

September 1, 2015

Melanie A. Bachman
Acting Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification – Facility Modification
45 Fargo Road, Waterford, Connecticut**

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains twelve (12) antennas at the 173-foot level of the existing 183-foot tower at 45 Fargo Road in Waterford, Connecticut (the Property”). The tower is owned by SBA. The Council approved Cellco’s use of this tower in 1999. Cellco now intends to modify its facility by installing three (3) remote radio heads (“RRHs”) behind its 700 MHz antennas. Included in Attachment 1 are specifications for Cellco’s proposed RRHs.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Daniel Steward, First Selectman for the Town of Waterford. A copy of this letter is also being sent to Rudolph Chieka, the owner of the Property and SBA, the tower owner.

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


1. The proposed modifications will not result in an increase in the height of the existing tower. Cellco’s RRHs will be installed at the 173-foot level on the existing 183-foot tower.

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2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the modified facility (installation of RRHs) will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative General Power Density table for Cellco's modified facility is included in Attachment 2.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The tower and its foundation can support Cellco's proposed modifications. (*See* Structural Analysis Report included in Attachment 3).

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

Sincerely,



Kenneth C. Baldwin

Enclosures

Copy to:

Daniel Steward, Waterford First Selectman
Rudolph Chieka
Victoria Barrios, SBA Communications Corporation
Tim Parks

ATTACHMENT 1

ALCATEL-LUCENT B13 RRH4X30-4R

Alcatel-Lucent B13 Remote Radio Head 4x30-4R is the newest addition of Remote Radio Head to the extended product line of Alcatel-Lucent's distributed Base Station solutions, aimed at facilitating smooth RF site acquisition and related civil engineering.

Supporting 2Tx/4Tx MIMO and 4-way Rx diversity, Alcatel-Lucent B13 RRH4x30-4R allows operators to have a compact radio solution to deploy LTE in the 700U band (700 MHz, 3GPP band 13), providing them with the means to achieve high capacity, high quality and high coverage with minimum site requirements.



The Alcatel-Lucent B13 RRH4x30-4R product has four transmit RF paths, offering the possibility to **select, via software only, 2Tx or 4Tx MIMO configurations** with either 2x60 W or 4x30 W RF output power. It supports also 4-way Rx diversity and up to 10MHz instantaneous bandwidth.

The Alcatel-Lucent B13 RRH4x30-4R is a near zero-footprint solution and operates noise free, simplifying negotiations with site property owners and minimizing environmental impacts.

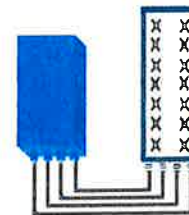
Its compactness and slim design makes the Alcatel-Lucent B13 RRH4x30-4R easy to install close to the antenna: operators can therefore locate this Remote Radio Head where RF design conditions are deemed ideal, minimizing trade-offs between available sites and RF optimum sites, together with reducing the RF feeder needs and installation costs.

FEATURES

- Supporting LTE in 700 MHz band (700U, 3GPP band 13)
- LTE 2Tx or 4Tx MIMO (SW switchable)
- Output power: Up to 2x60W or 4x30W
- 10MHz LTE carrier with 4Rx Diversity
- Convection-cooled (fan-less)
- Supports AISG 2.0 ALD devices (RET, TMA) through RS485 or RF ports

BENEFITS

- Compact to reduce additional footprint when adding LTE in 700U band
- MIMO scheme operation selection (2Tx or 4Tx) by software only
- Improves downlink spectral efficiency through MIMO4
- Increases LTE coverage thanks to 4Rx diversity capability and best in class Rx sensitivity
- Flexible mounting options: Pole or Wall



4x30W with 4T4R
or
2x60W with 2T4R

Can be switched between modes via SW w/o site visit

TECHNICAL SPECIFICATIONS

Features & performance	
Number of TX/RX paths	4 duplexed (either 4T4R or 2T4R by SW)
Frequency band	U700 (C) (3GPP bands 13): DL: 746 - 756 MHz / UL: 777 - 787 MHz
Instantaneous bandwidth - #carriers	10MHz – 1 LTE carrier (in 10MHz occupied bandwidth)
LTE carrier bandwidth	10 MHz
RF output power	2x60W or 4x30W (by SW)
Noise figure – RX Diversity scheme	2 dB typ. (<2.5 dB max) – 2 or 4 way Rx diversity
Sizes (HxWxD) in mm (in.)	550 x 305 x 230 (21.6" x 12.0" x 9") (with solar shield)
Volume in L	38 (with solar shield)
Weight in kg (lb) (w/o mounting HW)	26 (57.2) (with solar shield)
DC voltage range	-40.5 to -57V at full performance, -38 to -57V with relaxation on power consumption
DC power consumption	550W typical @100% RF load (in 2Tx or 4Tx mode)
Environmental conditions	-40°C (-40°F) / +55°C (+131°F) IP65
Wind load (@150km/h or 93mph)	Frontal: <200N / Lateral : <150N
Antenna ports	4 ports 7/16 DIN female (50 ohms) VSWR < 1.5
CPRI ports	2 CPRI ports (HW ready for Rate7, 9.8 Gbps) SFP single mode dual fiber
AISG interfaces	1 AISG2.0 output (RS485) Integrated Smart Bias Tees (x2)
Misc. Interfaces	4 external alarms (1 connector) – 4 RF Tx & 4 RF Rx monitor ports - 1 DC connector (2 pins)
Installation conditions	Pole and wall mounting
Regulatory compliance	3GPP 36.141 / 3GPP 36.113 / GR-1089-CORE / GR-3108-CORE / UL 60950-1 / FCC Part 27

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ATTACHMENT 2

Site Name: Montville 2 (Waterford)		General		Power		Density					
Tower Height: 183Ft.											
CARRIER	# OF CHAN.	WATTS ERP	HEIGHT	CALC. POWER DENS	FREQ.	MAX. PERMISS. EXP.	FRACTION MPE	Total			
*T-Mobile LTE	1	865	152	0.0135	2100	1.0000	1.35%				
*T-Mobile PCS/AWS	2	2334	152	0.0726	1950	1.0000	7.26%				
*T-Mobile PCS/AWS	4	1167	152	0.0726	2100	1.0000	7.26%				
*Clearwire	2	153	163	0.0041	2496	1.0000	0.41%				
*Clearwire	1	211	163	0.0029	11 GHz	1.0000	0.29%				
*AT&T GSM	2	565	143	0.0199	880	0.5867	3.39%				
*AT&T GSM	2	875	143	0.0308	1900	1.0000	3.08%				
*AT&T UMTS	1	647	143	0.0114	880	0.5867	1.94%				
*AT&T UMTS	4	934	143	0.0657	1900	1.0000	6.57%				
*AT&T LTE	1	1615	143	0.0284	734	0.4893	5.80%				
Verizon PCS	11	418	173	0.0552	1970	1.0000	5.52%				
Verizon Cellular	9	293	173	0.0317	869	0.5793	5.47%				
Verizon AWS	1	2762	173	0.0332	2145	1.0000	3.32%				
Verizon 700	1	1001	173	0.0120	746	0.4973	2.42%				
									54.08%		
* Source: Siting Council											

ATTACHMENT 3



Tower Engineering Solutions

Phone (972) 483-0607, Fax (972) 975-9615
8445 Freepoint Parkway, Suite 375, Irving, Texas 75063

Structural Analysis Report

Existing 183 ft. Monopole
Customer Name: SBA Communications Corp
Customer Site Number: CT01002-S
Customer Site Name: Waterford
Carrier Name: Verizon
Carrier Site Number: 117857
Carrier Site Name: N/A
Site Location: 45 Fargo Road
Waterford, Connecticut
New London County
Latitude: 41.389339
Longitude: -72.171408

Analysis Result:

Max Structural Usage: 93.1% [Pass]
Max Foundation Usage: 46.0% [Pass]
Report Prepared By : Billy Davis



Introduction

The purpose of this report is to summarize the analysis results on the 183 ft. Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	A. Nudd Corp. Project #6637, dated May 7, 1999
Foundation Drawing	A. Nudd Corp. Project #6637, dated May 7, 1999
Geotechnical Report	Jaworski Geotech Inc Project #C98392G, dated September 18, 1998
Modification Drawings	Semaan Engineering Solutions, Inc. Analysis and Modifications Package, dated May 7, 2002 FDH Engineering Inc. Project #10-08045E S2, dated November 4, 2010

Analysis Criteria

The analysis was performed in accordance with the requirements and stipulations of the ANSI/TIA/EIA 222-F. In accordance with this standard, the structure was analyzed using **TESPoles**, a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Basic Wind Speed Used in the Analysis:	85.0 mph (fastest mile)
Basic Wind Speed with Ice:	74 mph (fastest mile) with 1/2" radial ice concurrent
Operational Wind Speed:	50 mph + 0" Radial ice
Standard/Codes:	ANSI/TIA/EIA 222-F / 2005 Connecticut State Building Code

Existing Antennas, Mounts and Transmission Lines

The table below summarizes the antennas, mounts and transmission lines that were considered in the analysis as existing on the tower.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	173.0	4	Antel - LPA-80080-4CF-EDIN-0 - Panel	Low Profile Platform	(3) 1 5/8" Outside (9) 1 5/8" (2) 1 5/8" Hybriflex	Verizon
2		2	RFS - APL866513-42T0 - Panel			
3		6	Commscope - HBXX-6517DS-VTM - Panel			
4		3	Commscope - LNX-6514DS-VTM - Panel			
5		3	Alcatel RRH2X60-AWS-RRH			
6		3	Alcatel RRH2x60-PCS-RRH			
8		2	RFS DB-T1-6Z-8AB-OZ ODU			
9	163.0	3	Samsung DAP Radio Head	Low Profile Platform	(3) 9/16" (3) 5/16" (1) 3" Conduit	Clearwire
10		3	Argus - LLPX310R - Panel			
11	153.0	3	Ericsson - AIR 21 B2A B4P - Panel	Low Profile Platform	(12) 1 5/8" (1) 1 5/8" Fiber	T-Mobile
12		3	Ericsson - AIR 21 B4A B2P - Panel			
13		3	Commscope - LNX-6515DS - Panel			
14		3	Ericsson KRY 112 144/1			
15		3	Ericsson S11B12			
16	143.0	3	Powerwave - 7770.00 - Panel	Low Profile Platform	(12) 1 1/4" (2) 3/4" DC (1) 7/16" Fiber	AT&T
17		2	KMW - AM-X-CD-16-65-00T- Panel			
18		2	Andrew - SBNH-1D6565C - Panel			
19		2	Powerwave - P65-17-XLH-RR - Panel			
20		6	ADC Cleargain 850-1900 TMA			
21		6	Ericsson RRUS 11-RRU			
22		3	Powerwave LGP13519 Diplexer			
23		3	CSS DBC-750 Diplexers			
24		1	Ray cap DC6-48-60-18-8F			

Proposed Carrier's Final Configuration of Antennas, Mounts and Transmission Lines

Information pertaining to the proposed carrier's final configuration of antennas and transmission lines was provided by SBA Communications Corp. The proposed antennas and lines are listed below.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	173.0	4	Antel - LPA-80080-4CF-EDIN-0 - Panel	Low Profile Platform	(3) 1 5/8" Outside (9) 1 5/8" Hybriflex (2) 1 5/8"	Verizon
2		2	RFS - APL866513-42T0 - Panel			
3		6	Commscope - HBXX-6517DS-VTM - Panel			
4		3	Commscope - LNX-6514DS-VTM - Panel			
5		3	Alcatel RRH2X60-AWS-RRH			
6		3	Alcatel RRH2x60-PCS-RRH			
7		3	Alcatel RRH2x60-700U-RRH			
8		2	RFS DB-T1-6Z-8AB-OZ ODU			

Three of the proposed 1 5/8" transmission lines were considered outside of the pole shafts. The lines shall be strapped tightly to the face of the pole shafts. Stacking lines is not allowed. The remainder of the proposed coax were considered inside the pole shafts.

Analysis Results

The results of the structural analysis, performed for the wind and ice loading and antenna equipment as defined above, are summarized as the following:

	Pole shafts	Reinforcing Steel	Anchor Bolts	Base Plate
Max. Usage:	93.1%	82.0%	50.0%	46.0%
Pass/Fail	Pass	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	5034.6	39.1	62.6

The foundation has been investigated using the supplied documents and soils report and was found adequate. Therefore, no modification to the foundation will be required.

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by ANSI/TIA/EIA 222-F for the installed antennas. Maximum twist/sway at the elevation of the proposed equipment is 2.1420 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

Based on the analysis results, the existing structure and its foundation were found to be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the ANSI/TIA/EIA 222-F Standard under the design basic wind speed as specified in the Analysis Criteria.

Standard Conditions

1. This analysis was performed based on the information supplied to **(TES) Tower Engineering Solutions, LLC**. Verification of the information provided was not included in the Scope of Work for **TES**. The accuracy of the analysis is dependent on the accuracy of the information provided.
2. The analysis is based on the presumption that the tower members and components along with any existing reinforcement items have been correctly and properly designed, manufactured, installed and maintained.
3. All the existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion.
4. An initial tension of 10% of the break strength on all the existing guy wires was assumed in all the structural analyses of guyed towers unless different values were provided by the client. **TES** cannot take responsibility for the deviations in the analysis results because of differences in the initial tension forces of the existing guy wires.
5. Secondary component or connection secondary components, welds and bolts are assumed to be able to carry their intended original design loads. **TES** cannot take responsibility for verification of the adequacy on the connections, bolts and welds present in the structure.
6. The analyses will be performed based on the codes as specified by the client or based on the best knowledge of the engineering staff of **TES**. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/TIA-222. If wind speed or/and ice loads are different from the minimum values recommended by the EIA/TIA-222 standard or other codes, **TES** should be notified in writing and the applicable minimum values provided by the client.
7. The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. **TES** has not visited the tower site to verify the adequacy of the information provided. If there is any discrepancy found in the report regarding the existing conditions, **TES** should be notified immediately to evaluate the effect of the discrepancy on the analysis results.
8. The client will assume responsibility for rework associated with the differences in initially provided information, including tower and foundation information, existing and/or proposed equipment and transmission lines.
9. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

Usage Diagram - Max Stress 93.1% at 0.0ft

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69

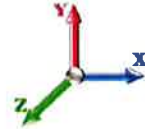
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Dead Load Factor: 1.00
Wind Load Factor: 1.00

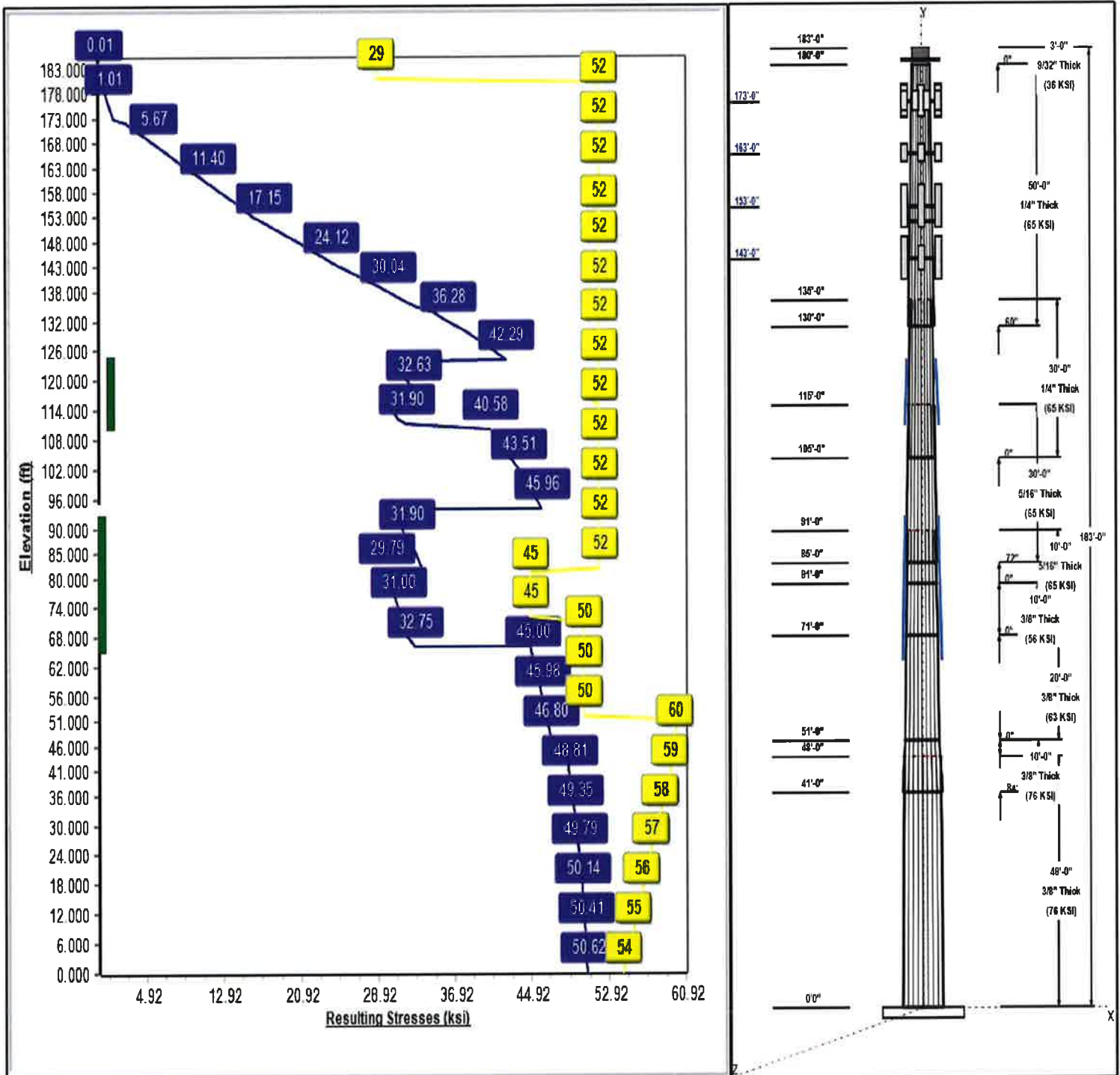
Load Case : 85 mph Wind with 0 in Ice



Iterations: 30

- 54 Allowable Stress
- 51 Resulting Stress

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Structure: CT01002-S-SBA

Type: Custom
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.23542

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Shaft Properties

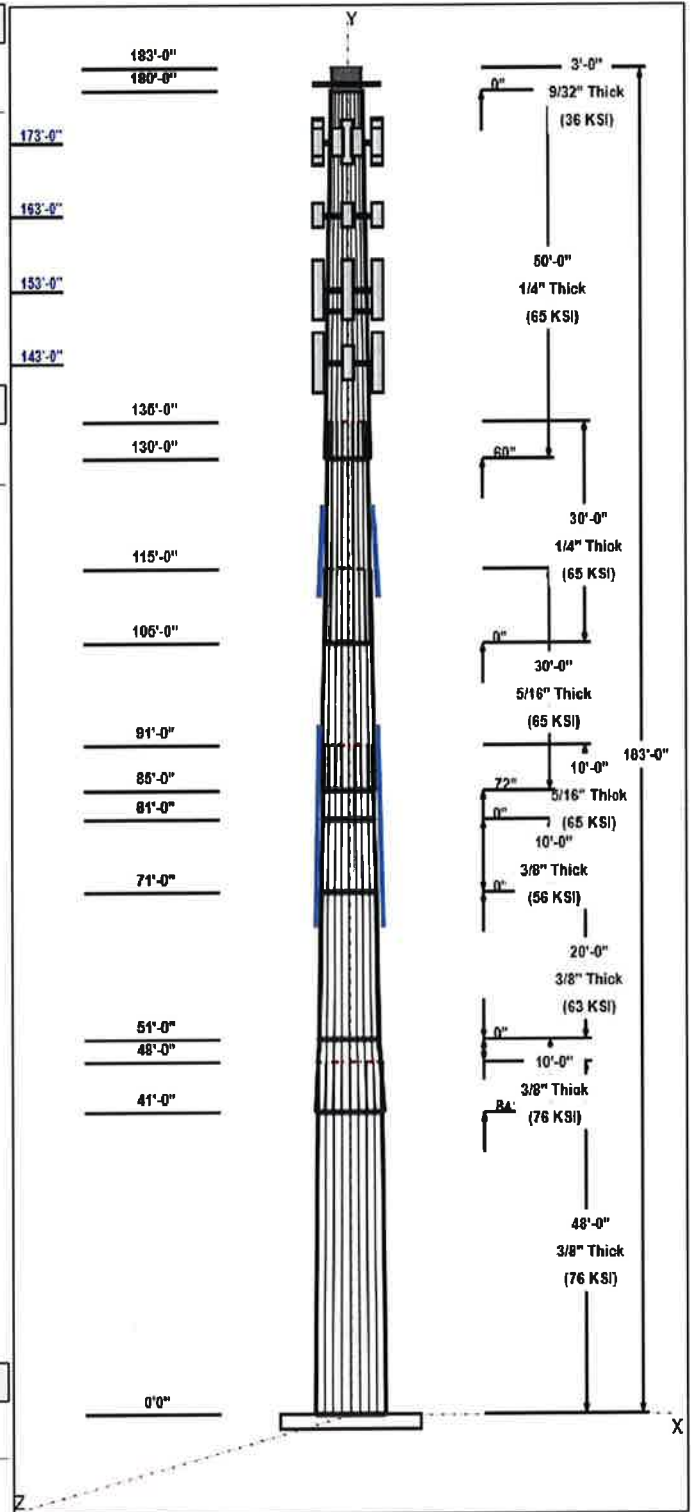
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	48.00	53.20	64.50	0.375		0.23542	76
2	10.00	53.24	55.60	0.375	Slip	0.23542	76
3	20.00	48.53	53.24	0.375	Butt	0.23542	63
4	10.00	46.18	48.53	0.375	Butt	0.23542	56
5	10.00	43.83	46.18	0.313	Butt	0.23542	65
6	30.00	38.80	45.87	0.313	Slip	0.23542	65
7	30.00	34.09	38.80	0.250	Butt	0.23542	65
8	50.00	24.00	35.77	0.250	Slip	0.23542	65
9	3.00	24.00	24.00	0.281	Butt	0.00000	36

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
181.00	181.00	1	Low Profile	Verizon
173.00	173.00	2	APL866513-42T0	Verizon
173.00	173.00	2	DB-T1-6Z-8AB-OZ	Verizon
173.00	173.00	6	HBXX-6517DS-VTM	Verizon
173.00	173.00	3	LNx-6514DS-VTM	Verizon
173.00	173.00	1	Low Profile	Verizon
173.00	173.00	4	LPA-80080-4CF-EDIN-0	Verizon
173.00	173.00	3	RRH2x60-1900	Verizon
173.00	173.00	3	RRH2x60-700U	Verizon
173.00	173.00	3	RRH2X60-AWS	Verizon
163.00	163.00	3	DAP Head	Clearwire
163.00	163.00	3	LLPX310R	Clearwire
163.00	163.00	1	Low Profile	Clearwire
153.00	153.00	3	AIR 21, 1.3M, B2A B4P	T-Mobile
153.00	153.00	3	AIR 21, 1.3M, B4A B2P	T-Mobile
153.00	153.00	3	KRY 112 144/1	T-Mobile
153.00	153.00	3	LNx-6515DS	T-Mobile
153.00	153.00	1	Low Profile	T-Mobile
153.00	153.00	3	S11B12	T-Mobile
150.00	150.00	1	Low Profile	Verizon
143.00	143.00	3	7770.00	AT&T
143.00	143.00	6	850/1900	AT&T
143.00	143.00	2	AM-X-CD-16-65-00T-RET	AT&T
143.00	143.00	3	DBC-750	AT&T
143.00	143.00	1	DC6-48-60-18-8F	AT&T
143.00	143.00	3	LGP13519	AT&T
143.00	143.00	1	Low Profile	AT&T
143.00	143.00	2	P65-17-XLH-RR	AT&T
143.00	143.00	6	RRUS 11	AT&T
143.00	143.00	2	SBNH-1D6565C	AT&T

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	183.00	Outside	Safety Cable	
0.00	183.00	Outside	Step bolts (ladder)	
0.00	173.00	Outside	1 5/8" Coax	Verizon
0.00	173.00	Inside	1 5/8" Coax	Verizon
0.00	173.00	Inside	1 5/8" Hybrid	Verizon
0.00	163.00	Inside	3" Conduit	Clearwire
0.00	163.00	Inside	5/16" Coax	Clearwire



Structure: CT01002-S-SBA

Type: Custom
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.00000

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0.00	163.00	Inside	9/16" Coax	Clearwire
0.00	153.00	Inside	1 5/8" Coax	T-Mobile
0.00	153.00	Inside	1 5/8" Fiber	T-Mobile
0.00	143.00	Inside	1 1/4" Coax	AT&T
0.00	143.00	Inside	3/4" DC	AT&T
0.00	143.00	Inside	7/16" Fiber	AT&T
110.00	125.00	Outside	C6X10.5 Reinforcing	
65.00	95.00	Outside	C6X10.5 Reinforcing	

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
24	2.00" A687	105.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
1.5000	64.5	60.0	Round

Reactions

Load Case	Moment	Shear	Axial
85 mph Wind with 0" Ice	5034.7	39.1	52.6
73.61 mph Wind with 0.5" Ice	4335.3	33.1	62.6
50 mph Wind with 0" Ice	1744.3	13.5	52.6

