.33	0.00	-103.83	0.00	103.83	4,673.23	1,117.82	4,631.42	4,403.24	0.33	-0.07	0.029
46.83	-25.60	-1.32	0.00	-101.39	0.00	101.39	4,642.15	1,107.71	4,548.07	4,334.04	0.36	-0.07	0.029
50.00	-24.38	-1.31	0.00	-97.21	0.00	97.21	4,587.86	1,090.22	4,405.57	4,215.06	0.41	-0.08	0.028
53.17	-24.02	-1.30	0.00	-93.06	0.00	93.06	3,768.52	936.45	3,792.03	3,474.49	0.46	-0.09	0.033
55.00	-23.03	-1.29	0.00	-90.67	0.00	90.67	3,744.58	927.79	3,722.21	3,420.21	0.50	-0.09	0.033
60.00	-22.06	-1.28	0.00	-84.22	0.00	84.22	3,678.14	904.13	3,534.84	3,273.15	0.59	-0.10	0.032
65.00	-21.12	-1.26	0.00	-77.84	0.00	77.84	3,610.18	880.47	3,352.30	3,127.89	0.70	-0.11	0.031
70.00	-20.19	-1.24	0.00	-71.54	0.00	71.54	3,540.70	856.82	3,174.60	2,984.54	0.82	-0.12	0.030
75.00	-19.28	-1.22	0.00	-65.33	0.00	65.33	3,469.70	833.16	3,001.74	2,843.22	0.95	-0.13	0.029
80.00	-18.74	-1.21	0.00	-59.24	0.00	59.24	3,397.18	809.50	2,833.72	2,704.01	1.08	-0.14	0.027
83.00	-18.30	-1.19	0.00	-55.62	0.00	55.62	3,352.94	795.31	2,735.23	2,621.55	1.17	-0.14	0.027
85.00	-17.43	-1.17	0.00	-53.23	0.00	53.23	3,323.14	785.85	2,670.54	2,567.04	1.23	-0.14	0.026
90.00	-16.58	-1.14	0.00	-47.41	0.00	47.41	3,226.60	762.19	2,512.20	2,416.69	1.39	-0.15	0.025
95.00	-16.50	-1.13	0.00	-41.73	0.00	41.73	3,126.45	738.53	2,358.70	2,268.26	1.55	-0.16	0.024
95.49	-15.38	-1.09	0.00	-41.17	0.00	41.17	3,116.70	736.23	2,344.00	2,254.06	1.57	-0.16	0.023
100.00	-15.26	-1.08	0.00	-36.26	0.00	36.26	3,026.31	714.88	2,210.03	2,124.54	1.73	-0.17	0.022
100.51	-14.82	-1.07	0.00	-35.71	0.00	35.71	1,846.72	483.67	1,517.31	1,320.63	1.75	-0.17	0.035
104.00	-14.44	-1.05	0.00	-31.99	0.00	31.99	1,820.61	472.67	1,449.10	1,272.13	1.87	-0.18	0.033
105.00	-13.84	-1.02	0.00	-30.94	0.00	30.94	1,812.98	469.52	1,429.82	1,258.29	1.91	-0.18	0.032
110.00	-13.28	-0.99	0.00	-25.85	0.00	25.85	1,773.95	453.74	1,335.39	1,189.54	2.11	-0.19	0.029
111.00	-11.44	-0.89	0.00	-24.85	0.00	24.85	1,765.96	450.59	1,316.89	1,175.88	2.15	-0.19	0.028
112.00	-11.09	-0.88	0.00	-23.96	0.00	23.96	1,757.91	447.44	1,298.52	1,162.27	2.19	-0.19	0.027
115.00	-10.86	-0.86	0.00	-21.33	0.00	21.33	1,733.39	437.97	1,244.18	1,121.63	2.31	-0.20	0.025
117.00	-10.52	-0.85	0.00	-19.60	0.00	19.60	1,716.74	431.66	1,208.60	1,094.73	2.40	-0.20	0.024
120.00	-10.02	-0.81	0.00	-17.07	0.00	17.07	1,691.31	422.20	1,156.20	1,054.68	2.53	-0.21	0.022
125.00	-9.54	-0.78	0.00	-12.99	0.00	12.99	1,647.72	406.43	1,071.45	988.80	2.75	-0.22	0.019
130.00	-8.96	-0.74	0.00	-9.08	0.00	9.08	1,602.60	390.66	989.92	924.09	2.98	-0.22	0.015
131.00	-6.86	-0.59	0.00	-8.34	0.00	8.34	1,593.39	387.51	974.00	911.30	3.03	-0.22	0.013
135.00	-6.40	-0.56	0.00	-5.97	0.00	5.97	1,555.96	374.89	911.61	860.66	3.22	-0.23	0.011
140.00	-6.22	-0.54	0.00	-3.19	0.00	3.19	1,507.81	359.12	836.54	798.61	3.46	-0.23	0.008
142.00	-4.86	-0.43	0.00	-2.11	0.00	2.11	1,488.12	352.81	807.41	774.21	3.55	-0.23	0.006
143.00	-3.28	-0.30	0.00	-1.68	0.00	1.68	1,478.18	349.65	793.04	762.10	3.60	-0.23	0.004
145.00	-3.02	-0.27	0.00	-1.09	0.00	1.09	1,453.50	343.35	764.68	735.72	3.70	-0.23	0.004
149.00	0.00	-0.26	0.00	0.00	0.00	0.00	1,400.09	330.73	709.52	682.38	3.90	-0.23	0.000

