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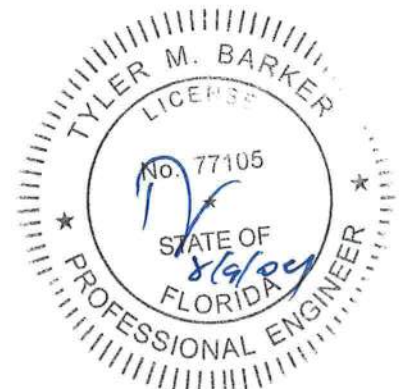
Structural Analysis Report

Structure : 195 ft Monopole
ATC Site Name : FT WHITE WEST FL, FL
ATC Asset Number : 282213
Engineering Number : 13686628_C3_02
Proposed Carrier : VERIZON WIRELESS
Carrier Site Name : FT WHITE WEST
Carrier Site Number : 477708
Site Location : 338 SW Lenox Glen
Fort White, FL 32038-0001
29.95360396, -82.75315979
County : Columbia
Date : June 14, 2021
Max Usage : 70%
Result : Pass



Prepared By:
Anna Barber
CLS

Reviewed By:

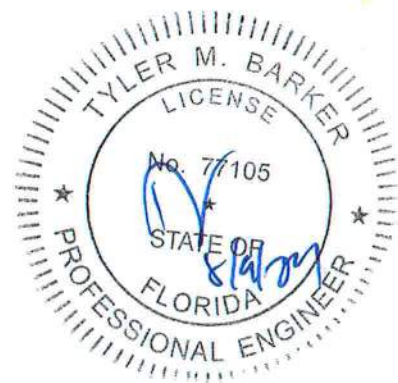


Tyler M. Barker
Old Sorrell Engineering PLLC
PE # 77105 Exp. 2/28/2023
COA # 34924



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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 195 ft monopole to reflect the change in loading by VERIZON WIRELESS.

Supporting Documents

Tower Drawings	Nello Drawing #227349, dated February 21, 2014
Foundation Drawing	RWH Engineering Foundation Design, dated October 31, 2014
Geotechnical Report	EGSci Geotechnical Investigation, dated January 28, 2014

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.

Basic Wind Speed:	120 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	30 mph (3-Second Gust) w/ 1/4" radial ice concurrent
Code:	ANSI/TIA-222-H / 2018 IBC / 7th Ed. (2020) Florida Building Code
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Crest Height (H):	0 ft
Spectral Response:	$S_s = 0.08$, $S_1 = 0.05$
Site Class:	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. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Existing and Reserved Equipment

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
195.0	6	Commscope E15Z01P13	Sector Frame	(3) 0.39" (10mm) Fiber Trunk (6) 0.78" (19.7mm) 8 AWG 6 (12) 1 5/8" Coax (1) 2 1/2" conduit (3) 3/8" (0.38"- 9.5mm) RET Control Cable (3) 2" conduit	AT&T MOBILITY
	3	Ericsson Radio 8843 - B2 + B66A			
	3	Ericsson RRUS 4449 B5, B12			
	3	Raycap DC6-48-60-18-8C			
	4	Ericsson RRUS 32 (50.8 lbs)			
	5	Andrew SBNH-1D8585B			
	2	CCI HPA-33R-BUU-H6			
	3	Commscope NNHH-65B-R4			
	2	Andrew SBJAHH-1D65B-DL			
182.0	1	Raycap RCMDC-3315-PF-48 (32 lbs)	Triangular Low Profile Platform	-	VERIZON WIRELESS
	6	Commscope NHH-65C-R2B			

Equipment to be Removed

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
182.0	1	Raycap RCMDC-3315-PF-48 (32 lbs)	-	(2) 1.58" (40.1mm) Hybrid	VERIZON WIRELESS
	3	Ericsson Radio 4449			
	6	Ericsson Radio 8843			

Proposed Equipment

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
182.0	3	Ericsson 8843 Rev 2	Triangular Low Profile Platform	(1) 1 1/4" Hybriflex Cable (1) 1 5/8" Hybriflex	VERIZON WIRELESS
	3	Ericsson Radio 4449 - B13&B5			
	3	Ericsson AIR 6449 B77D/ C-Band			
	1	Raycap RCMDC-6627-PF-48			

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

Install proposed coax inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	61%	Pass
Shaft	60%	Pass
Base Plate	10%	Pass

Foundations

Reaction Component	Original Design Reactions	Analysis Reactions	% of Design
Moment (Kips-Ft)	6,414.9	4,111.0	64%
Shear (Kips)	46.3	32.6	70%

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

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
182.0	Ericsson 8843 Rev 2	VERIZON WIRELESS	2.124	1.503
	Ericsson Radio 4449 - B13&B5			
	Ericsson AIR 6449 B77D/ C-Band			
	Raycap RCMDC-6627-PF-48			

*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 LLC 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 LLC

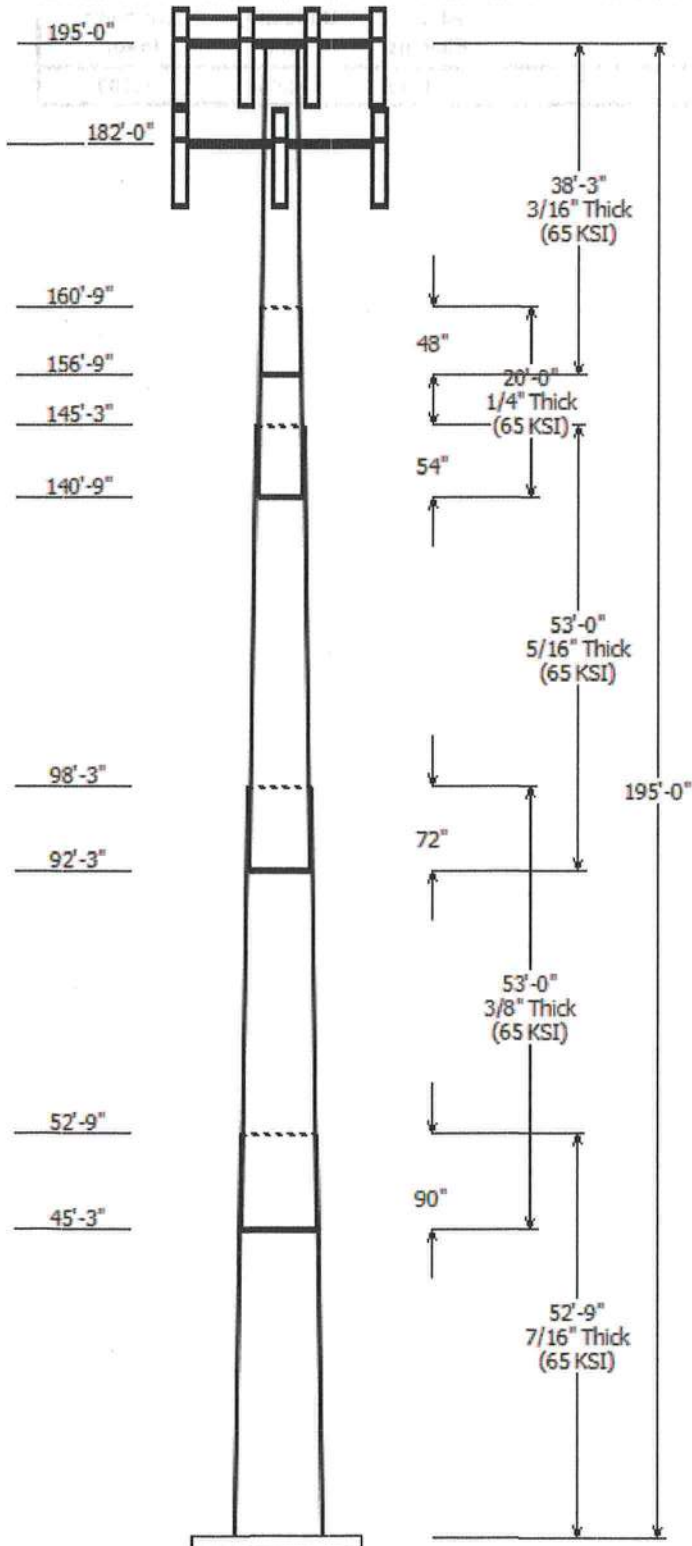
It is the responsibility of the client to ensure that the information provided to ATC Tower Services LLC and used in the performance of our engineering services is correct and complete.

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 LLC, 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 LLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

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Job Information

Client : VERIZON WIRELESS
Pole : 282213 Code: ANSI/TIA-222-H
Location : FT WHITE WEST FL, FL
Description : 195 ft Monopole Risk Category : II
Shape : 18 Sides Exposure : C
Height : 195.00 (ft) Topo Method : Method 1
Base Elev (ft): 0.00 Topographic Category : 1
Taper: 0.23843(in/ft)

Sections Properties

Shaft Section	Length (ft)	Diameter (in)		Thick Joint (in)	Overlap Length (in)	Steel Grade
		Across Flats Top	Across Flats Bottom	Type	Shape	(ksi)
1	52.750	51.66	64.24	0.438	0.000 18 Sides	65
2	53.000	41.56	54.20	0.375 Slip Joint	90.000 18 Sides	65
3	53.000	30.98	43.62	0.313 Slip Joint	72.000 18 Sides	65
4	20.000	27.79	32.56	0.250 Slip Joint	54.000 18 Sides	65
5	38.250	20.00	29.12	0.188 Slip Joint	48.000 18 Sides	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
195.000	195.000	3	Round Sector Frame
195.000	193.600	2	CCI HPA-33R-BUU-H6
195.000	193.400	3	Commscope NNHH-65B-R4
195.000	195.000	2	Andrew SBJAHH-1D65B-DL
195.000	193.400	5	Andrew SBNH-1D8585B
195.000	195.400	4	Ericsson RRUS 32 (50.8 lbs)
195.000	194.200	3	Raycap DC6-48-60-18-8C
195.000	194.400	3	Ericsson RRUS 4449 B5, B12
195.000	194.400	3	Ericsson Radio 8843 - B2 + B66
195.000	195.000	6	Commscope E15Z01P13
182.000	182.000	1	Flat Low Profile Platform
182.000	181.900	6	Commscope NHH-65C-R2B
182.000	182.000	1	Raycap RCMD-6627-PF-48
182.000	182.000	3	Ericsson AIR 6449 B77D/ C-
182.000	183.900	1	Raycap RCMD-3315-PF-48 (32
182.000	182.000	3	Ericsson Radio 4449 - B13&B5
182.000	182.000	3	Ericsson 8843 Rev 2

Linear Appurtenance

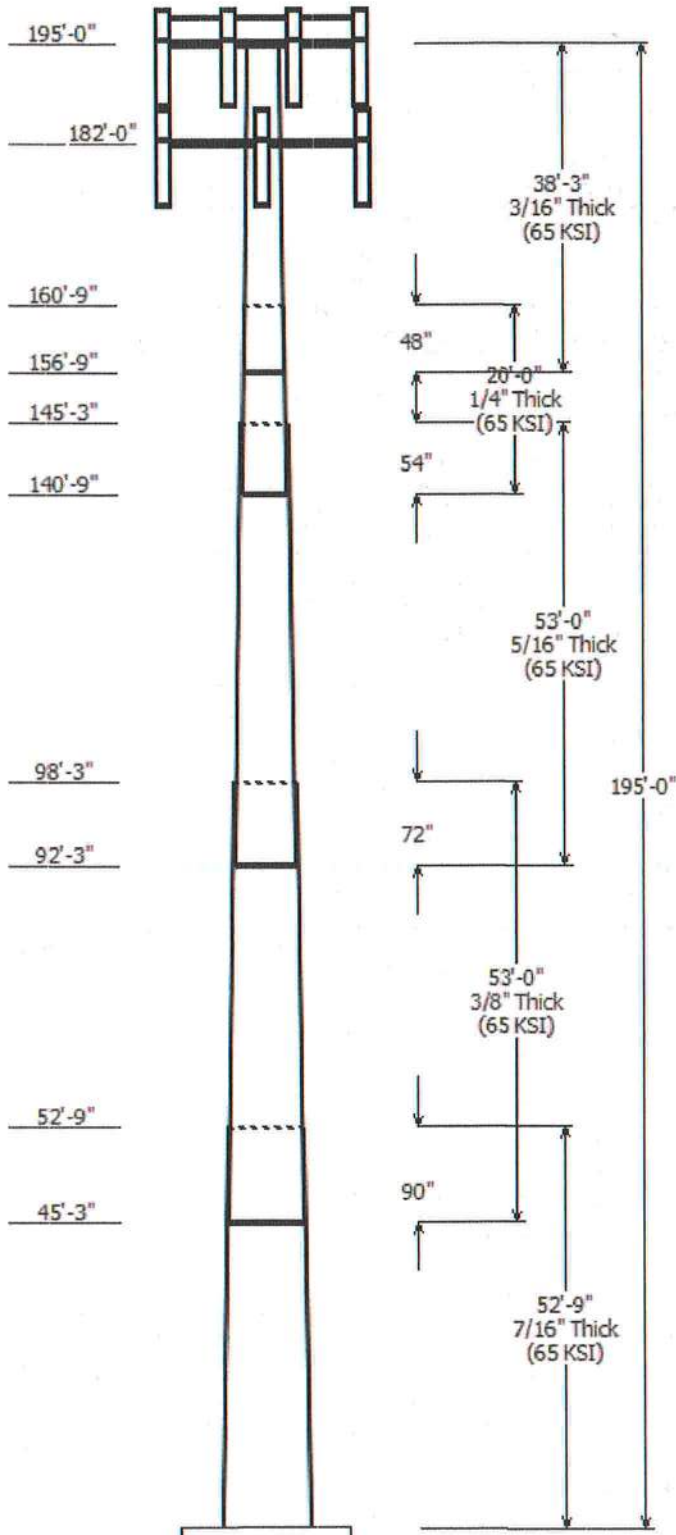
Elev (ft)	From	To	Description	Exposed To Wind
0.000	182.0	195.0	1 1/4" Hybriflex	No
0.000	182.0	195.0	1 5/8" Hybriflex	No
0.000	194.0	195.0	2" conduit	No
0.000	195.0	195.0	0.39" (10mm)	No
0.000	195.0	195.0	0.78" (19.7mm) 8	No
0.000	195.0	195.0	1 5/8" Coax	No
0.000	195.0	195.0	2 1/2" conduit	No
0.000	195.0	195.0	3/8" (0.38")	No