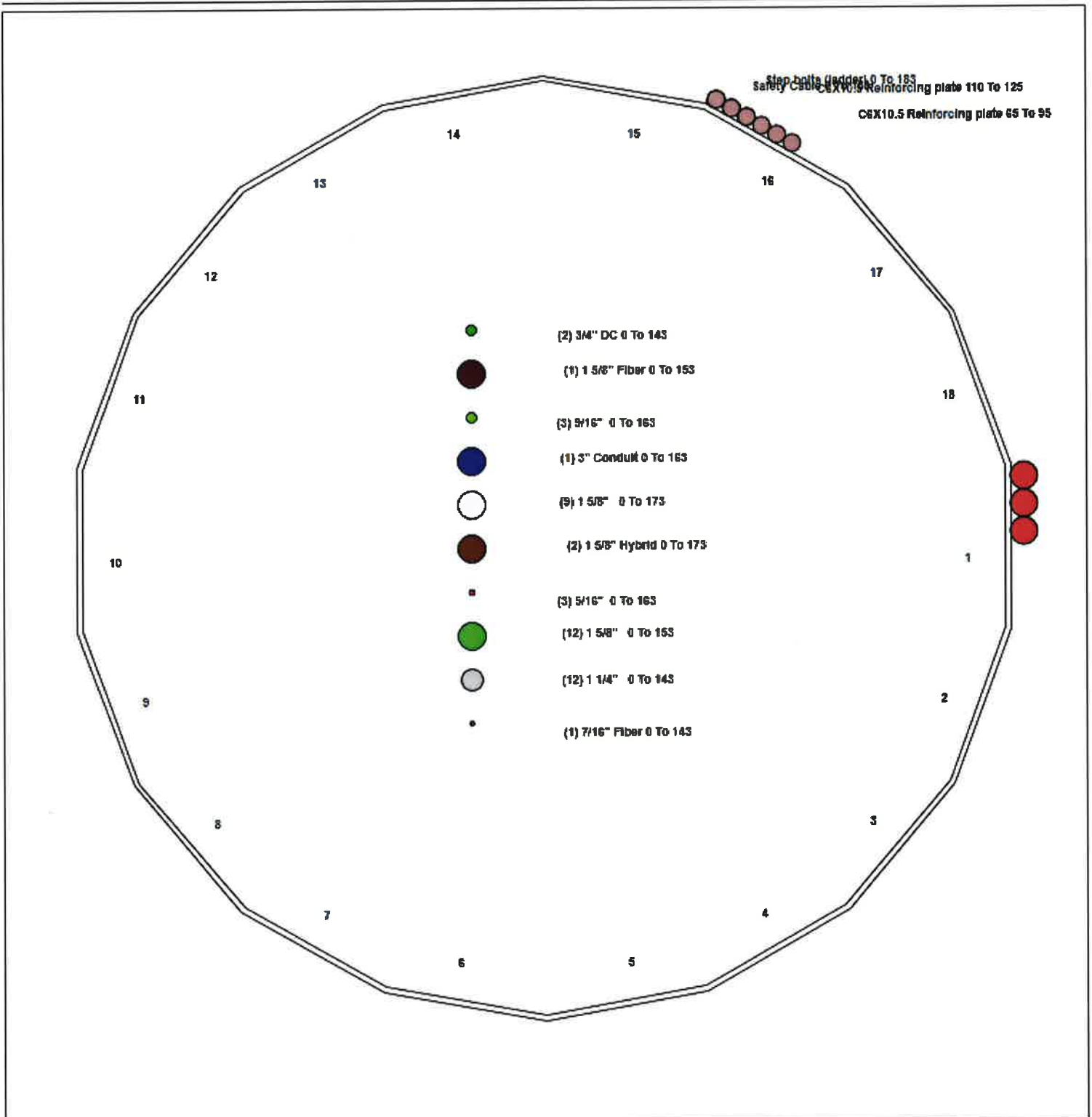
Structure: CT01002-S-SBA - Coax Line Placement

Type: Monopole
Site Name: Waterford
Height: 183.00 (ft)

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Shaft Properties

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	48.000	0.3750	76		0.00	11,368
2	18	10.000	0.3750	76	Slip	84.00	2,189
3	18	20.000	0.3750	63	Flange	0.00	4,092
4	18	10.000	0.3750	56	Flange	0.00	1,903
5	18	10.000	0.3125	65	Flange	0.00	1,508
6	18	30.000	0.3125	65	Slip	72.00	4,255
7	18	30.000	0.2500	65	Flange	0.00	2,837
8	18	50.000	0.2500	65	Slip	60.00	4,001
9	R	3.000	0.2810	36	Flange	0.00	214
Total Shaft Weight:							32,365

Bottom

Top

Sec. No.	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper
1	64.50	0.00	76.32	39651.33	28.91	172	53.20	48.00	62.87	22166.3	23.60	141.8	0.235417
2	55.60	41.00	65.73	25324.19	24.73	148.2	53.24	51.00	62.92	22221.5	23.62	141.9	0.235417
3	53.24	51.00	62.93	22221.78	23.62	141.9	48.53	71.00	57.32	16797.8	21.41	129.4	0.235417
4	48.53	71.00	57.32	16797.13	21.41	129.4	46.18	81.00	54.52	14452.3	20.30	123.1	0.235417
5	46.18	81.00	45.49	12093.11	24.64	147.7	43.83	91.00	43.16	10325.0	23.31	140.2	0.235417
6	45.87	85.00	45.18	11844.89	24.46	146.7	38.80	115.0	38.18	7145.58	20.48	124.1	0.235417
7	38.80	105.0	30.59	5744.14	25.95	155.2	34.09	135.0	24.99	3130.27	20.97	136.3	0.235417
8	35.77	130.0	28.18	4493.04	23.81	143.0	24.00	180.0	18.85	1343.02	15.51	96	0.235417
9	24.00	180.0	20.94	1473.63	0	85.40	24.00	183.0	20.94	1473.63	0	85.40	0.000000

Additional Steel

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Fu (ksi)	Offset (in)	Intermediate Connectors Description	Spacing (in)	Termination Connectors Description	Spacing (in)	Lower Qty	Upper Qty
66.17	93.83	6	PLT C6x10.5(1.5" Hole)	65	80	0.85	5/8" Hollo Bolt	0.00	5/8" Hollo Bolt	24.00		
111.1	123.8	3	PLT C6x10.5(1.5" Hole)	65	80	0.85	5/8" Hollo Bolt	0.00	5/8" Hollo Bolt	24.00		

Loading Summary

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
1	181.0	Low Profile Platform-Round	1	1500.00	22.00	1.00	1800.00	27.00	1.00	0.00	0.00
2	173.0	APL866513-42T0	2	15.70	4.29	0.93	47.00	4.860	0.93	0.00	0.00
3	173.0	DB-T1-6Z-8AB-OZ	2	44.00	5.60	0.50	0.00	6.080	0.50	0.00	0.00
4	173.0	HBXX-6517DS-VTM	6	40.70	8.73	0.77	91.90	9.590	0.77	0.00	0.00
5	173.0	LNx-6514DS-VTM	3	33.10	8.33	0.80	83.10	9.150	0.80	0.00	0.00
6	173.0	Low Profile Platform-Round	1	1500.00	22.00	1.00	1800.00	27.00	1.00	0.00	0.00
7	173.0	LPA-80080-4CF-EDIN-0	4	12.00	6.05	1.00	45.10	6.650	1.00	0.00	0.00
8	173.0	RRH2x60-1900	3	19.50	1.76	0.50	48.40	1.930	0.67	0.00	0.00
9	173.0	RRH2x60-700U	3	50.00	2.48	0.50	71.10	2.810	0.50	0.00	0.00
10	173.0	RRH2X60-AWS	3	60.00	3.96	0.50	80.10	4.230	0.50	0.00	0.00
11	163.0	DAP Head	3	42.00	1.88	0.50	55.40	2.220	0.50	0.00	0.00
12	163.0	LLPX310R	3	28.60	4.83	0.69	54.50	5.360	0.69	0.00	0.00
13	163.0	Low Profile Platform-Round	1	1500.00	22.00	1.00	1800.00	27.00	1.00	0.00	0.00
14	153.0	AIR 21, 1.3M, B2A B4P	3	91.50	6.58	0.86	129.20	6.970	0.86	0.00	0.00
15	153.0	AIR 21, 1.3M, B4A B2P	3	90.40	6.58	0.86	128.10	6.970	0.86	0.00	0.00
16	153.0	KRY 112 144/1	3	11.00	0.41	0.50	14.10	0.550	0.50	0.00	0.00
17	153.0	LNx-6515DS	3	49.80	11.41	0.80	115.60	12.34	0.80	0.00	0.00
18	153.0	Low Profile Platform-Round	1	1500.00	22.00	1.00	1800.00	27.00	1.00	0.00	0.00
19	153.0	S11B12	3	55.00	2.94	0.50	74.30	3.290	0.50	0.00	0.00
20	150.0	Low Profile Platform-Round	1	1500.00	22.00	1.00	1800.00	27.00	1.00	0.00	0.00
21	143.0	7770.00	3	35.00	5.88	0.73	0.00	6.530	0.73	0.00	0.00
22	143.0	850/1900	6	5.50	0.52	0.50	8.80	0.680	0.50	0.00	0.00
23	143.0	AM-X-CD-16-65-00T-RET	2	48.50	8.26	0.75	95.00	9.080	0.75	0.00	0.00
24	143.0	DBC-750	3	4.80	0.51	0.50	7.70	0.660	0.50	0.00	0.00
25	143.0	DC6-48-60-18-8F	1	31.80	1.47	1.00	49.50	1.670	1.00	0.00	0.00
26	143.0	LGP13519	3	5.30	0.34	0.50	8.00	0.470	0.50	0.00	0.00
27	143.0	Low Profile Platform-Round	1	1500.00	22.00	1.00	1800.00	27.00	1.00	0.00	0.00
28	143.0	P65-17-XLH-RR	2	59.00	11.46	0.75	121.00	12.39	0.75	0.00	0.00
29	143.0	RRUS 11	6	50.70	2.94	0.50	66.00	3.140	0.50	0.00	0.00
30	143.0	SBNH-1D6565C	2	66.10	11.44	0.00	132.00	12.37	0.80	0.00	0.00
Totals:			81	11,855.80			15,428.90				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	No Ice		Ice		Exposed
			Weight (lb/ft)	CaAa (sf/ft)	Weight (lb/ft)	CaAa (sf/ft)	
0.00	183.0	(1) Safety Cable	0.27	0.03	0.81	0.12	Outside
0.00	183.0	(1) Step bolts (ladder)	1.04	0.05	1.73	0.14	Outside
0.00	173.0	(3) 1 5/8" Coax	3.12	0.17	7.67	0.25	Outside
0.00	173.0	(9) 1 5/8" Coax	9.36	0.00	9.36	0.00	Inside
0.00	173.0	(2) 1 5/8" Hybrid	2.20	0.00	2.20	0.00	Inside
0.00	163.0	(1) 3" Conduit	4.83	0.00	4.83	0.00	Inside
0.00	163.0	(3) 5/16" Coax	0.00	0.00	0.00	0.00	Inside
0.00	163.0	(3) 9/16" Coax	1.20	0.00	1.20	0.00	Inside
0.00	153.0	(12) 1 5/8" Coax	12.48	0.00	12.48	0.00	Inside
0.00	153.0	(1) 1 5/8" Fiber	1.10	0.00	1.10	0.00	Inside

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
0.00	143.0	(12) 1 1/4" Coax		7.92	0.00		7.92	0.00		Inside	
0.00	143.0	(2) 3/4" DC		0.80	0.00		0.80	0.00		Inside	
0.00	143.0	(1) 7/16" Fiber		0.12	0.00		0.80	0.00		Inside	
110.00	125.0	(3) C6X10.5 Reinforcing plate		0.00	0.34		6.42	0.43		Outside	
65.00	95.00	(6) C6X10.5 Reinforcing plate		0.00	0.34		12.84	0.43		Outside	
Totals:				7,104.67			8,695.10				

Shaft Section Properties

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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Increment Length: 2 (ft)

Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	Wt Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)	Additional Reinforcing			
											Area (in^2)	Ixp (in^4)	Iyp (in^4)	Weight (lb)
0.00		0.3750	64.500	76.322	39651.3	28.92	172.00	76	54	0.0	0.00	0.0	0.0	0.0
2.00		0.3750	64.029	75.762	38784.3	28.70	170.74	76	55	517.5				
4.00		0.3750	63.558	75.201	37930.0	28.47	169.49	76	55	513.7				
6.00		0.3750	63.087	74.641	37088.4	28.25	168.23	76	55	509.9				
8.00		0.3750	62.617	74.080	36259.3	28.03	166.98	76	55	506.1				
10.00		0.3750	62.146	73.520	35442.6	27.81	165.72	76	56	502.3				
12.00		0.3750	61.675	72.960	34638.3	27.59	164.47	76	56	498.4				
14.00		0.3750	61.204	72.399	33846.3	27.37	163.21	76	56	494.6				
16.00		0.3750	60.733	71.839	33066.4	27.15	161.96	76	56	490.8				
18.00		0.3750	60.262	71.279	32298.6	26.93	160.70	76	57	487.0				
20.00		0.3750	59.792	70.718	31542.8	26.70	159.44	76	57	483.2				
22.00		0.3750	59.321	70.158	30798.9	26.48	158.19	76	57	479.4				
24.00		0.3750	58.850	69.597	30066.7	26.26	156.93	76	57	475.6				
26.00		0.3750	58.379	69.037	29346.3	26.04	155.68	76	57	471.7				
28.00		0.3750	57.908	68.477	28637.4	25.82	154.42	76	58	467.9				
30.00		0.3750	57.437	67.916	27940.1	25.60	153.17	76	58	464.1				
32.00		0.3750	56.967	67.356	27254.2	25.38	151.91	76	58	460.3				
34.00		0.3750	56.496	66.795	26579.6	25.15	150.66	76	58	456.5				
36.00		0.3750	56.025	66.235	25916.2	24.93	149.40	76	59	452.7				
38.00		0.3750	55.554	65.675	25263.9	24.71	148.14	76	59	448.9				
40.00		0.3750	55.083	65.114	24622.7	24.49	146.89	76	59	445.0				
41.00	Bot - Section 2	0.3750	54.848	64.834	24306.2	24.38	146.26	76	59	221.1				
42.00		0.3750	54.612	64.554	23992.4	24.27	145.63	76	59	443.3				
44.00		0.3750	54.142	63.993	23373.0	24.05	144.38	76	60	880.9				
46.00		0.3750	53.671	63.433	22764.3	23.83	143.12	76	60	873.3				
48.00	Top - Section 1	0.3750	53.950	63.765	23124.1	23.96	143.87	76	60	865.7				
50.00		0.3750	53.479	63.205	22519.7	23.74	142.61	76	60	432.1				
51.00	Top - Section 2	0.0000	0.000	0.000	0.0	NAN	NAN		0	214.6				
51.00	Bot - Section 3	0.3750	53.244	62.925	22221.6	23.62	141.98	76	60					
52.00		0.3750	53.009	62.645	21926.3	23.51	141.36	63	50	213.6				
54.00		0.3750	52.538	62.084	21343.1	23.29	140.10	63	50	424.4				
56.00		0.3750	52.067	61.524	20770.3	23.07	138.85	63	50	420.6				
58.00		0.3750	51.596	60.964	20207.9	22.85	137.59	63	50	416.8				
60.00		0.3750	51.125	60.403	19655.8	22.63	136.33	63	50	413.0				
62.00		0.3750	50.654	59.843	19113.8	22.41	135.08	63	50	409.2				
64.00		0.3750	50.184	59.283	18581.8	22.19	133.82	63	50	405.4				
66.00		0.3750	49.713	58.722	18059.8	21.96	132.57	63	50	401.5				
66.17	RB1	0.3750	49.673	58.675	18015.9	21.95	132.46	63	50	34.0	18.48	6572.7	6572.7	10.7
68.00		0.3750	49.242	58.162	17547.7	21.74	131.31	63	50	363.8	18.48	6467.0	6467.0	115.3
70.00		0.3750	48.771	57.601	17045.4	21.52	130.06	63	50	393.9	18.48	6352.5	6352.5	126.0
71.00	Top - Section 3	0.0000	0.000	0.000	0.0	NAN	NAN		0	195.5	18.48	6295.6	6295.6	63.0
71.00	Bot - Section 4	0.3750	48.536	57.321	16797.8	21.41	129.43	63	50					
72.00		0.3750	48.300	57.040	16552.0	21.30	128.80	56	45	194.6	18.48	6238.8	6238.8	63.0
74.00		0.3750	47.829	56.480	16068.9	21.08	127.54	56	45	386.3	18.48	6126.3	6126.3	126.0
76.00		0.3750	47.358	55.919	15595.4	20.86	126.29	56	45	382.5	18.48	6014.8	6014.8	126.0
78.00		0.3750	46.887	55.359	15131.2	20.64	125.03	56	45	378.7	18.48	5904.4	5904.4	126.0
80.00		0.3750	46.416	54.799	14676.3	20.41	123.78	56	45	374.8	18.48	5795.0	5795.0	126.0
81.00	Top - Section 4	0.0000	0.000	0.000	0.0	NAN	NAN		0	186.0	18.48	5740.7	5740.7	63.0
81.00	Bot - Section 5	0.3750	46.181	54.518	14452.3	20.30	123.15	56	45					
82.00		0.3125	45.946	45.261	11907.9	24.51	147.03	65	52	154.4	18.48	5686.6	5686.6	63.0
84.00		0.3125	45.475	44.794	11543.1	24.25	145.52	65	52	306.4	18.48	5579.3	5579.3	126.0
85.00	Bot - Section 6	0.3125	45.239	44.560	11363.5	24.12	144.77	65	52	152.0	18.48	5526.0	5526.0	63.0

Increment Length: 2 (ft)

Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)	Additional Reinforcing			
											Area (in^2)	Ixp (in^4)	Iyp (in^4)	Weight (lb)
86.00		0.3125	45.004	44.327	11185.8	23.98	144.01	65	52	304.6	18.48	5614.5	5614.5	63.0
88.00		0.3125	44.533	43.860	10836.0	23.72	142.51	65	52	604.4	18.48	5507.8	5507.8	126.0
90.00		0.3125	44.062	43.393	10493.5	23.45	141.00	65	52	598.0	18.48	5402.1	5402.1	126.0
91.00	Top - Section 5	0.3125	44.452	43.780	10776.8	23.67	142.25	65	52	296.6	18.48	5349.7	5349.7	63.0
92.00		0.3125	44.217	43.546	10605.3	23.54	141.49	65	52	148.6	18.48	5297.5	5297.5	63.0
93.83	RT1	0.3125	43.786	43.119	10296.2	23.30	140.12	65	52	269.8	18.48	5202.6	5202.6	115.3
94.00		0.3125	43.746	43.079	10267.8	23.27	139.99	65	52	24.9				
96.00		0.3125	43.275	42.612	9937.5	23.01	138.48	65	52	291.6				
98.00		0.3125	42.805	42.145	9614.3	22.74	136.97	65	52	288.4				
100.00		0.3125	42.334	41.678	9298.2	22.48	135.47	65	52	285.2				
102.00		0.3125	41.863	41.211	8989.2	22.21	133.96	65	52	282.1				
104.00		0.3125	41.392	40.744	8687.0	21.94	132.45	65	52	278.9				
106.00		0.3125	40.921	40.277	8391.8	21.68	130.95	65	52	483.9				
108.00		0.3125	40.450	39.810	8103.2	21.41	129.44	65	52	478.2				
110.00		0.3125	39.980	39.343	7821.4	21.15	127.93	65	52	472.4				
111.17	RB2	0.3125	39.704	39.070	7659.6	20.99	127.05	65	52	273.7	9.24	1943.8	1943.8	36.9
112.00		0.3125	39.509	38.876	7546.2	20.88	126.43	65	52	193.0	9.24	1925.4	1925.4	26.1
114.00		0.3125	39.038	38.409	7277.5	20.62	124.92	65	52	461.0	9.24	1881.3	1881.3	63.0
115.00	Top - Section 6	0.0000	0.000	0.000	0.0	NAN	NAN	0	0	130.3	9.24	2083.9	2083.9	31.5
115.00	Bot - Section 7	0.3125	38.802	38.176	7145.6	20.48	124.17	65	52					
116.00		0.2500	38.567	30.403	5639.6	25.79	154.27	65	51	103.8	9.24	2060.8	2060.8	31.5
118.00		0.2500	38.096	30.030	5434.2	25.46	152.38	65	51	205.6	9.24	2015.2	2015.2	63.0
120.00		0.2500	37.625	29.656	5233.9	25.13	150.50	65	52	203.1	9.24	1970.0	1970.0	63.0
122.00		0.2500	37.154	29.282	5038.6	24.79	148.62	65	52	200.6	9.24	1925.4	1925.4	63.0
123.83	RT2	0.2500	36.723	28.940	4864.2	24.49	146.89	65	52	181.3	9.24	1885.0	1885.0	57.6
124.00		0.2500	36.683	28.909	4848.2	24.46	146.73	65	52	16.7				
126.00		0.2500	36.212	28.535	4662.6	24.13	144.85	65	52	195.5				
128.00		0.2500	35.742	28.162	4481.9	23.80	142.97	65	52	192.9				
130.00	Bot - Section 8	0.2500	35.271	27.788	4305.9	23.47	141.08	65	52	190.4				
132.00		0.2500	34.800	27.414	4134.5	23.13	139.20	65	52	378.4				
134.00		0.2500	34.329	27.041	3967.8	22.80	137.32	65	52	373.3				
135.00	Top - Section 7	0.2500	34.594	27.251	4061.0	22.99	138.38	65	52	184.7				
136.00		0.2500	34.358	27.064	3978.1	22.82	137.43	65	52	92.4				
138.00		0.2500	33.888	26.691	3815.6	22.49	135.55	65	52	182.9				
140.00		0.2500	33.417	26.317	3657.6	22.16	133.67	65	52	180.4				
142.00		0.2500	32.946	25.943	3504.0	21.83	131.78	65	52	177.8				
143.00		0.2500	32.711	25.757	3428.9	21.66	130.84	65	52	88.0				
144.00		0.2500	32.475	25.570	3354.8	21.49	129.90	65	52	87.3				
146.00		0.2500	32.004	25.196	3209.9	21.16	128.02	65	52	172.7				
148.00		0.2500	31.533	24.823	3069.2	20.83	126.13	65	52	170.2				
150.00		0.2500	31.063	24.449	2932.7	20.50	124.25	65	52	167.7				
152.00		0.2500	30.592	24.075	2800.3	20.17	122.37	65	52	165.1				
153.00		0.2500	30.356	23.889	2735.7	20.00	121.43	65	52	81.6				
154.00		0.2500	30.121	23.702	2672.0	19.83	120.48	65	52	81.0				
156.00		0.2500	29.650	23.328	2547.6	19.50	118.60	65	52	160.0				
158.00		0.2500	29.179	22.955	2427.2	19.17	116.72	65	52	157.5				
160.00		0.2500	28.708	22.581	2310.6	18.84	114.83	65	52	154.9				
162.00		0.2500	28.238	22.207	2197.8	18.51	112.95	65	52	152.4				
163.00		0.2500	28.002	22.021	2142.8	18.34	112.01	65	52	75.2				
164.00		0.2500	27.767	21.834	2088.7	18.17	111.07	65	52	74.6				
166.00		0.2500	27.296	21.460	1983.3	17.84	109.18	65	52	147.3				
168.00		0.2500	26.825	21.087	1881.5	17.51	107.30	65	52	144.8				
170.00		0.2500	26.354	20.713	1783.3	17.18	105.42	65	52	142.2				
172.00		0.2500	25.883	20.339	1688.5	16.85	103.53	65	52	139.7				
173.00		0.2500	25.648	20.153	1642.4	16.68	102.59	65	52	68.9				
174.00		0.2500	25.413	19.966	1597.2	16.51	101.65	65	52	68.3				
176.00		0.2500	24.942	19.592	1509.2	16.18	99.77	65	52	134.6				
178.00		0.2500	24.471	19.219	1424.5	15.85	97.88	65	52	132.1				
180.00	Top - Section 8	0.0000	0.000	0.000	0.0	NAN	NAN	0	0	129.5				
180.00	Bot - Section 9	0.2500	24.000	18.845	1343.0	15.52	96.00	65	52					

Increment Length: 2 (ft)

Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)	Additional Reinforcing			
											Area (in ²)	Ixp (in ⁴)	Iyp (in ⁴)	Weight (lb)
181.00		0.2810	24.000	20.939	1473.6	0.00	85.41	36	29	71.3				
182.00		0.2810	24.000	20.939	1473.6	0.00	85.41	36	29	71.3				
183.00		0.2810	24.000	20.939	1473.6	0.00	85.41	36	29	71.3				
Total Weight										32498.7				2188.9

Wind Loading - Shaft

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

8/14/2015

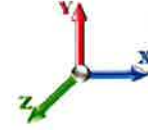


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Load Case: 85 mph Wind with 0" Ice

Iterations: 30

Dead Load Factor 1.00
Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	18.496	31.26	456.88	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		0.00	1.00	18.496	31.26	453.54	0.650	0.000	2.00	10.711	6.96	217.6	0.0	517.5
4.00		0.00	1.00	18.496	31.26	450.20	0.650	0.000	2.00	10.632	6.91	216.0	0.0	513.7
6.00		0.00	1.00	18.496	31.26	446.87	0.650	0.000	2.00	10.554	6.86	214.4	0.0	509.9
8.00		0.00	1.00	18.496	31.26	443.53	0.650	0.000	2.00	10.475	6.81	212.8	0.0	506.1
10.00		0.00	1.00	18.496	31.26	440.20	0.650	0.000	2.00	10.397	6.76	211.2	0.0	502.3
12.00		0.00	1.00	18.496	31.26	436.86	0.650	0.000	2.00	10.318	6.71	209.6	0.0	498.4
14.00		0.00	1.00	18.496	31.26	433.53	0.650	0.000	2.00	10.240	6.66	208.0	0.0	494.6
16.00		0.00	1.00	18.496	31.26	430.19	0.650	0.000	2.00	10.161	6.60	206.5	0.0	490.8
18.00		0.00	1.00	18.496	31.26	426.86	0.650	0.000	2.00	10.083	6.55	204.9	0.0	487.0
20.00		0.00	1.00	18.496	31.26	423.52	0.650	0.000	2.00	10.005	6.50	203.3	0.0	483.2
22.00		0.00	1.00	18.496	31.26	420.19	0.650	0.000	2.00	9.926	6.45	201.7	0.0	479.4
24.00		0.00	1.00	18.496	31.26	416.85	0.650	0.000	2.00	9.848	6.40	200.1	0.0	475.6
26.00		0.00	1.00	18.496	31.26	413.52	0.650	0.000	2.00	9.769	6.35	198.5	0.0	471.7
28.00		0.00	1.00	18.496	31.26	410.18	0.650	0.000	2.00	9.691	6.30	196.9	0.0	467.9
30.00		0.00	1.00	18.496	31.26	406.85	0.650	0.000	2.00	9.612	6.25	195.3	0.0	464.1
32.00		0.00	1.00	18.496	31.26	403.51	0.650	0.000	2.00	9.534	6.20	193.7	0.0	460.3
34.00		0.00	1.01	18.654	31.53	401.89	0.650	0.000	2.00	9.455	6.15	193.8	0.0	456.5
36.00		0.00	1.03	18.962	32.05	401.81	0.650	0.000	2.00	9.377	6.09	193.3	0.0	452.7
38.00		0.00	1.04	19.257	32.54	401.52	0.650	0.000	2.00	9.298	6.04	196.7	0.0	448.9
40.00		0.00	1.06	19.541	33.02	401.04	0.650	0.000	2.00	9.220	5.99	197.9	0.0	445.0
41.00 Bot - Section 2		0.00	1.06	19.679	33.26	400.74	0.650	0.000	1.00	4.580	2.98	99.0	0.0	221.1
42.00		0.00	1.07	19.815	33.49	400.40	0.650	0.000	1.00	4.623	3.01	100.6	0.0	443.3
44.00		0.00	1.09	20.081	33.94	399.59	0.650	0.000	2.00	9.188	5.97	202.7	0.0	880.9
46.00		0.00	1.10	20.337	34.37	398.64	0.650	0.000	2.00	9.109	5.92	203.5	0.0	873.3
48.00 Top - Section 1		0.00	1.11	20.586	34.79	397.55	0.650	0.000	2.00	9.031	5.87	204.2	0.0	865.7
50.00		0.00	1.13	20.827	35.20	401.98	0.650	0.000	2.00	8.952	5.82	204.8	0.0	432.1
51.00 Top - Section 2		0.00	1.13	20.946	35.40	401.34	0.650	0.000	1.00	4.447	2.89	102.3	0.0	214.6
52.00		0.00	1.14	21.062	35.60	400.68	0.650	0.000	1.00	4.427	2.88	102.4	0.0	213.6
54.00		0.00	1.15	21.291	35.98	399.27	0.650	0.000	2.00	8.796	5.72	205.7	0.0	424.4
56.00		0.00	1.16	21.513	36.36	397.75	0.650	0.000	2.00	8.717	5.67	206.0	0.0	420.6
58.00		0.00	1.17	21.730	36.72	396.13	0.650	0.000	2.00	8.639	5.62	206.2	0.0	416.8
60.00		0.00	1.19	21.941	37.08	394.42	0.650	0.000	2.00	8.560	5.56	206.3	0.0	413.0
62.00		0.00	1.20	22.148	37.43	392.63	0.650	0.000	2.00	8.482	5.51	206.4	0.0	409.2
64.00		0.00	1.21	22.350	37.77	390.75	0.650	0.000	2.00	8.403	5.46	206.3	0.0	405.4
66.00		0.00	1.22	22.547	38.10	388.79	0.650	0.000	2.00	8.325	5.41	206.2	0.0	401.5
66.17 RB1		0.00	1.22	22.563	38.13	388.61	0.650	0.000	0.17	0.704	0.46	17.4	0.0	55.4
68.00		0.00	1.23	22.740	38.43	386.75	0.650	0.000	1.83	7.542	4.90	188.4	0.0	594.4
70.00		0.00	1.24	22.929	38.75	384.64	0.650	0.000	2.00	8.168	5.31	205.7	0.0	645.9
71.00 Top - Section 3		0.00	1.24	23.022	38.91	383.56	0.650	0.000	1.00	4.054	2.64	102.5	0.0	321.5
72.00		0.00	1.25	23.114	39.06	382.46	0.650	0.000	1.00	4.035	2.62	102.4	0.0	320.6
74.00		0.00	1.26	23.296	39.37	380.21	0.650	0.000	2.00	8.011	5.21	205.0	0.0	638.3
76.00		0.00	1.27	23.474	39.67	377.91	0.650	0.000	2.00	7.932	5.16	204.5	0.0	634.5
78.00		0.00	1.28	23.649	39.97	375.54	0.650	0.000	2.00	7.854	5.10	204.0	0.0	630.7
80.00		0.00	1.29	23.821	40.26	373.12	0.650	0.000	2.00	7.775	5.05	203.5	0.0	626.8
81.00 Top - Section 4		0.00	1.29	23.906	40.40	371.89	0.650	0.000	1.00	3.858	2.51	101.3	0.0	312.0
82.00		0.00	1.30	23.989	40.54	370.64	0.650	0.000	1.00	3.839	2.50	101.2	0.0	280.4
84.00		0.00	1.31	24.155	40.82	368.11	0.650	0.000	2.00	7.618	4.95	202.1	0.0	558.4