Site Number: 274398

Code: ANSI/TIA-222-H

© 2007 - 2020 by ATC IP LLC. All rights reserved.

Site Name: AMAGANSETT FD NY, NY

Engineering Number: 13248277\_C3\_03

7/13/2020 4:49:39 PM

Customer: AT&T MOBILITY

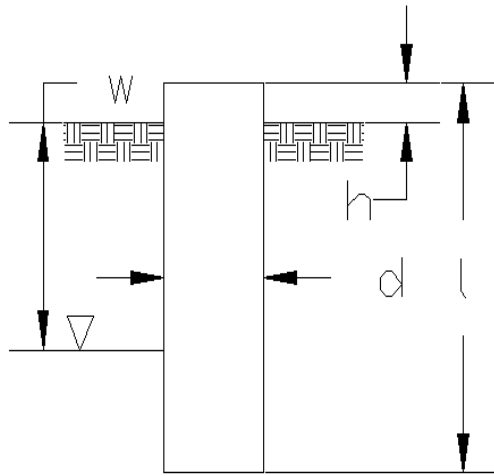
## Analysis Summary

Load Case	Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.0W	39.84	0.00	53.45	0.00	0.00	4333.53	0.00	0.71
0.9D + 1.0W	39.82	0.00	40.07	0.00	0.00	4288.06	0.00	0.70
1.2D + 1.0Di + 1.0Wi	9.00	0.00	69.04	0.00	0.00	968.55	0.00	0.17
1.2D + 1.0Ev + 1.0Eh	1.34	0.00	53.13	0.00	0.00	166.48	100.51	0.04
0.9D - 1.0Ev + 1.0Eh	1.34	0.00	37.25	0.00	0.00	164.35	100.51	0.04
1.0D + 1.0W	7.47	0.00	44.60	0.00	0.00	808.76	0.00	0.14

**Site Name:** Amagansett FD NY, NY  
**Site Number:** 274398  
**Tower Type:** MP  
**Design Base Loads (Factored) - Analysis per TIA-222-H Standards**