Load Cases

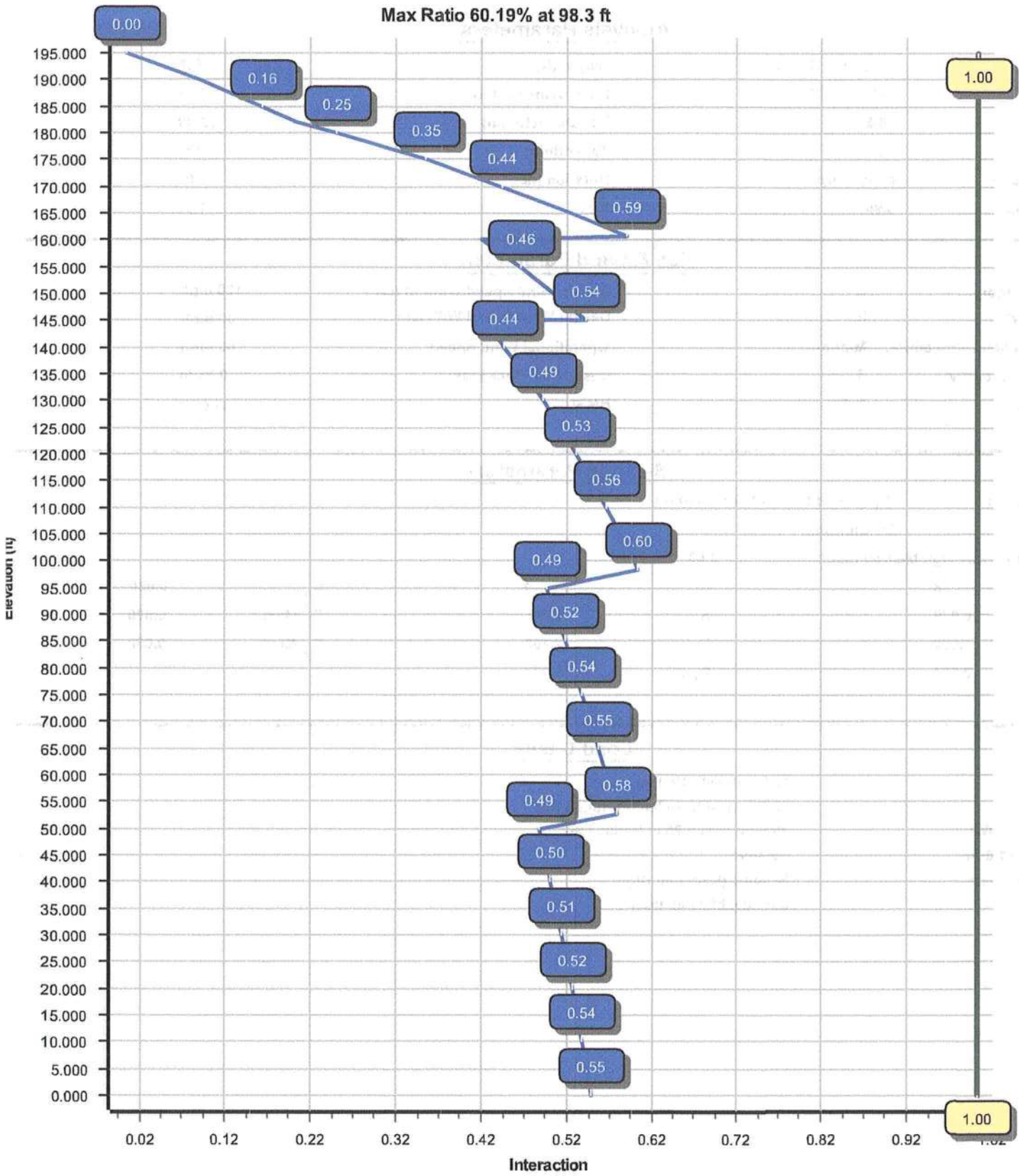
1.2D + 1.0W	120 mph with No Ice
0.9D + 1.0W	120 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	30 mph with 0.25 in Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	Serviceability 60 mph

Reactions			
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.0W	4111.05	32.56	55.31
0.9D + 1.0W	4066.24	32.54	41.47
1.2D + 1.0Di + 1.0Wi	355.85	3.02	58.07
1.2D + 1.0Ev + 1.0Eh	214.88	1.39	54.10
0.9D + 1.0Ev + 1.0Eh	212.30	1.39	39.26
1.0D + 1.0W	914.12	7.28	46.12

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



Load Case : 1.2D + 1.0W
Max Ratio 60.19% at 98.3 ft



ite Number: 282213

Code: ANSI/TIA-222-H

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Site Name: FT WHITE WEST FL, FL

Engineering Number:13686628_C3_02

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Customer: VERIZON WIRELESS

Analysis Parameters

ocation :	Columbia County, FL	Height (ft) :	195
ode :	ANSI/TIA-222-H	Base Diameter (in) :	64.24
hape :	18 Sides	Top Diameter (in) :	20.00
ole Type :	Taper	Taper (in/ft) :	0.238
ole Manufacturer :	Nello Corp	Rotation (deg) :	0.00
d (non-service) :	0.95	Ke :	1.00

Ice & Wind Parameters

xposure Category:	C	Design Wind Speed Without Ice:	120 mph
isk Category:	II	Design Wind Speed With Ice:	30 mph
opographic Factor Procedure:	Method 1	Operational Wind Speed:	60 mph
opographic Category:	1	Design Ice Thickness:	0.25 in
rest Height:	0 ft	HMSL:	60.00 ft

Seismic Parameters

Analysis Method:	Equivalent Lateral Force Method		
ite Class:	D - Stiff Soil		
eriod Based on Rayleigh Method (sec):	2.60		
L (sec):	8	p:	1
s:	0.079	S ₁ :	0.048
a:	1.600	F _v :	2.400
ds:	0.084	S _{d1} :	0.077
		C _s :	0.030
		C _s Max:	0.030
		C _s Min:	0.030

Load Cases

2D + 1.0W	120 mph with No Ice
9D + 1.0W	120 mph with No Ice (Reduced DL)
2D + 1.0Di + 1.0Wi	30 mph with 0.25 in Radial Ice
2D + 1.0Ev + 1.0Eh	Seismic
9D + 1.0Ev + 1.0Eh	Seismic (Reduced DL)
0D + 1.0W	Serviceability 60 mph

Site Number: 282213

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Site Name: FT WHITE WEST FL, FL

Engineering Number: 13686628_C3_02

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Customer: VERIZON WIRELESS

Shaft Section Properties

Slip							Bottom							Top						
Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Weight (lb)	Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Taper (in/ft)	
1-18	52.750	0.4375	65		0.00	14,336	64.24	0.00	88.60	45574.2	24.13	146.84	51.66	52.75	71.14	23587.3	19.06	118.10	0.2384	
2-18	53.000	0.3750	65	Slip	90.00	10,198	54.20	45.25	64.07	23455.8	23.72	144.55	41.56	98.25	49.03	10511.2	17.78	110.85	0.2384	
3-18	53.000	0.3125	65	Slip	72.00	6,617	43.62	92.25	42.96	10181.2	22.85	139.60	30.98	145.25	30.42	3616.8	15.72	99.16	0.2384	
4-18	20.000	0.2500	65	Slip	54.00	1,616	32.56	140.75	25.64	3381.4	21.20	130.24	27.79	160.75	21.85	2094.3	17.84	111.17	0.2384	
5-18	38.250	0.1875	65	Slip	48.00	1,888	29.12	156.75	17.22	1821.0	25.62	155.31	20.00	195.00	11.79	584.7	17.04	106.67	0.2384	
Shaft Weight						34,655														

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
195.00	Commscope E15Z01P13	6	0.80	0.000	24.00	0.780	0.50	28.47	0.885	0.50
195.00	Ericsson Radio 8843 - B2 + B66A	3	0.80	-0.600	71.90	1.650	0.50	82.45	1.795	0.50
195.00	Ericsson RRUS 4449 B5, B12	3	0.80	-0.600	71.00	1.969	0.50	82.04	2.129	0.50
195.00	Raycap DC6-48-60-18-8C	3	0.80	-0.800	16.00	2.030	0.50	25.97	2.160	0.50
195.00	Ericsson RRUS 32 (50.8 lbs)	4	0.80	0.400	50.80	2.692	0.50	63.05	2.890	0.50
195.00	Andrew SBNH-1D8585B	5	0.80	-1.600	46.20	8.187	0.69	76.36	8.670	0.69
195.00	Andrew SBJAHH-1D65B-DL	2	0.80	0.000	47.20	8.200	0.77	77.40	8.684	0.77
195.00	Commscope NNHH-65B-R4	3	0.80	-1.600	83.80	12.271	0.64	126.82	12.751	0.64
195.00	CCI HPA-33R-BUU-H6	2	0.80	-1.400	79.40	14.286	0.72	130.44	14.775	0.72
195.00	Round Sector Frame	3	0.75	0.000	300.00	14.400	0.75	362.98	17.234	0.75
182.00	Ericsson 8843 Rev 2	3	0.80	0.000	75.00	1.650	0.50	85.56	1.795	0.50
182.00	Ericsson Radio 4449 - B13&B5	3	0.80	0.000	70.00	1.650	0.50	79.59	1.794	0.50
182.00	Raycap RCMDC-3315-PF-48 (32	1	0.80	1.900	32.00	2.512	0.50	45.59	2.689	0.50
182.00	Ericsson AIR 6449 B77D/ C-Band	3	0.80	0.000	81.60	4.028	0.70	101.42	4.262	0.70
182.00	Raycap RCMDC-6627-PF-48	1	0.80	0.000	32.00	4.056	0.50	53.63	4.288	0.50
182.00	Commscope NHH-65C-R2B	6	0.80	-0.100	51.60	11.389	0.70	90.49	11.939	0.70
182.00	Flat Low Profile Platform	1	1.00	0.000	1,500.00	26.100	1.00	1,610.26	29.349	1.00
Totals	Num Loadings:17	52			5,012.90			6,313.40		

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	Dist Between Rows (in)	Dist Between Cols (in)	Dist Azimuth (deg)	Dist From Face (in)	Exposed To Wind Carrier
0.00	195.00	3	0.39" (10mm) Fiber	0.39	0.06	N	0	0.00	0.00	0	AT&T MOBILITY
0.00	195.00	6	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0.00	0.00	0	AT&T MOBILITY
0.00	195.00	12	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	AT&T MOBILITY
0.00	195.00	1	2 1/2" conduit	2.88	5.79	N	0	0.00	0.00	0	AT&T MOBILITY
0.00	195.00	3	3/8" (0.38"- 9.5mm)	0.38	0.23	N	0	0.00	0.00	0	AT&T MOBILITY
0.00	194.00	3	2" conduit	2.38	3.65	N	0	0.00	0.00	0	AT&T MOBILITY
0.00	182.00	1	1 1/4" Hybriflex Cable	1.54	1.00	N	0	0.00	0.00	0	VERIZON WIRELES
0.00	182.00	1	1 5/8" Hybriflex	1.98	1.30	N	0	0.00	0.00	0	VERIZON WIRELES

te Number: 282213

Code: ANSI/TIA-222-H

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Customer: VERIZON WIRELESS

Segment Properties (Max Len : 5.ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in ³)	Z (in ³)	Weight (lb)
00		0.4375	64.244	88.600	45,574.2	24.13	146.84	73.0	1397.	0.0	0.0
00		0.4375	63.052	86.945	43,067.1	23.65	144.12	73.6	1345.	0.0	1,493.4
1.00		0.4375	61.860	85.289	40,653.7	23.17	141.39	74.2	1294.	0.0	1,465.2
1.00		0.4375	60.668	83.634	38,332.2	22.69	138.67	74.7	1244.	0.0	1,437.0
1.00		0.4375	59.475	81.979	36,100.8	22.21	135.94	75.3	1195.	0.0	1,408.9
1.00		0.4375	58.283	80.323	33,957.7	21.73	133.22	75.8	1147.	0.0	1,380.7
1.00		0.4375	57.091	78.668	31,901.2	21.25	130.49	76.4	1100.	0.0	1,352.5
1.00		0.4375	55.899	77.012	29,929.4	20.77	127.77	77.0	1054.	0.0	1,324.4
1.00		0.4375	54.707	75.357	28,040.5	20.29	125.04	77.5	1009.	0.0	1,296.2
1.00		0.4375	53.515	73.702	26,232.9	19.80	122.32	78.1	965.5	0.0	1,268.0
1.25	Bot - Section 2	0.4375	53.455	73.619	26,144.6	19.78	122.18	78.1	963.3	0.0	62.7
1.00		0.4375	52.323	72.046	24,504.7	19.32	119.59	78.7	922.4	0.0	2,201.9
2.75	Top - Section 1	0.3750	52.417	61.941	21,195.0	22.88	139.78	74.5	796.4	0.0	1,253.2
1.00		0.3750	51.880	61.302	20,546.3	22.63	138.35	74.8	780.0	0.0	471.8
1.00		0.3750	50.688	59.883	19,152.4	22.07	135.17	75.4	744.2	0.0	1,030.9
1.00		0.3750	49.496	58.464	17,822.9	21.51	131.99	76.1	709.2	0.0	1,006.8
1.00		0.3750	48.304	57.045	16,556.5	20.95	128.81	76.8	675.1	0.0	982.6
1.00		0.3750	47.112	55.626	15,351.5	20.39	125.63	77.4	641.8	0.0	958.5
1.00		0.3750	45.920	54.208	14,206.5	19.83	122.45	78.1	609.4	0.0	934.4
1.00		0.3750	44.727	52.789	13,119.8	19.27	119.27	78.7	577.7	0.0	910.2
1.00		0.3750	43.535	51.370	12,090.1	18.71	116.09	79.4	547.0	0.0	886.1
2.25	Bot - Section 3	0.3750	42.999	50.731	11,644.8	18.46	114.66	79.7	533.4	0.0	390.9
1.00		0.3750	42.343	49.951	11,115.6	18.15	112.92	80.1	517.1	0.0	870.0
3.25	Top - Section 2	0.3125	42.193	41.539	9,205.3	22.04	135.02	75.5	429.7	0.0	1,010.9
10.0		0.3125	41.776	41.125	8,932.9	21.81	133.68	75.7	421.2	0.0	246.1
15.0		0.3125	40.584	39.943	8,184.3	21.14	129.87	76.5	397.2	0.0	689.6
10.0		0.3125	39.392	38.760	7,478.8	20.46	126.05	77.3	373.9	0.0	669.5
15.0		0.3125	38.200	37.578	6,815.0	19.79	122.24	78.1	351.4	0.0	649.4
20.0		0.3125	37.007	36.395	6,191.7	19.12	118.42	78.9	329.5	0.0	629.3
25.0		0.3125	35.815	35.213	5,607.6	18.45	114.61	79.7	308.4	0.0	609.2
30.0		0.3125	34.623	34.031	5,061.5	17.77	110.79	80.5	287.9	0.0	589.1
35.0		0.3125	33.431	32.848	4,552.0	17.10	106.98	81.3	268.2	0.0	568.9
40.0		0.3125	32.239	31.666	4,077.9	16.43	103.16	82.1	249.1	0.0	548.8
40.7	Bot - Section 4	0.3125	32.060	31.488	4,009.8	16.33	102.59	82.2	246.3	0.0	80.6
45.0		0.3125	31.047	30.483	3,637.9	15.75	99.35	82.6	230.8	0.0	813.1
45.2	Top - Section 3	0.2500	31.487	24.786	3,055.6	20.44	125.95	77.4	191.1	0.0	47.0
50.0		0.2500	30.354	23.887	2,735.1	19.65	121.42	78.3	177.5	0.0	393.4
55.0		0.2500	29.162	22.941	2,422.9	18.81	116.65	79.3	163.6	0.0	398.4
56.7	Bot - Section 5	0.2500	28.745	22.610	2,319.5	18.51	114.98	79.6	158.9	0.0	135.6
60.0		0.2500	27.970	21.995	2,135.3	17.96	111.88	80.3	150.4	0.0	434.5
60.7	Top - Section 4	0.1875	28.166	16.650	1,646.8	24.72	150.22	72.3	115.2	0.0	98.6
65.0		0.1875	27.153	16.047	1,474.2	23.77	144.82	73.4	106.9	0.0	236.4
70.0		0.1875	25.961	15.338	1,287.2	22.65	138.46	74.8	97.7	0.0	267.0
75.0		0.1875	24.769	14.628	1,116.7	21.53	132.10	76.1	88.8	0.0	254.9
80.0		0.1875	23.576	13.919	962.0	20.41	125.74	77.4	80.4	0.0	242.8
82.0		0.1875	23.100	13.635	904.4	19.96	123.20	77.9	77.1	0.0	93.8
85.0		0.1875	22.384	13.209	822.3	19.29	119.38	78.7	72.4	0.0	137.0
90.0		0.1875	21.192	12.500	696.8	18.17	113.02	80.0	64.8	0.0	218.7
95.0		0.1875	20.000	11.790	584.7	17.04	106.67	81.4	57.6	0.0	206.6
											34,655.3