Wind Loading - Shaft

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

8/14/2015

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85.00 Bot - Section 6	0.00	1.31	24.237	40.96	366.82	0.650	0.000	1.00	3.780	2.46	100.6	0.0	278.0
86.00	0.00	1.31	24.318	41.10	365.52	0.650	0.000	1.00	3.812	2.48	101.8	0.0	430.6
88.00	0.00	1.32	24.478	41.37	362.89	0.650	0.000	2.00	7.566	4.92	203.4	0.0	856.4
90.00	0.00	1.33	24.636	41.63	360.21	0.650	0.000	2.00	7.487	4.87	202.6	0.0	850.0
91.00 Top - Section 5	0.00	1.34	24.714	41.77	358.85	0.650	0.000	1.00	3.714	2.41	100.8	0.0	422.6
92.00	0.00	1.34	24.791	41.90	362.61	0.650	0.000	1.00	3.695	2.40	100.6	0.0	274.6
93.83 RT1	0.00	1.35	24.931	42.13	360.09	0.650	0.000	1.83	6.710	4.36	183.8	0.0	500.4
94.00	0.00	1.35	24.944	42.16	359.85	0.650	0.000	0.17	0.620	0.40	17.0	0.0	24.9
96.00	0.00	1.36	25.095	42.41	357.05	0.650	0.000	2.00	7.252	4.71	199.9	0.0	291.6
98.00	0.00	1.36	25.243	42.66	354.21	0.650	0.000	2.00	7.173	4.66	198.9	0.0	288.4
100.00	0.00	1.37	25.389	42.91	351.32	0.650	0.000	2.00	7.095	4.61	197.9	0.0	285.2
102.00	0.00	1.38	25.533	43.15	348.40	0.650	0.000	2.00	7.016	4.56	196.8	0.0	282.1
104.00	0.00	1.39	25.675	43.39	345.44	0.650	0.000	2.00	6.938	4.51	195.7	0.0	278.9
106.00	0.00	1.40	25.815	43.63	342.44	0.650	0.000	2.00	6.467	4.20	183.4	0.0	275.7
108.00	0.00	1.40	25.953	43.86	339.41	0.650	0.000	2.00	6.389	4.15	182.1	0.0	272.5
110.00	0.00	1.41	26.090	44.09	336.34	0.650	0.000	2.00	6.310	4.10	180.8	0.0	269.3
111.17 RB2	0.00	1.41	26.169	44.23	334.52	0.650	0.000	1.17	3.655	2.38	105.1	0.0	229.8
112.00	0.00	1.42	26.225	44.32	333.23	0.650	0.000	0.83	2.577	1.67	74.2	0.0	162.4
114.00	0.00	1.43	26.357	44.54	330.09	0.650	0.000	2.00	6.153	4.00	178.2	0.0	389.0
115.00 Top - Section 6	0.00	1.43	26.423	44.66	328.51	0.650	0.000	1.00	3.243	2.11	94.1	0.0	193.3
116.00	0.00	1.43	26.489	44.77	326.92	0.650	0.000	1.00	3.224	2.10	93.8	0.0	166.8
118.00	0.00	1.44	26.618	44.99	323.72	0.650	0.000	2.00	6.389	4.15	186.8	0.0	331.6
120.00	0.00	1.45	26.747	45.20	320.49	0.650	0.000	2.00	6.310	4.10	185.4	0.0	329.1
122.00	0.00	1.45	26.873	45.42	317.22	0.650	0.000	2.00	6.232	4.05	184.0	0.0	326.6
123.83 RT2	0.00	1.46	26.988	45.61	314.21	0.650	0.000	1.83	5.633	3.66	167.0	0.0	296.6
124.00	0.00	1.46	26.998	45.63	313.93	0.650	0.000	0.17	0.520	0.34	15.4	0.0	16.7
126.00	0.00	1.47	27.122	45.84	310.61	0.650	0.000	2.00	6.075	3.95	181.0	0.0	195.5
128.00	0.00	1.47	27.244	46.04	307.26	0.650	0.000	2.00	5.996	3.90	179.5	0.0	192.9
130.00 Bot - Section 8	0.00	1.48	27.365	46.25	303.89	0.650	0.000	2.00	5.918	3.85	177.9	0.0	190.4
132.00	0.00	1.49	27.485	46.45	300.49	0.650	0.000	2.00	5.923	3.85	178.8	0.0	378.4
134.00	0.00	1.49	27.603	46.65	297.06	0.650	0.000	2.00	5.844	3.80	177.2	0.0	373.3
135.00 Top - Section 7	0.00	1.50	27.662	46.75	295.33	0.650	0.000	1.00	2.893	1.88	87.9	0.0	184.7
136.00	0.00	1.50	27.720	46.85	297.94	0.650	0.000	1.00	2.873	1.87	87.5	0.0	92.4
138.00	0.00	1.50	27.836	47.04	294.47	0.650	0.000	2.00	5.687	3.70	173.9	0.0	182.9
140.00	0.00	1.51	27.951	47.24	290.98	0.650	0.000	2.00	5.609	3.65	172.2	0.0	180.4
142.00	0.00	1.52	28.064	47.43	287.46	0.650	0.000	2.00	5.530	3.59	170.5	0.0	177.8
143.00 Appurtenance(s)	0.00	1.52	28.121	47.52	285.69	0.650	0.000	1.00	2.736	1.78	84.5	0.0	88.0
144.00	0.00	1.52	28.177	47.62	283.92	0.650	0.000	1.00	2.716	1.77	84.1	0.0	87.3
146.00	0.00	1.53	28.288	47.81	280.36	0.650	0.000	2.00	5.373	3.49	167.0	0.0	172.7
148.00	0.00	1.54	28.398	47.99	276.77	0.650	0.000	2.00	5.295	3.44	165.2	0.0	170.2
150.00 Appurtenance(s)	0.00	1.54	28.507	48.18	273.16	0.650	0.000	2.00	5.216	3.39	163.4	0.0	167.7
152.00	0.00	1.55	28.615	48.36	269.53	0.650	0.000	2.00	5.138	3.34	161.5	0.0	165.1
153.00 Appurtenance(s)	0.00	1.55	28.669	48.45	267.70	0.650	0.000	1.00	2.540	1.65	80.0	0.0	81.6
154.00	0.00	1.55	28.723	48.54	265.88	0.650	0.000	1.00	2.520	1.64	79.5	0.0	81.0
156.00	0.00	1.56	28.829	48.72	262.20	0.650	0.000	2.00	4.981	3.24	157.7	0.0	160.0
158.00	0.00	1.56	28.934	48.90	258.51	0.650	0.000	2.00	4.902	3.19	155.8	0.0	157.5
160.00	0.00	1.57	29.038	49.07	254.80	0.650	0.000	2.00	4.824	3.14	153.9	0.0	154.9
162.00	0.00	1.58	29.141	49.25	251.06	0.650	0.000	2.00	4.746	3.08	151.9	0.0	152.4
163.00 Appurtenance(s)	0.00	1.58	29.192	49.34	249.19	0.650	0.000	1.00	2.343	1.52	75.1	0.0	75.2
164.00	0.00	1.58	29.243	49.42	247.31	0.650	0.000	1.00	2.324	1.51	74.6	0.0	74.6
166.00	0.00	1.59	29.345	49.59	243.54	0.650	0.000	2.00	4.589	2.98	147.9	0.0	147.3
168.00	0.00	1.59	29.446	49.76	239.75	0.650	0.000	2.00	4.510	2.93	145.9	0.0	144.8
170.00	0.00	1.60	29.545	49.93	235.94	0.650	0.000	2.00	4.432	2.88	143.8	0.0	142.2
172.00	0.00	1.60	29.644	50.10	232.11	0.650	0.000	2.00	4.353	2.83	141.8	0.0	139.7
173.00 Appurtenance(s)	0.00	1.61	29.693	50.18	230.19	0.650	0.000	1.00	2.147	1.40	70.0	0.0	68.9
174.00	0.00	1.61	29.742	50.26	228.26	0.650	0.000	1.00	2.128	1.38	69.5	0.0	68.3
176.00	0.00	1.61	29.840	50.43	224.40	0.650	0.000	2.00	4.196	2.73	137.5	0.0	134.6
178.00	0.00	1.62	29.936	50.59	220.52	0.650	0.000	2.00	4.118	2.68	135.4	0.0	132.1

Wind Loading - Shaft

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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180.00 Top - Section 8	0.00	1.62	30.032	50.75	216.62	0.650	0.000	2.00	4.039	2.63	133.3	0.0	129.5
181.00 Appurtenance(s)	0.00	1.63	30.079	50.83	216.79	0.590	0.000	1.00	2.000	1.18	60.0	0.0	71.3
182.00	0.00	1.63	30.127	50.91	216.96	0.590	0.000	1.00	2.000	1.18	60.1	0.0	71.3
183.00	0.00	1.63	30.174	50.99	217.13	0.590	0.000	1.00	2.000	1.18	60.2	0.0	71.3
Totals:								183.00			17,051.3		35,861.1

Discrete Appurtenance Forces

Structure: CT01002-S-SB
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

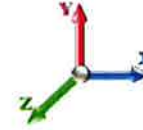
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Load Case: 85 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 30

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	181.00	Low Profile Platform-Round	1	30.079	50.834	1.00	22.00	1500.00	0.000	0.000	1118.35	0.00	0.00
2	173.00	Low Profile Platform-Round	1	29.693	50.182	1.00	22.00	1500.00	0.000	0.000	1104.00	0.00	0.00
3	173.00	APL866513-42T0	2	29.693	50.182	0.93	7.98	31.40	0.000	0.000	400.42	0.00	0.00
4	173.00	DB-T1-6Z-8AB-OZ	2	29.693	50.182	0.50	5.60	88.00	0.000	0.000	281.02	0.00	0.00
5	173.00	LNx-6514DS-VTM	3	29.693	50.182	0.80	19.99	99.30	0.000	0.000	1003.23	0.00	0.00
6	173.00	HBXX-6517DS-VTM	6	29.693	50.182	0.77	40.33	244.20	0.000	0.000	2023.96	0.00	0.00
7	173.00	LPA-80080-4CF-EDIN-0	4	29.693	50.182	1.00	24.20	48.00	0.000	0.000	1214.40	0.00	0.00
8	173.00	RRH2x60-1900	3	29.693	50.182	0.50	2.64	58.50	0.000	0.000	132.48	0.00	0.00
9	173.00	RRH2x60-700U	3	29.693	50.182	0.50	3.72	150.00	0.000	0.000	186.68	0.00	0.00
10	173.00	RRH2X60-AWS	3	29.693	50.182	0.50	5.94	180.00	0.000	0.000	298.08	0.00	0.00
11	163.00	Low Profile Platform-Round	1	29.192	49.335	1.00	22.00	1500.00	0.000	0.000	1085.37	0.00	0.00
12	163.00	LLPX310R	3	29.192	49.335	0.69	10.00	85.80	0.000	0.000	493.26	0.00	0.00
13	163.00	DAP Head	3	29.192	49.335	0.50	2.82	126.00	0.000	0.000	139.13	0.00	0.00
14	153.00	S11B12	3	28.669	48.451	0.50	4.41	165.00	0.000	0.000	213.67	0.00	0.00
15	153.00	Low Profile Platform-Round	1	28.669	48.451	1.00	22.00	1500.00	0.000	0.000	1065.92	0.00	0.00
16	153.00	LNx-6515DS	3	28.669	48.451	0.80	27.38	149.40	0.000	0.000	1326.78	0.00	0.00
17	153.00	AIR 21, 1.3M, B4A B2P	3	28.669	48.451	0.86	16.98	271.20	0.000	0.000	822.52	0.00	0.00
18	153.00	AIR 21, 1.3M, B2A B4P	3	28.669	48.451	0.86	16.98	274.50	0.000	0.000	822.52	0.00	0.00
19	153.00	KRY 112 144/1	3	28.669	48.451	0.50	0.61	33.00	0.000	0.000	29.80	0.00	0.00
20	150.00	Low Profile Platform-Round	1	28.507	48.177	1.00	22.00	1500.00	0.000	0.000	1059.90	0.00	0.00
21	143.00	DC6-48-60-18-8F	1	28.121	47.524	1.00	1.47	31.80	0.000	0.000	69.86	0.00	0.00
22	143.00	7770.00	3	28.121	47.524	0.73	12.88	105.00	0.000	0.000	611.98	0.00	0.00
23	143.00	850/1900	6	28.121	47.524	0.50	1.56	33.00	0.000	0.000	74.14	0.00	0.00
24	143.00	AM-X-CD-16-65-00T-RET	2	28.121	47.524	0.75	12.39	97.00	0.000	0.000	588.82	0.00	0.00
25	143.00	DBC-750	3	28.121	47.524	0.50	0.77	14.40	0.000	0.000	36.36	0.00	0.00
26	143.00	P65-17-XLH-RR	2	28.121	47.524	0.75	17.19	118.00	0.000	0.000	816.94	0.00	0.00
27	143.00	LGP13519	3	28.121	47.524	0.50	0.51	15.90	0.000	0.000	24.24	0.00	0.00
28	143.00	Low Profile Platform-Round	1	28.121	47.524	1.00	22.00	1500.00	0.000	0.000	1045.53	0.00	0.00
29	143.00	RRUS 11	6	28.121	47.524	0.50	8.82	304.20	0.000	0.000	419.16	0.00	0.00
30	143.00	SBNH-1D6565C	2	28.121	47.524	0.00	22.88	132.20	0.000	0.000	1087.35	0.00	0.00
Totals:							11,855.80				19,595.84		

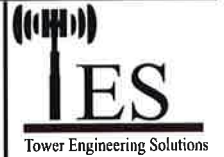
Total Applied Force Summary

Structure: CT01002-S-SB
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

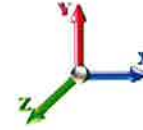
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Load Case: 85 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 30

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		233.25	606.39	0.00	0.00
4.00		231.65	602.58	0.00	0.00
6.00		230.06	598.77	0.00	0.00
8.00		228.47	594.95	0.00	0.00
10.00		226.87	591.14	0.00	0.00
12.00		225.28	587.32	0.00	0.00
14.00		223.68	583.51	0.00	0.00
16.00		222.09	579.70	0.00	0.00
18.00		220.49	575.88	0.00	0.00
20.00		218.90	572.07	0.00	0.00
22.00		217.30	568.26	0.00	0.00
24.00		215.71	564.44	0.00	0.00
26.00		214.12	560.63	0.00	0.00
28.00		212.52	556.81	0.00	0.00
30.00		210.93	553.00	0.00	0.00
32.00		209.33	549.19	0.00	0.00
34.00		209.52	545.37	0.00	0.00
36.00		211.33	541.56	0.00	0.00
38.00		212.96	537.75	0.00	0.00
40.00		214.42	533.93	0.00	0.00
41.00		107.33	265.54	0.00	0.00
42.00		109.01	487.76	0.00	0.00
44.00		219.64	969.80	0.00	0.00
46.00		220.69	962.17	0.00	0.00
48.00		221.62	954.54	0.00	0.00
50.00		222.42	520.94	0.00	0.00
51.00		111.16	259.04	0.00	0.00
52.00		111.33	258.09	0.00	0.00
54.00		223.70	513.31	0.00	0.00
56.00		224.18	509.50	0.00	0.00
58.00		224.56	505.68	0.00	0.00
60.00		224.86	501.87	0.00	0.00
62.00		225.07	498.06	0.00	0.00
64.00		225.19	494.24	0.00	0.00
66.00		238.19	490.43	0.00	0.00
66.17		21.27	52.22	0.00	0.00
68.00		229.90	560.40	0.00	0.00
70.00		251.45	608.80	0.00	0.00
71.00		125.49	302.97	0.00	0.00
72.00		125.50	302.01	0.00	0.00
74.00		251.46	601.17	0.00	0.00
76.00		251.36	597.36	0.00	0.00
78.00		251.19	593.54	0.00	0.00
80.00		250.96	589.73	0.00	0.00
81.00		125.15	293.43	0.00	0.00
82.00		125.08	261.85	0.00	0.00
84.00		250.32	521.32	0.00	0.00
85.00		124.80	259.47	0.00	0.00

Total Applied Force Summary

Structure: CT01002-S-SB
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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86.00		126.09	412.02	0.00	0.00
88.00		252.25	819.27	0.00	0.00
90.00		251.75	812.91	0.00	0.00
91.00		125.48	404.07	0.00	0.00
92.00		125.33	256.02	0.00	0.00
93.83		229.26	466.46	0.00	0.00
94.00		21.22	32.49	0.00	0.00
96.00		235.53	380.48	0.00	0.00
98.00		220.24	377.30	0.00	0.00
100.00		219.33	374.12	0.00	0.00
102.00		218.37	370.94	0.00	0.00
104.00		217.37	367.76	0.00	0.00
106.00		205.21	364.58	0.00	0.00
108.00		204.07	361.41	0.00	0.00
110.00		202.89	358.23	0.00	0.00
111.17		135.60	244.95	0.00	0.00
112.00		95.93	173.11	0.00	0.00
114.00		230.72	414.87	0.00	0.00
115.00		120.49	206.24	0.00	0.00
116.00		120.21	179.72	0.00	0.00
118.00		239.89	357.52	0.00	0.00
120.00		238.73	354.98	0.00	0.00
122.00		237.55	352.44	0.00	0.00
123.83		216.25	320.25	0.00	0.00
124.00		20.00	24.29	0.00	0.00
126.00		219.49	284.35	0.00	0.00
128.00		202.47	281.81	0.00	0.00
130.00		201.01	279.27	0.00	0.00
132.00		202.04	467.27	0.00	0.00
134.00		200.53	462.18	0.00	0.00
135.00		99.58	229.19	0.00	0.00
136.00		99.20	136.85	0.00	0.00
138.00		197.42	271.80	0.00	0.00
140.00		195.83	269.26	0.00	0.00
142.00		194.20	266.72	0.00	0.00
143.00	(29) appurtenances	4870.76	2483.90	0.00	0.00
144.00		95.97	122.93	0.00	0.00
146.00		190.88	243.95	0.00	0.00
148.00		189.17	241.41	0.00	0.00
150.00	(1) appurtenances	1247.34	1738.87	0.00	0.00
152.00		185.68	236.32	0.00	0.00
153.00	(16) appurtenances	4373.29	2510.31	0.00	0.00
154.00		91.64	102.99	0.00	0.00
156.00		182.10	204.08	0.00	0.00
158.00		180.27	201.54	0.00	0.00
160.00		178.41	198.99	0.00	0.00
162.00		176.54	196.45	0.00	0.00
163.00	(7) appurtenances	1805.24	1809.07	0.00	0.00
164.00		87.00	90.61	0.00	0.00
166.00		172.71	179.31	0.00	0.00
168.00		170.76	176.76	0.00	0.00
170.00		168.80	174.22	0.00	0.00
172.00		166.81	171.68	0.00	0.00
173.00	(27) appurtenances	6726.84	2484.29	0.00	0.00
174.00		73.53	69.57	0.00	0.00
176.00		145.61	137.23	0.00	0.00
178.00		143.51	134.69	0.00	0.00
180.00		141.38	132.15	0.00	0.00

Total Applied Force Summary

Structure: CT01002-S-SB
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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181.00	(1) appurtenances	1182.40	1572.56	0.00	0.00
182.00		64.15	72.56	0.00	0.00
183.00		64.25	72.56	0.00	0.00
Totals:		39,078.35	52,632.61	0.00	0.00

Resulting Forces and Deflections

Structure: CT01002-S-SB
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

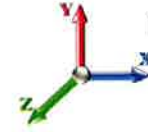
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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Load Case: 85 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 30

Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	Deflect X (in)	Deflect Z (in)	Deflect Resultant (in)	Rotation Sway (deg)	Rotation Twist (deg)
0.00	-39.112	-52.607	0.000	0.000	0.000	-5034.7	0.000	0.000	0.000	0.000	0.000
2.00	-38.943	-51.952	0.000	0.000	0.000	-4956.4	-0.016	0.000	0.016	-0.072	0.000
4.00	-38.776	-51.300	0.000	0.000	0.000	-4878.5	-0.062	0.000	0.062	-0.144	0.000
6.00	-38.608	-50.653	0.000	0.000	0.000	-4801.0	-0.138	0.000	0.138	-0.216	0.000
8.00	-38.441	-50.010	0.000	0.000	0.000	-4723.8	-0.245	0.000	0.245	-0.290	0.000
10.00	-38.274	-49.371	0.000	0.000	0.000	-4646.9	-0.383	0.000	0.383	-0.363	0.000
12.00	-38.108	-48.736	0.000	0.000	0.000	-4570.4	-0.551	0.000	0.551	-0.437	0.000
14.00	-37.942	-48.105	0.000	0.000	0.000	-4494.1	-0.751	0.000	0.751	-0.511	0.000
16.00	-37.777	-47.478	0.000	0.000	0.000	-4418.3	-0.982	0.000	0.982	-0.586	0.000
18.00	-37.612	-46.855	0.000	0.000	0.000	-4342.7	-1.244	0.000	1.244	-0.662	0.000
20.00	-37.448	-46.236	0.000	0.000	0.000	-4267.5	-1.538	0.000	1.538	-0.738	0.000
22.00	-37.284	-45.621	0.000	0.000	0.000	-4192.6	-1.864	0.000	1.864	-0.814	0.000
24.00	-37.120	-45.010	0.000	0.000	0.000	-4118.0	-2.222	0.000	2.222	-0.891	0.000
26.00	-36.957	-44.403	0.000	0.000	0.000	-4043.8	-2.612	0.000	2.612	-0.968	0.000
28.00	-36.794	-43.800	0.000	0.000	0.000	-3969.9	-3.034	0.000	3.034	-1.046	0.000
30.00	-36.632	-43.201	0.000	0.000	0.000	-3896.3	-3.490	0.000	3.490	-1.124	0.000
32.00	-36.470	-42.606	0.000	0.000	0.000	-3823.0	-3.978	0.000	3.978	-1.202	0.000
34.00	-36.307	-42.015	0.000	0.000	0.000	-3750.1	-4.499	0.000	4.499	-1.281	0.000
36.00	-36.141	-41.428	0.000	0.000	0.000	-3677.5	-5.053	0.000	5.053	-1.361	0.000
38.00	-35.972	-40.846	0.000	0.000	0.000	-3605.2	-5.641	0.000	5.641	-1.441	0.000
40.00	-35.786	-40.280	0.000	0.000	0.000	-3533.3	-6.262	0.000	6.262	-1.521	0.000
41.00	-35.700	-39.992	0.000	0.000	0.000	-3497.5	-6.585	0.000	6.585	-1.562	0.000
42.00	-35.620	-39.469	0.000	0.000	0.000	-3461.8	-6.917	0.000	6.917	-1.603	0.000
44.00	-35.427	-38.456	0.000	0.000	0.000	-3390.5	-7.606	0.000	7.606	-1.684	0.000
46.00	-35.231	-37.451	0.000	0.000	0.000	-3319.7	-8.330	0.000	8.330	-1.766	0.000
48.00	-35.032	-36.453	0.000	0.000	0.000	-3249.2	-9.087	0.000	9.087	-1.848	0.000
50.00	-34.831	-35.903	0.000	0.000	0.000	-3179.2	-9.879	0.000	9.879	-1.930	0.000
51.00	-34.736	-35.623	0.000	0.000	0.000	-3144.3	-10.288	0.000	10.288	-1.970	0.000
52.00	-34.653	-35.333	0.000	0.000	0.000	-3109.6	-10.705	0.000	10.705	-2.010	0.000
54.00	-34.459	-34.780	0.000	0.000	0.000	-3040.3	-11.565	0.000	11.565	-2.090	0.000
56.00	-34.264	-34.231	0.000	0.000	0.000	-2971.4	-12.458	0.000	12.458	-2.170	0.000
58.00	-34.068	-33.687	0.000	0.000	0.000	-2902.8	-13.384	0.000	13.384	-2.251	0.000
60.00	-33.870	-33.146	0.000	0.000	0.000	-2834.7	-14.345	0.000	14.345	-2.331	0.000
62.00	-33.671	-32.610	0.000	0.000	0.000	-2767.0	-15.339	0.000	15.339	-2.412	0.000
64.00	-33.470	-32.079	0.000	0.000	0.000	-2699.6	-16.367	0.000	16.367	-2.494	0.000
66.00	-33.235	-31.574	0.000	0.000	0.000	-2632.7	-17.429	0.000	17.429	-2.575	0.000
66.17	-33.228	-31.505	0.000	0.000	0.000	-2627.0	-17.521	0.000	17.521	-2.582	0.000
68.00	-33.004	-30.922	0.000	0.000	0.000	-2566.2	-18.522	0.000	18.522	-2.637	0.000
70.00	-32.748	-30.300	0.000	0.000	0.000	-2500.2	-19.640	0.000	19.640	-2.697	0.000
71.00	-32.624	-29.986	0.000	0.000	0.000	-2467.5	-20.208	0.000	20.208	-2.728	0.000
72.00	-32.508	-29.665	0.000	0.000	0.000	-2434.9	-20.782	0.000	20.782	-2.758	0.000
74.00	-32.258	-29.043	0.000	0.000	0.000	-2369.8	-21.951	0.000	21.951	-2.818	0.000
76.00	-32.007	-28.425	0.000	0.000	0.000	-2305.3	-23.144	0.000	23.144	-2.878	0.000
78.00	-31.755	-27.812	0.000	0.000	0.000	-2241.3	-24.362	0.000	24.362	-2.938	0.000
80.00	-31.495	-27.212	0.000	0.000	0.000	-2177.8	-25.605	0.000	25.605	-2.997	0.000
81.00	-31.369	-26.909	0.000	0.000	0.000	-2146.3	-26.236	0.000	26.236	-3.027	0.000
82.00	-31.253	-26.627	0.000	0.000	0.000	-2114.9	-26.873	0.000	26.873	-3.057	0.000
84.00	-30.998	-26.093	0.000	0.000	0.000	-2052.4	-28.168	0.000	28.168	-3.125	0.000
85.00	-30.874	-25.822	0.000	0.000	0.000	-2021.4	-28.827	0.000	28.827	-3.159	0.000