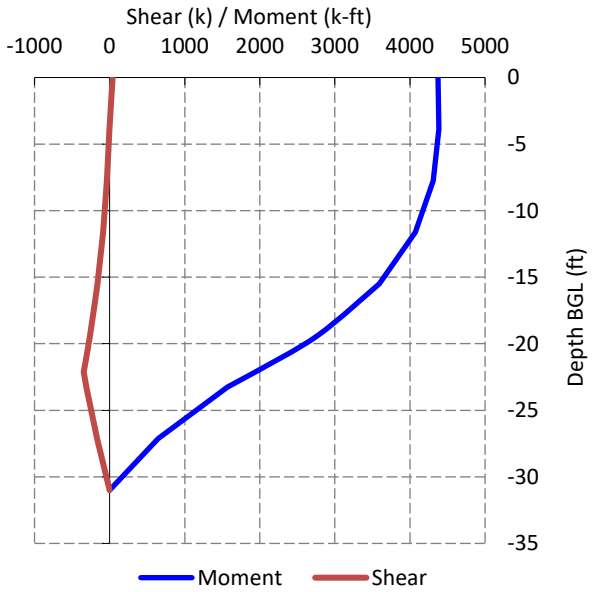
## Pier Foundation Analysis

Foundation Analysis Parameters		
Analyze or Design a Foundation?	Analyze	-
Foundation Mapped:	N	-
Moment (M):	4,333.5	k-ft
Shear/Leg (V):	39.8	k
Axial Load (P):	53.5	k
Uplift/Leg (U):	0.0	k
Diameter of Caisson (d):	7.5	ft
Caisson Embedment (L-h):	31	ft
Caisson Height Above Ground (h):	1	ft
Depth Below Ground Surface to Water Table (w):	99	ft
Unit Weight of Concrete:	150	pcf
Unit Weight of Water:	62.4	pcf
Tension/Compression Skin Friction Factor:	0.75	-
Pullout Angle:	30	°



Depth (ft)		$\gamma_{Soil}$	$C_u$	$\phi$	Ultimate Skin	Ultimate Bearing
Top	Bottom	(pcf)	(psf)	(degree)	Friction (psf)	Pressure (psf)
0	2	76	0	0	0	0
2	4	107	632	0	0	0
4	8	120	0	33	0	0
8	18	120	0	33	1,341	0
18	23	123	0	32	2,006	0
23	32	119	0	32	2,351	21,945