Site Number: 282213

Code: ANSI/TIA-222-H

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Site Name: FT WHITE WEST FL, FL

Engineering Number: 13686628_C3_02

6/14/2021 5:24:55 PM

Customer: VERIZON WIRELESS

Load Case: 1.2D + 1.0W

120 mph with No Ice

26 Iterations

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	Dead Load	Wind FX	Torsion	Moment	Dead Load	Wind FX	Dead Load	Wind FX	Dead Load	Torsion	Moment
					MY	MZ						MY	MZ
		(lb)	(lb)	(lb)	(lb-ft)	(lb-ft)	(lb)	(lb)	(lb)	(lb)	(lb)	(lb-ft)	(lb)
0.00		321.2	0.0					0.0	0.0	321.2	0.0	0.0	0.0
5.00		636.3	1,792.0					0.0	199.7	636.3	1,991.8	0.0	0.0
10.00		624.3	1,758.2					0.0	199.7	624.3	1,958.0	0.0	0.0
15.00		621.8	1,724.4					0.0	199.7	621.8	1,924.2	0.0	0.0
20.00		635.8	1,690.6					0.0	199.7	635.8	1,890.4	0.0	0.0
25.00		653.4	1,656.8					0.0	199.7	653.4	1,856.6	0.0	0.0
30.00		665.3	1,623.0					0.0	199.7	665.3	1,822.8	0.0	0.0
35.00		673.0	1,589.2					0.0	199.7	673.0	1,789.0	0.0	0.0
40.00		677.5	1,555.4					0.0	199.7	677.5	1,755.2	0.0	0.0
45.00		356.5	1,521.6					0.0	199.7	356.5	1,721.4	0.0	0.0
45.25	Bot - Section 2	344.5	75.2					0.0	10.0	344.5	85.2	0.0	0.0
50.00		516.9	2,642.2					0.0	189.8	516.9	2,832.0	0.0	0.0
52.75	Top - Section 1	344.2	1,503.8					0.0	109.9	344.2	1,613.7	0.0	0.0
55.00		497.7	566.1					0.0	89.9	497.7	656.0	0.0	0.0
60.00		683.8	1,237.1					0.0	199.7	683.8	1,436.8	0.0	0.0
65.00		679.1	1,208.1					0.0	199.7	679.1	1,407.9	0.0	0.0
70.00		673.2	1,179.2					0.0	199.7	673.2	1,378.9	0.0	0.0
75.00		666.2	1,150.2					0.0	199.7	666.2	1,349.9	0.0	0.0
80.00		658.2	1,121.2					0.0	199.7	658.2	1,321.0	0.0	0.0
85.00		649.4	1,092.3					0.0	199.7	649.4	1,292.0	0.0	0.0
90.00		465.8	1,063.3					0.0	199.7	465.8	1,263.0	0.0	0.0
92.25	Bot - Section 3	319.9	469.0					0.0	89.9	319.9	558.9	0.0	0.0
95.00		382.9	1,044.0					0.0	109.9	382.9	1,153.9	0.0	0.0
98.25	Top - Section 2	316.6	1,213.1					0.0	129.8	316.6	1,343.0	0.0	0.0
100.00		421.2	295.4					0.0	69.9	421.2	365.3	0.0	0.0
105.00		616.0	827.6					0.0	199.7	616.0	1,027.3	0.0	0.0
110.00		603.8	803.4					0.0	199.7	603.8	1,003.2	0.0	0.0
115.00		591.1	779.3					0.0	199.7	591.1	979.0	0.0	0.0
120.00		577.8	755.1					0.0	199.7	577.8	954.9	0.0	0.0
125.00		564.0	731.0					0.0	199.7	564.0	930.7	0.0	0.0
130.00		549.7	706.9					0.0	199.7	549.7	906.6	0.0	0.0
135.00		535.0	682.7					0.0	199.7	535.0	882.5	0.0	0.0
140.00		302.7	658.6					0.0	199.7	302.7	858.3	0.0	0.0
140.75	Bot - Section 4	259.6	96.7					0.0	30.0	259.6	126.7	0.0	0.0
145.00		233.5	975.7					0.0	169.8	233.5	1,145.4	0.0	0.0
145.25	Top - Section 3	252.4	56.4					0.0	10.0	252.4	66.4	0.0	0.0
150.00		483.9	472.0					0.0	189.8	483.9	661.8	0.0	0.0
155.00		327.9	478.0					0.0	199.7	327.9	677.8	0.0	0.0
156.75	Bot - Section 5	238.2	162.7					0.0	69.9	238.2	232.7	0.0	0.0
160.00		189.7	521.4					0.0	129.8	189.7	651.2	0.0	0.0
160.75	Top - Section 4	230.9	118.3					0.0	30.0	230.9	148.3	0.0	0.0
165.00		418.1	283.7					0.0	169.8	418.1	453.5	0.0	0.0
170.00		436.1	320.4					0.0	199.7	436.1	520.1	0.0	0.0
175.00		418.7	305.9					0.0	199.7	418.7	505.6	0.0	0.0
180.00		284.4	291.4					0.0	199.7	284.4	491.2	0.0	0.0
182.00	Appurtenance(s)	196.0	112.5	4,289.0	0.0	-105.6	3,064.1	0.0	79.9	4,485.0	3,256.5	0.0	0.0
185.00		303.3	164.4					0.0	111.6	303.3	276.0	0.0	0.0
190.00		364.5	262.4					0.0	185.9	364.5	448.4	0.0	0.0

Load Case: 1.2D + 1.0W			120 mph with No Ice								26 Iterations		
Gust Response Factor :1.10													
Dead Load Factor :1.20													
Wind Load Factor :1.00													
95.00	Appurtenance(s)	177.6	248.0	5,888.4	0.0	-5,153.0	2,951.4	0.0	172.8	6,066.0	3,372.2	0.0	0.0
Totals:										32,816.7	55,342.7	0.00	0.00

Site Number: 282213

Code: ANSI/TIA-222-H

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Site Name: FT WHITE WEST FL, FL

Engineering Number: 13686628_C3_02

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Customer: VERIZON WIRELESS

Load Case: 1.2D + 1.0W

120 mph with No Ice

26 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	-55.31	-32.56	0.00	-4,111.05	0.00	4,111.05	5,822.67	1,554.93	8,961.09	7,651.97	0.00	0.00	0.54
5.00	-53.24	-32.04	0.00	-3,948.27	0.00	3,948.27	5,758.10	1,525.88	8,629.40	7,424.77	0.07	-0.13	0.54
10.00	-51.22	-31.52	0.00	-3,788.09	0.00	3,788.09	5,691.85	1,496.83	8,303.96	7,198.63	0.27	-0.25	0.53
15.00	-49.23	-31.00	0.00	-3,630.49	0.00	3,630.49	5,623.91	1,467.78	7,984.78	6,973.68	0.60	-0.38	0.53
20.00	-47.27	-30.46	0.00	-3,475.49	0.00	3,475.49	5,554.29	1,438.73	7,671.85	6,750.04	1.08	-0.52	0.52
25.00	-45.35	-29.89	0.00	-3,323.20	0.00	3,323.20	5,482.98	1,409.67	7,365.17	6,527.84	1.69	-0.65	0.51
30.00	-43.47	-29.31	0.00	-3,173.73	0.00	3,173.73	5,409.99	1,380.62	7,064.75	6,307.21	2.44	-0.79	0.51
35.00	-41.62	-28.71	0.00	-3,027.18	0.00	3,027.18	5,335.32	1,351.57	6,770.59	6,088.26	3.34	-0.92	0.50
40.00	-39.80	-28.10	0.00	-2,883.63	0.00	2,883.63	5,258.96	1,322.52	6,482.68	5,871.12	4.38	-1.06	0.49
45.00	-38.05	-27.76	0.00	-2,743.12	0.00	2,743.12	5,180.92	1,293.46	6,201.03	5,655.92	5.57	-1.21	0.49
45.25	-37.94	-27.46	0.00	-2,736.18	0.00	2,736.18	5,176.97	1,292.01	6,187.11	5,645.21	5.63	-1.21	0.49
50.00	-35.07	-26.95	0.00	-2,605.73	0.00	2,605.73	5,101.20	1,264.41	5,925.63	5,442.78	6.91	-1.35	0.48
52.75	-33.43	-26.61	0.00	-2,531.62	0.00	2,531.62	4,152.32	1,087.06	5,109.67	4,449.17	7.72	-1.43	0.57
55.00	-32.73	-26.16	0.00	-2,471.74	0.00	2,471.74	4,125.89	1,075.85	5,004.88	4,374.94	8.41	-1.50	0.57
60.00	-31.24	-25.53	0.00	-2,340.93	0.00	2,340.93	4,065.92	1,050.95	4,775.90	4,210.85	10.07	-1.67	0.56
65.00	-29.78	-24.90	0.00	-2,213.27	0.00	2,213.27	4,004.27	1,026.05	4,552.28	4,048.01	11.91	-1.84	0.55
70.00	-28.35	-24.27	0.00	-2,088.77	0.00	2,088.77	3,940.94	1,001.15	4,334.02	3,886.56	13.93	-2.01	0.54
75.00	-26.96	-23.63	0.00	-1,967.45	0.00	1,967.45	3,875.92	976.24	4,121.12	3,726.63	16.12	-2.18	0.53
80.00	-25.59	-23.00	0.00	-1,849.28	0.00	1,849.28	3,809.22	951.34	3,913.59	3,568.33	18.51	-2.36	0.52
85.00	-24.26	-22.38	0.00	-1,734.27	0.00	1,734.27	3,740.83	926.44	3,711.41	3,411.79	21.07	-2.54	0.51
90.00	-22.97	-21.91	0.00	-1,622.39	0.00	1,622.39	3,670.76	901.54	3,514.60	3,257.14	23.83	-2.72	0.50
92.25	-22.39	-21.60	0.00	-1,573.11	0.00	1,573.11	3,638.68	890.33	3,427.78	3,188.20	25.13	-2.81	0.50
95.00	-21.21	-21.20	0.00	-1,513.72	0.00	1,513.72	3,599.01	876.64	3,323.15	3,104.51	26.78	-2.91	0.49
98.25	-19.85	-20.84	0.00	-1,444.83	0.00	1,444.83	2,821.56	729.01	2,757.64	2,432.36	28.80	-3.03	0.60
100.00	-19.46	-20.45	0.00	-1,408.35	0.00	1,408.35	2,803.70	721.75	2,702.97	2,392.70	29.93	-3.10	0.59
105.00	-18.39	-19.85	0.00	-1,306.08	0.00	1,306.08	2,751.53	700.99	2,549.80	2,280.16	33.29	-3.32	0.58
110.00	-17.36	-19.25	0.00	-1,206.83	0.00	1,206.83	2,697.67	680.24	2,401.08	2,168.84	36.88	-3.54	0.56
115.00	-16.34	-18.67	0.00	-1,110.56	0.00	1,110.56	2,642.13	659.49	2,256.84	2,058.88	40.70	-3.76	0.54
120.00	-15.36	-18.08	0.00	-1,017.23	0.00	1,017.23	2,584.91	638.74	2,117.06	1,950.39	44.75	-3.98	0.52
125.00	-14.40	-17.51	0.00	-926.81	0.00	926.81	2,526.00	617.99	1,981.75	1,843.50	49.03	-4.20	0.50
130.00	-13.47	-16.95	0.00	-839.25	0.00	839.25	2,465.41	597.24	1,850.91	1,738.33	53.55	-4.43	0.48
135.00	-12.57	-16.39	0.00	-754.51	0.00	754.51	2,403.14	576.48	1,724.54	1,635.02	58.30	-4.65	0.46
140.00	-11.71	-16.05	0.00	-672.53	0.00	672.53	2,339.18	555.73	1,602.64	1,533.68	63.28	-4.87	0.44
140.75	-11.57	-15.80	0.00	-660.50	0.00	660.50	2,329.44	552.62	1,584.74	1,518.66	64.05	-4.91	0.44
145.00	-10.43	-15.49	0.00	-593.34	0.00	593.34	2,264.75	534.98	1,485.20	1,428.90	68.50	-5.10	0.42
145.25	-10.35	-15.25	0.00	-589.47	0.00	589.47	1,725.54	434.99	1,227.28	1,108.88	68.76	-5.11	0.53
150.00	-9.68	-14.75	0.00	-517.03	0.00	517.03	1,683.18	419.22	1,139.91	1,042.13	73.95	-5.31	0.50
155.00	-8.99	-14.38	0.00	-443.30	0.00	443.30	1,636.94	402.62	1,051.43	973.04	79.64	-5.56	0.46
156.75	-8.75	-14.14	0.00	-418.13	0.00	418.13	1,620.36	396.80	1,021.30	949.16	81.69	-5.65	0.44
160.00	-8.10	-13.90	0.00	-372.17	0.00	372.17	1,589.02	386.01	966.52	905.27	85.59	-5.81	0.41
160.75	-7.95	-13.67	0.00	-361.75	0.00	361.75	1,083.74	292.21	738.43	624.60	86.50	-5.85	0.58
165.00	-7.49	-13.24	0.00	-303.64	0.00	303.64	1,060.67	281.63	685.91	589.02	91.79	-6.04	0.52
170.00	-6.96	-12.78	0.00	-237.44	0.00	237.44	1,031.98	269.18	626.61	547.58	98.25	-6.30	0.44

te Number: 282213

Code: ANSI/TIA-222-H

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Site Name: FT WHITE WEST FL, FL