Resulting Forces and Deflections

Structure: CT01002-S-SB
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

8/14/2015
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86.00	-30.748	-25.391	0.000	0.000	0.000	-1990.6	-29.492	0.000	29.492	-3.192	0.000
88.00	-30.478	-24.552	0.000	0.000	0.000	-1929.1	-30.843	0.000	30.843	-3.259	0.000
90.00	-30.201	-23.729	0.000	0.000	0.000	-1868.1	-32.222	0.000	32.222	-3.325	0.000
91.00	-30.065	-23.316	0.000	0.000	0.000	-1837.9	-32.922	0.000	32.922	-3.358	0.000
92.00	-29.944	-23.043	0.000	0.000	0.000	-1807.8	-33.629	0.000	33.629	-3.391	0.000
93.83	-29.699	-22.575	0.000	0.000	0.000	-1753.1	-34.940	0.000	34.940	-3.450	0.000
94.00	-29.697	-22.517	0.000	0.000	0.000	-1748.0	-35.062	0.000	35.062	-3.455	0.000
96.00	-29.475	-22.103	0.000	0.000	0.000	-1688.6	-36.530	0.000	36.530	-3.550	0.000
98.00	-29.267	-21.692	0.000	0.000	0.000	-1629.7	-38.037	0.000	38.037	-3.645	0.000
100.00	-29.060	-21.285	0.000	0.000	0.000	-1571.1	-39.584	0.000	39.584	-3.740	0.000
102.00	-28.852	-20.882	0.000	0.000	0.000	-1513.0	-41.171	0.000	41.171	-3.834	0.000
104.00	-28.643	-20.483	0.000	0.000	0.000	-1455.3	-42.796	0.000	42.796	-3.928	0.000
106.00	-28.446	-20.087	0.000	0.000	0.000	-1398.0	-44.461	0.000	44.461	-4.022	0.000
108.00	-28.249	-19.695	0.000	0.000	0.000	-1341.1	-46.165	0.000	46.165	-4.115	0.000
110.00	-28.045	-19.317	0.000	0.000	0.000	-1284.6	-47.908	0.000	47.908	-4.207	0.000
111.17	-27.905	-19.063	0.000	0.000	0.000	-1251.8	-48.945	0.000	48.945	-4.261	0.000
112.00	-27.814	-18.872	0.000	0.000	0.000	-1228.7	-49.688	0.000	49.688	-4.291	0.000
114.00	-27.570	-18.450	0.000	0.000	0.000	-1173.0	-51.500	0.000	51.500	-4.363	0.000
115.00	-27.445	-18.236	0.000	0.000	0.000	-1145.5	-52.417	0.000	52.417	-4.399	0.000
116.00	-27.330	-18.039	0.000	0.000	0.000	-1118.0	-53.342	0.000	53.342	-4.434	0.000
118.00	-27.088	-17.663	0.000	0.000	0.000	-1063.4	-55.215	0.000	55.215	-4.515	0.000
120.00	-26.845	-17.292	0.000	0.000	0.000	-1009.2	-57.122	0.000	57.122	-4.594	0.000
122.00	-26.602	-16.925	0.000	0.000	0.000	-955.54	-59.062	0.000	59.062	-4.672	0.000
123.83	-26.371	-16.607	0.000	0.000	0.000	-906.86	-60.865	0.000	60.865	-4.741	0.000
124.00	-26.365	-16.558	0.000	0.000	0.000	-902.38	-61.034	0.000	61.034	-4.748	0.000
126.00	-26.151	-16.247	0.000	0.000	0.000	-849.65	-63.044	0.000	63.044	-4.851	0.000
128.00	-25.953	-15.939	0.000	0.000	0.000	-797.35	-65.096	0.000	65.096	-4.951	0.000
130.00	-25.755	-15.634	0.000	0.000	0.000	-745.45	-67.189	0.000	67.189	-5.049	0.000
132.00	-25.537	-15.145	0.000	0.000	0.000	-693.94	-69.323	0.000	69.323	-5.144	0.000
134.00	-25.313	-14.673	0.000	0.000	0.000	-642.86	-71.496	0.000	71.496	-5.236	0.000
135.00	-25.204	-14.434	0.000	0.000	0.000	-617.55	-72.596	0.000	72.596	-5.281	0.000
136.00	-25.108	-14.280	0.000	0.000	0.000	-592.35	-73.706	0.000	73.706	-5.326	0.000
138.00	-24.906	-13.993	0.000	0.000	0.000	-542.13	-75.952	0.000	75.952	-5.407	0.000
140.00	-24.703	-13.711	0.000	0.000	0.000	-492.32	-78.231	0.000	78.231	-5.484	0.000
142.00	-24.497	-13.442	0.000	0.000	0.000	-442.92	-80.542	0.000	80.542	-5.557	0.000
143.00	-19.414	-11.432	0.000	0.000	0.000	-418.42	-81.708	0.000	81.708	-5.592	0.000
144.00	-19.317	-11.302	0.000	0.000	0.000	-399.00	-82.882	0.000	82.882	-5.625	0.000
146.00	-19.115	-11.057	0.000	0.000	0.000	-360.37	-85.249	0.000	85.249	-5.690	0.000
148.00	-18.914	-10.816	0.000	0.000	0.000	-322.14	-87.643	0.000	87.643	-5.750	0.000
150.00	-17.506	-9.196	0.000	0.000	0.000	-284.32	-90.061	0.000	90.061	-5.807	0.000
152.00	-17.303	-8.968	0.000	0.000	0.000	-249.30	-92.501	0.000	92.501	-5.858	0.000
153.00	-12.699	-6.913	0.000	0.000	0.000	-232.00	-93.729	0.000	93.729	-5.883	0.000
154.00	-12.601	-6.813	0.000	0.000	0.000	-219.30	-94.962	0.000	94.962	-5.906	0.000
156.00	-12.404	-6.619	0.000	0.000	0.000	-194.10	-97.441	0.000	97.441	-5.950	0.000
158.00	-12.208	-6.430	0.000	0.000	0.000	-169.29	-99.939	0.000	99.939	-5.991	0.000
160.00	-12.014	-6.243	0.000	0.000	0.000	-144.88	-102.45	0.000	102.452	-6.028	0.000
162.00	-11.820	-6.061	0.000	0.000	0.000	-120.85	-104.98	0.000	104.980	-6.060	0.000
163.00	-9.834	-4.451	0.000	0.000	0.000	-109.03	-106.24	0.000	106.249	-6.075	0.000
164.00	-9.740	-4.367	0.000	0.000	0.000	-99.201	-107.52	0.000	107.521	-6.089	0.000
166.00	-9.551	-4.203	0.000	0.000	0.000	-79.722	-110.07	0.000	110.073	-6.113	0.000
168.00	-9.363	-4.043	0.000	0.000	0.000	-60.620	-112.63	0.000	112.634	-6.134	0.000
170.00	-9.178	-3.885	0.000	0.000	0.000	-41.894	-115.20	0.000	115.203	-6.149	0.000
172.00	-8.994	-3.732	0.000	0.000	0.000	-23.538	-117.77	0.000	117.776	-6.160	0.000
173.00	-2.039	-1.984	0.000	0.000	0.000	-14.544	-119.06	0.000	119.065	-6.163	0.000
174.00	-1.959	-1.922	0.000	0.000	0.000	-12.505	-120.35	0.000	120.353	-6.165	0.000
176.00	-1.800	-1.802	0.000	0.000	0.000	-8.587	-122.93	0.000	122.932	-6.169	0.000
178.00	-1.643	-1.683	0.000	0.000	0.000	-4.988	-125.51	0.000	125.511	-6.171	0.000
180.00	-1.488	-1.567	0.000	0.000	0.000	-1.703	-128.09	0.000	128.092	-6.173	0.000

Resulting Forces and Deflections

Structure: CT01002-S-SB

Code: EIA/TIA-222-F

8/14/2015



Site Name: Waterford

Exposure: C

Height: 183.00 (ft)

Gh: 1.69

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Base Elev: 0.000 (ft)

Struct Class: II

181.00	-0.143	-0.130	0.000	0.000	0.000	-0.215	-129.38	0.000	129.382	-6.173	0.000
182.00	-0.072	-0.065	0.000	0.000	0.000	-0.072	-130.67	0.000	130.673	-6.173	0.000
183.00	-0.064	0.000	0.000	0.000	0.000	0.000	0.000	0.000	131.963	-6.173	0.000

Resulting Stresses

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

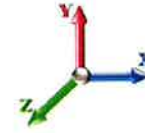
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Load Case: 85 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 30

Applied Stresses

Elev (ft)	fa Axial (Y) (ksi)	fvx Shear (X) (ksi)	fvz Shear (Z) (ksi)	fvT Torsion (ksi)	fbx Bending (X) (ksi)	fbz Bending (Z) (ksi)	fb Combined (ksi)	Allow Stress (ksi)	f/Fb Stress Ratio
0.00	0.69	1.03	0.00	0.00	0.00	49.90	50.62	54.4	0.931
2.00	0.69	1.04	0.00	0.00	0.00	49.85	50.57	54.6	0.926
4.00	0.68	1.04	0.00	0.00	0.00	49.81	50.52	54.8	0.921
6.00	0.68	1.04	0.00	0.00	0.00	49.76	50.47	55.1	0.916
8.00	0.68	1.05	0.00	0.00	0.00	49.70	50.41	55.3	0.911
10.00	0.67	1.05	0.00	0.00	0.00	49.64	50.35	55.6	0.906
12.00	0.67	1.05	0.00	0.00	0.00	49.58	50.28	55.8	0.901
14.00	0.66	1.06	0.00	0.00	0.00	49.51	50.21	56.0	0.896
16.00	0.66	1.06	0.00	0.00	0.00	49.44	50.14	56.3	0.891
18.00	0.66	1.06	0.00	0.00	0.00	49.37	50.06	56.5	0.886
20.00	0.65	1.07	0.00	0.00	0.00	49.29	49.97	56.7	0.881
22.00	0.65	1.07	0.00	0.00	0.00	49.20	49.88	57.0	0.875
24.00	0.65	1.07	0.00	0.00	0.00	49.11	49.79	57.2	0.870
26.00	0.64	1.08	0.00	0.00	0.00	49.01	49.69	57.5	0.865
28.00	0.64	1.08	0.00	0.00	0.00	48.91	49.58	57.7	0.859
30.00	0.64	1.09	0.00	0.00	0.00	48.80	49.47	57.9	0.854
32.00	0.63	1.09	0.00	0.00	0.00	48.69	49.35	58.2	0.848
34.00	0.63	1.10	0.00	0.00	0.00	48.56	49.23	58.4	0.843
36.00	0.63	1.10	0.00	0.00	0.00	48.44	49.10	58.6	0.837
38.00	0.62	1.10	0.00	0.00	0.00	48.30	48.96	58.9	0.832
40.00	0.62	1.11	0.00	0.00	0.00	48.16	48.81	59.1	0.826
41.00	0.62	1.11	0.00	0.00	0.00	48.08	48.74	59.2	0.823
42.00	0.61	1.11	0.00	0.00	0.00	48.01	48.66	59.4	0.820
44.00	0.60	1.12	0.00	0.00	0.00	47.85	48.49	59.6	0.814
46.00	0.59	1.12	0.00	0.00	0.00	47.69	48.31	59.8	0.808
48.00	0.57	1.11	0.00	0.00	0.00	46.19	46.80	60.1	0.779
50.00	0.57	1.11	0.00	0.00	0.00	46.00	46.61	59.9	0.778
51.00	0.57	1.11	0.00	0.00	0.00	45.90	46.51	60.0	0.775
51.00	0.57	1.11	0.00	0.00	0.00	45.90	46.51	60.0	0.775
52.00	0.56	1.11	0.00	0.00	0.00	45.80	46.41	50.4	0.921
54.00	0.56	1.12	0.00	0.00	0.00	45.60	46.20	50.4	0.917
56.00	0.56	1.12	0.00	0.00	0.00	45.38	45.98	50.4	0.913
58.00	0.55	1.13	0.00	0.00	0.00	45.16	45.75	50.4	0.908
60.00	0.55	1.13	0.00	0.00	0.00	44.92	45.51	50.4	0.903
62.00	0.54	1.13	0.00	0.00	0.00	44.68	45.26	50.4	0.898
64.00	0.54	1.14	0.00	0.00	0.00	44.42	45.00	50.4	0.893
66.00	0.54	1.14	0.00	0.00	0.00	44.15	44.73	50.4	0.888
66.17	0.54	1.14	0.00	0.00	0.00	32.21	32.75	50.4	0.650
68.00	0.53	1.14	0.00	0.00	0.00	31.94	31.94	50.4	0.634
70.00	0.53	1.15	0.00	0.00	0.00	31.63	31.63	50.4	0.628
71.00	0.52	1.15	0.00	0.00	0.00	31.48	31.48	50.4	0.625
72.00	0.52	1.15	0.00	0.00	0.00	31.32	31.32	44.8	0.699
74.00	0.51	1.15	0.00	0.00	0.00	31.00	31.00	44.8	0.692
76.00	0.51	1.15	0.00	0.00	0.00	30.66	30.66	44.8	0.685
78.00	0.50	1.16	0.00	0.00	0.00	30.32	30.32	44.8	0.677
80.00	0.50	1.16	0.00	0.00	0.00	29.97	29.97	44.8	0.669
81.00	0.49	1.16	0.00	0.00	0.00	29.79	29.79	44.8	0.665

Resulting Stresses

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

8/14/2015



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82.00	0.59	1.39	0.00	0.00	0.00	33.52	33.52	52.0	0.645
84.00	0.58	1.39	0.00	0.00	0.00	33.09	33.09	52.0	0.636
85.00	0.58	1.40	0.00	0.00	0.00	32.86	32.86	52.0	0.632
86.00	0.57	1.40	0.00	0.00	0.00	32.36	32.36	52.0	0.623
88.00	0.56	1.40	0.00	0.00	0.00	31.90	31.90	52.0	0.614
90.00	0.55	1.40	0.00	0.00	0.00	31.43	31.43	52.0	0.605
91.00	0.53	1.38	0.00	0.00	0.00	31.19	31.19	52.0	0.600
92.00	0.53	1.39	0.00	0.00	0.00	30.51	30.51	52.0	0.587
93.83	0.52	1.39	0.00	0.00	0.00	30.06	30.58	52.0	0.588
94.00	0.52	1.39	0.00	0.00	0.00	45.38	45.96	52.0	0.884
96.00	0.52	1.39	0.00	0.00	0.00	44.80	45.39	52.0	0.873
98.00	0.51	1.40	0.00	0.00	0.00	44.21	44.79	52.0	0.862
100.00	0.51	1.41	0.00	0.00	0.00	43.58	44.16	52.0	0.850
102.00	0.51	1.41	0.00	0.00	0.00	42.93	43.51	52.0	0.837
104.00	0.50	1.42	0.00	0.00	0.00	42.25	42.82	52.0	0.824
106.00	0.50	1.42	0.00	0.00	0.00	41.54	42.11	52.0	0.810
108.00	0.49	1.43	0.00	0.00	0.00	40.79	41.36	52.0	0.796
110.00	0.49	1.44	0.00	0.00	0.00	40.01	40.58	52.0	0.781
111.17	0.49	1.44	0.00	0.00	0.00	31.41	31.90	52.0	0.614
112.00	0.49	1.44	0.00	0.00	0.00	31.11	31.11	52.0	0.598
114.00	0.48	1.45	0.00	0.00	0.00	30.35	30.35	52.0	0.584
115.00	0.48	1.45	0.00	0.00	0.00	29.23	29.23	52.0	0.562
116.00	0.59	1.81	0.00	0.00	0.00	33.99	33.99	51.1	0.665
118.00	0.59	1.82	0.00	0.00	0.00	32.63	32.63	51.4	0.634
120.00	0.58	1.82	0.00	0.00	0.00	31.99	31.99	51.7	0.619
122.00	0.58	1.83	0.00	0.00	0.00	30.94	30.94	52.0	0.595
123.83	0.57	1.84	0.00	0.00	0.00	29.95	30.52	52.0	0.587
124.00	0.57	1.84	0.00	0.00	0.00	41.60	42.29	52.0	0.814
126.00	0.57	1.85	0.00	0.00	0.00	40.20	40.90	52.0	0.787
128.00	0.57	1.86	0.00	0.00	0.00	38.74	39.44	52.0	0.759
130.00	0.56	1.87	0.00	0.00	0.00	37.20	37.90	52.0	0.729
132.00	0.55	1.88	0.00	0.00	0.00	35.59	36.28	52.0	0.698
134.00	0.54	1.89	0.00	0.00	0.00	33.89	34.58	52.0	0.665
135.00	0.53	1.86	0.00	0.00	0.00	32.05	32.74	52.0	0.630
136.00	0.53	1.87	0.00	0.00	0.00	31.17	31.86	52.0	0.613
138.00	0.52	1.88	0.00	0.00	0.00	29.34	30.04	52.0	0.578
140.00	0.52	1.89	0.00	0.00	0.00	27.40	28.12	52.0	0.541
142.00	0.52	1.90	0.00	0.00	0.00	25.37	26.10	52.0	0.502
143.00	0.44	1.52	0.00	0.00	0.00	24.32	24.90	52.0	0.479
144.00	0.44	1.52	0.00	0.00	0.00	23.53	24.12	52.0	0.464
146.00	0.44	1.53	0.00	0.00	0.00	21.89	22.49	52.0	0.433
148.00	0.44	1.54	0.00	0.00	0.00	20.16	20.77	52.0	0.400
150.00	0.38	1.44	0.00	0.00	0.00	18.35	18.89	52.0	0.363
152.00	0.37	1.45	0.00	0.00	0.00	16.59	17.15	52.0	0.330
153.00	0.29	1.07	0.00	0.00	0.00	15.69	16.08	52.0	0.309
154.00	0.29	1.07	0.00	0.00	0.00	15.06	15.46	52.0	0.297
156.00	0.28	1.07	0.00	0.00	0.00	13.76	14.17	52.0	0.273
158.00	0.28	1.07	0.00	0.00	0.00	12.40	12.82	52.0	0.247
160.00	0.28	1.07	0.00	0.00	0.00	10.97	11.40	52.0	0.219
162.00	0.27	1.07	0.00	0.00	0.00	9.46	9.91	52.0	0.191
163.00	0.20	0.90	0.00	0.00	0.00	8.68	9.02	52.0	0.174
164.00	0.20	0.90	0.00	0.00	0.00	8.03	8.38	52.0	0.161
166.00	0.20	0.90	0.00	0.00	0.00	6.68	7.05	52.0	0.136
168.00	0.19	0.89	0.00	0.00	0.00	5.27	5.67	52.0	0.109
170.00	0.19	0.89	0.00	0.00	0.00	3.77	4.25	52.0	0.082
172.00	0.18	0.89	0.00	0.00	0.00	2.20	2.84	52.0	0.055
173.00	0.10	0.20	0.00	0.00	0.00	1.38	1.52	52.0	0.029
174.00	0.10	0.20	0.00	0.00	0.00	1.21	1.35	52.0	0.026

Resulting Stresses

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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176.00	0.09	0.19	0.00	0.00	0.00	0.86	1.01	52.0		0.019
178.00	0.09	0.17	0.00	0.00	0.00	0.52	0.68	52.0		0.013
180.00	0.08	0.16	0.00	0.00	0.00	0.19	0.38	52.0		0.007
180.00	0.08	0.16	0.00	0.00	0.00	0.19	0.38	52.0		0.007
181.00	0.01	0.01	0.00	0.00	0.00	0.02	0.04	28.8	28.8	0.001
182.00	0.00	0.01	0.00	0.00	0.00	0.01	0.02	28.8	28.8	0.001
183.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	28.8	28.8	0.000

Wind Loading - Shaft

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

8/14/2015

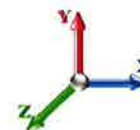


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Load Case: 73.61 mph Wind with 0.5" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00

Iterations: 30



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	13.871	23.44	395.65	0.650	0.500	0.00	0.000	0.00	0.0	0.0	0.0
2.00		0.00	1.00	13.871	23.44	392.77	0.650	0.500	2.00	10.877	7.07	165.7	78.8	596.3
4.00		0.00	1.00	13.871	23.44	389.88	0.650	0.500	2.00	10.799	7.02	164.5	78.3	592.0
6.00		0.00	1.00	13.871	23.44	386.99	0.650	0.500	2.00	10.720	6.97	163.4	77.7	587.6
8.00		0.00	1.00	13.871	23.44	384.10	0.650	0.500	2.00	10.642	6.92	162.2	77.1	583.2
10.00		0.00	1.00	13.871	23.44	381.21	0.650	0.500	2.00	10.564	6.87	161.0	76.5	578.8
12.00		0.00	1.00	13.871	23.44	378.32	0.650	0.500	2.00	10.485	6.82	159.8	76.0	574.4
14.00		0.00	1.00	13.871	23.44	375.44	0.650	0.500	2.00	10.407	6.76	158.6	75.4	570.0
16.00		0.00	1.00	13.871	23.44	372.55	0.650	0.500	2.00	10.328	6.71	157.4	74.8	565.6
18.00		0.00	1.00	13.871	23.44	369.66	0.650	0.500	2.00	10.250	6.66	156.2	74.2	561.2
20.00		0.00	1.00	13.871	23.44	366.77	0.650	0.500	2.00	10.171	6.61	155.0	73.7	556.8
22.00		0.00	1.00	13.871	23.44	363.88	0.650	0.500	2.00	10.093	6.56	153.8	73.1	552.5
24.00		0.00	1.00	13.871	23.44	361.00	0.650	0.500	2.00	10.014	6.51	152.6	72.5	548.1
26.00		0.00	1.00	13.871	23.44	358.11	0.650	0.500	2.00	9.936	6.46	151.4	71.9	543.7
28.00		0.00	1.00	13.871	23.44	355.22	0.650	0.500	2.00	9.857	6.41	150.2	71.4	539.3
30.00		0.00	1.00	13.871	23.44	352.33	0.650	0.500	2.00	9.779	6.36	149.0	70.8	534.9
32.00		0.00	1.00	13.871	23.44	349.44	0.650	0.500	2.00	9.700	6.31	147.8	70.2	530.5
34.00		0.00	1.01	13.990	23.64	348.04	0.650	0.500	2.00	9.622	6.25	147.9	69.6	526.1
36.00		0.00	1.03	14.220	24.03	347.97	0.650	0.500	2.00	9.543	6.20	149.1	69.1	521.7
38.00		0.00	1.04	14.442	24.41	347.72	0.650	0.500	2.00	9.465	6.15	150.2	68.5	517.3
40.00		0.00	1.06	14.655	24.77	347.30	0.650	0.500	2.00	9.386	6.10	151.1	67.9	513.0
41.00 Bot - Section 2		0.00	1.06	14.759	24.94	347.04	0.650	0.500	1.00	4.664	3.03	75.6	33.8	254.9
42.00		0.00	1.07	14.861	25.11	346.74	0.650	0.500	1.00	4.707	3.06	76.8	34.1	477.4
44.00		0.00	1.09	15.059	25.45	346.05	0.650	0.500	2.00	9.355	6.08	154.8	67.7	948.6
46.00		0.00	1.10	15.252	25.78	345.22	0.650	0.500	2.00	9.276	6.03	155.4	67.1	940.4
48.00 Top - Section 1		0.00	1.11	15.439	26.09	344.28	0.650	0.500	2.00	9.198	5.98	156.0	66.5	932.2
50.00		0.00	1.13	15.620	26.40	348.11	0.650	0.500	2.00	9.119	5.93	156.5	65.9	498.0
51.00 Top - Section 2		0.00	1.13	15.708	26.55	347.56	0.650	0.500	1.00	4.530	2.94	78.2	32.8	247.4
52.00		0.00	1.14	15.796	26.69	346.99	0.650	0.500	1.00	4.511	2.93	78.3	32.7	246.3
54.00		0.00	1.15	15.967	26.98	345.77	0.650	0.500	2.00	8.962	5.83	157.2	64.8	489.2
56.00		0.00	1.16	16.134	27.27	344.45	0.650	0.500	2.00	8.884	5.77	157.4	64.2	484.8
58.00		0.00	1.17	16.296	27.54	343.05	0.650	0.500	2.00	8.805	5.72	157.6	63.6	480.4
60.00		0.00	1.19	16.455	27.81	341.57	0.650	0.500	2.00	8.727	5.67	157.7	63.1	476.1
62.00		0.00	1.20	16.610	28.07	340.02	0.650	0.500	2.00	8.648	5.62	157.8	62.5	471.7
64.00		0.00	1.21	16.761	28.33	338.39	0.650	0.500	2.00	8.570	5.57	157.8	61.9	467.3
66.00		0.00	1.22	16.909	28.58	336.69	0.650	0.500	2.00	8.491	5.52	157.7	61.3	462.9
66.17 RB1		0.00	1.22	16.922	28.60	336.54	0.650	0.500	0.17	0.718	0.47	13.3	5.2	60.6
68.00		0.00	1.23	17.054	28.82	334.92	0.650	0.500	1.83	7.695	5.00	144.2	55.6	650.0
70.00		0.00	1.24	17.196	29.06	333.10	0.650	0.500	2.00	8.334	5.42	157.4	60.2	706.1
71.00 Top - Section 3		0.00	1.24	17.266	29.18	332.16	0.650	0.500	1.00	4.138	2.69	78.5	30.0	351.5
72.00		0.00	1.25	17.335	29.30	331.21	0.650	0.500	1.00	4.118	2.68	78.4	29.8	350.4
74.00		0.00	1.26	17.471	29.53	329.27	0.650	0.500	2.00	8.177	5.32	156.9	59.0	697.3
76.00		0.00	1.27	17.605	29.75	327.27	0.650	0.500	2.00	8.099	5.26	156.6	58.5	692.9
78.00		0.00	1.28	17.736	29.97	325.22	0.650	0.500	2.00	8.020	5.21	156.3	57.9	688.5
80.00		0.00	1.29	17.865	30.19	323.12	0.650	0.500	2.00	7.942	5.16	155.9	57.3	684.2
81.00 Top - Section 4		0.00	1.29	17.928	30.30	322.05	0.650	0.500	1.00	3.942	2.56	77.6	28.5	340.5
82.00		0.00	1.30	17.991	30.40	320.97	0.650	0.500	1.00	3.922	2.55	77.5	28.4	308.8
84.00		0.00	1.31	18.115	30.61	318.78	0.650	0.500	2.00	7.785	5.06	154.9	56.2	614.6