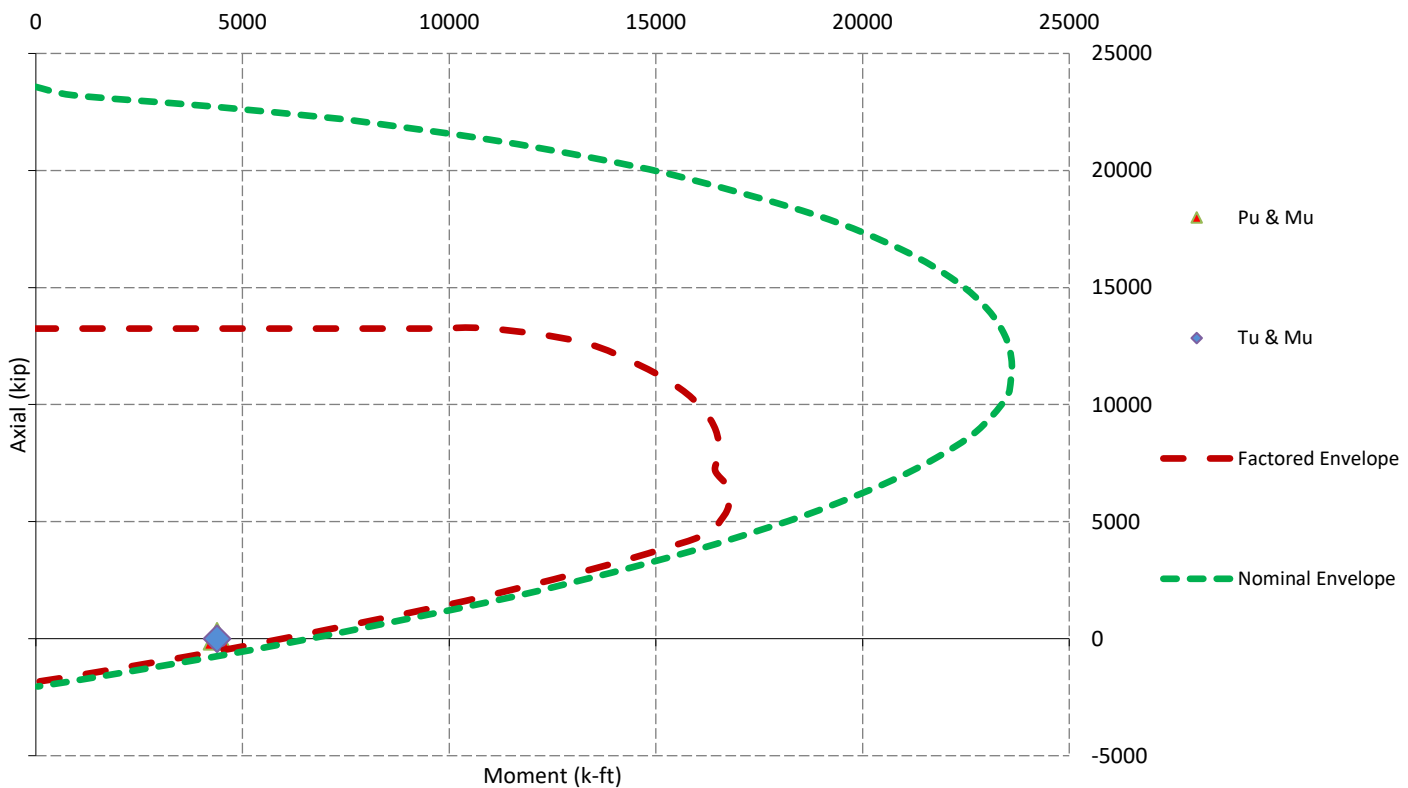
Soil Strength Capacities		
Required Embedment:	21.4	ft
Volume of Concrete:	1413.7	ft <sup>3</sup>
Buoyant Weight of Concrete:	212.1	k
Average Soil Unit Weight:	116.5	pcf
Skin Friction Resistance:	995.4	k
Compressive Bearing Resistance:	969.5	k
Pullout Weight (Minus Concrete Weight):	1973.8	k
Nominal Uplift Capacity per Leg ( $f_s T_n$ ):	559.9	k
Nominal Compressive Capacity per Leg ( $f_s P_n$ ):	1473.7	k
$T_u$ :	0.00	k
$T_u / f_s T_n$ :	0%	Pass
$P_u$ :	108.5	k
$P_u / f_s P_n$ :	7%	Pass
Total Lateral Resistance:	3278.9	k
Inflection Point (Below Ground Surface):	22.1	ft
Moment At Inflection Point ( $M_D$ ):	5253.4	k-ft
Nominal Moment Capacity ( $f_s M_n$ ):	14484.8	k-ft
$f_s$ :	0.75	-
$M_D / f_s M_n$ :	36%	Pass