Engineering Number:13686628_C3_02

6/14/2021 5:24:58 PM

Customer: VERIZON WIRELESS

Load Case: 1.2D + 1.0W

120 mph with No Ice

26 Iterations

Gust Response Factor :1.10

Dead Load Factor :1.20

Wind Load Factor :1.00

175.00	-6.46	-12.33	0.00	-173.54	0.00	173.54	1,001.61	256.73	569.99	506.70	104.96	-6.53	0.351
180.00	-5.99	-12.00	0.00	-111.88	0.00	111.88	969.55	244.28	516.05	466.52	111.88	-6.71	0.248
182.00	-3.27	-7.17	0.00	-87.87	0.00	87.87	956.25	239.30	495.22	450.66	114.70	-6.77	0.199
185.00	-3.02	-6.84	0.00	-66.36	0.00	66.36	935.81	231.83	464.79	427.15	118.97	-6.84	0.159
190.00	-2.61	-6.43	0.00	-32.15	0.00	32.15	900.38	219.37	416.21	388.72	126.17	-6.93	0.086
195.00	0.00	-6.07	0.00	0.00	0.00	0.00	863.27	206.92	370.31	351.36	133.42	-6.96	0.001

Site Number: 282213

Code: ANSI/TIA-222-H

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Site Name: FT WHITE WEST FL, FL

Engineering Number: 13686628_C3_02

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Customer: VERIZON WIRELESS

Load Case: 0.9D + 1.0W**120 mph with No Ice (Reduced DL)****26 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		321.2	0.0					0.0	0.0	321.2	0.0	0.0	0.0
5.00		636.3	1,344.0					0.0	149.8	636.3	1,493.8	0.0	0.0
10.00		624.3	1,318.7					0.0	149.8	624.3	1,468.5	0.0	0.0
15.00		621.8	1,293.3					0.0	149.8	621.8	1,443.1	0.0	0.0
20.00		635.8	1,268.0					0.0	149.8	635.8	1,417.8	0.0	0.0
25.00		653.4	1,242.6					0.0	149.8	653.4	1,392.4	0.0	0.0
30.00		665.3	1,217.3					0.0	149.8	665.3	1,367.1	0.0	0.0
35.00		673.0	1,191.9					0.0	149.8	673.0	1,341.7	0.0	0.0
40.00		677.5	1,166.6					0.0	149.8	677.5	1,316.4	0.0	0.0
45.00		356.5	1,141.2					0.0	149.8	356.5	1,291.0	0.0	0.0
45.25	Bot - Section 2	344.5	56.4					0.0	7.5	344.5	63.9	0.0	0.0
50.00		516.9	1,981.7					0.0	142.3	516.9	2,124.0	0.0	0.0
52.75	Top - Section 1	344.2	1,127.9					0.0	82.4	344.2	1,210.3	0.0	0.0
55.00		497.7	424.6					0.0	67.4	497.7	492.0	0.0	0.0
60.00		683.8	927.8					0.0	149.8	683.8	1,077.6	0.0	0.0
65.00		679.1	906.1					0.0	149.8	679.1	1,055.9	0.0	0.0
70.00		673.2	884.4					0.0	149.8	673.2	1,034.2	0.0	0.0
75.00		666.2	862.6					0.0	149.8	666.2	1,012.4	0.0	0.0
80.00		658.2	840.9					0.0	149.8	658.2	990.7	0.0	0.0
85.00		649.4	819.2					0.0	149.8	649.4	969.0	0.0	0.0
90.00		465.8	797.5					0.0	149.8	465.8	947.3	0.0	0.0
92.25	Bot - Section 3	319.9	351.8					0.0	67.4	319.9	419.2	0.0	0.0
95.00		382.9	783.0					0.0	82.4	382.9	865.4	0.0	0.0
98.25	Top - Section 2	316.6	909.8					0.0	97.4	316.6	1,007.2	0.0	0.0
100.00		421.2	221.5					0.0	52.4	421.2	273.9	0.0	0.0
105.00		616.0	620.7					0.0	149.8	616.0	770.5	0.0	0.0
110.00		603.8	602.6					0.0	149.8	603.8	752.4	0.0	0.0
115.00		591.1	584.5					0.0	149.8	591.1	734.3	0.0	0.0
120.00		577.8	566.4					0.0	149.8	577.8	716.2	0.0	0.0
125.00		564.0	548.3					0.0	149.8	564.0	698.1	0.0	0.0
130.00		549.7	530.1					0.0	149.8	549.7	680.0	0.0	0.0
135.00		535.0	512.0					0.0	149.8	535.0	661.8	0.0	0.0
140.00		302.7	493.9					0.0	149.8	302.7	643.7	0.0	0.0
140.75	Bot - Section 4	259.6	72.5					0.0	22.5	259.6	95.0	0.0	0.0
145.00		233.5	731.7					0.0	127.3	233.5	859.1	0.0	0.0
145.25	Top - Section 3	252.4	42.3					0.0	7.5	252.4	49.8	0.0	0.0
150.00		483.9	354.0					0.0	142.3	483.9	496.3	0.0	0.0
155.00		327.9	358.5					0.0	149.8	327.9	508.3	0.0	0.0
156.75	Bot - Section 5	238.2	122.1					0.0	52.4	238.2	174.5	0.0	0.0
160.00		189.7	391.1					0.0	97.4	189.7	488.4	0.0	0.0
160.75	Top - Section 4	230.9	88.7					0.0	22.5	230.9	111.2	0.0	0.0
165.00		418.1	212.8					0.0	127.3	418.1	340.1	0.0	0.0
170.00		436.1	240.3					0.0	149.8	436.1	390.1	0.0	0.0
175.00		418.7	229.4					0.0	149.8	418.7	379.2	0.0	0.0
180.00		284.4	218.6					0.0	149.8	284.4	368.4	0.0	0.0
182.00	Appurtenance(s)	196.0	84.4	4,289.0	0.0	-105.6	2,298.1	0.0	59.9	4,485.0	2,442.4	0.0	0.0
185.00		303.3	123.3					0.0	83.7	303.3	207.0	0.0	0.0
190.00		364.5	196.8					0.0	139.5	364.5	336.3	0.0	0.0

Load Case: 0.9D + 1.0W				120 mph with No Ice (Reduced DL)						26 Iterations			
Gust Response Factor :1.10													
Dead Load Factor :0.90													
Wind Load Factor :1.00													
95.00	Appurtenance(s)	177.6	186.0	5,888.4	0.0	-5,153.0	2,213.5	0.0	129.6	6,066.0	2,529.1	0.0	0.0
Totals:										32,816.7	41,507.0	0.00	0.00

Site Number: 282213

Code: ANSI/TIA-222-H

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Site Name: FT WHITE WEST FL, FL

Engineering Number: 13686628_C3_02

6/14/2021 5:25:02 PM

Customer: VERIZON WIRELESS

Load Case: 0.9D + 1.0W

120 mph with No Ice (Reduced DL)

26 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)	Rati
0.00	-41.47	-32.54	0.00	-4,066.24	0.00	4,066.24	5,822.67	1,554.93	8,961.09	7,651.97	0.00	0.00	0.53
5.00	-39.91	-31.99	0.00	-3,903.54	0.00	3,903.54	5,758.10	1,525.88	8,629.40	7,424.77	0.07	-0.12	0.53
10.00	-38.37	-31.45	0.00	-3,743.59	0.00	3,743.59	5,691.85	1,496.83	8,303.96	7,198.63	0.27	-0.25	0.52
15.00	-36.86	-30.90	0.00	-3,586.36	0.00	3,586.36	5,623.91	1,467.78	7,984.78	6,973.68	0.60	-0.38	0.52
20.00	-35.38	-30.33	0.00	-3,431.87	0.00	3,431.87	5,554.29	1,438.73	7,671.85	6,750.04	1.06	-0.51	0.51
25.00	-33.93	-29.75	0.00	-3,280.20	0.00	3,280.20	5,482.98	1,409.67	7,365.17	6,527.84	1.67	-0.64	0.50
30.00	-32.50	-29.14	0.00	-3,131.47	0.00	3,131.47	5,409.99	1,380.62	7,064.75	6,307.21	2.41	-0.78	0.50
35.00	-31.10	-28.52	0.00	-2,985.78	0.00	2,985.78	5,335.32	1,351.57	6,770.59	6,088.26	3.30	-0.91	0.49
40.00	-29.73	-27.89	0.00	-2,843.17	0.00	2,843.17	5,258.96	1,322.52	6,482.68	5,871.12	4.33	-1.05	0.49
45.00	-28.41	-27.55	0.00	-2,703.69	0.00	2,703.69	5,180.92	1,293.46	6,201.03	5,655.92	5.50	-1.19	0.48
45.25	-28.32	-27.24	0.00	-2,696.81	0.00	2,696.81	5,176.97	1,292.01	6,187.11	5,645.21	5.57	-1.20	0.48
50.00	-26.15	-26.73	0.00	-2,567.42	0.00	2,567.42	5,101.20	1,264.41	5,925.63	5,442.78	6.83	-1.33	0.47
52.75	-24.92	-26.38	0.00	-2,493.93	0.00	2,493.93	4,152.32	1,087.06	5,109.67	4,449.17	7.62	-1.42	0.56
55.00	-24.39	-25.92	0.00	-2,434.56	0.00	2,434.56	4,125.89	1,075.85	5,004.88	4,374.94	8.30	-1.48	0.56
60.00	-23.25	-25.28	0.00	-2,304.95	0.00	2,304.95	4,065.92	1,050.95	4,775.90	4,210.85	9.95	-1.65	0.55
65.00	-22.15	-24.63	0.00	-2,178.56	0.00	2,178.56	4,004.27	1,026.05	4,552.28	4,048.01	11.76	-1.81	0.54
70.00	-21.06	-23.99	0.00	-2,055.40	0.00	2,055.40	3,940.94	1,001.15	4,334.02	3,886.56	13.75	-1.98	0.53
75.00	-20.01	-23.35	0.00	-1,935.47	0.00	1,935.47	3,875.92	976.24	4,121.12	3,726.63	15.92	-2.15	0.52
80.00	-18.97	-22.71	0.00	-1,818.74	0.00	1,818.74	3,809.22	951.34	3,913.59	3,568.33	18.26	-2.33	0.51
85.00	-17.96	-22.07	0.00	-1,705.20	0.00	1,705.20	3,740.83	926.44	3,711.41	3,411.79	20.79	-2.50	0.50
90.00	-16.99	-21.60	0.00	-1,594.84	0.00	1,594.84	3,670.76	901.54	3,514.60	3,257.14	23.51	-2.68	0.49
92.25	-16.55	-21.29	0.00	-1,546.23	0.00	1,546.23	3,638.68	890.33	3,427.78	3,188.20	24.80	-2.77	0.49
95.00	-15.67	-20.90	0.00	-1,487.68	0.00	1,487.68	3,599.01	876.64	3,323.15	3,104.51	26.42	-2.87	0.48
98.25	-14.64	-20.55	0.00	-1,419.76	0.00	1,419.76	2,821.56	729.01	2,757.64	2,432.36	28.41	-2.99	0.59
100.00	-14.34	-20.15	0.00	-1,383.80	0.00	1,383.80	2,803.70	721.75	2,702.97	2,392.70	29.52	-3.05	0.58
105.00	-13.53	-19.55	0.00	-1,283.03	0.00	1,283.03	2,751.53	700.99	2,549.80	2,280.16	32.83	-3.27	0.56
110.00	-12.75	-18.95	0.00	-1,185.30	0.00	1,185.30	2,697.67	680.24	2,401.08	2,168.84	36.37	-3.48	0.55
115.00	-11.98	-18.36	0.00	-1,090.56	0.00	1,090.56	2,642.13	659.49	2,256.84	2,058.88	40.13	-3.70	0.53
120.00	-11.24	-17.78	0.00	-998.78	0.00	998.78	2,584.91	638.74	2,117.06	1,950.39	44.12	-3.92	0.51
125.00	-10.51	-17.20	0.00	-909.90	0.00	909.90	2,526.00	617.99	1,981.75	1,843.50	48.33	-4.14	0.49
130.00	-9.81	-16.64	0.00	-823.88	0.00	823.88	2,465.41	597.24	1,850.91	1,738.33	52.78	-4.36	0.47
135.00	-9.13	-16.09	0.00	-740.65	0.00	740.65	2,403.14	576.48	1,724.54	1,635.02	57.45	-4.58	0.45
140.00	-8.48	-15.76	0.00	-660.18	0.00	660.18	2,339.18	555.73	1,602.64	1,533.68	62.36	-4.79	0.43
140.75	-8.38	-15.51	0.00	-648.37	0.00	648.37	2,329.44	552.62	1,584.74	1,518.66	63.11	-4.83	0.43
145.00	-7.52	-15.21	0.00	-582.46	0.00	582.46	2,264.75	534.98	1,485.20	1,428.90	67.49	-5.01	0.41
145.25	-7.46	-14.97	0.00	-578.65	0.00	578.65	1,725.54	434.99	1,227.28	1,108.88	67.75	-5.03	0.52
150.00	-6.95	-14.47	0.00	-507.53	0.00	507.53	1,683.18	419.22	1,139.91	1,042.13	72.85	-5.23	0.49
155.00	-6.44	-14.12	0.00	-435.16	0.00	435.16	1,636.94	402.62	1,051.43	973.04	78.45	-5.47	0.45
156.75	-6.26	-13.88	0.00	-410.45	0.00	410.45	1,620.36	396.80	1,021.30	949.16	80.47	-5.56	0.43
160.00	-5.77	-13.65	0.00	-365.34	0.00	365.34	1,589.02	386.01	966.52	905.27	84.31	-5.71	0.40
160.75	-5.65	-13.42	0.00	-355.11	0.00	355.11	1,083.74	292.21	738.43	624.60	85.21	-5.75	0.57
165.00	-5.31	-12.99	0.00	-298.06	0.00	298.06	1,060.67	281.63	685.91	589.02	90.40	-5.94	0.51
170.00	-4.91	-12.54	0.00	-233.10	0.00	233.10	1,031.98	269.18	626.61	547.58	96.76	-6.20	0.43

Load Case: 0.9D + 1.0W						120 mph with No Ice (Reduced DL)						26 Iterations	
Gust Response Factor :1.10													
Dead Load Factor :0.90													
Wind Load Factor :1.00													
75.00	-4.54	-12.10	0.00	-170.41	0.00	170.41	1,001.61	256.73	569.99	506.70	103.36	-6.42	0.343
80.00	-4.18	-11.78	0.00	-109.93	0.00	109.93	969.55	244.28	516.05	466.52	110.17	-6.60	0.242
82.00	-2.27	-7.05	0.00	-86.37	0.00	86.37	956.25	239.30	495.22	450.66	112.94	-6.66	0.195
85.00	-2.09	-6.72	0.00	-65.24	0.00	65.24	935.81	231.83	464.79	427.15	117.14	-6.73	0.156
90.00	-1.79	-6.32	0.00	-31.62	0.00	31.62	900.38	219.37	416.21	388.72	124.21	-6.81	0.084
95.00	0.00	-6.07	0.00	0.00	0.00	0.00	863.27	206.92	370.31	351.36	131.35	-6.84	0.001

Site Number: 282213

Code: ANSI/TIA-222-H

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Site Name: FT WHITE WEST FL, FL