Wind Loading - Shaft

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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85.00 Bot - Section 6	0.00	1.31	18.177	30.72	317.67	0.650	0.500	1.00	3.863	2.51	77.1	27.9	306.0
86.00	0.00	1.31	18.238	30.82	316.54	0.650	0.500	1.00	3.896	2.53	78.0	28.2	458.8
88.00	0.00	1.32	18.358	31.02	314.26	0.650	0.500	2.00	7.732	5.03	155.9	55.8	912.2
90.00	0.00	1.33	18.476	31.22	311.94	0.650	0.500	2.00	7.654	4.98	155.3	55.2	905.2
91.00 Top - Section 5	0.00	1.34	18.534	31.32	310.76	0.650	0.500	1.00	3.798	2.47	77.3	27.5	450.1
92.00	0.00	1.34	18.592	31.42	314.02	0.650	0.500	1.00	3.778	2.46	77.2	27.3	301.9
93.83 RT1	0.00	1.35	18.697	31.60	311.84	0.650	0.500	1.83	6.863	4.46	141.0	49.5	549.9
94.00	0.00	1.35	18.707	31.61	311.63	0.650	0.500	0.17	0.634	0.41	13.0	4.6	29.5
96.00	0.00	1.36	18.820	31.81	309.21	0.650	0.500	2.00	7.418	4.82	153.4	53.5	345.1
98.00	0.00	1.36	18.931	31.99	306.74	0.650	0.500	2.00	7.340	4.77	152.6	52.9	341.3
100.00	0.00	1.37	19.041	32.18	304.25	0.650	0.500	2.00	7.262	4.72	151.9	52.3	337.6
102.00	0.00	1.38	19.149	32.36	301.72	0.650	0.500	2.00	7.183	4.67	151.1	51.8	333.8
104.00	0.00	1.39	19.255	32.54	299.15	0.650	0.500	2.00	7.105	4.62	150.3	51.2	330.1
106.00	0.00	1.40	19.360	32.72	296.55	0.650	0.500	2.00	6.634	4.31	141.1	47.7	323.4
108.00	0.00	1.40	19.464	32.89	293.93	0.650	0.500	2.00	6.555	4.26	140.2	47.2	319.7
110.00	0.00	1.41	19.566	33.07	291.27	0.650	0.500	2.00	6.477	4.21	139.2	46.6	315.9
111.17 RB2	0.00	1.41	19.625	33.17	289.70	0.650	0.500	1.17	3.753	2.44	80.9	27.1	256.9
112.00	0.00	1.42	19.667	33.24	288.58	0.650	0.500	0.83	2.646	1.72	57.2	19.1	181.5
114.00	0.00	1.43	19.767	33.41	285.86	0.650	0.500	2.00	6.320	4.11	137.2	45.4	434.4
115.00 Top - Section 6	0.00	1.43	19.816	33.49	284.49	0.650	0.500	1.00	3.327	2.16	72.4	24.0	217.3
116.00	0.00	1.43	19.865	33.57	283.11	0.650	0.500	1.00	3.307	2.15	72.2	23.9	190.6
118.00	0.00	1.44	19.963	33.74	280.34	0.650	0.500	2.00	6.555	4.26	143.7	47.2	378.8
120.00	0.00	1.45	20.059	33.90	277.54	0.650	0.500	2.00	6.477	4.21	142.7	46.6	375.7
122.00	0.00	1.45	20.154	34.06	274.72	0.650	0.500	2.00	6.398	4.16	141.6	46.0	372.6
123.83 RT2	0.00	1.46	20.240	34.20	272.11	0.650	0.500	1.83	5.786	3.76	128.6	41.6	338.2
124.00	0.00	1.46	20.248	34.22	271.86	0.650	0.500	0.17	0.534	0.35	11.9	3.9	20.6
126.00	0.00	1.47	20.340	34.38	268.99	0.650	0.500	2.00	6.241	4.06	139.5	44.9	240.3
128.00	0.00	1.47	20.432	34.53	266.09	0.650	0.500	2.00	6.163	4.01	138.3	44.3	237.2
130.00 Bot - Section 8	0.00	1.48	20.523	34.68	263.17	0.650	0.500	2.00	6.084	3.95	137.2	43.7	234.1
132.00	0.00	1.49	20.613	34.84	260.22	0.650	0.500	2.00	6.089	3.96	137.9	43.7	422.1
134.00	0.00	1.49	20.701	34.99	257.25	0.650	0.500	2.00	6.011	3.91	136.7	43.2	416.5
135.00 Top - Section 7	0.00	1.50	20.745	35.06	255.76	0.650	0.500	1.00	2.976	1.93	67.8	21.4	206.2
136.00	0.00	1.50	20.789	35.13	258.02	0.650	0.500	1.00	2.956	1.92	67.5	21.3	113.7
138.00	0.00	1.50	20.876	35.28	255.01	0.650	0.500	2.00	5.854	3.81	134.2	42.0	224.9
140.00	0.00	1.51	20.962	35.43	251.99	0.650	0.500	2.00	5.775	3.75	133.0	41.4	221.8
142.00	0.00	1.52	21.047	35.57	248.94	0.650	0.500	2.00	5.697	3.70	131.7	40.9	218.7
143.00 Appurtenance(s)	0.00	1.52	21.089	35.64	247.41	0.650	0.500	1.00	2.819	1.83	65.3	20.3	108.2
144.00	0.00	1.52	21.131	35.71	245.87	0.650	0.500	1.00	2.799	1.82	65.0	20.1	107.5
146.00	0.00	1.53	21.215	35.85	242.79	0.650	0.500	2.00	5.540	3.60	129.1	39.7	212.5
148.00	0.00	1.54	21.297	35.99	239.68	0.650	0.500	2.00	5.461	3.55	127.8	39.1	209.3
150.00 Appurtenance(s)	0.00	1.54	21.379	36.13	236.56	0.650	0.500	2.00	5.383	3.50	126.4	38.6	206.2
152.00	0.00	1.55	21.460	36.27	233.41	0.650	0.500	2.00	5.305	3.45	125.1	38.0	203.1
153.00 Appurtenance(s)	0.00	1.55	21.501	36.34	231.83	0.650	0.500	1.00	2.623	1.70	61.9	18.8	100.5
154.00	0.00	1.55	21.541	36.40	230.25	0.650	0.500	1.00	2.603	1.69	61.6	18.7	99.7
156.00	0.00	1.56	21.620	36.54	227.07	0.650	0.500	2.00	5.148	3.35	122.3	36.8	196.9
158.00	0.00	1.56	21.699	36.67	223.87	0.650	0.500	2.00	5.069	3.29	120.8	36.3	193.8
160.00	0.00	1.57	21.777	36.80	220.65	0.650	0.500	2.00	4.991	3.24	119.4	35.7	190.6
162.00	0.00	1.58	21.855	36.93	217.42	0.650	0.500	2.00	4.912	3.19	117.9	35.1	187.5
163.00 Appurtenance(s)	0.00	1.58	21.893	37.00	215.80	0.650	0.500	1.00	2.427	1.58	58.4	17.4	92.7
164.00	0.00	1.58	21.931	37.06	214.17	0.650	0.500	1.00	2.407	1.56	58.0	17.3	91.9
166.00	0.00	1.59	22.007	37.19	210.90	0.650	0.500	2.00	4.755	3.09	115.0	34.0	181.3
168.00	0.00	1.59	22.083	37.32	207.62	0.650	0.500	2.00	4.677	3.04	113.4	33.4	178.2
170.00	0.00	1.60	22.158	37.45	204.32	0.650	0.500	2.00	4.598	2.99	111.9	32.8	175.0
172.00	0.00	1.60	22.232	37.57	201.01	0.650	0.500	2.00	4.520	2.94	110.4	32.2	171.9
173.00 Appurtenance(s)	0.00	1.61	22.269	37.63	199.34	0.650	0.500	1.00	2.230	1.45	54.6	16.0	84.9
174.00	0.00	1.61	22.305	37.70	197.68	0.650	0.500	1.00	2.211	1.44	54.2	15.8	84.1
176.00	0.00	1.61	22.378	37.82	194.33	0.650	0.500	2.00	4.363	2.84	107.3	31.1	165.7
178.00	0.00	1.62	22.451	37.94	190.97	0.650	0.500	2.00	4.284	2.78	105.7	30.5	162.6

Wind Loading - Shaft

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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180.00 Top - Section 8	0.00	1.62	22.522	38.06	187.59	0.650	0.500	2.00	4.206	2.73	104.1	29.9	159.5
181.00 Appurtenance(s)	0.00	1.63	22.558	38.12	187.74	0.590	0.500	1.00	2.083	1.23	46.9	15.0	86.2
182.00	0.00	1.63	22.594	38.18	187.89	0.590	0.500	1.00	2.083	1.23	46.9	15.0	86.2
183.00	0.00	1.63	22.629	38.24	188.04	0.590	0.500	1.00	2.083	1.23	47.0	15.0	86.2
Totals:								183.00			13,092.1		40,800.4

Discrete Appurtenance Forces

Structure: CT01002-S-SB
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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Load Case: 73.61 mph Wind with 0.5" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 30

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	181.00	Low Profile Platform-Round	1	22.558	38.123	1.00	27.00	1800.00	0.000	0.000	1029.33	0.00	0.00
2	173.00	Low Profile Platform-Round	1	22.269	37.634	1.00	27.00	1800.00	0.000	0.000	1016.12	0.00	0.00
3	173.00	APL866513-42T0	2	22.269	37.634	0.93	9.04	94.00	0.000	0.000	340.20	0.00	0.00
4	173.00	DB-T1-6Z-8AB-OZ	2	22.269	37.634	0.50	6.08	0.00	0.000	0.000	228.82	0.00	0.00
5	173.00	LNx-6514DS-VTM	3	22.269	37.634	0.80	21.96	249.30	0.000	0.000	826.44	0.00	0.00
6	173.00	HBXX-6517DS-VTM	6	22.269	37.634	0.77	44.31	551.40	0.000	0.000	1667.41	0.00	0.00
7	173.00	LPA-80080-4CF-EDIN-0	4	22.269	37.634	1.00	26.60	180.40	0.000	0.000	1001.07	0.00	0.00
8	173.00	RRH2x60-1900	3	22.269	37.634	0.67	3.88	145.20	0.000	0.000	145.99	0.00	0.00
9	173.00	RRH2x60-700U	3	22.269	37.634	0.50	4.21	213.30	0.000	0.000	158.63	0.00	0.00
10	173.00	RRH2X60-AWS	3	22.269	37.634	0.50	6.35	240.30	0.000	0.000	238.79	0.00	0.00
11	163.00	Low Profile Platform-Round	1	21.893	36.999	1.00	27.00	1800.00	0.000	0.000	998.98	0.00	0.00
12	163.00	LLPX310R	3	21.893	36.999	0.69	11.10	163.50	0.000	0.000	410.51	0.00	0.00
13	163.00	DAP Head	3	21.893	36.999	0.50	3.33	166.20	0.000	0.000	123.21	0.00	0.00
14	153.00	S11B12	3	21.501	36.336	0.50	4.94	222.90	0.000	0.000	179.32	0.00	0.00
15	153.00	Low Profile Platform-Round	1	21.501	36.336	1.00	27.00	1800.00	0.000	0.000	981.07	0.00	0.00
16	153.00	LNx-6515DS	3	21.501	36.336	0.80	29.62	346.80	0.000	0.000	1076.13	0.00	0.00
17	153.00	AIR 21, 1.3M, B4A B2P	3	21.501	36.336	0.86	17.98	384.30	0.000	0.000	653.42	0.00	0.00
18	153.00	AIR 21, 1.3M, B2A B4P	3	21.501	36.336	0.86	17.98	387.60	0.000	0.000	653.42	0.00	0.00
19	153.00	KRY 112 144/1	3	21.501	36.336	0.50	0.83	42.30	0.000	0.000	29.98	0.00	0.00
20	150.00	Low Profile Platform-Round	1	21.379	36.131	1.00	27.00	1800.00	0.000	0.000	975.54	0.00	0.00
21	143.00	DC6-48-60-18-8F	1	21.089	35.641	1.00	1.67	49.50	0.000	0.000	59.52	0.00	0.00
22	143.00	7770.00	3	21.089	35.641	0.73	14.30	0.00	0.000	0.000	509.69	0.00	0.00
23	143.00	850/1900	6	21.089	35.641	0.50	2.04	52.80	0.000	0.000	72.71	0.00	0.00
24	143.00	AM-X-CD-16-65-00T-RET	2	21.089	35.641	0.75	13.62	190.00	0.000	0.000	485.43	0.00	0.00
25	143.00	DBC-750	3	21.089	35.641	0.50	0.99	23.10	0.000	0.000	35.28	0.00	0.00
26	143.00	P65-17-XLH-RR	2	21.089	35.641	0.75	18.59	242.00	0.000	0.000	662.39	0.00	0.00
27	143.00	LGP13519	3	21.089	35.641	0.50	0.70	24.00	0.000	0.000	25.13	0.00	0.00
28	143.00	Low Profile Platform-Round	1	21.089	35.641	1.00	27.00	1800.00	0.000	0.000	962.31	0.00	0.00
29	143.00	RRUS 11	6	21.089	35.641	0.50	9.42	396.00	0.000	0.000	335.74	0.00	0.00
30	143.00	SBNH-1D6565C	2	21.089	35.641	0.80	19.79	264.00	0.000	0.000	705.41	0.00	0.00
Totals:								15,428.90			16,587.94		

Total Applied Force Summary

Structure: CT01002-S-SB
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

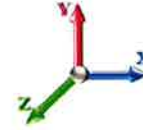
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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Load Case: 73.61 mph Wind with 0.5" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 30

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		189.66	696.78	0.00	0.00
4.00		188.46	692.40	0.00	0.00
6.00		187.26	688.01	0.00	0.00
8.00		186.07	683.62	0.00	0.00
10.00		184.87	679.23	0.00	0.00
12.00		183.68	674.84	0.00	0.00
14.00		182.48	670.45	0.00	0.00
16.00		181.29	666.06	0.00	0.00
18.00		180.09	661.67	0.00	0.00
20.00		178.89	657.28	0.00	0.00
22.00		177.70	652.89	0.00	0.00
24.00		176.50	648.51	0.00	0.00
26.00		175.31	644.12	0.00	0.00
28.00		174.11	639.73	0.00	0.00
30.00		172.92	635.34	0.00	0.00
32.00		171.72	630.95	0.00	0.00
34.00		171.99	626.56	0.00	0.00
36.00		173.59	622.17	0.00	0.00
38.00		175.05	617.78	0.00	0.00
40.00		176.37	613.39	0.00	0.00
41.00		88.33	305.12	0.00	0.00
42.00		89.64	527.66	0.00	0.00
44.00		180.71	1049.03	0.00	0.00
46.00		181.71	1040.82	0.00	0.00
48.00		182.60	1032.62	0.00	0.00
50.00		183.39	598.44	0.00	0.00
51.00		91.71	297.65	0.00	0.00
52.00		91.88	296.55	0.00	0.00
54.00		184.72	589.66	0.00	0.00
56.00		185.26	585.28	0.00	0.00
58.00		185.72	580.89	0.00	0.00
60.00		186.11	576.50	0.00	0.00
62.00		186.43	572.11	0.00	0.00
64.00		186.68	567.72	0.00	0.00
66.00		199.16	576.17	0.00	0.00
66.17		17.92	60.60	0.00	0.00
68.00		193.73	650.07	0.00	0.00
70.00		212.07	706.23	0.00	0.00
71.00		105.91	351.54	0.00	0.00
72.00		105.96	350.44	0.00	0.00
74.00		212.45	697.45	0.00	0.00
76.00		212.56	693.06	0.00	0.00
78.00		212.61	688.67	0.00	0.00
80.00		212.61	684.28	0.00	0.00
81.00		106.11	340.57	0.00	0.00
82.00		106.09	308.84	0.00	0.00
84.00		212.48	614.72	0.00	0.00
85.00		106.01	306.03	0.00	0.00

Total Applied Force Summary

Structure: CT01002-S-SB
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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86.00	107.02	458.81	0.00	0.00	
88.00	214.26	912.28	0.00	0.00	
90.00	214.04	905.35	0.00	0.00	
91.00	106.76	450.15	0.00	0.00	
92.00	106.69	301.95	0.00	0.00	
93.83	195.31	550.03	0.00	0.00	
94.00	18.08	40.25	0.00	0.00	
96.00	199.48	458.35	0.00	0.00	
98.00	185.27	441.76	0.00	0.00	
100.00	184.71	438.00	0.00	0.00	
102.00	184.10	434.25	0.00	0.00	
104.00	183.47	430.50	0.00	0.00	
106.00	174.45	423.87	0.00	0.00	
108.00	173.71	420.11	0.00	0.00	
110.00	172.94	416.36	0.00	0.00	
111.17	117.38	286.27	0.00	0.00	
112.00	83.09	202.32	0.00	0.00	
114.00	200.03	484.69	0.00	0.00	
115.00	103.90	242.45	0.00	0.00	
116.00	103.72	215.78	0.00	0.00	
118.00	207.17	429.07	0.00	0.00	
120.00	206.44	425.95	0.00	0.00	
122.00	205.68	422.84	0.00	0.00	
123.83	187.47	384.19	0.00	0.00	
124.00	17.35	30.22	0.00	0.00	
126.00	189.30	347.18	0.00	0.00	
128.00	173.54	337.64	0.00	0.00	
130.00	172.54	334.53	0.00	0.00	
132.00	173.41	522.56	0.00	0.00	
134.00	172.37	516.90	0.00	0.00	
135.00	85.70	256.40	0.00	0.00	
136.00	85.43	163.92	0.00	0.00	
138.00	170.23	325.37	0.00	0.00	
140.00	169.12	322.25	0.00	0.00	
142.00	167.99	319.13	0.00	0.00	
143.00	(29) appurtenances	3937.08	3199.87	0.00	0.00
144.00		83.20	148.85	0.00	0.00
146.00		165.68	295.22	0.00	0.00
148.00		164.49	292.10	0.00	0.00
150.00	(1) appurtenances	1138.81	2088.98	0.00	0.00
152.00		162.04	285.86	0.00	0.00
153.00	(16) appurtenances	3653.80	3325.73	0.00	0.00
154.00		80.16	127.47	0.00	0.00
156.00		159.52	252.47	0.00	0.00
158.00		158.23	249.35	0.00	0.00
160.00		156.93	246.23	0.00	0.00
162.00		155.60	243.11	0.00	0.00
163.00	(7) appurtenances	1609.93	2250.16	0.00	0.00
164.00		76.89	113.65	0.00	0.00
166.00		152.89	224.82	0.00	0.00
168.00		151.52	221.70	0.00	0.00
170.00		150.12	218.58	0.00	0.00
172.00		148.70	215.47	0.00	0.00
173.00	(27) appurtenances	5697.21	3580.54	0.00	0.00
174.00		63.97	86.63	0.00	0.00
176.00		126.92	170.77	0.00	0.00
178.00		125.39	167.65	0.00	0.00
180.00		123.85	164.53	0.00	0.00

Total Applied Force Summary

Structure: CT01002-S-SB

Site Name: Waterford

Height: 183.00 (ft)

Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F

Exposure: C

Gh: 1.69

Struct Class: II

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181.00	(1) appurtenances	1086.10	1888.76	0.00	0.00
182.00		56.86	88.76	0.00	0.00
183.00		56.95	88.76	0.00	0.00
Totals:		33,063.57	62,638.21	0.00	0.00

Resulting Forces and Deflections

Structure: CT01002-S-SB
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

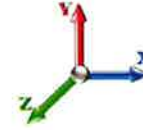
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Load Case: 73.61 mph Wind with 0.5" Ice

Iterations: 30

Dead Load Factor 1.00
Wind Load Factor 1.00



Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	Deflect X (in)	Deflect Z (in)	Deflect Resultant (in)	Rotation Sway (deg)	Rotation Twist (deg)
0.00	-33.098	-62.619	0.000	0.000	0.000	-4335.2	0.000	0.000	0.000	0.000	0.000
2.00	-32.975	-61.887	0.000	0.000	0.000	-4269.0	-0.014	0.000	0.014	-0.062	0.000
4.00	-32.852	-61.159	0.000	0.000	0.000	-4203.1	-0.053	0.000	0.053	-0.124	0.000
6.00	-32.729	-60.436	0.000	0.000	0.000	-4137.4	-0.119	0.000	0.119	-0.186	0.000
8.00	-32.606	-59.717	0.000	0.000	0.000	-4071.9	-0.211	0.000	0.211	-0.249	0.000
10.00	-32.483	-59.003	0.000	0.000	0.000	-4006.7	-0.330	0.000	0.330	-0.313	0.000
12.00	-32.361	-58.293	0.000	0.000	0.000	-3941.7	-0.475	0.000	0.475	-0.377	0.000
14.00	-32.238	-57.588	0.000	0.000	0.000	-3877.0	-0.647	0.000	0.647	-0.441	0.000
16.00	-32.116	-56.887	0.000	0.000	0.000	-3812.5	-0.846	0.000	0.846	-0.505	0.000
18.00	-31.994	-56.190	0.000	0.000	0.000	-3748.3	-1.072	0.000	1.072	-0.571	0.000
20.00	-31.872	-55.498	0.000	0.000	0.000	-3684.3	-1.325	0.000	1.325	-0.636	0.000
22.00	-31.749	-54.811	0.000	0.000	0.000	-3620.6	-1.606	0.000	1.606	-0.702	0.000
24.00	-31.628	-54.128	0.000	0.000	0.000	-3557.1	-1.915	0.000	1.915	-0.768	0.000
26.00	-31.506	-53.450	0.000	0.000	0.000	-3493.8	-2.251	0.000	2.251	-0.835	0.000
28.00	-31.384	-52.776	0.000	0.000	0.000	-3430.8	-2.616	0.000	2.616	-0.902	0.000
30.00	-31.262	-52.107	0.000	0.000	0.000	-3368.1	-3.009	0.000	3.009	-0.970	0.000
32.00	-31.141	-51.442	0.000	0.000	0.000	-3305.5	-3.430	0.000	3.430	-1.038	0.000
34.00	-31.018	-50.781	0.000	0.000	0.000	-3243.3	-3.880	0.000	3.880	-1.106	0.000
36.00	-30.892	-50.126	0.000	0.000	0.000	-3181.2	-4.358	0.000	4.358	-1.175	0.000
38.00	-30.764	-49.475	0.000	0.000	0.000	-3119.4	-4.865	0.000	4.865	-1.244	0.000
40.00	-30.619	-48.837	0.000	0.000	0.000	-3057.9	-5.402	0.000	5.402	-1.313	0.000
41.00	-30.553	-48.516	0.000	0.000	0.000	-3027.3	-5.681	0.000	5.681	-1.349	0.000
42.00	-30.495	-47.962	0.000	0.000	0.000	-2996.7	-5.967	0.000	5.967	-1.384	0.000
44.00	-30.346	-46.881	0.000	0.000	0.000	-2935.8	-6.562	0.000	6.562	-1.454	0.000
46.00	-30.194	-45.808	0.000	0.000	0.000	-2875.1	-7.187	0.000	7.187	-1.525	0.000
48.00	-30.039	-44.743	0.000	0.000	0.000	-2814.7	-7.842	0.000	7.842	-1.596	0.000
50.00	-29.880	-44.122	0.000	0.000	0.000	-2754.6	-8.526	0.000	8.526	-1.667	0.000
51.00	-29.806	-43.810	0.000	0.000	0.000	-2724.7	-8.879	0.000	8.879	-1.702	0.000
52.00	-29.744	-43.489	0.000	0.000	0.000	-2694.9	-9.239	0.000	9.239	-1.737	0.000
54.00	-29.594	-42.869	0.000	0.000	0.000	-2635.4	-9.982	0.000	9.982	-1.806	0.000
56.00	-29.441	-42.255	0.000	0.000	0.000	-2576.2	-10.754	0.000	10.754	-1.875	0.000
58.00	-29.287	-41.645	0.000	0.000	0.000	-2517.4	-11.555	0.000	11.555	-1.945	0.000
60.00	-29.131	-41.039	0.000	0.000	0.000	-2458.8	-12.385	0.000	12.385	-2.015	0.000
62.00	-28.974	-40.439	0.000	0.000	0.000	-2400.5	-13.244	0.000	13.244	-2.086	0.000
64.00	-28.816	-39.843	0.000	0.000	0.000	-2342.6	-14.133	0.000	14.133	-2.156	0.000
66.00	-28.621	-39.255	0.000	0.000	0.000	-2285.0	-15.052	0.000	15.052	-2.227	0.000
66.17	-28.619	-39.182	0.000	0.000	0.000	-2280.1	-15.132	0.000	15.132	-2.233	0.000
68.00	-28.433	-38.515	0.000	0.000	0.000	-2227.7	-15.997	0.000	15.997	-2.281	0.000
70.00	-28.219	-37.799	0.000	0.000	0.000	-2170.9	-16.964	0.000	16.964	-2.333	0.000
71.00	-28.116	-37.439	0.000	0.000	0.000	-2142.6	-17.455	0.000	17.455	-2.359	0.000
72.00	-28.021	-37.074	0.000	0.000	0.000	-2114.5	-17.952	0.000	17.952	-2.385	0.000
74.00	-27.812	-36.361	0.000	0.000	0.000	-2058.5	-18.963	0.000	18.963	-2.438	0.000
76.00	-27.602	-35.653	0.000	0.000	0.000	-2002.9	-19.995	0.000	19.995	-2.490	0.000
78.00	-27.391	-34.949	0.000	0.000	0.000	-1947.7	-21.049	0.000	21.049	-2.542	0.000
80.00	-27.172	-34.257	0.000	0.000	0.000	-1892.9	-22.125	0.000	22.125	-2.594	0.000
81.00	-27.066	-33.909	0.000	0.000	0.000	-1865.7	-22.671	0.000	22.671	-2.620	0.000
82.00	-26.970	-33.585	0.000	0.000	0.000	-1838.6	-23.222	0.000	23.222	-2.646	0.000
84.00	-26.755	-32.961	0.000	0.000	0.000	-1784.7	-24.343	0.000	24.343	-2.704	0.000
85.00	-26.651	-32.647	0.000	0.000	0.000	-1757.9	-24.913	0.000	24.913	-2.734	0.000