### Caisson Strength Capacities

Concrete Compressive Strength ( $f'_c$ ):	4,000	psi	
Vertical Steel Rebar Size #:	11	-	
Vertical Steel Rebar Area:	1.56	in <sup>2</sup>	
# of Vertical Steel Rebars:	22	-	
Vertical Steel Rebar Yield Strength ( $F_y$ ):	60	ksi	
Horizontal Tie / Stirrup Size #:	5	-	
Horizontal Tie / Stirrup Area:	0.31	in <sup>2</sup>	
Vertical Rebar Clear Cover:	3.625	in	
Design Horizontal Tie / Stirrup Spacing:	12	in	
Horizontal Tie / Stirrup Steel Yield Strength ( $F_y$ ):	60	ksi	
Rebar Cage Diameter:	82.8	in	
Strength Bending/Tension Reduction Factor ( $f_b$ ):	0.9	-	<i>ACI 318-14 - 21.2.1 [Table 21.2.1 (a)]</i>
Strength Shear Reduction Factor ( $f_v$ ):	0.75	-	<i>ACI 318-14 - 21.2.1 [Table 21.2.1 (b)]</i>
Strength Compression Reduction Factor ( $f_c$ ):	0.65	-	<i>ACI 318-14 - 21.2.1 [Table 21.2.1 (a)]</i>
Steel Elastic Modulus:	29000	ksi	
Design Moment ( $M_u$ ):	4385.1	k-ft	
Nominal Moment Capacity ( $f_b M_n$ ):	6258.7	k-ft	<i>ACI 318-14 - 9.5.2/22.3</i>
$M_u/f_b M_n$ :	70%	Pass	
Design Shear ( $V_u$ ):	345.2	k	
Nominal Shear Capacity ( $f_v V_n$ ):	773.46	k	<i>ACI 318-14 - 22.5</i>
$V_u/f_v V_n$ :	45%	Pass	
Design Tension ( $T_u$ ):	0.0	k	
Nominal Tension Capacity ( $f_t T_n$ ):	1853.3	k	
$T_u/f_t T_n$ :	0%	Pass	
Design Compression ( $P_u$ ):	108.5	k	
Nominal Compression Capacity ( $f_p P_n$ ):	12257.6	k	<i>ACI 318-14 - 22.4</i>
$P_u/f_p P_n$ :	1%	Pass	
Bending Reinforcement Ratio:	0.005	-	
$M_u/f_b M_n + T_u/f_t T_n$ :	70%	Pass	<i>ACI 318-14 - 10.6.1 &amp; TIA-222-H - 9.4.1</i>

### Nominal and Factored Moment Capacity and Factored Design Loads





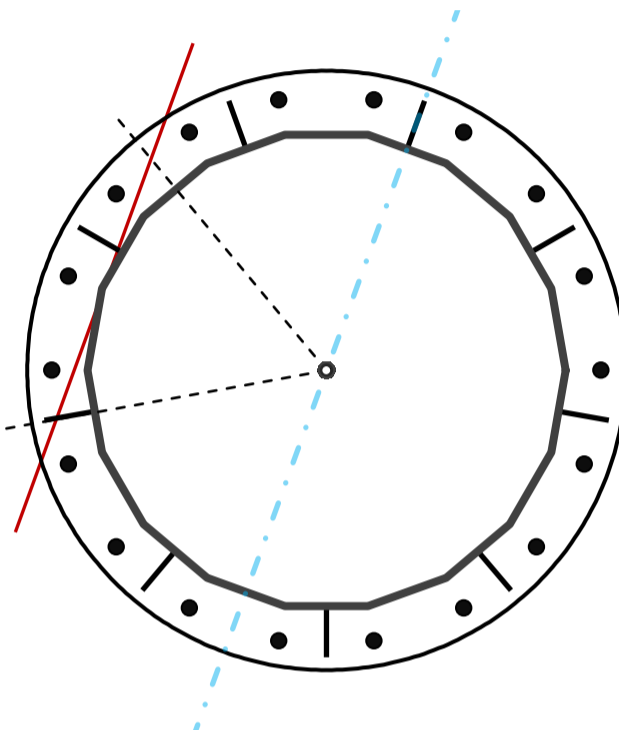
## Base Plate & Anchor Rod Analysis

Pole Dimensions		
Number of Sides	18	-
Diameter	56.5	in
Thickness	7/16	in
Orientation Offset		°

Base Reactions		
Moment, Mu	4,333.5	k-ft
Axial, Pu	53.5	k
Shear, Vu	39.8	k
Neutral Axis	70	°