Engineering Number: 13686628_C3_02

6/14/2021 5:25:02 PM

Customer: VERIZON WIRELESS

Load Case: 1.2D + 1.0Di + 1.0Wi

30 mph with 0.25 in Radial Ice

24 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		33.2	0.0					0.0	0.0	33.2	0.0	0.0	0.0
5.00		65.8	1,868.6					0.0	199.7	65.8	2,068.3	0.0	0.0
10.00		64.6	1,842.1					0.0	199.7	64.6	2,041.8	0.0	0.0
15.00		64.4	1,811.0					0.0	199.7	64.4	2,010.7	0.0	0.0
20.00		65.8	1,778.4					0.0	199.7	65.8	1,978.2	0.0	0.0
25.00		67.7	1,745.1					0.0	199.7	67.7	1,944.8	0.0	0.0
30.00		68.9	1,711.2					0.0	199.7	68.9	1,911.0	0.0	0.0
35.00		69.8	1,677.1					0.0	199.7	69.8	1,876.8	0.0	0.0
40.00		70.2	1,642.6					0.0	199.7	70.2	1,842.4	0.0	0.0
45.00		37.0	1,608.0					0.0	199.7	37.0	1,807.8	0.0	0.0
45.25	Bot - Section 2	35.7	79.5					0.0	10.0	35.7	89.5	0.0	0.0
50.00		53.6	2,724.6					0.0	189.8	53.6	2,914.3	0.0	0.0
52.75	Top - Section 1	35.7	1,551.3					0.0	109.9	35.7	1,661.1	0.0	0.0
55.00		51.6	604.8					0.0	89.9	51.6	694.6	0.0	0.0
60.00		71.0	1,321.5					0.0	199.7	71.0	1,521.2	0.0	0.0
65.00		70.5	1,291.2					0.0	199.7	70.5	1,491.0	0.0	0.0
70.00		69.9	1,260.9					0.0	199.7	69.9	1,460.6	0.0	0.0
75.00		69.2	1,230.5					0.0	199.7	69.2	1,430.2	0.0	0.0
80.00		68.4	1,200.0					0.0	199.7	68.4	1,399.8	0.0	0.0
85.00		67.5	1,169.5					0.0	199.7	67.5	1,369.3	0.0	0.0
90.00		48.5	1,138.9					0.0	199.7	48.5	1,338.7	0.0	0.0
92.25	Bot - Section 3	33.3	502.8					0.0	89.9	33.3	592.7	0.0	0.0
95.00		39.8	1,085.4					0.0	109.9	39.8	1,195.2	0.0	0.0
98.25	Top - Section 2	33.0	1,261.3					0.0	129.8	33.0	1,391.1	0.0	0.0
100.00		43.8	321.1					0.0	69.9	43.8	391.0	0.0	0.0
105.00		64.2	899.3					0.0	199.7	64.2	1,099.0	0.0	0.0
110.00		62.9	873.4					0.0	199.7	62.9	1,073.1	0.0	0.0
115.00		61.6	847.4					0.0	199.7	61.6	1,047.2	0.0	0.0
120.00		60.3	821.5					0.0	199.7	60.3	1,021.2	0.0	0.0
125.00		58.9	795.5					0.0	199.7	58.9	995.2	0.0	0.0
130.00		57.4	769.5					0.0	199.7	57.4	969.2	0.0	0.0
135.00		55.9	743.4					0.0	199.7	55.9	943.2	0.0	0.0
140.00		31.6	717.3					0.0	199.7	31.6	917.1	0.0	0.0
140.75	Bot - Section 4	27.1	105.5					0.0	30.0	27.1	135.5	0.0	0.0
145.00		24.4	1,024.7					0.0	169.8	24.4	1,194.5	0.0	0.0
145.25	Top - Section 3	26.4	59.3					0.0	10.0	26.4	69.3	0.0	0.0
150.00		50.7	525.0					0.0	189.8	50.7	714.7	0.0	0.0
155.00		34.3	531.8					0.0	199.7	34.3	731.5	0.0	0.0
156.75	Bot - Section 5	25.0	181.3					0.0	69.9	25.0	251.3	0.0	0.0
160.00		19.9	555.5					0.0	129.8	19.9	685.3	0.0	0.0
160.75	Top - Section 4	24.2	126.1					0.0	30.0	24.2	156.1	0.0	0.0
165.00		43.9	326.6					0.0	169.8	43.9	496.4	0.0	0.0
170.00		45.8	368.8					0.0	199.7	45.8	568.5	0.0	0.0
175.00		44.0	352.2					0.0	199.7	44.0	552.0	0.0	0.0
180.00		29.9	335.7					0.0	199.7	29.9	535.4	0.0	0.0
182.00	Appurtenance(s)	20.6	129.9	288.8	0.0	-6.8	3,142.1	0.0	79.9	309.4	3,351.9	0.0	0.0
185.00		32.0	189.7					0.0	111.6	32.0	301.3	0.0	0.0
190.00		38.5	302.5					0.0	185.9	38.5	488.4	0.0	0.0

te Number: 282213

Code: ANSI/TIA-222-H

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Site Name: FT WHITE WEST FL, FL

Engineering Number:13686628_C3_02

6/14/2021 5:25:06 PM

Customer: VERIZON WIRELESS

Load Case: 1.2D + 1.0Di + 1.0Wi				30 mph with 0.25 in Radial Ice				24 Iterations					
Gust Response Factor :1.10				Ice Dead Load Factor :1.00				Ice Importance Factor :1.00					
Dead Load Factor :1.20													
Wind Load Factor :1.00													
95.00	Appurtenance(s)	18.8	285.9	399.9	0.0	-337.2	2,894.4	0.0	172.8	418.6	3,353.1	0.0	0.0
Totals:										3,045.91	58,072.5	0.00	0.00

Site Number: 282213

Code: ANSI/TIA-222-H

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Site Name: FT WHITE WEST FL, FL

Engineering Number: 13686628_C3_02

6/14/2021 5:25:06 PM

Customer: VERIZON WIRELESS

Load Case: 1.2D + 1.0Di + 1.0Wi

30 mph with 0.25 in Radial Ice

24 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	-58.07	-3.02	0.00	-355.85	0.00	355.85	5,822.67	1,554.93	8,961.09	7,651.97	0.00	0.00	0.05
5.00	-56.00	-2.96	0.00	-340.76	0.00	340.76	5,758.10	1,525.88	8,629.40	7,424.77	0.01	-0.01	0.05
10.00	-53.96	-2.91	0.00	-325.95	0.00	325.95	5,691.85	1,496.83	8,303.96	7,198.63	0.02	-0.02	0.05
15.00	-51.95	-2.85	0.00	-311.42	0.00	311.42	5,623.91	1,467.78	7,984.78	6,973.68	0.05	-0.03	0.05
20.00	-49.97	-2.79	0.00	-297.16	0.00	297.16	5,554.29	1,438.73	7,671.85	6,750.04	0.09	-0.04	0.05
25.00	-48.03	-2.74	0.00	-283.18	0.00	283.18	5,482.98	1,409.67	7,365.17	6,527.84	0.15	-0.06	0.05
30.00	-46.11	-2.67	0.00	-269.51	0.00	269.51	5,409.99	1,380.62	7,064.75	6,307.21	0.21	-0.07	0.05
35.00	-44.24	-2.61	0.00	-256.14	0.00	256.14	5,335.32	1,351.57	6,770.59	6,088.26	0.29	-0.08	0.05
40.00	-42.39	-2.55	0.00	-243.09	0.00	243.09	5,258.96	1,322.52	6,482.68	5,871.12	0.38	-0.09	0.04
45.00	-40.59	-2.51	0.00	-230.36	0.00	230.36	5,180.92	1,293.46	6,201.03	5,655.92	0.48	-0.10	0.04
45.25	-40.50	-2.48	0.00	-229.73	0.00	229.73	5,176.97	1,292.01	6,187.11	5,645.21	0.48	-0.10	0.04
50.00	-37.58	-2.43	0.00	-217.96	0.00	217.96	5,101.20	1,264.41	5,925.63	5,442.78	0.59	-0.12	0.04
52.75	-35.92	-2.39	0.00	-211.29	0.00	211.29	4,152.32	1,087.06	5,109.67	4,449.17	0.66	-0.12	0.05
55.00	-35.23	-2.34	0.00	-205.91	0.00	205.91	4,125.89	1,075.85	5,004.88	4,374.94	0.72	-0.13	0.05
60.00	-33.70	-2.28	0.00	-194.19	0.00	194.19	4,065.92	1,050.95	4,775.90	4,210.85	0.86	-0.14	0.05
65.00	-32.21	-2.21	0.00	-182.80	0.00	182.80	4,004.27	1,026.05	4,552.28	4,048.01	1.02	-0.16	0.05
70.00	-30.75	-2.14	0.00	-171.75	0.00	171.75	3,940.94	1,001.15	4,334.02	3,886.56	1.19	-0.17	0.05
75.00	-29.32	-2.08	0.00	-161.03	0.00	161.03	3,875.92	976.24	4,121.12	3,726.63	1.37	-0.18	0.05
80.00	-27.92	-2.01	0.00	-150.64	0.00	150.64	3,809.22	951.34	3,913.59	3,568.33	1.57	-0.20	0.05
85.00	-26.55	-1.95	0.00	-140.58	0.00	140.58	3,740.83	926.44	3,711.41	3,411.79	1.79	-0.21	0.04
90.00	-25.21	-1.90	0.00	-130.85	0.00	130.85	3,670.76	901.54	3,514.60	3,257.14	2.02	-0.23	0.04
92.25	-24.62	-1.87	0.00	-126.58	0.00	126.58	3,638.68	890.33	3,427.78	3,188.20	2.13	-0.23	0.04
95.00	-23.42	-1.82	0.00	-121.45	0.00	121.45	3,599.01	876.64	3,323.15	3,104.51	2.27	-0.24	0.04
98.25	-22.03	-1.79	0.00	-115.52	0.00	115.52	2,821.56	729.01	2,757.64	2,432.36	2.43	-0.25	0.05
100.00	-21.64	-1.75	0.00	-112.39	0.00	112.39	2,803.70	721.75	2,702.97	2,392.70	2.53	-0.26	0.05
105.00	-20.54	-1.68	0.00	-103.66	0.00	103.66	2,751.53	700.99	2,549.80	2,280.16	2.81	-0.28	0.05
110.00	-19.47	-1.62	0.00	-95.24	0.00	95.24	2,697.67	680.24	2,401.08	2,168.84	3.11	-0.29	0.05
115.00	-18.42	-1.56	0.00	-87.13	0.00	87.13	2,642.13	659.49	2,256.84	2,058.88	3.42	-0.31	0.04
120.00	-17.40	-1.50	0.00	-79.33	0.00	79.33	2,584.91	638.74	2,117.06	1,950.39	3.75	-0.33	0.04
125.00	-16.41	-1.44	0.00	-71.84	0.00	71.84	2,526.00	617.99	1,981.75	1,843.50	4.11	-0.34	0.04
130.00	-15.44	-1.38	0.00	-64.64	0.00	64.64	2,465.41	597.24	1,850.91	1,738.33	4.48	-0.36	0.04
135.00	-14.49	-1.32	0.00	-57.74	0.00	57.74	2,403.14	576.48	1,724.54	1,635.02	4.87	-0.38	0.04
140.00	-13.58	-1.29	0.00	-51.12	0.00	51.12	2,339.18	555.73	1,602.64	1,533.68	5.27	-0.40	0.03
140.75	-13.44	-1.26	0.00	-50.16	0.00	50.16	2,329.44	552.62	1,584.74	1,518.66	5.33	-0.40	0.03
145.00	-12.25	-1.23	0.00	-44.79	0.00	44.79	2,264.75	534.98	1,485.20	1,428.90	5.70	-0.41	0.03
145.25	-12.18	-1.21	0.00	-44.49	0.00	44.49	1,725.54	434.99	1,227.28	1,108.88	5.72	-0.41	0.04
150.00	-11.46	-1.15	0.00	-38.76	0.00	38.76	1,683.18	419.22	1,139.91	1,042.13	6.14	-0.43	0.04
155.00	-10.73	-1.12	0.00	-33.00	0.00	33.00	1,636.94	402.62	1,051.43	973.04	6.60	-0.45	0.04
156.75	-10.48	-1.09	0.00	-31.05	0.00	31.05	1,620.36	396.80	1,021.30	949.16	6.76	-0.45	0.03
160.00	-9.79	-1.07	0.00	-27.50	0.00	27.50	1,589.02	386.01	966.52	905.27	7.08	-0.47	0.03
160.75	-9.64	-1.04	0.00	-26.70	0.00	26.70	1,083.74	292.21	738.43	624.60	7.15	-0.47	0.05
165.00	-9.14	-1.00	0.00	-22.28	0.00	22.28	1,060.67	281.63	685.91	589.02	7.57	-0.48	0.04
170.00	-8.57	-0.95	0.00	-17.29	0.00	17.29	1,031.98	269.18	626.61	547.58	8.09	-0.50	0.04

Load Case: 1.2D + 1.0Di + 1.0Wi				30 mph with 0.25 in Radial Ice								24 Iterations		
Gust Response Factor :1.10				Ice Dead Load Factor :1.00								Ice Importance Factor :1.00		
Dead Load Factor :1.20														
Wind Load Factor :1.00														
175.00	-8.02	-0.90	0.00	-12.55	0.00	12.55	1,001.61	256.73	569.99	506.70	8.63	-0.52	0.033	
180.00	-7.49	-0.87	0.00	-8.04	0.00	8.04	969.55	244.28	516.05	466.52	9.18	-0.53	0.025	
182.00	-4.14	-0.53	0.00	-6.30	0.00	6.30	956.25	239.30	495.22	450.66	9.40	-0.54	0.018	
185.00	-3.84	-0.49	0.00	-4.72	0.00	4.72	935.81	231.83	464.79	427.15	9.74	-0.54	0.015	
190.00	-3.35	-0.45	0.00	-2.25	0.00	2.25	900.38	219.37	416.21	388.72	10.31	-0.55	0.010	
195.00	0.00	-0.42	0.00	0.00	0.00	0.00	863.27	206.92	370.31	351.36	10.89	-0.55	0.000	

Site Number: 282213

Code: ANSI/TIA-222-H

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Site Name: FT WHITE WEST FL, FL