Resulting Forces and Deflections

Structure: CT01002-S-SB
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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86.00	-26.547	-32.173	0.000	0.000	0.000	-1731.3	-25.489	0.000	25.489	-2.763	0.000
88.00	-26.320	-31.246	0.000	0.000	0.000	-1678.2	-26.658	0.000	26.658	-2.821	0.000
90.00	-26.084	-30.333	0.000	0.000	0.000	-1625.6	-27.852	0.000	27.852	-2.878	0.000
91.00	-25.969	-29.876	0.000	0.000	0.000	-1599.5	-28.458	0.000	28.458	-2.907	0.000
92.00	-25.868	-29.561	0.000	0.000	0.000	-1573.5	-29.070	0.000	29.070	-2.936	0.000
93.83	-25.658	-29.010	0.000	0.000	0.000	-1526.2	-30.206	0.000	30.206	-2.987	0.000
94.00	-25.661	-28.951	0.000	0.000	0.000	-1521.8	-30.312	0.000	30.312	-2.992	0.000
96.00	-25.479	-28.467	0.000	0.000	0.000	-1470.5	-31.583	0.000	31.583	-3.075	0.000
98.00	-25.310	-27.999	0.000	0.000	0.000	-1419.5	-32.889	0.000	32.889	-3.157	0.000
100.00	-25.141	-27.536	0.000	0.000	0.000	-1368.9	-34.229	0.000	34.229	-3.240	0.000
102.00	-24.971	-27.077	0.000	0.000	0.000	-1318.6	-35.603	0.000	35.603	-3.322	0.000
104.00	-24.801	-26.623	0.000	0.000	0.000	-1268.7	-37.012	0.000	37.012	-3.404	0.000
106.00	-24.638	-26.175	0.000	0.000	0.000	-1219.1	-38.455	0.000	38.455	-3.485	0.000
108.00	-24.475	-25.732	0.000	0.000	0.000	-1169.8	-39.932	0.000	39.932	-3.566	0.000
110.00	-24.304	-25.301	0.000	0.000	0.000	-1120.9	-41.443	0.000	41.443	-3.647	0.000
111.17	-24.185	-25.007	0.000	0.000	0.000	-1092.4	-42.343	0.000	42.343	-3.694	0.000
112.00	-24.108	-24.792	0.000	0.000	0.000	-1072.4	-42.987	0.000	42.987	-3.721	0.000
114.00	-23.897	-24.302	0.000	0.000	0.000	-1024.1	-44.558	0.000	44.558	-3.783	0.000
115.00	-23.790	-24.054	0.000	0.000	0.000	-1000.2	-45.354	0.000	45.354	-3.815	0.000
116.00	-23.694	-23.824	0.000	0.000	0.000	-976.50	-46.156	0.000	46.156	-3.845	0.000
118.00	-23.486	-23.382	0.000	0.000	0.000	-929.11	-47.781	0.000	47.781	-3.916	0.000
120.00	-23.278	-22.943	0.000	0.000	0.000	-882.14	-49.436	0.000	49.436	-3.985	0.000
122.00	-23.069	-22.510	0.000	0.000	0.000	-835.59	-51.119	0.000	51.119	-4.053	0.000
123.83	-22.867	-22.127	0.000	0.000	0.000	-793.37	-52.684	0.000	52.684	-4.114	0.000
124.00	-22.867	-22.078	0.000	0.000	0.000	-789.48	-52.830	0.000	52.830	-4.119	0.000
126.00	-22.687	-21.711	0.000	0.000	0.000	-743.75	-54.574	0.000	54.574	-4.209	0.000
128.00	-22.521	-21.353	0.000	0.000	0.000	-698.38	-56.356	0.000	56.356	-4.297	0.000
130.00	-22.355	-20.999	0.000	0.000	0.000	-653.34	-58.174	0.000	58.174	-4.383	0.000
132.00	-22.171	-20.460	0.000	0.000	0.000	-608.63	-60.027	0.000	60.027	-4.467	0.000
134.00	-21.979	-19.935	0.000	0.000	0.000	-564.29	-61.914	0.000	61.914	-4.547	0.000
135.00	-21.887	-19.671	0.000	0.000	0.000	-542.31	-62.870	0.000	62.870	-4.587	0.000
136.00	-21.807	-19.494	0.000	0.000	0.000	-520.43	-63.835	0.000	63.835	-4.626	0.000
138.00	-21.634	-19.157	0.000	0.000	0.000	-476.81	-65.787	0.000	65.787	-4.697	0.000
140.00	-21.461	-18.825	0.000	0.000	0.000	-433.55	-67.768	0.000	67.768	-4.765	0.000
142.00	-21.282	-18.504	0.000	0.000	0.000	-390.62	-69.776	0.000	69.776	-4.829	0.000
143.00	-17.097	-15.639	0.000	0.000	0.000	-369.34	-70.790	0.000	70.790	-4.860	0.000
144.00	-17.013	-15.485	0.000	0.000	0.000	-352.25	-71.811	0.000	71.811	-4.890	0.000
146.00	-16.837	-15.189	0.000	0.000	0.000	-318.22	-73.870	0.000	73.870	-4.947	0.000
148.00	-16.662	-14.897	0.000	0.000	0.000	-284.55	-75.952	0.000	75.952	-5.000	0.000
150.00	-15.355	-12.903	0.000	0.000	0.000	-251.22	-78.055	0.000	78.055	-5.050	0.000
152.00	-15.176	-12.624	0.000	0.000	0.000	-220.52	-80.178	0.000	80.178	-5.096	0.000
153.00	-11.244	-9.633	0.000	0.000	0.000	-205.34	-81.247	0.000	81.247	-5.117	0.000
154.00	-11.157	-9.507	0.000	0.000	0.000	-194.10	-82.320	0.000	82.320	-5.138	0.000
156.00	-10.982	-9.263	0.000	0.000	0.000	-171.78	-84.478	0.000	84.478	-5.177	0.000
158.00	-10.807	-9.022	0.000	0.000	0.000	-149.82	-86.652	0.000	86.652	-5.213	0.000
160.00	-10.633	-8.786	0.000	0.000	0.000	-128.21	-88.841	0.000	88.841	-5.246	0.000
162.00	-10.459	-8.554	0.000	0.000	0.000	-106.94	-91.042	0.000	91.042	-5.274	0.000
163.00	-8.650	-6.460	0.000	0.000	0.000	-96.486	-92.147	0.000	92.147	-5.288	0.000
164.00	-8.565	-6.351	0.000	0.000	0.000	-87.836	-93.254	0.000	93.254	-5.300	0.000
166.00	-8.394	-6.139	0.000	0.000	0.000	-70.706	-95.476	0.000	95.476	-5.321	0.000
168.00	-8.224	-5.930	0.000	0.000	0.000	-53.918	-97.707	0.000	97.707	-5.339	0.000
170.00	-8.056	-5.724	0.000	0.000	0.000	-37.470	-99.944	0.000	99.944	-5.353	0.000
172.00	-7.888	-5.523	0.000	0.000	0.000	-21.359	-102.18	0.000	102.185	-5.363	0.000
173.00	-1.881	-2.491	0.000	0.000	0.000	-13.471	-103.30	0.000	103.308	-5.365	0.000
174.00	-1.809	-2.410	0.000	0.000	0.000	-11.590	-104.43	0.000	104.430	-5.368	0.000
176.00	-1.667	-2.252	0.000	0.000	0.000	-7.971	-106.67	0.000	106.676	-5.371	0.000
178.00	-1.527	-2.097	0.000	0.000	0.000	-4.636	-108.92	0.000	108.923	-5.374	0.000
180.00	-1.388	-1.945	0.000	0.000	0.000	-1.583	-111.17	0.000	111.171	-5.375	0.000

Resulting Forces and Deflections

Structure: CT01002-S-SB

Site Name: Waterford

Height: 183.00 (ft)

Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F

Exposure: C

Gh: 1.69

Struct Class: II

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181.00	-0.130	-0.166	0.000	0.000	0.000	-0.195	-112.29	0.000	112.295	-5.375	0.000
182.00	-0.065	-0.083	0.000	0.000	0.000	-0.065	-113.41	0.000	113.419	-5.375	0.000
183.00	-0.057	0.000	0.000	0.000	0.000	0.000	0.000	0.000	114.543	-5.375	0.000

Resulting Stresses

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

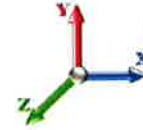
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Load Case: 73.61 mph Wind with 0.5" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 30

Applied Stresses

Elev (ft)	fa Axial (Y) (ksi)	fvx Shear (X) (ksi)	fvz Shear (Z) (ksi)	fvT Torsion (ksi)	fbx Bending (X) (ksi)	fbz Bending (Z) (ksi)	fb Combined (ksi)	f Allow Stress (ksi)	f/Fb Stress Ratio
0.00	0.82	0.87	0.00	0.00	0.00	42.97	43.81	54.4	0.806
2.00	0.82	0.88	0.00	0.00	0.00	42.94	43.78	54.6	0.802
4.00	0.81	0.88	0.00	0.00	0.00	42.91	43.75	54.8	0.798
6.00	0.81	0.88	0.00	0.00	0.00	42.88	43.71	55.1	0.794
8.00	0.81	0.89	0.00	0.00	0.00	42.84	43.68	55.3	0.789
10.00	0.80	0.89	0.00	0.00	0.00	42.80	43.63	55.6	0.785
12.00	0.80	0.89	0.00	0.00	0.00	42.76	43.59	55.8	0.781
14.00	0.80	0.90	0.00	0.00	0.00	42.71	43.54	56.0	0.777
16.00	0.79	0.90	0.00	0.00	0.00	42.66	43.48	56.3	0.773
18.00	0.79	0.90	0.00	0.00	0.00	42.61	43.43	56.5	0.768
20.00	0.78	0.91	0.00	0.00	0.00	42.55	43.36	56.7	0.764
22.00	0.78	0.91	0.00	0.00	0.00	42.49	43.30	57.0	0.760
24.00	0.78	0.92	0.00	0.00	0.00	42.42	43.23	57.2	0.755
26.00	0.77	0.92	0.00	0.00	0.00	42.35	43.15	57.5	0.751
28.00	0.77	0.92	0.00	0.00	0.00	42.27	43.07	57.7	0.746
30.00	0.77	0.93	0.00	0.00	0.00	42.18	42.98	57.9	0.742
32.00	0.76	0.93	0.00	0.00	0.00	42.10	42.89	58.2	0.737
34.00	0.76	0.94	0.00	0.00	0.00	42.00	42.79	58.4	0.733
36.00	0.76	0.94	0.00	0.00	0.00	41.90	42.69	58.6	0.728
38.00	0.75	0.94	0.00	0.00	0.00	41.79	42.58	58.9	0.723
40.00	0.75	0.95	0.00	0.00	0.00	41.68	42.46	59.1	0.718
41.00	0.75	0.95	0.00	0.00	0.00	41.62	42.40	59.2	0.716
42.00	0.74	0.95	0.00	0.00	0.00	41.56	42.33	59.4	0.713
44.00	0.73	0.96	0.00	0.00	0.00	41.43	42.20	59.6	0.708
46.00	0.72	0.96	0.00	0.00	0.00	41.30	42.05	59.8	0.703
48.00	0.70	0.95	0.00	0.00	0.00	40.01	40.74	60.1	0.678
50.00	0.70	0.95	0.00	0.00	0.00	39.86	40.59	59.9	0.677
51.00	0.70	0.95	0.00	0.00	0.00	39.78	40.51	60.0	0.675
51.00	0.70	0.95	0.00	0.00	0.00	39.78	40.51	60.0	0.675
52.00	0.69	0.96	0.00	0.00	0.00	39.69	40.42	50.4	0.802
54.00	0.69	0.96	0.00	0.00	0.00	39.53	40.25	50.4	0.799
56.00	0.69	0.96	0.00	0.00	0.00	39.35	40.07	50.4	0.795
58.00	0.68	0.97	0.00	0.00	0.00	39.16	39.88	50.4	0.792
60.00	0.68	0.97	0.00	0.00	0.00	38.97	39.68	50.4	0.788
62.00	0.68	0.98	0.00	0.00	0.00	38.76	39.47	50.4	0.783
64.00	0.67	0.98	0.00	0.00	0.00	38.55	39.25	50.4	0.779
66.00	0.67	0.98	0.00	0.00	0.00	38.32	39.03	50.4	0.775
66.17	0.67	0.98	0.00	0.00	0.00	27.96	28.62	50.4	0.568
68.00	0.66	0.99	0.00	0.00	0.00	27.72	27.72	50.4	0.550
70.00	0.66	0.99	0.00	0.00	0.00	27.46	27.46	50.4	0.545
71.00	0.65	0.99	0.00	0.00	0.00	27.33	27.33	50.4	0.543
72.00	0.65	0.99	0.00	0.00	0.00	27.20	27.20	44.8	0.607
74.00	0.64	0.99	0.00	0.00	0.00	26.92	26.92	44.8	0.601
76.00	0.64	0.99	0.00	0.00	0.00	26.64	26.64	44.8	0.595
78.00	0.63	1.00	0.00	0.00	0.00	26.35	26.35	44.8	0.588
80.00	0.63	1.00	0.00	0.00	0.00	26.05	26.05	44.8	0.582
81.00	0.62	1.00	0.00	0.00	0.00	25.90	25.90	44.8	0.578

Resulting Stresses

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

8/14/2015
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82.00	0.74	1.20	0.00	0.00	0.00	29.14	29.14	52.0	0.561
84.00	0.74	1.20	0.00	0.00	0.00	28.77	28.77	52.0	0.553
85.00	0.73	1.21	0.00	0.00	0.00	28.58	28.58	52.0	0.550
86.00	0.73	1.21	0.00	0.00	0.00	28.15	28.15	52.0	0.542
88.00	0.71	1.21	0.00	0.00	0.00	27.75	27.75	52.0	0.534
90.00	0.70	1.21	0.00	0.00	0.00	27.35	27.35	52.0	0.526
91.00	0.68	1.20	0.00	0.00	0.00	27.14	27.14	52.0	0.522
92.00	0.68	1.20	0.00	0.00	0.00	26.55	26.55	52.0	0.511
93.83	0.67	1.20	0.00	0.00	0.00	26.17	26.84	52.0	0.516
94.00	0.67	1.20	0.00	0.00	0.00	39.50	40.23	52.0	0.774
96.00	0.67	1.21	0.00	0.00	0.00	39.02	39.74	52.0	0.764
98.00	0.66	1.21	0.00	0.00	0.00	38.51	39.23	52.0	0.755
100.00	0.66	1.22	0.00	0.00	0.00	37.97	38.69	52.0	0.744
102.00	0.66	1.22	0.00	0.00	0.00	37.42	38.13	52.0	0.734
104.00	0.65	1.23	0.00	0.00	0.00	36.83	37.54	52.0	0.722
106.00	0.65	1.23	0.00	0.00	0.00	36.22	36.93	52.0	0.710
108.00	0.65	1.24	0.00	0.00	0.00	35.58	36.29	52.0	0.698
110.00	0.64	1.25	0.00	0.00	0.00	34.91	35.62	52.0	0.685
111.17	0.64	1.25	0.00	0.00	0.00	27.41	28.05	52.0	0.540
112.00	0.64	1.25	0.00	0.00	0.00	27.15	27.15	52.0	0.522
114.00	0.63	1.25	0.00	0.00	0.00	26.50	26.50	52.0	0.510
115.00	0.63	1.26	0.00	0.00	0.00	25.52	25.52	52.0	0.491
116.00	0.78	1.57	0.00	0.00	0.00	29.68	29.68	51.1	0.580
118.00	0.78	1.58	0.00	0.00	0.00	28.51	28.51	51.4	0.554
120.00	0.77	1.58	0.00	0.00	0.00	27.96	27.96	51.7	0.541
122.00	0.77	1.59	0.00	0.00	0.00	27.06	27.06	52.0	0.521
123.83	0.76	1.59	0.00	0.00	0.00	26.20	26.97	52.0	0.519
124.00	0.76	1.59	0.00	0.00	0.00	36.39	37.26	52.0	0.717
126.00	0.76	1.60	0.00	0.00	0.00	35.19	36.06	52.0	0.694
128.00	0.76	1.61	0.00	0.00	0.00	33.93	34.80	52.0	0.670
130.00	0.76	1.62	0.00	0.00	0.00	32.61	33.48	52.0	0.644
132.00	0.75	1.63	0.00	0.00	0.00	31.21	32.08	52.0	0.617
134.00	0.74	1.64	0.00	0.00	0.00	29.75	30.61	52.0	0.589
135.00	0.72	1.62	0.00	0.00	0.00	28.15	29.00	52.0	0.558
136.00	0.72	1.62	0.00	0.00	0.00	27.39	28.25	52.0	0.543
138.00	0.72	1.63	0.00	0.00	0.00	25.80	26.67	52.0	0.513
140.00	0.72	1.64	0.00	0.00	0.00	24.13	25.01	52.0	0.481
142.00	0.71	1.65	0.00	0.00	0.00	22.38	23.27	52.0	0.448
143.00	0.61	1.34	0.00	0.00	0.00	21.47	22.20	52.0	0.427
144.00	0.61	1.34	0.00	0.00	0.00	20.77	21.51	52.0	0.414
146.00	0.60	1.35	0.00	0.00	0.00	19.33	20.07	52.0	0.386
148.00	0.60	1.35	0.00	0.00	0.00	17.81	18.56	52.0	0.357
150.00	0.53	1.27	0.00	0.00	0.00	16.21	16.88	52.0	0.325
152.00	0.52	1.27	0.00	0.00	0.00	14.68	15.36	52.0	0.295
153.00	0.40	0.95	0.00	0.00	0.00	13.88	14.38	52.0	0.277
154.00	0.40	0.95	0.00	0.00	0.00	13.33	13.83	52.0	0.266
156.00	0.40	0.95	0.00	0.00	0.00	12.18	12.69	52.0	0.244
158.00	0.39	0.95	0.00	0.00	0.00	10.97	11.49	52.0	0.221
160.00	0.39	0.95	0.00	0.00	0.00	9.71	10.23	52.0	0.197
162.00	0.39	0.95	0.00	0.00	0.00	8.37	8.91	52.0	0.171
163.00	0.29	0.79	0.00	0.00	0.00	7.68	8.09	52.0	0.156
164.00	0.29	0.79	0.00	0.00	0.00	7.11	7.53	52.0	0.145
166.00	0.29	0.79	0.00	0.00	0.00	5.93	6.36	52.0	0.122
168.00	0.28	0.79	0.00	0.00	0.00	4.68	5.15	52.0	0.099
170.00	0.28	0.78	0.00	0.00	0.00	3.37	3.89	52.0	0.075
172.00	0.27	0.78	0.00	0.00	0.00	1.99	2.64	52.0	0.051
173.00	0.12	0.19	0.00	0.00	0.00	1.28	1.44	52.0	0.028
174.00	0.12	0.18	0.00	0.00	0.00	1.12	1.28	52.0	0.025

Resulting Stresses

Structure: CT01002-S-SBA

Code: EIA/TIA-222-F

8/14/2015

Site Name: Waterford

Exposure: C

Height: 183.00 (ft)

Gh: 1.69

Base Elev: 0.000 (ft)

Struct Class: II

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176.00	0.11	0.17	0.00	0.00	0.00	0.80	0.96	52.0		0.019
178.00	0.11	0.16	0.00	0.00	0.00	0.49	0.66	52.0		0.013
180.00	0.10	0.15	0.00	0.00	0.00	0.17	0.38	52.0		0.007
180.00	0.10	0.15	0.00	0.00	0.00	0.17	0.38	52.0		0.006
181.00	0.01	0.01	0.00	0.00	0.00	0.02	0.03	28.8	28.8	0.001
182.00	0.00	0.01	0.00	0.00	0.00	0.01	0.01	28.8	28.8	0.001
183.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	28.8	28.8	0.000

Wind Loading - Shaft

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

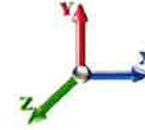
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Load Case: 50 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 28

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	6.400	10.82	268.75	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		0.00	1.00	6.400	10.82	266.79	0.650	0.000	2.00	10.711	6.96	75.3	0.0	517.5
4.00		0.00	1.00	6.400	10.82	264.83	0.650	0.000	2.00	10.632	6.91	74.7	0.0	513.7
6.00		0.00	1.00	6.400	10.82	262.86	0.650	0.000	2.00	10.554	6.86	74.2	0.0	509.9
8.00		0.00	1.00	6.400	10.82	260.90	0.650	0.000	2.00	10.475	6.81	73.6	0.0	506.1
10.00		0.00	1.00	6.400	10.82	258.94	0.650	0.000	2.00	10.397	6.76	73.1	0.0	502.3
12.00		0.00	1.00	6.400	10.82	256.98	0.650	0.000	2.00	10.318	6.71	72.5	0.0	498.4
14.00		0.00	1.00	6.400	10.82	255.02	0.650	0.000	2.00	10.240	6.66	72.0	0.0	494.6
16.00		0.00	1.00	6.400	10.82	253.06	0.650	0.000	2.00	10.161	6.60	71.4	0.0	490.8
18.00		0.00	1.00	6.400	10.82	251.09	0.650	0.000	2.00	10.083	6.55	70.9	0.0	487.0
20.00		0.00	1.00	6.400	10.82	249.13	0.650	0.000	2.00	10.005	6.50	70.3	0.0	483.2
22.00		0.00	1.00	6.400	10.82	247.17	0.650	0.000	2.00	9.926	6.45	69.8	0.0	479.4
24.00		0.00	1.00	6.400	10.82	245.21	0.650	0.000	2.00	9.848	6.40	69.2	0.0	475.6
26.00		0.00	1.00	6.400	10.82	243.25	0.650	0.000	2.00	9.769	6.35	68.7	0.0	471.7
28.00		0.00	1.00	6.400	10.82	241.28	0.650	0.000	2.00	9.691	6.30	68.1	0.0	467.9
30.00		0.00	1.00	6.400	10.82	239.32	0.650	0.000	2.00	9.612	6.25	67.6	0.0	464.1
32.00		0.00	1.00	6.400	10.82	237.36	0.650	0.000	2.00	9.534	6.20	67.0	0.0	460.3
34.00		0.00	1.01	6.455	10.91	236.41	0.650	0.000	2.00	9.455	6.15	67.0	0.0	456.5
36.00		0.00	1.03	6.561	11.09	236.36	0.650	0.000	2.00	9.377	6.09	67.6	0.0	452.7
38.00		0.00	1.04	6.663	11.26	236.19	0.650	0.000	2.00	9.298	6.04	68.1	0.0	448.9
40.00		0.00	1.06	6.762	11.43	235.91	0.650	0.000	2.00	9.220	5.99	68.5	0.0	445.0
41.00 Bot - Section 2		0.00	1.06	6.809	11.51	235.73	0.650	0.000	1.00	4.580	2.98	34.3	0.0	221.1
42.00		0.00	1.07	6.857	11.59	235.53	0.650	0.000	1.00	4.623	3.01	34.8	0.0	443.3
44.00		0.00	1.09	6.948	11.74	235.05	0.650	0.000	2.00	9.188	5.97	70.1	0.0	880.9
46.00		0.00	1.10	7.037	11.89	234.49	0.650	0.000	2.00	9.109	5.92	70.4	0.0	873.3
48.00 Top - Section 1		0.00	1.11	7.123	12.04	233.86	0.650	0.000	2.00	9.031	5.87	70.7	0.0	865.7
50.00		0.00	1.13	7.207	12.18	236.46	0.650	0.000	2.00	8.952	5.82	70.9	0.0	432.1
51.00 Top - Section 2		0.00	1.13	7.248	12.25	236.08	0.650	0.000	1.00	4.447	2.89	35.4	0.0	214.6
52.00		0.00	1.14	7.288	12.32	235.69	0.650	0.000	1.00	4.427	2.88	35.4	0.0	213.6
54.00		0.00	1.15	7.367	12.45	234.86	0.650	0.000	2.00	8.796	5.72	71.2	0.0	424.4
56.00		0.00	1.16	7.444	12.58	233.97	0.650	0.000	2.00	8.717	5.67	71.3	0.0	420.6
58.00		0.00	1.17	7.519	12.71	233.02	0.650	0.000	2.00	8.639	5.62	71.4	0.0	416.8
60.00		0.00	1.19	7.592	12.83	232.01	0.650	0.000	2.00	8.560	5.56	71.4	0.0	413.0
62.00		0.00	1.20	7.664	12.95	230.96	0.650	0.000	2.00	8.482	5.51	71.4	0.0	409.2
64.00		0.00	1.21	7.733	13.07	229.85	0.650	0.000	2.00	8.403	5.46	71.4	0.0	405.4
66.00		0.00	1.22	7.802	13.18	228.70	0.650	0.000	2.00	8.325	5.41	71.3	0.0	401.5
66.17 RB1		0.00	1.22	7.807	13.19	228.60	0.650	0.000	0.17	0.704	0.46	6.0	0.0	55.4
68.00		0.00	1.23	7.869	13.30	227.50	0.650	0.000	1.83	7.542	4.90	65.2	0.0	594.4
70.00		0.00	1.24	7.934	13.41	226.26	0.650	0.000	2.00	8.168	5.31	71.2	0.0	645.9
71.00 Top - Section 3		0.00	1.24	7.966	13.46	225.62	0.650	0.000	1.00	4.054	2.64	35.5	0.0	321.5
72.00		0.00	1.25	7.998	13.52	224.98	0.650	0.000	1.00	4.035	2.62	35.4	0.0	320.6
74.00		0.00	1.26	8.061	13.62	223.66	0.650	0.000	2.00	8.011	5.21	70.9	0.0	638.3
76.00		0.00	1.27	8.123	13.73	222.30	0.650	0.000	2.00	7.932	5.16	70.8	0.0	634.5
78.00		0.00	1.28	8.183	13.83	220.91	0.650	0.000	2.00	7.854	5.10	70.6	0.0	630.7
80.00		0.00	1.29	8.242	13.93	219.48	0.650	0.000	2.00	7.775	5.05	70.4	0.0	626.8
81.00 Top - Section 4		0.00	1.29	8.272	13.98	218.76	0.650	0.000	1.00	3.858	2.51	35.1	0.0	312.0
82.00		0.00	1.30	8.301	14.03	218.02	0.650	0.000	1.00	3.839	2.50	35.0	0.0	280.4
84.00		0.00	1.31	8.358	14.13	216.53	0.650	0.000	2.00	7.618	4.95	69.9	0.0	558.4