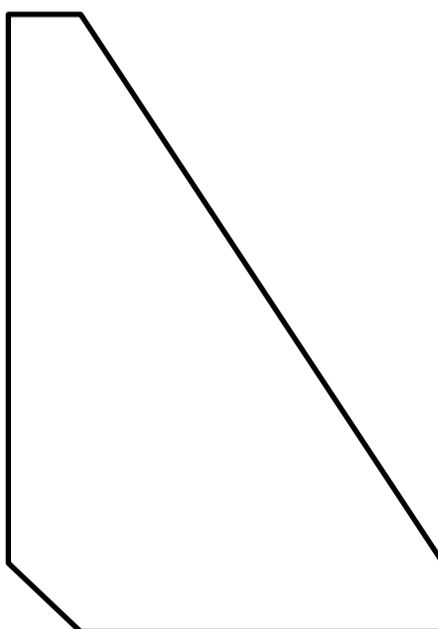
Report Capacities		
Component	Capacity	Result
Base Plate	36%	Pass
Anchor Rods	76%	Pass
Dwyidag	-	-

Base Plate		
Shape	Round	-
Diameter, $\phi$	72	in
Thickness	2 1/4	in
Grade	A572-60	
Yield Strength, Fy	60	ksi
Tensile Strength, Fu	75	ksi
Clip	N/A	in
Orientation Offset		°
Anchor Rod Detail	d	$\eta=0.5$
Clear Distance	3	in
Applied Moment, Mu	1194.7	k
Bending Stress, $\phi Mn$	3303.0	k



Original Anchor Rods		
Arrangement	Radial	-
Quantity	18	-
Diameter, $\phi$	2 1/4	in
Bolt Circle	66	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	11.5	in
Orientation Offset		°
Applied Force, Pu	184.5	k
Anchor Rods, $\phi Pn$	243.6	k

Stiffeners		
Arrangement	Radial	-
Quantity	9	-
Height	9	in
Width	6	in
Effective Width	6.000	in
Thickness	3/4	in
Effective Thickness	0.750	in
Notch	1	in
Flat Edge	1	in
Grade	A36	
Yield Strength, Fy	36	ksi
Tensile Strength, Fu	58	ksi
Horizontal Weld	Bevel+Fillet	
Horizontal Fillet Size	1/4	in
Bevel Depth	1/4	in
Vertical Weld	Fillet	
Vertical Fillet Size	3/8	in
Weld Strength	70	ksi
Electrode Coefficient	1	-
Orientation Offset	10	°
Vertical Weld, $\phi Rn$	142.2	k
Horz. Weld, $\phi Rn$	141.9	k
Ten. Capacity, $\phi Tn$	121.5	k
Comp. Capacity, $\phi Pn$	1361.8	k





# Calculations for Monopole Base Plate & Anchor Rod Analysis

## Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
-	k	k-ft	-
Base Forces	39.8	4333.5	1.00
Anchor Rod Forces	39.8	4333.5	1.00
Additional Bolt (Grp1) Forces	0.0	0.0	0.00
Additional Bolt (Grp2) Forces	0.0	0.0	0.00
Dywidag Forces	0.0	0.0	0.00
Stiffener Forces	13.2	1433.7	0.33

## Geometric Properties

Section	Gross Area	Net Area	Individual Inertia	Threads per Inch	Moment of Inertia
-	in <sup>2</sup>	in <sup>2</sup>	in <sup>4</sup>	#	in <sup>4</sup>
Pole	76.6643	4.2591	0.2728		30124.44
Bolt	3.9761	3.2477	0.8393	4.5	29596.09
Bolt1	0.0000	0.0000	0.0000	0	0.00
Bolt2	0.0000	0.0000	0.0000	0	0.00
Dywidag	0.0000	0.0000	0.0000		0.00
Stiffener	3.7500	3.3750	54.0000		14893.24