Engineering Number:13686628_C3_02

6/14/2021 5:25:06 PM

Customer: VERIZON WIRELESS

Load Case: 1.0D + 1.0W

Serviceability 60 mph

25 Iterations

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		71.8	0.0					0.0	0.0	71.8	0.0	0.0	0.0
5.00		142.3	1,493.4					0.0	166.5	142.3	1,659.8	0.0	0.0
10.00		139.6	1,465.2					0.0	166.5	139.6	1,631.6	0.0	0.0
15.00		139.1	1,437.0					0.0	166.5	139.1	1,603.5	0.0	0.0
20.00		142.2	1,408.9					0.0	166.5	142.2	1,575.3	0.0	0.0
25.00		146.2	1,380.7					0.0	166.5	146.2	1,547.1	0.0	0.0
30.00		148.8	1,352.5					0.0	166.5	148.8	1,519.0	0.0	0.0
35.00		150.5	1,324.4					0.0	166.5	150.5	1,490.8	0.0	0.0
40.00		151.5	1,296.2					0.0	166.5	151.5	1,462.6	0.0	0.0
45.00		79.7	1,268.0					0.0	166.5	79.7	1,434.5	0.0	0.0
45.25	Bot - Section 2	77.1	62.7					0.0	8.3	77.1	71.0	0.0	0.0
50.00		115.6	2,201.9					0.0	158.1	115.6	2,360.0	0.0	0.0
52.75	Top - Section 1	77.0	1,253.2					0.0	91.5	77.0	1,344.7	0.0	0.0
55.00		111.3	471.8					0.0	74.9	111.3	546.7	0.0	0.0
60.00		153.0	1,030.9					0.0	166.5	153.0	1,197.4	0.0	0.0
65.00		151.9	1,006.8					0.0	166.5	151.9	1,173.2	0.0	0.0
70.00		150.6	982.6					0.0	166.5	150.6	1,149.1	0.0	0.0
75.00		149.0	958.5					0.0	166.5	149.0	1,124.9	0.0	0.0
80.00		147.2	934.4					0.0	166.5	147.2	1,100.8	0.0	0.0
85.00		145.3	910.2					0.0	166.5	145.3	1,076.7	0.0	0.0
90.00		104.2	886.1					0.0	166.5	104.2	1,052.5	0.0	0.0
92.25	Bot - Section 3	71.6	390.9					0.0	74.9	71.6	465.8	0.0	0.0
95.00		85.6	870.0					0.0	91.5	85.6	961.6	0.0	0.0
98.25	Top - Section 2	70.8	1,010.9					0.0	108.2	70.8	1,119.1	0.0	0.0
100.00		94.2	246.1					0.0	58.3	94.2	304.4	0.0	0.0
105.00		137.8	689.6					0.0	166.5	137.8	856.1	0.0	0.0
110.00		135.1	669.5					0.0	166.5	135.1	836.0	0.0	0.0
115.00		132.2	649.4					0.0	166.5	132.2	815.9	0.0	0.0
120.00		129.2	629.3					0.0	166.5	129.2	795.7	0.0	0.0
125.00		126.2	609.2					0.0	166.5	126.2	775.6	0.0	0.0
130.00		123.0	589.1					0.0	166.5	123.0	755.5	0.0	0.0
135.00		119.7	568.9					0.0	166.5	119.7	735.4	0.0	0.0
140.00		67.7	548.8					0.0	166.5	67.7	715.3	0.0	0.0
140.75	Bot - Section 4	58.1	80.6					0.0	25.0	58.1	105.6	0.0	0.0
145.00		52.2	813.1					0.0	141.5	52.2	954.5	0.0	0.0
145.25	Top - Section 3	56.4	47.0					0.0	8.3	56.4	55.3	0.0	0.0
150.00		108.2	393.4					0.0	158.1	108.2	551.5	0.0	0.0
155.00		73.4	398.4					0.0	166.5	73.4	564.8	0.0	0.0
156.75	Bot - Section 5	53.3	135.6					0.0	58.3	53.3	193.9	0.0	0.0
160.00		42.4	434.5					0.0	108.2	42.4	542.7	0.0	0.0
160.75	Top - Section 4	51.7	98.6					0.0	25.0	51.7	123.5	0.0	0.0
165.00		93.5	236.4					0.0	141.5	93.5	377.9	0.0	0.0
170.00		97.6	267.0					0.0	166.5	97.6	433.4	0.0	0.0
175.00		93.6	254.9					0.0	166.5	93.6	421.4	0.0	0.0
180.00		63.6	242.8					0.0	166.5	63.6	409.3	0.0	0.0
182.00	Appurtenance(s)	43.8	93.8	959.4	0.0	-23.6	2,553.4	0.0	66.6	1,003.2	2,713.7	0.0	0.0
185.00		67.9	137.0					0.0	93.0	67.9	230.0	0.0	0.0
190.00		81.5	218.7					0.0	155.0	81.5	373.7	0.0	0.0

Load Case: 1.0D + 1.0W				Serviceability 60 mph				25 Iterations					
Gust Response Factor :1.10													
Dead Load Factor :1.00													
Wind Load Factor :1.00													
95.00	Appurtenance(s)	39.7	206.6	1,317.1	0.0	-1,152.7	2,459.5	0.0	144.0	1,356.9	2,810.1	0.0	0.0
								Totals:		7,340.60	46,118.9	0.00	0.00

Site Number: 282213

Code: ANSI/TIA-222-H

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Site Name: FT WHITE WEST FL, FL

Engineering Number: 13686628_C3_02

6/14/2021 5:25:10 PM

Customer: VERIZON WIRELESS

Load Case: 1.0D + 1.0W

Serviceability 60 mph

25 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	-46.12	-7.28	0.00	-914.12	0.00	914.12	5,822.67	1,554.93	8,961.09	7,651.97	0.00	0.00	0.12
5.00	-44.45	-7.16	0.00	-877.73	0.00	877.73	5,758.10	1,525.88	8,629.40	7,424.77	0.02	-0.03	0.12
10.00	-42.82	-7.04	0.00	-841.94	0.00	841.94	5,691.85	1,496.83	8,303.96	7,198.63	0.06	-0.06	0.12
15.00	-41.21	-6.92	0.00	-806.74	0.00	806.74	5,623.91	1,467.78	7,984.78	6,973.68	0.13	-0.09	0.12
20.00	-39.63	-6.79	0.00	-772.15	0.00	772.15	5,554.29	1,438.73	7,671.85	6,750.04	0.24	-0.11	0.12
25.00	-38.08	-6.66	0.00	-738.18	0.00	738.18	5,482.98	1,409.67	7,365.17	6,527.84	0.38	-0.14	0.12
30.00	-36.56	-6.53	0.00	-704.86	0.00	704.86	5,409.99	1,380.62	7,064.75	6,307.21	0.54	-0.17	0.11
35.00	-35.07	-6.39	0.00	-672.20	0.00	672.20	5,335.32	1,351.57	6,770.59	6,088.26	0.74	-0.21	0.11
40.00	-33.60	-6.26	0.00	-640.23	0.00	640.23	5,258.96	1,322.52	6,482.68	5,871.12	0.97	-0.24	0.11
45.00	-32.17	-6.18	0.00	-608.95	0.00	608.95	5,180.92	1,293.46	6,201.03	5,655.92	1.24	-0.27	0.11
45.25	-32.09	-6.11	0.00	-607.41	0.00	607.41	5,176.97	1,292.01	6,187.11	5,645.21	1.25	-0.27	0.11
50.00	-29.73	-6.00	0.00	-578.38	0.00	578.38	5,101.20	1,264.41	5,925.63	5,442.78	1.54	-0.30	0.11
52.75	-28.39	-5.92	0.00	-561.89	0.00	561.89	4,152.32	1,087.06	5,109.67	4,449.17	1.71	-0.32	0.13
55.00	-27.84	-5.82	0.00	-548.57	0.00	548.57	4,125.89	1,075.85	5,004.88	4,374.94	1.87	-0.33	0.13
60.00	-26.64	-5.68	0.00	-519.48	0.00	519.48	4,065.92	1,050.95	4,775.90	4,210.85	2.24	-0.37	0.13
65.00	-25.46	-5.53	0.00	-491.11	0.00	491.11	4,004.27	1,026.05	4,552.28	4,048.01	2.65	-0.41	0.12
70.00	-24.31	-5.39	0.00	-463.45	0.00	463.45	3,940.94	1,001.15	4,334.02	3,886.56	3.09	-0.45	0.12
75.00	-23.18	-5.25	0.00	-436.50	0.00	436.50	3,875.92	976.24	4,121.12	3,726.63	3.58	-0.48	0.12
80.00	-22.08	-5.11	0.00	-410.27	0.00	410.27	3,809.22	951.34	3,913.59	3,568.33	4.11	-0.52	0.12
85.00	-21.00	-4.96	0.00	-384.74	0.00	384.74	3,740.83	926.44	3,711.41	3,411.79	4.68	-0.56	0.11
90.00	-19.95	-4.86	0.00	-359.92	0.00	359.92	3,670.76	901.54	3,514.60	3,257.14	5.29	-0.60	0.11
92.25	-19.48	-4.79	0.00	-348.99	0.00	348.99	3,638.68	890.33	3,427.78	3,188.20	5.58	-0.62	0.11
95.00	-18.52	-4.70	0.00	-335.82	0.00	335.82	3,599.01	876.64	3,323.15	3,104.51	5.95	-0.65	0.11
98.25	-17.40	-4.62	0.00	-320.53	0.00	320.53	2,821.56	729.01	2,757.64	2,432.36	6.40	-0.67	0.13
100.00	-17.09	-4.54	0.00	-312.44	0.00	312.44	2,803.70	721.75	2,702.97	2,392.70	6.65	-0.69	0.13
105.00	-16.23	-4.40	0.00	-289.76	0.00	289.76	2,751.53	700.99	2,549.80	2,280.16	7.39	-0.74	0.13
110.00	-15.40	-4.27	0.00	-267.75	0.00	267.75	2,697.67	680.24	2,401.08	2,168.84	8.19	-0.78	0.12
115.00	-14.58	-4.14	0.00	-246.41	0.00	246.41	2,642.13	659.49	2,256.84	2,058.88	9.04	-0.83	0.12
120.00	-13.78	-4.01	0.00	-225.72	0.00	225.72	2,584.91	638.74	2,117.06	1,950.39	9.94	-0.88	0.12
125.00	-13.00	-3.88	0.00	-205.68	0.00	205.68	2,526.00	617.99	1,981.75	1,843.50	10.89	-0.93	0.11
130.00	-12.25	-3.76	0.00	-186.27	0.00	186.27	2,465.41	597.24	1,850.91	1,738.33	11.89	-0.98	0.11
135.00	-11.51	-3.63	0.00	-167.49	0.00	167.49	2,403.14	576.48	1,724.54	1,635.02	12.95	-1.03	0.10
140.00	-10.80	-3.56	0.00	-149.33	0.00	149.33	2,339.18	555.73	1,602.64	1,533.68	14.06	-1.08	0.10
140.75	-10.69	-3.50	0.00	-146.66	0.00	146.66	2,329.44	552.62	1,584.74	1,518.66	14.23	-1.09	0.10
145.00	-9.74	-3.44	0.00	-131.77	0.00	131.77	2,264.75	534.98	1,485.20	1,428.90	15.22	-1.13	0.09
145.25	-9.68	-3.38	0.00	-130.91	0.00	130.91	1,725.54	434.99	1,227.28	1,108.88	15.28	-1.13	0.12
150.00	-9.13	-3.27	0.00	-114.85	0.00	114.85	1,683.18	419.22	1,139.91	1,042.13	16.43	-1.18	0.11
155.00	-8.56	-3.19	0.00	-98.49	0.00	98.49	1,636.94	402.62	1,051.43	973.04	17.69	-1.24	0.10
156.75	-8.37	-3.14	0.00	-92.91	0.00	92.91	1,620.36	396.80	1,021.30	949.16	18.15	-1.25	0.10
160.00	-7.83	-3.09	0.00	-82.71	0.00	82.71	1,589.02	386.01	966.52	905.27	19.02	-1.29	0.09
160.75	-7.70	-3.04	0.00	-80.39	0.00	80.39	1,083.74	292.21	738.43	624.60	19.22	-1.30	0.13
165.00	-7.32	-2.94	0.00	-67.49	0.00	67.49	1,060.67	281.63	685.91	589.02	20.39	-1.34	0.12
170.00	-6.89	-2.84	0.00	-52.79	0.00	52.79	1,031.98	269.18	626.61	547.58	21.83	-1.40	0.10

ite Number: 282213

Code: ANSI/TIA-222-H

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Site Name: FT WHITE WEST FL, FL

Engineering Number:13686628_C3_02

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Customer: VERIZON WIRELESS

Load Case: 1.0D + 1.0W

Serviceability 60 mph

25 Iterations

Gust Response Factor :1.10

Dead Load Factor :1.00

Wind Load Factor :1.00

175.00	-6.47	-2.74	0.00	-38.60	0.00	38.60	1,001.61	256.73	569.99	506.70	23.32	-1.45	0.083
180.00	-6.06	-2.67	0.00	-24.90	0.00	24.90	969.55	244.28	516.05	466.52	24.86	-1.49	0.060
182.00	-3.37	-1.60	0.00	-19.56	0.00	19.56	956.25	239.30	495.22	450.66	25.49	-1.50	0.047
185.00	-3.14	-1.52	0.00	-14.77	0.00	14.77	935.81	231.83	464.79	427.15	26.44	-1.52	0.038
190.00	-2.77	-1.43	0.00	-7.16	0.00	7.16	900.38	219.37	416.21	388.72	28.04	-1.54	0.022
195.00	0.00	-1.36	0.00	0.00	0.00	0.00	863.27	206.92	370.31	351.36	29.66	-1.55	0.000

Site Number: 282213

Code: ANSI/TIA-222-H

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Site Name: FT WHITE WEST FL, FL

Engineering Number: 13686628_C3_02

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Customer: VERIZON WIRELESS

Equivalent Lateral Forces Method Analysis

Spectral Response Acceleration for Short Period (S_s):	0.08
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.05
Long-Period Transition Period (T_L):	8
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}):	0.08
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):	2.60
Redundancy Factor (p):	1.00
Seismic Force Distribution Exponent (k):	2.00
Total Unfactored Dead Load:	46.12 k
Seismic Base Shear (E):	1.38 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)
48	192.50	351	12,993	0.025	35	427
47	187.50	374	13,136	0.026	36	455
46	183.50	230	7,744	0.015	21	280
45	181.00	160	5,253	0.010	14	195
44	177.50	409	12,895	0.025	35	498
43	172.50	421	12,538	0.025	34	513
42	167.50	433	12,161	0.024	33	527
41	162.88	378	10,025	0.020	27	460
40	160.38	124	3,178	0.006	9	150
39	158.38	543	13,612	0.027	37	660
38	155.88	194	4,711	0.009	13	236
37	152.50	565	13,135	0.026	36	687
36	147.63	551	12,018	0.023	33	671
35	145.13	55	1,165	0.002	3	67
34	142.88	955	19,485	0.038	53	1,162
33	140.38	106	2,080	0.004	6	128
32	137.50	715	13,523	0.026	37	870
31	132.50	735	12,911	0.025	35	895
30	127.50	756	12,282	0.024	33	919
29	122.50	776	11,639	0.023	31	944
28	117.50	796	10,986	0.021	30	968
27	112.50	816	10,326	0.020	28	993
26	107.50	836	9,661	0.019	26	1,017
25	102.50	856	8,994	0.018	24	1,042
24	99.13	304	2,991	0.006	8	370

te Number: 282213

Code: ANSI/TIA-222-H

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Site Name: FT WHITE WEST FL, FL