Wind Loading - Shaft

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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85.00 Bot - Section 6	0.00	1.31	8.387	14.17	215.78	0.650	0.000	1.00	3.780	2.46	34.8	0.0	278.0
86.00	0.00	1.31	8.415	14.22	215.01	0.650	0.000	1.00	3.812	2.48	35.2	0.0	430.6
88.00	0.00	1.32	8.470	14.31	213.46	0.650	0.000	2.00	7.566	4.92	70.4	0.0	856.4
90.00	0.00	1.33	8.525	14.41	211.89	0.650	0.000	2.00	7.487	4.87	70.1	0.0	850.0
91.00 Top - Section 5	0.00	1.34	8.552	14.45	211.09	0.650	0.000	1.00	3.714	2.41	34.9	0.0	422.6
92.00	0.00	1.34	8.578	14.50	213.30	0.650	0.000	1.00	3.695	2.40	34.8	0.0	274.6
93.83 RT1	0.00	1.35	8.627	14.58	211.82	0.650	0.000	1.83	6.710	4.36	63.6	0.0	500.4
94.00	0.00	1.35	8.631	14.59	211.68	0.650	0.000	0.17	0.620	0.40	5.9	0.0	24.9
96.00	0.00	1.36	8.683	14.67	210.03	0.650	0.000	2.00	7.252	4.71	69.2	0.0	291.6
98.00	0.00	1.36	8.735	14.76	208.36	0.650	0.000	2.00	7.173	4.66	68.8	0.0	288.4
100.00	0.00	1.37	8.785	14.85	206.66	0.650	0.000	2.00	7.095	4.61	68.5	0.0	285.2
102.00	0.00	1.38	8.835	14.93	204.94	0.650	0.000	2.00	7.016	4.56	68.1	0.0	282.1
104.00	0.00	1.39	8.884	15.01	203.20	0.650	0.000	2.00	6.938	4.51	67.7	0.0	278.9
106.00	0.00	1.40	8.933	15.10	201.44	0.650	0.000	2.00	6.467	4.20	63.5	0.0	275.7
108.00	0.00	1.40	8.980	15.18	199.65	0.650	0.000	2.00	6.389	4.15	63.0	0.0	272.5
110.00	0.00	1.41	9.028	15.26	197.84	0.650	0.000	2.00	6.310	4.10	62.6	0.0	269.3
111.17 RB2	0.00	1.41	9.055	15.30	196.78	0.650	0.000	1.17	3.655	2.38	36.4	0.0	229.8
112.00	0.00	1.42	9.074	15.34	196.02	0.650	0.000	0.83	2.577	1.67	25.7	0.0	162.4
114.00	0.00	1.43	9.120	15.41	194.17	0.650	0.000	2.00	6.153	4.00	61.6	0.0	389.0
115.00 Top - Section 6	0.00	1.43	9.143	15.45	193.24	0.650	0.000	1.00	3.243	2.11	32.6	0.0	193.3
116.00	0.00	1.43	9.166	15.49	192.31	0.650	0.000	1.00	3.224	2.10	32.5	0.0	166.8
118.00	0.00	1.44	9.211	15.57	190.42	0.650	0.000	2.00	6.389	4.15	64.6	0.0	331.6
120.00	0.00	1.45	9.255	15.64	188.52	0.650	0.000	2.00	6.310	4.10	64.2	0.0	329.1
122.00	0.00	1.45	9.299	15.71	186.60	0.650	0.000	2.00	6.232	4.05	63.7	0.0	326.6
123.83 RT2	0.00	1.46	9.338	15.78	184.83	0.650	0.000	1.83	5.633	3.66	57.8	0.0	296.6
124.00	0.00	1.46	9.342	15.79	184.67	0.650	0.000	0.17	0.520	0.34	5.3	0.0	16.7
126.00	0.00	1.47	9.385	15.86	182.71	0.650	0.000	2.00	6.075	3.95	62.6	0.0	195.5
128.00	0.00	1.47	9.427	15.93	180.74	0.650	0.000	2.00	5.996	3.90	62.1	0.0	192.9
130.00 Bot - Section 8	0.00	1.48	9.469	16.00	178.76	0.650	0.000	2.00	5.918	3.85	61.6	0.0	190.4
132.00	0.00	1.49	9.510	16.07	176.76	0.650	0.000	2.00	5.923	3.85	61.9	0.0	378.4
134.00	0.00	1.49	9.551	16.14	174.74	0.650	0.000	2.00	5.844	3.80	61.3	0.0	373.3
135.00 Top - Section 7	0.00	1.50	9.572	16.18	173.73	0.650	0.000	1.00	2.893	1.88	30.4	0.0	184.7
136.00	0.00	1.50	9.592	16.21	175.26	0.650	0.000	1.00	2.873	1.87	30.3	0.0	92.4
138.00	0.00	1.50	9.632	16.28	173.22	0.650	0.000	2.00	5.687	3.70	60.2	0.0	182.9
140.00	0.00	1.51	9.672	16.35	171.16	0.650	0.000	2.00	5.609	3.65	59.6	0.0	180.4
142.00	0.00	1.52	9.711	16.41	169.09	0.650	0.000	2.00	5.530	3.59	59.0	0.0	177.8
143.00 Appurtenance(s)	0.00	1.52	9.730	16.44	168.06	0.650	0.000	1.00	2.736	1.78	29.2	0.0	88.0
144.00	0.00	1.52	9.750	16.48	167.01	0.650	0.000	1.00	2.716	1.77	29.1	0.0	87.3
146.00	0.00	1.53	9.788	16.54	164.92	0.650	0.000	2.00	5.373	3.49	57.8	0.0	172.7
148.00	0.00	1.54	9.826	16.61	162.80	0.650	0.000	2.00	5.295	3.44	57.2	0.0	170.2
150.00 Appurtenance(s)	0.00	1.54	9.864	16.67	160.68	0.650	0.000	2.00	5.216	3.39	56.5	0.0	167.7
152.00	0.00	1.55	9.902	16.73	158.55	0.650	0.000	2.00	5.138	3.34	55.9	0.0	165.1
153.00 Appurtenance(s)	0.00	1.55	9.920	16.76	157.47	0.650	0.000	1.00	2.540	1.65	27.7	0.0	81.6
154.00	0.00	1.55	9.939	16.80	156.40	0.650	0.000	1.00	2.520	1.64	27.5	0.0	81.0
156.00	0.00	1.56	9.975	16.86	154.24	0.650	0.000	2.00	4.981	3.24	54.6	0.0	160.0
158.00	0.00	1.56	10.012	16.92	152.06	0.650	0.000	2.00	4.902	3.19	53.9	0.0	157.5
160.00	0.00	1.57	10.048	16.98	149.88	0.650	0.000	2.00	4.824	3.14	53.2	0.0	154.9
162.00	0.00	1.58	10.083	17.04	147.68	0.650	0.000	2.00	4.746	3.08	52.6	0.0	152.4
163.00 Appurtenance(s)	0.00	1.58	10.101	17.07	146.58	0.650	0.000	1.00	2.343	1.52	26.0	0.0	75.2
164.00	0.00	1.58	10.119	17.10	145.48	0.650	0.000	1.00	2.324	1.51	25.8	0.0	74.6
166.00	0.00	1.59	10.154	17.16	143.26	0.650	0.000	2.00	4.589	2.98	51.2	0.0	147.3
168.00	0.00	1.59	10.189	17.22	141.03	0.650	0.000	2.00	4.510	2.93	50.5	0.0	144.8
170.00	0.00	1.60	10.223	17.28	138.79	0.650	0.000	2.00	4.432	2.88	49.8	0.0	142.2
172.00	0.00	1.60	10.257	17.34	136.53	0.650	0.000	2.00	4.353	2.83	49.1	0.0	139.7
173.00 Appurtenance(s)	0.00	1.61	10.274	17.36	135.40	0.650	0.000	1.00	2.147	1.40	24.2	0.0	68.9
174.00	0.00	1.61	10.291	17.39	134.27	0.650	0.000	1.00	2.128	1.38	24.1	0.0	68.3
176.00	0.00	1.61	10.325	17.45	132.00	0.650	0.000	2.00	4.196	2.73	47.6	0.0	134.6
178.00	0.00	1.62	10.358	17.51	129.72	0.650	0.000	2.00	4.118	2.68	46.9	0.0	132.1

Wind Loading - Shaft

Structure: CT01002-S-SBA

Code: EIA/TIA-222-F

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Site Name: Waterford

Exposure: C

Height: 183.00 (ft)

Gh: 1.69

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Base Elev: 0.000 (ft)

Struct Class: II

180.00 Top - Section 8	0.00	1.62	10.392	17.56	127.42	0.650	0.000	2.00	4.039	2.63	46.1	0.0	129.5
181.00 Appurtenance(s)	0.00	1.63	10.408	17.59	127.52	0.590	0.000	1.00	2.000	1.18	20.8	0.0	71.3
182.00	0.00	1.63	10.424	17.62	127.63	0.590	0.000	1.00	2.000	1.18	20.8	0.0	71.3
183.00	0.00	1.63	10.441	17.64	127.73	0.590	0.000	1.00	2.000	1.18	20.8	0.0	71.3
Totals:								183.00			5,900.1		35,861.1

Discrete Appurtenance Forces

Structure: CT01002-S-SB
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

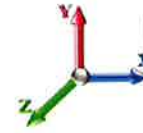
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Load Case: 50 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 28

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	181.00	Low Profile Platform-Round	1	10.408	17.590	1.00	22.00	1500.00	0.000	0.000	386.97	0.00	0.00
2	173.00	Low Profile Platform-Round	1	10.274	17.364	1.00	22.00	1500.00	0.000	0.000	382.01	0.00	0.00
3	173.00	APL866513-42T0	2	10.274	17.364	0.93	7.98	31.40	0.000	0.000	138.55	0.00	0.00
4	173.00	DB-T1-6Z-8AB-OZ	2	10.274	17.364	0.50	5.60	88.00	0.000	0.000	97.24	0.00	0.00
5	173.00	LNx-6514DS-VTM	3	10.274	17.364	0.80	19.99	99.30	0.000	0.000	347.14	0.00	0.00
6	173.00	HBXX-6517DS-VTM	6	10.274	17.364	0.77	40.33	244.20	0.000	0.000	700.33	0.00	0.00
7	173.00	LPA-80080-4CF-EDIN-0	4	10.274	17.364	1.00	24.20	48.00	0.000	0.000	420.21	0.00	0.00
8	173.00	RRH2x60-1900	3	10.274	17.364	0.50	2.64	58.50	0.000	0.000	45.84	0.00	0.00
9	173.00	RRH2x60-700U	3	10.274	17.364	0.50	3.72	150.00	0.000	0.000	64.59	0.00	0.00
10	173.00	RRH2X60-AWS	3	10.274	17.364	0.50	5.94	180.00	0.000	0.000	103.14	0.00	0.00
11	163.00	Low Profile Platform-Round	1	10.101	17.071	1.00	22.00	1500.00	0.000	0.000	375.56	0.00	0.00
12	163.00	LLPX310R	3	10.101	17.071	0.69	10.00	85.80	0.000	0.000	170.68	0.00	0.00
13	163.00	DAP Head	3	10.101	17.071	0.50	2.82	126.00	0.000	0.000	48.14	0.00	0.00
14	153.00	S11B12	3	9.920	16.765	0.50	4.41	165.00	0.000	0.000	73.93	0.00	0.00
15	153.00	Low Profile Platform-Round	1	9.920	16.765	1.00	22.00	1500.00	0.000	0.000	368.83	0.00	0.00
16	153.00	LNx-6515DS	3	9.920	16.765	0.80	27.38	149.40	0.000	0.000	459.09	0.00	0.00
17	153.00	AIR 21, 1.3M, B4A B2P	3	9.920	16.765	0.86	16.98	271.20	0.000	0.000	284.61	0.00	0.00
18	153.00	AIR 21, 1.3M, B2A B4P	3	9.920	16.765	0.86	16.98	274.50	0.000	0.000	284.61	0.00	0.00
19	153.00	KRY 112 144/1	3	9.920	16.765	0.50	0.61	33.00	0.000	0.000	10.31	0.00	0.00
20	150.00	Low Profile Platform-Round	1	9.864	16.670	1.00	22.00	1500.00	0.000	0.000	366.75	0.00	0.00
21	143.00	DC6-48-60-18-8F	1	9.730	16.444	1.00	1.47	31.80	0.000	0.000	24.17	0.00	0.00
22	143.00	7770.00	3	9.730	16.444	0.73	12.88	105.00	0.000	0.000	211.76	0.00	0.00
23	143.00	850/1900	6	9.730	16.444	0.50	1.56	33.00	0.000	0.000	25.65	0.00	0.00
24	143.00	AM-X-CD-16-65-00T-RET	2	9.730	16.444	0.75	12.39	97.00	0.000	0.000	203.75	0.00	0.00
25	143.00	DBC-750	3	9.730	16.444	0.50	0.77	14.40	0.000	0.000	12.58	0.00	0.00
26	143.00	P65-17-XLH-RR	2	9.730	16.444	0.75	17.19	118.00	0.000	0.000	282.68	0.00	0.00
27	143.00	LGP13519	3	9.730	16.444	0.50	0.51	15.90	0.000	0.000	8.39	0.00	0.00
28	143.00	Low Profile Platform-Round	1	9.730	16.444	1.00	22.00	1500.00	0.000	0.000	361.77	0.00	0.00
29	143.00	RRUS 11	6	9.730	16.444	0.50	8.82	304.20	0.000	0.000	145.04	0.00	0.00
30	143.00	SBNH-1D6565C	2	9.730	16.444	0.00	22.88	132.20	0.000	0.000	376.25	0.00	0.00
Totals:							11,855.80			6,780.57			

Total Applied Force Summary

Structure: CT01002-S-SB
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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Load Case: 50 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 28

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		80.71	606.39	0.00	0.00
4.00		80.16	602.58	0.00	0.00
6.00		79.61	598.77	0.00	0.00
8.00		79.05	594.95	0.00	0.00
10.00		78.50	591.14	0.00	0.00
12.00		77.95	587.32	0.00	0.00
14.00		77.40	583.51	0.00	0.00
16.00		76.85	579.70	0.00	0.00
18.00		76.30	575.88	0.00	0.00
20.00		75.74	572.07	0.00	0.00
22.00		75.19	568.26	0.00	0.00
24.00		74.64	564.44	0.00	0.00
26.00		74.09	560.63	0.00	0.00
28.00		73.54	556.81	0.00	0.00
30.00		72.99	553.00	0.00	0.00
32.00		72.43	549.19	0.00	0.00
34.00		72.50	545.37	0.00	0.00
36.00		73.13	541.56	0.00	0.00
38.00		73.69	537.75	0.00	0.00
40.00		74.19	533.93	0.00	0.00
41.00		37.14	265.54	0.00	0.00
42.00		37.72	487.76	0.00	0.00
44.00		76.00	969.80	0.00	0.00
46.00		76.36	962.17	0.00	0.00
48.00		76.68	954.54	0.00	0.00
50.00		76.96	520.94	0.00	0.00
51.00		38.47	259.04	0.00	0.00
52.00		38.52	258.09	0.00	0.00
54.00		77.40	513.31	0.00	0.00
56.00		77.57	509.50	0.00	0.00
58.00		77.70	505.68	0.00	0.00
60.00		77.81	501.87	0.00	0.00
62.00		77.88	498.06	0.00	0.00
64.00		77.92	494.24	0.00	0.00
66.00		82.42	490.43	0.00	0.00
66.17		7.36	52.22	0.00	0.00
68.00		79.55	560.40	0.00	0.00
70.00		87.01	608.80	0.00	0.00
71.00		43.42	302.97	0.00	0.00
72.00		43.42	302.01	0.00	0.00
74.00		87.01	601.17	0.00	0.00
76.00		86.97	597.36	0.00	0.00
78.00		86.92	593.54	0.00	0.00
80.00		86.84	589.73	0.00	0.00
81.00		43.31	293.43	0.00	0.00
82.00		43.28	261.85	0.00	0.00
84.00		86.62	521.32	0.00	0.00
85.00		43.18	259.47	0.00	0.00

Total Applied Force Summary

Structure: CT01002-S-SB
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
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86.00		43.63	412.02	0.00	0.00
88.00		87.28	819.27	0.00	0.00
90.00		87.11	812.91	0.00	0.00
91.00		43.42	404.07	0.00	0.00
92.00		43.37	256.02	0.00	0.00
93.83		79.33	466.46	0.00	0.00
94.00		7.34	32.49	0.00	0.00
96.00		81.50	380.48	0.00	0.00
98.00		76.21	377.30	0.00	0.00
100.00		75.89	374.12	0.00	0.00
102.00		75.56	370.94	0.00	0.00
104.00		75.22	367.76	0.00	0.00
106.00		71.01	364.58	0.00	0.00
108.00		70.61	361.41	0.00	0.00
110.00		70.20	358.23	0.00	0.00
111.17		46.92	244.95	0.00	0.00
112.00		33.19	173.11	0.00	0.00
114.00		79.83	414.87	0.00	0.00
115.00		41.69	206.24	0.00	0.00
116.00		41.60	179.72	0.00	0.00
118.00		83.01	357.52	0.00	0.00
120.00		82.61	354.98	0.00	0.00
122.00		82.20	352.44	0.00	0.00
123.83		74.83	320.25	0.00	0.00
124.00		6.92	24.29	0.00	0.00
126.00		75.95	284.35	0.00	0.00
128.00		70.06	281.81	0.00	0.00
130.00		69.56	279.27	0.00	0.00
132.00		69.91	467.27	0.00	0.00
134.00		69.39	462.18	0.00	0.00
135.00		34.46	229.19	0.00	0.00
136.00		34.32	136.85	0.00	0.00
138.00		68.31	271.80	0.00	0.00
140.00		67.76	269.26	0.00	0.00
142.00		67.20	266.72	0.00	0.00
143.00	(29) appurtenances	1685.38	2483.90	0.00	0.00
144.00		33.21	122.93	0.00	0.00
146.00		66.05	243.95	0.00	0.00
148.00		65.46	241.41	0.00	0.00
150.00	(1) appurtenances	431.61	1738.87	0.00	0.00
152.00		64.25	236.32	0.00	0.00
153.00	(16) appurtenances	1513.25	2510.31	0.00	0.00
154.00		31.71	102.99	0.00	0.00
156.00		63.01	204.08	0.00	0.00
158.00		62.38	201.54	0.00	0.00
160.00		61.73	198.99	0.00	0.00
162.00		61.08	196.45	0.00	0.00
163.00	(7) appurtenances	624.65	1809.07	0.00	0.00
164.00		30.10	90.61	0.00	0.00
166.00		59.76	179.31	0.00	0.00
168.00		59.09	176.76	0.00	0.00
170.00		58.41	174.22	0.00	0.00
172.00		57.72	171.68	0.00	0.00
173.00	(27) appurtenances	2327.62	2484.29	0.00	0.00
174.00		25.44	69.57	0.00	0.00
176.00		50.39	137.23	0.00	0.00
178.00		49.66	134.69	0.00	0.00
180.00		48.92	132.15	0.00	0.00

Total Applied Force Summary

Structure: CT01002-S-SB

Code: EIA/TIA-222-F

8/14/2015

Site Name: Waterford

Exposure: C

Height: 183.00 (ft)

Gh: 1.69

Base Elev: 0.000 (ft)

Struct Class: II

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181.00	(1) appurtenances	409.13	1572.56	0.00	0.00
182.00		22.20	72.56	0.00	0.00
183.00		<u>22.23</u>	<u>72.56</u>	<u>0.00</u>	<u>0.00</u>
	Totals:	13,521.92	52,632.61	0.00	0.00

Resulting Forces and Deflections

Structure: CT01002-S-SB
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

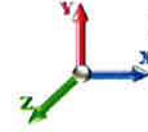
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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Load Case: 50 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 28

Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	Deflect X (in)	Deflect Z (in)	Deflect Resultant (in)	Rotation Sway (deg)	Rotation Twist (deg)
0.00	-13.531	-52.629	0.000	0.000	0.000	-1744.3	0.000	0.000	0.000	0.000	0.000
2.00	-13.472	-52.017	0.000	0.000	0.000	-1717.2	-0.006	0.000	0.006	-0.025	0.000
4.00	-13.414	-51.409	0.000	0.000	0.000	-1690.3	-0.021	0.000	0.021	-0.050	0.000
6.00	-13.356	-50.804	0.000	0.000	0.000	-1663.4	-0.048	0.000	0.048	-0.075	0.000
8.00	-13.299	-50.204	0.000	0.000	0.000	-1636.7	-0.085	0.000	0.085	-0.100	0.000
10.00	-13.241	-49.607	0.000	0.000	0.000	-1610.1	-0.133	0.000	0.133	-0.126	0.000
12.00	-13.184	-49.014	0.000	0.000	0.000	-1583.6	-0.191	0.000	0.191	-0.151	0.000
14.00	-13.127	-48.424	0.000	0.000	0.000	-1557.3	-0.260	0.000	0.260	-0.177	0.000
16.00	-13.070	-47.839	0.000	0.000	0.000	-1531.0	-0.340	0.000	0.340	-0.203	0.000
18.00	-13.013	-47.258	0.000	0.000	0.000	-1504.9	-0.431	0.000	0.431	-0.229	0.000
20.00	-12.956	-46.680	0.000	0.000	0.000	-1478.9	-0.533	0.000	0.533	-0.256	0.000
22.00	-12.899	-46.106	0.000	0.000	0.000	-1452.9	-0.646	0.000	0.646	-0.282	0.000
24.00	-12.843	-45.536	0.000	0.000	0.000	-1427.1	-0.770	0.000	0.770	-0.309	0.000
26.00	-12.787	-44.970	0.000	0.000	0.000	-1401.5	-0.905	0.000	0.905	-0.335	0.000
28.00	-12.731	-44.407	0.000	0.000	0.000	-1375.9	-1.051	0.000	1.051	-0.362	0.000
30.00	-12.675	-43.849	0.000	0.000	0.000	-1350.4	-1.209	0.000	1.209	-0.389	0.000
32.00	-12.620	-43.294	0.000	0.000	0.000	-1325.1	-1.378	0.000	1.378	-0.417	0.000
34.00	-12.563	-42.743	0.000	0.000	0.000	-1299.8	-1.559	0.000	1.559	-0.444	0.000
36.00	-12.506	-42.196	0.000	0.000	0.000	-1274.7	-1.751	0.000	1.751	-0.472	0.000
38.00	-12.448	-41.653	0.000	0.000	0.000	-1249.7	-1.955	0.000	1.955	-0.499	0.000
40.00	-12.384	-41.115	0.000	0.000	0.000	-1224.8	-2.170	0.000	2.170	-0.527	0.000
41.00	-12.355	-40.847	0.000	0.000	0.000	-1212.4	-2.282	0.000	2.282	-0.541	0.000
42.00	-12.327	-40.355	0.000	0.000	0.000	-1200.1	-2.397	0.000	2.397	-0.555	0.000
44.00	-12.261	-39.380	0.000	0.000	0.000	-1175.4	-2.636	0.000	2.636	-0.584	0.000
46.00	-12.194	-38.413	0.000	0.000	0.000	-1150.9	-2.887	0.000	2.887	-0.612	0.000
48.00	-12.125	-37.453	0.000	0.000	0.000	-1126.5	-3.149	0.000	3.149	-0.640	0.000
50.00	-12.056	-36.929	0.000	0.000	0.000	-1102.3	-3.424	0.000	3.424	-0.669	0.000
51.00	-12.023	-36.667	0.000	0.000	0.000	-1090.2	-3.566	0.000	3.566	-0.683	0.000
52.00	-11.995	-36.405	0.000	0.000	0.000	-1078.2	-3.710	0.000	3.710	-0.697	0.000
54.00	-11.929	-35.887	0.000	0.000	0.000	-1054.2	-4.008	0.000	4.008	-0.724	0.000
56.00	-11.862	-35.373	0.000	0.000	0.000	-1030.3	-4.318	0.000	4.318	-0.752	0.000
58.00	-11.794	-34.863	0.000	0.000	0.000	-1006.6	-4.639	0.000	4.639	-0.780	0.000
60.00	-11.726	-34.356	0.000	0.000	0.000	-983.06	-4.972	0.000	4.972	-0.808	0.000
62.00	-11.658	-33.854	0.000	0.000	0.000	-959.61	-5.317	0.000	5.317	-0.836	0.000
64.00	-11.589	-33.355	0.000	0.000	0.000	-936.29	-5.673	0.000	5.673	-0.864	0.000
66.00	-11.508	-32.863	0.000	0.000	0.000	-913.12	-6.041	0.000	6.041	-0.893	0.000
66.17	-11.506	-32.808	0.000	0.000	0.000	-911.16	-6.073	0.000	6.073	-0.895	0.000
68.00	-11.429	-32.245	0.000	0.000	0.000	-890.11	-6.420	0.000	6.420	-0.914	0.000
70.00	-11.341	-31.635	0.000	0.000	0.000	-867.25	-6.808	0.000	6.808	-0.935	0.000
71.00	-11.298	-31.331	0.000	0.000	0.000	-855.91	-7.005	0.000	7.005	-0.946	0.000
72.00	-11.258	-31.026	0.000	0.000	0.000	-844.61	-7.204	0.000	7.204	-0.956	0.000
74.00	-11.172	-30.423	0.000	0.000	0.000	-822.09	-7.609	0.000	7.609	-0.977	0.000
76.00	-11.086	-29.823	0.000	0.000	0.000	-799.75	-8.023	0.000	8.023	-0.998	0.000
78.00	-10.999	-29.227	0.000	0.000	0.000	-777.58	-8.445	0.000	8.445	-1.018	0.000
80.00	-10.909	-28.636	0.000	0.000	0.000	-755.58	-8.876	0.000	8.876	-1.039	0.000
81.00	-10.866	-28.341	0.000	0.000	0.000	-744.67	-9.095	0.000	9.095	-1.050	0.000
82.00	-10.826	-28.077	0.000	0.000	0.000	-733.81	-9.316	0.000	9.316	-1.060	0.000
84.00	-10.738	-27.554	0.000	0.000	0.000	-712.16	-9.765	0.000	9.765	-1.083	0.000
85.00	-10.696	-27.293	0.000	0.000	0.000	-701.42	-9.994	0.000	9.994	-1.095	0.000

Resulting Forces and Deflections

Structure: CT01002-S-SB

Code: EIA/TIA-222-F

8/14/2015



Site Name: Waterford

Exposure: C

Height: 183.00 (ft)

Gh: 1.69

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IES

Base Elev: 0.000 (ft)