Base Plate		
Shape	Round	-
Diameter, D	72	in
Thickness, t	2.25	in
Yield Strength, Fy	60	ksi
Tensile Strength, Fu	75	ksi
Base Plate Chord	44.629	in
Detail Type	d	-
Detail Factor	0.50	-
Clear Distance	3	-

Anchor Rods		
Anchor Rod Quantity, N	18	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	66	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	184.5	k
Applied Shear, Vu	0.6	k
Compressive Capacity, $\phi P_n$	243.6	k
Tensile Capacity, $\phi R_{nt}$	0.757	OK
Interaction Capacity	0.762	OK

Base Plate Stiffeners		
Applied Axial Force, Pu	121.9	k
Applied Horizontal Force, Vu	0.73	k

Vertical Weld		
Vert.-to-Stiffener $a=e_x/l$	0.222	-
Spacing Ratio, k	0.083	-
Weld Coefficient, C	3.510	-
Compressive Capacity, $\phi P_n$	142.2	k
Vert.-to-Plate $a=e_x/l$	0.333	-
Spacing Ratio, k	0.083	-
Weld Coefficient, C	2.940	-
Shear Capacity, $\phi V_n$	119.1	k
$P_u/\phi P_n + V_u/\phi V_n$	0.864	OK

Horizontal Weld		
Horz.-to-Stiffener $a=e_x/l$	0.167	-
Spacing Ratio, k	0.125	-
Weld Coefficient, C	3.940	-
Effective Fillet	0.500	in
Compressive Capacity, $\phi P_n$	141.9	k
Horz.-to-Pole $a=e_x/l$	0.250	-
Spacing Ratio, k	0.125	-
Weld Coefficient, C	3.310	-
Shear Capacity, $\phi V_n$	119.2	k
$P_u/\phi P_n + V_u/\phi V_n$	0.866	OK

Plate Tension		
Gross Cross Section	3.750	in <sup>2</sup>
Net Cross Section	3.375	in <sup>2</sup>
Tensile Capacity, $\phi T_n$	121.5	k
Capacity, $T_u/\phi T_n$	0.502	OK

Plate Compression		
Radius of Gyration	0.217	in <sup>3</sup>
$kl/r$	24.94	-
$4.71 \sqrt{E/F_y}$	133.68	-
Buckling Stress( $F_e$ )	460.1	-
Crit. Buckling Stress( $F_{cr}$ )	403.5	ksi
Compressive Capacity, $\phi P_n$	1361.8	k
Capacity, $P_u/\phi P_n$	0.045	OK

External Base Plate		
Chord Length AA	38.547	in
Additional AA	9.782	in
Section Modulus, Z	61.166	in <sup>3</sup>
Applied Moment, Mu	1194.7	k-ft
Bending Capacity, $\phi M_n$	3303.0	k-ft
Capacity, $M_u/\phi M_n$	0.362	OK

Chord Length AB	37.231	in
Additional AB	8.978	in
Section Modulus, Z	58.484	in <sup>3</sup>
Applied Moment, Mu	962.5	k-ft
Bending Capacity, $\phi M_n$	3158.1	k-ft
Capacity, $M_u/\phi M_n$	0.305	OK

Bend Line Length	36.946	in
Additional Bend Line	56.435	in
Section Modulus, Z	118.185	in <sup>3</sup>
Applied Moment, Mu	1194.7	k-ft
Bending Capacity, $\phi M_n$	6382.0	k-ft
Capacity, $M_u/\phi M_n$	0.187	OK

Internal Base Plate		
Arc Length	0.000	in
Section Modulus, Z	0.000	in <sup>3</sup>
Moment Arm	0.000	in
Applied Moment, Mu	0.0	k-ft
Bending Capacity, $\phi M_n$	0.0	k-ft
Capacity, $M_u/\phi M_n$		