Engineering Number:13686628_C3_02

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Customer: VERIZON WIRELESS

23	96.63	1,119	10,449	0.020	28	1,362
22	93.63	962	8,429	0.016	23	1,170
21	91.13	466	3,868	0.008	10	567
20	87.50	1,053	8,058	0.016	22	1,281
19	82.50	1,077	7,328	0.014	20	1,310
18	77.50	1,101	6,612	0.013	18	1,340
17	72.50	1,125	5,913	0.012	16	1,369
16	67.50	1,149	5,236	0.010	14	1,398
15	62.50	1,173	4,583	0.009	12	1,428
14	57.50	1,197	3,959	0.008	11	1,457
13	53.88	547	1,587	0.003	4	665
12	51.38	1,345	3,549	0.007	10	1,636
11	47.63	2,360	5,353	0.010	14	2,872
10	45.13	71	145	0.000	0	86
9	42.50	1,434	2,591	0.005	7	1,746
8	37.50	1,463	2,057	0.004	6	1,780
7	32.50	1,491	1,575	0.003	4	1,814
6	27.50	1,519	1,149	0.002	3	1,848
5	22.50	1,547	783	0.002	2	1,883
4	17.50	1,575	482	0.001	1	1,917
3	12.50	1,603	251	0.000	1	1,951
2	7.50	1,632	92	0.000	0	1,985
1	2.50	1,660	10	0.000	0	2,020
Commscope E15Z01P13	195.00	144	5,476	0.011	15	175
Ericsson Radio 8843	195.00	216	8,202	0.016	22	262
Ericsson RRUS 4449 B	195.00	213	8,099	0.016	22	259
Raycap DC6-48-60-18-	195.00	48	1,825	0.004	5	58
Ericsson RRUS 32 (50	195.00	203	7,727	0.015	21	247
Andrew SBNH-1D8585B	195.00	231	8,784	0.017	24	281
Andrew SBIAHH-1D65B-	195.00	94	3,590	0.007	10	115
Commscope NNHH-65B-R	195.00	251	9,559	0.019	26	306
CCI HPA-33R-BUU-H6	195.00	159	6,038	0.012	16	193
Round Sector Frame	195.00	900	34,223	0.067	93	1,095
Ericsson 8843 Rev 2	182.00	225	7,453	0.015	20	274
Ericsson Radio 4449	182.00	210	6,956	0.014	19	256
Raycap RCMDC-3315-PF	182.00	32	1,060	0.002	3	39
Ericsson AIR 6449 B7	182.00	245	8,109	0.016	22	298
Raycap RCMDC-6627-PF	182.00	32	1,060	0.002	3	39
Commscope NHH-65C-R2	182.00	310	10,255	0.020	28	377
Flat Low Profile Pla	182.00	1,500	49,686	0.097	134	1,825
		46,119	511,602	1.000	1,384	56,120

oad 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)
48	192.50	351	12,993	0.025	35	310
47	187.50	374	13,136	0.026	36	330
46	183.50	230	7,744	0.015	21	203
45	181.00	160	5,253	0.010	14	142
44	177.50	409	12,895	0.025	35	361
43	172.50	421	12,538	0.025	34	372
42	167.50	433	12,161	0.024	33	383
41	162.88	378	10,025	0.020	27	334
40	160.38	124	3,178	0.006	9	109
39	158.38	543	13,612	0.027	37	479
38	155.88	194	4,711	0.009	13	171
37	152.50	565	13,135	0.026	36	499
36	147.63	551	12,018	0.023	33	487
35	145.13	55	1,165	0.002	3	49
34	142.88	955	19,485	0.038	53	843

Site Number: 282213

Code: ANSI/TIA-222-H

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Site Name: FT WHITE WEST FL, FL

Engineering Number: 13686628_C3_02

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Customer: VERIZON WIRELESS

33	140.38	106	2,080	0.004	6	93
32	137.50	715	13,523	0.026	37	632
31	132.50	735	12,911	0.025	35	649
30	127.50	756	12,282	0.024	33	667
29	122.50	776	11,639	0.023	31	685
28	117.50	796	10,986	0.021	30	703
27	112.50	816	10,326	0.020	28	721
26	107.50	836	9,661	0.019	26	738
25	102.50	856	8,994	0.018	24	756
24	99.13	304	2,991	0.006	8	269
23	96.63	1,119	10,449	0.020	28	988
22	93.63	962	8,429	0.016	23	849
21	91.13	466	3,868	0.008	10	411
20	87.50	1,053	8,058	0.016	22	930
19	82.50	1,077	7,328	0.014	20	951
18	77.50	1,101	6,612	0.013	18	972
17	72.50	1,125	5,913	0.012	16	993
16	67.50	1,149	5,236	0.010	14	1,015
15	62.50	1,173	4,583	0.009	12	1,036
14	57.50	1,197	3,959	0.008	11	1,057
13	53.88	547	1,587	0.003	4	483
12	51.38	1,345	3,549	0.007	10	1,188
11	47.63	2,360	5,353	0.010	14	2,084
10	45.13	71	145	0.000	0	63
9	42.50	1,434	2,591	0.005	7	1,267
8	37.50	1,463	2,057	0.004	6	1,292
7	32.50	1,491	1,575	0.003	4	1,317
6	27.50	1,519	1,149	0.002	3	1,341
5	22.50	1,547	783	0.002	2	1,366
4	17.50	1,575	482	0.001	1	1,391
3	12.50	1,603	251	0.000	1	1,416
2	7.50	1,632	92	0.000	0	1,441
1	2.50	1,660	10	0.000	0	1,466
Commscope E15Z01P13	195.00	144	5,476	0.011	15	127
Ericsson Radio 8843	195.00	216	8,202	0.016	22	190
Ericsson RRUS 4449 B	195.00	213	8,099	0.016	22	188
Raycap DC6-48-60-18-	195.00	48	1,825	0.004	5	42
Ericsson RRUS 32 (50	195.00	203	7,727	0.015	21	179
Andrew SBNH-1D8585B	195.00	231	8,784	0.017	24	204
Andrew SBJAHH-1D65B-	195.00	94	3,590	0.007	10	83
Commscope NNHH-65B-R	195.00	251	9,559	0.019	26	222
CCI HPA-33R-BUU-H6	195.00	159	6,038	0.012	16	140
Round Sector Frame	195.00	900	34,223	0.067	93	795
Ericsson 8843 Rev 2	182.00	225	7,453	0.015	20	199
Ericsson Radio 4449	182.00	210	6,956	0.014	19	185
Raycap RCMDC-3315-PF	182.00	32	1,060	0.002	3	28
Ericsson AIR 6449 B7	182.00	245	8,109	0.016	22	216
Raycap RCMDC-6627-PF	182.00	32	1,060	0.002	3	28
Commscope NHH-65C-R2	182.00	310	10,255	0.020	28	273
Fiat Low Profile Pla	182.00	1,500	49,686	0.097	134	1,325
		46,119	511,602	1.000	1,384	40,730

te Number: 282213

Code: ANSI/TIA-222-H

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Site Name: FT WHITE WEST FL, FL

Engineering Number:13686628_C3_02

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Customer: VERIZON WIRELESS

oad 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	-54.10	-1.39	0.00	-214.88	0.00	214.88	5,822.67	1,554.93	8,961.09	7,651.97	0.00	0.00	0.037
5.00	-52.11	-1.39	0.00	-207.95	0.00	207.95	5,758.10	1,525.88	8,629.40	7,424.77	0.00	-0.01	0.037
10.00	-50.16	-1.40	0.00	-201.00	0.00	201.00	5,691.85	1,496.83	8,303.96	7,198.63	0.01	-0.01	0.037
15.00	-48.25	-1.40	0.00	-194.01	0.00	194.01	5,623.91	1,467.78	7,984.78	6,973.68	0.03	-0.02	0.036
20.00	-46.36	-1.40	0.00	-187.01	0.00	187.01	5,554.29	1,438.73	7,671.85	6,750.04	0.06	-0.03	0.036
25.00	-44.51	-1.41	0.00	-179.99	0.00	179.99	5,482.98	1,409.67	7,365.17	6,527.84	0.09	-0.03	0.036
30.00	-42.70	-1.41	0.00	-172.97	0.00	172.97	5,409.99	1,380.62	7,064.75	6,307.21	0.13	-0.04	0.035
35.00	-40.92	-1.40	0.00	-165.94	0.00	165.94	5,335.32	1,351.57	6,770.59	6,088.26	0.18	-0.05	0.035
40.00	-39.17	-1.40	0.00	-158.92	0.00	158.92	5,258.96	1,322.52	6,482.68	5,871.12	0.23	-0.06	0.035
45.00	-39.09	-1.40	0.00	-151.92	0.00	151.92	5,180.92	1,293.46	6,201.03	5,655.92	0.30	-0.07	0.034
45.25	-36.22	-1.39	0.00	-151.57	0.00	151.57	5,176.97	1,292.01	6,187.11	5,645.21	0.30	-0.07	0.034
50.00	-34.58	-1.38	0.00	-144.98	0.00	144.98	5,101.20	1,264.41	5,925.63	5,442.78	0.37	-0.07	0.033
52.75	-33.91	-1.38	0.00	-141.19	0.00	141.19	4,152.32	1,087.06	5,109.67	4,449.17	0.41	-0.08	0.040
55.00	-32.46	-1.37	0.00	-138.09	0.00	138.09	4,125.89	1,075.85	5,004.88	4,374.94	0.45	-0.08	0.039
60.00	-31.03	-1.36	0.00	-131.25	0.00	131.25	4,065.92	1,050.95	4,775.90	4,210.85	0.54	-0.09	0.039
65.00	-29.63	-1.35	0.00	-124.46	0.00	124.46	4,004.27	1,026.05	4,552.28	4,048.01	0.64	-0.10	0.038
70.00	-28.26	-1.33	0.00	-117.72	0.00	117.72	3,940.94	1,001.15	4,334.02	3,886.56	0.75	-0.11	0.037
75.00	-26.92	-1.32	0.00	-111.05	0.00	111.05	3,875.92	976.24	4,121.12	3,726.63	0.87	-0.12	0.037
80.00	-25.61	-1.30	0.00	-104.47	0.00	104.47	3,809.22	951.34	3,913.59	3,568.33	1.00	-0.13	0.036
85.00	-24.33	-1.28	0.00	-97.97	0.00	97.97	3,740.83	926.44	3,711.41	3,411.79	1.15	-0.14	0.035
90.00	-23.76	-1.27	0.00	-91.58	0.00	91.58	3,670.76	901.54	3,514.60	3,257.14	1.30	-0.15	0.035
92.25	-22.59	-1.25	0.00	-88.72	0.00	88.72	3,638.68	890.33	3,427.78	3,188.20	1.37	-0.16	0.034
95.00	-21.23	-1.22	0.00	-85.29	0.00	85.29	3,599.01	876.64	3,323.15	3,104.51	1.46	-0.16	0.033
98.25	-20.86	-1.21	0.00	-81.34	0.00	81.34	2,821.56	729.01	2,757.64	2,432.36	1.57	-0.17	0.041
100.00	-19.82	-1.18	0.00	-79.22	0.00	79.22	2,803.70	721.75	2,702.97	2,392.70	1.63	-0.17	0.040
105.00	-18.80	-1.16	0.00	-73.30	0.00	73.30	2,751.53	700.99	2,549.80	2,280.16	1.82	-0.18	0.039
110.00	-17.81	-1.13	0.00	-67.50	0.00	67.50	2,697.67	680.24	2,401.08	2,168.84	2.02	-0.20	0.038
115.00	-16.84	-1.10	0.00	-61.84	0.00	61.84	2,642.13	659.49	2,256.84	2,058.88	2.23	-0.21	0.036
120.00	-15.90	-1.07	0.00	-56.33	0.00	56.33	2,584.91	638.74	2,117.06	1,950.39	2.46	-0.22	0.035
125.00	-14.98	-1.04	0.00	-50.98	0.00	50.98	2,526.00	617.99	1,981.75	1,843.50	2.69	-0.23	0.034
130.00	-14.08	-1.00	0.00	-45.79	0.00	45.79	2,465.41	597.24	1,850.91	1,738.33	2.94	-0.25	0.032
135.00	-13.21	-0.96	0.00	-40.78	0.00	40.78	2,403.14	576.48	1,724.54	1,635.02	3.21	-0.26	0.030
140.00	-13.08	-0.96	0.00	-35.96	0.00	35.96	2,339.18	555.73	1,602.64	1,533.68	3.48	-0.27	0.029
140.75	-11.92	-0.90	0.00	-35.24	0.00	35.24	2,329.44	552.62	1,584.74	1,518.66	3.53	-0.27	0.028
145.00	-11.86	-0.90	0.00	-31.40	0.00	31.40	2,264.75	534.98	1,485.20	1,428.90	3.77	-0.28	0.027
145.25	-11.18	-0.87	0.00	-31.18	0.00	31.18	1,725.54	434.99	1,227.28	1,108.88	3.79	-0.28	0.035
150.00	-10.50	-0.83	0.00	-27.07	0.00	27.07	1,683.18	419.22	1,139.91	1,042.13	4.07	-0.29	0.032
155.00	-10.26	-0.82	0.00	-22.92	0.00	22.92	1,636.94	402.62	1,051.43	973.04	4.39	-0.31	0.030
156.75	-9.60	-0.78	0.00	-21.49	0.00	21.49	1,620.36	396.80	1,021.30	949.16	4.50	-0.31	0.029
160.00	-9.45	-0.77	0.00	-18.97	0.00	18.97	1,589.02	386.01	966.52	905.27	4.71	-0.32	0.027
160.75	-8.99	-0.74	0.00	-18.39	0.00	18.39	1,083.74	292.21	738.43	624.60	4.76	-0.32	0.038
165.00	-8.46	-0.71	0.00	-15.25	0.00	15.25	1,060.67	281.63	685.91	589.02	5.05	-0.33	0.034
170.00	-7.95	-0.67	0.00	-11.72	0.00	11.72	1,031.98	269.18	626.61	547.58	5.41	-0.34	0.029
175.00	-7.45	-0.63	0.00	-8.37	0.00	8.37	1,001.61	256.73	569.99	506.70	5.77	-0.35	0.024
180.00	-7.26	-0.62	0.00	-5.20	0.00	5.20	969.55	244.28	516.05	466.52	6.15	-0.36	0.019
182.00	-3.87	-0.35	0.00	-3.96	0.00	3.96	956.25	239.30	495.22	450.66	6.30	-0.37	0.013
185.00	-3.42	-0.31	0.00	-2.91	0.00	2.91	935.81	231.83	464.79	427.15	6.53	-0.37	0.010

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190.00	-2.99	-0.27	0.00	-1.36	0.00	1.36	900.38	219.37	416.21	388.72	6.92	-0.37	0.00
195.00	0.00	-0.25	0.00	0.00	0.00	0.00	863.27	206.92	370.31	351.36	7.31	-0.37	0.00

te Number: 282213

Code: ANSI/TIA-222-H

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Site Name: FT WHITE WEST FL, FL