Struct Class: II

Tower Engineering Solutions

86.00	-10.652	-26.879	0.000	0.000	0.000	-690.73	-10.224	0.000	10.224	-1.107	0.000
88.00	-10.559	-26.058	0.000	0.000	0.000	-669.42	-10.693	0.000	10.693	-1.130	0.000
90.00	-10.464	-25.243	0.000	0.000	0.000	-648.30	-11.171	0.000	11.171	-1.153	0.000
91.00	-10.417	-24.838	0.000	0.000	0.000	-637.84	-11.414	0.000	11.414	-1.164	0.000
92.00	-10.375	-24.580	0.000	0.000	0.000	-627.42	-11.659	0.000	11.659	-1.176	0.000
93.83	-10.291	-24.114	0.000	0.000	0.000	-608.44	-12.114	0.000	12.114	-1.196	0.000
94.00	-10.291	-24.078	0.000	0.000	0.000	-606.69	-12.157	0.000	12.157	-1.198	0.000
96.00	-10.215	-23.693	0.000	0.000	0.000	-586.11	-12.666	0.000	12.666	-1.231	0.000
98.00	-10.144	-23.312	0.000	0.000	0.000	-565.68	-13.189	0.000	13.189	-1.264	0.000
100.00	-10.073	-22.934	0.000	0.000	0.000	-545.39	-13.725	0.000	13.725	-1.297	0.000
102.00	-10.001	-22.559	0.000	0.000	0.000	-525.25	-14.276	0.000	14.276	-1.330	0.000
104.00	-9.930	-22.188	0.000	0.000	0.000	-505.24	-14.840	0.000	14.840	-1.362	0.000
106.00	-9.863	-21.819	0.000	0.000	0.000	-485.38	-15.418	0.000	15.418	-1.395	0.000
108.00	-9.795	-21.454	0.000	0.000	0.000	-465.66	-16.009	0.000	16.009	-1.427	0.000
110.00	-9.726	-21.094	0.000	0.000	0.000	-446.07	-16.614	0.000	16.614	-1.459	0.000
111.17	-9.678	-20.847	0.000	0.000	0.000	-434.69	-16.974	0.000	16.974	-1.478	0.000
112.00	-9.647	-20.672	0.000	0.000	0.000	-426.66	-17.232	0.000	17.232	-1.488	0.000
114.00	-9.562	-20.257	0.000	0.000	0.000	-407.37	-17.861	0.000	17.861	-1.513	0.000
115.00	-9.520	-20.049	0.000	0.000	0.000	-397.80	-18.179	0.000	18.179	-1.526	0.000
116.00	-9.480	-19.868	0.000	0.000	0.000	-388.28	-18.500	0.000	18.500	-1.538	0.000
118.00	-9.397	-19.508	0.000	0.000	0.000	-369.32	-19.150	0.000	19.150	-1.566	0.000
120.00	-9.314	-19.151	0.000	0.000	0.000	-350.53	-19.812	0.000	19.812	-1.593	0.000
122.00	-9.230	-18.797	0.000	0.000	0.000	-331.90	-20.486	0.000	20.486	-1.620	0.000
123.83	-9.151	-18.477	0.000	0.000	0.000	-315.01	-21.112	0.000	21.112	-1.644	0.000
124.00	-9.149	-18.449	0.000	0.000	0.000	-313.46	-21.170	0.000	21.170	-1.647	0.000
126.00	-9.076	-18.162	0.000	0.000	0.000	-295.16	-21.868	0.000	21.868	-1.682	0.000
128.00	-9.009	-17.877	0.000	0.000	0.000	-277.01	-22.581	0.000	22.581	-1.717	0.000
130.00	-8.941	-17.595	0.000	0.000	0.000	-258.99	-23.308	0.000	23.308	-1.751	0.000
132.00	-8.867	-17.125	0.000	0.000	0.000	-241.11	-24.049	0.000	24.049	-1.784	0.000
134.00	-8.790	-16.661	0.000	0.000	0.000	-223.37	-24.803	0.000	24.803	-1.816	0.000
135.00	-8.752	-16.431	0.000	0.000	0.000	-214.58	-25.185	0.000	25.185	-1.832	0.000
136.00	-8.720	-16.292	0.000	0.000	0.000	-205.83	-25.571	0.000	25.571	-1.847	0.000
138.00	-8.651	-16.018	0.000	0.000	0.000	-188.39	-26.351	0.000	26.351	-1.876	0.000
140.00	-8.581	-15.748	0.000	0.000	0.000	-171.09	-27.143	0.000	27.143	-1.902	0.000
142.00	-8.510	-15.480	0.000	0.000	0.000	-153.93	-27.946	0.000	27.946	-1.928	0.000
143.00	-6.745	-13.053	0.000	0.000	0.000	-145.42	-28.351	0.000	28.351	-1.940	0.000
144.00	-6.711	-12.930	0.000	0.000	0.000	-138.68	-28.759	0.000	28.759	-1.952	0.000
146.00	-6.642	-12.686	0.000	0.000	0.000	-125.25	-29.581	0.000	29.581	-1.974	0.000
148.00	-6.572	-12.444	0.000	0.000	0.000	-111.97	-30.413	0.000	30.413	-1.995	0.000
150.00	-6.084	-10.720	0.000	0.000	0.000	-98.831	-31.253	0.000	31.253	-2.015	0.000
152.00	-6.014	-10.484	0.000	0.000	0.000	-86.664	-32.101	0.000	32.101	-2.033	0.000
153.00	-4.413	-8.029	0.000	0.000	0.000	-80.650	-32.528	0.000	32.528	-2.041	0.000
154.00	-4.380	-7.926	0.000	0.000	0.000	-76.237	-32.956	0.000	32.956	-2.049	0.000
156.00	-4.311	-7.723	0.000	0.000	0.000	-67.478	-33.818	0.000	33.818	-2.065	0.000
158.00	-4.244	-7.523	0.000	0.000	0.000	-58.855	-34.686	0.000	34.686	-2.079	0.000
160.00	-4.176	-7.326	0.000	0.000	0.000	-50.369	-35.559	0.000	35.559	-2.092	0.000
162.00	-4.109	-7.131	0.000	0.000	0.000	-42.016	-36.438	0.000	36.438	-2.103	0.000
163.00	-3.419	-5.346	0.000	0.000	0.000	-37.907	-36.879	0.000	36.879	-2.108	0.000
164.00	-3.386	-5.256	0.000	0.000	0.000	-34.488	-37.321	0.000	37.321	-2.113	0.000
166.00	-3.321	-5.079	0.000	0.000	0.000	-27.716	-38.208	0.000	38.208	-2.121	0.000
168.00	-3.256	-4.904	0.000	0.000	0.000	-21.075	-39.098	0.000	39.098	-2.128	0.000
170.00	-3.191	-4.732	0.000	0.000	0.000	-14.564	-39.991	0.000	39.991	-2.134	0.000
172.00	-3.127	-4.562	0.000	0.000	0.000	-8.182	-40.886	0.000	40.886	-2.137	0.000
173.00	-0.709	-2.166	0.000	0.000	0.000	-5.055	-41.333	0.000	41.333	-2.138	0.000
174.00	-0.681	-2.098	0.000	0.000	0.000	-4.346	-41.781	0.000	41.781	-2.139	0.000
176.00	-0.625	-1.962	0.000	0.000	0.000	-2.984	-42.677	0.000	42.677	-2.141	0.000
178.00	-0.571	-1.830	0.000	0.000	0.000	-1.733	-43.574	0.000	43.574	-2.141	0.000
180.00	-0.517	-1.699	0.000	0.000	0.000	-0.592	-44.471	0.000	44.471	-2.142	0.000

Resulting Forces and Deflections

Structure: CT01002-S-SB

Site Name: Waterford

Height: 183.00 (ft)

Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F

Exposure: C

Gh: 1.69

Struct Class: II

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181.00	-0.050	-0.143	0.000	0.000	0.000	-0.074	-44.920	0.000	44.920	-2.142	0.000
182.00	-0.025	-0.072	0.000	0.000	0.000	-0.025	-45.368	0.000	45.368	-2.142	0.000
183.00	-0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	45.817	-2.142	0.000

Resulting Stresses

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

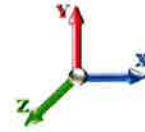
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Load Case: 50 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 28

Applied Stresses

Elev (ft)	fa Axial (Y) (ksi)	fvx Shear (X) (ksi)	fvz Shear (Z) (ksi)	fvT Torsion (ksi)	fbx Bending (X) (ksi)	fbz Bending (Z) (ksi)	fb Combined (ksi)	Allow Stress (ksi)	f/Fb Stress Ratio
0.00	0.69	0.36	0.00	0.00	0.00	17.29	17.99	54.4	0.331
2.00	0.69	0.36	0.00	0.00	0.00	17.27	17.97	54.6	0.329
4.00	0.68	0.36	0.00	0.00	0.00	17.26	17.95	54.8	0.327
6.00	0.68	0.36	0.00	0.00	0.00	17.24	17.93	55.1	0.326
8.00	0.68	0.36	0.00	0.00	0.00	17.22	17.91	55.3	0.324
10.00	0.67	0.36	0.00	0.00	0.00	17.20	17.89	55.6	0.322
12.00	0.67	0.36	0.00	0.00	0.00	17.18	17.86	55.8	0.320
14.00	0.67	0.37	0.00	0.00	0.00	17.16	17.84	56.0	0.318
16.00	0.67	0.37	0.00	0.00	0.00	17.13	17.81	56.3	0.317
18.00	0.66	0.37	0.00	0.00	0.00	17.11	17.78	56.5	0.315
20.00	0.66	0.37	0.00	0.00	0.00	17.08	17.75	56.7	0.313
22.00	0.66	0.37	0.00	0.00	0.00	17.05	17.72	57.0	0.311
24.00	0.65	0.37	0.00	0.00	0.00	17.02	17.69	57.2	0.309
26.00	0.65	0.37	0.00	0.00	0.00	16.99	17.65	57.5	0.307
28.00	0.65	0.37	0.00	0.00	0.00	16.95	17.61	57.7	0.305
30.00	0.65	0.38	0.00	0.00	0.00	16.91	17.57	57.9	0.303
32.00	0.64	0.38	0.00	0.00	0.00	16.88	17.53	58.2	0.301
34.00	0.64	0.38	0.00	0.00	0.00	16.83	17.49	58.4	0.299
36.00	0.64	0.38	0.00	0.00	0.00	16.79	17.44	58.6	0.297
38.00	0.63	0.38	0.00	0.00	0.00	16.74	17.39	58.9	0.295
40.00	0.63	0.38	0.00	0.00	0.00	16.69	17.34	59.1	0.293
41.00	0.63	0.38	0.00	0.00	0.00	16.67	17.31	59.2	0.292
42.00	0.63	0.38	0.00	0.00	0.00	16.64	17.28	59.4	0.291
44.00	0.62	0.39	0.00	0.00	0.00	16.59	17.22	59.6	0.289
46.00	0.61	0.39	0.00	0.00	0.00	16.53	17.15	59.8	0.287
48.00	0.59	0.38	0.00	0.00	0.00	16.01	16.61	60.1	0.277
50.00	0.58	0.38	0.00	0.00	0.00	15.95	16.55	59.9	0.276
51.00	0.58	0.39	0.00	0.00	0.00	15.92	16.51	60.0	0.275
51.00	0.58	0.39	0.00	0.00	0.00	15.92	16.51	60.0	0.275
52.00	0.58	0.39	0.00	0.00	0.00	15.88	16.48	50.4	0.327
54.00	0.58	0.39	0.00	0.00	0.00	15.81	16.40	50.4	0.326
56.00	0.57	0.39	0.00	0.00	0.00	15.74	16.33	50.4	0.324
58.00	0.57	0.39	0.00	0.00	0.00	15.66	16.25	50.4	0.322
60.00	0.57	0.39	0.00	0.00	0.00	15.58	16.16	50.4	0.321
62.00	0.57	0.39	0.00	0.00	0.00	15.49	16.07	50.4	0.319
64.00	0.56	0.39	0.00	0.00	0.00	15.41	15.98	50.4	0.317
66.00	0.56	0.39	0.00	0.00	0.00	15.31	15.89	50.4	0.315
66.17	0.56	0.40	0.00	0.00	0.00	11.17	11.73	50.4	0.233
68.00	0.55	0.40	0.00	0.00	0.00	11.08	11.08	50.4	0.220
70.00	0.55	0.40	0.00	0.00	0.00	10.97	10.97	50.4	0.218
71.00	0.55	0.40	0.00	0.00	0.00	10.92	10.92	50.4	0.217
72.00	0.54	0.40	0.00	0.00	0.00	10.86	10.86	44.8	0.243
74.00	0.54	0.40	0.00	0.00	0.00	10.75	10.75	44.8	0.240
76.00	0.53	0.40	0.00	0.00	0.00	10.64	10.64	44.8	0.238
78.00	0.53	0.40	0.00	0.00	0.00	10.52	10.52	44.8	0.235
80.00	0.52	0.40	0.00	0.00	0.00	10.40	10.40	44.8	0.232
81.00	0.52	0.40	0.00	0.00	0.00	10.34	10.34	44.8	0.231

Resulting Stresses

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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82.00	0.62	0.48	0.00	0.00	0.00	11.63	11.63	52.0	0.224
84.00	0.62	0.48	0.00	0.00	0.00	11.48	11.48	52.0	0.221
85.00	0.61	0.48	0.00	0.00	0.00	11.40	11.40	52.0	0.219
86.00	0.61	0.48	0.00	0.00	0.00	11.23	11.23	52.0	0.216
88.00	0.59	0.49	0.00	0.00	0.00	11.07	11.07	52.0	0.213
90.00	0.58	0.49	0.00	0.00	0.00	10.91	10.91	52.0	0.210
91.00	0.57	0.48	0.00	0.00	0.00	10.82	10.82	52.0	0.208
92.00	0.56	0.48	0.00	0.00	0.00	10.59	10.59	52.0	0.204
93.83	0.56	0.48	0.00	0.00	0.00	10.43	10.99	52.0	0.211
94.00	0.56	0.48	0.00	0.00	0.00	15.75	16.33	52.0	0.314
96.00	0.56	0.48	0.00	0.00	0.00	15.55	16.13	52.0	0.310
98.00	0.55	0.49	0.00	0.00	0.00	15.34	15.92	52.0	0.306
100.00	0.55	0.49	0.00	0.00	0.00	15.13	15.70	52.0	0.302
102.00	0.55	0.49	0.00	0.00	0.00	14.90	15.47	52.0	0.298
104.00	0.54	0.49	0.00	0.00	0.00	14.67	15.24	52.0	0.293
106.00	0.54	0.49	0.00	0.00	0.00	14.42	14.99	52.0	0.288
108.00	0.54	0.50	0.00	0.00	0.00	14.16	14.73	52.0	0.283
110.00	0.54	0.50	0.00	0.00	0.00	13.89	14.45	52.0	0.278
111.17	0.53	0.50	0.00	0.00	0.00	10.91	11.44	52.0	0.220
112.00	0.53	0.50	0.00	0.00	0.00	10.80	10.80	52.0	0.208
114.00	0.53	0.50	0.00	0.00	0.00	10.54	10.54	52.0	0.203
115.00	0.53	0.50	0.00	0.00	0.00	10.15	10.15	52.0	0.195
116.00	0.65	0.63	0.00	0.00	0.00	11.80	11.80	51.1	0.231
118.00	0.65	0.63	0.00	0.00	0.00	11.33	11.33	51.4	0.220
120.00	0.65	0.63	0.00	0.00	0.00	11.11	11.11	51.7	0.215
122.00	0.64	0.64	0.00	0.00	0.00	10.75	10.75	52.0	0.207
123.83	0.64	0.64	0.00	0.00	0.00	10.40	11.04	52.0	0.212
124.00	0.64	0.64	0.00	0.00	0.00	14.45	15.13	52.0	0.291
126.00	0.64	0.64	0.00	0.00	0.00	13.97	14.65	52.0	0.282
128.00	0.63	0.64	0.00	0.00	0.00	13.46	14.14	52.0	0.272
130.00	0.63	0.65	0.00	0.00	0.00	12.93	13.60	52.0	0.262
132.00	0.62	0.65	0.00	0.00	0.00	12.36	13.04	52.0	0.251
134.00	0.62	0.66	0.00	0.00	0.00	11.77	12.44	52.0	0.239
135.00	0.60	0.65	0.00	0.00	0.00	11.14	11.79	52.0	0.227
136.00	0.60	0.65	0.00	0.00	0.00	10.83	11.49	52.0	0.221
138.00	0.60	0.65	0.00	0.00	0.00	10.19	10.85	52.0	0.209
140.00	0.60	0.66	0.00	0.00	0.00	9.52	10.19	52.0	0.196
142.00	0.60	0.66	0.00	0.00	0.00	8.82	9.48	52.0	0.182
143.00	0.51	0.53	0.00	0.00	0.00	8.45	9.01	52.0	0.173
144.00	0.51	0.53	0.00	0.00	0.00	8.18	8.73	52.0	0.168
146.00	0.50	0.53	0.00	0.00	0.00	7.61	8.16	52.0	0.157
148.00	0.50	0.53	0.00	0.00	0.00	7.01	7.57	52.0	0.146
150.00	0.44	0.50	0.00	0.00	0.00	6.38	6.87	52.0	0.132
152.00	0.44	0.50	0.00	0.00	0.00	5.77	6.26	52.0	0.121
153.00	0.34	0.37	0.00	0.00	0.00	5.45	5.82	52.0	0.112
154.00	0.33	0.37	0.00	0.00	0.00	5.24	5.61	52.0	0.108
156.00	0.33	0.37	0.00	0.00	0.00	4.78	5.16	52.0	0.099
158.00	0.33	0.37	0.00	0.00	0.00	4.31	4.68	52.0	0.090
160.00	0.32	0.37	0.00	0.00	0.00	3.81	4.19	52.0	0.081
162.00	0.32	0.37	0.00	0.00	0.00	3.29	3.67	52.0	0.071
163.00	0.24	0.31	0.00	0.00	0.00	3.02	3.31	52.0	0.064
164.00	0.24	0.31	0.00	0.00	0.00	2.79	3.08	52.0	0.059
166.00	0.24	0.31	0.00	0.00	0.00	2.32	2.62	52.0	0.050
168.00	0.23	0.31	0.00	0.00	0.00	1.83	2.13	52.0	0.041
170.00	0.23	0.31	0.00	0.00	0.00	1.31	1.63	52.0	0.031
172.00	0.22	0.31	0.00	0.00	0.00	0.76	1.12	52.0	0.022
173.00	0.11	0.07	0.00	0.00	0.00	0.48	0.60	52.0	0.012
174.00	0.11	0.07	0.00	0.00	0.00	0.42	0.54	52.0	0.010

Resulting Stresses

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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176.00	0.10	0.06	0.00	0.00	0.00	0.30	0.42	52.0		0.008
178.00	0.10	0.06	0.00	0.00	0.00	0.18	0.30	52.0		0.006
180.00	0.09	0.06	0.00	0.00	0.00	0.06	0.18	52.0		0.003
180.00	0.09	0.06	0.00	0.00	0.00	0.06	0.18	52.0		0.003
181.00	0.01	0.00	0.00	0.00	0.00	0.01	0.02	28.8	28.8	0.001
182.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	28.8	28.8	0.000
183.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.8	28.8	0.000

Final Analysis Summary

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

8/14/2015
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Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	t MZ (ft-kips)
85 mph Wind with 0" Ice	39.1	0.00	52.61	0.00	0.00	5034.70
73.61 mph Wind with 0.5" Ice	33.1	0.00	62.62	0.00	0.00	4335.26
50 mph Wind with 0" Ice	13.5	0.00	52.63	0.00	0.00	1744.31

Max Stresses

Load Case	fa Axial (Y) (ksi)	fvx Shear (X) (ksi)	fvz Shear (Z) (ksi)	fvT Torsion (ksi)	fbx Bending (X) (ksi)	fbz Bending (Z) (ksi)	Combined Stress (ksi)	Allowable Stress (ksi)	Elev (ft)	Stress Ratio
85 mph Wind with 0" Ice	0.69	1.03	0.00	0.00	0.00	49.90	50.62	54.4	0.00	0.931
73.61 mph Wind with 0.5" Ice	0.82	0.87	0.00	0.00	0.00	42.97	43.81	54.4	0.00	0.806
50 mph Wind with 0" Ice	0.69	0.36	0.00	0.00	0.00	17.29	17.99	54.4	0.00	0.331

Additional Steel Summary

└ Intermediate Connectors ┘
└ Upper Termination ┘
└ Lower Termination ┘
└ Max Member ┘

Elev From (ft)	Elev To (ft)	Member	VQ/I (lb/in)	V (kips)	Shear Allow (kips)	MQ/I (kips)	Num Req'd	Num Actual	MQ/I (kips)	Num Req'd	Num Actual	MQ/I (kips)	Ta (kips)	Pa (kips)	Ratio
66.2	93.8	(6) PLT-C6x10.5(1.5" Hole)	142.1	0.00	0.0	99.16	5	0	105.3	2	0	110.2	138.1	160.1	0.798
111.2	123.8	(3) PLT-C6x10.5(1.5" Hole)	242.9	0.00	0.0	100.2	5	0	98.8	2	0	113.3	138.1	160.1	0.820



Monopole Mat Foundation Design

Date
8/6/2015

Customer Name:	Verizon	EIA/TIA Standard:	EIA-222-F
Site Name:		Structure Height (Ft.):	183
Site Number:	CT01002-S-SBA	Engineer Name:	B. Davis
Engr. Number:	16360	Engineer Login ID:	TES

Foundation Info Obtained from:

Drawings/Calculations

Structure Type:

Monopole

Analysis or Design?

Analysis

Base Reactions (Unfactored)

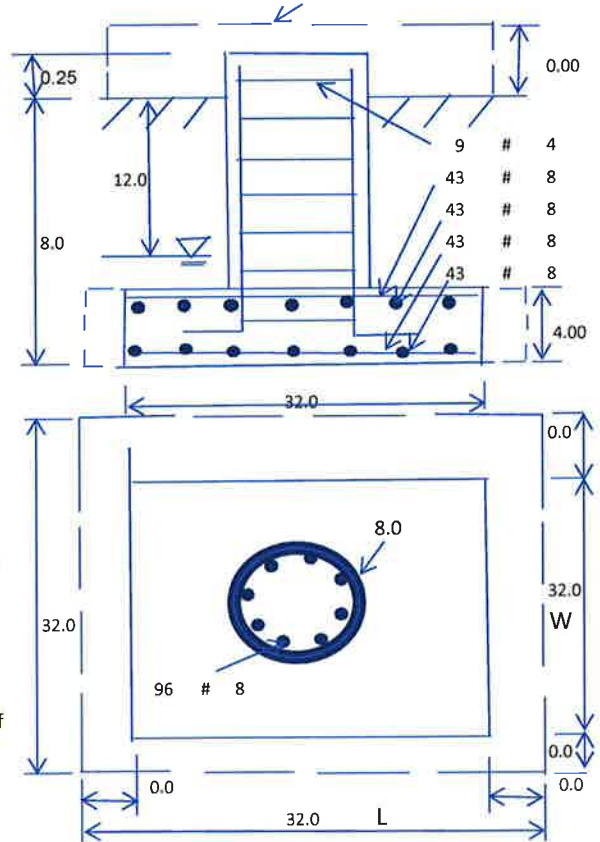
Axial Load (Kips):	62.6	Shear Force (Kips):	39.1
Uplift Force (Kips):	0.0	Moment (Kips-ft):	5034.7

Foundation Geometries:

Diameter of Pier (ft.):	8.0	Mods required -Yes/No ?:	No
Pier Height A. G. (ft.):	0.25	Depth of Base BG (ft.):	8.0
Length of Pad (ft.):	32	Thickness of Pad (ft.):	4.00
Final Length of pad (ft)	32.0	Final width of pad (ft):	32.0
Control Value for Cell D18:	0	Control Value for Cell F18:	0

Material Properties and Rebar Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	8	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	96	Tie Spacing (in):	12.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	8	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	43	Qty. of Rebar in Pad (W):	43	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	43	Qty. of Rebar in Pad (W):	43	



Soil Design Parameters:

Soil Unit Weight (pcf):	100.0	Soil Buoyant Weight:	50.0	Pcf
Water Table B.G.S. (ft):	12.0	Unit Weight of Water:	62.4	pcf
Allowable Net Soil Bearing (psf):	10000	Allowable Skin Friction:	0	Psf
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No	
Consider soil hori. force for O.T.M.:	No	Reduction factor on the maximum soil bearing pressure:	1.00	
		Angle from Top of Pad:		30
		Angle from Bottm of Pad:		25
		Angle from Bottm of Pad:		25

Foundation Analysis and Design:

Total Dry Soil Volume (cu. Ft.):	3894.94	Total Dry Soil Weight (Kips):	389.49
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	389.49	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	4309.63	Total Dry Concrete Weight (Kips):	646.44
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	646.44	Total Vertical Load on Base (Kips):	1098.55

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	1641	<	Allowable Soil Bearing (psf):	10000	0.16	OK!
Allowable Foundation Overturning Resistance (SF=1.5, kips-ft.):	11717.8	>	Applied Momont (kips-ft):	5357	0.46	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	3.28					OK!

Check the capacities of Reinforcing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90	Strength reduction factor (Shear):	0.75
Strength reduction factor (Axial compression):	0.65	Wind Load Factor on Concrete Design:	1.30

(1) Concrete Pier:

				Capacity Ratio	
Vertical Steel Rebar Area (sq. in./each):	0.79	Tie / Stirrup Area (sq. in./each):	0.20		
Calculated Moment Capacity (Mn,Kips-Ft):	14849.0	> Design Factored Moment (Mu, Kips-F	6761.1	0.46	OK!
Calculated Shear Capacity (Kips):	840.3	> Design Factored Shear (Kips):	50.8	0.06	OK!
Calculated Tension Capacity (Tn, Kips):	4095.4	> Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	12663.1	> Design Factored Axial Load (Pu Kips):	81.4	0.01	OK!
Moment & Axial Strength Combination(Pu/Pn+Mu/Mn):	0.46	OK! Check Tie Spacing (Design/Required):		1	OK!
Pier Reinforcement Ratio:	0.010	Reinforcement Ratio is satisfied per ACI			

(2) Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):	1621.1	> One-Way Factored Shear (L-D. Kips):	336.0	0.21	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1621.1	> One-Way Factored Shear (W-D., Kips)	336.0	0.21	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	1887.3	> One-Way Factored Shear (C-C, Kips):	527.0	0.28	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0020	OK! Lower Steel Pad Reinf. Ratio (W-Direc	0.0020		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	6683.2	> Moment at Bottom (L-Direct. K-Ft):	1071.7	0.16	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	6683.2	> Moment at Bottom (W-Direct. K-Ft):	1071.7	0.16	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	9415.2	> Moment at Bottom (C-C Dir. K-Ft):	1515.6	0.16	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0020	OK! Upper Steel Reinf. Ratio (W-Direct.):	0.0020		
Upper Steel Pad Moment Capacity (L-Direction. Kips-ft):	6683.2	> Moment at the top (L-Dir Kips-Ft):	491.4	0.07	OK!
Upper Steel Pad Moment Capacity (W-Direction. Kips-ft):	6683.2	> Moment at the top (W-Dir Kips-Ft):	491.4	0.07	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	9415.2	> Moment at the top (C-C Direc. K-Ft):	1280.5	0.14	OK!