Engineering Number:13686628_C3_02

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Customer: VERIZON WIRELESS

oad 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	-39.26	-1.39	0.00	-212.30	0.00	212.30	5,822.67	1,554.93	8,961.09	7,651.97	0.00	0.00	0.034
5.00	-37.82	-1.39	0.00	-205.38	0.00	205.38	5,758.10	1,525.88	8,629.40	7,424.77	0.00	-0.01	0.034
10.00	-36.41	-1.39	0.00	-198.43	0.00	198.43	5,691.85	1,496.83	8,303.96	7,198.63	0.01	-0.01	0.034
15.00	-35.02	-1.40	0.00	-191.47	0.00	191.47	5,623.91	1,467.78	7,984.78	6,973.68	0.03	-0.02	0.034
20.00	-33.65	-1.40	0.00	-184.49	0.00	184.49	5,554.29	1,438.73	7,671.85	6,750.04	0.06	-0.03	0.033
25.00	-32.31	-1.40	0.00	-177.51	0.00	177.51	5,482.98	1,409.67	7,365.17	6,527.84	0.09	-0.03	0.033
30.00	-30.99	-1.40	0.00	-170.53	0.00	170.53	5,409.99	1,380.62	7,064.75	6,307.21	0.13	-0.04	0.033
35.00	-29.70	-1.39	0.00	-163.55	0.00	163.55	5,335.32	1,351.57	6,770.59	6,088.26	0.18	-0.05	0.032
40.00	-28.43	-1.39	0.00	-156.59	0.00	156.59	5,258.96	1,322.52	6,482.68	5,871.12	0.23	-0.06	0.032
45.00	-28.37	-1.39	0.00	-149.64	0.00	149.64	5,180.92	1,293.46	6,201.03	5,655.92	0.29	-0.06	0.032
45.25	-26.28	-1.38	0.00	-149.29	0.00	149.29	5,176.97	1,292.01	6,187.11	5,645.21	0.30	-0.06	0.032
50.00	-25.10	-1.37	0.00	-142.76	0.00	142.76	5,101.20	1,264.41	5,925.63	5,442.78	0.37	-0.07	0.031
52.75	-24.61	-1.36	0.00	-139.00	0.00	139.00	4,152.32	1,087.06	5,109.67	4,449.17	0.41	-0.08	0.037
55.00	-23.56	-1.35	0.00	-135.94	0.00	135.94	4,125.89	1,075.85	5,004.88	4,374.94	0.45	-0.08	0.037
60.00	-22.52	-1.34	0.00	-129.17	0.00	129.17	4,065.92	1,050.95	4,775.90	4,210.85	0.53	-0.09	0.036
65.00	-21.50	-1.33	0.00	-122.45	0.00	122.45	4,004.27	1,026.05	4,552.28	4,048.01	0.63	-0.10	0.036
70.00	-20.51	-1.32	0.00	-115.79	0.00	115.79	3,940.94	1,001.15	4,334.02	3,886.56	0.74	-0.11	0.035
75.00	-19.54	-1.30	0.00	-109.20	0.00	109.20	3,875.92	976.24	4,121.12	3,726.63	0.86	-0.12	0.034
80.00	-18.59	-1.28	0.00	-102.70	0.00	102.70	3,809.22	951.34	3,913.59	3,568.33	0.99	-0.13	0.034
85.00	-17.66	-1.26	0.00	-96.29	0.00	96.29	3,740.83	926.44	3,711.41	3,411.79	1.13	-0.14	0.033
90.00	-17.25	-1.25	0.00	-89.98	0.00	89.98	3,670.76	901.54	3,514.60	3,257.14	1.28	-0.15	0.032
92.25	-16.40	-1.23	0.00	-87.17	0.00	87.17	3,638.68	890.33	3,427.78	3,188.20	1.35	-0.15	0.032
95.00	-15.41	-1.20	0.00	-83.79	0.00	83.79	3,599.01	876.64	3,323.15	3,104.51	1.44	-0.16	0.031
98.25	-15.14	-1.19	0.00	-79.89	0.00	79.89	2,821.56	729.01	2,757.64	2,432.36	1.55	-0.17	0.038
100.00	-14.38	-1.17	0.00	-77.81	0.00	77.81	2,803.70	721.75	2,702.97	2,392.70	1.61	-0.17	0.038
105.00	-13.65	-1.14	0.00	-71.97	0.00	71.97	2,751.53	700.99	2,549.80	2,280.16	1.79	-0.18	0.037
110.00	-12.92	-1.11	0.00	-66.26	0.00	66.26	2,697.67	680.24	2,401.08	2,168.84	1.99	-0.19	0.035
115.00	-12.22	-1.08	0.00	-60.69	0.00	60.69	2,642.13	659.49	2,256.84	2,058.88	2.20	-0.20	0.034
120.00	-11.54	-1.05	0.00	-55.27	0.00	55.27	2,584.91	638.74	2,117.06	1,950.39	2.42	-0.22	0.033
125.00	-10.87	-1.02	0.00	-50.00	0.00	50.00	2,526.00	617.99	1,981.75	1,843.50	2.65	-0.23	0.031
130.00	-10.22	-0.98	0.00	-44.91	0.00	44.91	2,465.41	597.24	1,850.91	1,738.33	2.90	-0.24	0.030
135.00	-9.59	-0.95	0.00	-39.99	0.00	39.99	2,403.14	576.48	1,724.54	1,635.02	3.16	-0.25	0.028
140.00	-9.49	-0.94	0.00	-35.25	0.00	35.25	2,339.18	555.73	1,602.64	1,533.68	3.43	-0.26	0.027
140.75	-8.65	-0.89	0.00	-34.55	0.00	34.55	2,329.44	552.62	1,584.74	1,518.66	3.47	-0.27	0.026
145.00	-8.60	-0.88	0.00	-30.78	0.00	30.78	2,264.75	534.98	1,485.20	1,428.90	3.71	-0.28	0.025
145.25	-8.12	-0.85	0.00	-30.56	0.00	30.56	1,725.54	434.99	1,227.28	1,108.88	3.73	-0.28	0.032
150.00	-7.62	-0.81	0.00	-26.52	0.00	26.52	1,683.18	419.22	1,139.91	1,042.13	4.01	-0.29	0.030
155.00	-7.45	-0.80	0.00	-22.46	0.00	22.46	1,636.94	402.62	1,051.43	973.04	4.32	-0.30	0.028
156.75	-6.97	-0.76	0.00	-21.06	0.00	21.06	1,620.36	396.80	1,021.30	949.16	4.43	-0.31	0.026
160.00	-6.86	-0.75	0.00	-18.58	0.00	18.58	1,589.02	386.01	966.52	905.27	4.64	-0.31	0.025
160.75	-6.52	-0.73	0.00	-18.01	0.00	18.01	1,083.74	292.21	738.43	624.60	4.69	-0.31	0.035
165.00	-6.14	-0.69	0.00	-14.93	0.00	14.93	1,060.67	281.63	685.91	589.02	4.97	-0.32	0.031
170.00	-5.77	-0.66	0.00	-11.47	0.00	11.47	1,031.98	269.18	626.61	547.58	5.32	-0.34	0.027
175.00	-5.41	-0.62	0.00	-8.19	0.00	8.19	1,001.61	256.73	569.99	506.70	5.68	-0.35	0.022
180.00	-5.27	-0.61	0.00	-5.09	0.00	5.09	969.55	244.28	516.05	466.52	6.05	-0.36	0.016
182.00	-2.81	-0.34	0.00	-3.88	0.00	3.88	956.25	239.30	495.22	450.66	6.20	-0.36	0.012
185.00	-2.48	-0.30	0.00	-2.85	0.00	2.85	935.81	231.83	464.79	427.15	6.43	-0.36	0.009

Site Number: 282213

Code: ANSI/TIA-222-H

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Site Name: FT WHITE WEST FL, FL

Engineering Number: 13686628_C3_02

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Customer: VERIZON WIRELESS

190.00	-2.17	-0.27	0.00	-1.33	0.00	1.33	900.38	219.37	416.21	388.72	6.81	-0.37	0.00
195.00	0.00	-0.25	0.00	0.00	0.00	0.00	863.27	206.92	370.31	351.36	7.19	-0.37	0.00

File Number: 282213

Code: ANSI/TIA-222-H

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Site Name: FT WHITE WEST FL, FL

Engineering Number:13686628_C3_02

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Customer: VERIZON WIRELESS

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
2D + 1.0W	32.56	0.00	55.31	0.00	0.00	4111.05	98.25	0.60
9D + 1.0W	32.54	0.00	41.47	0.00	0.00	4066.24	98.25	0.59
2D + 1.0Di + 1.0Wi	3.02	0.00	58.07	0.00	0.00	355.85	0.00	0.06
2D + 1.0Ev + 1.0Eh	1.39	0.00	54.10	0.00	0.00	214.88	98.25	0.04
9D + 1.0Ev + 1.0Eh	1.39	0.00	39.26	0.00	0.00	212.30	98.25	0.04
0D + 1.0W	7.28	0.00	46.12	0.00	0.00	914.12	98.25	0.14



Base Plate & Anchor Rod Analysis

Pole Dimensions		
Number of Sides	18	-
Diameter	64.2441	in
Thickness	7/16	in
Orientation Offset		*

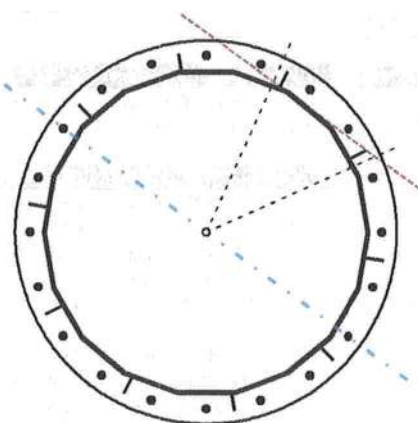
Base Reactions		
Moment, Mu	4,111.1	k-ft
Axial, Pu	55.3	k
Shear, Vu	32.6	k
Neutral Axis	324	*

Report Capacities		
Component	Capacity	Result
Base Plate	10%	Pass
Anchor Rods	61%	Pass
Dwyldag	-	-

Base Plate		
Shape	Round	-
Diameter, ϕ	77	in
Thickness	3	in
Grade	A572-50	
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Clip	N/A	in
Orientation Offset		*
Anchor Rod Detail	d	$\eta=0.5$
Clear Distance	3 7/8	in
Applied Moment, Mu	436.8	k
Bending Stress, ϕMn	4518.0	k

Original Anchor Rods		
Arrangement	Radial	-
Quantity	20	-
Diameter, ϕ	2 1/4	in
Bolt Circle	71	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	11.2	in
Orientation Offset		*
Applied Force, Pu	146.5	k
Anchor Rods, ϕPn	243.6	k

Stiffeners		
Arrangement	Radial	-
Quantity	10	-
Height	12	in
Width	4	in
Effective Width	4.000	in
Thickness	1	in
Effective Thickness	0.180	in
Notch	0.5	in
Flat Edge	1	in
Grade	A572-50	-
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Horizontal Weld	Fillet	
Horizontal Fillet Size	3/16	in
Bevel Depth	0	in
Vertical Weld	Fillet	
Vertical Fillet Size	3/16	in
Weld Strength	70	ksi
Electrode Coefficient	1	-
Orientation Offset	9	*
Vertical Weld, ϕRn	100.4	k
Horz. Weld, ϕRn	20.9	k
Ten. Capacity, ϕTn	153.6	k
Comp. Capacity, ϕPn	61.5	k



Calculations for Monopole Base Plate & Anchor Rod Analysis

Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
	k	k-ft	-
Base Forces	32.6	4111.1	1.00
Anchor Rod Forces	32.6	4111.1	1.00
Additional Bolt (Grp1) Forces			
Additional Bolt (Grp2) Forces			
Dywidag Forces			
Stiffener Forces	2.3	284.8	0.07

Geometric Properties

Section	Gross Area	Net Area	Individual Inertia	Threads per Inch	Moment of Inertia
	in ²	in ²	in ⁴	#	in ⁴
Pole	87.2542	4.8475	0.3103		44410.15
Bolt	3.9761	3.2477	0.8393	4.5	38253.38
Bolt1					
Bolt2					
Dywidag					
Stiffener	0.6300	0.5670	3.8400		3305.64

Base Plate		
Shape	Round	-
Diameter, D	77	in
Thickness, t	3	in
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Base Plate Chord	42.446	in
Detail Type	d	-
Detail Factor	0.50	-
Clear Distance	3.875	-

Anchor Rods		
Anchor Rod Quantity, N	20	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	71	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	146.5	k
Applied Shear, Vu	0.8	k
Compressive Capacity, ϕP_n	243.6	k
Tensile Capacity, ϕR_n	0.601	OK
Interaction Capacity	0.608	OK

Base Plate Stiffeners		
Applied Axial Force, Pu	20.1	k
Applied Horizontal Force, Vu	0.11	k
Vertical Weld		
Vert.-to-Stiffener $a=e_v/l$	0.111	-
Spacing Ratio, k	0.083	-
Weld Coefficient, C	3.720	-
Compressive Capacity, ϕP_n	100.4	k
Vert.-to-Plate $a=e_v/l$	0.333	-
Spacing Ratio, k	0.083	-
Weld Coefficient, C	2.940	-
Shear Capacity, ϕV_n	79.4	k
$P_u/\phi_p P_n + V_u/\phi_v V_n$	0.202	OK

External Base Plate		
Chord Length AA	35.481	in
Additional AA	9.142	in
Section Modulus, Z	100.400	in ³
Applied Moment, Mu	436.8	k-ft
Bending Capacity, ϕM_n	4518.0	k-ft
Capacity, Mu/ ϕM_n	0.097	OK

Chord Length AB	33.616	in
Additional AB	8.173	in
Section Modulus, Z	94.025	in ³
Applied Moment, Mu	239.0	k-ft
Bending Capacity, ϕM_n	4231.1	k-ft
Capacity, Mu/ ϕM_n	0.056	OK

Bend Line Length	28.559	in
Additional Bend Line	40.836	in
Section Modulus, Z	156.139	in ³
Applied Moment, Mu	311.7	k-ft
Bending Capacity, ϕM_n	7026.2	k-ft
Capacity, Mu/ ϕM_n	0.044	OK

Internal Base Plate		
Arc Length	0.000	in
Section Modulus, Z	0.000	in ³
Moment Arm	0.000	in
Applied Moment, Mu	0.0	k-ft
Bending Capacity, ϕM_n	0.0	k-ft
Capacity, Mu/ ϕM_n		

Horizontal Weld		
Horz.-to-Stiffener $a=e_h/l$	0.167	-
Spacing Ratio, k	0.250	-
Weld Coefficient, C	2.240	-
Effective Fillet	0.188	in
Compressive Capacity, ϕP_n	20.2	k
Horz.-to-Pole $a=e_h/l$	0.500	-
Spacing Ratio, k	0.250	-
Weld Coefficient, C	2.320	-
Shear Capacity, ϕV_n	20.9	k
$P_u/\phi_p P_n + V_u/\phi_v V_n$	1.004	OK

Plate Tension		
Gross Cross Section	0.630	in ²
Net Cross Section	0.567	in ²
Tensile Capacity, ϕT_n	153.6	k
Capacity, Tu/ ϕT_n	0.066	OK

Plate Compression		
Radius of Gyration	0.052	in ³
kl/r	138.56	-
$4.71 \sqrt{E/F_y}$	113.43	-
Buckling Stress(F_e)	22.2	-
Crit. Buckling Stress(F_{cr})	19.5	ksi
Compressive Capacity, ϕP_n	61.5	k
Capacity, Pu/ ϕP_n	0.164	OK